

The Rhododendron

The Australian Rhododendron Society Inc.



Volume 55

2015

The *Rhododendron*

Official Journal of the Australian Rhododendron Society

2015

Volume 55

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Front cover *Rhododendron konori* 'West New Guinea' x *R. konori* 'White Giant' (see page 27).

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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 AUD\$25 (single member) and AUD\$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\$35. 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

Thanks to all those who've contributed to the 2015 volume of *The Rhododendron*.

I have had rather less of the responsibility for this issue than usual, as I have been heavily occupied on other responsibilities and just now about to commence travel to Western Australia with my wife Gay, to allow her to undertake a wildflower ramble. Hence Editor Richard Francis assumes even more responsibility for this issue.

Unfortunately, contributions have been rather slow arriving with us this time, but we trust that readers will nevertheless enjoy the contents,

If I might be excused for pressing the point, it would be much appreciated if, for future volumes, contributors might aim to get their work into our hands as soon as possible after our preferred deadline of 1st August. ❀

President's Report

This is my first President's Report. My predecessors Neil Webster and Rob Hatcher each served the maximum of three terms. But they were, and still are, younger than me by a good few years. I had intended to be a one term president but I have been persuaded to add a second.

In October last year I set myself three objectives:

- Furthering the North Queensland Project of obtaining properly provenanced samples of Australia's native rhododendrons from their mountaintop habitats both to enable DNA analysis and to establish ex situ collections of them at Olinda, Mount Lofty and Emu Valley to further the study of these plants
- Revising ARS Rules so as;
 - to reduce the cost of running ARS to the minimum needed for the core objectives of publication of *The Rhododendron*, maintaining the ARS website and satisfying the statutory requirements of an Annual National Council meeting and an Annual General meeting
 - to ensure that no Branch [or its members] is bound by any ARS decision to do or pay anything unless it votes in favour
 - to facilitate, as ARS projects, those projects that Branches prepared to fund them wish to be ARS projects
- Re-establishing Emu Valley as a branch and encouraging Blackheath to become a branch.

What has happened?

The North Queensland Project

The Project has secured funding from the Ian Potter Foundation.

James Cook University's Prof Darren Crayn [Cairns] and Plant & Food Research Co's Principal Scientist, Team Leader, 'Mapping and Markers' Dr Sue Gardiner [Palmerston North New Zealand] have agreed on an outline of how the project will proceed:

- Prof Crayn will be Project Director to oversee collection of samples. JCU has or can obtain requisite permits
 - Dr Gardiner's team will do the DNA analysis
 - Both JCU and Plant & Food Research will co-author the research papers
 - ARS members will be able to participate in collection of the samples
 - ARSV and Adelaide Botanic Garden and, hopefully, Emu Valley Rhododendron Garden will establish *ex situ* collections from the collected samples for further study
 - ARSV has promised funding
 - A Memorandum of Understanding between JCU and ARSV has been drafted
 - Hopefully ARS SA Branch and ARS will each, also, contribute funding
- Details of all the funding and scheduling have yet to be decided, the MOU has yet to be signed off and funding for enhancements to the DNA study has yet to be sourced.

But I think ARS Branches and their members can feel confident the Project will proceed. It will determine with confidence how many Australian native rhododendrons there are; one, two, three or more. It will also shed light on the source of these plants in Australia, their evolution and relationships with New Guinea relatives.

ARS Rules

I drafted proposed new Rules for ARS. I moved a special resolution for their adoption at the ARS AGM. The resolution carried. It needed to do that to streamline ARS operations. I think that the previous rules were meant for different times.

My new ones have the objectives I set out above.

Re-establishing Emu Valley as a Branch and gaining Blackheath as a Branch

Neither of these are yet achieved. Blackheath must wait for 2016. Emu Valley is possible this year. But far from certain.

There is much to do in my second term.

Simon Begg

Reports – Australian Rhododendron Groups



PHOTOGRAPH BY DAVID COOK

Campbell Rhododendron Gardens, Blackheath, New South Wales.

Blue Mountains Rhododendron Society

The Gardens, fully maintained by volunteers and by donations, are flourishing! We are finally moving forward with some development plans after spending many hours over the last few years tidying up after severe weather events. 2011 we had cyclonic winds, 2012 snow fell, 2013 fire threatened our gardens and closed them for several days. The last two years we have seen more snow! 2015 saw the heaviest snowfall in 50 years. Because our Rhododendron genus trees and shrubs are planted under a Eucalypt canopy and much of our land is natural bushland, the devastation caused by the high winds and snow has meant that many trees and branches have been brought down. Much work has been done to clear these especially from pathways and carpark areas.

It was pleasing to see that the 2015 snowfall caused very little damage to the trees.

With all this clearing work behind us we are now building again. A new pathway has been formed above the existing Quota Walk, allowing us to complete plantings for Quota Past Presidents. Another pathway, currently being formed, will allow visitors to see rare and even unique rhododendrons

which were part of Dr Peter Valder's collection. We have also been able to tend our plants more effectively, removing dead wood and the constant dodder vine which strangles them.

We have replaced plants which have succumbed and hope El Nino does not require us to hand water them all summer.

The Dick Harris Lookout has been well received by visitors. We had much positive feedback from many of the 13,000 visitors we welcomed during our peak flowering period last year. This year the Lodge will be fully accessible with a new paved ramp/path allowing easy access to the Lodge verandah.

Our calendars this year are spectacular! We would love to welcome all readers to our Gardens. Find us on the web at www.rhodogarden.org.au or at our address, Bacchante Street, Blackheath, NSW 2785.

Julia Hanley

Photo taken by David Cook

Emu Valley Rhododendron Garden: Chairman's Annual Report 2013–14

As I started to write this report I reflected on what EVRG is all about. How and why did it start, how did it grow from what was basically bush land to what it is today and where do we, the members, want to see EVRG head in the future?

Whatever paths we decide to follow one thing is certain and that is that EMU Valley Rhododendron Garden will continue to be one of Tasmania's major tourist draw cards. We are becoming more and more well known for not just our world class Rhododendrons but for the year-round beauty. However none of this happens without a great deal of effort.

It was not until June that I was elected to the Chairman's role and I acknowledge the work done by Ivan Johnstone and Ian Chalk who between them held the role for nearly the whole 2014/2015 financial year.

Business Manager Sue Johnson and Horticulturist Juanita Wood keep the garden ticking over and their love for the place is infectious. The additional hours worked and duties performed outside of their required tasks is a credit to both employees.

To Jenny Chalk in the hospitality/catering area, EVRG's legend Curator Maurie Kupsch and members of the Advisory Board and Management Group—thank you.

A very special note of thanks goes out to all of the wonderful volunteers who without them EVRG would not be what it is today. Be it weeding, poisoning, taking tours around or working in the kitchen or tea-room, they are always there.

It is always risky handing special notes of appreciation as there is often someone who is overlooked, but three people I will make mention of this year are:

Nigel Burch who lives in Launceston but still puts our newsletter together; *Tony Simpson* who is responsible for the management of membership records and like Nigel lives some distance away; and a very special mention to Eric Weeks who not only has responsibility for managing our banking requirements but is pretty much a one man band in maintaining the huge expanse of rock walls.

During the year richly deserved life membership was granted to Audrey Weeks, Kay Shadbolt, Ethel Tavner and Pam Kupsch.

Burnie City Council and the Cradle Coast Authority are very supportive and there are a number of opportunities coming up to apply for grants. However we need go beyond this. It is imperative that we continue to explore ways for EVRG to become financially self sustainable and a review of our Strategic direction is underway to assist in this process.

Our close relationship with the Royal Tasmanian Botanical Gardens has continued as has our ties with the Seattle based Rhododendron Species Foundation and the Australian Rhododendron Society.

We have commenced a much needed upgrade of our Nursery facilities, made possible with funding coming from Tasmanian Community Fund and a donation of \$10,000. With the departure of our caretaker in November 2014, we have taken the opportunity to renovate the cottage with the aim of renting it when completed.

Members Doreen and Peter Stratford represented EVRG at the 70th Jubilee International Rhododendron Conference in Dunedin, New Zealand, in October 2014. It was great to receive their report.

During Autumn, 30 new species rhododendron were planted out. Many visitors to the garden comment on how wonderful it will be when planting of the “hill” is complete so people can wander up to that area.

I thank you, our many supporters, donors and our volunteers for your help and support during the past year.

Geoff Wood
Chairman of the Management Group
Emu Valley Rhododendron Garden

Southern Tasmanian Group

A rare sea level dumping of snow greeted me this morning as I sat down to write this annual report. With the sun shining through the old cultivar ‘Cornubia’ and making a beautiful picture just glowing in the sun, made my mind race forward to all the rhododendrons flowering as spring approaches

to when our beloved genus reigns supreme again. So what better time than to look back at our branch's year of activities.

In September the first meeting of the year was held at Joy Stones and Ted Cutlans. Many members took the opportunity of perhaps seeing this magnificent garden for the last time in its entirety as the land has now been subdivided and sold. Joy gave her talk on camellias and the wonderful range this genus brings as an extra dimension to the garden.

October saw our members making an early start and travelling to the north of the state to visit the W.A.G. Walker Heritage Rhododendron Garden. This old garden still shows years of neglect but the new owners are gradually transforming this once extensive collection of rhododendrons and deciduous azaleas into what will be, in time, a magnificent showpiece of grand proportions. A stop off at the nearby Red Dragon Nursery was then made and where, at the end of the visit, the plants purchased outnumbered the members on the bus.

The November visit was to Claremont to visit our members Neil and Sandra Harwood. The weather was perfect and beautifully showed off the rhododendrons and myriads of desirable companion plants under their skirts.

Once again we wound down our 2014 with our Christmas luncheon. After a guided tour around the garden, Phil and Dianne Cooper provided a great spit roast with members bringing plates of salads and desserts just to make sure we didn't go hungry.

Our first 2015 meeting was in March which saw us all gathered in Deb Farmilo's shed, where Ken Gillanders gave a propagating demonstration. He showed us how to take cuttings, not only of rhododendrons, but also of many of those other desirable companion plants which we love to associate amongst our rhododendrons. This proved to be an extremely well attended and successful meeting and everyone seemed to relish trying cuttings of the many pieces of the various plants brought along.

We continued the propagation theme in April where, once again Ken Gillanders brought his extensive knowledge to the fore and showed the members how to do aerial layering.

A change of pace in May when a garden visit to Jo Saxon-Keith and John Keith's large garden in Lucaston. Such a tranquil garden with its large lake and many, sometimes quirky, sculptures to be discovered around every corner.

June saw us back at Ken and Lesley Gillander's ever-changing garden. Ken took us on a refresher course and gave a well illustrated talk on rhododendrons in general and their cultivation needs.

The year ended with our traditional July luncheon. A bitterly cold winter's day but a good number of members braved the elements and enjoyed a good

old Sunday roast around the roaring fire at Huon Manor in Huonville.

This past year we have seemed to make Ken and Lesley Gillander's our home base, so it would really be remiss of me if I didn't sincerely thank them both for allowing us to invade their home so many times. I know our members always enjoy wandering around their garden and gaining so much knowledge from these wonderful people.

I must also thank not only my secretary Gill, but all the committee for their help, support, ideas and guidance over the last year. We have seen new members joining the Society and I hope they are enjoying learning more about our wonderful rhododendrons.

So let's now have a great 2015–2016 year of spreading the word about our rhododendrons and not letting them become a forgotten genus.

Lesley Eaton

President, Southern Tasmanian Group

Victorian Branch

The activities of the Victorian branch again this year revolved mostly around a smallish group of very active members with the occasional larger group activity. This year saw consolidation of our work in the Vireya House, better propagation and more sorting out of the collection at Olinda. We held several larger events that were well attended by today's standards and we ran the national rhododendron conference.

This reporting year started with the Branch conducting the National Conference. We were lucky that we could get Dr George Argent of Royal Botanic Gardens Edinburgh and Frédéric Danet of Jardin Botanique de la Ville de Lyon to come and join us for our conference. The conference was well attended by locals who enjoyed a range of interesting talks; a pleasant conference dinner and the opportunity to visit exciting gardens not generally open to the public. The conference gave us a chance to conduct a few very pleasant pieces of business. George Argent agreed to cut the ribbon that officially opened our refurbished Vireya House after which a long discussion took place in the warm humidity of the house about growing, collecting and conserving this diverse group of plants. The conference dinner gave us an opportunity to recognize the long and energetic service given to the Society and to the Garden at Olinda by awarding life memberships to Laurie Begg and Alan Kepert.

Both George Argent and Frédéric Danet agreed to give a public talk at the Herbarium in Melbourne, prior to the conference; this allowed us to continue our recent series of free public lectures aimed at attracting people who hold a wide range of plant interests. The objective of these talks is to expose both the Society and the speakers to a wider audience than the

membership of the Society alone would provide. We hold these talks when we have suitable speakers. The benefits are that it gives the wider plant community an opportunity to get together and hear interesting speakers without paying the exorbitant prices some of Melbourne's plant groups charge. These talks help us become more widely known and give us a venue to advertise the work we are doing, whether this is the North Queensland project or work at Olinda. This talk attracted a very good crowd of 70 or more with some of Melbourne's top horticulturists present.

As things will have it a month later we had a second excellent speaker visit and needed to give the wider public a chance to hear his presentation, this time we held it at Domain House in Melbourne. This speaker was Dr Bob Moseley, Director of Conservation at The Nature Conservancy, and his talk was titled "Revisiting Shangri-La: Photographing a Century of Environmental and Cultural Change in the Mountains of Southwest China".

Members Prue Crome and Dan Macleod also gave a talk about their recent trip to rhodo country in China to a group of members at Olinda but otherwise we largely confined ourselves to garden projects, propagation and lots of talking. We have started adding the occasional Sunday workday at Olinda to the usual Tuesdays. We hope this becomes a regular activity for our younger members.

*John O'Hara
President, Victorian Branch*

South Australian Branch

It is my great pleasure to present this annual report and I am happy to say that we have welcomed new members to our Society.

The monthly meetings have been well attended (despite the weather) and it is fair to say that there has been a great deal of collegiality of members.

At any AGM there are many people to thank, particularly the members of your committee of management.

Special thanks to Milton as secretary, Peter as treasurer, Bron, Michelle and David as librarians, David as Vice President, Jeff Jenkinson as our National Council delegate and Bron, Robert et al (very successful plant sale).

Rob Hatcher's hard work is of special mention and does not go unnoticed – especially as our "in house" guest speaker and along with Jacki in covering the absence of the President and Secretary in May.

Our speakers this year included Rob (presenting on Sikkim, India and Singapore), Peter, Bron and Jeff (on the New Zealand conference) and Richard (on some great gardens of England). Richard was also the driving force behind our very successful cuttings day.

We were all saddened by the death of Ray Giles, our oldest member and a wonderful man, but all delighted by the life membership of Peter Wiadrowsky.

There has been some angst about the role and future of the ARS, prompting the Federal President, Simon Begg, to visit our branch in July. It appears that a consensus will be reached to maintain a much leaner federal body and the “return to the fold” of all rhododendron societies in Australia.

The Christmas function at Beverina was a classic afternoon in fairyland setting.

I believe we have had a good year and I have decided to step down after three years, following the example of the national rules.

Thankyou for allowing me the privilege of representing you all. I have enjoyed it!

*Ian Smylie
outgoing President, SA Branch*

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The genus *Rhododendron* L. (Ericaceae) in New Guinea: a new neotype for *R. gardenia* Schltr. and a new species, *Rhododendron cravenii* Danet, sp. nov.

FRÉDÉRIC DANET

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Abstract

A detailed analysis of the protologue of *Rhododendron gardenia* establishes that the previously designated neotype does not conform to the original description but is referable to a new species. A study of the plants in their natural habitat and the examination of herbarium material led to the revision of the taxonomic circumscription of *R. gardenia*. A new description of *R. gardenia* is given, the neotype is superseded and a new species is described and illustrated. *Rhododendron cravenii* Danet, sp. nov. is distinguished from *R. gardenia* in having the ovary very densely covered with a heterogeneous indumentum comprising 3–8-rayed stellate hairs, the underside of the leaf blade that is densely verruculose, slowly glabrescent but initially bearing dendroid scales, as well as a leaf blade that is usually sub-cordate at the base.

Key Words

Ericaceae, *Rhododendron*, *Schistanthe*, *Vireya*, neotype, New Guinea, new species.

Introduction

The genus *Rhododendron* L. (Ericaceae), with 913 species (Gibbs *et al.* 2011) is among the top twenty of species-rich flowering plant genera (Frodin 2004). *Rhododendron* is particularly diverse in New Guinea where 171 species are recognized (Argent 2015). All of them belong to the section *Schistanthe* Schltr. (sensu Craven *et al.* 2011) which is raised to the rank of subgenus *Vireya* C.B. Clarke by Argent (2006, 2015). The first four species described from New Guinea were discovered in 1875 by Beccari on Arfak Mts (Beccari 1878). Since then, the number of known species has increased as scientific expeditions ventured into the mountainous interior of the island. One of the major contributions to our knowledge of the genus in New Guinea is that of Schlechter (1917–1918) who created 17 new names. Among them,

Rhododendron gardenia Schltr. This name was published from material collected by Ledermann in 1913 during the German expedition Kaiserin–Augusta–Fluss in the Sepik River basin. As the type material (the holotype *Ledermann 12024* and the paratypes *Ledermann 11669, 12419* and *13442*) was lost when the majority of the Berlin herbarium was destroyed in 1943 (Veldkamp *et al.* 1988), a neotype was designated by Sleumer (1960: 84). This neotype is a specimen (*Brass 10832*) collected in 1938 in the Baliem Valley on the occasion of the third Archbold Expedition to New Guinea (Brass 1941). Since then, major herbaria have received several specimens identified under the name of *Rhododendron gardenia*. Morphological study of plants in their natural habitat and a review of the available material in herbaria (A, BISH, BRI, CANB, E, K, L, LYJB, MAN, P) lead me to reconsider the taxonomic circumscription of this species. Part of the studied material matches the protologue but Sleumer’s neotype and the remaining material correspond to a new species. The present paper provides an analysis of the protologue establishing a clear contradiction between this and the neotype chosen by Sleumer. Consequently, a new description of *R. gardenia* is given from the material corresponding to the protologue, another neotype is designated and a new species is described.

Position of *Rhododendron gardenia* Schltr. in the botanical classifications

For German New Guinea, Schlechter (1917–1918) established a classification of *Rhododendron* based on the inflorescence type, the corolla shape and the leaf texture. He placed *Rhododendron gardenia* in section *Hadranthe* Schltr. comprised of species having a corolla that is lobed in the upper third or less, slightly zygomorphic and fleshy, and a leaf blade that is leathery, thick and stiff. For *Flora Malesiana*, Sleumer (1960, 1966) proposed another classification based primarily on the type of scales on the underside of the leaf blade. He divided the section *Vireya* into seven subsections: *Albovireya* Sleumer, *Euvireya* H.F.Copel., *Malayovireya* Sleumer, *Phaeovireya* Sleumer, *Pseudovireya* (C.B.Clarke) Sleumer, *Siphonovireya* Sleumer and *Solenovireya* H.F.Copel. Sleumer (1960) claims to have studied the whole Berlin material before it was destroyed, but he recognized that he lacked some information necessary to position some species. The scale characteristics of the destroyed types are important elements that are no longer verifiable and which are therefore subject to the interpretation of the protologues. Consequently, some Schlechter’s names find an uncertain position within the Sleumer’s classification. This is the case for *Rhododendron gardenia* where the morphology of the neotype clearly indicates that it should be placed in subsection *Phaeovireya* due to the presence of dendroid scales on persistent epidermal protuberances. According

to contemporary authors, this subsection is elevated to sectional rank in the subgenus *Vireya* (Argent 2006, 2015 as section *Hadranthe* Schltr.) or reduced to an informal group ‘*Phaeovireya*’ (Craven *et al.* 2011) in section *Schistanthe* subsection *Euvireya*.

Interpretation of the morphological terminology used by Schlechter

Some of Schlechter’s contemporary authors accurately describe trichomes in the genus *Rhododendron*. Such is the case of Smith who describes scales on twigs of *Rhododendron tuberculiferum* J.J.Sm. (subsection *Phaeovireya*) as follows: “*lepidibus peltatis breviter stipitatis irregulariter stellatis c. 0.025–0.05 cm diam. verrucis insertis*” (Smith 1917: 504). Schlechter (1917–1918) is less explicit, however it was realized that he uses his morphological terminology to distinguish sessile from stalked scales. He uses the adjective *lepidotus* to describe organs which we know to be covered by sessile scales in the protologues of the following names: *Rhododendron fuchsoides* Schltr., *R. gardenia* Schltr., *R. gorumense* Schltr., *R. maboroense* Schltr., *R. melantherum* Schltr., *R. podocarpoides* Schltr. and *R. torricellense* Schltr. In contrast, he uses the compound adjectives *stellato-lepidotus* and *stellato-tomentosus* to describe organs covered by stalked scales in the protologues of *Rhododendron dasylepis* Schltr., *R. dielsianum* Schltr., *R. laureola* Schltr., *R. linnaeoides* Schltr., *R. neriifolium* Schltr., *R. rarum* Schltr., *R. schultzei* Schltr., *R. stolleanum* Schltr. and *R. warianum* Schltr. Schlechter does not describe the fugaceous scales that had probably already gone from the type specimen of *R. moszkowskii* Schltr., the leaf blade underside remaining punctate with scale scars: “*folia subtus nigro-punctata*” (Schlechter 1918: 161). With few exceptions, this division into two groups is consistent with Sleumer’s divisions (1960, 1966). Indeed, apart from just two exceptions (*R. gardenia* and *R. melantherum*), the names of the first group belong (as accepted names or as synonyms) to subsections *Euvireya* and *Pseudovireya* according to the morphology of the scales that are entire to stellately lobed, and sessile. With just one exception (*R. linnaeoides*, subsection *Euvireya*), the second group represents subsection *Phaeovireya*. The presence of *R. linnaeoides* in the second group is due to the dendroid scales on the twigs (whereas scales are entire to obtusely lobed, and sessile on the leaf blade underside): “*rami et ramuli primum dense stellato-lepidoti*” (Schlechter 1917: 144). However, the presence of *R. melantherum* and *R. gardenia* in the first group (sessile scales) is in contradiction with the position of these species in subsection *Phaeovireya*. This can be explained by the absence of the original material that led Sleumer to misinterpret the protologues. The use by Schlechter of the adjective *lepidotus* strongly suggests that the type specimens were covered by sessile scales. This

and other morphological characters derived from the protologues lead to the conclusion that *R. melantherum* and *R. gardenia* should be repositioned in subsection *Euvireya*. For *R. melantherum*, identification keys of Sleumer (1966) and Argent (2006, 2015) lead to *R. villosulum* J.J.Sm. However, conspecificity of *R. villosulum* and *R. melantherum* can't be established in the absence of new collections in the type locality of *R. melantherum*. For *R. gardenia*, analysis of its protologue establishes a clear contradiction of the neotype chosen by Sleumer.

Superseding the neotype of *Rhododendron gardenia*

The neotype chosen by Sleumer for *Rhododendron gardenia* (*Brass 10832*) does not conform with the protologue (Schlechter 1918) for the following reasons: scales on branches, branchlets and leaves are not fugaceous in this specimen but persistent, the underside of the leaf blade is not punctate (with scale scars) but densely verruculose, and the ovary is not puberulent (with short simple hairs) but covered by a heterogeneous indumentum composed mainly of 3–8-rayed stellate hairs. Table 1 sets out the comparison between Schlechter's description of *Rhododendron gardenia* (1918), the author's interpretation of this description, and the characters of the neotype selected by Sleumer (1960). Given the neotype selected by Sleumer does not conform with the description of *Rhododendron gardenia*, according to Art. 9.18 of the Melbourne Code (McNeill *et al.* 2012), the neotype chosen by Sleumer must be replaced.

	Schlechter's description of <i>Rhododendron gardenia</i>	Author's interpretation of the description	Specimen <i>Brass 10832</i>
Branches, branchlets and leaves	<i>rami, ramuli et folia glabrati</i>	branches, branchlets and leaves appear glabrous after the fugaceous scales have gone	branches, branchlets and leaves persistently lepidote
Underside of the leaf blade	<i>folia subtus sublente dense punctata</i>	underside of the leaf blade densely punctate with scale scars	underside of the leaf blade densely verruculose
Ovary	<i>ovarium dense puberulum</i>	ovary densely covered with simple hairs [masking the scales]	ovary very densely covered with an heterogeneous indumentum comprising 3–8-rayed stellate hairs

Table 1. Comparison between morphological characteristics given by Schlechter (1918) in the description of *Rhododendron gardenia*, the author's interpretation of the description and the morphological characters of the specimen *Brass 10832* selected as neotype by Sleumer (1960).

Systematics

Rhododendron gardenia Schltr. (Fig. 1)

Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 55(2–3): 158 (1918); Sleumer, *Reinwardtia* 5: 83 (1960), pro parte; Sleumer, in *Flora Malesiana* ser. I, 6(4): 514 (1966), pro parte; Argent, *Rhododendrons of subgenus Vireya*, 1st ed.: 81 (2006), pro parte; Argent, *Rhododendrons of subgenus Vireya*, 2nd ed.: 92 (2015), pro parte — Types: Nordöstl. Neu-Guinea [Papua New Guinea], Gebirgswäldern des Schraderberges, Sepik-Gebiet, 2070 m, VI.1913, fl., *Ledermann 12024* (holo-, B†); *ibid.*, III.1913, bt., *Ledermann 11669* (para-, B†); Nordöstl. Neu-Guinea [Papua New Guinea], Gebirgswäldern bei dem Lager Felsspitze, Sepik-Gebiet, 1400–1500 m, VII.1913, fl., *Ledermann 12419* (para-, B†); *ibid.*, *Ledermann 13442* (para-, B†); Papua New Guinea, Dist. West Sepik, subdist. Telefomin, Telefomin, [5°08'S, 141°38'E], 1600 m, grasslands on swampy soils with poor drainage, III.1975, *Womersley NGF 48701*, (neo-, here designated: K! [K000082821]; isoneo-, A, BISH [BISH409516], BRI [BRI-AQ0352625] image!, CANB [CANB262532] image!, E! [E00664329], L! [L0442193]). This selection replace the specimen *Brass 10832* (A00015724) previously designated by Sleumer (1960) as neotype.

ADDITIONAL MATERIAL EXAMINED. — **Indonesia**. Papua province. Abmisibil, Barenaka, fourrés à rhododendrons, 2307 m, 18.III.2011, fl., *Danet & N. Setamanki 4725* (LYJB!). — **Papua-New-Guinea**. *Sine loco*, cultivated at the Royal Botanic Garden Edinburgh (RBGE) (accession n°20061101A), 27.IV.2011, *Argent s.n.*, (E! [E00639533]) (grown from seed of *Sleumer s.n.*); Mt Giluwe, cultivated at RBGE (accession n°19761339A), 2.III.2010, *Conlon C291* (E! [E00328636]) (grown from original wild collection *Argent s.n.*, 15.V.1975); Dist. west Sepik, subdist. Telefomin, above airfield at Telefomin, 4700 ft, cultivated at RBGE (accession n°19650265A), 20.V.2010, *Conlon C320* (E [E00328631] image!) (grown from seed of *Herklots 3*, 30.XII.1964); Dist. Southern Highlands, subdist. Mendi, East Iaro River, South slope Mt Giluwe, 6°10'S, 143°59'E, 2130 m, submontane rainforest, 31.XII.1973, *Croft et al. LAE 60918* (K! [K000082820]); Dist. West Sepik, subdist. Telefomin, above airfield at Telefomin, 4700 ft, cultivated at RBGE (accession n°19650265A), 15.III.1980, *sine coll.*, *s.n.*, (E! [E00639797]) (grown from seed of *Herklots 3*, 30.XII.1964); *ibid.*, 24.IV.1981, *sine coll.*, *s.n.* (E [E00639796] image!) (grown from seed of *Herklots 3*, 30.XII.1964); *ibid.*, 19.VII.1990, *sine coll.*, *s.n.* (E [E00021378] image!) (grown from seed of *Herklots 3*, 30.XII.1964).

DISTRIBUTION AND ECOLOGY

Rhododendron gardenia is endemic to the Central Range of New Guinea, and is distributed from the Star Mountains to Mount Giluwe. It is terrestrial



Fig. 1. *Rhododendron gardenia* Schltr., terrestrial shrub in a rainforest disturbed by fire, Abmisibil, New Guinea, Danet & N. Setamanki 4725. Photograph by Frédéric Danet.

or epiphytic in *Nothofagus* primary forest and colonizes disturbed habitats between 1400 and 2300 m altitude.

DESCRIPTION

Terrestrial or epiphytic shrub, erect, ramose, up to 4 m tall; twigs terete, 4–17 cm long, 4–6 mm in diameter, densely lepidote, soon glabrescent. Leaves spreading to erect, irregularly alternate, progressively grouped towards the tips of the upper 1–2 sympodial units. Petiole sub-circular when fresh, sub-quadrangular when dry, 11–36 × 2–3 mm, densely lepidote, soon glabrescent. Blade ovate, elliptic or obovate, (3.3)–6.8–14 × (2.6)–3.3–9 cm, coriaceous; base acuminate, cuneate, acute, obtuse or rounded; margin entire, very slightly recurved; apex obtuse, rounded or emarginate, rarely cuneate; upper side matt dark green, densely lepidote initially, very soon glabrescent; underside light green, densely lepidote initially (scales reddish brown, lobed-substellate, with a medium-sized centre, usually sessile and impressed, or sometimes very briefly

stalked on an obscure epidermal protuberance), soon glabrescent; midrib prominent above at base, then levelled in the upper half, very prominent beneath; secondary nerves (7–11 pairs) impressed, slightly raised or obscure on both sides; tertiary nerves and reticulation obscure or invisible on both sides. Umbels 3–4-flowered. Umbel buds ellipsoid; bracts appressed. Outer bracts sub-orbicular to elliptic, cuspidate to rounded at the apex, glabrous to densely hispidulous on both sides, sub-glabrous at the margin. Inner bracts elliptic to spatulate, up to 6.5 cm long, densely hispidulous outside, ciliolate at the margin, densely antrorsely pubescent inside. Flowers spreading, fragrant, zygomorphic. Bracteoles linear, 2.5–4.1 cm long, laxly to densely pubescent on both sides. Pedicel green or reddish brown, 0.4–3.4 cm long, 2–4 mm in diameter, very densely lepidote, pubescent near the calyx or without hairs. Calyx green or pink, sub-entire or 5–6-lobed, sparsely lepidote and sparsely pubescent outside, ciliolate or ciliolate-lepidote at the margin, glabrous inside; lobes very depressed to broadly ovate-triangular, 1–4 mm long. Corolla tubular-infundibuliform, 5–10.4 cm long, fleshy; tube yellowish white or greenish white outside, yellowish white or greenish white sometimes suffused with orange-pink inside, straight or slightly incurved, 2–6 cm long, 7–12 mm in diameter at the base, regularly widened up to 12–28 mm in diameter at the throat, glabrous outside, densely retrorsely pubescent-pilose (hairs 0.2–0.8 mm) at the base inside, progressively thinning to become glabrous at the throat; throat oblique to 3–9 mm; lobes 5–8, white or white suffused with pink, spreading-erect, overlapping, obovate-spatulate, broadly obovate or sub-orbicular, 3.2–5.3 × 1.8–3.6 cm, rounded, obtuse, retuse or rarely cuspidate at the apex, glabrous. Stamens 10–16, sub-equal, exserted to 0–26 mm outside tube; filaments cream colored, relatively fine, very densely pubescent at the base, progressively thinning to become glabrous in the upper third; anthers clustered in the dorsal part of the corolla, yellow-orange, beige or violet, narrowly oblongoid, incurved, 9–11 × 1.5–2 × 1–1.5 mm; thecae rounded or shortly appendiculate at the base; pores antrorse-latrorse or antrorse-introrse. Disc yellowish-white, 10–14-lobed, glabrous to very densely pubescent-pilose (hairs 0.1–0.8 mm). Ovary greyish white, ellipsoid-ovoid, 9–13 × 4–6 mm, attenuate towards the style, very densely lepidote and sparsely to very densely hairy, the hairs simple, antrorse, 0.2–1 mm long; style pink or yellowish green, robust, incurved, glabrous or bearing some hairs at the very base; stigma in the ventral part of the corolla, light green, sub-capitate, 5–8-lobed, becoming exserted to 25 mm. Capsule not seen.

AFFINITIES

A recent study of molecular phylogeny (Goetsch *et al.* 2011) shows that

the section *Schistanthe* is monophyletic, though some of its subsections are not – *Albovireya*, *Phaeovireya*, *Solenovireya* and *Siphonovireya*. Drawing on this study, Craven *et al.* (2011) proposed a new classification in which these subsections are no longer recognized but are left as informal groups facilitating species identification in the subsection *Euvireya* (sensu Craven *et al.* 2011). *Rhododendron gardenia* is located in the informal group ‘Euvireya’ by its tubular-infundibuliform corolla and the presence of subequal, lobed-substellate, (sub) sessile and not overlapping scales on the underside of the leaf blade. In this group, *R. gardenia* is related to *R. pachystigma* Sleumer from which it differs by the presence of hairs on the ovary.

REMARKS

The specimen *Womersley NGF 48701* [K000082821] is designated as the new neotype for *Rhododendron gardenia* as it meets the following criteria: good agreement with the original description; collection locality close to that of the original material (Sepik region); detailed labelling; abundance of fertile parts; drying quality; good preservation; and the presence of duplicates in several herbaria (A, BISH, BRI, CANB, E, K, L).

Rhododendron gardenia was introduced into cultivation in 1964 from seed of Herklots (Argent 2006, 2015).

***Rhododendron cravenii* Danet, sp. nov. (Figs 2; 3; 4; 5)**

Rhododendron gardenia auct. non Schltr.; Sleumer, *Reinwardtia* 5: 83 (1960), pro parte quoad *Brass 10832*; Sleumer, in *Flora Malesiana* ser. 1, 6(4): 514 (1966), pro parte; Argent, *Rhododendrons of subgenus Vireya*, 1st ed.: 81 (2006), pro parte quoad *Brass 10832*; Argent, *Rhododendrons of subgenus Vireya*, 2nd ed.: 92 (2015), pro parte quoad *Brass 10832*.

Rhododendro gardeniae Schltr. *affinis, sed foliari limbo subcordato ad basem, subtus dense verruculoso, dendro-lepidoto, tarde glabriusculo, disco stellato-tomentoso, ovario dendro-lepidoto et stellato-tomentoso (radiis 3–8), praecipue differt.*

TYPUS. — **Indonesia**. Papua province, lieu-dit Gunalome près de Dimba, dans une jachère en lisière de forêt secondaire, 2336 m, 26.V.2008, bt., fl., *Danet 4626* (holo-, LYJB!).

MATERIAL EXAMINED (PARATYPI). — **Indonesia**. Papua province. Bele Valley, 25 km NE of Lake Habbema, 2300 m, X.1938, fl., *Brass 10832* (A [A00015724] image!, BRI [BRI-AQ0189283] image!, L0007470!); Mont Yonowe, Mayok, fourrés dégradés (feux) sur chaos morainique, 2902 m, 23.V.2008, fl., *Danet*

4610 (LYJB!); lieu-dit Gunalome près de Dimba, forêt secondaire, 2363 m, 21.IV.2010, bt., fl., *Danet* 4704 (LYJB!, MAN!, P!); crête sommitale Teropil au-dessus d'Abmisibil, forêt de crête, 2465 m, 13.III.2011, fl., *Danet*, *O. Setamanki* & *L. Setamanki* 4712 (LYJB!).

DISTRIBUTION AND ECOLOGY

Rhododendron cravenii sp. nov. is endemic to the Central Range of New Guinea, it is known to date only from the Indonesian part of the island, from lake Habbema to the Star Mountains. It is terrestrial or epiphytic in primary *Nothofagus* forest and it colonizes disturbed habitats between 2300 and 2900 m altitude. Flowering was observed in October and from March to May.

VERNACULAR NAME

“Silalul” (in Ngalum).

ETYMOLOGY

This new species is dedicated to the memory of Lyndley Alan Craven who passed away in 2014.

DESCRIPTION

Terrestrial or epiphytic shrub, erect, ramose, up to 3 m tall; twigs terete, 7–30 cm long, 6–8 mm in diameter, densely dendro-lepidote, soon glabrescent. Leaves spreading to erect, irregularly alternate, progressively grouped towards the tips of the upper 1–3 sympodial units. Petiole sub-circular when fresh, sub-quadrangular when dry, (11)–13–34 × *c.* 4 mm, densely dendro-lepidote, soon glabrescent. Blade ovate, elliptic or obovate, (4.8)–6.5–16.5 × (2.3)–3.7–8.8 cm, coriaceous; base usually sub-cordate, sometimes cordate, rounded or obtuse; margin entire, flat or slightly recurved; apex obtuse, rounded or emarginate, rarely acute; upperside matt dark green, densely dendro-lepidote initially, soon glabrescent; underside light green, densely dendro-lepidote initially and verruculose (scales reddish brown, stellate, with a relatively small center, stalked on a small epidermal protuberance which persists giving a verruculose surface after the scales have gone), slowly glabrescent; midrib very prominent above at the base, then levelled and becoming canaliculated in the upper half, very prominent beneath; secondary nerves (8–12 pairs) raised to obscure on both sides; tertiary nerves and reticulation obscure or invisible on both sides. Umbels 2–5-flowered. Umbel buds ellipsoid; bracts appressed. Outer bracts broadly ovate-triangular to elliptic, cuspidate to rounded at the apex, cristate-rugate and densely hispidulous outside, subglabrous at the margin, densely hispidulous inside. Inner bracts elliptic to spatulate, up to 9 cm long,



Fig. 2. *Rhododendron cravenii* Danet, sp. nov., shrub in a fallow land, Dimba, New Guinea, Danet 4626. Photograph by Frédéric Danet.

Fig. 3. *Rhododendron cravenii* Danet, sp. nov., epiphytic shrub on top of a tree, primary forest, Abmisibil, New Guinea, Danet, O. Setamanki & L. Setamanki 4712. Photograph by Frédéric Danet.





Fig. 4. *Rhododendron cravenii* Danet, sp. nov., cut flowering branches, Abmisibil, New Guinea, Danet, O. Setamanki & L. Setamanki 4712. Photograph by Frédéric Danet.

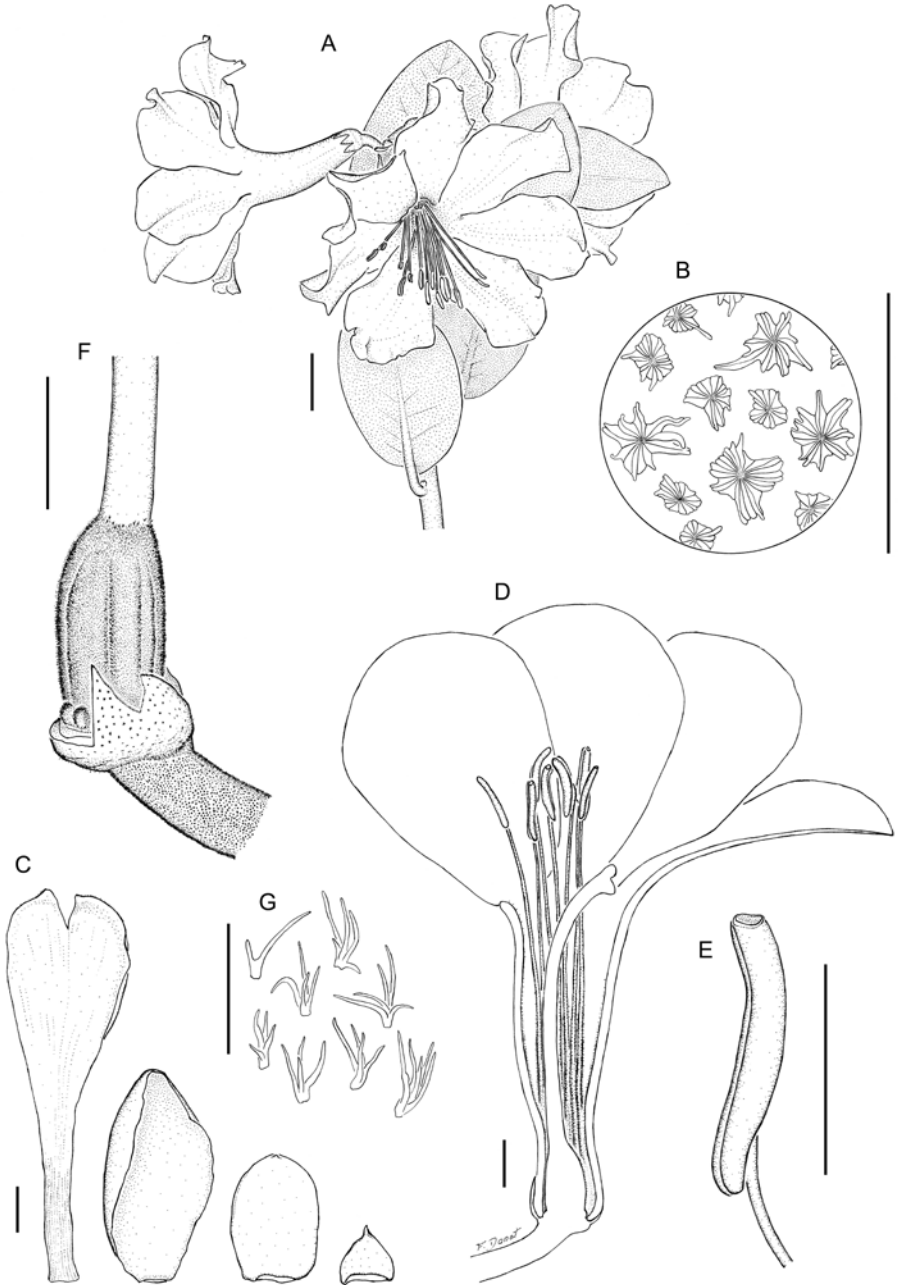
emarginate at the apex, sparsely to densely puberulous outside, ciliolate or ciliolate-lepidote at the margin, densely antrorsely pubescent inside. Flowers spreading, fragrant, zygomorphic. Bracteoles linear to linear-spatulate, c. 6.5 cm long, rounded to subulate at the apex, laxly to densely pubescent on both sides, ciliate at the margin. Pedicel reddish brown, 0.8–2.5 cm long, 3–6 mm in diameter, very densely stellate-lepidote, pubescent near the calyx or without hairs. Calyx magenta to reddish brown, 6–7-lobed, sparsely to densely stellate-lepidote and sparsely pubescent outside, ciliolate or ciliolate-lepidote at the margin, glabrous or antrorsely pubescent inside; lobes very depressed to narrowly ovate-triangular, 1–9 mm long. Corolla tubular-infundibuliform, 9.6–13.5 cm long, fleshy (2–3 mm thick in the middle of the tube); base circular-hexagonal or circular-heptagonal in cross section; tube pinkish

white outside, magenta-pink inside, straight or slightly incurved, 4.1–6.7 cm long, 10–21 mm in diameter at the base, regularly widened up to 21–32 mm diameter at the throat, glabrous outside, densely retrorsely pilose at the base inside, progressively thinning to become sparsely pilose at the throat except for a glabrous ventral area; throat oblique to 4–7 mm; lobes 6 or 7, pinkish white, spreading-erect, overlapping, obovate to broadly obovate, 4.5–6.6 × 3.2–5.1 cm, rounded or retuse at the apex, glabrous. Stamens 12 or 14, sub-equal, exerted to 12–36 mm outside tube; filaments white or pinkish white, relatively fine, very densely pilose at the base, progressively thinning to become glabrous in the upper third; anthers clustered in the dorsal part of the corolla, cream colored, pink or violet, narrowly oblong, incurved, 9–14 × 2–2.5 × 1.5–2 mm; thecae rounded or briefly appendiculate at the base; pores antrorse-latrorse. Disc yellowish white, 12 or 14-lobed, very densely covered with stellate hairs (similar but smaller to those in the ovary). Ovary greyish white, light green to pale yellow, ellipsoid-ovoid, 15–16 × 8–9 mm, attenuate towards the style, very densely covered with a heterogeneous indumentum of yellowish 3–8-rayed stellate hairs, bifurcate hairs, simple hairs and reddish brown stipitate scales; style light green to pale yellow initially, becoming red, robust, incurved, glabrous or bearing some stellate hairs at the very base; stigma in the central or ventral part of the corolla, light green to pale yellow initially, becoming dark yellow, sub-capitate, 6 or 7-lobed, becoming exerted to 50 mm. Capsule: columella 41–68 mm long; valves recurved.

AFFINITIES

In the subsection *Euwireya* (sensu Craven *et al.* 2011), *Rhododendron cravenii*, sp. nov. is located in the informal group ‘Phaeovireya’ (= section *Hadranthe* sensu Argent 2015) by the presence of dendroid scales on top of small epidermal protuberances on the leaf blade underside. After *Rhododendron andrineae* Danet, *Rhododendron cravenii* is the second species in section *Schistanthe* whose ovary indumentum has been shown to include stellate hairs.

The new species is similar to *Rhododendron gardenia* but distinct in having an ovary very densely covered with a heterogeneous indumentum comprising 3–8-rayed stellate hairs, the underside of the leaf blade that is densely verruculose, slowly glabrescent, initially bearing dendroid scales, as well as a leaf blade that is usually sub-cordate at the base. In *R. gardenia*, the ovary is covered with scales and simple hairs, the underside of the leaf blade is smooth or dotted with obscure protuberances, soon glabrescent, initially covered with scales that are lobed-substellate, usually sessile and impressed, or sometimes very shortly stalked, the base of the leaf blade is acuminate to rounded.



REMARKS

Not known to have been cultivated.

Rhododendron cravenii sp. nov. and *R. herzogii* Warb. are considered to be the parental species of *Rhododendron* × *kawir* Danet (Danet 2011).

Acknowledgements

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Opposite page Fig. 5. *Rhododendron cravenii* Danet, sp. nov.: A, flowering branch; B, scales on the underside of the leaf blade; C, outer bracts to inner bracts, from right to left; D, flower; longitudinal section; E, anther; F, calyx and gynoecium, part of the calyx removed to show the disc; G, hairs detached from the ovary. A, B, D–G, drawn from the paratype Danet 4610; C, drawn from the holotype Danet 4626. Scale bars: A, C, D, E, F, 1 cm; B, G, 1 mm.

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Conserving in cultivation a *Rhododendron* species and its hybrids: a case study using *Rhododendron konori*

ANDREW ROUSE

Introduction of R. konori into cultivation in Australia

R. konori has been introduced into cultivation on a number of occasions, with Withers listing 12 different introductions up to the early 1990s. Many of these have subsequently been lost to cultivation, or if the plants have survived, the provenance information is no longer carried on the label. The only accessions I'm aware of where there is some information on provenance are shown in Table 1.

Table 1: *R. konori* in cultivation in Australia with provenance information.

<i>Provenance known as:</i>	<i>Provenance and comments</i>
<i>R. konori</i> 'White Giant'	Collected in Papua New Guinea (collector unknown – possibly Department of Forestry, Lae) and received by ARS in the 1960s
<i>R. konori</i> 'West New Guinea'	Collected by Dr Sleumer, Anggi Lakes, Arfak Mountains, West Papua and received by Brian Clancy, ARS member in February 1962
<i>R. konori</i> var. <i>phaeopeplum</i>	Probable source is Dr Sleumer, Wadori River, Arfak Mountains, West Papua, and received by Brian Clancy, ARS member 1962
<i>R. konori</i> 'Natural Hybrid'	Collected by Paul Kores, Edie Creek, Papua New Guinea as K11576 (date unknown), received by ARS subsequently from New Zealand
<i>R. konori</i> 'West New Guinea' x <i>R. konori</i> 'White Giant'	John Rouse hybrid

From examining private collections and that at the National Rhododendron Gardens Olinda, there are plants labelled as *R. konori* that fit the species description that are morphologically different from known accessions (Table 1). It however has not been possible to track back through records to identify the provenance of these plants. So it is quite likely that other accessions survive in cultivation in Australia, however we currently can't attach a provenance to these plants.



Above *R. konori* 'White Giant'.

Below *R. konori* 'West New Guinea' x *R. konori* 'White Giant'.



R. konori is well worth growing and can be kept into maturity in a pot. *R. konori* ‘West New Guinea’ is bushier and has smaller flowers than *R. konori* ‘White Giant’ (Figure 1). Arguably the best form of *R. konori* to grow is the hybrid between these accessions: *R. konori* ‘WNG’ x *R. konori* ‘White Giant’ (Figure 2). It has the large flower size of ‘White Giant’ though with more flowers in the truss, and the bushier habit from the ‘West New Guinea’ parent.

I’d welcome feedback from ARS members if they hold specimens of *R. konori* with a provenance other than those listed in Table 1.

Conservation of *R. konori* in cultivation in Australia

R. konori has been distributed extensively to ARS members over the decades and I assume amongst the Rhododendron gardens, however I’m not sure how widely it is now held in private collections, and if so, whether these private collections have maintained provenance with the plants. Most plant labels I examine simply have the plant name and no provenance information.

Using NRG Olinda’s collection as an example, it holds 1–2 specimens of *R. konori* from each of the known provenance (those in Table 1) and about another 10 plants of unknown provenance – less than 20 plants in total. A check of the database shows that there is a high attrition rate when grown outdoors, and to keeping it on display outdoors would require more intensive propagation and re-planting. It also requires surveying the garden beds every 1–2 years so that the plant database reflects what is actually growing in the gardens and therefore can be used to manage the collection and determine the propagation priorities.

The *R. konori* specimens in the Vireya House at NRG Olinda are growing well, however space constraints limit the number of specimens to about two per provenance.

I haven’t had the chance to ascertain what specimens are held by other Rhododendron gardens in Australia, however I’d envisage the numbers of specimens would be roughly the same as that held by NRG Olinda.

In other words, for *R. konori* – one of the ‘signature’ species of vireya – well-provenanced specimens are unlikely to be held in large numbers, either in public gardens or private collections.

To confidently conserve in cultivation when you have a relatively small number of plants requires regular monitoring of specimens held, and prompt propagation to replace deaths. This may not be practical for the Rhododendron gardens where a garden bed may only be comprehensively surveyed every couple of years.

This can be mitigated by the Rhododendron gardens holding more specimens where space permits; at NRG Olinda we’re aiming to ‘bulk up’

on those species that have shown to grow well outdoors.

R. konori and other species continue to be made available to ARS members. I'd encourage members to consider growing a couple of species; not only are they rewarding garden plants, you will be doing your bit to help conserve them in cultivation. One thing I urge is to keep good records! If you have information on the provenance of the plant, record this on the label, and ensure that this info is passed on whenever plants are propagated. If you receive specimens without provenance info, see whether it can be provided.

Hybrids of R. konori and the conservation in cultivation in Australia

R. konori (including *R. phaeocephalum* which is now considered a variety of *R. konori*) has been used extensively in hybridising in Australia and elsewhere and some of the most impressive and enduring vireya hybrids have *R. konori* in their parentage – 'Highland White Jade', 'Mrs Elizabeth Miller', 'Sweet Wendy', 'Great Scent-sation' and 'Eastern Zanzibar' to name a few. Its large flower size and strong scent are characteristics carried by many of its hybrids.

A check of the list of Australian registered hybrids shows nearly 100 hybrids have *R. konori* in their parentage (Table 2). This list will not include hybrids registered overseas and subsequently introduced into Australia.

From perusing the list, I'm struck by how many of the hybrids have 'Sweet Wendy' or 'Doctor Hermann Sleumer' in their parentage. The former is still widely held in cultivation, however I'm not sure that I've seen specimens of the latter? Is it still in cultivation in Australia?

Many of these hybrids are not known to me and have quite likely died out. With the passage of time you'd expect this, though you do hope that amongst the casualties aren't hybrids with horticultural merit. Others such as 'Buttermilk' and 'Australia II' are incredibly impressive in flower however are not vigorous in temperate climates and are susceptible to fungal disease, and therefore may have a bleak future as garden plants.

From about 100 registered *R. konori* hybrids, there's probably 10–15 of sufficient horticultural merit that the ARS should ensure their conservation in cultivation in Australia. I'd previously held the view that garden plants with horticultural merit, would, by their very appeal, have sufficient demand to safeguard them in cultivation. Now I'm not so sure that this argument holds; the number of specialist and retail nurseries are declining and there are a range of economic factors that are driving the every diminishing range of plants available to the public to those that are more in the 'quick to grow and quick to flower' category.

From the surviving hybrids in the list below, which ones do we want to ensure are secure in cultivation in Australia?

More broadly, which vireya hybrids do we want to ensure are secure?

The ARS is best placed to make this decision. For vireyas, my ball-park estimate is there is about 50–60 hybrids of sufficient horticultural merit that we want to ensure are well represented across the Rhododendron gardens, are made available to ARS members and the public, and are the priority for the society's propagation, promotion and distribution.

The volunteers at NRG Olinda are in the process of identifying and propagating the vireya hybrids best suited for our local conditions, and in time we aim to be able to offer them in increasing numbers to the general public through plants sales.

We also hope to establish in the ground at NRG Olinda, sufficient numbers of those hybrids we want to maintain in cultivation such that there is little likelihood of the plants dying out between bed surveys.

I'd welcome your feedback on the *R. konori* hybrids in Table 2 that you believe are of horticultural merit and the 'top 50' performing vireya hybrids.

Table 2: Australian registered hybrids with *R. konori* in the parentage (registrations 1971–2008)

Name	Female Parent	Male Parent
ADA VERSPEEK	<i>R. konori</i>	<i>R. zoelleri</i>
AFRICAN QUEEN	DOCTOR HERMANN SLEUMER	<i>R. laetum</i> × <i>R. aurigeranum</i>
ALICIA KAYE	GARDENIA	AUSTRALIA II
ANGI GITA	<i>R. aurigeranum</i>	<i>R. phaeoepelum</i>
AUSTRALIA I I	(<i>R. phaeoepelum</i> × <i>R. lochiai</i>) × <i>R. zoelleri</i>	<i>R. leucogigas</i> 'Hunstein's Secret'
AUTUMN BERRY WINE	(<i>R. konori</i> × <i>R. laetum</i>) × <i>R. commonae</i>	<i>R. laetum</i>
BARBARA CROUCH	<i>R. rhodoleucum</i>	<i>R. konori</i>
BENJAMIN MACDONALD	<i>R. aurigeranum</i>	<i>R. konori</i>
BLOND VENUS	SWEET WENDY	<i>R. laetum</i> × <i>R. laetum</i> (dwarf)
BLONDE BOMBSHELL	<i>R. laetum</i>	SWEET WENDY
BRIANNA BELL	<i>R. zoelleri</i> × (<i>R. christianae</i> × <i>R. konori</i>)	GARDENIA ODYSSEY
BRUNSWICK GREEN	DOCTOR H. SLEUMER	<i>R. leucogigas</i>
BUTTERMILK	<i>R. konori</i>	<i>R. aurigeranum</i>
CAILEN THOMAS	DOCTOR HERMANN SLEUMER	ZOE ELLOISE
CATHERINE THE GREAT	(<i>R. phaeoepelum</i> × <i>R. lochiai</i>) × <i>R. zoelleri</i>	<i>R. leucogigas</i> 'Hunstein's Secret'
CHERRY HARMONY	SWEET WENDY	<i>R. javanicum</i>
CHOC ORANGE	<i>R. laetum</i>	SWEET WENDY

CHOIRS OF ANGELS	(<i>R. phaeoepelum</i> x <i>R. lochiae</i>) x <i>R. leucogigas</i>	<i>R. jasminiflorum</i>
CHRISTOPHER JOHN	<i>R. phaeoepelum</i>	<i>R. zoelleri</i> 'Island Sunset'
CORAZON	<i>R. konori</i>	<i>R. leucogigas</i>
COURTNEY	<i>R. phaeoepelum</i> x <i>R. lochiae</i>	<i>R. leucogigas</i> x <i>R. jasminiflorum</i>
CRIMSON LIGHTNING	<i>R. konori</i>	<i>R. javanicum</i>
CRINOLETTE	<i>R. loranthiflorum</i>	<i>R. konori</i>
CYBELLE BARBOUR	(<i>R. phaeoepelum</i> x <i>R. lochiae</i>) x <i>R. leucogigas</i>	<i>R. jasminiflorum</i>
DIAMOND JUBILEE	<i>R. konori</i>	<i>R. zoelleri</i>
DOCTOR HERMAN SLEUMER	<i>R. phaeoepelum</i>	<i>R. zoelleri</i>
DRESSED TO KILL	<i>R. konori</i>	<i>R. christiana</i>
DUCHESS SATIN	<i>R. konori</i>	<i>R. leucogigas</i>
DULCIE LELLIOTT	<i>R. rhodoleucum</i>	<i>R. aurigeranum</i> x DOCTOR HERMAN SLEUMER
EASTERN ZANZIBAR	<i>R. konori</i>	<i>R. zoelleri</i>
ELIZABETH CROUCH	<i>R. konori</i>	<i>R. orbiculatum</i>
ESPRIT-DE-JOIE	<i>R. konori</i>	<i>R. laetum</i>
FIREPLUM	<i>R. phaeoepelum</i> x <i>R. lochiae</i>	<i>R. zoelleri</i>
FUCHSIA LADY	(<i>R. phaeoepelum</i> x <i>R. lochiae</i>) x <i>R. zoelleri</i>	<i>R. leucogigas</i> 'Hunstein's Secret'
GLEN BORCH	DOCTOR H. SLEUMER	<i>R. laetum</i>
GREAT COAT	<i>R. zoelleri</i> x (<i>R. christiana</i> x <i>R. konori</i>)	GARDENIA ODYSSEY
GREAT SCENT-SATION	<i>R. konori</i>	<i>R. lochiae</i>
HIGH COUNTRY WEDDING	(<i>R. phaeoepelum</i> x <i>R. lochiae</i>) x <i>R. leucogigas</i>	<i>R. laetum</i>
HIGHLAND FAIR	<i>R. phaeoepelum</i> x <i>R. lochiae</i>	<i>R. zoelleri</i>
HIGHLAND PETER PAN	<i>R. christiana</i>	SWEET WENDY
HIGHLAND WHITE JADE	DOCTOR SLEUMER x <i>R. herzogii</i>	<i>R. laetum</i> x <i>R. aurigeranum</i>
HILDA MARGARET CROUCH	<i>R. laetum</i> x <i>R. zoelleri</i>	<i>R. konori</i>
HIP-HIP-HURRAH	DOCTOR SLEUMER x <i>R. herzogii</i>	<i>R. laetum</i> x <i>R. aurigeranum</i>
HOTEL ON MAYFAIR	(<i>R. phaeoepelum</i> x <i>R. lochiae</i>) x <i>R. leucogigas</i>	<i>R. laetum</i>
JEREMY FUNDER	<i>R. konori</i> x <i>R. rhodoleucum</i>	<i>R. konori</i>

JOLLY ROGER	<i>R. leucogigas</i> 'Hunstein's Secret'	(<i>R. phaeoepelum</i> × <i>R. lochiaie</i>) × <i>R. zoelleri</i>
KALEIDASCOPE	<i>R. konori</i>	<i>R. christianaie</i>
KAY CATCHLOVE	<i>R. laetum</i> × DOCTOR H. SLEUMER	<i>R. aurigeranum</i> × DOCTOR HERMAN SLEUMER
LADY CLARE	<i>R. phaeoepelum</i> × <i>R. lochiaie</i>	<i>R. leucogigas</i>
LAURA KATE	<i>R. superbum</i>	DOCTOR HERMAN SLEUMER
LIFE'S GOOD	TEDDY'S BEST	<i>R. rarilepidotum</i>
LITTLE NELL	<i>R. wrightianum</i>	DOCTOR HERMAN SLEUMER
LOLLY WILLOWS	<i>R. konori</i>	<i>R. laetum</i> F2
LOVEY	<i>R. konori</i>	(<i>R. phaeoepelum</i> × <i>R. lochiaie</i>) × <i>R. zoelleri</i>
MAURICE KUPSCH	probably <i>R. konori</i> hybrid	unknown
MELBOURNE CUP	<i>R. laetum</i> × DOCTOR H. SLEUMER	<i>R. aurigeranum</i> × DOCTOR H. SLEUMER
MISS ESSIE	NEESA (unregistered)	<i>R. konori</i>
MRS ELIZABETH MILLER	(<i>R. phaeoepelum</i> × <i>R. lochiaie</i>) × <i>R. leucogigas</i>	<i>R. laetum</i>
MY GUY DAVID	DR HERMAN SLEUMER	<i>R. superbum</i>
NAN CUTTEN	<i>R. aurigeranum</i>	DOCTOR HERMAN SLEUMER
NATASHA JOY	<i>R. konori</i> × <i>R. zoelleri</i>	<i>R. javanicum</i>
ORANGE HARMONY	SWEET WENDY	<i>R. javanicum</i>
OUR JOSHUA	DOCTOR H. SLEUMER	<i>R. superbum</i>
OUR MARCIA	DOCTOR H. SLEUMER × <i>R. herzogii</i>	<i>R. laetum</i> × <i>R. aurigeranum</i>
OUR MARY	<i>R. zoelleri</i> (Michael Black Form)	DOCTOR HERMANN SLEUMER
PATRIZIA DEL ROMA	(<i>R. phaeoepelum</i> × <i>R. lochiaie</i>) × <i>R. leucogigas</i>	<i>R. laetum</i>
PERSONALITY	(<i>R. phaeoepelum</i> × <i>R. lochiaie</i>) × <i>R. zoelleri</i>	<i>R. konori</i>
PINDI PEACH	<i>R. laetum</i>	<i>R. phaeoepelum</i>
PINDI PEARL	<i>R. laetum</i>	<i>R. phaeoepelum</i>
PINK FEATHERS	DOCTOR H. SLEUMER	<i>R. herzogii</i>
PINK LIGHTNING	<i>R. javanicum</i>	<i>R. konori</i>
PINK PAZAZZ	<i>R. konori</i> (West Irian form)	<i>R. zoelleri</i>

PINK SALLY	(<i>R. phaeoepelum</i> x <i>R. lochiaie</i>) x x <i>R. zoelleri</i>	<i>R. laetum</i>
PLATINUM BLONDE	<i>R. laetum</i>	SWEET WENDY
POET LAUREATE	DOCTOR H. SLEUMER x <i>R. herzogii</i>	<i>R. laetum</i> x <i>R.</i> <i>aurigeranum</i>
RATAFIA	DOCTOR H. SLEUMER	<i>R. konori</i>
ROYAL BOUQUET	DOCTOR H. SLEUMER	<i>R. superbum</i>
RUBY BELLS	<i>R. konori</i> x <i>R. laetum</i>	<i>R. commonae</i>
SHANTUNG PINK	(<i>R. phaeoepelum</i> x <i>R. lochiaie</i>) x <i>R. leucogigas</i>	<i>R. laetum</i>
SHANTUNG ROSE	(<i>R. phaeoepelum</i> x <i>R. lochiaie</i>) x <i>R. leucogigas</i>	<i>R. laetum</i>
STRAWBERRY DELIGHT	<i>R. zoelleri</i> 'ISLAND SUNSET'	DOCTOR H. SLEUMER x <i>R. javanicum</i>
SWEET AMANDA	DOCTOR H. SLEUMER x <i>R. herzogii</i>	<i>R. laetum</i> x <i>R.</i> <i>aurigeranum</i>
SWEET ROSALEA	<i>R. konori</i>	<i>R. christiana</i>
SWEET WENDY	<i>R. laetum</i>	<i>R. phaeoepelum</i>
THE SORCERER'S APPRENTICE	<i>R. konori</i> x <i>R. rhodoleucum</i>	<i>R. konori</i>
TOM LELLIOTT	<i>R. laetum</i> x <i>R. zoelleri</i>	<i>R. konori</i>
TOPS OF KEW	(<i>R. phaeoepelum</i> x <i>R. lochiaie</i>) x <i>R. leucogigas</i>	<i>R. zoelleri</i>
TORRID AFFAIR	<i>R. zoelleri</i> x <i>R. konori</i>	<i>R. brookeanum</i>
TOSCA'S KISS	<i>R. leucogigas</i> 'Hunstein's Secret'	(<i>R. phaeoepelum</i> x <i>R.</i> <i>lochiaie</i>) x <i>R. zoelleri</i>
VALERIE JUNE	<i>R. konori</i> x GARDENIA ODYSSEY	Un-named hybrid, pink lobed with yellow throat
VANILLA CREAM	<i>R. konori</i>	<i>R. aurigeranum</i>
WHITE GIANT	<i>R. konori</i> Selected form	N/A
WHITE RUM	DOCTOR H. SLEUMER	<i>R. konori</i>
WILD REDHEAD	<i>R. retusum</i>	<i>R. javanicum</i>
YELLOW FIRE	<i>R. laetum</i> x <i>R. zoelleri</i>	(<i>R. konori</i> x <i>R. zoelleri</i>) x <i>R. zoelleri</i>
ZOE ELOISE	DOCTOR H. SLEUMER	<i>R. zoelleri</i> – Michael Black Form

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Singalila Ridge Trek 2015

A JACKI AND ROB HATCHER RHODODENDRON AND HIMALAYAN ADVENTURE

In April 2015 we left Adelaide to journey to the border country of Nepal and West Bengal and Sikkim.

The Singalila Ridge was the trekking component of this journey. We booked this through Exodus which has an Australian partner called Peregrine Adventure tours.

On our way to India to start this adventure while we were in Singapore, the Nepal Earthquake struck and we received this news with some trepidation while still in the Airport waiting to catch our flight to New Delhi.

On arriving in Delhi and meeting our Exodus Guide Chospel it was a relief to find it would not have any impact on our trekking.

The rest of our group comprised a large contingent of eight from the United Kingdom, three from Canada, one from the USA, unbelievably two others from Adelaide, and Jacki and myself.

We flew as a group from New Delhi to Bagdogra Airport, which is near the town of Siliguri.

Here we met our trek guide Santosh and were allocated our Tata jeeps for the next phase of the adventure.

We wound our way up to Darjeeling in our convoy of Tata “jeeps”. I unfortunately started feeling rather unwell at about two thirds of the way up the winding road. I can only surmise the chicken on the plane did not agree with me – I do not get travel sick as a rule.

We arrived at the Hotel at around 3.30pm and I was by this stage only wanting to be horizontal. Once in my room, I fell asleep, only to be rudely shaken awake to see the wall-mounted lampshade turn a 180-degree flip to be pointing downwards as opposed to upwards. The thought came to me momentarily that we were suffering an earthquake, then turned over and started to doze again when I was shaken out of it all with the news we were in fact suffering an earthquake, a significant aftershock from the Nepal quake had struck us as well, and we had to evacuate to a mustering point outside. After some period of time that seemed inordinate we were allowed back into the hotel where I resumed my slumbers.

The trek started the next day and miraculously I felt a heck of a lot better. Had a great breakfast and we all set off to ride the Toy train to Ghoum (spelt many different ways). From Ghoum we drove in convoy again to Dodhrey where we set off on the trek proper. On this road we started to encounter rhododendrons, with the first being one of my favourites, *Rhododendron dalhousiae* var. *dalhousiae*.

The first rhodo we encountered on foot was *R. griffithianum* at 2,000 m altitude thereabouts and then it was into *R. arboreum* ssp. *cinnamomeum* all the way up to 2,500 m where we camped at a place called Tonglu. In among the *R. arboreum* we saw *R. grande* (not in flower but with the characteristic new foliage) and also *R. falconeri* in flower.

The second day of the trek started out brilliantly with *Agapetes* and *Rhododendron arboreum* again and then *R. cinnabarinum* appeared, one I was not expecting to see.

Arisaemas also were in evidence and, although not in flower, *Meconopsis horridula* and *Cardiocrinum giganteum* plants proliferated. *Viburnum* sp. and *Cotoneaster* sp. (possibly *horizontalis*) and close to flowering *Rhododendron anthopogon* also kept us company while there were ancient *Magnolia campbellii* in full bud within view of the path we were on.

This was a long day and we entered Singalila National Park and criss-crossed the border between Nepal and west Bengal all day. Rain set in during the afternoon. Arriving at the evening campsite we found there was room in the local lodge so, rather than sleep in the tents, we paid the extra and slept in relative comfort but, more importantly, dryness. This was at a place known as Kalipokhari.

The next day was onward and upward to 3,600 m at Sandakpu, seeing *Rhododendron hodgsonii*, *R. campanulatum* and *R. barbatum* among the *R. arboreum*. *Primula*, *Viola* and *Mahonia* spp. were also seen, along with *Magnolia campbellii* in bloom and *Abies spectabilis* as a backdrop.

The evening meal was accompanied by some Hit beer, which is only supposed to be available in Sikkim, but here it was in West Bengal. Quite a strong brew which had on the side of the bottle that it was not more than 8.5% by volume.

The next morning was meant to be an opportunity to see the panorama of the Himalaya's four highest peaks in one vista. However there was fog and the guide predicted it probably would not lift so we journeyed on to the next site which also promised this opportunity. This site at Sandakpu also was the location where I managed to spill the first cup of tea of the day on Jacki's foot causing a bad scald. Her response to suggestions she may need to get evacuated on one of the ramshackle series one Land Rovers was a not very polite refusal and that she would walk out of there rather than suffer such a fate. We were fortunate to have a nurse with us on the trek and she had proper burn dressings in her first aid kit.

The fourth day's trekking was a lot of "the up and the down", as Santosh put it and the weather was likely to be a "little bit of rain and a little bit of sun", according to Chospel. We saw more rhodos along the way more *R.*



Above *Rhododendron dalhousiae* ssp. *dalhousiae* on the road side on our way to starting the trek.

Below The "Toy Train" steam engine trying to get up steam in Darjeeling.



PHOTOGRAPHS BY JACCI AND ROBERT HATCHER



Above Looking down on a valley filled with *Rhododendron hodgsonii* near Sandakhpu at around 3,300 m altitude.

Below Vision of Kanchendzhonga in their background with *Rhododendron barbatum* and *R. hodgsonii* in foreground and quintessential himalayan fir *Abies spectabilis* var. *densa* (or *Abies densa*) also visible behind the rhododendrons, taken on our way after our viewing of the four highest peaks in the world at Samadan.



hodgsonii, more *R. campanulatum*, more *R. arboretum* and more *R. barbatum* and what I think were *R. fulgens* and *R. wallichii*.

I must say each day's lunch was delightful and the "Trek boys" carrying the containers with hot soups and chapatis and curries were amazing.

The fourth night at a place called Samadan we spent in horrific winds of around 50kmh with rain to boot. The tents were concave and we slept with our heads near the door so we had dry heads. The mess tent blew down during the night as did one of the toilet tents. The morning dawned foggy and we were all fairly subdued as this was to be the last chance to see the much vaunted view of all the peaks. As I was about to exit the tent with my coffee after breakfast (again a magnificent meal as were all of them) Chospel let me know the mist was lifting and he was sure we would see all the peaks.

We all poured out of the Mess Tent up to the view point and sure enough the panorama unfolded.

Everest in the distance, Makalu, Lotze and Kanchendzhonga (many spellings of this are around but this is the one I like to use) all appeared in a long row before us and the dominant peak of Kanchendzhonga closest to us with the ridge leading up to it all covered in *Rhododendron arboretum* forest.

That day was the best weather day and we saw more rhodos and orchids and *Abies spectabilis* and *Pinus wallichiana*, bamboo species and much much more, but the resounding memory will always be of the Himalayan Peaks that day. We went down 1800 metres to stay at the village of the "Pony boys" which had carried all the packs of our gear and the tents and cooking gear etc all the way. This was at Sirikhola and we had some Hit beer to celebrate.

The next day was a bit of a doddle by comparison to the rest of the trek and we finished up at Rimbik, also at 1,800 m. On Buddha's birthday a Hindhu wedding was what greeted us on arrival and a very comfortable night in the guest house was had here. The young monks playing their long horns down the valley, the view into Sikkim, which is where the rest of the trip by vehicle was going to be, beckoned, but this trek had been memorable to say the least.

The meals were some of the best I have had and all cooked on Primus stoves, including a semolina chocolate cake with icing to celebrate one of our fellow trekker's birthday.

I can recommend Exodus Singalila Trek to anyone with a mind to do something challenging and see some amazing *Rhododendron* species and companion plants. ❀



Rhododendron occidentale

You are cordially invited to join the
American Rhododendron Society

Benefits: quarterly journal,
seed exchange, chapter affiliation,
conventions

ARS Website: <http://www.rhododendron.org>

Convention on Biological Diversity and the Nagoya Protocol

This is a relatively recent convention that has been developed to try and limit the over exploitation of wild populations of flora and fauna. It came into force in October 2014.

This has been a further addition to the Convention in Trade of Endangered species or CITES as it is better known.

Essentially the CBD and Nagoya Protocol have been developed to allow the country of origin of plants, that are found to have medical or other scientific beneficial properties, that are then commercialised to gain a share in these profits.

What is the Nagoya Protocol and what is its objective?

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity is a supplementary agreement to the Convention on Biological Diversity. It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

The Nagoya Protocol on ABS was adopted on 29 October 2010 in Nagoya, Japan and entered into force on 12 October 2014, 90 days after the deposit of the 50th instrument of ratification. Its objective is the fair and equitable sharing of benefits arising from the utilization of genetic resources, thereby contributing to the conservation and sustainable use of biodiversity.

Why is the Nagoya Protocol important?

The Nagoya Protocol will create greater legal certainty and transparency for both providers and users of genetic resources by:

- Establishing more predictable conditions for access to genetic resources.
- Helping to ensure benefit-sharing when genetic resources leave the country providing the genetic resources

By helping to ensure benefit-sharing, the Nagoya Protocol creates

incentives to conserve and sustainably use genetic resources, and therefore enhances the contribution of biodiversity to development and human well-being.

What does the Nagoya Protocol cover?

The Nagoya Protocol applies to genetic resources that are covered by the CBD, and to the benefits arising from their utilization. The Nagoya Protocol also covers traditional knowledge (TK) associated with genetic resources that are covered by the CBD and the benefits arising from its utilization.

What are the core obligations of the Nagoya Protocol with respect to genetic resources?

The Nagoya Protocol sets out core obligations for its contracting Parties to take measures in relation to access to genetic resources, benefit-sharing and compliance.

Access obligations

Domestic-level access measures are to:

- Create legal certainty, clarity and transparency
- Provide fair and non-arbitrary rules and procedures
- Establish clear rules and procedures for prior informed consent and mutually agreed terms
- Provide for issuance of a permit or equivalent when access is granted
- Create conditions to promote and encourage research contributing to biodiversity conservation and sustainable use
- Pay due regard to cases of present or imminent emergencies that threaten human, animal or plant health
- Consider the importance of genetic resources for food and agriculture for food security

Benefit-sharing obligations

Domestic-level benefit-sharing measures are to provide for the fair and equitable sharing of benefits arising from the utilization of genetic resources with the contracting party providing genetic resources. Utilization includes research and development on the genetic or biochemical composition of genetic resources, as well as subsequent applications and commercialization. Sharing is subject to mutually agreed terms. Benefits may be monetary or non-monetary such as royalties and the sharing of research results.

Compliance obligations

Specific obligations to support compliance with the domestic legislation or regulatory requirements of the contracting party providing genetic resources, and contractual obligations reflected in mutually agreed terms, are a significant innovation of the Nagoya Protocol. Contracting Parties are to:

- Take measures providing that genetic resources utilized within their jurisdiction have been accessed in accordance with prior informed consent, and that mutually agreed terms have been established, as required by another contracting party
- Cooperate in cases of alleged violation of another contracting party's requirements
- Encourage contractual provisions on dispute resolution in mutually agreed terms
- Ensure an opportunity is available to seek recourse under their legal systems when disputes arise from mutually agreed terms
- Take measures regarding access to justice
- Take measures to monitor the utilization of genetic resources after they leave a country including by designating effective checkpoints at any stage of the value-chain: research, development, innovation, pre-commercialization or commercialization

How does the Nagoya Protocol address traditional knowledge associated with genetic resources and genetic resources held by indigenous and local communities?

The Nagoya Protocol addresses traditional knowledge associated with genetic resources with provisions on access, benefit-sharing and compliance. It also addresses genetic resources where indigenous and local communities have the established right to grant access to them. Contracting Parties are to take measures to ensure these communities' prior informed consent, and fair and equitable benefit-sharing, keeping in mind community laws and procedures as well as customary use and exchange. More information on the Nagoya Protocol and traditional knowledge can be found on the Traditional Knowledge programme of work webpage.

Tools and mechanisms to assist implementation

The Nagoya Protocol's success will require effective implementation at the domestic level. A range of tools and mechanisms provided by the Nagoya Protocol will assist contracting parties including:

- Establishing national focal points (NFPs) and competent national authorities (CNAs) to serve as contact points for information, grant access or cooperate on issues of compliance
- An access and benefit-sharing clearing-house to share information, such as domestic regulatory ABS requirements or information on NFPs and CNAs
- Capacity-building to support key aspects of implementation. Based on a country's self-assessment of national needs and priorities, this can include capacity to
 - Develop domestic ABS legislation to implement the Nagoya Protocol
 - Negotiate MAT
 - Develop in-country research capability and institutions
 - Awareness-raising
 - Technology transfer
- Targeted financial support for capacity-building and development initiatives through the Nagoya Protocol's financial mechanism, the Global Environment Facility (GEF)

Editor's note

The above is the wording used on the CBD website.

This has currently put most of the wild-collected rhododendron seed that was available from various sources such as the Rhododendron Camellia and Magnolia Group of the RHS and the American Rhododendron Society out of action. Of course crosses and hybridising can go on with seed sourced earlier than October 2014 but any trade in wild-collected seed since this protocol came into being is now bound by it if you are in one of the signatory countries (basically all members of the UN and the EU).

The Royal Horticultural society has had a formal meeting recently and while there are no final outcomes there is ongoing work being done to try and resolve the issue of seed supply.

Watch the Web sites for more updates!!

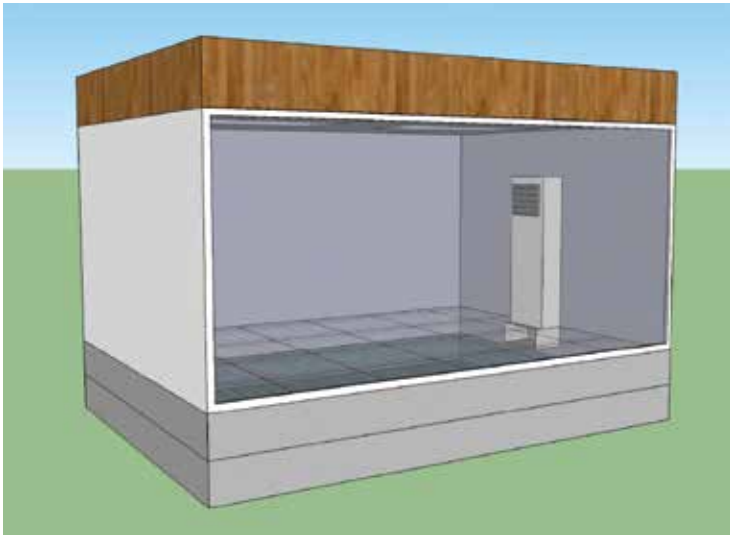
Building a “Rouse House”

Constructing a John Rouse rhododendron seed germinating box

JOHN O’HARA

As part of our improvements to the propagation facilities at the Rhododendron Garden Olinda we undertook to build a seed-germinating box after the style developed many years ago by our well-known late member, John Rouse. Such a box provides adequate light, air movement and an atmosphere that is saturated with moisture without relying on fogging or misting. The absence of sprayed water means there are no droplets to encourage the growth of mould and fungus.

We started our plan by following the brief description given by George Argent in his book *Rhododendrons of the Subgenus Vireya* for the box they use at Edinburg Botanic Gardens. We also had some memories and a few parts of the boxes that John had in his backyard. From these ideas plus a few bits of material left over from the glasshouse refurbishment and a couple of new items we built an environmental chamber suitable for raising rhododendron seedlings at least to the pricking out stage.



The sketch above shows the plan for our “Rouse House”. In essence it is an enclosed box with a wire grid over a heated water bath, a fan runs continuously to circulate air and aquarium lighting enables the seedlings to grow.

Our box is built with twin walled polycarbonate sheeting forming three



sides and the roof, the front has two sliding glass doors and the base is a thick walled PVC trough. The box is about 1.8 metres long by 800 mm wide by 900 high. The trough is 200 mm deep and is kept half full of water. On top of the PVC trough and 100 mm above the water is a galvanised steel grid where the seedling punnets are placed. The water is heated by two 50-watt aquarium heaters set permanently to 25C° (the water rarely gets to 25C° in the winter but is above ambient).

Air circulation is driven by a high humidity tolerant 12-volt fan set at the top of a short length of PVC ducting. This draws air from the top of the box down the duct and blows it across the top of the heated water and runs 24 hours a day.

The box is designed to be housed indoors, in this instance at the back of the new potting shed. This means that we do not have problems with variable light levels and don't get sun scorch. It means however that we rely entirely on artificial lighting to allow plant growth. This lighting is provided by two twin 60 cm fluorescent lights, suspended slightly above the transparent roof.

When we first set this box up we encountered two problems – one caused by the lights and other by condensation dripping from the roof onto the seedlings. The fix put in place solved both problems at same time. The problem caused by the lighting was that it attracted moths and a layer of dead moths had to be regularly removed from on top of the box. To stop the moths getting to the lights a tight fitting wooden box was made to enclose the lights. This wooden box covered both the light fittings as well as the whole of the propagator's roof. It keeps the moths out and also keeps the heat from the lights in, so now the propagator's roof is warm and no condensation collects, so no drips on the seedlings below. This heating of the roof of course only works when the lights are on; they therefore never get turned off. What literature that could be found regarding raising rhododendron seedlings in 24-hour daylight suggests it is not a problem and so far we have found it works well with very good and rapid seed germination. ❀

New Registrations 2014–2015

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 2014–2015.

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.

‘Angel Fair’ Elepidote hybrid of *morii* × *hyperythrum* H: the late Hilary O’Rourke (1990). G: the late Hilary O’Rourke (1996). N & R: O’Rourke Family Estate (2014). Truss: ball consisting of 10 saucer-shaped flowers. Corolla: 25mm × 20mm. Lobes: 5 wavy. Buds: 49C to 49D (peach-pink). Corolla: Inside and outside 155B (cream) with flare 45A (bright red) on upper two lobes only. Solid in throat for 10mm then flares out ending in spots. Leaves: linear 65mm × 35mm. Upper surface: glossy. Height: 180cm 170cm in 20 years. Flowering time: September–October.

‘Autumn Light’ Elepidote hybrid of ‘Indiana’ × ‘Tidbit’ H: the late Hilary O’Rourke (1988). G: the late Hilary O’Rourke (1994). N & R: O’Rourke Family Estate (2014). Truss: flat consisting of 7 campanulate-shaped flowers. Corolla: 45–48mm × 30–40mm. Lobes: 5 wavy. Buds: 45B fading to 43B (crimson fading to bright red). Inside 45B (crimson) with 26B (orange) at base. Outside 41D (tangerine) with 26B (orange) at base. 45B (crimson) spots on all lobes with 26B (orange) 15mm from base of throat. Calyx: 2–4mm 41D (tangerine). Leaves: oblong 78mm × 33mm. Upper surface: glossy. Height: 71cm × 130cm in 26 years. Flowering time November–December.

‘Breffny Ice’ Elepidote hybrid of ‘Trude Webster’ × ‘Queen Souriya’. H: the late Hilary O’Rourke (1987). G: the late Hilary O’Rourke (1994). N & R: O’Rourke Family Estate (2014). Truss: ball consisting of 14–16 saucer-shaped flowers. Corolla: 20mm × 35mm. Lobes: 5 frilly. Buds: 65C (mauve-pink). Corolla: Inside 69C (pale pink) at edges over 155B (cream). Outside: 65D (pale pink). Spots 72A (red-purple) on upper lobe only. Leaves: lanceolate 152mm × 60mm. Upper surface: glossy. Height: 125cm × 137cm in 20+ years. Flowering time: November–December.

‘Breffny Prince’ Lepidote hybrid of *burmanicum* × ‘Alf Bramley’. H: the late Hilary O’Rourke (1990). G: the late Hilary O’Rourke (2002). N & R: O’Rourke Family Estate (2014). Truss: lax consisting of 5–6 funnel-shaped flowers. Corolla: 40–45mm × 15–20mm. Lobes: 5 wavy. Buds: 144C (yellow-green). Corolla: Inside 144C (Yellow-green) throat surrounded by 155D (white). Outside: 8D (lemon) to within 3–5mm of edge of petal which is 155D (white). Calyx: 3–5mm 144C (yellow-green). Leaves: lanceolate 83mm × 35mm. Upper surface: glossy. Height: 140cm × 150cm in 20+ years. Flowering time: October. Scented.

‘Claire Therese’ Elepidote hybrid of ‘The Master’ × ‘Lady Decies’. H: the late Hilary O’Rourke (1987). G: the late Hilary O’Rourke (1993). N & R: O’Rourke Family Estate (2014). Truss: conical consisting of 23 broad funnel-shaped flowers. Corolla: 75–80mm × 110–130mm. Lobes: 5 frilly. Buds: 49B–C (medium to pale dusky pink). Corolla: Inside and outside 62C/D (rose pink fading to pale pink) over white 155D. Blotch of 53A (crimson) in throat and two upper lobes. Calyx: 1–2 mm. 54A (bright rose pink). Leaves: oblong 160–200mm × 60–90mm. Upper surface: glossy. Height: 180cm × 260cm in 27 years. Flowering time : October.

‘Dusky Sunset’ Elepidote hybrid of ‘Jean Marie de Montague’ × ‘Kilimanjaro’ H: the late Hilary O’Rourke (1999). G: the late Hilary O’Rourke (2007). N & R: Brendan O’Rourke (2014). Truss: loose ball consisting of 10–12 funnel-shaped flowers. Corolla: 45–55mm × 35–40mm. Lobes: 5 wavy. Buds: 45C (red). Corolla: Inside 45C (red). Outside 46A (dark red). Flare of 65A (bright pink) on all lobes. Calyx: 1–3mm. 45D (red). Leaves: lanceolate 112–145mm × 42mm. Upper surface: glossy Height: 100cm × 150cm in 15+ years. Flowering time: October.

‘Flourish of Trumpets’ Vireya hybrid of ‘Simbu Sunset’ × *suaveolens*. H: Andrew Rouse (2007). G: Andrew Rouse (2012). N & R: Andrew Rouse (2015). Truss: Full umbel consisting of 16–20 trumpet-shaped flowers. Corolla: 30–35mm × 45mm. Lobes: 5 wavy. Buds: light green. Corolla: Inside and

outside white. Calyx: 1mm off white. Leaves: broadly elliptic to oblanceolate 20–55mm × 10–30mm. Upper surface: glossy. Height: 0.6m × 0.5m in 8 years. Flowering time: April/May.

‘Geoff’s Celebration’ Elepidote hybrid of ‘Jeanette Clarke’ × *arboretum*. H: L. Begg (2003). G: John C Gray (2010) N & R: John C Gray (2014). Truss: Ball consisting of 12 campanulate-shaped flowers. Corolla: 55mm × 50mm. Lobes: 5 frilly. Buds: 46D (red). Corolla: Inside and 55A (bright pink). Crimson spots on upper lobe. Leaves: elliptic 110mm × 40mm. Upper surface: glossy. Height: 1.2m × 1m in 10 years, Flowering time: September. Very heat tolerant.

‘Gilt Edged’ Elepidote hybrid of ‘Odee Wright’ × ‘Medusa’ × ‘Crest’. H: the late Hilary O’Rourke (1997). G: the late Hilary O’Rourke (2004) N & R: the late Hilary O’Rourke and Family (2014). Truss: loose flat consisting of 11–13 funnel-shaped flowers. Corolla: 50mm × 50–60mm. Lobes: 6–7 flat. Buds: 170A through C (bright orange). Corolla: 4A (bright yellow) to 4B (yellow) at

Newly registered vireya hybrid ‘Flourish of Trumpets’.



margins. Outside: 5C (lemon). Orange flare in bottom of throat. Calyx: 4mm 154A (yellow-green). Leaves: elliptical 90mm × 40mm. Upper surface: matt. Height: 103cm × 90cm in 15+ years. Flowering time: November/December.

‘Glamour Belle’ Elepidote hybrid of ‘Glamour’ × *elliottii*. H: the late Hilary O’Rourke (1990). G: the late Hilary O’Rourke (1997). N & R: O’Rourke Family Estate (2014). Truss: dome consisting of 13 funnel-shaped flowers. Corolla: 65–70mm × 70–80mm. Lobes: 5 wavy. Buds: 46B–C (bright red). Corolla: Inside: 47D (light red) fading to 48D (mid pink). Outside: 52A (bright reddish-pink). Red spots on upper lobe only. Calyx: 3–4mm 52A (bright reddish-pink). Leaves: lanceolate 177mm × 62mm. Upper surface: matt. Height: 205cm × 160cm in 24 years. Flowering time: November.

‘Golden Grace’ Elepidote hybrid of (‘Odee Wright’ × ‘Medusa’) × ‘Crest’. H: the late Hilary O’Rourke (1997). G: the late Hilary O’Rourke (2004). N & R: O’Rourke Family Estate (2014). Truss: loose flat consisting of 10–13 open funnel-shaped flowers. Corolla: 50mm × 60–65mm. Lobes: 7 wavy. Buds: 154C (yellow-green). Corolla: Inside and outside 4A (yellow) fading to 4B/C (light yellow) by outer margin. Short flare of 171B (mid tan) in bottom 1/3rd of throat. Calyx: 2–4mm. Green with red cilia. Leaves: oval 88mm × 38mm. Upper surface: matt. Height: 121cm × 126cm in 15+ years. Flowering time: October to mid December.

‘Harbour Lights’ Elepidote hybrid of ‘Noyo Chief’ × (‘Molly Ann’ × *neriiflorum*). H: the late Hilary O’Rourke (1990). G: the late Hilary O’Rourke (1998). N & R: O’Rourke Family Estate (2014). Truss: ball consisting of 16 campanulate-shaped flowers. Corolla: 48mm × 45–50mm. Lobes: 5 wavy. Buds: 53C (red) with 53B (dark red) at edges. Corolla: Inside and outside 53C (red) with 53B (dark red) at edges. Dark red spots on upper lobes. Calyx: 1–2 mm 53D (mid red). Leaves: oblong 85–92mm × 44mm. Upper surface: glossy. Height: 135cm × 170cm in 24 years. Flowering time: October.

‘Heart Of Beaconsfield’ Elepidote hybrid of *arboreum* × unknown. H: Emu Valley Rhododendron Garden (1992). G: Emu Valley Rhododendron Garden (1998). N: Nigel Burch (2012). R: Emu Valley Rhododendron Garden (2015). Truss: Ball consisting of 27 tubular campanulate-shaped flowers. Corolla: 50mm × 48mm. Lobes: 7 wavy. Buds: 53 B (dark red). Corolla: Inside and outside 63A (Bluish red) fading to 62A (deep rose pink). Spots of 63A (Bluish red) on upper lobe. Leaves: Oblong lanceolate 155mm × 45mm. Upper surface: matt. Indumentum: hairy. Silver when young and remaining silver when mature. Height: 3m × 2.5m in 20 years. Flowering time: late August.

‘How Delicious’ Elepidote hybrid of ‘Odee Wright’ × ‘Crest’. H: the late

Hilary O'Rourke' (1987). G: the late Hilary O'Rourke (1994). N & R: O'Rourke Family Estate (2014). Truss: loose flat consisting of 10–13 open funnel-shaped flowers. Corolla: 50mm × 60–70mm. Lobes: 7 wavy. Buds: 20A (deep yellow) fading to 20 C (pale apricot). Corolla: Inside and outside 11B (butter yellow) fading to 11D (deep cream) by outer margin. Calyx: 6–10mm 4B (yellow). Leaves: elliptical 90mm × 40mm. Upper surface: glossy. Height: 92cm × 59cm in 20+ years. Flowering time: October to mid December.

'Jillian Milbourne' Elepidote hybrid of 'Nicholas' × 'Red Eye'. H: the late Hilary O'Rourke (1990). G: the late Hilary O'Rourke (1997). N & R: the late Hilary O'Rourke and Family (2014). Truss: tight conical consisting of 18 widely funnel-shaped flowers. Corolla: 47mm × 80mm. Lobes: 5 wavy. Buds: 77A (purple) on upper 2/3rds and 77B (mid purple) on lower 1/3rd. Corolla: 77A (purple) on outer margin fading to 77B (mid purple). Obvious marking along mid-vein of each lobe 77C (lilac). Calyx: 1–2mm. 138D (green). Leaves: oblong 140mm × 50mm. Upper surface: glossy. Height: 126cm × 120cm in 20+ years. Flowering time: November.

'Little Treasure' Elepidote hybrid of 'Tidbit' × 'Ayers Rock'. H: the late Hilary O'Rourke. G: the late Hilary O'Rourke. N & R: O'Rourke Family Estate. Truss: loose ball consisting of 12 short funnel-shaped flowers. Corolla: 30mm × 45mm. Lobes: 5 wavy. Buds: 33A (deep orange). Corolla: Inside 33B (orange), outside 33A (deep orange). Occasional spots of 34A (bright tan) on upper lobes only. Calyx: 5–10mm 34A (bright tan). Leaves: lanceolate 55mm × 30mm. Upper surface: glossy. Height: 92cm × 84cm in 10+ years. Flowering time: October.

'Morning Joy' Elepidote hybrid of 'Colehurst' × unknown. H: the late Hilary O'Rourke (1990). G: the late Hilary O'Rourke (2004). N & R: O'Rourke Family Estate (2014). Truss: lax consisting of 10 saucer-shaped flowers. Corolla: 68mm × 80mm. Lobes: 8 frilly. Buds: 55B (bright rose pink). Corolla: Inside 56B (pink) fading to 56C (pale pink). Outside 56A (mid-pink) fading to 56C (pale pink). Flare on upper lobe 54B (cyclamen pink). Entire throat area covered with splotches 54B (cyclamen pink). Calyx: green 2mm long. Leaves: lanceolate 130mm × 55mm. Upper surface: matt. Height: 170cm × 200cm in 20+ years. Flowering time: November.

'My Girl Winnie' Elepidote hybrid of ('CIS' × *yakushimanum*) × ('Jalisco'). H: the late Hilary O'Rourke (1985). G: the late Hilary O'Rourke (1992). N & R: O'Rourke Family Estate (2014). Truss: conical consisting of 7 open funnel-shaped flowers. Corolla: 55–57mm × 88mm. Lobes: 7 wavy. Buds: 39B (tangerine) blended with 19B (rich yellow). Corolla: Inside splotches of

46C (red) over 19A (yellow-orange). Outside 19C (rich cream) blended with 38A (deep apricot) and 38B (apricot). 46C (red) blotches on upper four lobes. 11C/D (cream) 5–10mm in throat. Calyx: 1–2mm 175B (brown). Leaves: oblong 110–140mm × 53–70mm. Upper surface: matt. Height: 230cm × 290cm in 29+ years. Flowering time: September/October.

Newly registered vireya hybrid 'Olivia Manson' (see opposite page).



‘Olivia Manson’ Vireya hybrid of ‘Simbu Sunset’ × *luraluense*. H: Andrew Rouse (2002). G: Andrew Rouse (2012). N & R: Andrew Rouse (2015). Truss: open consisting of 5–8 narrow campanulate-shaped flowers. Corolla: 40–45mm × 8–15mm. Lobes: 5 wavy Buds: light green. Corolla: Inside and outside 49C (pale creamy pink). Calyx: 1mm very pale light green. Leaves: broadly elliptic to oblanceolate 50–70mm × 18–40mm. Upper surface: glossy. Height: 1.5m × 0.4m in 13 years. Flowering time: April/May. Hardy.

‘Pink Caviar’ Elepidote hybrid of ‘Mrs P.D. Williams’ × unknown. H: the late Hilary O’Rourke (1997). G: the late Hilary O’Rourke (2004). N & R: O’Rourke Family Estate (2014). Truss: lax consisting of 8–10 open campanulate-shaped flowers. Corolla: 50–65mm × 60–80mm. Lobes: 5–6 wavy. Buds: 48B (bright rose pink). Corolla: Inside 18B (butter yellow) graduating to 48C (deep pink) at margin. Outside 48B (bright rose pink) fading to 48D (mid pink) at margin. Blotch of 164A (buff) on two upper lobes. Calyx: 1–4mm 164A (tan). Leaves: oblanceolate 110mm × 40mm. Upper surface: glossy. Height: 98cm × 98cm in 17 years. Flowering time: October.

‘Soft Splendour’ Elepidote hybrid of (‘Anica Bricogne’ × ‘Red Eye’) × ‘Madame Cachet’. H: the late Hilary O’Rourke (1999). G: the late Hilary O’Rourke (2004). N & R: O’Rourke Family Estate (2014). Truss: conical truss consisting of 20–21 flat saucer-shaped flowers. Corolla: 45–50mm × 80mm. Lobes: 5 wavy. Buds: 77A (deep purple). Corolla: Inside 77A (deep purple) margins with 80A (bright purple). Outside 80A (bright purple). Blotch of 178C (tan) on upper 2/3rds of upper lobes with 181A (reddish-brown) on lower 1/3rd spreading to adjacent lobes either side. Calyx: 1–3mm 162D (grey yellow). Leaves: oblanceolate 113mm × 48mm. Upper surface: glossy. Height: 146cm × 173cm in 15+ years. Flowering time: November.

‘Sullivan’s Gold’ Elepidote hybrid of ‘Crest’ × ‘Logan Damaris’. H: Dr Noel Sullivan G: the late Hilary O’Rourke (1992). N & R: O’Rourke Family Estate (2014). Truss: lax consisting of 6–8 saucer-shaped flowers. Corolla: 25mm × 65mm. Lobes: 5 wavy. Buds: 14D (soft yellow) blending with 29C (pale apricot). Corolla: Inside and outside 158A (caramel). Spots: faint showing of 34C (mid-orange) on upper two lobes. Calyx: 1–3mm 14D (soft yellow). Leaves: lanceolate 122mm × 51mm. Upper surface: glossy. Height: 230cm × 150cm in 20+ years. Flowering time: October.

‘Sushmitam Rouse’ Vireya hybrid of *sessilifolium* × ‘Clare Rouse’. H: Andrew Rouse (1998). G: Andrew Rouse (2006). N & R: Andrew Rouse (2015). Truss: open consisting of 6–9 campanulate-shaped flowers. Corolla: 30–35mm × 9–12mm. Lobes: 5 wavy. Buds: light green. Corolla: Inside and

outside 4B (mid yellow becoming brilliant yellow as flower matures). Calyx: 1mm 154D (light yellowish green). Leaves: elliptic 50–100mm × 15–35mm. Upper surface: glossy. Height: 1m × 0.8m in 17 years. Flowering period: May.

‘Sweet Serenade’ Elepidote hybrid of ‘Calstocker’ × ‘Winning Post’. H: the late Hilary O’Rourke (1987). G: the late Hilary O’Rourke (1994). N & R: O’Rourke Family Estate (2014). Truss: lax consisting of 8–10 saucer-shaped flowers. Corolla: 75mm × 115mm. Lobes: 6 wavy. Buds: 155D (cream). Corolla: Inside and outside 155D (cream) tinged with 55B (bright rose pink). Spots 65B (mid pink) deep in throat. Calyx: 1–2mm 55A (deep rose pink). Leaves: oblong 174mm × 54mm. Upper surface: glossy. Height: 220cm × 190cm in 27+ years. Flowering time: September/October.

‘Tache Rouge’ Elepidote hybrid of *morii* × ‘Freckle Pink’. H: the late Hilary O’Rourke (1985). G: the late Hilary O’Rourke (1991). N & R: O’Rourke Family Estate (2014). Truss: ball consisting of 14 open funnel-shaped flowers. Corolla: 25mm × 35mm. Lobes: 5 wavy. Buds: 155A (cream). Corolla: Inside and outside 155A (cream) Spots of 187B (burgundy) on all lobes. Leaves: lanceolate 110–130mm × 60–70mm. Upper surface: matt. Height: 300cm × 280cm in 20+ years. Flowering time: September.

‘Terry Shadbolt’ Elepidote hybrid of *magnificum* × unknown. H: Bob Malone (1987). G: Emu Valley Rhododendron Garden (2009). N: Emu Valley Rhododendron Garden (2013). R: Emu Valley Rhododendron Garden (2014). Ball consisting of 23 ventricose-campanulate-shaped flowers. Corolla: 70mm × 70mm. Lobes: 8 wavy. Buds: 60C (red-purple Corolla: Inside and outside 150D (pale greenish-yellow) with 186D (pale grey-pink) on edges. Blotch of 77A (purple) at base. Leaves: oblanceolate 400mm × 135mm. Upper surface: matt. Indumentum hairy. Fawn when young, light fawn when mature. Height: 4m × 3m in 25 years. Flowering time: August.

‘Tivoli Gem’ Elepidote hybrid of (Golden Star’ × ‘Lems Cameo’) × (‘Award’ × ‘Ayers Rock’). H: The late Hilary O’Rourke (1999). G: the late Hilary O’Rourke (2005). N & R: O’Rourke Family Estate (2014). Truss: lax consisting of 13 open funnel-shaped flowers. Corolla: 52mm × 95mm. Lobes: 7 frilly. Buds: 53C (red). Corolla: Inside 51A (light red) margins fading to 51B (deep dusky pink) right through to 10D (pale lemon). Outside 52 B (light red). Flare of 34C (orange) on upper 4 lobes. 53 A (crimson) blotch in throat. Calyx: 8–15mm 52B/C (light red). Leaves: oblong 124mm × 47mm. Upper surface: matt. Height: 109cm × 140cm in 15 years. Flowering time: October/November.

‘Velvet Cream’ Elepidote hybrid of (*decorum* × ‘Tortoiseshell Wonder’) × ‘Cream Glory’. H: the late Hilary O’Rourke (1999). G: the late Hilary O’Rourke (2006). N & R: O’Rourke Family Estate (2014). Truss: loose ball consisting of 10 open funnel-shaped flowers. Corolla: 55mm × 60–80mm. Lobes: 7 wavy. Buds: 20B (apricot) flushed with 29C (pale orange) and 46D (light red). Inside and outside 20B (apricot). 57B (cyclamen pink) down mid-vein from base to tip of each lobe. Blotch of 46A (dark red) flaming from base of throat. Calyx: 15–25mm 52B (light red) on a background of 11B (yellow). Leaves: elliptic 92mm × 46mm. Upper surface: glossy. Height: 118cm × 132cm in 15 years. Flowering time: November.

‘Wood Nymph’ Elepidote hybrid of (‘Jalisco’ × ‘Mrs P.D. Williams’) × ‘Great Scott’. H: the late Hilary O’Rourke (1999). G: the late Hilary O’Rourke (2006). N & R: O’Rourke Family Estate (2014). Truss: ball consisting of 19 broad funnel-shaped flowers. Corolla: 60–65mm × 90–110mm. Lobes: 5 wavy. Buds: 155C (white) with glimpses of 76B (lilac). Corolla: Inside and outside 155C (white) with 76B (lilac) edges. Blotch of 172A (tan) on upper lobe and spreading onto edges of adjoining lobes. Calyx: 1 – mm 162B (grey-yellow). Leaves: oblong 145mm × 58mm. Upper surface: glossy. Height: 130cm × 160cm in 15+ years. Flowering time: October/November.

‘Worthy Knight’ Elepidote hybrid of ‘Britannia’ × ‘Kilimanjaro’. H: the late Hilary O’Rourke (1990). G: the late Hilary O’Rourke (2002). N & R: O’Rourke Family Estate (2014). Truss: ball consisting of 9 broad funnel-shaped flowers. Corolla: 58mm × 90–100mm. Lobes: 5 frilly. Buds: 46C (red). Corolla: Inside and outside 53C (soft red). Blotch of 187A (rich brown) on upper lobes. Calyx: 1–2 mm 53C (soft red). Leaves: oblong 105mm × 48mm. Upper surface: glossy. Height: 140cm × 200cm in 20+ years. Flowering time: October/November. ❀

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