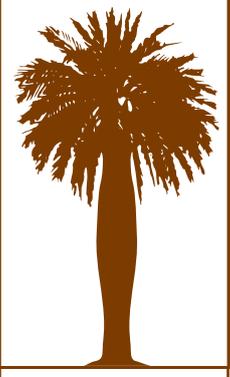


Jubaea



Friends of Geelong Botanic Gardens Inc Newsletter

Volume 13 Issue 3 June/July/August 2013

FRIENDS OF
GEELONG
BOTANIC
GARDENS



Living Fossils @ GBG

Living Fossils have been celebrated in our Gardens throughout autumn 2013. The Living Fossils project came about in response to the Permian Monsters exhibition at the National Wool Museum. The Friends' volunteer guides, GBG horticultural staff and educators have combined to tell the story of plant evolution through displays in the curiosity cabinet, interpretative signs in the Gardens and by providing education programs for schools and to the public.

The term *Living Fossil* was coined by Charles Darwin to describe the platypus (*Ornithorhynchus*) and the lungfish (*Lepidosiren*) which have characteristics of both primitive and advanced taxonomic groups.

And in fresh water we find some of the most anomalous forms now known in the world, as the Ornithorhynchus and Lepidosiren, which, like fossils, connect to a certain extent orders now widely separated in the natural scale. These anomalous forms may be called living fossils; they have endured to the present day, from having inhabited a confined area, and from having thus been exposed to less severe competition.

Charles Darwin: *On the Origin of the Species*

Living Fossil could equally well be used to describe plants such as the ginkgo which has leaves resembling a fern, cones and seed structures resembling cycads and timber which is more typical of a pine tree.

Our Gardens have a range of living fossil plants which guides and educators use to tell the story of plant evolution and the history of all life on earth. Without the very first primitive plants, single celled algae, there could be no animal life. The earth's early atmosphere was rich in carbon dioxide which all plants need, but devoid of oxygen which is essential for animal life. Algae began to change the earth's atmosphere to one in which modern life forms could evolve, reducing CO₂ and increasing oxygen. But

single-celled algae don't make good fossils, and the pond in the 21st Century Garden is almost clear of algae now: so which plants are our living fossils?

When it comes to plants, a living fossil could be:

- A group of plants such as the **cycads** which have remained morphologically stable over a long period of geological time.
- A species such as the ***Ginkgo biloba*** which has no close living relatives but which is a survivor from a group which is well represented in the fossil record.
- A group of plants with many primitive characteristics such as the **Bunya or Wollemi pines**.
- A tree such as the **Dawn Redwood** that was first described from fossils before being found still alive.

Cycads

Cycads date from 280 million years ago in the Permian era. The species we have today are morphologically similar, but studies show that they evolved over the last 12 million years – relative youngsters!

Cycads are plants of ancient lineage and unusual life history. They are the oldest living representatives of the Gymnosperms and they produce cones – but not like any pine tree. Neither do they produce timber. The young cones heat up 4–6°C above ambient temperature to attract pollinating beetles. Once pollination is complete, the male cones slowly disintegrate while the female cone continues to develop until the bright orange seeds are released some months later.

We have a number of cycads on display in the 21st Century Garden as well as in the Temperate Garden.

Ginkgo

Our **ginkgo** (*Ginkgo biloba*) is one of the oldest and best loved trees in our Gardens, and one of the most unusual. The ginkgo represents an evolutionary 'dead-end' being most closely related to the cycads and yet having characteristics of ferns – the leaves resemble those of a maidenhair fern – and timber like a pine tree. Male trees produce pollen in a cone-like structure, but female trees do not. They produce a single fleshy fruit with a hard seed inside – rather more like an apricot. Those with a nose for it report that the fruit smells disgusting, but not everyone is sensitive to it.

... continued on page 3

Committee News

Richard Barley

The Friends congratulate our patron, Richard Barley, on his appointment as Director of Kew Gardens' Horticulture. Richard was Director of Melbourne Gardens at the Royal Botanic Gardens before becoming Chief Executive Officer of Open Gardens Australia.

Richard Barley says: 'I am very excited to be joining the very talented team at the Royal Botanic Gardens, Kew. It has long been my ambition to work in this extraordinary botanic garden. Kew Gardens is widely regarded as the world's pre-eminent botanic garden, with a rich history of over 250 years of central involvement in the discovery, classification, documentation, growing, distribution and conservation of the world's flora. 'As a passionate horticulturist with a background of working in a major botanic garden, and as a strong advocate for public visitation and appreciation of gardens, the opportunity to take on the role of Director of Horticulture at Kew is irresistible.'

We wish Richard all the best in his new and exciting role.

Notice of Annual General Meeting

The Friends of Geelong Botanic Gardens invite Members to our Annual General Meeting:

Monday 26 August in the Botanic Gardens Meeting Room.

Forms for nominations to the FGBG Committee of Management will be available for collection from the FGBG office from Monday 30 July. Nominations must be submitted by 20 August, 7 days prior to the meeting.

The Committee is always looking for members who are willing to lend their expertise to helping run the Friends. Like any committee, there are areas where particular skills are needed whether from committee members or our wider membership. These include IT, media, design, marketing and copywriting as well as business planning. If you have skills in any of these areas that you would like to share, even if you are not sure about joining the committee, please speak to one of the committee members or contact our office for more details.

Membership Renewal

Annual membership subscriptions are due for renewal on 30 June 2013. There will be no change in the subscription rate for the year commencing 1 July 2013.

Your subscriptions help cover the costs of running the Friends, including the costs of circulating *Jubaea*. You can help keep this cost down by indicating your willingness on your membership renewal form to receive *Jubaea* by email (pdf format).

When renewing your membership or updating your details (for Life Members) please take the time to complete all your details; our office is working hard to ensure that our database holds correct information about our members. It is important that this is updated annually. If you have an email address, please ensure that this is included. All members who register their email

address with us receive our monthly *What's On* bulletin which summarises all of the Friends activities and other Public Programs at the Gardens for the next month.

Gift Vouchers

In response to requests from our members, the Friends have introduced Gift Vouchers which can be purchased from the FGBG office (expiry of 12 months).

Vouchers can be redeemed for the purchase of plants from the Growing Friends Nursery; a range of merchandise including botanic art cards and Friends' aprons from the Friends office; membership subscriptions or Friends events and tours.

Giving to support the Geelong Botanic Gardens

The Friends Gift Fund (established 1997) is a Public Ancillary Fund managed by the FGBG committee, on behalf of the Friends as Trustees of the Fund. The purpose being to support projects in the Geelong Botanic Gardens.

The current balance is \$106,386.38 with almost \$5,400 donated by FGBG members in the past two years as well as interest from Gift Fund investment, FGBG investment interest and other contributions. In 2011, more than \$13,000 was given to the Gardens for the development of the 'Central Flag Bed' and the installation of six new seats in the Gardens. The committee is considering projects for further 'giving', including some of the Conservatory re-development.

Donations to the Gift Fund (over \$2.00) are tax deductible and the FGBG members and wider network have the opportunity to include a Gift Fund donation when membership is renewed or details confirmed annually. We intend to promote the Gift Fund in the wider community and acknowledge donors (names only) in each edition of *Jubaea*, unless donors indicate otherwise. We ask all *Jubaea* readers to please consider this opportunity to donate to the FGBG Gift Fund.

Judy Fyfe
Treasurer

Jubaea via email

Jubaea is now available in electronic as well as printed form. This represents a significant saving to our organisation, enabling your membership fees to work harder to support our Friends' programs and the Geelong Botanic Gardens.

If you would like to receive *Jubaea* via email, please contact the FGBG office so we can change your details on our database. Printed copies are available to all members from the FGBG office.

Deadline for the spring edition of Jubaea: Friday 2 August

Correction

Last issue was misnamed – it should read Volume 13 No 2. This is *Jubaea* Vol 13 No 3

From the President



Our Constitution

From time to time organisations such as the Friends must tackle the arduous task of updating their constitution. Legislative changes to the Associations Incorporation Reform Act under which the Friends operate came into law in November 2012 which introduce new or updated legal obligations on our Association. We, along with other incorporated not-for-profit organisations have until November 2013 to incorporate these new requirements into our constitution.

The Friends' Committee has put considerable effort into rewriting our Rules to incorporate the necessary changes as well as reviewing and updating items in our existing Rules which are particular to our own organisation.

Our current constitution comprises our Rules and Purposes which to date have been separate documents. These documents will now be combined to form our new Rules (constitution).

Many of the proposed changes to our constitution relate to changes in the Act which we must include by law. If our Rules do not reflect these changes, the Act overrides our Rules. Other alterations reflect changes in modern society including provision for members to be able to "attend" meetings using electronic communication methods. The new Rules are fundamentally very similar as previously, but provide more detail in some clauses, better definition in others and greater clarification of officers' and the Committee's responsibilities. Overall they are easier to follow and provide greater security for both the Committee and our members.

As we go to press, the task of redrafting our Rules is nearly complete. The Committee expects to be able to recommend that they be put to our members at the Annual General Meeting in August. All financial members will be given further information on the new Rules, how to obtain a copy

and arrangements for proxy voting, when we send out formal notice for the AGM.

Thanks are especially due to Judith Trimble and Annie McGeachy who helped steer the Committee through the lengthy process of blending our current Rules with the new "model" Rules to produce a document that is our very own. Thank you to all the Committee members, who by the time this process is complete will have spent countless hours checking over many drafts to ensure that nothing has been missed.

Gift Fund

At the same time as State legislation was introduced, requiring a re-write of our Rules, Federal legislation came into force setting up the Australian Charities and Not-for-Profit Commission (ACNC). This legislation principally affects the Friends' Gift Fund, a Public Ancillary Fund, for which donations of \$2 or more are tax deductible. To maintain this status, from July 1 2015, the Gift Fund will need to pay out a minimum of 4% per year towards its charitable purpose, which is conserving, protecting and fostering the Geelong Botanic Gardens. The Friends Committee of Management are the Trustees for this fund.

More information about the ACNC can be found on their website (www.acnc.gov.au)

Jenny Possingham
President FGBG

Living Fossils @ GBG ... article from page 1

Today's ginkgos comes from China via Japan, but evidence from fossils show that very similar ginkgos were once widespread across the globe. Ginkgo fossils have been found in the Otway basin, so perhaps our Otway forest was once a ginkgo forest.

Wollemi Pine

The **Wollemi Pine** (*Wollemia nobilis*) is Australia's very own living fossil. It was discovered in 1994 in Wollemi National Park in NSW. The oldest known fossils of this species are 200 million years old.

Wollemi pines are not true pines but belong to the family Araucariaceae and are related to the Bunya pines.

Our Wollemi pine is nestled into a bed at the depot end of the walnut lawn. Planting it was a team effort which included the Friends' own Living Treasure, George Jones as well as past Gardens' Curators Ian Rogers and John Arnott as well as the GBG horticultural staff.

Dawn Redwood

The Dawn Redwood (*Metasequoia glyptostroboides*) is a living fossil in every sense of the phrase, *Metasequoia* having been first described from fossils up to 225 million years old, before it was discovered growing in the Sichuan-Hubei region of Western China in 1942.

Unlike most other conifers, dawn redwoods are deciduous. Their leaves turn amber in autumn and new growth appears in spring. This is thought to reflect their ancient origins where they grew above the Arctic Circle, experiencing up to three months of total darkness a year.

Our dawn redwood can be found on the rose garden lawn below the conservatory.

Some of our Living Fossils are also some of our best loved trees in the Gardens. You can find out more about these and other trees by joining the **Discovery walk: Bare Trunks and Conifers** at 2 pm on June 16.

Jenny Possingham
Volunteer Guide

Jubaea is published by the Friends of Geelong Botanic Gardens, Inc. Eastern Park, Geelong. PO Box 235, Geelong 3220.

Email: info@friendsgbg.org.au **Website:** www.friendsgbg.org.au **Friends' office hours:** 10.00am - 1.00pm Weekdays

Friends' phone: (03) 5222 6053 **Geelong Botanic Gardens Office:** (03) 5272 4379

President: Jenny Possingham **Vice Presidents:** Helena Buxton and Judith Trimble **Secretary:** Luanne Thornton

Treasurer: Judy Fye **Committee Members:** Susanna Keith, Helen Rodd, Jayne Salmon, Don Spittle and Anthea Williams

Out and About

Flora of the Otway Plain & Ranges 2



It is always exciting when a new book about our local flora is released. The Launch of Enid Mayfield's new book *Flora of the Otway Plains and Ranges 2* was especially exciting as she is one of the Geelong Botanic Gardens' own. Enid is an illustrative researcher, who has been based at the Geelong Botanic Gardens for a number of years. She has contributed illustrations for other scientific publications, including *Flora of Victoria* and *Flora of Australia*. Many of you will have seen her working away at the computer in the good north light of her office where she has been working on her two volume series on the *Plants of the Otway Plain and Ranges*.

Volume 2 illustrates and describes over 500 species of the diverse range of flora of our region, encompassing the Bellarine Peninsula through Colac to Portland, and of course, the Otway Ranges, a vast area. Volume 2 covers Daisies, Heaths, Peas, Saltbushes, Sundews, Wattles and other Shrubby and Herbaceous dicotyledons. This book is a companion volume to *Flora of the Otway Plain and Ranges 1*.

No botanic illustrator works in isolation, especially as the work involves finding as well as illustrating and describing the specimens. The launch on Friday the 12 May was a wonderful opportunity

for Enid to celebrate the fulfilment of her project along with many of the people, including past and present horticultural staff from our Gardens, who have helped to make this work possible. The Friends congratulate Enid on her achievement and look forward to hearing about her next project – after a well earned break in France.

Flora of the Otway Plain & Ranges Vol 1 and 2 are published by CSIRO Publishing and are available through their website (www.publish.csiro.au) or from many bookshops in our region including Dymocks Market Square and Waurin Ponds, The Wool Museum, Great Ocean Books, Aireys Inlet, RG and FJ Richardson, Meredith and Torquay Books Torquay.

Luanne Thornton and Jenny Possingham



News from the Growing Friends

The Growing Friends had their beginnings in a small group of volunteers who helped at a 'fuchsia potting bee' in 1985.

Among the first volunteers was Irene Schlotz who has continued working for the Friends until recently. Irene recalls the early days: "it was a very small group and we had to bring all of our own tools. We were told exactly what to do." It seems that those in authority kept a tight rein on the volunteers! These days, the atmosphere is much more relaxed and friendly – however many still bring along their own tools, although it's not compulsory.

Irene has worked with several co-ordinators of the Growing Friends and many other volunteers – probably hundreds over the years! In recent years she has become a specialist with our large collection of succulents.

Last month, Irene quietly announced that she had decided to retire. As always, she didn't want "a big fuss", so her colleagues approached her individually to say how much she would be missed at the Growing Friends Nursery. But we just couldn't let her go without a celebration and recognition of her amazing contribution over the years. Roz Hill, the leader of our group, managed to organise a beautiful bouquet and a quick informal get-together in the nursery. All of Irene's colleagues were delighted to applaud her great work and to wish her well in retirement. Irene will be very much missed: we hope she will have time to visit us sometimes on Wednesday mornings.

Showcasing a wide selection of plants sourced from the Geelong Botanic Gardens, the Nursery includes Australian plants, colourful perennials, hardy shrubs, pelargoniums and Irene's succulents – all in the Growing Friends' Nursery at the rear of the Geelong Botanic Gardens

The Growing Friends' Nursery is open for sales every Wednesday morning from 10.00 am until noon. For those who can't make it on a weekday, don't miss

The Growing Friends Winter Plant Sale:

Saturday 24 and Sunday 25 August
from 10.00 am to 4.00 pm



Liz Bennetto

Friends Tour to Royal Botanic Gardens Cranbourne

Seventy five members and friends enjoyed the stunning contemporary Australian landscape at RBG Cranbourne on Monday 22 April.



We were welcomed by John Arnott, Cranbourne Manager of Horticulture and former GBG Director, who introduced the Gardens. We were then joined by four members of the horticultural staff on an extensive tour of the Gardens which showcase the beauty and diversity of the Australian flora. There was particular emphasis on the recently opened Stage 2 area featuring the Gondwana Garden, Ian Potter Lake and Precinct, Display Gardens, a Seaside Garden featuring Melaleuca Spits, an Arbour Garden and the elevated Howson and Gibson Hills. The Australian Garden exceeded all expectations; there is space, light, water, vistas, rockwork, playgrounds, wonderful plants and phenomenal growth of trees and shrubs planted during development of Stage 1 ten years ago. What an inspirational day!

Jayne Salmon



Music in the Gardens

February is a great month for outdoor events and Music in the Gardens 2013 offered a wonderful opportunity to showcase the Geelong Botanic Gardens at its best. This year we were blessed with fine weather for all four fabulous concerts, allowing us to welcome over 600 visitors to the Gardens on each evening – and contributing to the series making a profit which can be put towards projects which enhance and celebrate our Gardens.

Thank you to Helena Buxton and all those who assisted in making 2013 a most successful season. It requires a minimum of 50 volunteers and over 500 volunteer hours to deliver the series. Music in the Gardens is an excellent example of a team effort and the value of volunteer contribution. Thanks also to the Geelong Botanic Garden staff who helped in so many ways from assisting with event planning, through to setting up and supporting us at each concert. Without your partnership, Music in the Gardens could not take place.

Our aim is to improve with each season and planning for 2014 is already under way.

The Friends thank all volunteers, GBG Staff and the City for a successful season.

Director's Report

A fascination with living fossils



Isn't it amazing how pre-historic creatures can inspire small children to be interested in the natural world? Our Permian Monsters partnership with the National Wool Museum has generated a series of opportunities for people to learn about living fossils. Our fabulous Ginkgo is featured in the discovery trail as a great example of a plant found in the fossil record and still living today. It has been wonderful to see so many families taking up the challenge of following the trail around the garden.

The Curiosity Cabinet features fossil plants showing a timeline of the development for the plant kingdom. We are displaying fossils and petrified wood from Wilson Botanic Park, whose tree collection of fossil plants and is well worth a visit. Our school holiday programs have been a great success and encourage more families to connect with the garden in a new way. The Permian Monsters exhibition continues at the National Wool Museum until 10 June and during this period we are delivering education programs on living fossils. It has been fantastic to see so many children learning in the garden with our enthusiastic teachers.



We are enhancing how we display our Pelargonium collection with the inclusion of more species in the garden beds. Our horticultural team has been working over the past year to redesign garden beds and propagate plants ready for planting. Scented pelargoniums are featured in the beds adjacent to the valued plants collection making a good link to other aromatic plants. Dry climate species are now on display next to the Curiosity Cabinet; these plants have wonderful adaptations and interesting growth cycles. The next stage of the project is to plant underneath the Beech with woodland species and share the stories about the interesting plants in the collection on our website.

Annette Zealley

Director Geelong Botanic Gardens

High Tea with the Friends and Dr Tim Entwisle



Photo courtesy of Janusz Molinski Photography

Sunday June 23

at Truffleduck,
Hyland St Fyansford

From 2 – 4.30 pm

\$50 per person
(\$40 for FGBG members)

Booking s essential at the
Friends' Office by 17 June

Our guest speaker this year is Dr Tim Entwisle, Director and Chief Executive of the Royal Botanic Gardens, Melbourne.

Dr Entwisle recently took up his appointment at RBG Melbourne, following the retirement of Dr Philip Moors. Previously, he had spent two years as Director of Conservation, Living Collections and Estates at Kew Gardens in the UK where his responsibilities covered over half of Kew Gardens, one of the world's most famous Botanic Gardens. His role at Kew covered Wakehurst Place, the Millennium Seed Bank, conservation policy and the maintenance of 50 heritage

listed buildings. This recent experience will stand him in good stead as he takes over the reins of the RBG Melbourne!

His early experience after studies at Melbourne University and a PhD from La Trobe University was at the National Herbarium of Victoria. While there he worked on his specialisation, freshwater algae and contributed to and co-edited the 4 volume *Flora of Victoria*. He later moved to Sydney where he was Executive Director of the Botanic Gardens, a position which included responsibility for the Mount Tomah and Mount Annan Botanic Gardens and where he was also instrumental in raising \$25million for the Botanic Gardens Trust.

Tim Entwisle is internationally respected as a scientist and scientific communicator. He writes a regular blog: *Talking Plants – every plant has a story to tell* (talkingplants.blogspot.com.au) where he gets to indulge his passion for plants and share their stories with a wider audience.

This is a wonderful opportunity to hear of Australia's foremost Botanic Gardens experts and share an afternoon with friends who have a passion for plants, people and places. Book your place today.

FGBG activities @GBG and beyond

This page lists planned Friends activities and other events for the coming season. Details are correct at time of printing but sometimes arrangements change. To get the latest information please subscribe to our monthly **What's On** email which is sent at the beginning of each month to all our members who have registered their email address with the Friends Office. Those members without email can pick up their copy directly from the FGBG Office during normal opening hours.

JUNE 2013

Tuesday June 6:

Wider Geelong Flora Lecture with the Geelong Field Naturalist Club. Neil Anderton will be speaking on *Caladenia pumila* -Back from Beyond the Brink. Neil will discuss its rediscovery, protection and propagation efforts to date. 7 for 7.30pm in the Geelong Botanic Gardens Meeting Room.

Sunday June 16:

Discovery Walk –**Bare Trunks and conifers:** The joy of the change in seasons. The Geelong Botanic Gardens has a wide selection of deciduous trees and conifers from both the northern and southern hemispheres. Winter is a great time to admire their beauty.

Sunday June 23:

Winter high Tea at Truffleduck with Dr Tim Entwisle, Director of Royal Melbourne Botanic Gardens. 2-4.30pm Tickets: \$50 (\$40 members). Bookings essential. Contact the Friends Office. Closing date 17 June.

JULY 2013

School Holiday Family Discovery Program: Crafty Creatures. Tuesday 2 and Thursday 4 and 11 July. See our monthly *What's On* for more details.

Botanic Art Workshops: Floral Motives

Repeat Patterns: Friday 5 and Saturday 6 July with Rita Parkinson.

The floral motif is the basis of many textile patterns. This workshop will use previously executed work to look at the underlying geometric structures that all repeats are made from and turn our images into some fascinating patterns.

Bookmarks: Monday 8 July with Dolores Sk-Malloni

Bookmarks will focus on designing a bookmark with GBG plants in mind. Finished bookmarks will be displayed in *Inspired By Nature 3* at the Winter Garden Gallery in October, and a winner will be selected in a "People Choice" award.

Botanicals and Vessels 3: Tuesday 9 and Wednesday 10 July with Dolores Sk-Malloni

Following the success of Botanicals and Vessels 1 and 2 workshops, this workshop will focus on producing work to be entered in a unique exhibition in early 2014.

All workshops run from 9.30am – 4.30 pm in the Botanic Gardens meeting room. Please contact the Friends office for more details.

Sunday July 14:

Discovery Walk – **Fungi in food, fun and folklore:** Fungi are the intimate partners of plants for both good and ill. We mostly notice them when they fruit, producing mushrooms, toadstools, truffles and mould. Join our walk through the Geelong Botanic Gardens to discover more about the wonderful world of fungi and their influence in our kitchens, gardens, forests and fantasy worlds.

Monday July 29:

Members and Friends trip to Melbourne University to visit the Systems Garden, and other sites around the University. More information in July *What's On*. There is no cost for this activity, but bookings are essential. Closing date for registration 22 July

AUGUST 2013

Sunday August 11:

Discovery Walk – **Plants of Chile** Join us to see some striking and unexpected Chilean plants...significant trees on the Heritage Register List, plants used to surviving on moisture absorbed from fogs, colourful desert plants from North Chile and evergreens that grow naturally in South Chile. See the now extinct Easter Island specimen growing here in our 21st Century Garden and learn more about the Chilean Wine Palm (the emblem of the Friends of Geelong Botanic Gardens).

Winter Plant Sale Saturday 24 and Sunday 25 August:

10 am – 4 pm. Late winter is a great time to get out and plant for spring. Drop in to the Growing Friends nursery and spice up your garden after winter.

Monday August 29 - Friends of Geelong Botanic Gardens AGM 6.00 pm GBG meeting room

Discovery Walks all start at 2 pm on the front steps of the Geelong Botanic Gardens, unless otherwise indicated.

Free guided walks are offered every Sunday at 2 pm when there is no Discovery walk. Join a volunteer guides for a winter afternoon stroll around the Gardens.

For all bookings contact the FGBG Office on 5222 6053

To keep up with everything that is happening at the GBG and with the Friends, make sure your email is registered at the Friends' Office so that you can receive our monthly *What's On* @ GBG.

For more details, see the monthly *What's On*, visit our website: www.friendsgbg.org.au or contact the FGBG Office

Autumn Postcards

Photographs for this edition of *Jubaea* have been supplied by Jenny and Katie Possingham, Gail Thomas and GBG staff



1, 2 Family Discovery walks over the Easter Holidays

3, 4 and 5, The launch of Enid Mayfield's *Flora of the Otway Plain and Ranges Vol 2*

6 The Friends volunteers enjoyed a Thank You lunch after Music in the Gardens

7 Living Fossils were highlighted on the Easter Discovery Table

