



The
Rhododendron

Official Journal of the Australian Rhododendron Society

1998

Volume 38

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 with 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 the Branches' or National Council's Secretaries.

Subscriptions

Australian members pay an annual subscription to the Society's National Council of \$15 per annum. The annual journal *The Rhododendron* is included as a benefit of membership. Individual branches collect membership subscriptions from their own members, which may include amounts additional to the National Council subscription.

Subscription for overseas members is A\$25 per annum, which includes affiliation with a nominated Australian branch, and airmail delivery of *The Rhododendron*. Overseas subscriptions may be paid by bank draft, and in certain branches by Visa or Mastercard.

Correction to last year's edition ...

Colour plate (iv): Upper picture shows *R. malayanum*, not *R. zollingeri* as indicated.

Our cover: *Rhododendron* 'Unique', Photograph by Richard Francis.

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The Rhododendron, the journal of the Australian Rhododendron Society Inc., is published annually by the Australian Rhododendron Society. Material for publication in *The Rhododendron* is welcomed and contributors are requested to note that the closing date for each issue is August 1.

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President's Report

Time does fly, and as I write this report I ask the question, “where has the last twelve months gone and what have we achieved in that time?” The more I live life the more I realise life must be lived, otherwise life can pass us by and the goals you may have, do not come to pass. This is a very important issue for the Society to which so many of us commit much time and effort.

What is it that we want to achieve and how are we going to achieve it? It is very good to belong to societies like ours but belonging is not enough in itself. To ensure the survival and ongoing development of a healthy society, we must develop goals and targets and then set about achieving them by utilising the people who have, not only the ideas, but also the time and energy.

Our Society is full of people who have years of accumulated experience and skills in many different aspects of horticulture, especially growing rhododendrons. Many of them are very keen to share their knowledge. All we need to do is help them. Sharing is one of the great strengths of our Society and one thing we must continue to build, and not let time or any other pressure stop us from doing so. Sharing is one of the “identifiers” or “distinctives” of our society and underpins our very existences and certainly our longevity.

One of the great strengths of having a Society that is organised as a national body is the ability to participate in this sharing at a national level. I am aware that the Victorian Branch is providing a quantity of plant material to the Emu Valley Garden this year, furthering the garden's development. Earlier this year the South Australian branch, through the Mount Lofty Botanic Garden, also supplied several dozen rhododendron plants, mostly of known wild origin, to Emu Valley for its collections. Efforts are being made to assist selected northern botanic gardens to develop collections and displays of *Vireya* rhododendrons, and many members continually swap plant material and information as a result of being brought together by the Society. These opportunities are without doubt, generated and facilitated through the arrangement of our Society as a national society, something we should acknowledge and strive to not only protect but strengthen.

I would like to briefly comment on the renaming of the North West Tasmanian branch to the Emu Valley Rhododendron Society Incorporated. This name change was effective from the 30th July 1998.

I would like to point out that this name change is perfectly admissible under the Society's Rules, which do not mandate the form of name which any Branch may adopt, as long as the Australian Rhododendron Society affiliation is acknowledged in official communications and published materials.

Having said that, I would like to congratulate the Branch on its initiative and hard work in establishing the garden, the role they are playing in achieving the very aims and goals of our Society, and acknowledge the fact that they see great benefit from the name change. I wish them continued success with the garden and their public patronage, and believe it is very important and exciting that this garden is being developed in this way.

Congratulations to all who have been and are currently involved.

I am looking forward to the fast-approaching National Council meeting and ARS weekend at Illawarra on the 9th, 10th and 11th of October. I believe these weekends are extremely beneficial for the Society and those who are able to attend, and it is excellent to have the Illawarra Branch hosting this weekend.

I encourage members to make an effort to attend the annual weekends because it is a very good way to get to know other members of our Society, share ideas and information and generally have a good time. The Tasmanian weekend still stands out in my mind as achieving all of this.

That's what so good about *our* Society.

John Schutz
outgoing National President
September 1998.



*THE AUSTRALIAN RHODODENDRON SOCIETY
NATIONAL COUNCIL*

Annual Report for the year 1997–98

BARRY STAGOLL

The 1997 Annual General Meeting of the Australian Rhododendron Society was held on 11 October in Hobart. As usual, it was held as a component of our annual successful Annual ARS “National Weekend” convention, this time hosted by the Southern Tasmania Branch and very well attended by members of the host Branch and visitors from all other Branches, who enjoyed a feast of garden visits regardless of some heavy Spring rain showers. The Society’s Committee (National Council) met earlier on the same day. President Mr John Schutz chaired both meetings.

The AGM noted that all officers on National Council were reappointed to their existing roles, so that National Council for the 1997/98 year comprised (as from the close of the Meeting):

Officers

President (also Public Officer):	John Schutz CHECK!!
Vice President:	Neil Jordan
Secretary:	Barry Stagoll
Treasurer:	Neil Webster
Editor:	Richard Francis
Librarian:	Val Marshall
Technical Officer:	Ken Gillanders
Registrar:	Graeme Eaton
Immediate Past President:	Lesley Eaton

At the same date Delegates to National Council were:

Southern Tasmania:	Barry Davidson Shane Atkins
North West Tasmania:	Maurie Kupsch Terry Shadbolt

South Australia:	Lester Duthy Allan Kerr Grant
Illawarra:	Clyde Smith Mavis Smith
Victoria:	Lionel Marshall John Quinn

The Financial Statements (as published in the 1997 Volume of *The Rhododendron*) were placed before the Meeting. It was explained that the substantial reduction in the income reflected in those statements resulted from the decision to reduce the National Council levy to \$10 per Australian member (from \$15 in the previous year). Members had been advised already, with their membership renewals for the 1997/98 year, that National Council had decided to revert to a levy of \$15 per Australian member (with an appropriate adjustment to subscriptions for overseas members) for the 1997/98 year.

The Meeting also adopted by special resolution the new Rules of the Society proposed by National Council. These came into full effect upon their subsequent registration with the corporate authorities.

Ralph Sangster, who was amongst the Victorians present, was paid a warm tribute for his contribution to the Society since its earliest days in a speech by Neil Jordan, Vice-President. This was received with acclamation.

As is now its established practice, National Council held a further meeting (in April 1998) by teleconference.

National Council next meets in Wollongong, New South Wales, during the 1998 ARS Annual Convention, this time organised by the Illawarra Branch, to take place on the weekend of 10–11 October, 1998.

The Convention will include a number of visits to members' gardens and botanic gardens. These will, of course, include the Rhododendron Park which the Branch has worked so hard to create, and in which important new work has, as usual, been proceeding recently. Our Illawarra members, and the rest of the community, have had the extra burden of cleaning up damage caused by severe storms experienced in the region in August.

The 1998 Annual General Meeting of the Society is to be held during a dinner on the Saturday evening. David Stanton, President of the Branch, will address the dinner. The financial statements of the Society for the 1997/98 year, as will be submitted to the AGM, appear in full elsewhere in this issue.

Life Members

The Victorian Branch of the Australian Rhododendron Society submitted the names of Branch members, Mrs Lesley Eaton and Mrs Jean Whitelaw, to the National Council of the Society for consideration of the suggestion made by the Branch that these two ladies be granted Life Membership of the Society. Citations were presented and Council was gracious in accepting the recommendations made.

A brief outline of the citations given show that these members possess all the attributes for the Award of Life Membership.

Mrs Lesley Eaton has had an association with gardening since childhood, and became a member of the Australian Rhododendron Society in 1971, serving a three year period on the Committee, during which time she occupied the position of Secretary for two years. She has worked in the National Rhododendron Gardens at Olinda since 1971, being a member of the Gardens' Technical Group, the Horticultural Reference Group (of the Dandenong Ranges gardens) and the former Committee of Management of the Olinda gardens where she was Deputy Chairperson.

Since 1979 she has been a member of the Committee of the Victorian Branch of the Society, holding positions of Secretary and President. In 1987 she was elected to National Council of the Society, becoming Secretary for a period of six years and President of the Society for three years.

Mrs Eaton regularly invites members to visit her garden and provides propagation material as available. She maintains portion of the Victorian Branch stock material of rare and unusual plants, which for safekeeping are not held in the Olinda garden.

She is a speaker of note, being invited to address meetings within the State, interstate and overseas. She is an exhibitor at shows and displays and willingly imparts her knowledge of the genus *Rhododendron* to all interested persons and promotes the Society at every opportunity.

Mrs Jean Whitelaw has a background of agricultural science with bacteriological experience and maintains an extensive home garden.

She is a foundation member of the Australian Rhododendron Society and a foundation member of the National Rhododendron Gardens Ladies Auxiliary. As a member of the Committee of the Society in those early years she served as Secretary for a period of three years and later as a member of the Victorian Branch of the Society represented the Branch on the Committee of Management of the National Rhododendron Garden at Olinda.

Mrs Whitelaw is a prolific exhibitor at rhododendron shows and at Branch meetings and has delivered lectures on the genus *Rhododendron* to the Australian Rhododendron Society and to the Royal Horticultural Society of Victoria.

She has assisted in all phases of the Olinda garden since its inception and is a constant member of the Branch Garden Group, using her expertise in the propagation area.

She willingly divulges her knowledge of the genus to all interested persons and uses every opportunity to promote the Society.

Lionel Marshall
Secretary
Victorian Branch

Rhododendrons Down Under

A U S T R A L I A 2 0 0 0 C O N F E R E N C E

Melbourne, October 12–15, 2000

Preparations are well under way for the fourth international rhododendron conference to be staged in Australia. Content will be stimulating and entertaining, and the garden inspections and visits to other attractions in and around the Dandenong Ranges – site of the main conference proceedings – will be full of interest. Aside from the focus upon the National Rhododendron Garden at Olinda, other visits will include Melbourne's Royal Botanic Gardens, one of the world's highly regarded botanic gardens. Conference visitors will be invited to spend time at the premier Australian fauna park, and take a trip back through time on the scenic Puffing Billy narrow gauge rail journey. A bevy of other sightseeing opportunities are available within a few hours travel.

To arrange for a personal Conference package to be forwarded, when this becomes available, preliminary interest in the Conference can be registered by writing to the Society's Victorian Branch at PO Box 500, Brentford Square, Victoria 3131, Australia.

The Life of Dr Joseph Hooker

LISA CHARLESWORTH

Introduction

Interest in Sikkim rhododendrons began in 1827 when Dr Wallich first introduced to England seeds of *R. arboreum*. However, it wasn't until just over 20 years later that the doors to the Sikkim rhododendrons were opened by a young Dr Joseph Hooker.

I will describe some of the adventures and hardships that he endured during both his famous collecting trip in Sikkim Himalayas and before that, on his expedition to the Antarctic. I will also describe other highlights of his career that hopefully, you will also find interesting.

Joseph's family background

There is little wonder that Joseph was such a great botanist (in fact, according to Mea Allen, "he was the greatest botanist of his time"), as he grew up in a household that talked, ate and slept botany. Joseph's father was Sir William Jackson Hooker – he, too, was knighted for his services to botany.

William began his professional career in botany out of desperation – he needed money to keep his young family afloat. Before that, he was a botanist but wasn't being paid for his work. With the help of an influential friend, Sir Joseph Banks, he was appointed to the Chair of Botany at Glasgow University in 1820.

It was during these years in Glasgow, while Joseph was a young boy, that he began to show a keen interest in botany. Each morning, Joseph, who was then seven, would attend William's pre-breakfast botany lectures. By the time he was ten his father was boasting about his botanical skills to his friends. At this stage, he was already spending all of his spare time in William's herbarium. Joseph's keen interest in botany remained until the day he died.

William left Glasgow in 1841 and headed for Kew. It was the years spent as the first Director of Kew Gardens for which William was renowned.

When he first became Director, the gardens comprised a mere 11 acres. By 1846, five years later, they comprised 650 acres, the size they are currently. During his realm, among other things he built many greenhouses, the Palm House and Temperate House, the Museum of Economic Botany

and the wood museum and established a library. He made his own personal herbarium available to all visiting botanists and this eventually was bought by the government to become the official Kew herbarium. He also commenced distributing many useful and ornamental plants and seeds around the world. With all of these changes, the public flocked to Kew – “the trickle of 9,000 visitors during William’s first year as Director reached half a million by [the time he died in] 1865.”¹

Antarctica

Joseph was invited on his first scientific expedition when he was 22. He had always been interested in travel so when he was offered a place on board the *Erebus*, which was to be sailed by Captain Ross to the Antarctic in search of the south magnetic pole, he jumped at it. The only stipulation was that he had to successfully complete his medical degree before the expedition left. He graduated from medical school in May 1839, was accepted into the navy and sailed in September 1839. The *Erebus* was to be his home for the next four years.

He was appointed Assistant Surgeon to the *Erebus* and Botanist for the expedition. The second ship in the expedition was the *Terror*. The fact that he was botanist for the expedition and not just his ship was very important to him as it not only increased his status for the expedition, but it was also a major personal victory as Charles Darwin’s name had been half-heartedly mooted by Ross for a possible Naturalist’s position. Darwin was famous for his *Voyages of the Beagle* by this stage.

The official botanical equipment that Joseph was supplied with was meagre. Joseph recorded that “except for some drying paper for plants, I had not a single instrument or book supplied to me as a naturalist ... not a single glass bottle was supplied for collecting purposes, empty pickle bottles were all we had, and rum as preservative from the ships’ stores”². Joseph was lucky that his father had given him many books and pieces of equipment.

To determine the south magnetic pole, Ross had to stop at many different sites between New Holland and Cape Horn so that he could make magnetometric observations from known locations. These measurements were to record the variations that would determine true and magnetic south. While Ross was busy taking readings, Joseph was busy botanising. For instance, when the ships landed for nine weeks at Kerguelen’s Land – this was the Desolation Island that he had had read to him by his grandfather as a child from Cook’s

Voyages – Cook had recorded that there were only 18 species on the island and Joseph was determined that he would find more than that number. And he did, he found 150 species, including 17 of Cook's 18 species. He found that finding the plants was often difficult as the hilltops were always covered with snow and frost – and, as he recorded in his journal, to collect some of his best lichens he had to sit on them until they thawed.

The four-year Antarctic voyage was successful. Ross discovered the south magnetic pole in February 1843 and Joseph discovered and returned to Kew hundreds of species of plants. He also greatly increased his knowledge of the geographical distribution of plants by always being meticulous in recording the exact location of where he found his species. Although both boats returned to England in the same condition as they left, if it hadn't been for the great experience of Ross and most probably an enormous amount of luck, they wouldn't have returned at all.

Their third trip south was also successful. However, they were very lucky to survive. Late on the 31 December 1841 they were surrounded by pack ice. This is probably not as hard to imagine when you realise that it travels at anything from 10–60 km per day. They weren't fussed by this as it gave them the perfect opportunity to throw a huge New Year Eve's party. They cast out double anchors, mooring the *Erebus* and *Terror* one each side of an iceberg to prevent them from colliding. They then proceeded to set up a bar and ballroom on the ice, and they then drank and danced until dawn.

The two ships remained moored on each side of the iceberg until 17 January when the sea gained such a height that their 8-inch ropes were not strong enough to hold them. The ships were so close by this stage that when one of the ships rose to the crest of a wave, the other ship was on the crest of the next wave. The storm continued for two days and when it finally ceased, the ships' rudders were badly damaged but at least they were still afloat. If it wasn't for a chain of icebergs windward of them, the ships would have been destroyed by the pressure of the pack ice. The *Terror* was particularly lucky to survive as, during the storm, she had been on fire for two hours and the crew was only able to extinguish it by filling the hold to a depth of two feet. Ross wrote later in his journal "The awful grandeur of such a scene can neither be imagined nor described, far less can the feelings of those who witnessed it be understood. Each of us secured our hold, waiting the issue with resignation to the will of Him who alone could preserve us, and bring us safely through this extreme danger; watching with breathless anxiety the effect of each succeeding collision, and the

vibrations of the tottering masts, expecting every moment to see them give way without our having the power to make an effort to save them.”³

After the close call, it was decided that they should head north to winter in the Falkland Islands. During their trip north things were going well until shortly before midnight one night another storm hit. Small pieces of ice began dotting the sea (warning them that a field of icebergs lay ahead) and so Ross ordered the sails to be dropped. The sails had only just been brought down when a huge iceberg was seen ahead. The *Erebus* would have cleared it except that the *Terror* suddenly crashed very heavily into her. The two ships, now hanging together by a mess of rigging, were riding up and down the huge waves as they were crashing into the iceberg. Finally the *Terror* separated from the *Erebus* and moved past her. The *Terror* was badly damaged but the *Erebus* was completely disabled, “her decks like a junkyard with wreckage”. At this stage she was so close to the iceberg that her lower yardarms were striking the ice cliffs which towered high above the mast-heads. Showing his superb seamanship, Ross ordered the mainsails to be dropped. The ship immediately responded, pushing her stern into the sea as she backed away from imminent danger, only to discover another cliff-high iceberg immediately astern. Ross was able to swing her around and shoot through the narrow channel between the two perpendicular walls of ice. Once through they found smooth water. The next morning they found the *Terror* still afloat and they worked to make repairs and then headed north for the winter.

Ross successfully completed the objective of his expedition on 22 February 1843 when he crossed the point of no variation – this was the position of the south magnetic pole. The expedition returned home four years and five months after they sailed from England. Quite amazingly, during the entire voyage, the only sickness that Joseph had suffered from was one cold in the head and a brief attack of rheumatic fever while in Madeira.

Sikkim-Himalaya

Joseph was back in England for four years before his second expedition. During this time, he wrote his *Flora Antartica* and was employed by the Geological Museum as the fossil botanist on the Geological Survey.

He was working on the survey when the opportunity to travel to India arose. He bumped into the First Lord of the Admiralty, who offered him the chance to work abroad and in 1848 he headed off to collect both fossil plants for the Geological Museum and living plants and seeds for Kew Gardens.

Joseph thought it was to be only a short trip as, just shortly before he left, he became engaged to a lifetime friend, the daughter of the Cambridge Professor of Botany. Frances Henslow was to be the right wife for Joseph as, by both birth and training, she was able to work by his side and share in all of his scientific aims and enthusiasm.

It was to be a long engagement for them, however, as he didn't return for nearly four years. Not that that would have stopped him as he was "ready to make any sacrifice to get to the tropics for a year" as he was convinced that "it will give me the lift I want, in acquiring a knowledge of exotic Botany".

He was thrilled to be going to Sikkim, and, if he could, the independent states of Nepal and Bhutan, as he felt that, because of what he had been told of the climate, he stood a good chance of discovering many new botanical species. He was also pleased with the idea that he would be the first European in 65 years to be travelling into that unmapped region of the Himalayas. It would then be more than 50 years before another European would travel in the same area.

Sikkim was chosen as its ruler was practically a dependent of the British Crown and, as such, access shouldn't have been a problem. Sikkim is located between Bhutan in the east and Nepal in the West. It is only 12,700 sq km, about 18 times smaller than Victoria. Although tiny, it has an immense biological diversity that is not found anywhere else in the world. For instance, there are more than 4000 species of flowering plants, of which the rhododendrons for which Sikkim is famous comprise only one per cent. This biological diversity results from the great changes in both aspect (Sikkim contains Kangchenjunga, which is 8,580 m) and climate. For example, within a north-south distance of about 150 km, the flora ranges from subtropical through temperate to glacial.

Compared to his earlier trip to the Antarctic, the start of his journey, initially heading to Darjeeling was in relative luxury. His baggage train comprised bullocks, bullock carts and elephants. Joe was most impressed with his elephant as it picked up the stones that he wanted and threw them back to him using its trunk, thereby saving him from dismounting to geologise.

Joe set up his base at Darjeeling and it was from here that he made three expeditions into the Himalayas.

His first expedition started in October 1848. He was hoping to walk deep into Sikkim, however the Rajah refused him permission. This was just the start of the political problems that he was to experience! Instead he explored eastern Nepal so that he could be as close to the eastern flank of Kangchenjunga as possible. Back in 1848, it was thought to be the

highest mountain in the world. It is now known to be the third highest, being just ten metres short of K2 and 248 m shorter than Mt Everest.

His party for his first expedition comprised a massive 56 people – there were no thoughts of conservation in those days! However, with the gear that he had, he needed nearly all of them. For instance, 14 coolies were required to carry the food, which was mainly rice, ghee, oil, capsicums, salt and flour. Seven more were required to carry his stock of paper for drying his plant specimens, and others were required to carry items such as his tent, bed, instruments, box of clothes, books and papers.

He also had with him three lepchas, the local aborigines he had specifically trained to help collect plants and rotate the drying papers. Joseph actually found the locals to be useful during his expeditions as they knew the locations of many of the plants and they provided him with a lot of useful information about what the plants were used for.

He experienced his first problems of having to rely on coolies on the first night – he had to spend the night without food or a bed as the coolies who were carrying them failed to arrive. Days later, realising that they were going to cause trouble, he decided to sack them. They saved him the trouble as they ran off first. Stuck at 3,000 m without enough coolies to carry the enormous load, he decided to take a more circuitous route via mountain villages where he was able to pay coolies as required.

On another occasion, he had to exist for 18 days on just 8 days' rations and was at last reduced to coarse boiled rice and chilli vinegar.

Another time, he had to wait three days at the foot of a mountain for his porters to bring up his baggage. During this time, he had no dry clothes or any paper for the plants that he had collected. His tent was also with the porters and so he slept under the shelter of a precipice to try to get some protection from the lashing rain and snow. It was really amazing that he didn't get hypothermia! Mind you, the local lepchas also braved the same conditions as Joseph but all they were clothed in was a cotton vest loosely thrown around their body reaching their knees and gathered around their waist, and in cold weather they simply added an upper garment with loose sleeves.

Apart from problems with his coolies and the climate, he also experienced many annoyances with the local livestock. In his journal he wrote: "A large tick infests the small bamboo, and a more hateful insect I never encountered. The traveller cannot avoid these insects coming on his person (sometimes in great numbers) as he brushes through the forest; they get inside his dress, and insert the proboscis deeply without pain. Buried head and shoulders, and

retained by a barbed lancet, the tick is only to be extracted by force, which is very painful. I have devised many tortures, mechanical and chemical, to induce these disgusting intruders to withdraw the proboscis, but in vain.”

Leeches were another continual problem at elevations of up to 7,000 ft (2,134 m). In order to be able to botanise successfully, he had to get off his pony and walk down into the many gullies below the steep track. Again from his journal, “diving into little gullies, and coming out loaded with new plants and ferns, and my legs with leeches, which swarm about the foot of the hills, bite through your stockings and roll themselves up into little balls like thick skinned gooseberries, and thus lie with impunity within your shoes.” And another entry, “I think the leeches are worst; my legs are, I assure you, daily clotted with blood, and I pull my stockings off quite full of leeches; they get into the hair and all over the body.” The leeches were so bad in fact that they left his legs scarred for life.

And the most ironic hardship was caused by the rhododendrons themselves. “If your shins were as bruised as mine tearing through the interminable rhododendron scrub at 10,000 to 13,000 feet (3,050–4,000 m), you would be as sick of these glories as I am.”

But for all of the hardship that Joseph faced, there were always the rhododendrons as compensation. On one particular day he found 26 species. Almost wherever he went, in ravines, on mountain tops, on unstable landslips, there were cascades of flowers in every shade of white, red and yellow from which he would collect seeds and make sketches.

After botanising successfully for three months, Joseph returned to Darjeeling to ship eighty loads of plants and geological specimens to England. During the expedition, Joseph had twice walked through the snows of Kangchenjunga, and was the first Englishman to have done so.

His second expedition began four months later and lasted for seven months. This time he was to explore the loftier areas of Sikkim and hoped to cross briefly into Tibet. His party comprised 42 people of which most were young lepchas who Joseph liked and trusted enormously – he wasn’t going to risk taking Bhutan coolies this time.

Being at higher elevations during this expedition (for a two-month period they didn’t get below 10,000 ft/3,050 m) he suffered regularly with altitude sickness – as he wrote, his head ringing with an acute headache and feeling as if bound in a vice, his temples throbbing at every step, while he retched with sickness. His answer to this particular problem was that it was easier to take his notes on the way up to altitudes above 15,000 ft/

4,575 m (this appeared to be his threshold) – as then he did not feel so sick – rather than on the way down when he was sick all of the time.

At 18,000 ft (5,500 m) he collected a rhododendron which he called the snow rhododendron for obvious reasons. “The hard, woody branches of this curious little species, as thick as a goose quilt, straggle along the ground for a foot or two, presenting brown tufts of vegetation. The branches spread horizontally and are barely raised two inches above the soil. They are exposed to the joint influences of a scorching sun by day and the keenest frost at night. During genial weather, when the sun heats the soil to 150°F, its perfumed foliage scents the air, while to snowstorm and frost it is insensible, blooming through all, expanding its little purple flowers to the day.”

And at 19,000 ft (5,800 m) he was rapt to find a lichen that he hadn't seen since he was in the Antarctic: “I saw stony hills at 19,000 feet stained wholly orange-red with *Lecanora miniata*, exactly as the rocks of Cockburn Island were in 64° South; is not this most curious and interesting? To find the identical plant forming the only vegetation at the two extreme limits of vegetable life is always interesting; but to find it absolutely in both instances painting a landscape, so as to render its colour conspicuous in each case five miles off, is wonderful.”

At one stage when he was very close to Tibet, to obtain a better view he climbed Donkia mountain to a height of 19,300 ft (5,883 m). In doing so, he broke the record for the greatest altitude to which man had climbed.

During the expedition, Joseph's party met with constant political hostility. The Rajah was very reluctant to let him into Sikkim and so many ploys had been set up to encourage them to leave the country. In one area Joseph found that the path was strewn with limbs of trees, crossing stones had been removed from the streams, and when he came to a cane bridge across a river he found that the supports had been loosened and slips of bamboo ingeniously placed to trip up the unwary passenger and overturn him into the deep broiling river below.

Hooker was not going to be intimidated. Being typically Victorian, he felt that he had every right to be exactly where he wanted to be. He also felt confident of his position and right as he had accompanying him in his party, Britain's political agent responsible for maintaining relations with the Rajah, Dr Campbell. Campbell had insisted on accompanying Joseph into Sikkim as the Rajah's permission had been very clouded by threats from the Dewan, the Rajah's chief adviser.

So when all other means of intimidation had failed, the Dewan struck. While awaiting an audience with the Rajah (they were trying to sort out

their access rights to the country), unbeknownst to the Rajah, the Dewan sent a large number of Sikkimese to invade the stone hovel in which they were housed. Campbell, thinking it better to get out of the hut, was suddenly shouting loudly: "Hooker, Hooker!! The savages are murdering me!" When Joseph rushed to the door, he saw a swarm of men kicking and torturing Campbell. Before he could go to his rescue, Joseph was seized by another eight Sikkimese and forced back into the hut. Joseph's captors simply questioned him, enquiring how he thought that Campbell would react to such treatment.

It seemed that the entire episode was set up to try to remove Campbell from Sikkim, as he had been working successfully for the downfall of the Dewan. And since the Dewan had a successful monopoly of trade both in and out of Sikkim, he wanted to ensure that Campbell was removed, and what better way than by trying to destroy the relationship that existed between Britain and Sikkim.

The following morning Hooker was allowed to see Campbell and found him badly bruised about the head but otherwise unhurt. The two men were held for six weeks, during which time they were not hurt but just made as uncomfortable as possible. The Dewan's plans failed because the British rushed a small force to Darjeeling, scaring the Rajah into ordering the Dewan to release the prisoners and then sacking him. Typically, Joseph still managed to continue botanising during some of his capture. While the two men were being forced to march to another area, he "managed to snatch ripe capsules of rhododendron seed from the bushes they passed and in fact made an impressive collection of seeds of many different species."

On his two expeditions in Sikkim, Joe collected, sketched and described 36 species of rhododendrons, of which 28 were new to science. Before 1848, only 33 species were in cultivation. The Rhododendron Dell at Kew Gardens was the recipient of the seedlings grown from the seeds of the hardier species that he sent back to England. It remains to this day a memorial to Joseph, who started a craze for the rhododendron.

When Joseph arrived home, he lost no time in marrying the patient Frances. He then settled down to write. In 1855, his father William finally got his way and had Joseph appointed Assistant Director of Kew. This was lucky for science and Kew. By this stage, Joseph was considering giving up botany, as his meagre government grant for the publication of his works was drying up and there were no paid botanical positions available. When William died ten years later aged 80, Joseph was appointed to the Director's position.

Joseph's friendship with Darwin

Another aspect of Joseph's life that I found quite fascinating was that he was a life-long friend of Charles Darwin. The strong bond of a mutual interest drew them together. Darwin, the zoologist, was interested in the changes that had taken place in the structure of animals and birds throughout the ages. What influences were at work to produce modifications and variations? And why suddenly did a species become extinct?

Hooker, the botanist, had observed in his travels the facts of geographical plant distribution. In his daily work of dissecting plants for the purpose of plant identification, he saw modifications, for example, carpels that were modified leaves. He saw how tenaciously a particular plant clung to the ground, adapting itself to strong prevailing winds by shrinking close to the ground, while its brother in a more sheltered place grew tall and lush – the same species, he averred, though other botanists would not have it so.

This friendship began when Joseph returned from the Antarctic in 1843. By this stage, Darwin had already been thinking about his theories on the origin of species for six years. For the next 16 years they thrashed out their ideas. Darwin relied on Hooker as both a helper and critic. In a letter to Darwin's son, Joseph wrote "It was an established rule that he every day pumped me, as he called it, for half an hour or so after breakfast in his study, when he first brought out a heap of slips with questions botanical, geographical etc, for me to answer. And concluded by telling me of the progress he had made on his own work, asking my opinion on various points."

Hooker also gained from this relationship. Because he was aware of how greatly Darwin relied on his knowledge of plant distribution, this gave him a second motive for perfecting his Floras – botanical publications from the many countries where he collected. Revisiting his enormous collections and studying his predecessors' work, he was able to write accurate books identifying and describing plants. And from these he was able to obtain a true view of where different plants grew, which was the first step in finding the key to the geographical distribution of plants.

So by the time *The Origin of Species* was published in 1859 (Darwin was certainly very thorough in checking every facet of his theory and wanted to ensure that it would stand up to the myriad of criticism that he knew that it would receive), it was basically a team effort. Darwin writing

to Hooker shortly before its publication “Believe that I never forget even for a minute how much assistance that I have received from you.” And during all of this time of 16 years Hooker kept Darwin’s theories to his chest.

Summary

Joseph continued at the helm of Kew until, at the advice of his doctor, he retired in 1885 at the age of 68. For nearly 44 years the Hookers, both father and son, had directed the fortunes of Kew. Quoting Tyler Whittle, “Sir William had pursued, with great effect, the plan for Kew laid down by Sir Joseph Banks, which was to make it the greatest collection of plants in the civilised world, an international reservoir of seeds and plants, and a centre for the development of botany as a science. Joseph carried the plan through to completion.”

Joseph was knighted in 1877 with the Star of India – he was very pleased for botany’s sake and was thrilled with the order as he felt that it was to India that he had given his best labours. This was only one of many accolades that he received during the latter part of his life. By the time he died he was the most widely and highly honoured botanist of his day, and according to Mea Allen, “it is likely that no other botanist will ever be again”.

Joseph’s last chore completed before he died was to reclassify the *Impatiens* genus in the balsam family. This was no menial task – it took him 26 years! He may have retired from Kew but he hadn’t retired from his beloved botany. With a microscope and herbarium sheets from Berlin, Paris and Kew, he set about the job. He completed it, naming 303 new species in the process, carefully returned the herbarium sheets, packed away the microscope, and laid down his pen. Four days later he died. He was 94 years of age.

¹ Hepper, 1982

² Joseph Hooker

³ Ross

During genealogical studies into her family’s history, Lisa Charlesworth became interested in the life of her great, great grandfather. The above lecture was delivered at the June meeting of the Victorian Branch of the Society.

Yunnan – People, Places and Plants

MARGARET L. CAMERON

In May 1994 Peter and I, with Margaret Ann Fulton and another 30 New Zealanders, spent three weeks travelling in the Chinese Province of Yunnan. The tour was organised by the Pukeiti Rhododendron Trust with the cooperation of the Kunming Botanical Institute, and was led by Lynn and Robin Bublitz.

Our aim was to see rhododendrons and other plants in the wild. More than half the known species of *Rhododendron* occur naturally in China, and of these over 250 grow in Yunnan. Although the province lies across the Tropic of Cancer, much of the country is above 2,000 m, giving it a pleasant temperate climate. Yunnan lies at the eastern end of the Himalayan chain, where the clash of the Asian and Indian plates has compressed and wrinkled the land into parallel mountain ranges. The great rivers, the Salween, Mekong and Yangtze, have carved deep gorges between the ranges as they force their way south.

Kunming, ‘city of eternal spring’, was our starting point. The 2,000-year-old capital of Yunnan is rapidly assuming a western face as high-rise tourist hotels dominate the skyline. We set off in two modern minibuses, followed by a small baggage truck to carry the heavy luggage. Travelling with us were Ji Xiangsheng (Tony Ji), Sia Yu (Sha), and Xiao Tiao Jiang (John), three botanists from the Kunming Institute, who took care of all the local arrangements and were our guides and interpreters for the trip.

Our first day’s travel was to Xiaguan, 400 km to the west, along the route of the old Burma Road. A modern motorway has now replaced the old cobbled road for 140 km as far as Chuxiong, but nevertheless it was still a long day as we travelled over parched hills and down into fertile valleys with ever-changing views of hill farms and villages. Everywhere men and women were out in the fields tending the crops. Winters are dry in Yunnan, and the spring and summer rains which come towards the end of May had not yet started.

We stopped beside a steep dry hillside covered in metre-high scrub. A small pink evergreen azalea *Rhododendron microphylon* was growing there, and a handsome plant of *Lyonia ovalifolia*, glossy-leaved, with racemes of narrow pitcher-shaped white flowers. Beside the road and tumbling down the bank, a white rose, growing wild, was flowering abundantly. *Rhododendron pachypodum*, closely related to *ciliicalyx*, and *R. decorum* are common in this area, and we caught glimpses of both from the bus.

Xiaguan, where we stayed on our journey north and again on our return, lies at the southern tip of Lake Erhai. An industrial town, it owes its beginnings to its strategic position at the crossroads of two major caravan routes – one to Tibet and one to Burma.

Historic Dali – the Bai people

Fifteen kilometres to the north is the ancient walled town of Dali, the ancestral home of the Bai minority group, and the seat of an independent kingdom until it was conquered by Kublai Khan in 1253. One cannot walk through the high stone-arched gateway at each end of the town, along the narrow cobbled main street to look up at the crooked rooflines and the blackened timbers of houses that have stood there for hundreds of years, without feeling awed by the weight of its history.

On the outskirts of Dali, three elegant white pagodas rise from the plain. The oldest and tallest, sixteen tiers and 70 m high, has stood there since the ninth century. Silhouetted against the stark outline of the Cangshan Range, they are breathtakingly beautiful in their simplicity.

The Dali plain, three or four kilometres wide, lies between the granite rampart of the Cangshan to the west and Lake Erhai to the east, and its rich dark soil is fed by the many rivers which flow off the mountain. The rice planting season was in full swing in early May, and we watched families lifting and bundling rice seedlings from the nursery beds, while others wading in the flooded paddy fields moved forward in line, methodically planting out the young seedlings. In the shallow waters at the edge of the lake, fenced-off fish-holding areas were guarded by family members on duty in small wooden shelters on stilts.

Climbing the Cangshan

One of the special highlights of our trip was the day we spent on the Cangshan looking at plants, which we regard as special treasures in our gardens, growing undisturbed in their natural state. The access road up the eastern side of the mountain rises directly from the Dali plain. It is a road used mainly to bring out the marble which has been quarried for centuries on the lower slopes. Huge trucks with their 20-ton loads of marble roll and sway as they descend the narrow road. One of these great juggernauts side-swiped the back corner of our hired bus as it passed. The road zigzags across the flank of the mountain climbing to 3,000 m. The bone-shaking journey up took two hours.

Towards the top of the road excitement mounted as we passed a field of blue Iris, and then on the bank a glimpse of pink pleiones, and the unmistakable veined leaves of *rodgersias*. When the bus could go no further we walked, finding *Rhododendron maddenii*, *brachyanthum* and *virgatum* ssp. *oleifolium*, all in flower beside the road. Up a side valley Lynn pointed out the solitary plant of *edgeworthii* noted by the previous tour party two years earlier. *Arisaema elephas* was spectacular under its sheltering leaves, and above us *Rhododendron neriiflorum* had dropped a carpet of red flowers. A handsome clump of *Nomocharis* was an exciting discovery.

The fittest of our party set off for the summit, and were rewarded on the higher slopes by seeing *Rhododendron cyanocarpum*, *R. selense* ssp. *jucundum*, *R. fictolacteum*, and near the top, *R. taliense* and *R. haematodes*. The rest of us climbed more slowly noting on the sunny hillside the bright red new shoots of *Pieris forrestii*, *Viburnum grandiflorum* (syn. *nervosum*), *Piptanthus* and numerous species of *Hypericum*. Growing on a craggy outcrop was *Rhododendron sulfureum* in flower, and on another rocky bluff *R. fastigiatum*, beside a handsome clump of *Bergenia purpurescens*. At about 3,500 m we had lunch in a sunny glade sweetly scented by *Schisandra chinensis* nearby. At this height *Rhododendron trichocladum* was common. Further on we came to *Abies delavayi*, spectacular against the granite cliffs, and a little higher were steep hillsides clothed in *Rhododendron lacteum*.

The journey from Dali to Lijiang

Sunday is market day in this area, and it was on a Sunday that we travelled to Lijiang, 200 km to the north. Everybody, it seemed, was on the move, and the roads were clogged with trucks, tractors, carts, bicycles. Some, we were told, would have a two day walk to their nearest market. We stopped for lunch at Jianchuan and strolled through the chaotic, noisy street, looking at stalls with every conceivable type of food displayed some quite unrecognisable to us. The Bai women, in their traditional dress, many carrying their capacious wicker baskets on their backs, added to the colourful scene.

On the road north again, we crossed the Iron Armour Mountain; photo stops offered magnificent views and a chance to botanise. We found the alpine perennial, *Stellera chamaejasme*, and *Clematis chrysocoma*. *Rhododendron racemosum* bloomed profusely where the land had been cleared under power lines. In the scrub across the valley *R. delavayi* was in flower. *R. yunnanense* in its various colour forms lavender, pink, white and spotted – is widespread at altitudes above 2,500 m. We saw it often, lighting up the sparse pine forest or the forest clearings.

Romantic Lijiang – the Naxi people

Lijiang, an important trading centre for 800 years, lies on a fertile plain dominated by the Yulongxueshan or Jade Dragon Snow Range, with its thirteen spectacular snow covered peaks. It is the home of the Naxi people, a matriarchal society in which women run the market and control the money; and men have traditionally been responsible for gardening, child rearing, painting and music. There was in Lijiang an orchestra made up of mainly elderly men, who had secretly kept alive their traditional Naxi music and hidden their instruments during the years of repression when it was forbidden to play or teach music. The orchestra gave a one hour concert to our group after breakfast in the hotel. There was poignancy in the slow lilting music and the simple universal themes of life and nature.

We wandered around the cobbled streets of the old town beside a narrow swift flowing canal, and felt we had stepped back in time. Women at an open shop window made ribbon pasta on a hand operated machine. People worked by the canal drawing water, washing clothes and cleaning vegetables. Houses with flower boxes and trees at their entrances made a splash of colour and shade, and in the open squares, hand crafted objects and silverware were being sold. When we walked out into the industrial city the heat and dust and noise seemed intolerable.

Trip to the Picea Plateau

An excursion to the foot of the Yulong Snow Mountain took us across the plain and over into a pleasant wooded valley to Baishuihi, a disused forestry camp. Plants of *Indigofera* were growing and flowering on the dry banks beside the road. After leaving the buses we climbed up a steep track to 3180 m – a test of our fitness. Beside the path, pleiones grew on rocky outcrops, as well as tiny gentians in the grass.

Our lunch spot was the ‘Picea Plateau’, a large grassy meadow surrounded by spruces, with the mountain rising dizzily behind them. High on the slopes above we saw patches of *Rhododendron vernicosum* and *fictolacteam*. At this altitude the shorter needled *Pinus densata* had taken over from *P. yunnanensis*, with Chinese larch *Larix thibetica* (syn. *potaninii*), and *Picea likiangensis*.

The track down to the buses wound in leisurely fashion through woods. In the semi-shade *Rhododendron yunnanense* and *decorum* were in flower,

and we found many small woodland plants under the trees. We saw yellow *Primula forrestii*, *Roscoea tibetica*, and curious spider-like *Paris polyphylla*, a dainty *Thalictrum*, and a tiny *Polygonatum* species. In a dry thicket were shrubs of *Paeonia delavayi*, small, but with rich dark red flowers. Once we left the woods the views were splendid, and the scent of *Eleagnus angustifolia* hung in the still warm air.

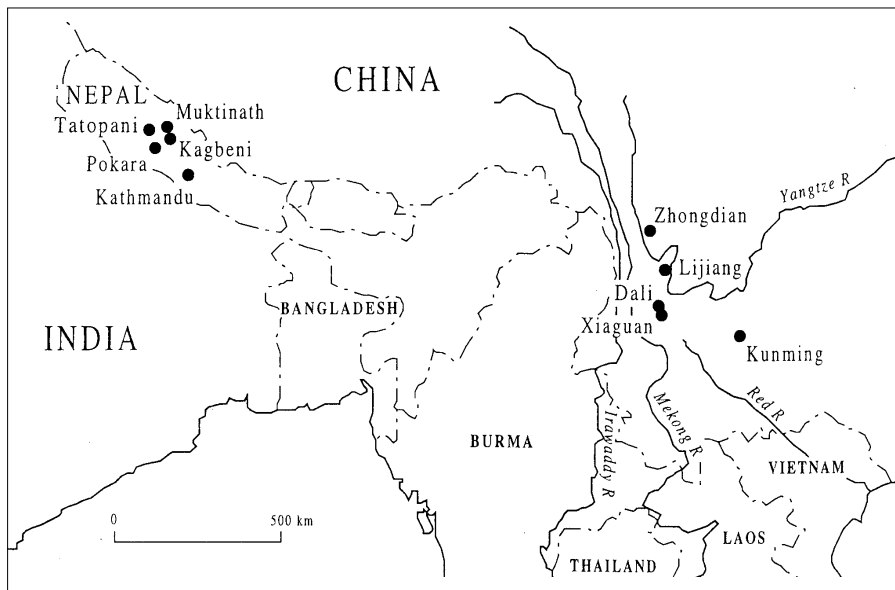
It had been a most satisfying day, but we made one more detour to visit the Yufengsi monastery on the lower slope of the mountain near the small village where Joseph Rock lived. Two trees, one an enormous *Magnolia delavayi*, shaded the front garden of the monastery. Inside the enclosed courtyard was the 500-year-old *Camellia reticulata* known as the tree of ten thousand blooms. The aged lama dressed in his red robes was pleased to be photographed beside the gnarled old tree that he had cared for all his life. Two plants of *Michelia yunnanensis*, planted in the courtyard, had been trained to form an overhanging verandah. *Wisteria sinensis*, and a very old China rose were also growing in this enclosed garden, which seemed to epitomise China's timeless traditions.

Five of our group were away early next day to climb high on the mountain in search of plants. They returned elated after a long and successful day, bringing flowers to whet our appetites. They had seen *Rhododendron rubiginosum*, *telmateium*, *adenogynum*, *beesianum* and *phaeochrysum* var. *agglutinatum* as well as *Arisaema griffithii*, *Meconopsis integrifolia* and *Fritillaria pallidiflora*.

Along the mighty Yangtze

Seventy kilometres west of Lijiang is Shigu, which we were to visit on our return from the north a week later. At this spot, the Yangtze flowing south from Tibet turns nearly 180 degrees to flow north. The Great Bend of the river is dramatic from the low-lying shoreline. Overlooking the river is the Stone Drum, a memorial to the Sino-Naxi victory over a Tibetan army of 200,000 in 1548. After the battle, the river is said to have run red with blood. It is also remembered as the place where Mao crossed the Yangtze on the Long March in 1936. His 18,000 men took four days to be ferried across.

From Lijiang we crossed to the main highway north, and followed the River Yangtze for some time, looking down on the fields symmetrically terraced in sweeping contours.



One can eat very cheaply in China and some of our most enjoyable meals were served beside the road. We stopped that day at Longpa at a country inn. Tables were set under an open verandah, and a seven course lunch was cooked in woks over a charcoal fire and served in about 15 minutes. The meal, including beers, cost six yuan (about \$A1.25). The dishes were bean curd, turnip and pork soup, tomato, finely grated fried potato, pork with spring onion, fried chicken, broad beans and, of course, rice. Some of the more unusual foods we were served in China included garlic flower stalk with pig's intestine, woodear fungus and dragon's foot fern.

Continuing north, we made a short detour to see the impressive Tiger-Leaping Gorge. The Yangtze, confined in a narrow gorge, has cut a chasm between the mountains that rise sheer above the river to 3,000 m, and are at this point only 30 m apart. The tiger of the story reputedly leapt the river to avoid its pursuers. Our buses turned here as the road became a vertiginous track cut into the cliff above the river. Fortunately, we did not have time to walk it.

Our road left the Yangtze and followed a clear-flowing mountain river, the Zhongdian, up a pleasant wooded valley, where the afternoon sun was slanting through birches and poplars, larches and firs. Here and there in a clearing *Rhododendron yunnanense* bloomed.

Tibetan-style Zhongdian

We were now in a sensitive area, and our road – the main route to Lhasa – was under army surveillance. Zhongdian, the largest town in the Tibetan Autonomous Prefecture of Deqen, was to be our base for the next three days, as the top military, making their presence known on the date of the Dalai Lama's birthday, had taken over the main hotel in Deqen, and we had to wait until they vacated it.

Zhongdian, altitude 3,344 m, is on the edge of the Tibetan plateau, and the spring flowers were magnificent. *Rhododendron racemosum* and *R. hippophaeoides*, in full bloom, covered acres just outside the town. To the north above Lake Napa, sweetly scented yellow-flowered *Daphne aurantiaca* covered the slopes, looking from the distance like a field of gorse. In between the daphne bushes were neat clumps of lime-green *Euphorbia polychroma*, and Graham Smith found an *Incarvillea delavayi* in flower.

On a day's outing to Bita Lake we found more treasures. A clearing in the sparse woods was carpeted by *Primula chionantha*. Beside a small stream was a tiny electric-blue *Corydalis*, a *Podophyllum* species and little clumps of *Hepatica*. Further up the hill, *R. rubiginosum* and *R. vernicosum* were flowering.

Excursion to the Golden Terraces

Our most ambitious expedition from Zhongdian was to the Baishuitai Golden Terraces, 103 km along a logging road so rough that a local bus had to be hired for the trip. The route passed over a low saddle and beside farms where Tibetan women were working with hand-hoes; it looked backbreaking work. High wooden racks for drying crops stood in the fields. Tibetan houses with their heavy, wooden, decorated beams sat solidly on the land. On the road we passed a few yaks and a group of girls, cheerful in their bright red and blue head coverings.

The bus climbed past hills denuded by clear felling. Further on, we stopped at a sunny hillside where *R. rubiginosum* was blooming freely, and we found *R. phaeochrysum* in flower. Reaching the saddle we looked across ridge upon ridge of tree-clad hills softly outlined in the blue haze rising from the valleys, like a scene from a Chinese painting. Beyond and dominating the horizon was 5,396 m Mt Haba, its peak resembling a crouching bear.

The road wound on, crossing ridges and valleys. We looked down into unspoilt forest: *Betula utilis*, with its beautiful bark; larches, firs and spruces. At times we saw above the road *Rhododendron fictolacteum*, *vernicosum* and *uvarifolium*, and little patches

of *Roscoea*. Further on, we gazed over cultivated fields to Yi villages of wooden houses with sturdy wooden fences, against a background of snowy mountains. The winding precipitous road was in places supported by log buttresses.

After six hours of dusty, hot, jolting travel, we reached the Baishuitai, set high at the head of a wide green valley rimmed by mountains. The silica terraces, formed by water flowing over the edge of a small lake and down a hillside, are comparable with our own pink and white terraces, destroyed by the eruption of Tarawera in 1886. The Baishuitai glowed lustroously in the afternoon sun. The view over the valley was quite breathtaking. While we waited at the roadside for our bus to return from the nearby village, Graham Smith identified the Chinese form of *Cornus kousa*, *Acer davidii*, *Philadelphus delavayi* and species of *Lonicera*, *Schima*, and *Photinia*.

The trip back was even more arduous than the outward journey. Although we did not pause for photographs, we had an unscheduled stop when the bus ground to a halt on a steep uphill pinch. We walked onto the top of the saddle until the engine could be coaxed into starting again. By this time it was getting dark and cold, and we were relieved to be on our way again. We rattled on in the darkness past shadowy trees, the bus headlights now and then picking out a herdsman's tent and glowing campfire. At 9.30 pm, after 13 hours on the road, we reached a checkpoint on the outskirts of Zhongdian. It took half an hour for the bus driver and our guides to satisfy demands for papers of entry, for a toll payment, and for an authority to be travelling at night. It had been a long day.

Farthest and highest – Deqen and the Mekong

The final stage of our outward journey was the 190 km trip to Deqen. From the Zhongdian plain the road rose over hills and valleys to cross the watershed between the Zhongdian and Yangtze rivers. In the valleys the farmers were tilling their fields with wooden ploughs pulled by yaks. In a family effort women led the animals and men guided the ploughs. The hills were dry and denuded, and fell away into deep gorges. Across the valley we could see houses built on three levels clinging to the hillside which sloped so steeply that their terraced fields below them seemed to be defying gravity. The only flat places for drying crops were the roof tops.

We descended steeply to the Yangtze which was flowing fast and muddy with large logs floating downstream. Our road ran along the main street of Benzilan, where we stopped for lunch at a roadside cafe. Chickens and pigs shared the roadway.

Above the village white roses bloomed beside the road which continued upwards, zigzagging and swinging round the curves of the steep hillsides. The view changed with every turn of the road. Now and then we had an aerial view of a village far below, its fields green and irrigated, like an oasis in the barren land.

At every stop there was something to look at. We found a small plant of *Paeonia lutea*, with bright yellow flowers, growing on a low bank. As we gained altitude it got colder and moister. We stopped by a small mountain cascade to see drifts of *Primula sonchifolia* colonising the steep bank above the water. *Rhododendron oreotrephes* was growing on this shady slope, and not far away small pink-flowered *R. selense* and *R. uvarifolium*. Further on we saw a grove of *R. beesianum* in flower, and stopped to take photos of it. There were snow banks beside the road as we climbed, and winter avalanche damage was evident as we neared the highest point, the Baima Snow Pass at 4,200 m. It was snowing lightly on the fields of heath-like rhododendron – probably *R. rupicola* – showing little sign of flower.

Soon we saw Deqen (altitude 3,480 m) far below in the middle of a narrow valley. The Meli Hotel is a new Tibetan-style inn, which provided us with a 12-course Tibetan banquet – I think we were the first large group of foreigners to stay there. The army patrolling the streets with their rifles underlined the strategic importance of the town.

Next day we travelled along the road toward Lhasa, and down into the deep Mekong valley, where we had a picnic lunch beside the river. On the way back to Deqen we stopped at a vantage point to look across toward Tibet to see the spectacular Meli Range spread out before us. The highest peak called Kawagebo (6,740 m) is still unconquered, and its long glacier seems to fall straight down into the Mekong valley. A small shrine has been erected in memory of Japanese and Chinese climbers who lost their lives on the mountain, and the prayer flags fluttered in the thin cold air.

We returned to Kunming after 3,500 km of bus travel. We had been to remote areas where time had stood still and people lived as they had for a thousand years. We had seen plants in their natural environment on isolated mountain heights and in faraway valleys. Our senses had been bombarded by the sights, sounds and smells of a vast country. It was an unforgettable journey – an experience of a lifetime.

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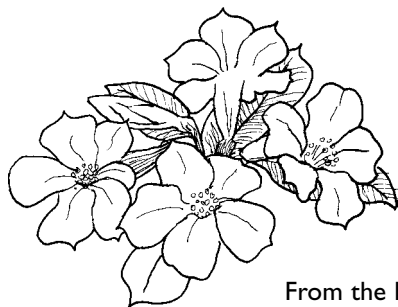
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Selecting Good Growers for South Eastern Australian Gardens

VIN HURLEY & JACK O'SHANNASSY

The material upon which this article was based was created originally for use in connection with the annual Short Courses in Gardening with Azaleas & Rhododendrons conducted by the Victorian Branch and offered to both ARS members and the public.

The plants nominated are selected on their observed performance in Melbourne (the suburbs, rather than the more benign mountain environments nearby). There are enough similarities in climatic conditions in other locations in southeastern Australia that the nominations can be expected generally to be among the “hardier” of garden choices.

Azaleas

As a group, azaleas have a long history of cultivation in Europe, particularly England and Belgium, and an even longer one in Japan.

Loosely speaking, the deciduous azalea cultivars seen here today were bred mainly from North American species, together with a few from China and Japan. The majority of the named deciduous azaleas we grow today were bred in England under the descriptions the “Knap Hill” azaleas and the “Exbury” azaleas, referring to the gardens in which they were developed. However, today in Australia formal parentage is seldom recognised and many are sold as seedlings in flower, with the choice of variety being based solely on the customer’s preference for colour. This is mainly because propagation from cuttings of deciduous azaleas is not easy and, in general, seedlings seem to grow better.

On the other hand, the evergreen azaleas so common and attractive in Australian gardens originate principally from Japan. Many of the older cultivars came via the Belgian nursery trade, where extensive hybridisation for glasshouse culture took place. Recent developments in America and Australia have produced many new cultivars which suit our conditions.

'Asiatic' rhododendrons

Hybrid cultivars of this description are the plants that most people think of as "rhododendrons", e.g. *R.* 'Mrs E.C. Stirling', *R.* 'Ivery's Scarlet', *R.* 'Pink Pearl', or *R.* 'Sir Robert Peel'.

The bulk of the species they originate from occur in China and North-eastern India near the Himalayas, with a lesser number occurring in Europe, Japan and North America. The original species introduced into horticulture were selected for English conditions, and hence tended to be from higher altitudes to obtain the necessary cold-hardiness.

With better political relations between China and the Western World in recent years, there have been frequent expeditions (some with Australian representation) into the rhododendron-rich mountainous areas of China. As a result, plant material has again become available, some of which was known previously but lost to cultivation and some completely new. We look forward with interest to the appearance of new cultivars and species from this new raw material from the field, with Australian conditions being kept in mind when selecting them.

Vireyas

This group has an interesting history in cultivation. Last century, collectors for the English nursery firm Veitch & Co. (who were mainly interested in obtaining new orchid species) brought back from Java and Sumatra (then the Dutch East Indies) a small number of vireyas. Examples were *R. javanicum* and *R. brookeanum*. The firm grew these in heated glasshouses, and did some hybridising and also, apparently, some trade in them. But in England, vireyas were hothouse plants, and by World War I, if not earlier, large coal-fired hothouses became too expensive, so the growing of vireyas there ceased.

This did not stop orchid culture completely, but apparently only a little of this first period of vireya rhododendron cultivation survived this change. However, a few of the Veitch hybrids have survived, and are well regarded here today.

With the opening up of New Guinea during and after World War II, it was realised this was the true centre of vireya occurrence. The main trigger for a greatly increased interest in this part of the genus was the work of Dr Herman Sleumer of Leyden, Netherlands. In 1965 he published a description of nearly 100 vireya species, along with a new system of classification.

We are fortunate that the Australian Rhododendron Society was a recipient of some of this New Guinea material, via Dr Sleumer, and also from an English missionary (Canon Crutwell), and others interested in vireyas, and in some

cases via collections made by our own Australian members. Most of these plants are either terrestrial or epiphytic, i.e. growing on other plants rather than rooted into the ground. This characteristic makes it possible to maintain them for many years in a relatively small container, or mounted on a tree fern slab. Most have flamboyant flowers in white and a full range of colours except blue. Flowering can occur at any time of the year and mature plants can flower for much of the year. Many are scented.

The one persistent criticism today is that vireya plants are often “leggy”, another epiphytic trait. However, if a more compact plant is desired, one can obtain a small plant and periodically nip out the top of the soft new growth to encourage multiple growths. Also, selection amongst the many cultivars now available is helping to produce more compact plants.

Species and hybrids

For our purposes, we could consider a species of rhododendron to be a group which occurs within a smallish, stable “natural” site, in which on close scrutiny it is found that all of the individual members are very similar, and which yield progeny from their inter-breeding which are all very similar to one another and the parent plants.

To the joy of the plant breeder, rhododendrons are highly cross-fertile. However, some groups are incompatible one with another – for instance vireyas and Asiatics, and within Asiatics the “lepidotes” and the “elepidotes”. Provided the two parent plants are compatible types, the simple application of the pollen of one rhododendron species (or hybrid) to the stigma of another at the appropriate time results, in most cases, in a pod full of hundreds of *hybrid* seeds.

If some of these seeds are grown to flowering and the choicest plant selected (for, unlike with a species, the resulting hybrid plants will not all be basically alike), this could be registered and given an official name (a *named hybrid*, e.g. *R.* ‘Mrs E.C. Stirling’, *R.* ‘Denise’). Only plants produced vegetatively (i.e. by cuttings, grafts, or tissue culture) from such a plant will be close to identical to it, and will be entitled to be labelled with the original name.

If a choice plant of a species crops up in a seed batch (from the wild or from a garden plant), it can be registered and become a *named cultivar*. *R. davidsonianum* produced *R. davidsonianum* ‘Caerhays Castle’. Similarly, *R. irroratum* produced ‘Polka Dot’.

In cultivation, we can regard “species” as plants whose background can be traced back to the wild, and which, when bred together, give progeny

which are similar to the parents and to one another. (“Similar” does not necessarily apply to flower colour. In some species, e.g. the vireya *R. macgregoriae*, several colours occur in the wild, and in cultivation, but it is still *R. macgregoriae*).

This definition of “species” may be rather vague, but we can take encouragement from the fact that Darwin in his famous work *The Origin of Species* did not give a definition of the term.

Recommended for growing in Melbourne

A short list of rhododendrons which have been found over time to do well in Melbourne gardens follows:

‘Asiatic’ rhododendrons

<i>aberconwayii</i>	Anne Teese	Loder’s White
<i>arboreum</i>	Bibiani	Mrs. E.C. Stirling
<i>ciliicalyx</i>	Donvale Pearl	Pink Delight
<i>cutbitti</i>	Donvale Ruby	Seta
<i>davidsonianum</i>	Donvale Ruffles	Sir Robert Peel
<i>delavayi</i>	Florence Mann	Unique
<i>irroratum</i>	Fragrantissimum	Van Nes Sensation
<i>maddenii</i>	Hugh Koster	Wedding Gown
<i>ponticum</i>	Ivery’s Scarlet	White Pearl
<i>racemosum</i>	Jean Marie de Montague	
<i>yunnanense</i>	Lamplighter	

Deciduous azaleas

<i>austrinum</i>	Cecile	Homebush
<i>luteum</i>	Gibraltar	Dr. Oesthoek
<i>occidentale</i>		
<i>reticulatum</i>		

Azaleas

<i>indicum</i>	Advent Bells	Kirin(Kurume)
<i>kaempferi</i>	Alba Magnifica	Princess Maude (Kurume)
<i>oldhamii</i>	Apple Blossom	Red Ruffles
<i>simsii</i>	Blaaw’s Pink	Red Wing
	Coral Bells	Rose Queen
	Fielder’s White	Splendens
	Hinomayo (Kurume)	

Vireyas

<i>aurigeranum</i>	Arthur's Choice	Liberty Bar
<i>javanicum</i>	Bulolo Gold	Pink Seedling (Veitch)
<i>laetum</i>	Buttermilk	St. Valentine
<i>lochiae</i>	Carillion Bells	Simbu Sunset
<i>macgregoriae</i>	Coral Flare	Sunny
<i>zoelleri</i>		

Asiatic rhododendrons which have *indumentum* under their leaves are well worth considering. The foliage has added decorative appeal (a feature to be enjoyed particularly in the non-flowering period of the year) and is long-lasting, and the *indumentum* provides added resistance to insect attack (especially against lacewing).

Australian-raised hybrids

Many of the hybrids which were grown here in the early days (many still grown even today) were raised in England or Holland to suit conditions there. In general, their special requirements were that the plants should be cold-hardy and that they should flower late in the season to avoid their hard frosts.

Here in Australia, our requirements in these two respects are quite different. We need plants which are heat-tolerant and preferably drought-tolerant, but which do not need to be particularly cold-hardy. Furthermore, we want plants which flower early in the season to avoid our hot weather with its accompanying dry winds which can ruin flowers in one day unless they are very well sheltered.

A good deal of work has been done by both nurserymen and amateurs with these aims in mind, and there are now many hybrids available which suit our conditions quite well. Many can be seen in the "Australian Hybrids" section of the Rhododendron Garden at Olinda. Our message to Australian gardeners is: don't overlook Australian hybrids!

These remarks so far refer to the Asiatic rhododendrons. So far as vireyas are concerned, many of the hybrids available in the trade here today have been raised in Australia, and naturally selections have been made with our requirements in mind. The fact that vireyas collectively flower throughout the year overcomes some of the problems discussed earlier regarding desirable flowering times, remembering, however, that as most are tropical, care needs to be taken even with our mild frosts.



MARGARET L. CAMERON

Meli Range in northwest Yunnan, looking towards Tibet, with *Rhododendron yunnanense* growing in the foreground at 3,800 m.



MARGARET L. CAMERON

Above *Rhododendron nubiginosum* growing at 3,500 m in the Haba Range, northwest Yunnan.

Below Pony transport to hunt rhododendrons, author on left.



MARGARET L. CAMERON



LESLIE EATON

Above *R. irroratum* 'Polka Dot'



RICHARD FRANCIS

Above *R. 'Red Wing'*



RICHARD FRANCIS

Above *R. 'Loder's White'*



RICHARD FRANCIS

Above *R. occidentale*

Below *R. macgregoriae*



RICHARD FRANCIS



RICHARD FRANCIS

Below *R. 'White Pearl'*



RICHARD FRANCIS

Above *Rhododendron arboreum* spp. *delavayi*.



RICHARD FRANCIS

Above *R. sinogrande*, with the largest leaves of all rhododendrons.

Below *R. macabeanum* is found at altitudes between 2,500 and 3,000 m in northeastern India.



RICHARD FRANCIS

Small stature plants

Many of the small species and hybrids are available if you look for them, and should be considered seriously for use in the smaller suburban garden, or even for a town house balcony. You get more variety per square metre of garden with them.

As a general rule, the smaller the leaf size, the smaller the plant (or, at least, a plant which will flower while still quite small and which can then be kept down in size by judicious pruning after flowering).

Nature, of course, does not stick fast to such generalisations, and some specific knowledge is required for precision in predicting mature size of plants. This can be obtained from appropriate reference books, from experienced nursery growers, or from experienced amateur growers such as members of the Rhododendron Society. Due to our different conditions, figures given in overseas books may not apply here.

As might be expected, some of the smaller rhododendrons are not as sturdy or as easy to grow as most of the larger ones. Here again, for appropriate information, experience from one source or another is required. A brief list of some easier-to-grow small plants follows:

Bowbells	Elisabeth Hobbie	<i>racemosum</i>
Bric-a-brac	Emasculum	Ruby Hart
Chikor	Florence Mann	Saffron Queen
Chrysomanicum	Kimberley	Seta
Cilpinense	<i>moupinense</i>	

Because of their suitability for pot culture, the vireyas offer a wide choice of variety for this purpose. The larger-leafed ones, however, may reach a size beyond desirable limits, and should be considered carefully before choosing them for this purpose.

Not a lot of work has been done as yet on growing vireyas in the ground, but they are well worth a try. Conditions required are excellent drainage (preferably built-up beds), an open mix containing plenty of organic material, bright light, and some shelter from the cold, especially frosts. Experience has been that generally the very small-leaf varieties and the very large-leaf varieties do not do as well as those with medium-sized leaves, such as *R. lochiaie*, *R. laetum* and their hybrids.

Why not the species?

DR NOEL SULLIVAN

A species is, by definition, a term to denote a group of closely-allied individuals. In turn, these will breed true but with minor variation.

The species we have in collections were chosen originally in the wild as herbarium material and later classified by taxonomists as new species or a form of an existing species. If available, seed was sent back with this dried material, but now with air transport live plants may be exported.

Mankind, as a collector, strives to own the “better form” of whatever that possession may be. Discovering and bringing back new plant material has never been easy, in that you go when the plants are in flower and hope to collect some seed not yet dispersed from last year’s seed capsule; or you go when the seed is ripe, recognise the plant by its foliage and hope that the flowers are at least of average quality.

It is likely that a superior foliage and flowering form of that species does occur in the wild. Although it has the same genetic makeup as the forms in cultivation, how many expeditions might it take to locate?

For those who do not wish to travel afar, there is another method of exploration. Self-pollinate one, or cross-pollinate any two, of the forms of a species that are in cultivation and grow on as many seedlings as possible, to exploit the genetic possibilities of that species.

I have done this on a number of occasions and it can be very rewarding. I had two selected forms of *R. polyandrum* ‘Pink Trumpets’ and a good yellow. Cross-pollinated they produced a wide range including a pure white, white with green basal blotch, white with pink basal blotch, deep pink with a darker basal blotch, and yellow with darker basal blotch. Grown together as a group they demonstrate that they are a “family”, and not just clones. *R. polyandrum* has now been relieved of its specific status and becomes *R. maddenii*, but shown to be a very distinct variant.

At the 1988 Wollongong Conference, Dr Fang showed slides of *R. irroratum* in the wild, and I was surprised at the high percentage of yellow forms. I soon acquired a good yellow form, and crossed that with the named form ‘Polkadot’ and with a pink form. The resulting seedlings have shown the wide spectrum of this species in nature. I find this much easier than collecting in Sichuan, and they are still the species.

The aim is to show the diversity within a species. Why not try it? You could be pleasantly surprised!

Tree rhododendrons

RICHARD FRANCIS

Early introductions of rhododendrons were the result of plant hunting expeditions funded by the new wealth of the industrial revolution, competing fiercely with each other to fill their conservatories with exotic horticultural curiosities. This emerging wealthy class could afford estates of the scale necessary to accommodate species impractical for the smaller suburban garden, so size was no limit. As a result, many of the hybrids bred from these earlier introductions tended also to be impractically large.

With the turn of the century and the rise of the middle classes, home gardening became more popular, and the thrust turned to the breeding of compact plants with showy, colourful flowers. This trend was spurred on by the discovery of low-growing species such as the strong red prostrate *R. forrestii* (George Forrest, Tibet, 1905) or *R. degronianum* ssp. *yakushmanum* (Japanese collector Nakai, Yakushima Island, 1921) and interest in the larger species started to wane. The frost tenderness of many early introductions, used to growing as sheltered understorey plants, also tended to restrict their success in the cooler northern hemisphere climates.

All the so-called 'tree' rhododendrons are forest dwellers growing at altitudes of between 2,500 and 3,000 m or more. Some species grow in dense, tangled forests where they are virtually the sole species. Others dominate the understorey beneath a canopy of taller evergreen or deciduous trees, through which frosts rarely penetrate. These may be birches, magnolias, maples, oaks or chestnuts, while at higher altitudes the conifers takes over – spruces, silver firs and larches.

The size these plants attain in the wild is, to some extent, the result of the abundant moisture available to them, particularly the monsoonal summer rains found in most of the growing areas. As spring growth commences over February and March, they are amply watered by melting snows. Thus, they live in an environment with a virtually continuous supply of abundant moisture. For this reason, every effort should be made in cultivation to protect them from the drying effects of hot sun or wind as well as frost, a woodland setting being ideal.

Many will take quite a few years to reach flowering, at least twenty or more, while at least fifty years is needed for a tree rhododendron to reach

its optimum form. Many are worth growing for their splendid foliage alone, particularly the charming 'candlesticks' formed by the erect young leaf shoots in spring.

Larger species tend to be elepidotes, without the covering of fine scales over the foliage which assist the plant in transpiration. The Himalayan species *R. nuttallii* is an exception, a lepidote in the *Maddenia* subsection which reaches about 10 m in ideal conditions. It makes a good choice for Australian gardens, being quite heat and sun-tolerant, although it is inclined to wilt alarmingly when conditions become dangerously dry.

Easily the best known of the tree rhododendrons is the obviously named *R. arboreum*, which is distributed widely across the Himalayas, China, Thailand, India, Myanmar and even as far south as the highlands of Sri Lanka. It has been recorded as reaching heights of up to 20 m, although it is more usually half that height or less, with glossy, deep green leaves bearing a white or fawn indumentum underneath. The best known form of *R. arboreum* has tight, globular trusses of around twenty blood red flowers, borne from July to October, although other forms are various shades of white, pink or red. The red forms tend to be more tender. A number of local variations which were formerly classified as distinct species are now regarded as subspecies of *R. arboreum*, including *R. delavayii* (Abbé Delavay, West Yunnan, 1883) and *R. zeylanicum*.

R. arboreum ssp. *zeylanicum* reaches about 10 m in the wild, with distinctive spiral bark markings, and dark green bullate leaves with a thick brown indumentum. Its flowers are normally blood red, although there are pink forms, borne in October and November. It is native to Sri Lanka and Manipur in Assam.

Also from the *Arborea* subsection, *R. lanigerum* forms a shrub or small tree to about 6 m, very similar in form to the later-flowering *R. niveum*. It bears large, rounded trusses of purplish, bell-shaped flowers between August and October. Its delightful young growth is covered with a creamy-white tomentum. It was first collected by Kingdon-Ward in 1928 in the Delei Valley, Assam.

R. grande was discovered by Wight in Bhutan around 1847 and is found growing at between 1,700 and 3,600 m in eastern Nepal, Sikkim, Bhutan, southern Xizang and Arunachal Pradesh, where it has been recorded at up to 15 m. Its leaves, which follow distinctive pink bud-scales on new shoots, have a woolly, silvery or fawn undumentum, and can reach as long as 45 cm. Flower trusses, which bloom between August and October, consist of up to 25 cream, pale yellow, pink or deep rose flowers, spotted and with a purple blotch. The

relatively early flowering and subsequent early leaf growth of this species demands a well-sheltered site as the foliage is very susceptible to wind and frost damage. While *R. grande* gives its name to the Grandia subsection, other close relatives are notable as the among the largest of rhododendrons.

R. sinogrande grows at 2,100 to 4,300 m in East Arunachal Pradesh, Yunnan, upper Myanmar and southeast Xizang, and was discovered in 1912 by George Forrest in the Salwin-Kiu Chiang Divide, southeastern Xizang. It forms a large shrub or medium-sized tree reaching about 12 m with certainly the largest, and possibly the most handsome of all rhododendron foliage. The creamy bell-shaped flowers, borne in huge trusses around October, seem almost an afterthought to the huge, dark, leathery leaves which diminish in size as flowering age is reached. A more northerly form has soft yellow flowers. Like the other large-leaved species, *R. sinogrande* demands plenty of shelter but will tolerate a reasonably sunny position, although the largest foliage is borne on plants that are well shaded and growing in constantly moist soil.

Once classified as a form of *R. sinogrande*, the deep pink or rosy purple flowers of *R. montroseanum* are regarded as the finest of pinks in larger species. It reaches up to 15 m in the wild, with foliage up to 45 cm long, similar in form to both *R. sinogrande* and *R. grande*. A Kingdon-Ward discovery, it is found in the Tsangpo Gorge in southeastern Xizang, at altitudes of 2,400 to 2,700 m where it can constitute up to 50 per cent of the temperate rainforest in which it grows.

Also in the Grandia subsection, *R. giganteum* was discovered by George Forrest in 1919 in southwestern Yunnan. Perhaps the largest of all rhododendrons, it has been recorded at over 30 m in height, with a massive girth of trunk of almost 2.5 m at 1.5 m from ground level.

Some forms of *R. barbatum* grow into graceful small trees. As its name implies, twigs and leaf stalks are covered with stiff, bristly hairs. It has lovely smooth reddish bark, and, like others with smooth bark, tends to resent too much pruning. Its compact trusses of rich red flowers are borne around September.

R. macbeanum, again from the Grandia subsection, grows at 2,400 to 2,700 m in the Naga Hills, Assam, and Manipur in northern India, amongst birches or as compact forests on its own. It was discovered by Sir George Watt in 1882. It reaches up to 15 m in the wild, and has leathery, dark green leaves reaching 30 cm, with a whitish woolly indumentum underneath. New shoots form a spectacular display of silvery 'candles' covered in distinctive bright red bud scales. Its huge trusses of up to twenty

cream to bright or lemon yellow flowers are profusely borne in September to October. In comparison to other large-leaved species, it is relatively tolerant of wind, frost and drought, and thus makes an ideal garden plant.

R. magnificum, from around the Myanmar–Xizang frontier at 1,500 to 2,400 m, is very similar in form to *R. prostratum*, although it is recorded as being hardier and more floriferous. It was discovered by Kingdon–Ward in 1931 in the Adung Valley, Myanmar, and can reach as much as 18 m in the wild, although it is always far smaller, typically to 6 m, in cultivation. It bears trusses of up to thirty floppy deep rose to crimson or reddish purple florets from August to October.

R. falconeri can be a spreading tree with several trunks reaching about 16 m, although it rarely reaches half that height. It has reddish-brown bark and its leaves which reach 30 cm or more in length have a rich brown indumentum. Young shoots have a temporary covering of pale brown fur and its creamy yellow bell-shaped flowers are borne in large rounded trusses in October and November. *R. falconeri* was first described by Sir Joseph Hooker in Sikkim in 1849, and is widely distributed across Nepal, Sikkim, Bhutan, western Arunachal Pradesh and Assam.

Also in the Falconera subsection, *R. fictolacteum* is a highly variable species, but particularly impressive is the large-leaved form from western China. It has bell-shaped white, cream or pink flowers with a purple blotch, borne in October–November. It was discovered by Abbé Delavay in 1886, growing in western Yunnan.

R. calophytum, from the Fortunea subsection, is distinguished by its distinctive and elegant long, narrow leaves. It reaches 15 m in its native western Szechuan. In September to October it carries large trusses of white or pink flowers marked by a reddish blotch.

These are by no means all of the rhododendrons which can qualify as tree species, but a representative selection. Fear of excessive height should not deter the growing of these potentially large plants in domestic gardens. In cultivation, they are very unlikely to attain proportions achieved in their natural environment, the larger broad-leaved species being understory plants whose inclination is to grow tall and leggy to reach the scant light available.

This article was originally written for publication in the International Dendrology Society's Australian Branch Newsletter, September 1997.

Just rewards: As you sow, so shall ye reap

DR NOEL SULLIVAN

This paper was delivered in Melbourne as the 1997 Baron von Mueller Memorial Lecture (the sixth in a series of occasional lectures, sponsored by the Victorian Branch of ARS, commemorating the life and career of one of Australia's most important figures in botany and horticulture).

I would like to examine the part that Australians have played in the dissemination of knowledge of the genus *Rhododendron*, why Australia was a suitable location for this to happen, and the stimulus von Mueller provided. This is history that should be recorded, and what better time than now, one hundred years after the death of this remarkable man. I set out to detail particular people involved in this history, and their achievements. First, to set the scene ...

Horticulture differs from agriculture in that the latter fulfils the need to produce food, and the former fulfils another, an aesthetic need. Two major criteria for ongoing horticulture are very lengthy periods of the lack of invasive or internal warfare, and secondly, economic wealth of that country or that portion of the population involved. Following the 1984 Wollongong *Rhododendron* Conference I enjoyed the company of Professor Fang from Sichuan, and his comment following visits to many large gardens was “In China we have the rhododendrons on the mountains and all arable land is for vegetables”. We are indeed fortunate that we have always been able to use land for decorative gardening.

Australia, long inhabited by indigenous hunter gatherers, had been visited through time by explorers from the Pacific, from Asia and from Europe, but none had seen it fit for settlement until Cook's visit in 1770, when the powers of the day thought it useful as a penal colony. The French, with a presence in these waters at that time, made a similar decision for New Caledonia, but were too late to claim Australia. The point to make here is that Australia was an English colony and that horticultural practice would be influenced by the mother country. This new settlement was in a place almost as remote as possible from England but the first free settlers were ill prepared for survival in what was seen as a harsh and unfriendly environment. The early problems in adapting grain growing to this different climate while sheep survived, led to an Australian diet high in meat – a habit persisting for nearly two centuries. Free settlers had difficulty in adjusting to a totally foreign climate and a strange flora and fauna. There was a need

for familiar plants to remind them of their former home half a world away. As to the seasons there was a total reversal of the calendar they remembered.

English gardening had long been struggling to divorce itself of the rigid formality of the European style, major setbacks being the advent of William of Orange and later the German Georges to the English throne. They reintroduced the formal parterre style of the continent. The English countryside had been dramatically altered by landscape designers, typified by Capability Brown, creating contrived landscapes, an endless parkland of trees and grass, but no evidence of flowers. These were to follow later, and when they did rhododendrons were in great demand as one of the most beautiful and dramatic of temperate climate trees and shrubs, for this genus with some eight hundred species of diverse form, colour and flowering times, had also the potential to produce an incredible range of hybrids for a wider scope of horticultural use.

Australia, with no winter as experienced in northern latitudes, has almost no native deciduous trees, whose early spring foliage was a reminder that winter was over, and they were sorely missed. Despite the struggle for survival, it was surprising how soon ornamental plants were imported. It is amazing how man's love of gardening will overcome what must have been great difficulty in bringing a purely ornamental plant half way round the world on a six month voyage in a small sailing ship, for we find that one rhododendron is listed for the record of 1834 of the Government Gardens, now the Royal Botanic Garden in Hobart. Australia's oldest surviving nursery catalogue, that of Tasmanian nurseryman James Dickson, listed two varieties of rhododendron for sale in 1845. Another example was that of Richard Dry, a convict from Sydney, sent to manage the Government Stores at Port Dalrymple (now Launceston), Tasmania. He married a free woman who, in preparation for his imminent pardon, had acquired land to build a house, and they were in need of trees other than the native trees (which they considered unattractive). A contact with Kew Gardens (which at that time, about 1828, was in total management disarray) resulted in a shipment of seeds recently arrived from a collection by Douglas on the North American Pacific Coast. Germination of these conifers was good, and the seedlings were widely distributed throughout settled Tasmania. Today sees these trees approaching two centuries in age, a vivid reminder of the fact that early settlers were conscious of their surroundings, and wished to improve them by ornamental gardening.

Such was the enthusiasm for gardening and interest in ornamental plants when Ferdinand Müller arrived in Adelaide in 1847. He was born in 1825 in Rostock, on the Baltic Coast of North Germany, an only son of prosperous upper middle class parents, and sent to school at the earliest opportunity. Tuberculosis, then a commonplace disease, played a vital role in young Ferdinand's life, a dread carried to his grave, for his father had a fatal and prolonged pulmonary illness, followed by his mother and then

his older sister. His childhood and youth was devoured by anxiety, with little chance of parental love. This intelligent child took refuge in solitude in the open countryside, and in work, and this was his life thereafter. His mother, before her death, arranged for his apprenticeship to a pharmacist, so, aged fourteen, he started work. In addition to his studies, a university course, he was expected to collect a comprehensive herbarium, and thus became obsessed with botany. Strongly motivated for one so young, he was determined to become a botanist but needed the profession of pharmacy in the meantime. Seven years later he graduated at the University of Kiel, and immediately presented a botanical thesis on a species of *Bursaria*, and was awarded a Doctorate of Philosophy. Offered a partnership by the pharmacist, he declined partly because he shunned the boredom of this occupation, but more importantly, his younger sister showed early signs of tuberculosis and he understood that a new treatment suggested blue skies and open air, rather than purging and bleeding. At the same time a family friend, Doctor Priess, a botanist, had returned from Western Australia with glowing reports of botanical wealth, and Ferdinand made a decision which saw the remaining Müllers, brother and both sisters, arrive in Adelaide in 1847. He certainly had the instinct to go where the greatest possibilities lay. If chance played a part, then fortune smiled upon him, for this was the newest continent to be settled and containing a wealth of botanical genera as yet unclassified and unnamed. Scanning textbooks of Australian flora, it is difficult to find a page without a species lacking the epithet FvM. or F. Muell. and with many named specifically *muelleri* or *muelleriana*.

If rhododendrons had reached Australia before Müller, what was their status as plants in horticulture at that time? This was around the start of young Queen Victoria's reign. The English garden had taken a considerable time to develop its form as a natural, but man-made, paradise garden. It was unnatural in that it presented a collection of only the very best plants from all over the world and said: "Is not nature wonderful?" The word "paradise" is derived from an old Arabic word which means garden. For a nomadic race inhabiting a semi-desert area, a garden is indeed paradise. The theme is depicted often in their art form, the oriental carpet (also their main article of furniture), showing a formal garden complete with flowers, ornamental pools, and animals and fish, but stylised in presentation.

In the more formal fashion of European gardens, the art of topiary, which called for regular control of plant shape by pruning, automatically excluded the use of flowering plants. In England, John Tradescant was the first of the great plant hunters, and became gardener to King Charles the First. His son John succeeded his father as Royal Gardener, and the plants he introduced from the new English colony, Virginia, brought a wealth of new colour to English gardens. Again the bishop of London, Henry Compton, also a soldier, statesman and tutor guardian to the two princesses, was a keen gardener who encouraged plantmen in his extended diocese in North America, to send him American

plants, the first being the swamp honeysuckle, *R. viscosum*, discovered in 1680 and soon added to his collection at the Bishop's Palace. Compton was later removed from office, but continued to live in his Palace, and continued to add to its collection.

Other rhododendrons entered England, *R. maximum* 1736, *R. ponticum* 1763, *R. caucasicum* 1803, *R. catawbiense* 1809, *R. campanulatum* 1825, the same year that *R. arboreum* flowered in England for the first time. Meanwhile, Dean Herbert, the father of hybridising, produced *Rhododendron* 'Odorum', a hybrid between the evergreen *R. ponticum* and *R. nudiflorum*, a deciduous azalea. Such a cross is called an azaleodendron. The attempt to introduce colour to a white perfumed flower succeeded beyond all expectations, for the gene controlling perfume is recessive. *Rhododendron* 'Odorum' is mauve blue with a strong perfume.

William Hooker had been Professor of Botany at Glasgow University, and later became Director of Kew Gardens, as Sir William. His son Joseph followed in his father's footsteps as a botanical explorer. The big breakthrough for rhododendrons was when he went to Sikkim and introduced the wealth of Himalayan rhododendrons to the world. This was 1847, the same year that Müller went to Adelaide. Alas these rhododendrons were too tender for general cultivation, and this led to hybridising to combine the hardiness of the then available species and hybrids with the new colour and form of the Sikkim plants. Nurserymen closely guarded the secrets of their successes and many were never recorded. This new race of plants are now referred to as the old hardy hybrids - perhaps the most famous being 'Pink Pearl', which was awarded the first FCC in 1898. Thus, this development of a new range of rhododendrons occurred during von Mueller's term of office in Victoria as Government Botanist. As the products of this work became available, they were introduced to Australia, and von Mueller suggested that they would do well in cooler areas such as Mount Macedon and the Dandenongs in Victoria.

To return to Müller's original decision to go to Adelaide, this was influenced by the fact that it was a colony of free men, and not a penal colony. Also there were two settlements of Prussians nearby at Hahndorf and Klemzig. The Müllers travelled first class, and on arrival at Adelaide it was the usual festive occasion when the crowds went down to meet and take stock of the new arrivals. Later, in the street, they were approached by an Englishman, Samuel Davenport, and offered hospitality until they could find suitable accommodation. Another stroke of good luck was in the form of a fellow passenger whose brother owned a chemist's shop in Adelaide, so he found instant employment. At every spare moment he was out botanising alone, and he covered great distances on foot and as a result his *Flora of South Australia* was published in Hooker's Kew Journal in 1853, an unintentional, but timely, way to draw attention to himself later in Melbourne.

Melbourne had been selected as a site for settlement when Batman sailed from

Launceston, and went up the Bay to the mouth of the River Yarra in the year 1834. Twelve years later the Lieutenant Governor of Victoria, Latrobe, established a Botanic Garden of 83 acres. How incredible, but so in keeping with the times, that this could happen in a town so newly settled that there was no attempt at public sanitation and the streets were either dust bowls or knee deep in mud. The year being 1846. In 1850 the population had swelled to 23,000. One year later gold had been discovered, and madness set in. Within the year the population had increased by another 100,00. Two Adelaide doctors invited Müller to join them in the goldfields as a pharmacist so he went to Melbourne, as did half the men in Adelaide. But he did not get to the goldfields, for soon after his arrival he met Governor Latrobe, a keen amateur botanist, who was most impressed with Müller and wrote to Hooker at Kew. It must be remembered that all official positions in the colonies were appointed by the appropriate departments in England. Hooker fully approved of the “new man”, for he had already seen his level of expertise. Müller was gazetted as Government Botanist, and he made his start on a life-long career of botanist, scientist and explorer. He anglicised his name to Mueller, and started work with a vengeance, setting off a few days later for the Victorian Alps.

It was notable that in those days, new settlements created botanic gardens as one of the first public assets. England was the leading industrial nation, benefiting from early involvement in the Industrial Revolution. There was a new class of wealth, industrial wealth, and taxes were low. There was full employment generated by this wealth, there was even a need to import domestic labour from Europe. Households often employed twenty or more servants. They were obsessive collectors of everything, and their houses were filled with natural objects stuffed or dried, and their gardens were repositories of rarities. Science had at long last come to the people. They were at one and the same time fascinated by the wonders of nature and appalled by the changes thrust upon them. Darwin was about to publish his *Theory of Evolution*. Of all the natural sciences, botany was the favourite, and considered eminently suitable for the ladies, many of whom for the first time had time on their hands.

Such was the public attitude when Doctor Mueller started as Government Botanist. He had a great need for the public recognition of his official position. He had made it and enjoyed his success by working hard. He spent months alone botanising and exploring throughout Victoria, and then had to attend to all the paperwork on the classification of the herbarium material, on papers and articles, and endless correspondence with botanical connections around the world.

It was proposed that an expedition explore northern Australia from west to east, and Mueller went as botanist. It took place in 1855–56, going by ship from Sydney to Queensland, and around the top, to land at the Victoria River south west of Darwin, crossed the continent to north Queensland, and then down the coastal range to Brisbane,

a journey of 5,000 miles. Before he left, Mueller botanised in the Glasshouse Mountains, and suggested that an endemic rhododendron, an outlier from New Guinea, might be found in such a locality.

On his return to Melbourne, he was appointed Director of the Botanic Gardens. Mueller was determined that he should be the one to do the *Flora Australiensis*. He fully believed that it should be done in the country of its origin, but Sir William Hooker at Kew, and even more importantly, George Bentham, the great English taxonomist and President of the Linnean Society, thought otherwise. Mueller had yet another responsibility – Melbourne's Zoological Gardens. Not only was he exchanging plant material around the world, but also animals. He was also involved in planting trees around the country, as well as in the Botanic Gardens.

In 1862 Mueller finally gave up his ambition to become the sole author of the *Flora of Australia*; to do so he would have had to go to England to compare various collections. He had no intention of going, so lost by default. Bentham saw to it that he was elected a Fellow of the Royal Society. He had learnt the most bitter lesson of his life, that he was never intended to be the author and since he could not beat them, he must join them. Aged 36, and in poor spirits after this great disappointment, he met a spinster lady in the Botanic Garden. She saw him as a good catch, and he in turn was grateful for the attention she offered this lonely man, and was flattered by her interest in his vocation. Emotionally starved, he named a new plant after her, and later sent her a copy of his just printed *Flora of Victoria*, and declared his intentions in flowery phrases on the flyleaf. To his horror he realised he was committed to a marriage that would seriously limit his career. He sought, and found, a way out difficult in that level of Victorian society. Believe it or not, that particular book was purchased by a friend of mine at a booksale in Burnie some years ago for the sum of twenty cents.

Mueller really had no time for anything but his work. In 1866, after ten years as Director, the Gardens had grown to four hundred acres, and more and more species were added to the collection. Melbourne had grown wealthy and the mood was that it should be seen to be wealthy. Houses and buildings were ornate, but despite there being twenty miles of walks in the Gardens, where was there any sign of opulence? No ornaments, no statues, no massed beds of flowers, only Mueller's interminable trees. During the year he had been created a hereditary Baron by the Duke of Wurtemberg, and Hooker and Bentham had secured for him, from Queen Victoria, the honour of the Order of St Michael and St George. This was not in his favour, for the feelings in Australia were that there was no status other than that of wealth. Mueller's foreign titles were not based on wealth and therefore a trick to make him superior to others.

Ferdinand von Mueller had begun to fight for his position as Director of the Gardens. He had many talents, but they did not include a flair for landscaping, and

certainly not with native plants. Mueller continued with his wealth of correspondence to journals, scientific correspondents, amateur botanists, to newspapers and to recipients having anything to do with botany. He also corresponded with the Guilfoyle family, and encouraged the son to a career in botany, and thought highly enough of him to propose him a Fellow of the Linnean Society.

By the end of 1869 Mueller felt that his achievements had made his position secure, but did not understand that the same achievements and honours, and the attention they brought him would, through colonial parochialism, result in his overthrow. He had planted 30,000 trees, and distributed over half a million plants throughout the colony, and thereby invoked the displeasure of the nurserymen.

Writing of Australian Botanic Gardens that he had visited about 1870, Antony Trollope had this to say:

“Those in Melbourne are the more pretentious, and in scientific point of view, no doubt the most valuable. I am told that in rarity and multiplicity of plants collected there, they are hardly surpassed by any in Europe. The Melbourne are the most scientific, but the world at large cares little for science. These gardens are a long sermon by a great divine whose theology is unanswerable, but his language tedious.”

Trollope thus summed up the general feelings of the excessive devotion to botany, and the disregard of gardening. So finally, after 21 years as director, Mueller was dismissed, with the excuse that his talents as a botanist were too valuable to be wasted on the mere direction of a botanic garden, and Guilfoyle took over. He and von Mueller remained friends, but von Mueller never entered the Gardens again. The fault we shall see was von Mueller's, but so perfectly was it corrected by Guilfoyle that the Gardens are now considered to have the distinction of being the most beautiful of their kind in the Southern Hemisphere and perhaps the world.

Antony Trollope's comment that the Melbourne Botanic Gardens are “the most scientific, but that the world cares little for science”, is a bald statement. I suggest that the general public do not want to understand the complexities of science, but are somewhat elated to live with the status of an educated and scientific background, rather than an uncivilised and barbaric one. A modern example of this phenomenon was the publication of Stephen Hawking's *A Brief History of Time*, which spent three years in the British best seller list; sold millions of copies in 20 different languages; a work that so few of us can understand, except in the vaguest pictorial terms, but it was a stimulus to our understanding of the universe. I suggest that Baron von Mueller became such a figurehead in his day. A botanic garden has always been in a different category to a public park or a playing field, and I am sure that it fostered an interest in gardening. Again the nature of our climate, and

the availability of land, saw our centres of population develop as suburban, and not urban as in most European centres. The “Great Australian Dream” has always been to own your own home on a quarter-acre block. We have been fortunate to have a standard of living that gives us the space to afford a flower garden, when for many of the world’s population, life consists of a daily grind to find enough food, and the fuel with which to cook it.

Having banished von Mueller from the Botanic Gardens, the bureaucracy proceeded to harass him on every occasion, but he fought back and now, in some way, he was free again to explore and to catalogue. In 1877 Bentham had finished the *Flora of Australia*, fully utilising the notes and herbarium material that von Mueller had supplied. The end of 16 years of toil. The following year, Queen Victoria granted him a knighthood for his contribution to the *Flora*, and he now had the impressive title, Baron Sir Ferdinand von Mueller Ph.D., M.D., F.R.S., F.L.S. etc. etc. With an English title he was more secure, but he failed to understand that Australia was an egalitarian society, and that tall poppies should be chopped down. Most people in his situation would have given in. He went on botanising, writing and publishing, but he was far from being the eccentric; part figure of fun, part mad scientist. He was an ecologist, well aware of the vulnerability of the Australian flora. He was a century ahead of the Society for Growing Australian Native Plants; an explorer, who was the first to show an interest in Antarctic exploration for Australia. Von Mueller never did retire, nor was he ever retired. He became an institution, and worked till he died in 1896.

It would be interesting to see catalogued the number and type of rhododendrons in gardens in Australia at the turn of the century. Dr Chris Laurie has researched the history of *Rhododendron* ‘Mrs E.C. Stirling’, which was raised by Waterer. Mr E.C. Stirling, later Sir Edward, imported a large number of rhododendrons from England to Adelaide, including this plant, probably the first to be named for an Australian. His gardener raised and named some seedlings in the 1880s. In Victoria, Taylor and Sangster were importing from England and the continent as early as 1880, encouraged to plant at Mount Macedon by von Mueller and Guilfoyle. In Tasmania, English-trained nurserymen imported large numbers from England and Europe, in particular from Holland. In one period 50,000 grafted plants over five years were grown on, and later shipped to Melbourne. These were the old hardy hybrids, and destined to be the source of supply for this country for many years to come.

But now in England private gardeners, wealthy amateurs, with large gardens, such as Lord Loder, started their own hybridising. After the Great War, a select group were able to widen the scope, for this was the age of the great plant hunters, Fortune, Kingdon Ward and Wilson, to name a few, who introduced a vast number of new species. Lionel de Rothschild made over 1,200 crosses, grew an unbelievable number of seedlings, but with strict culling, and in the end his garden contained a million rhododendrons in a woodland

setting. This was the high point in collecting, high labour costs and taxes will see it never happen again. The Rothschild rhododendrons were for a milder climate, and this has been a watershed in breeding. From that time breeders have concentrated on plants for specific climates. Hobbie, and now Hachmann, in the cold of Baltic north Germany, strove for the ultimate in cold hardiness, where the flowering season is a bare four weeks from late spring to early summer, and these plants have great interest for growers in the colder parts of North America. In Melbourne, breeders were still unsure whether to breed for early flowering, so that the new foliage would be sufficiently hardened to resist damage by the hot early Summer northerly winds, or concentrate still on producing plants flowering for the traditional Cup Day display in early November.

After World War II new hybrids from England were fewer, but the Americans had a new approach. England never had a separate Rhododendron Society, it was always part of the Royal Horticultural Society and the Year Book shared with camellias. The American Rhododendron Society was formed in 1944. This was right from the start a friendly people's organisation, and they soon started hybridising and sharing their interests, and their plants. Their first publication was the 1945 *Yearbook*, and the genesis of the current seed exchange was a request from eastern members for species pollen. I have long studied their annual seed exchange catalogue as a preview of what is currently being done, and with interpretation, looking ahead eight years or so for a new direction.

When *R. yakushmanum* was introduced to cultivation in the 1950s, it took some time before it was recognised as an aid to cold hardiness, and also that it might create smaller plants. It was the most used species of that time. A witticism was that "yak" had been crossed with everything from 'Pink Pearl' to a toothbrush. Waterers, in their search for more compact plants, produced the seven dwarfs series, but soon wished that 'Snow White' had tripled the number of helpers. Later, while in America, I was stunned by the number of seemingly useless crosses; but I was to see in the next generation again, and with the *R. yakushmanum* content reduced to one quarter, the remarkable improvement in the foliage of this new generation. So now there was breeders' control over cold hardiness, plant size, and improved foliage, as well as the original target, pretty flowers in a range of colours. All these rhododendrons being the evergreen, non scaly-leaved type (elepidotes).

For Australians, an important year was 1953, when a group from the Ferny Creek Horticultural Society in Victoria felt that they would like to specialise in the study of the *Rhododendron* genus. Formed in May 1954, the group was so successful that by 1958 it was decided to extend their interest to cover all of Australia, and it became the Australian Rhododendron Society. The first journal was dated February 1959, and immediately set the scene with an article by Vic Boulter, "Raising Rhododendrons for Australian Conditions". So from day one of our Society we have been advised that we

should tailor new plants to take advantage of our climate, the climate of south east coastal Australia, and that they should be smaller, compact plants to suit smaller suburban gardens. Within south east Australia there were many areas with suitable soil and rainfall, and here, like-minded people formed branches of the Australian Rhododendron Society. Don Stanton and Bill Mearns had a mutual interest in *R. lochiaie* and, finding that rhododendrons could be successfully grown in Wollongong, they formed the Illawarra Branch in 1968. One year later sufficient interest saw another branch in the Blue Mountains at Blackheath. In 1977 Bob Malone was instrumental in chairing the inaugural meeting of the Tasmanian Branch, later leading to three branches, the North Western, the Southern and the Northern. Also later in 1977 we saw the formation of the South Australian Branch. Membership in all branches continued to grow and peaked some years back. When you consider this membership in proportion to our population, we were the most rhododendron-conscious nation on earth. Surely a notable achievement, and a reflection on our lifestyle.

At this time the Society and its members benefited greatly from the import of the latest species and hybrids from overseas. In the art of hybridising for specific aims the breeder needs to have at hand, the greatest number of pollen and seed plants, the better to select the ideal parents. With an average of, say, seven years from pollination to flowering, it is imperative to use a ready-made hybrid as a building block, rather than have to make it from scratch. Tom Lelliot, a foundation member, made several trips abroad, and was able to select and introduce, with others, the better new material. Being familiar with the contents of famous English gardens, Alan Watts imported to Hobart large numbers of the newest hybrids and better species, and Eric Little, on the slopes of Mount Wellington, did likewise. Later Ron Radford of the North West Tasmanian Group imported from North West America, a similar climate, huge numbers of the latest American hybrids, and many species forms not yet here. Bob Malone and Jos Deen joined this venture.

With this larger gene pool, Australian hybridisers were better equipped to achieve their goals. By crossing 'Cheals Marion' with other early hybrids, Boulter's Nursery and Karel van de Ven and others produced high quality early hybrids, and for a while we had a seed exchange listing. We should give thanks to everyone who has created a new hybrid. We hope they have registered the name and details of that cross to save later confusion, and that they and others may continue to do so with the different types, and not just the elepidote rhododendrons which we discuss now. What might be expected in the future from these elepidote rhododendrons? Greater heat tolerance and even more important, smaller compact plants with very attractive foliage. Small plants for small modern gardens sounds attractive, but is difficult to achieve with but a handful of species less than two metres tall.

The lepidote, or scaly-leaved rhododendrons, in nature are either alpine shrubs with small foliage or tender plants from temperate climates like Assam or Upper Burma. Many have scented flowers and are eminently suited for Australian conditions. Strangely, they have not attracted many hybridisers, possibly because of buyer resistance, for people do not see them as real rhododendrons with a huge flower truss. However, they are extremely floriferous. Of all the near-blue hybrids, the better coloured are two Australian-raised, 'Blue Admiral' and 'Florence Mann', and they also do better in our conditions. Most interest is with the sub-section maddeniana, in the *dalhousiae* alliance, and the *ciliicalyx* alliance. In the former, the outstanding hybrid is Alf Bramley's 'Southern Cloud', with up to ten huge white scented trumpets. In the latter group we had early triumphs from Arnold Teese with his pink perfumed 'Anne Teese' and the F3 'Pink Silk'; 'Winifred Merson' from Tom Lelliot; and 'Denise', a colour break from Vic Boulter. Others have been bred, but not nearly enough. I am particularly interested in this type of rhododendron, and in Tasmania, in the Emu Valley Garden, have mass planted them away from other rhododendrons, and they look very effective in their own company. Since these tender rhododendrons are under glass in most countries, it behoves us to make more of them as an Australian feature.

Evergreen azaleas come from, and thus do better in, warmer areas, and are the members of the rhododendron genus better suited for climates like that of Sydney. Here we have produced some beautiful new hybrids, but since there are already so many, it is difficult to create anything dramatically different. Deciduous azaleas are best seen in colder climates, and were some of the earliest to be hybridised, being subject to many changes in style and fashion. First bred in Belgium and England, then improved as the "Knap Hill" strain, then again refined by Rothschild as the "Exbury" strain, and yet again as the Solent group, then exported to America to earn valuable revenue after World War II. The Americans have now developed the ultimate in trusses of up to eighty flowers. Who wants to top that?

I have refrained until now from discussing the subsection vireya, the largest group in the genus *Rhododendron*, and the most recently discovered and classified in their entirety. When, in 1855 von Mueller suggested that Australia might have an indigenous rhododendron, an outlier from the flora of New Guinea, in the mountains of Queensland, little did we know where this might lead. In 1887, thirty two years later, Sayer and Davidson made the first ascent of Mount Bellenden Kerr and found our rhododendron. That same year von Mueller described it and named it *R. lochae*, after Lady Loch, the wife of the governor, in recognition of her patronage of horticulture and rhododendrons, and thereafter it remained a curiosity of native flora. 52 years later we hear of *R. lochae* again when recorded as flowering in the temperate house in Kew Gardens, but it was not heard of authoritatively in cultivation here until 1948–50,

although it was probably in private gardens in the 1930s. The spelling was later changed from *lochae* to *lochiae* to conform with accepted botanical Latin.

Dr R.M. Withers is to be commended for his Baron von Mueller Memorial Lecture (the fifth, and previous to this) and for the depth of his study of our native rhododendron, and more recently for his perception of a difference, and the joint discovery, with Dr Lyn Craven, of a second species, *R. notiale*. I noted the painting of *R. lochiaie* on the front cover of the June 1988 issue of *The Rhododendron*, and that in three partly opened flowers the corolla tubes were depicted as curved. I put it down to artistic licence, or a trick of perspective (the curved tubes are a distinguishing feature of *R. notiale*). Botanical illustration is not easy. I was involved in a minor way with the Lord Talbot de Malahide's *Endemic Flora of Tasmania* as a collector. Collected material was refrigerated and sent to England where the artist Margaret Stones worked, the paintings then returned to Dr Curtis at Hobart University for accurate representation, for under these conditions it is easy to misrepresent the form.

The avid interest for new plant material early in the last century resulted in rhododendrons being introduced from the more accessible parts of Asia, in fact Malaysia, which in turn gave the name Malesians to this group, which are now known as vireyas. From warmer climates, they needed the protection of glasshouses, popular at that time, as were conservatories, and noted for their exotic content. Would you believe that *Epacris impressa*, the native heath which is the floral emblem, of Victoria, a plant not named by von Mueller, but by the French botanist Labillardiere, who was here much earlier, had been hybridised and selected for a range of forms for winter colour in the conservatory. So stated the weekly illustrated journal, *The Garden*, Volume 26, No 660, July 26, 1884, with a full page coloured illustration. Those Victorians were well informed and well supplied.

The Malesians were introduced before Hooker's Sikkim beauties, and aroused great interest for their brighter and different coloured flowers. Only seven species were known to have been used in hybrid production, but it is understood that nearly two hundred were named. The clever self-pollinating of flowers with petaloid stamens produced full doubles popular as longer lasting flowers, for they cannot be fertilised, and last longer in the vain hope that they might be. Tom Lelliot suggested, in an article in *The Journal* of 1962 that we should locate and import any of these still then available. Alas, most were no longer in cultivation, but this did show an awareness of the potential for this group of rhododendrons, and proved to be a rewarding field of endeavour for Australian collectors and hybridisers.

Dr Lyn Craven, in his *History of the Introduction and Cultivation of Vireyas* of 1973, gives a full report, but I will give a few significant dates. T. Lobb found *R. javanicum* in 1845. Von Mueller was aware that German botanists had found more in New Guinea. These records

were later lost. C. Stonor collected in New Guinea, sending seed to RBG Edinburgh, and stimulated Dr Sleumer to work on the genus *Rhododendron* in Malasia. The first Journal of the Australian Rhododendron Society in 1959 contained a reference to *R. lochiaie*, and this same year, the Reverend Norman Crutwell collected seed of *R. christianae* in Papua and sent it to Australia and RBG Edinburgh. Dr Sleumer collected in New Guinea in 1961–62 and most seed went to the west coast of America, to Edinburgh and Holland, with some to Australia. R. Pullen of Canberra collected in New Guinea in 1964 for Australia, as did Dr Craven in 1964 and 1966. Mr M. Black, of the UK (who delivered the inaugural Baron von Mueller Memorial Lecture) collected in New Guinea in 1965 and 1968, sharing seed from the last trip with us. K. Wade, of the ANU Canberra, collected in New Guinea in 1967 for Canada and Australia, and D. Stanton of Wollongong sent a considerable number of species to Australia in 1971. The Reverend Crutwell continued to share all his new finds with us. It's clear that we benefited greatly from this material, but were not the only people interested in this, the second phase of vireya culture.

I think some of us are still coming to grips with just how versatile this group may be. Plants in this section of the genus *Rhododendron*, coming from the high mountains of the tropics, are thus used to a temperate climate, high rainfall, higher levels of ultraviolet light and daylight hours of equal length throughout the year; they have no response to summer or winter, but do respond to wet and dry seasons. A large number are epiphytes, some terrestrials, some are either, in whichever habitat provides sufficient light. It is obvious that some species, due to their particular microclimates, will be more difficult in cultivation than others, but because of their intolerance of temperature below 0°C, they will need shelter and temperature control for most growers. However, a bonus is that, being epiphytes, they can be readily container grown. Hybridising shows that many adapt well as terrestrials, with the proviso that good drainage is essential. Plants in containers, whether they be pots or fern logs, may be subjected to semi-drought conditions for a period, then watered copiously, and thus may be stimulated to flower several times in the year. It seems that we have a multi purpose rhododendron. In milder climates, such as eastern Australia, New Zealand, Pacific islands such as Hawaii, and southern California, they may be grown as terrestrials in frost free locations, or may be container grown for use in patio situations. In less benign situations they need lathe house or heated glasshouse for survival. I can easily relate to an enthusiasm for growing large numbers of potted plants on tiered staging in glasshouses, but prefer them in a more natural state and we have the climate to so do.

The first seed of *R. christianae* was grown by Alf Bramley, and distributed to members in 1961, as was Dr Sleumer's contribution in 1962. When *R. christianae* flowered for Alf Bramley and Tom Lelliot in 1963, both successfully crossed it with *R. lochiaie*, and Lelliot crossed *R. macgregoriae* with *R. lochiaie*. As *R. christianae* flowered, members crossed it with every species available. There was nothing startling in the

early hybrids, for the crosses were dictated by the limited breeding material, but it was a trial period to assess dominance, and to create a gene pool. Don Stanton took a great interest in vireyas from the beginning, and was soon in the forefront with new hybrids from planned crosses. He also exchanged material with the California growers and Peter Sullivan at the Strybing Arboretum. In 1975 Brian Clancy produced a back cross or F2 of *R. christiana* × *R. lochia*.

Bob Withers, in a survey of vireya species in cultivation, suggests a total of about one hundred and twenty, but Lyn Craven thinks that some listed are no longer extant. However, as good garden plants, the hybrids are more amenable. We should be impressed with the multiple talents of Bob Withers and even more so John Rouse, who has been tireless raising from seed in his very clever propagating unit, with automatic controls, a vast range of species and hybrids, and as more hybrids became available, he has selected some very worthwhile breeding projects. He has evolved grafting techniques to side-step cultivation problems with vireyas difficult in cultivation; in some cases using lepidote rhododendrons as understock, and even a double graft using an intermediate “bridge” to overcome incompatibility between scion and understock.

Graham Snell, formerly located at the foot of the Dandenongs, Victoria, was the commercial grower so very necessary with the interest in this type of rhododendron, but he was also an avid collector with the experience to judge the horticultural worth or otherwise of new hybrids. His determination to present a superior product involved hard pruning of young plants to make them bushy, and at the same time maintain a good supply of cuttings. That procedure was sometimes set back by cold air draining from the mountain, so he moved to the hinterland of the Sunshine Coast and is still to the forefront of our ongoing development of vireyas. When the gardening public do see more advanced specimens of modern vireyas, there must be a greater demand for this product. There are some excellent examples in private gardens. John Rouse has a garden in the very heart of Melbourne, so filled with vireyas that they overflow onto the nature strip outside the front fence. The garden is crowded with species and hybrids. The drive is lined with large potted plants watered with a drip system. A glasshouse and rare material are in a locked enclosure behind the grass tennis court. Many plants are two metres high, and as much across – an inspiring sight.

Within the states that have branches of the society there are rhododendron gardens open to the public, that were developed on a voluntary basis by members of those branches, and the work they do developing their gardens for posterity is all the reward they ask. The first and largest is the National Rhododendron Garden, at Olinda in the Dandenongs, started in 1961 with 100 acres set aside for the formation of a garden. Later more land was added and, one third of a century on, it is a tribute to the dedication and hard work of members of the society. The public can see a comprehensive display

of the wealth of rhododendrons that have been so well chosen to demonstrate the wide range that can be grown in this climate. Vireyas were originally grown in a large glasshouse, but have now been planted out in the garden.

In New South Wales, the Illawarra Branch were quick to establish, in 1969, a site for a garden on the slopes of Mount Pleasant. Here the climate was more hostile than anticipated. Bill Mearns and Don Stanton were both interested in vireyas, an excellent choice for this area, and these, with azaleas, some locally developed, formed the basis for this garden in a dramatic site. The Blue Mountains Branch, who remained outside the society after it became organised nationally, developed, and still maintain an excellent rhododendron garden at Blackheath.

In South Australia, that branch has an interest in the Mount Lofty annexe of the Adelaide Botanic Gardens. That hill garden was badly damaged by fire in 1983, and both the Victorian and Tasmanian Branches sent a container load of advanced material to restart this planting.

The North West Tasmanian Branch, in a search for suitable land for a garden, gladly accepted an offer to lease land on the property of H. O'Rourke near Burnie. Now this, the Emu Valley Rhododendron Garden, a separate incorporated entity, owns this thirty three acres and is managed by a committee of members of the North West Tasmanian Branch. Development started in 1986 and has grown rapidly. Small seedlings of the cross (*B. konori* × *R. laetum*) × *R. commonae* were planted in sites with very good air drainage, and with very high top cover of blackwoods, and deliberately left to their own care, and survive they did, and here we have our collection of vireyas soon to be extended up that valley to enhance an existing stand of tall tree ferns, where many suitable vireyas will be grown as epiphytes. All these branch gardens have earned praise from overseas visitors for our efforts in this different climate.

I consider that the committee of the Australian Rhododendron Society showed great wisdom in producing a journal from the first year of its existence, for it has been a vital aid in communication with members, and as a vehicle for the dissemination of knowledge. Here we have a permanent record of our achievements in the cultivation of rhododendrons, especially those species too tender for colder climates, the need for and the announcement of new hybrids suitable for our range of climatic conditions.

I mention, in particular, opportunity afforded to record research from many of our members, and in particular that of, and initiated by, John Rouse and his research colleagues, who investigated the Reproductive Biology of Rhododendrons and allied subjects such as the reasons for incompatibility in interspecific fertilisation. He has been a prolific writer. His, the second Baron von Mueller lecture, was published in *The Rhododendron* and brought high acclaim from all quarters of the rhododendron world. It should be noted that the great level of interest in vireya is shown by the

content of the journal. I sincerely hope that members will continue to support the publication of *The Rhododendron*.

While on the subject of publications, we should highly commend J. Clyde Smith, a tireless worker and key figure in the Illawarra Branch, for his book *Vireya Rhododendrons*. As formerly Honorary Secretary of National Council, and at the same time editor of the Society's Journal *The Rhododendron*, he was the ideal person to write this book for the Society. This publication was a world first as a guide to the cultivation of vireyas as garden plants.

Branches of the Australian Rhododendron Society have staged three conferences with international content. The first, the combined Australia New Zealand Pacific Conference of 1970, was innovative in that it was held in both countries, the Australian content being in Sydney and Melbourne. The second, a triumph for our Ralph Sangster, then Chairman of the International Rhododendron Union, was for us to host the International Rhododendron Conference in Wollongong in 1988. One of our distinguished guest speakers was the Reverend Norman Crutwell, from New Guinea. Being asked at the official dinner to deliver the Blessing, he responded, "God bless rhododendrons, for they bring such delightful people together". The third, six years later, was the Pacific Region International Conference, held in Burnie Tasmania. All Conferences were well attended, with a congenial blend of local and overseas delegates, the subject material was of a very high standard, and all three fostered international good will.

It is a fact that the history of vireyas in cultivation, in its second phase, and that of this Society have followed a parallel course from the date of its inception. As this Society grew, so did our understanding of vireyas and their importance through the number of new hybrids that we produced, and are still doing. Back in 1980, John Rouse introduced Project Hybrid, with the aim of involving society members in an attempt to grow on large numbers of several key crosses to find vireya hybrids of tougher constitution, and more dramatic flower production. With an increase in knowledge since then, would it be possible to repeat this project? It was very exciting to read in the 1996 journal, in an article by Brian Clancy, "A New Standard For Dwarf Vireya Hybrids", that he has, with a number of second generation crosses, developed compact floriferous, multi-stemmed, dwarf hybrids. Breeders in Australia are creating new vireyas to suit a range of needs, and their production exceeds that of all the rest. Recent registration figures list some three hundred vireyas, of which one hundred and ninety one were Australian. "Just reward" for their efforts.

The Society introduced the accepted appreciation of Life Membership, and later another, the Award of the Society Medal. These provided the means for the Society to recognise hard work and excellence of achievement, such as that recounted above. Again, "just rewards." Members were delighted when the Medal of the Order of Australia was presented to Dr John Rouse, Dr Robert Withers and another fellow member, Dr

Peter Valder. Dr Withers had already been honoured by the Royal Horticultural Society with the Gold Veitch Memorial Medal. Very “just rewards.”

In conclusion, Australia has played a major role in the dissemination of knowledge of the genus *Rhododendron*, and in particular of vireyas. Australia was the perfect place for this to happen, and von Mueller did provide a remarkable stimulus for such efforts.

I consider that the true significance of the Baron von Mueller Memorial Lectures, sponsored by the Australian Rhododendron Society, is to commemorate the life of von Mueller as an Australian botanist who predicted the discovery of, and named, our endemic rhododendron, *R. lochiai*, and in so doing initiated an interest that would contribute to the situation where Australia leads the world in the development of this new multipurpose range of exciting plants, the modern vireyas. Von Mueller knew that he was laying a foundation for posterity. The very idea of a distant future in which he might still play a part delighted him. That a hybrid vireya rhododendron, progeny of the original discovery, was named ‘Ferdinand von Mueller’ can also be no more than a “just reward.”

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Dr. Sullivan joined the then newly-formed ARS in 1960, having previously belonged to the Ferny Creek Horticultural Society, Victoria. Subsequently, he became a foundation member and committee member of the Tasmania Branch No. 1. He served as President and Secretary, and on the ARS National Council. He was active in the negotiations for a suitable site for a regional rhododendron garden in northern Tasmania, which led to establishment of the Emu Valley Rhododendron Garden. As Chairman of the Garden Committee, he was responsible for production of the original landscaping design and overseeing the laying out of the garden. He has an intense interest in the hybridizing of ornamental plants, and is responsible for the introduction of numbers of important new hybrid rhododendrons

New Registrations 1997–98

GRAEME 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 1997/98.

- ‘Aaron Stewart Jordan’** Evergreen azalea hybrid of (‘Rosa Belton’ × *R. oldhamii*) Selfed. H. (1993), G. (1996), N. & R. (1997) Eric W. Jordan. Open, flat truss of 3 broadly funnel shaped flowers, 30 × 75 mm, with 5 wavy edged lobes. Colour: buds very light purple (75C) opening inside and out to the same colour. Leaves: elliptic 50 × 15 mm, flat ciliate margins, matt, attenuate at base, acute at apex. Size: 0.6 m high in 3 years.
- ‘Amber Blush’** Elepidote hybrid of ‘C.I.S.’ × ‘Jalisco’ H. (1982), G. (1994), N. & R. (1997) Noel Sullivan. Flat truss of 10–12 broadly funnel shaped flowers, 40 × 135 mm, with 5 wavy edged lobes. Colour: buds dark pink (182D) opening inside and out a very pale dilution of dark pink (182D), suffused from centre out pale yellow (161D), intensifying with age with a prominent moderate red (182A) basal blotch. Leaves: ovate, 130 × 50 mm, flat margins, matt, obtuse at both apex and base, with no indumentum. Height: 1.2 m × 1.0 m in 14 years.
- ‘Aunty Annie’** Elepidote hybrid of ‘Mrs Betty Robertson’ × ‘Tortoiseshell Wonder’. H. (1990), G. (1997), N. & R. (1997) D.J. Dossier. Flat truss of 10 funnel shaped flowers, 64 × 102 mm, with 6 wavy edged lobes. Colour: buds deep pink (50B) opening inside corolla deep pink (50B) shading to strong pink (50C) in throat, outside strong pink (50D). Leaves: ovate, 130 × 50 mm, decurved margins, matt, cordate at base, acute at apex. Size: 0.6 m × 0.6 m in 7 years.
- ‘Benjamin Robert Jordan’** Evergreen azalea hybrid of (‘Rosa Belton’ × *R. oldhamii*) Selfed. H. (1993), G. (1996), N. & R. (1997) Eric W. Jordan. Open flat truss of 3 hose in hose campanulate shaped flowers, 60 mm wide, with 2 sets of 5, flat edged lobes. Colour: corolla inside and out, strong purple (80B) with rose coloured spots on dorsal lobe. Leaves: broadly elliptic, 65 × 27 mm, flat ciliate margins, cuneate at base, mucronate at apex. Height: 0.6 m × 0.3 m in 3 years.
- ‘Black Ace’** Elepidote hybrid of ‘Midnight’ × ‘Mrs Tom H. Lowinsky’. H. (1986), G. (1996), N. & R. (1998) Noel Sullivan. Dome shaped truss of 15 funnel shaped flowers, 30 × 70 mm, with 5 flat edged lobes. Colour: buds strong purplish red (64B) opening inside and out to deep purplish pink (64D) with a large black three lobed blotch on upper three petals. Leaves: elliptic, 130 × 60 mm, upcurved margins, matt, obtuse at base, acuminate at apex, with no indumentum. Size: 1.5 m × 0.6 m in 12 years.
- ‘Bryan H. Tonkin’** Elepidote hybrid of ‘Lockington Pride’ × ‘Loderi Titan’. H. (1990), G. (1995), Don J. Dossier N. & R. (1997) Graham W. Tonkin. Large dome shaped perfumed truss of 18 funnel shaped flowers, 75 mm × 110–40 mm, with 7–8 wavy edged lobes. Colour: Buds Vivid purplish red (67B) opening inside corolla Very pale purple (69A) at lobe edges, shading to Very pale purple (69C), Outside Very pale purple (69C) with Deep purplish pink (68A) blush on midveins, Strong purplish red (60B) spotting on 3 dorsal lobes, Dark red (59A) blotch in throat. Leaves: Moderate olive green (147A), elliptic to slightly oblanceolate, 188–210 mm × 45–50 mm, wavy, upcurved margins, matt, attenuate at base, acute at apex, with no indumentum. Size: 1.5 m × 1.0 m in 7 years.

- ‘Christopher John Jordan’** Evergreen azalea hybrid of (‘Rosa Belton’ × *R. oldhamii*) selfed. H. (1993), G. (1996), N. & R. (1997) Eric W. Jordan. Flat truss of 3–4 hose in hose campanulate flowers, 50 × 90 mm, with 2 sets of 5 wavy edged lobes. Colour: Light purple inside and out, with rose spots on dorsal lobe. Leaves: Elliptic, 70 × 18 mm, flat ciliate margins, matt, cuneate at base, mucronate at apex. Size: 0.6 m × 0.3 m in 3 years.
- ‘Countess of Lockington’** Elepidote hybrid of ‘Lockington Pride’ × ‘Loderi Titan’. H. (1990), G. (1997), N. & R. (1997) Don J. Dosser. Conical truss of 10 perfumed, funnel shaped flowers, 76 × 114 mm, with 7 wavy edged flowers. Colour: Buds Strong purplish pink (63C), opening and fading inside and out to pure white with green spots. Leaves: Elliptic, 150 × 46 mm, flat margins, matt, attenuate at base, acute at apex, with no indumentum. Size: 0.6 m × 0.3 m in 7 years.
- ‘Deidre Hunt’** Elepidote hybrid of ‘Samantha Sawers’ × ‘Ross Maud’. H. (1990), G. (1996), N. & R. (1997) Don J. Dosser. Ball shaped truss of 15 funnel shaped flowers, 50 × 115 mm, with 6 wavy edged lobes. Colour: Buds Deep yellowish pink (47C) opening inside corolla deep purplish pink (54B), outside. Vivid red (52A), with greenish yellow spots (5D) on three dorsal lobes. Leaves: Elliptic, 153 × 53 mm, decurved margins, matt, truncate at base, acute at apex, with no indumentum. Size: 1.0 m × 0.7 m in 7 years.
- ‘Dianne Lane’** Elepidote hybrid of ‘Midnight’ × ‘Mrs Tom H. Lowinsky’. H. (1986), G. (1995), N. & R. (1998) Noel Sullivan. Dome shaped truss of 12–14 funnel shaped flowers with rudimentary stamens and no pollen, 30 × 85 mm, with 5 wavy edged lobes. Colour: buds strong reddish purple (72B) opening inside corolla strong purplish pink (73B) on lobe edges shading to Very pale purple (73D), outside very pale purple (73D), large Dark red (187A) basal blotch and dorsal lobe flare spreading to within 5 mm of lobe edge and to 2 other lobes. Leaves: Elliptic, 170 × 60 mm, decurved margins, semi glossy, bullate, obtuse at base, acute at apex, with no indumentum. Size: 1.0 m × 1.5 m in 12 years.
- ‘D. J. Dosser’s Choice’** Elepidote hybrid of ‘Elissa’ × ‘Loderi Titan’. H. (1990), G. (1996), N. & R. (1997) Don J. Dosser. Ball shaped truss of 14 funnel shaped flowers, 64 × 127mm, with 7 wavy edged lobes. Colour: Buds Very light purple (75C) opening inside corolla to the same colour and outside turning white, Vivid purplish red (57C) spots on dorsal lobe. Leaves: Narrowly ovate, 231 × 65mm, decurved margins, matt, obtuse at base, acute at apex, with no indumentum. Size: 1.5m × 0.8m in 7 years.
- ‘Earl of Lockington’** Elepidote hybrid of ‘Mrs Betty Robertson’ × ‘Cornubia’. H. 1990, G. 1996, N. & R. 1997 Don J. Dosser. Ball shaped truss of 16 funnel shaped flowers, 76 × 102 mm, with 5 wavy edged lobes. Colour: buds. vivid red (57A) turning to vivid purplish red (57C), corolla opening inside and out vivid purplish red (57C). Leaves: ovate, 155 × 54 mm, decurved margins, glossy, obtuse at base, acute at apex, with no indumentum. Size: 1.0m × 0.8m in 7 years.
- ‘Full Spectrum’** Elepidote hybrid of ‘Bambi’ × *R. delavayi*. H. 1986, G. 1996, N. & R. 1998 Noel Sullivan. Dome shaped truss of 15 campanulate flowers, 45 × 70 mm, with 5 straplike reflexed and twisted lobes. Colour: buds, strong purplish pink (54B), corolla opening inside and out strong pink (54C) changing rapidly to pale yellow (11D) with pale purplish pink (56D) margins. Leaves: elliptic, 120 × 40 mm, decurved margins, matt, obtuse at base, acute at apex, with dramatic indumentum which is orange red when young maturing to moderate reddish brown (166B). Size: 1.2 m × 0.7 m in 11 years.
- ‘Glory of Lockington’** Elepidote hybrid of ‘Tortoiseshell Wonder’ × ‘Mrs Betty Robertson’. H. 1990, G. 1997, N. & R. 1997 Don J. Dosser. Dome shaped truss of funnel shaped flowers, 57 × 50 mm, with 5 flat margined flowers. Colour: buds, deep red (53A), corolla opening inside light yellow (12C), outside pale yellow (11C). Leaves: elliptic, 123 × 39

mm, decurved margins, matt, attenuate at base, apiculate at apex, with no indumentum. Size: 0.8 m × 0.6 m in 7 years.

- 'Josephine Kaye'** Elepidote hybrid of 'Samantha Sawers' × 'Gift'. H. 1990, G. 1996, R. 1997 Don J. Dosser. N. 1997 Elaine Alice Game. Flat shaped truss of 9 funnel shaped flowers, with 8 wavy edged lobes. Colour: buds, moderate purplish red (64A), corolla opening inside and out deep purplish pink (73A). Leaves: elliptic, 180 × 50 mm, semi glossy, oblique at base, acute at apex, with no indumentum. Size: 1.0 m × 0.6 m in 7 years.
- 'Lavender Perfection'** Evergreen azalea hybrid of ('Rosa Belton' × *R. oldhamii*) selfed. H. 1993, G. 1996, N. & R. 1997 Eric W. Jordan. Lax, hose in hose truss of 3 funnel shaped flowers, 40 × 60 mm, with 2 sets of 5 lobes. Colour: pale purplish pink (62D) in bud opening inside and out to same colour, rose spots on dorsal lobe. Leaves: broadly elliptic, 55 × 21 mm, flat ciliate margins, matt, attenuate at base, mucronate at apex, with hairs. Size: 0.6 m high in 3 years.
- 'Light Touch'** Evergreen azalea hybrid of 'Shugetsu' × 'Splendens'. H. 1990, G. 1996, N. & R. 1997 Eric W. Jordan. Flat open truss of 3 flowers similar to 'Splendens', 75 mm wide, with 5 flat edged lobes. Colour: buds, strong pink (54C), corolla opening inside pale purplish pink (56B) shading to strong pink (54C) at lobe edges, outside moderate purplish pink (54D). Leaves: oblique elliptic, 58 × 20 mm, flat ciliate margins, matt, oblique at base, mucronate at apex, with hairs. Size: 0.6 m × 0.3 m in 8 years.
- 'Little Pearl'** Evergreen azalea hybrid of ('Rosa Belton' × *R. oldhamii*) selfed. H. 1993, G. 1996, N. & R. 1997 Eric W. Jordan. Lax, hose in hose shaped truss of 3 funnel shaped flowers, 40 × 60 mm, with 2 sets of 5 wavy edged lobes. Colour: buds, light purplish pink (63D), corolla opening inside and out to the same colour. Leaves: elliptic, 40 × 15 mm, flat ciliate margins, matt, attenuate at base, mucronate at apex, with hairs. Size: 0.3 m × 0.23 m in 3 years.
- 'Lockington Gold'** Elepidote hybrid of 'Crest' × un-named yellow seedling. H. 1990, G. 1996, N. & R. 1997 Don J. Dosser. Ball shaped truss of 9 funnel shaped flowers, 50 × 89 mm, with 7 wavy edged lobes. Colour: buds, strong yellowish pink (37B), corolla opening inside and out pale yellow green (4D) shading to light greenish yellow (4B) in throat. Leaves: elliptic, 102 × 37 mm, decurved margins, matt, oblique at base, apiculate at apex, with no indumentum. Size: 1.2 m × 0.5 m in 7 years.
- 'Margaret Ramshaw'** Lepidote hybrid of 'Moon Blush' selfed H. 1986, G. 1991, N. & R. Noel 1997 Sullivan Flat truss of 6 campanulate flowers, 40 × 70 mm, with 5 wavy edged lobes. Colour: buds, moderate red (181C) opening inside corolla to pale yellow (158A) with paler than dark pink (182D) edges to lobes and outside to moderate red (181C) stained paler than dark pink (182D). Dorsal lobe spotted brownish orange (171B), faint scent. Leaves: obovate, 60 × 30 mm, upcurved margins, matt, attenuate at base, obtuse at apex with scales. Size: 0.45 m × 0.4 m in 6 years.
- 'Mary Arabella'** Elepidote hybrid of 'Lockington Pride' × 'Loderi Titan' H. 1990, G. 1996, N. & R. 1997 Don J. Dosser. Ball shaped truss of 15 to 20 funnel shaped flowers, 63 × 95 mm with 7 wavy edged lobes. Colour: buds, strong purplish red (67A) opening inside corolla to pale yellow (11D) and outside strong purplish pink (68B). Deep purplish red (59B) spots on 4 dorsal lobes. Leaves: elliptic, 245 × 57 mm, slightly decurved, matt, attenuate at base, acute at apex, with no indumentum. Size: 1.0 m × 0.6 m in 7 years.
- 'Mauve Perfection'** Evergreen azalea hybrid of ('Rosa Belton × *R. oldhamii*) selfed. H. 1993, G. 1996, N. & R. 1997 Eric W. Jordan. Loose flat hose in hose truss of 3 funnel shaped flowers, 30 × 50 mm, with 2 sets of 5 flat edged lobes. Colour: buds, light purple (80D)

opening inside and outside corolla the same colour, dorsal lobe spotting. Leaves: broadly elliptic, 54 × 19 mm, flat ciliate margins, attenuate at base, acute mucronate at apex. Size: 0.6 m × 0.6 m in 3 years.

- ‘Mavis Fairfield’** Elepidote hybrid of ‘Jan Dekens’ × ‘Dr Arnold Entz’ seedling. H. 1976, G. 1984, N. & R. 1998 Noel Sullivan. Dome shaped truss of 22 campanulate flowers, 35 × 70 mm, with 5 wavy edged lobes. Colour: buds, strong purplish red (64C), opening inside corolla to deep purplish pink (66C) and outside strong purplish red (64C). Corolla when fully open has a 2 mm wide white edge to all petals. Very faint vivid purplish red (66A) spotting on dorsal lobe. Stamens and pistils red. Leaves: oblong, 110 × 55 mm, upcurved margins, matt, attenuate at base, apiculate at apex, with no indumentum. Size: 1.75 m × 1.25 m in 22 years.
- ‘Midas Touch’** Elepidote hybrid of (‘Percy Wiseman × ‘Tomeka’ #9) × ‘Apricot Ice’. H. 1990, G. 1996, N. & R. 1998 Noel Sullivan. Dome shaped truss of 14 funnel shaped flowers, 30 × 70 mm, with 6 flat edged flowers. Colour: buds, strong yellowish pink (34D), opening inside corolla to light yellow (162C), and outside to light yellowish pink (37D). Star-shaped moderate red (180A) basal blotch. An ornamental frilled and reflex calyx coloured as the corolla. Leaves: elliptic, 120 × 40 mm, flat margins, matt, cordate at base, acute at apex, with no indumentum. Size: 0.6 m × 0.5 m in 8 years.
- ‘Miss B.L. Jones’** Elepidote hybrid of ‘Samantha Sawers’ × ‘Ross Maud’. H. 1990, G. 1996, N. & R. 1997 Don J. Dosser. Ball shaped truss of 17 funnel shaped flowers, 63 × 90 mm, with 6 frilly edged flowers. Colour: buds, vivid red (52A), opening inside corolla to pale yellow green (4D), outside light purplish pink (62C), few spots on dorsal lobe. Leaves: ovate, 144 × 53 mm, decurved margins, matt, obtuse to truncate at base, acute at apex, with no indumentum. Size: 1.0 m × 0.8 m in 7 years.
- ‘Monica Chapman’** Elepidote hybrid of ‘President Roosevelt’ × ‘Bow Bells’. H. 1974 Bob Malone, G. 1986, N. & R. 1998 Noel Sullivan. Conical truss of 18 wide funnel shaped flowers, 35 × 100 mm, with 5 wavy edged lobes. Colour: buds, vivid red (52A), corolla opening inside white flushed with colour from outside corolla, with a narrow edge of deep pink (52B), outside deep pink (52B) Leaves: lanceolate, 100 × 60 mm, decurved margins, (leaf sharply decurved on long axis as well as across the width), matt, obtuse at base, acute at apex, with no indumentum. Size: 2.0 m × 1.0 m in 20 years.
- ‘Noel Archer’** Evergreen azalea hybrid of ‘Goyet’ × ‘Splendens’. H. 1989, G. 1993, N. & R. 1997 Eric W. Jordan. Truss similar to ‘Splendens’ with 3 tubular funnel shaped flowers, 90 mm wide, with 5 flat edged lobes. Colour: buds, vivid reddish orange (43B), corolla opening inside and out to the same colour. Leaves: elliptic, 57 × 15mm, flat ciliate margins, glossy, cuneate at base, mucronate at apex, with no indumentum. Size: 0.75 m × 0.3 m in 7 years.
- ‘Patricia Anne Jordan’** Evergreen azalea hybrid of unknown parentage. H. 1991, G. 1994, N. & R. 1997 Eric W. Jordan. Lax hose in hose truss of 3 broadly campanulate flowers, 50 × 75 mm, with 3 sets of 5 lobes, with wavy (fluted) margins. Colour: buds, yellowish white (155D), corolla opening to the same colour shading to green in the throat, outside yellowish white (155D). Leaves: elliptic, 63 × 21 mm, flat ciliate margins, matt, attenuate at base, mucronate at apex, with hairs. Size: 0.6 m × 0.9 m in 5 years.
- ‘Pink Memories’** Evergreen azalea hybrid of (‘Rosa Belton’ × *R. oldhamii*) selfed. H. 1993, G. 1996, N. & R. 1997 Eric W. Jordan. Flat truss of 7 hose in hose funnel shaped flowers, 35 × 50 mm, with 2 sets of 5 wavy edged lobes. Colour: buds, light purplish pink (63D), corolla opening inside and out to the same colour. Spots on dorsal lobe. Leaves: elliptic, 40 × 13 mm, flat ciliate margins, glossy, cuneate at base, mucronate at apex, with hairs. Size: 0.6 m × 0.45 m in 3 years.

- 'Pink Opal'** Evergreen azalea hybrid of 'Agnes Neale' × 'Splendens'. H. 1993, G. 1996, N. & R. 1997 Eric W. Jordan. Flat truss of 3 broadly funnel shaped flowers, 70 mm wide, with 5 wavy edged lobes. Colour: buds, very light purple (75C0, corolla opening inside and out to the same colour. Leaves: elliptic, 40 × 15 mm, flat ciliate margins, matt, cuneate at base, mucronate at apex, with hairs. Size: 0.9 m × 0.3 m in 3 years.
- 'Plenty Pink'** Lepidote hybrid of ?*R. johnstoneanum* × Unknown. From seed originally imported from Wisley as *R. maddenii* G. 1980, N. & R. 1998 Noel Sullivan. Loose flat truss of 4–6 funnel shaped flowers, 60 × 80 mm, with 5 wavy edged lobes. Colour: strong purplish pink (62A), corolla opening inside to pale purplish pink (65D) with pale purplish pink (62D) blushes at lobe edges, outside pale purplish pink (65D) with strong purplish red (62A) colouring along midribs. Leaves: oblanceolate, 13–85mm long × 21–30mm wide, decurved margins, matt, attenuate at base, mucronate at apex, with scales. Size: 1.5 m × 1.2 m in 25 years.
- 'Rebecca Clarke'** Elepidote hybrid of 'Bambi' × 'Tomeka'. H. 1982, G. 1989, N. & R. 1998 Noel Sullivan. Flattened dome shaped truss of 12 campanulate flowers, 40 × 60 mm, with 5 flat edged lobes. Colour: buds, strong red (47B), corolla opening inside and out to vivid reddish orange (34A) gradually changing to pale yellow (20C) from centre out leaving a red rim. Leaves: elliptic, 130 × 50 mm, flat margins, glossy, obtuse at base, acute at apex, with no indumentum. Size: 1.0 m × 1.2 m in 13 years.
- 'Red Gold'** Elepidote hybrid of 'Bambi' × *R. macabeanum*. H. 1983, G. 1992, N. & R. 1998 Noel Sullivan. Flat truss of 15 ventricose campanulate flowers, 50 × 50 mm, with 7 wavy edged lobes. Colour: buds, strong orange (169B), corolla opening inside and out moderate orange (168C) changing within a couple of days to light yellow (162C), moderate red (179A) basal blotch. Leaves: elliptic, 120 × 50 mm, slightly decurved margins, matt, obtuse at base, acute at apex, with very thin buff indumentum which lightens with age. Size: 0.8 m × 0.7 m in 15 years.
- 'Ruby Anne'** Vireya hybrid of *R. anigaliflorum* × *R. rubineiflorum*. H. 1984, G. 1987, N. 1987 Graham Snell, R. 1997 Dr Robert Withers. Truss of 1 tubular funnel shaped flower, 20 × 30 mm, with 5 flat edged lobes. Colour: inside corolla pale purplish pink (62D), moderate purplish pink (62B) at lobe edges, strong purplish red (63A) in throat; outside pale purplish pink (62D). Leaves: elliptic, 9 × 3.5 mm, flat margins, glossy, attenuate at base, acute at apex, with scales. Size: 0.19 m × 0.35 m. Compact spreading plant.
- 'Saffron Supreme'** Lepidote hybrid of *R. chrysomanicum* × *R. xanthostephanum*. H. 1987, G. 1992, N. & R. 1998 Noel Sullivan. Flat truss of 7–9 tubular campanulate flowers, 30 × 40 mm, with 5 flat edged lobes. Colour: buds, brilliant greenish yellow (5A), corolla opening inside and out to the same colour. Leaves: lanceolate, 70 × 25 mm, attenuate at base, acute at apex, with scales. Size: 0.5 m × 0.6 m in 10 years. Fills an empty space by flowering after *R. chrysomanicum* and before 'Saffron Queen'. Very floriferous.
- 'Salmon Ripple'** Elepidote hybrid of 'Golden Salmon' × 'Gary Herbert'. H. 1981 Mary Oleri, G. 1991, N. & R. 1998 Noel Sullivan. Flat truss of 12 funnel shaped flowers, 30 × 60 mm, with 7 frilly edged lobes. Colour: buds, strong purplish red (54A), corolla opening inside deep purplish pink (54B) in centre shading to moderate purplish pink (54D) and then to pale purplish pink (56D) at lobe edges, outside deep purplish pink (54B). Leaves: elliptic, 110 × 50 mm, flat margins, matt, obtuse at base, acute at apex, with no indumentum. Size: 1.8 m × 1.0 m in 16 years. Sterile. No stamens.
- 'Sarah Gillhoff'** Elepidote hybrid of 'Helene Schifffner' × *R. delavayi*. H. 1984, G. 1995, N. & R. 1998 Noel Sullivan. Ball shaped truss of 28 funnel shaped flowers, 35 × 50 mm, with

5 flat edged lobes. Colour: buds, strong red (50A), corolla opening inside to strong pink (50C), shading to a light centre which is almost white, outside deep pink (50B). Leaves: elliptic, 160 × 50 mm, flat margins, matt, cuneate at base, acute at apex, with thin pale yellow indumentum when young, maturing to gold. Size: 2.5 m × 1.2 m in 13 years. Good upright plant habit with good tight trusses.

‘Silver Challis’ Evergreen azalea hybrid of ‘Anne Perks’ × Unknown. H. 1991, G. 1993, R. 1997 Eric W. Jordan. N. 1993 Alan Raper. Open flat truss of 2 broadly funnel shaped, scented, flowers, 30 mm wide, with 5 wavy edged lobes. Colour: buds, greenish white (155C), corolla opening inside to pale purplish pink (56D), outside greenish white (155C). Leaves: broadly elliptic, 45 × 20 mm, flat, ciliate margins, matt, attenuate at base, mucronate at apex, with hairs. Size: 0.75 m × 0.6 m in 4 years.

‘Sydney Olympic 2000’ Evergreen azalea hybrid of ‘Agnes Neale’ × ‘Splendens’. H. 1993, G. 1996, N. & R. 1997 Eric W. Jordan. Flat, hose in hose truss of 2 broadly funnel shaped flowers, 40 × 75 mm, with 2 sets of 5 wavy edged lobes. Colour: Buds, moderate purplish pink (78D) corolla opening inside and out to the same colour. Leaves: elliptic, 96 × 25 mm, flat margins, glossy, cuneate at base, obtuse at apex, with no indumentum. Size: 0.6 m × 0.75 m in 3 years.

‘Tasmanian Treasure’ Elepidote hybrid of ‘Percy Wiseman’ × ‘Tomeka’. H. 1979 R. Malone, G. 1990, N. & R. 1998 Noel Sullivan. Flattened dome shaped truss of 10 campanulate shaped flowers, 40 × 75 mm, with 5 flat edged lobes. Colour: buds, strong red (51A), corolla opening inside and out strong red (51A) fading from centre out within a couple of days to pale yellow (19C) suffused deep pink (47D), overall effect a soft orange. Leaves: elliptic, 140 × 50 mm, decurved margins, matt, obtuse at base, acute at apex, with no indumentum. Size: 1.8 m × 1.0 m in 18 years.

‘The Sorcerer’s Apprentice’ Vireya hybrid of (*R. konori* × *R. rhodoleucum*) × *R. konori*. H. Unknown, G. 1994, N. & R. Douglas Moodie. Dome shaped truss of 7–11 tubular funnel shaped, perfumed flowers, 115 × 75 mm, with 6 wavy edged lobes. Colour: buds, light yellowish pink (37D), corolla opening inside yellowish white (155D), outside yellowish white (155D) darkening at base of tube to moderate pink (36D). Bright candy pink style. Leaves: ovate, 125 × 55 mm, flat margins, matt, obtuse at base, acute at apex, with very pale green (192B) scales when young, maturing to dark yellowish green (139A). Size: 2.5 m × 1.2 m in 12 years.

‘Top Award’ Elepidote hybrid of ‘Award’ × ‘Ice Cream’. H. 1989, G. 1996, N/ & R. 1998 Noel Sullivan. Large exotic conical truss of 20 broadly funnel shaped sterile flowers with no stamens, 20 × 105 mm, with 5 wavy edged lobes (folded and pleated). Colour: buds, pink suffused with deep pink (51B), corolla opening inside and out pale yellow green (155A) suffused moderate pink (51D). Deep purplish pink (61D) throat spreading to petal edges. Leaves: lanceolate, 175 × 70 mm, decurved margins, matt, cordate at base, acute at apex, with no indumentum. Size: 0.75 m × 0.5 m in 9 years.

‘Violet Perfection’ Evergreen azalea hybrid of ‘Violacea’ × ‘Agnes Neale’. H. 1990, G. 1993, N. & R. 1997 Eric W. Jordan. Lax, flat, hose in hose truss of 2 broadly funnel shaped flowers, 50 × 75 mm, with 2 sets of 5 frilly edged lobes. Colour: buds, vivid reddish purple (78A), corolla opening inside and out the same colour. Leaves: broadly elliptic, 50 × 20 mm, flat ciliate margins, matt, cuneate at base, obtuse at apex, with no indumentum. Size: 0.9 m × 2.0 m in 6 years.

‘Westbury Wonder’ Elepidote hybrid of ‘Percy Wiseman’ × ‘Tomeka’. H. 1979 R. Malone, G. 1988, N. & R. 1998 Noel Sullivan. Flattened dome shaped truss of 15 campanulate

shaped flowers, 45 × 70 mm, with 5 flat edged lobes. Colour: buds, moderate red (47A), corolla opening inside and out moderate red (47A) soon changing from centre out to light orange yellow (22B), overall effect a fiery orange. Stamens & pistil yellow. Leaves: elliptic, 100 × 40 mm, decurved margins, glossy, obtuse at base, acute at apex, with no indumentum. Size: 1.4 m × 1.6 m in 18 years.

'White Crystal' Evergreen azalea hybrid of 'Alphonse Anderson' × 'Firedance'. H. 1993, G. 1996, N. & R. 1997 Eric W. Jordan. Open lax, hose in hose truss of 3 funnel shaped flowers, 50 × 70 mm, with 2 sets of 5 wavy edged lobes. Colour: pure white in bud and opened flower. Leaves: elliptic, 60 × 20 mm, flat ciliate margins, matt, cuneate at base, mucronate at apex, with hairs. Size: 0.3 m × 0.3 m. in 5 years.

The Australian Rhododendron Society Plant Registrar should be contacted, in the first instance, by persons seeking to register. Mr Graeme Eaton, 1386 Mount Dandenong Tourist Road, Mount Dandenong, Victoria 3767. Telephone (03) 9751 1105 or email eaton@hard.net.au.



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Report by the Treasurer

I, Neil Gordon Webster, the Treasurer of The Australian Rhododendron Society Incorporated, do hereby state on behalf of the Society, that the accompanying financial statements present fairly the position of The Australian Rhododendron Society Incorporated as at 30th June 1998 and the results of its operations for the year ended 30th June 1998.



Neil Gordon Webster

Dated at Melbourne this twenty-first (21st) day of September 1998.

Auditor's Report

To the Members,
Australian Rhododendron Society Incorporated

Scope

I have audited the attached financial report, comprising a Statement of Income and Expenditure, Balance Sheet, Statement of Cash Flows and Notes to and forming part of the Financial Statements of the Australian Rhododendron Society Incorporated for the year ended 30 June 1998. The National Council is responsible for the preparation and presentation of the Financial Statements and the information contained therein. I have conducted an independent audit of the Financial Statements in order to express an opinion on them to the members.

My audit has been conducted in accordance with Australian Auditing Standards to provide reasonable assurance as to whether the financial statements are free of material misstatement. My procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the financial statements, and the evaluation of significant accounting estimates. These procedures have been undertaken to form an opinion as to whether in all material respects, the financial report is presented fairly in accordance with the requirements of Australian Accounting Standards and other mandatory professional reporting requirements (Urgent Issues Group Consensus Views), the Associations Incorporation Act 1985 (South Australia) and the Rules of the Society so as present a view of the Society which is consistent with my understanding of its financial position and the results of its operations and cash flows.

As an audit procedure it is not practicable to extend my examination of income beyond the accounting for amounts received and recorded in the books and records of the Australian Rhododendron Society Incorporated. Additionally the assertions of the Society's National Council on the existence and valuation of the Book Stock and Library have been accepted.

The audit opinion expressed in this report has been formed on the above basis.

Audit Opinion

In my opinion, subject to the above, the financial report of the Australian Rhododendron Society Incorporated present fairly in accordance with applicable Accounting Standards and other mandatory professional reporting requirements, the Associations Incorporation Act 1985 (South Australia) and the Rules of the Society the financial position as at 30 June 1998 and the results of its operations and cash flows for the year then ended.



D.G. GREENWALD

B.Com., FCPA, MIIA (Aust)

Dated at Melbourne this twenty-first (21st) day of September 1998.

Australian Rhododendron Society Incorporated

Balance Sheet as at 30 June 1998

	1997-98	1996-97
	\$	\$
Current assets		
Cash		
ANZ (Current A/C)	4865.83	2790.95
Macquarie Bank (on-call Invest)	8685.70	5097.73
Perpetual Trustees Tas.	0.00	3248.58
Secretary's Advance	200.00	200.00
Treasurer's Advance	0.00	0.00
	13751.53	11337.26
Book stock (at cost)		5280.00
Book stock (at valuation)	1848.00	
Debtors – late subscriptions	0.00	60.00
Total current assets	<u>15599.53</u>	<u>16677.26</u>
Non-current assets		
Library	Note 7	
	<u>2000.00</u>	<u>2000.00</u>
Total non-current assets	<u>2000.00</u>	<u>2000.00</u>
TOTAL ASSETS	<u>17599.53</u>	<u>18677.26</u>
Current liabilities		
Accrued expenses		
Teleconference	579.75	446.30
Secretary expenses	90.18	0.00
Audit fees	250.00	250.00
	919.93	696.30
	<u>919.93</u>	<u>696.30</u>
Total current liabilities		<u>696.30</u>
NET ASSETS	<u>16679.60</u>	<u>17980.96</u>
ACCUMULATED FUNDS		
Balance at the beginning of the financial year	17980.96	19824.88
Plus adjustments	0.00	230.00
Increase in net assets resulting from operations	-	-
Decrease in net assets resulting from operations after abnormal item	-1301.36	-2073.92
Balance as at the end of the Financial Year	<u>16679.60</u>	<u>17980.96</u>

Statement of Income & Expenditure as at 30 June 1998

	1998	1997
INCOME		
Membership subscriptions	Note 8	
	7000.00	4320.00
Advertising	686.00	470.00
Book sales	475.65	557.35
Bank interest	343.71	551.98
Other	10.00	0.00
Total income	<u>8515.06</u>	<u>5899.33</u>
EXPENDITURE		
National journal <i>The Rhododendron</i>	3952.00	6744.43
Travel subsidies	889.53	653.98
Bank charges	17.31	44.27
Secretary expenses	551.58	346.87
Treasurer expenses	0.00	32.40
Registrar expenses (net)	87.25	0.00
Half PO Box 21 Olinda rental	22.00	20.00
Cost of book sales	660.00	405.00
Telephone conference	579.75	446.30
Audit fee	250.00	250.00
Miscellaneous (Audit certificates)	35.00	20.00
Total expenditure	<u>7044.42</u>	<u>8963.25</u>
Increase/decrease in net assets from operations	1470.64	-3063.92
Abnormal item		
Write down of book stock	Note 4	
(924 × \$3.00)	-2772.00	
Increase in book stocks		<u>990.00</u>
Decrease in net assets resulting from operations after abnormal item	<u>-1301.36</u>	<u>-2073.92</u>

Statement of Cash Flow as at 30 June 1998

		1998	1997
<i>Cash flows from operating activities</i>			
Receipts			
Membership subscriptions	Note 8	7060.00	4260.00
Advertising		686.00	470.00
Book sales		475.65	557.35
Bank interest		343.41	551.98
Other		10.00	0.00
		<u>8575.06</u>	<u>5839.33</u>
Payments			
National journal <i>The Rhododendron</i>		3952.00	6744.43
Travel subsidies		889.53	653.98
Bank charges		17.31	44.27
Secretary expenses		461.40	346.87
Treasurer expenses		0.00	32.40
Registrar expenses		87.25	0.00
Half PO Box 21 Olinda rental		22.00	20.00
Cost of book sales		0.00	0.00
Telephone conference		446.30	0.00
Audit fee		250.00	0.00
Miscellaneous (Audit certificates)		35.00	20.00
		<u>6160.79</u>	<u>7861.95</u>
Net cash inflow from operating activities		2414.27	2022.62
Cash at the beginning of the Financial Year		11337.26	13359.88
Cash at the end of the Financial Year		<u>13751.53</u>	<u>11337.26</u>
Represented by:			
Current account (ANZ Bank)		4865.83	2869.55
Less unrepresented cheque		0.00	78.60
Perpetual Trustees Tasmania		0.00	2790.95
Macquarie investment (on-call)		8685.70	3248.58
Secretary advance		200.00	5097.73
Treasurer advance		0.00	200.00
		<u>0.00</u>	<u>0.00</u>
Total		13751.53	11337.26

*Notes to and forming part of the Financial Statements for the year ending 30th June 1998***Note 1. Summary of significant accounting policies****Basis of Accounting**

This general purpose financial report has been drawn up in accordance with the requirements of the Associations Incorporation Act 1985 (South Australia) and the Rules of the Society.

The financial report has been prepared in accordance with the applicable Australian Accounting Standards and other mandatory professional reporting requirements (Urgent Issues Group Consensus Views).

It has been prepared on the accrual basis under the convention of historical cost accounting, with the exception of certain non-current assets which are at valuations determined by the Society's National Council.

Additionally, interest is accounted for when received.

Note 2. Increment/Decrement in General Funds

The increment/decrement for the year is arrived at after bringing into account all revenue and expenditure, but excludes all capital expenditure on fixed assets.

The balance of membership funds is invested in either interest-bearing deposits with Macquarie Bank or with the ANZ Bank.

Note 3. Comparative figures

Where necessary, amounts shown for the previous year are in accordance with the same classifications as used for the current year.

Note 4. Abnormal item: Write down of Book Stocks – Motion 5 April 1998

Arising from a recommendation by the Treasurer that the remaining book stock be remaindered, a motion was carried that all book stock be written down by \$3.00 to \$2.00 per book. A total of 924 books (\$2772.00) were written down as at 30 June 1998.

Note 5. Abnormal item

The book stocks as at 30 June 1996 were understated by \$990.00 (198 copies). An abnormal item reflecting the increased value of book stocks as at 30 June 1997 is shown.

Note 6. General

There are no contingent liabilities.

There were no commitments for capital spending or lease payments as at 30 June 1998. No such commitments exist as the date of this report.

Note 7. The library

Total value as at 30 June 1998: \$2000.00.

The book stock is held as part of the library located at Olinda, Victoria, and is managed by ARS Victorian Branch.

An offer to purchase the library has been made by ARS Victorian Branch.

The list of books held in the National Library as at October 1997 is subject to verification and that an inventory will be necessary to confirm the national library stock/

Note 8. Membership subscriptions

The rate per head for subscription levy is as follows:

Year 1996–1997, \$10.00 per head.

Year 1997–1998, \$15.00 per head.

For the year 1998–1999, the rate will be \$15.00 per head.

Note 9. Related Parties

Officers and Delegates of the National Council of the Australian Rhododendron Society Incorporated, are not entitled to receive any benefit or remuneration for their services as Officers or Delegates, apart from reimbursement of a portion of travel expenses properly incurred, in accordance with the Act under which the ARS Inc. is incorporated.

Note 10. Registrar's expenses

The Registrar's expenses are net of income, less expenditure.

Note 11. Reconciliation of decrease in net assets resulting from operations to net cash inflow from operating activities

Decrease in net assets from operations after abnormal item	-1301.36	
Plus abnormals		2772.00
		1470.64
Plus book losses		198.00
		1668.64
Change in operating assets and liabilities		
Reduction in book stocks		462.00
Decrease in debtors		60.00
Increase in accrued expenses		223.63
		745.63
Net Cash Inflow from operating activities		2414.27

Note 12. Financial instruments as at 30 June 1998**(a) Terms, conditions and accounting policies**

The Society's accounting policies including the terms and conditions of each class of financial asset and liability at balance date are as follows:

<i>Recognised financial Instruments</i>	<i>Accounting policies</i>	<i>Terms and conditions</i>
(i) Financial assets		
Cash	Cash deposits are stated at net realisable value. Interest is recognised in the Statement of Income and Expenditure when received.	Cash is available on call and the interest rate at 30 June 1998 were: ANZ: 0.00 to 0.05% Macquarie Bank: 3.82% as at 30/6/98.
(ii) Financial liabilities		
Accrued expenses	Accrued expenses are stated at nominal amount.	Accrued expenses are unsecured and not subject to interest charges.

(b) Interest rate risk

The Society's exposure to interest rate risks and the effective interest rates of assets and financial liabilities are as follows:

<i>Financial instrument</i>	<i>Floating interest rate</i>	<i>Non interest-bearing</i>	<i>Carrying amount</i>	<i>Weighted average interest rate</i>
(i) Financial assets				
Cash ANZ	\$4865.83		\$4865.83	0%
Cash Macquarie	\$8685.70		\$8685.70	3.89%
Secretary's advance		\$200.00	\$200.00	0%
(ii) Financial liabilities				
Accrued expenses		\$919.93	\$919.93	

Comparative information relating to 1997–98 is unavailable.

(c) Net fair value

The net fair value of a financial asset or a financial liability is the amount at which the asset could be exchanged or liability settled in a current transaction between willing parties. The aggregate net fair values of financial assets and liabilities as at balance date are as follows:

<i>Financial instrument</i>	<i>Carrying amount</i>	<i>Net fair value</i>
(i) Financial assets		
Cash	\$13751.53	\$13751.53
(ii) Financial liabilities		
Accrued expenses	\$919.93	\$919.93

For cash and accrued expenses – the carrying amount approximates fair value because of the short term to maturity.

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