



Summer 2009-10

BOTANIC NEWS

FRIENDS *of the* ROYAL BOTANIC
GARDENS MELBOURNE INC.

SEASON'S GREETINGS
AND BEST WISHES
for the coming year

FROM THE PRESIDENT

Distinguished Honorary Life Member and Secretary of the Friends from 1982-2001, Lawrence Cohn retired from his position as a Trustee of the Trust Fund on 16 November, just before the Annual General Meeting. Lawrence had been a Trustee and Secretary of the Fund since it was established in 1986 and, together with his fellow Trustees, took responsibility for the administration of the Trust, a workload which increased considerably following the receipt of the Helen McLellan bequest in 2007. His contribution was greatly valued and we thank him most sincerely for it. Lawrence will continue to volunteer for the Friends in other capacities.

I was delighted that an Honorary Life Membership was



bestowed on Professor Robin Sharwood AM (above) at the Annual General Meeting. Professor Sharwood, with his illustrious legal background, became Chairman of the Trustees of the Trust Fund in 1986. He helped lead the way in making suitable arrangements for the financial management of the Trust Fund

upon receipt of the Helen McLellan bequest and was a member of the ad hoc Committee which recommended a number of amendments to the Trust Deed once the Supreme Court had given its approval to allow the Friends to make such changes. Our thanks and congratulations go to him.

We were very pleased that Peter Griffin AM and Maurice Castro were appointed as Trustees of the Trust Fund at the AGM. Peter has in-depth experience in investment banking and is currently President of the Cancer Council, while Maurice has a background in the business and private sectors and has been Treasurer of the Friends since 2002.

I would like to thank retiring Council member Judy Jarman. Judy joined the Friends in 1987 and has been involved with the botanical illustrators since that time and an organiser of the biennial *The Art of Botanical Illustration* exhibitions. She was elected to Council in 2001 and has always contributed to the Friends' affairs and been most supportive of all our activities.

Marta Salamon, who joined the Friends in 1992, has been elected to Council as an Ordinary Member.

Enthusiastic customers availed themselves of the wonderful opportunity to purchase expertly propagated plants at the Growing Friends' Spring Sale on 3 and 4 October. As in previous years, the Royal Botanic Gardens arranged their Spring Open Day, which draws large crowds to the Gardens, on the Sunday. This greatly boosts customer numbers at the



Photo: Cathy Trinca

sale and means that the Friends can promote their activities more widely. A net amount of \$22,565 was raised and the Growing Friends are to be congratulated on this very good result. Our thanks go to them all as well as to everyone else involved over the sale weekend.

The end of the year is fast approaching. I wish all Members and everyone else who reads this magazine the very best for the festive season and a peaceful fire-free and drought-free New Year.

Janet Thomson, President

2009 Annual General Meeting

The President welcomed Marta Salamon as an Ordinary Member. Re-elected to office were Vice-President Dr Richard Kirsner, Secretary Richard Smith and Ordinary Members Susan Brookes and John Goodwin. The President farewelled retiring member Judy Jarman.

Volunteer Service Medals were awarded to:

Frank Phillips (25 years); Sharon Beaman, Lois Brunt, Jan Cheyne, Sandy Edlin, Prof. Robin Sharwood, and Ann Sinha (20 years);

Marina Albert, Don Allison, Mary Gregory and Wendy Henderson (15 years);

John Hawker (10 years).

Members congratulated the winners of Friends' Staff Scholarships, Cali Salzmann, Val Stajsic and David Robbins. (Photos on page 15.) Warren Worboys presented an overview of the Australian Garden at Cranbourne, focussing on the development of Stage 2, due to open in 2011.

FROM THE GARDENS AND HERBARIUM

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Back cover: Waratah
Photos: Jennifer Marshall

Guilfoyle's Volcano

Recent visitors to RBG Melbourne will have seen that the flanks of Guilfoyle's Volcano are now being clothed with hundreds of plants. The hard-landscaping works (photo below) have been completed and the boardwalks, paths and massive bluestone monoliths are all in place. Red-foliaged and flowered plants are creating horticultural lava flows down the sides of the Volcano. They have been propagated in our Nursery over the past year or so and are rapidly adding colour, shape and texture to the landscape. The project has attracted a great deal of interest from Garden visitors and joggers around the Tan, and was featured in an article in *The Age* in October. We are planning for the opening to take place in Autumn, once the plantings have had time to settle in. This wonderful project revealing a long-lost feature of Guilfoyle's original design is being funded by The Myer Foundation, Friends of the RBG Melbourne, the RBG

Foundation and a number of generous local donors. Do walk past and have a look at progress during the Summer!

Nursery Irrigation Project

Staff in the Nursery produce thousands of plants each year for the Gardens, including recently most of those for the Volcano Project. Except in the Seed and Propagation Houses, recent structures built with earlier Friends' grants, all these plants have to be watered by hand – a time-consuming and not very water-efficient task. Automation and better irrigation controls are arriving, though! With a grant of \$52,000 from the Friends' *Water Works, Water Wise* program, work has begun on the installation of a computer-controlled system in the Nursery similar to the one that operates across other parts of the Gardens. The new system will enable much closer control of irrigation times and volumes for Nursery plants and will deliver savings in water use and more time for staff to apply their propagation skills. The

works are progressively being carried out by the staff across the Nursery's shade-and-glass-houses and will be completed by mid-year, 2010.

BGANZ Congress

The biennial congress of Botanic Gardens Australia and New Zealand (BGANZ) was held in October, hosted by the Mackay Regional Botanic Gardens. Some 120

people attended from gardens on both sides of the Tasman, and papers addressed the conference theme of 'Plan(e)t Priority, Regional Reality'. The meeting took place in Mackay's newly-opened Entertainment and Convention Centre, with site visits to the botanic gardens. These are still being developed, the first stage having opened in 2003. The gardens display diverse collections of subtropical and tropical plants, focusing particularly on the local flora, and with ambitious plans for future stages. Our hosts continued the record of out-standing BGANZ congresses, and the next one will be held at the Alice Springs Desert Park in 2011. I was honoured to be re-elected President of BGANZ for the next two years.

Australian Garden

Construction action continues at the Australian Garden. The impressive extensions to the Visitor Centre were opened by our Minister, Gavin Jennings, in September, and in October we appointed J A Dodd Ltd to build Stage 2 of the Garden itself. They began work in early November and already there is much to see as the sandy expanses of the bulk earthworks start giving way to paths, gardens and waterbodies. The Garden will be handed over in stages so that we can progressively undertake planting, commencing next April/May. It's exciting now to see the paper plans being transformed into gardens on the ground.

And in September the Australian Garden won its



Photo: Liz White

seventeenth award – this one the Award of Excellence from the Asia/Pacific section of the International Institute of Landscape Architects.

Friends' Scholarships

The three successful applicants for Friends' Scholarships in 2010 – Cali Salzman, Val Stajsic and David Robbins – were delighted to learn of their awards, and they look forward with enthusiasm to undertaking their planned programs in the coming year. These scholarships benefit both the staff and the organisation, and are an important additional way that the Friends support the Gardens.

I am most appreciative of all the interest and assistance that the Friends give to the RBG – these things make a real difference to what we do and can achieve. I wish all Friends a happy and safe Christmas and a fulfilling 2010.

Dr Philip Moors, Director and Chief Executive, RBG.

Government House

OPEN DAY

All citizens of Victoria and visitors to the State are invited to visit on Australia Day 2010. Gates open at 10.00am – 3.00pm. Parking in Birdwood Avenue and St Kilda Road. Information: 9655 4211

In the grounds:

- Have a picnic.
- Refreshments available for purchase.
- Children's entertainment.
- Musical performances.

Condition of entry: present bags for inspection to security.

Spanish Mosses

A LABORATORY VISIT TO THE UNIVERSITY OF MURCIA

We are sitting in the cafeteria laughing over my choice of tea rather than coffee. I have tea leaves and hot water in what my Spanish friends tell me is an oil tin! The problem arises when I want to pour the tea; we all giggle as I am given a huge strainer. Apparently this combination has not been seen before. I am informed that it must be especially for me – the Australian visitor!

I reflect on how I came to be here, in the Department of Biology at The University of Murcia in south-eastern Spain. With the generous support of the Friends of the Royal Botanic Gardens, Melbourne I was awarded a Staff Scholarship. Travelling first to London, I visited the current ABLO (Australian Botanical Liaison Officer), Tony Orchard, at the RBG Kew. Tony gave me a personal tour of the herbarium at Kew. A highlight for me was using the spiral wrought iron staircases – an icon of Kew herbarium. I also visited the

Natural History Museum where Len Ellis allowed me access to the bryophyte specimens.

Fortunately, the Charles Darwin exhibition, *The Big Idea*, was still open and I was able to attend. It was excellent!

After a 13-hour journey from London (including only four hours of flying time), due to a missed connection, I finally arrived in Murcia minus my luggage! Thankfully it was delivered the next day; I have never been so pleased to see a suitcase in my life! I was greeted with a traditional Spanish welcome – embraced and kissed on both cheeks – by Dr Maria Cano, my host, and her student David Orgaz. I spent the next ten days working in the bryological laboratory with Maria, David, Juan Guerra, Juan Antonio Jimenez and Mayte Gallego. This was my first opportunity to work with a group of bryologists. I was equally fortunate that the majority of them specialise in the Pottiaceae (the family of mosses which I also work on). David was the odd one out because he works on a different moss family – the Brachytheciaceae.

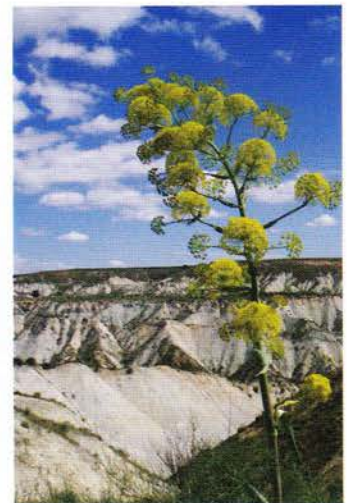


Figure 2. Spain

They all proved to be excellent hosts, and my visit was an enriching experience for me. The knowledge and experience that I gained during this visit were invaluable. Maria was particularly helpful as we examined specimens together, and discussed my research and studies; molecular techniques and methods; problematic groups; development of a generic key; donation of specimens from our institutions; and the IAB (International Association of Bryologists) meeting in Melbourne in 2011.

Fortunately, I was able to undertake field work the Spanish way – which was a unique experience. The lovely aroma of squashed Lavender and Thyme whilst kneeling to look at mosses was a new experience for me! My Spanish friends were also impressed with my knowledge of their vascular flora – I was embarrassed to admit that it is only because we grow many of their natives in our gardens. We found some lovely fertile mosses during our outings, including species that



Figure 1. Kew Botanic Gardens

ILLUS- TRATORS

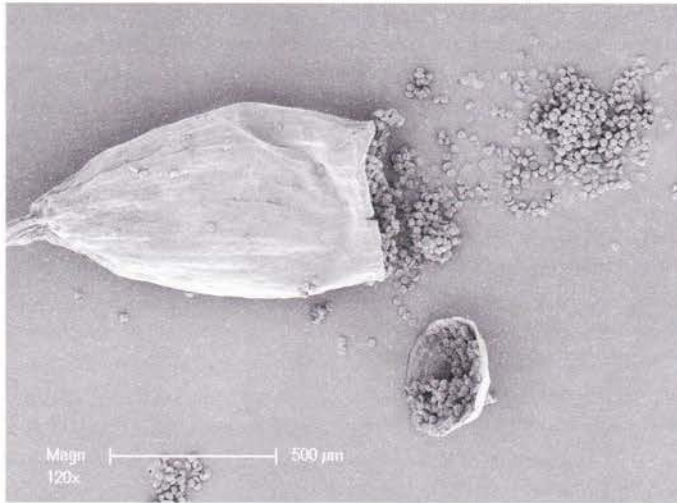


Figure 3. Capsule of *Microbryum davallianum*, a species which I collected in Spain.

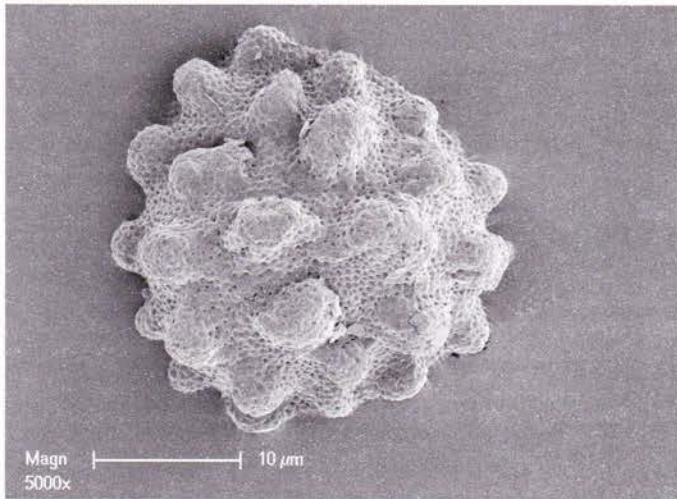


Figure 4. A spore of *Microbryum davallianum*



Photo: Helen Jolley

Figure 5. From left: Maria Cano, Juan Antonio Jimenez, Juan Guerra Montes, David Orgaz, Mayte Gallego.

are endemic to Spain and species that I have not seen before. I collected over 20 taxa, including 14 species of Pottiaceae. Although we share many genera of Pottiaceae, the majority of the species are different. The opportunity to collect and examine different species with a group of Pottiaceae experts has been fantastic. It has given me a greater understanding of our common taxa and of the variation in the Australian species.

I would like to thank the Friends of the Royal Botanic Gardens, Melbourne for their generous support in funding my trip. It was a most productive and enjoyable time and I feel privileged to have had this opportunity. I hope that this is the beginning of a long association with my Spanish colleagues!

Helen Jolley

Classes

Term 1 will start in the week beginning 31 January. Classes will be held on Tuesday and Wednesday evenings and in the daytime on Mondays, Wednesdays, Saturdays (two sessions each day - 2.5hr), Thursdays (one 2.5 hr session) and Fridays (one 3 hr session.)

2.5hr classes: \$270 (incl GST)

Friends: \$225 (incl GST)

3 hr classes: \$315 (incl GST)

Friends: \$270 (incl GST)

For further information on classes contact the Friends' office, 9650 6398.

Botanical Illustrators Quarterly Meeting

Tuesday 15 December at 11.00am.
RSVP to Friends' office, 9650 6398.

Come to the Whirling Room for a shared Christmas lunch and a little entertainment to celebrate the year's activities.

Please bring a plate of food (savoury or dessert) to share.

The Whirlybirds

A group of botanical artists meet in the Whirling Room on Tuesdays each week.

At present we are working on paintings to exhibit at *Artists' Realm* at 2/18 Prince Street, Gisborne, from 28 November to 6 December. The exhibition, titled *A Fascination with Nature*, will be open from 9.00am to 5.00pm on weekdays and 11.00am to 4.00pm at weekends and is well worth a visit. Come and meet the artists who will be in residence during the event.

If you are interested in joining the group in the future, please ring Sandra Sanger on 9598 9532 to be included on the waiting list.

ILLUSTRATORS

Workshops

ALL CLASSES WILL BE HELD IN THE WHIRLING ROOM STUDIO, OBSERVATORY GATE.

Artists are reminded that these workshops provide the ideal opportunity for preparing work for the Art of Botanical Illustration Exhibition 2010.

Beginners' Workshop
with Dianne Emery

4,5,6,7 January.
10.00am to 4.00pm

Cost: \$295 Friends: \$250

This intensive course is an introduction to botanical art via pencil and watercolour. Students will begin to develop skills in outline drawing, foreshortening, tonal work and rendering of surfaces, basic colour work and paint application.

The cost includes drawing materials, paint, watercolour paper and brushes and morning and afternoon tea.

Illustrating Plant Dissections
with Mali Moir

11,12,13 January.
10.00am - 3.00pm.

Cost: \$205 Friends: \$160

This workshop is designed to give students an idea of what is required when drawing plant dissections to support a botanical painting, or when producing scientific illustrations for publication.

Basic botany and plant structure will be covered, as will pen and ink techniques, preparation and page layout, and handling, storing and recording of specimens. References will be made to some of the visual language needed in line art. Students will need to apply for a materials list.

Drawing Workshop with Dianne Emery
18,19,20,21 January, 10.00am - 4.00pm
Cost: \$285 Friends: \$240

This workshop is open to those who would like to build upon their drawing skills. Activities will include observational drawing, including field sketching in the RBG; drawing as a preparation for future works (including pencil drafts, perspective, composition, foreshortening, tone and use of light); and drawings as finished artwork.

Alternative drawing media: graphite, charcoal, conte and coloured pencil.

Morning and afternoon tea will be supplied. Students will need to apply for a materials list.

Oil Painting with Anita Mertzlin
27,28,29 January 10.00am - 3.30pm
Cost: \$250 Friends: \$205

Learn the technique used to paint flowers, fruit and vegetables in a still life context. This approach enables the artist to record visual observation quickly and is useful for communicating surface texture. The workshop is also open to those who completed the first workshop with Anita in September, and who would like to add to their experience.

Materials included and

morning and afternoon tea will also be supplied.

Vellum and Watercolour
with Mali Moir
14,15 January 10.00am - 4.00pm.
Cost: \$175 Friends: \$130

This workshop is offered to experienced students only. Vellum is an animal skin from the leather industry, especially prepared for painting on. Its semi-opaque quality gives watercolours a uniquely lustrous and vibrant effect. This course will focus on producing small works using primarily a 'dry brush' technique.

Kelmscott vellum from England will be available for purchase at the workshop or you may bring your own. A 6x8 inch piece will cost approximately \$25. Students will need to apply for a materials list.

Color

BY DICK RAUH, PH.D

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We deal with color all the time, but have you ever wondered where the color comes from in plants that we love to paint? Color, to be scientific about it, is the visible spectrum of light. It includes those wavelengths that we see, from blue-violets to red. What we can't see, ultraviolet and infra-red, bracket the colors that are visible to us. Bees, for example, see a different range, ultraviolet being visible but red on the other end, appearing black. We create color in our paintings by using many pigments. Plants use pigments too, although not with the same chemical composition. And there are actually two color sources in plants, pigments and something called structural color – the physical arrangement of cell walls that act like prisms to create, for example, the blues of the Morpho butterfly, or the iridescent or silvery tone of some leaves.

Certain pigments occur in the cell in membrane-enclosed units called plastids. These create the range of hues we love to depict, from the greens of foliage to the rainbow tones of flowers and fruits. There are three classes of molecules that are the main sources of plant pigments, porphyrins, carotenoids and anthocyanins. Chlorophyll is the principal porphyrin we know, and it is



ILLUSTRATORS

responsible for greens. In the cell, chlorophyll is found in the plastid known as a chloroplast. There are actually two chlorophylls involved in the process of making food from carbon dioxide and water, so there are slightly different greens reflected to our eyes, but more about the differences in greens later.

Carotenoids, another pigment in chloroplasts, reflect red, orange (carotene) and yellow (xanthophyll). They function as what are known as accessory pigments; involved in the photosynthetic process by providing wavelengths, however minor, that chlorophyll can't. Lutein is a member of this class of pigment, and it makes the yellows of squash and other fruits and vegetables. Another carotenoid molecule is lycopene, the creator of the reds of tomatoes.

Anthocyanins are water soluble and are not found in plastids. They create colors in the cool red-to-blue range. Color here is influenced by acidity; blues are stronger in more acid settings. Think about the shift of hydrangea blossoms from pink to blue as the soil quality shifts from basic to acidic. Anthocyanins are prevalent in all plant tissues, except for a particular group of plants that use another water-soluble pigment called betalain instead. Betalain produces brilliant reds and yellows.

The group of plants – the caryophyllids, includes among others amaranths, beets (showing the characteristic beet-red color typical of betalain) and cactus with many species with betalain magenta

flowers. The cactus family was moved into this group primarily because it contains the pigment. You will never find a plant that contains both anthocyanins and betalains, for whatever that fact is worth.

Getting back to the variations in green, there are a number of factors to contribute to this phenomenon. Habitat, age and form of leaf all affect shading from light to dark. Plants growing in full sun tend to have lighter leaves than those in shady environments, the lighter leaves reflecting

some of that excess sunlight. Young leaves are apt to have fewer chloroplasts in their cells, and so are lighter than mature leaves that have grown their complete complement.

Sometimes anthocyanins, which are always present, usually in amounts too small to show, are revealed, and give the young leaves the reddish tone that vanishes when the chlorophyll matures. The reverse of this occurs in fall, when the chlorophyll is no longer replenished and the green disappears revealing the carotenes and xanthophylls that have always been there, and changing the leaves from green to red, orange and yellow.

Another factor in leaf color is the structure of the leaf. Thick leaves of some plants have a dense accumulation of

chloroplasts on their upper surface and low reflecting cell walls that create the dark green leaves of rhododendrons, for example. Succulent leaves whose large cells hold a high proportion of water, and hence fewer chloroplasts, tend to be lighter in color, if they are not covered in wax. Often there are leaves whose different surfaces are different colors, with the upper surfaces consistently darker in value because the concentration of chloroplasts is so much higher. Vertically oriented leaves, like iris,

however, tend to have little or no variation in value between the different sides, since both get about the same exposure to the sun. Disease or nutrient deficiency sometimes affects leaf coloration, producing yellow or mottled specimens. The white areas of variegated leaves stem from mutations that destroy some of the chlorophyll thus reducing the photosynthetic efficiency of the leaf. This occurs rarely in the wild, but has been capitalized on by horticulturalists because of the attractiveness of variegated leaves.

Petal and fruit colors range in the full visible spectrum. The pigments that help create this are contained in plastids called chromoplasts. Chloroplasts, the organelles devoted to chlorophyll convert to chromoplasts in

ripening fruits as the carotenoids increase and the chlorophyll dies out. Water soluble anthocyanins and betalains are contained in the vacuoles of cells and are not involved at all with photosynthesis. When you see a leaf that has its veins clearly defined in red, it is the anthocyanins that are showing in layers of non-photosynthesizing cells that cover the veins. Leaves with obvious white patterns that define their veins have colorless cells covering them in the same way.

Iridescence is the result of what is called structural color. Thin clear layers of cells in differing thickness reflect light in different colors and produce blue greens and light blues that have no pigments. The structure of the surfaces of cells with this type of color is amazing when seen under an electron microscope. Orderly rows of conical bumps, or lines of parallel serrations refract and reflect the light in ways that produce effects that are all but impossible to capture using traditional watercolors. Other leaves that seem white, silvery or metallic can be the result of being covered by tiny hairs called trichomes that reflect light and mask the green of the chlorophyll. In other plants it is a coating of wax that produces the cool, blue-green foliage.

I am not sure how much the knowledge of these technical color facts will influence your painting, except as they add to your appreciation of the ways of nature. Just keep painting and mining the narrow range of wavelengths that is our visual heritage.

Dr Dick Rauh.



Cortinarius archeri
Ruth Jackson

the sun. Disease or nutrient deficiency

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EVENTS



Last Chance To Book For **CHRISTMAS COCKTAILS AT GARDENS HOUSE**

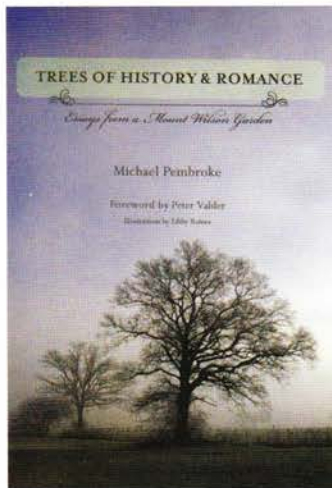
Wednesday 9 December
from 6.00pm to 8.00pm
COST: \$45.00

If you haven't already booked for the Friends' Christmas Cocktails there may still be some tickets available. But hurry hurry hurry and ring the office as soon as possible on 9650 6398.

Gardens House is the charming early nineteenth century former Director's private residence tucked away behind the National Herbarium which provides the handsome architectural backdrop to the perennial border.

We are delighted to be able to offer our Members and friends an opportunity to enjoy this hidden corner of the Botanic Gardens which will be decorated for Christmas with flowers and foliage from the

Gardens. Join with new Members, friends and committee members in this beautiful setting to celebrate the end of another busy and successful year of Friends' support for the Gardens.



Trees of History and Romance

ILLUSTRATED LECTURE BY MICHAEL PEMBROKE

Thursday 11 February
at 10.00 for 10.30am
Mueller Hall, National Herbarium
COST: \$25 Friends \$15

RSVP by Monday 8 February on enclosed booking form or download a booking form from the Events page on our website: www.rbgfriendsmelbourne.org
Please join us for morning tea before the talk.

Trees have inspired writers, naturalists and poets for thousands of years. Virgil, Wordsworth and Henry Thoreau were moved by them. They are the oldest organisms on earth, and have been worshipped by some as expressions of religious or national pride.

Michael Pembroke provides fascinating insights into trees drawn from history, literature, poetry, mythology, botany and folklore. Lightly woven

throughout is a personal memoir reflecting the unfolding of a deeply-felt connection with the land and nature – as an accidental gardener, an amateur naturalist and an occasional romantic.



Summer Guided Visit **TO THE GROWING FRIENDS' NURSERY**

Friday 12 February at 10.00am
Meet at Gate Lodge (opposite Shrine)
COST: \$5 MEMBERS ONLY
RSVP by Wednesday 10 February on enclosed booking form or download a booking form from the Events page on our website: www.rbgfriendsmelbourne.org
Bookings are essential as numbers will be limited.

Our late summer guided visit to the nursery will be the perfect opportunity to view and purchase good-looking plants that have stayed the distance during Melbourne's long hot summer.

This visit is particularly suitable for new Members and others who are not familiar with the whereabouts and workings of our Growing Friends' Nursery. We will gather at Gate Lodge for morning tea and the opportunity to meet other like-

minded gardeners, and then be guided down to the nursery.

If you plan to buy a number of plants, think about bringing some strong carry-bags or your market trolley to help carry your purchases home.



Summer Insiders' Walk

SHADY WALK TO TEMPLE OF THE WINDS AND PLANT CRAFT COTTAGE

Thursday 18 February at 10.00am
Meet at Gate Lodge (opposite Shrine)
COST: \$15 MEMBERS ONLY
RSVP by Monday 15 February on enclosed booking form or download a booking form from the Events page on our website:
www.rbgfriendsmelbourne.org
Book early as numbers will be limited.

Morning tea will be held in the garden of Gate Lodge after which we will walk through the shadier paths to the Temple of the Winds. The history of the trees planted by royalty and notable Victorians will be discussed as we stroll along. After viewing the city and the Grey Garden from the vantage point of the Temple, we will visit the Plant Craft Cottage and hear, from one of the volunteers the history of this remarkable old building and

how it has been transformed into such a creative place. There will be time to look at the work of basket makers, dyers and other crafts. After this, we will wend our way past the Rose Pavilion back to the Visitors' Centre.

The plan is to keep this walk appropriate for the weather conditions, particularly if it is warm.



Fit Friends' Ramble

GARDENS AND ARCHITECTURE OF NORTH FITZROY

Tuesday 23 February at 9.30am sharp
Meet at entrance gate to Old Colonists' Village cnr Rushall Crescent and Falconer Street North Fitzroy, Melways Map 30, D11
COST: \$30 Friends \$15
RSVP by Thursday 18 February on enclosed booking form or download a booking form from the Events page on our website:
www.rbgfriendsmelbourne.org
Book early as numbers will be limited.

This location has street parking and good public transport: Epping Line train to Rushall Station; Tram 86 (Bundoora RMIT) stop 25 on Queens Parade.

Join us to view some of early Melbourne's wonderful architecture set in beautifully tended gardens. Members of the Old Colonists' Garden Club will welcome us and show us around their colourful village, which was the vision of George Coppin, actor, philanthropist, entrepreneur and politician,

who founded the Old Colonists Association of Victoria.

Following our visit, we'll walk to Queens Parade and enjoy morning tea at one of the cafes before continuing our stroll past many interesting terraces large and small. Our walk ends at about 12 noon in the Edinburgh Gardens. Either return to your car, tram or train or take Tram 112 along Brunswick Street to the City.



Summer Talking Plants Morning

SALVIAS FOR ALL SEASONS

Friday 26 February at 10.00 am
Domain House, Dallas Brooks Drive, South Yarra
COST: \$15 Friends \$10
RSVP by Wednesday 24 February on enclosed booking form or download a booking form from the Events page on our website:
www.rbgfriendsmelbourne.org
Refreshments will be served during the morning.

Sensational Salvias provide year round flowering in your garden. They grow in a wide range of climatic zones from full sun to full shade including under trees.

Salvias are well able to survive our extreme heat and low water conditions. The flowers vary in colour from white, all shades of blue and purple, red, orange, apricot and many shades of pink. The leaf form, shape, size and colour varies from silver to all shades of green and adds interest all year round.

A knowledgeable person from the Salvia Society of Victoria will be present to show many fabulous flowers and give us some hints on cultivation and propagation. Those attending are invited to bring along some of their favourite salvia flowers to talk about and share.

Following the discussion there will be an opportunity to visit the Growing Friends' Nursery for plant purchases.

GROWING FRIENDS



Photo: Michael Hare

It is fair to say that the Growing Friends approached the Spring Sale with considerable concern. For a start, the weather during July and August had been warm with minimal rainfall, but also it was only five months since the Autumn Sale and consequently the number of plants available for the Spring Sale was not as many as we would have wished.

We need not have worried, however, for over the last two weeks of September, Melbourne received a good soaking. What an amazing difference rain makes! This applies particularly to gardens and gardeners; the former grow rapidly and look lush and vibrant, while for gardeners their minds blossom and their thoughts turn to pruning and new plantings. The

rain cleared in time for the Sale, which was held on two beautiful spring days. So it was that the opening rush on Saturday morning (see photo) resulted in many of the prized items being sold out; our 15 cream *Clivia miniata* were all sold in the first four minutes after opening. During the remainder of Saturday there was a steady stream of both lookers and buyers. A similar pattern applied on Sunday as the Gardens' Spring Open Day tours either finished at the Sale, or the visitors were encouraged to join us. As Sunday progressed a frequently heard comment was 'You only have this Sale today, don't you?' Our reply inevitably prompted the statement 'We'll come early for the April Sale!'

The Autumn Sale will be held on 17 and 18 April 2010, so you also should be early as there will again be a great selection of plants. However, Friends are not limited to our Spring and Autumn Sales, which are open to the public, but are encouraged to visit the Nursery (just inside Gate F) on Friday mornings when they may purchase plants from 8.00am till 1.00pm.

The last act of the Sale is to draw the raffle, which this year attracted a lot of attention as the first prize was a large potted orange *Clivia*; the lucky winners were:-

1. Potted *Clivia*, donated by the Growing Friends and won by Bev Teague, Malvern.
2. River Scene Tapestry, donated by Dorothy Smith and won by Robyn Robins, S. Yarra.
3. Sunscreen Products, donated by Ian Jarman, The Cancer Council and won by Christine Laidlaw, Barwon Heads.

Overall, the Spring Sale was a great success and the money raised will go to the continuing development of RBG Melbourne.

Finally, as this is my first experience of organising a Growing Friends Sale, I wish to thank not only the Growing Friends for their efforts in preparing for these Sales but also the RBG Melbourne staff who assist us in so many ways.

Michael Hare, Convener

Birds in Our Gardens

While we all love hearing birds in our gardens, many of us find Indian Mynas, Blackbirds and Corellas something of a trial. Unlike the intermittent flocks of migratory birds we all see from time to time, birds generally referred to as pests are those, including native birds, which are continually found in the wrong place or in excessive numbers. So the birds mentioned above are pests, of which only the Indian Myna and Blackbird have been introduced into Australia, while the Corella has been introduced to our gardens because its habitat is dwindling.

What is also noticeable is that there are no longer Wrens in our bushes, even where we try to grow native, bird-attracting plants. Bird-baths are regularly fought over by more aggressive, noisy, introduced species. So our shyer, native birds have been displaced.

Birds are one of the greatest dispersers of weeds throughout Australia. Introduced birds also exacerbate the weed problem as they tend to feed on introduced, rather than native, plants.

Bird pests are known to encourage the spread of disease,

both to humans (recent bird-flu epidemic) and other species. Pigeons and doves are known to carry over a dozen different disease organisms harmful to man, such as histoplasmosis, toxoplasmosis, encephalitis, salmonellosis and cryptococcosis. They are also hosts to fleas and mites. Pest birds can represent a health risk by contaminating items with their droppings, scavenging in eating areas and drinking from water fountains. Rainbow lorikeets in particular are known carriers of Psittacine Circoviral Disease, with an estimated 90 per cent of the Queensland population affected. The disease is more commonly referred to as 'beak and feather' and is a highly contagious, fatal virus which affects the immune system of parrots. There is no treatment for the disease and euthanasia is the kindest, and only, option to avoid suffering and further spread.

Introduced birds also cause direct threats by preying on native species. In Perth, introduced Laughing Kookaburras feed on an extraordinary array of prey including the nestlings of other birds, as well as lizards, frogs and fish.

Flocks of introduced birds foul buildings, statues, vehicles, gardens and water sources with their droppings. Pigeon flocks in particular are well-known for damaging buildings and monuments around the world due to the highly corrosive nature of acid in their droppings. Debris from roosting flocks builds up, blocks gutters and drains and can create potential fire hazards.

Eastern Long-Billed Corellas, now forced to inhabit cities as their habitats disappear, cause problems with their habit of trimming small branches and leaves from their roost trees. This behaviour results in reduced tree growth and creates sites for fungal and insect invasion which can result in the death of major limbs of trees, and, in extreme cases, the whole tree.

Not only do Sulfur-crested Cockatoos damage buildings and fences, but parking under the pine trees in Dallas Brooks Drive in Summer can be a dangerous business for the driver while being a godsend for the panel beater as cones are dropped from above.

The best management options to mitigate the issues associated with pest birds are preventative ones. Unfortunately, established, introduced and invasive bird populations are difficult to control due to their highly mobile nature. Culling methods including baiting, trapping, cannon-netting and shooting only ever achieve short-term reduction and can be very distressing to the public. Such activities are highly visible and generally must be attempted during daylight hours. Many of these bird populations are likely to persist in the future and there appears little we can do about them.

However, here are some suggestions for the metropolitan area:

- Do not feed wild birds, even if they are friendly and attractive.
- Clear away food scraps and excess pet food.
- Cover compost heaps, or use a compost bin.

- Actively destroy nests of introduced birds, such as pigeons and doves, in your backyard.
- Always ensure rubbish bin lids are firmly in place.
- Dispose of fruit which has fallen from fruit trees.
- Properly secure bird cages and poultry pens and ensure they are in good repair.
- Never deliberately release an animal or bird not native to your area.
- Never leave out bread and food scraps on the lawn. Apart from feeding the birds material which may do them harm, other vermin such as rats, mice and cockroaches, may also inhabit your area.

There is some positive news. Some introduced species in urban areas provide ready food for native bird populations that would otherwise decline. For example, peregrine falcons prey primarily on feral pigeons in capital cities.

Meg Miller, with thanks to Jodi Mansell-Fletcher, and *For People and Plants*, the journal of the Friends of Kings Park, Perth.



Photo: Bruce Sandie

Feral pigeon.



Photo: Meg Miller

Rainbow lorikeets eating inappropriate food.

Now that we're making our way into another Summer of water-consciousness, this seems to be the appropriate time to make a shameful confession: I used to do a lot of thinking in the shower. Let me hasten to say that this was before we all learned that showers had to be short and sharp. In those heady days before the word 'sustainable' had become common in our conversations and water wasn't the topic of discussion, I used to do some of my best cogitation under the steady and comforting stream of steaming hot aqua.

Perhaps it was related to the optimum operating temperature of the grey matter, maybe it was the massaging sensation of the tiny jets of water – who knows? In the humid atmosphere of the shower recess, some of the mysteries of the world received a solid working over. For example, on one memorable occasion I produced a feasible (to me) explanation for the clockwise-anticlockwise circulation of water down a plug-hole. The Coriolus Effect was clearly implicated, if I recall correctly.

The arrival of the three-minute-shower has certainly curtailed such mental meanderings. Perhaps some of the relatively straightforward matters might get attention, but there just simply isn't time to get the teeth into anything of substance. This means that the disciplined thinking on these weighty matters must be undertaken at other times. In the car perhaps? From my observations, half the drivers on our roads seem to have their minds elsewhere, rather than attending to matters as described under the

Traffic Act. Walking behind the lawn-mower seems to be quite good for engaging the brain on peripheral matters. Sadly, of course, this comes back to water again. No water, no lawn in Summer.

I'm not suggesting that the agenda for these musings is necessarily linked to matters of importance. If I remember rightly, I spent a considerable period speculating whether there was any likelihood at all that one of the world's ancient

empires had actually arrived in Australia, only to depart without leaving a trace. Or perhaps we just haven't found the trace yet... that road across the Nullarbor is awfully straight isn't it? Roman perhaps?

Well, the short answer would appear to be 'no', but following the theory of the Boltzmann Brain (Ludwig Boltzmann – Austrian physicist) that anything at all is possible over infinite time with random fluctuations of matter –

including, I may say, the formation of conscious brains in empty space ... OK, the answer is still that it is pretty unlikely. Unlikely here in Australia, but a veritable certainty (in racing parlance) in other parts of the world.

Imagine the surprise on the face of the farmer in 1960 at Fishbourne near Chichester in Sussex (southern England), when he noticed that the sod he was turning up when digging a drainage trench looked a bit curious, and unlike the usual local sub-sod. On closer inspection it became apparent that the small squares that he had ploughed up were pieces from a Roman mosaic, and after a bit of investigation, a whole Roman villa was uncovered. This is now a very well-conserved attraction in the area. Fishbourne Roman Palace contains some extraordinary mosaics including the memorable 'Cupid on a Dolphin', and many aspects of architectural and horticultural interest. Excavations have revealed bedding trenches, and these areas have been replanted with species known to have been popular at the time, such as *Buxus sempervirens* (English Box) which the Roman writer Pliny had referred to as lining the edges of his garden beds, and *Acanthus mollis*, so popular as an architectural motif of the time. There is evidence also of vegetable beds, and formal gardens.

We know, of course, that the Romans had quite a well-documented spell in England for several hundred years (roughly 55BC to Fifth Century AD). Just as a footnote – this is over twice the length of time



Mosaic of Cupid on a Dolphin at Fishbourne Roman Palace.



Box hedging at Fishbourne. Photos: Richard Barley

that Europeans have been in Australia. We now find also, thanks to an illuminating piece of research by five scientists from Madrid (see reference below) that all the trees known commonly as English Elm (*Ulmus procera*) derived from elm stock introduced to Great Britain by the Romans during this period.

The scientists' research establishes that the English Elms are likely to have originated from a single clone that the Romans transported from Italy to the Iberian Peninsula (Spain) and thence to

more than 25 million elms were lost. Lack of genetic diversity in a population is not a good thing when facing such a disease.

So – what does this mean for our six-and-a-half-odd-thousand elms in Melbourne? Here in the Gardens we have what we believe to be Australia's oldest elms – the two extant English Elms known as Arthur's Elms, planted in 1846. I have prattled on about these in an earlier edition. These trees were probably imported from Great Britain, and it is not beyond the bounds of reason to suggest that they may well be

inappropriate irrigation and general neglect, they might not be in too bad a shape.

The not-so-good news is that if we are careless enough to allow the introduction of a pernicious pathogen like Dutch Elm Disease, then like the elms in Great Britain there will be little point relying on genetic diversity to find resilient English Elms. But who knows – perhaps our growing conditions might restrict the spread of the organism in some way. Hopefully we'll never have to find out.

Richard Barley, Director, RBG Melbourne.

(Elms) were actually a darned good choice of tree for our climate – given their versatile performance in Latium, Iberia and Britannia!

Britannia. It had been thought previously that the elms arrived during the Bronze Age with the Celtic tribes, but the new research supports the theory that the elms arose from the Atinian Elm, which was grown for vine training in Latium (near Rome) by the Romans. This species was apparently advocated for this purpose by the Roman agronomist Columella, in about 50 AD. (I'm taking the word of the Spanish scientists on this – my Latin education faltered and stalled after showing early promise with a memorable appearance as one of the sheep in the Latin play *Odysseus in the Cave of the Cyclops*.)

It should be no surprise then to find that when Dutch Elm Disease arrived in Great Britain, and the English Elms were found to be susceptible, the pathogen spread rampantly, and

genetically identical to the stock which was brought to Britannia by the Romans, and therefore they are likely to be also linked to the Atinian Elm from the vineyard near Rome.

This supports the view that our ancestors' horticultural choices here in Melbourne were not as ill-thought as some would imagine. How many times have we heard the well-worn criticism that elms were a silly choice of tree in Melbourne, and were only planted here because folk needed to be reminded of their homelands, and so forth. I would suggest that they were actually a darned good choice of tree for our climate – given their versatile performance in Latium, Iberia and Britannia!

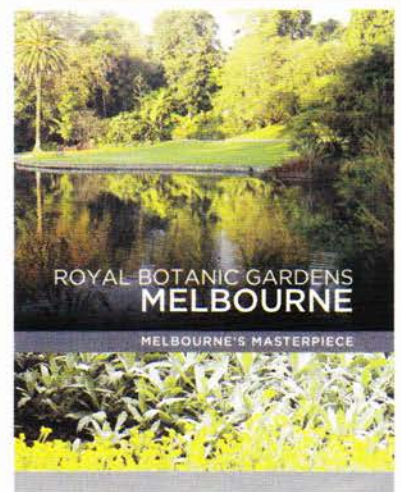
If only we hadn't given our city's elms such a hard time over the past century or so, with lopping, trenching,

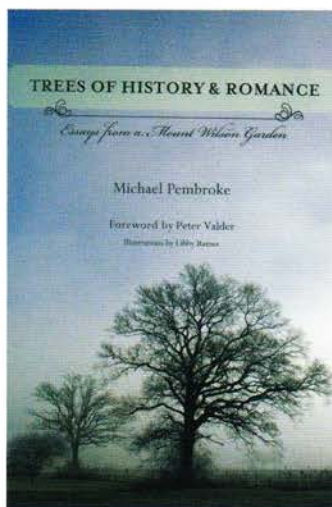
Royal Botanic Gardens Souvenir Booklet

Enjoy a sweeping panorama of the Melbourne Gardens with the updated and revised Melbourne Gardens souvenir booklet. Filled with a range of new photography – both historic and current, this 32-page booklet is a wonderful companion to the Australian Garden souvenir booklet. It retails for \$9.95 in the Gardens Shops and is also available for sale online at www.rbg.vic.gov.au

New Gardens Shop Eco Bag

The new Gardens Shop eco-bag is perfect for picnics, the beach and shopping. Decorated with iconic images of both RBG Melbourne and the Australian Garden, these hardy, waterproof bags are just the thing for this summer. The bag retails for \$12.95 and is now available at the Gardens Shops.





Trees of History and Romance
Michael Pembroke
Bloomings Books
RRP: \$35.00

Michael Pembroke has a property (Hawthorn) that was once a pine forest at Mount Wilson – an Australian hill station 125km from Sydney. There, in the area where the Wollemi pine grows, surrounded by eucalypt forests, he has constructed a garden in the tradition of hill stations. He has planted deciduous trees and conifers – from the northern hemisphere and China and Japan – that grow really well in the Mount Wilson climate. As he is a fan of the Edna Walling style of design, where the landscape itself is more important than the individual plants, the trees have been planted in clumps to create a Capability Brown type of parkland. There is a small lake and an ornamental temple. The artfully placed rocks look quite ‘natural’.

A corner of his property is reserved for eucalypts as it is difficult to mix the two types of trees.

Michael describes himself as an accidental gardener, amateur naturalist and occasional romantic. These attributes are all apparent in this series of essays about twenty-one of the exotic trees on his property. In an interview with Geraldine Doogue, he described these essays as a whimsical look at the species of trees he has planted, and an attempt to convey his appreciation for nature, with which he tries to live in harmony. The conclusion of his book references the Australian bush that surrounds him. At the end of each essay he has included a poem, the last of which is by Les Murray called ‘The Gum Forest’.

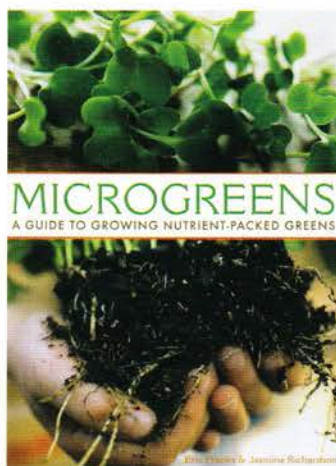
The trees Michael has written about, including the apple, the cypress, the elm and the yew, were chosen because they were the most documented over history, and he has produced a series of reflections and ruminations on them. Drawing from many sources including the classics, folklore, botany and history, he has produced a delightful, easy to dip into, resource. If you want to know why the leaves of the aspen tremble this is your book. If you wonder how Hitler’s life was saved by the oak, read on. If you ever wondered how the silver birch helped save the Russians from Napoleon’s advance, it’s all here!!

A great deal of research has gone into this book. It is all there in the footnotes, the notes on the poets and the lists of further reading.

This book has a lovely look and feel. It is beautiful to hold. The illustrations are by Libby Raines, a botanical artist,

gardener and plantswoman from the Mount Wilson community. The foreword is by Peter Valder.

Terri Kay



Microgreens – A Guide To Growing Nutrient-Packed Greens

Eric Franks and Jasmine Richardson
Gibbs Smith
RRP: \$29.95

Currently there is much discussion about food in the media. From food additives and the associated health risks, to food miles and the associated carbon costs, we are being urged to consider what we eat and the implications of our choices. Part of the chatter refers to the desirability and benefits of eating food directly from the garden. Unfortunately, this is coming at a time when many of us have less and less space in which to practise food farming.

According to the authors, microgreens might be the solution to getting the maximum nutritious bang for our gardening buck and space.

Sprouts, microgreens and baby greens are all stages in a plant’s development. Microgreens are the second stage of a

seed’s development, when the first seed leaves appear. The next leaves are the true leaves that specifically identify the plant. The plants are allowed to grow in the soil for a week or two. The authors say that at this stage the plants have all the nutritional value of sprouts, with the added advantage of trace minerals from the soil in which they are grown. This is a great deal of nutritional value in a very small package.

In this book they show how to grow microgreens, how to harvest them and how to eat them. Individual crops are illustrated and the tricks for growing them divulged. Interesting modern recipes are included.

The photographs are sumptuous. They make these little shoots incredibly attractive and fun.

Terri Kay

Forthcoming Event

Because the Autumn issue of *Botanic News* will not arrive in your postboxes until the end of February, Members are advised of a talk by Rod Ingham, Project Officer of the Yarra River Keeper’s Association, on March 17 at 10.00am in Mueller Hall.

Please make a note of this date in your diary so that you can attend a most interesting talk.



Gardens Market

ROYAL BOTANIC GARDENS MELBOURNE

At the Observatory Site
Birdwood Avenue, South Yarra
Melways 2F 12K
9.00am - 2.00pm
Saturday 12 December 2009
Saturday 9 January 2010
Saturday 13 February 2010
Saturday 13 March 2010
Saturday 10 April 2010

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- Artwork
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www.marketsinthegardens.com.au



Turtles on the Move

The Long-Necked Turtle population in the Melbourne RBG is currently on the move from the Lake, looking for nesting sites, which can be up to a kilometre away from the water. They will lay between six and twenty-five eggs, though usually about ten, which are left to develop for 3-4 months.

The turtles don't like being handled. It causes them a great deal of stress which may affect their breeding. Visitors may see a turtle crossing the lawns or paths in the Gardens, possibly looking for a nesting site. Please don't try to 'help' the turtles by moving them as they may be close to a good site.



Photos of Friends' Staff Scholarship Winners.

Top: David Robbins
Centre: Cali Salzmann
Bottom: Val Stajsic.

These businesses and organisations kindly offer discounts to Friends on PRIOR presentation of their current membership cards, which are not transferable.

The Gardens Shops offer 10 per cent discount on all Members' purchases.

RBG Cranbourne - Australian Garden: Entry fee \$7.35. Non-members \$9.80.

Terrace Tea Rooms, RBG, offers Members 10 per cent discount on all purchases. www.terracereception.com.au

National Gallery of Victoria offers 10 per cent discount at the NGV shop and \$10 off NGV annual membership (new membership only). For membership enquiries contact 8620 2233 or email: members@ngv.vic.gov.au

Blackwood Lane Gallery & Gardens

24 Blackwood Lane, Gembrook
Ph: 5968 1567
10% off paintings, prints and commissions.

Botanical Creations

122 Grange Rd, Glen Huntly
Ph: 9571 9922
10% off all plants

Bulleen Art and Garden

6 Manningham Rd West, Bulleen
www.baag.com.au
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Cloudehill Nursery - Gardens - Restaurant

89 Olinda-Monbulk Rd, Olinda
www.cloudehill.com.au
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Collectors Corner (at Garden World)

810 Springvale Rd, Braeside
www.gardenworld.com.au
10% off all plants, Collectors Corner only

Cultivate Nursery, Florist & Gifts

Rear 91-93 Doncaster Rd, North Balwyn
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I wish to apply for membership in the following category

Household - 1 year **\$66**

(Two adults living at same address. Please state name of second person)

2 years \$120

3 years \$180

Individual (within 50km of the GPO) - 1 year **\$45**

2 years \$80

3 years \$120

Interstate, Overseas, Country, Pensioner*, Student* (full-time) **\$33**

(*state pension number / student number and educational institution)

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Cheque/Money order enclosed OR please charge my

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Friends of RBG, Gate Lodge, 100 Birdwood Ave, Melbourne 3004

Age Group

Under 25 25-39 40-59 60 and over

How did you hear of the Friends of RBG? _____

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MELBOURNE INC.

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