

THE CREEK

Newsletter of BERG, the

*B*alcombe Estuary Rehabilitation Group Inc.
No A0034645Y
ABN 50 224 628 623

Volume 11 Issue 1

February 2007

PRESIDENT'S COLUMN

In March of this year, BERG will celebrate its tenth birthday.

The inaugural meeting was held on 1 March 1997, when it was unanimously agreed to apply for incorporation. About thirty people were at the meeting, and nine family and five single members were admitted to membership.

On 25th March 1997 we became an incorporated body under the Associations Incorporation Act 1981.

Our listed aims in 1997 included:

- ◆ the rehabilitation of the estuary reserves including Balcombe Creek
- ◆ encourage bird, animal and marine life
- ◆ liaise with Rotary and other kindred groups
- ◆ be a community-focused group and work with a vision to the future.

How have we fared over these ten years?

A basic essential for the success of any volunteer group is a hard-working, dedicated, skilled and enthusiastic management committee. We have that.

From our somewhat humble numbers of 1997, we have grown to 128 family and 23 single members – a current total (counting each family as 2) of 279 members. That growth reflects the

extent of our community support. So too do the many requests we receive to support the various causes of other community groups.

Over the past ten years we have removed many tonnes of rubbish and pest plants, and planted some 55,000 indigenous grasses, shrubs and trees. Our signage on the ecology and history of the area is publicly admired. To encourage bird and animal life, help to make up for the widespread loss of ancient trees and their nesting hollows, several roosting and nesting boxes have been installed the trees. We've raised community awareness and brought lots of young people on board through



BERG Committee at work: Mary Stemp, Liz Barraclough, Pam Hearn, Keith Wilson, Richard Kirsner

our involvement with schools, Scouts, and Work for the Dole. And we've hugely increased our knowledge and skills in environmental management.

In our immediate working area we have about three kilometres of waterway. An ultimate aim, however, is to have groups working to care for the creek over its entire length, and it is enormously satisfying to see the establishment over recent years of

groups working in Fairbairn Reserve, Kotor Close, Greenfield Way / Hopetoun Creek, and more recently, the Century Drive Group in Mornington East.

We continue to cooperate and coordinate our activities with The Briars, our immediate neighbour upstream. It will be important to consolidate this link for the long-term management of the creek.

Yes, we have achieved plenty in our first ten years. But there will always be plenty more to do, and with the continued support of government authorities at all levels, we can face the future with confidence.

Let me finish with some words from our founding President, Richard Hawkins, at our inaugural meeting: "I hope, as a result of our efforts, in fifty years' time people enjoying the area will look and be thankful we had the vision and energy to make the most of our beautiful creek and bush".

Now for the next ten years!

Keith Wilson, President

BERG Committee

President Keith Wilson
Vice President Harry Harris
Secretary Mary Stemp
Minutes Sec. Pam Hearn

Treasurer Richard Kirsner
Field Officer Liz Barraclough
Rotary Club Liaison Andy McGuigan
Newsletter Angela Kirsner

Schools Liaison Jenny Selby
Century Dve Friends Tony O'Connor
Kotor Friends Margaret Caldwell
Greenfields Friends Hazel Athey

Address for correspondence: Hon Secretary, BERG Inc, PO Box 433, Mt Martha 3934.

Phone: 5974 3996

Website: <http://berg.org.au>

BERG is a member of Coast Action/Coastcare Program and Greening Australia Victoria

FIRE AND BUSHLAND – A MOUNT MARTHA PERSPECTIVE

One of the delights of living at Mt Martha is its bushland feel. The downside is, inevitably, the threat of fire. BERG has always worked with both CFA and Council to manage the risk as well as possible, while preserving what we all love about the area.

Our control burn site is an example. Close to houses and the kindergarten, the aim is to replace the flammable Tea Tree scrub with less flammable Manna Gum woodland. And among the fast growing but short-lived wattles, the Mannas are growing apace and will eventually take over.

COMMUNITY FIREGUARD

During January, the CFA conducted five street-corner “Fire Ready Victoria” meetings in residential areas close to Mt Martha’s parks and reserves. The aim was to raise people’s awareness of their bushfire risk and help them to develop a practical bushfire survival plan.

These are “one-off” meetings. The next step is for a group of neighbours to form a Community Fireguard Group. With CFA support, residents plan together how they will respond to a bushfire as a local community. Groups can be very informal, and get together only occasionally, or they can be more tightly organised – as the members wish. CFA facilitators provide information on things such as fire behaviour, personal survival, house survival, and fire protection equipment, and they will assess local houses with residents to help them plan.

One Community Fireguard group has formed adjacent to the Balcombe Creek reserve, around the south bank and Watson’s Rd. Another group is planned for north bank residents around Maude and Augusta streets.

The Watson’s Rd group (coordinated by Liz Barraclough) formed late last year, and after a couple of meetings participants feel more enlightened about fire

behaviour, the risks they face, their own fire plan and the importance of communication and sharing of plans with their neighbours.

Every Community Fireguard group focuses on its own special needs. For example, groups might decide to:

- organise neighbourhood working bees to reduce fine fuel or improve a nature reserve
- become familiar with each other’s properties and fire fighting equipment
- make plans with the more vulnerable people who may have special needs in regard to bushfire safety
- establish a telephone tree for communication within the group
- organise bulk buying of protective clothing and equipment.

The CFA is happy to run a meeting or information session for any residents who are interested. Contact BERG or the local fire brigade.

FIRE AT MT MARTHA – JANUARY 2007

Gill Gordon is Coordinator of the Sunshine Reserve Conservation and Fireguard Group – a very active group that has become much involved in regeneration of the Sunshine Reserve. This is her account of the January fire on Mt Martha.

Sunshine Reserve Conservation and Fireguard Group started in 1997 because community fears of fire were driving locals to remove trees and fuel load. But most of us had come here because we love the trees and bushland feel.

We quickly discovered that to protect ourselves we needed to get rehabilitate the reserve, under the eye of council conservation officers, rather than replacing the trees with concrete or kikuyu grass.

So how did we fare in the recent alert at Mt Martha Park?

Our family had talked long and hard to decide what we would do as a family. Our decision was to

stay and defend, and we were well prepared.

Round the garden are six large containers with lids, filled with water. On both decks are mops for putting out spot fires. We quickly filled the gutters with water – we had previously removed any leaves and bought stoppers to close the gutters from Bunnings. The sinks also had water in. We quickly watered our mulch with hoses that were positioned around the house – yes, there was a watering ban in place, but we deemed it an emergency. The hoses, doormat, washing and umbrella then quickly came inside.

Our timber house had recently been repainted, and 16 tubes of filler used to close gaps so embers had nowhere to lodge.

Clothing was pre-organized. Cotton pants, long cotton sleeves, sturdy boots, gloves, a mask for the asthmatic. Curtains closed. Dogs were inside and leads were handy – they were very sooky. We felt psychologically ready to cope – nobody panicked. The radio was on batteries and tuned to 774 ABC. Internet access to the CFA web page and the Bush Fire Information line proved frustrating, with information up to three hours old. “Where is Mt Martha? – can you please spell it.” “The computers have frozen,” said the lady!

Our Community Fireguard phone tree includes 30 people in the neighbourhood, but under pressure, it took an appalling 15 minutes to inform the first seven people. There were many glitches – mobiles switched off, people away, one lady who panicked and forgot to ring the next person, Melbourne folk who had forgotten to take the phone tree numbers with them to town, people having difficulty getting into the area.

Hordes of sightseers clogged up the streets, sticky-beaking and driving up and down the dirt roads. Many were seen at the bottom of the street in shorts, thongs and tee

shirts, stubby in hand, watching the entertainment, ignoring CFA advice to leave or dress in clothes that would give them some protection from the radiant heat.

After all our preparation, there were two of us available to cruise the area, assisting the holiday house people, and another three

who patrolled the empty properties as well as Sunshine Reserve itself. Smoke filled the area. We looked out for each other, talked about wind changes, and watched for ember attack from the fire 500 metres away.

Since the fire, we have decided to restructure the phone tree –

locals first, only one phone number per household.

In fact, the three fires in Mt Martha Park over recent years have been very well managed by the CFA, their mates in other brigades, and the Council Fire Management Plan. We salute you guys. Thank you.

FIELD NEWS

Happy New Year and welcome to a 2007 of weeding and planting!

With two grants and the MOU funds from the Council, we are hoping to achieve great things along the south bank of the creek at the Uralla Rd end of the Reserve. It's time we tackled this section of the creek. There's lots of Boneseed, Privet and *Solanum pseudocapsicum* to get our teeth into and replace with more habitat-friendly vegetation. We should be able to make a real difference to this area, beginning at the February working-bee.

My apologies to those people whom I told the January working bee was cancelled. It went ahead, despite fears of heat, and we were lucky – it was a mild day after rain. We had a good turn-up and did a great job weeding the Teatree, Coast Wattle and Mahogany Gum seedlings from the Control Burn site.

Succumbing to drought

Have you noticed the plants that have suffered as a result of this drought, particularly the indigenous ones?

Coastal Beard-heath (*Leucopogon parviflorus*) has been the most surprising one to me as it is regarded as hardy. It grows and flourishes in very exposed positions and has spiky tough little leaves with quite a waxy coat. However, both along the coast and in inland, its brown dead-looking foliage stands out. Why? Will it recover, and if so, in what form? – will it shoot from the base, or from its branches...?



Leucopogon parviflorus – Coast Beard Heath. This small tree is covered in late winter or spring with masses of scented white flowers on short spikes. The white bead-like fruits are an important bird food. The seed will not germinate unless it has passed through the gut of a bird.

The Hop Goodenias (*Goodenia ovata*) have also taken a pounding, especially in our revegetation areas. Perhaps this is a lesson to us. Although they have survived very well up until now, we have probably planted them outside their correct provenance. The ones in and on the edge of the Swamp Melaleuca scrub are still doing well. It will be interesting to see if any of the others regenerate, or reseed. They look pretty dead now!

Liz Barraclough, Field Officer

CAN YOU HELP??

Greenfield Hopetoun Reserve Group

is holding two working bees:

Sunday 11th March

Sunday 13th May.

Please come, and bring your neighbours! Meet at 10am opposite 21 Greenfield Way. Enquiries: Hazel Athey on 0419899560.

CLEAN UP MT MARTHA!

BERG is again coordinating Clean Up Australia Day at Mt Martha – **Sunday 4th March, 9.00 to 12.00.**

We need as many people as possible to clean up after the annual summer onslaught.

Bring your friends and neighbours, and come and help for an hour or two!

Sign on at the Car Park opposite Mt Martha Village, corner of Watsons Rd and The Esplanade

Did you know?

- ◆ Australians are the among the highest producers of waste, per person, in the world.
- ◆ Some 7 billion cigarette butts end up in Australian waterways, streets and parklands each year.
- ◆ 80 million plastic bags end up as litter in Australia each year – a serious threat to marine life.
- ◆ Over one third of all items collected on Clean Up Australia Day 2004 were plastic. Recycling one tonne of plastic saves enough energy to run a refrigerator for a month.
- ◆ Recyclable material makes up almost 80% of total household waste in Australia.
- ◆ Over the past 15 years volunteers on Clean Up Australia Day have collected over 200,000 tonnes of rubbish – that's 4.7 million household wheelie bins!
- ◆ At Clean Up Australia Day 2006 some 700,000 volunteers removed more than 9,000 tonnes of rubbish at 7,527 sites across the country – roadsides, parks, waterways and coastal areas. They filled 1800 skip bins with everything from car bodies to bottle tops.

Diary Dates

BERG Working Bees

All welcome!

Meet at the Rotunda BBQ (Mel: 144 K11) on:

❖ **3rd Sunday** of every month, from 9.00 to 12.00.

Coffee and BERG-baked delicacies at 10.30. If you're running late, phone Liz's mobile (0408 388 430) to find where we are working. Next working bees

18TH FEBRUARY and 18TH MARCH.

❖ **Tuesdays** from 9.30 to 12.00. Coffee break at 10.30.

Bring gloves – other equipment provided.

All queries to Mary Stemp on 5974 3996.

Waterwatch testing: Tuesday February 20th 2007 (every 3 months, third Tuesday of the month)

Meetings

BERG Committee meets every 6 weeks at Mt Martha House, Saturdays 9.30. Next meeting on Saturday 10th March. All members welcome.

SPIFFA (Southern Peninsula Indigenous Flora and Fauna Association) meets 1st Monday of the month, 7.30 pm, at Parks Vic, Hinton Street, Rosebud (Mel 170 C4). Contact Jan Dwyer on 5986 6566.

Friends of Harrap Creek field days 4th Sunday of the month, 9.30. Contact Mary Stemp on 5974 3996.

Fairbairn Bushland Reserve Friends Group working bees: 10 am, March 11th, June 10th 2007 – meet at top of Margeurita Ave. Contact John Stoker on 5974 4726.

Membership Application

I wish to become a family/individual member of BERG and enclose cash/a cheque payable to BERG for:

Joining fee \$1	\$
Individual subscription (per year) \$4	\$
Family subscription (per year) \$5	\$
Donation (tax deductible over \$2)	\$
Total	\$

Please send to:

Membership Secretary
BERG, PO Box 433
Mount Martha 3934

Name

Address.....

Phone..... Fax

Mobile..... Email

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Volume 11 Issue 2

April 2007

PRESIDENT'S COLUMN

My good friend David Tredennick recently sent me an article by writer Geoffrey Barker on the moral dilemma facing the world over global warming. The following is a summary of that excellent piece.

For politicians, global warming and climate change require, primarily, economic and technological solutions. So economic fixes are now being wheeled out, including emissions trading and technological 'cures' such as nuclear, solar, wind power, clean coal and carbon sequestration. Eventually a mix of solutions that appear to have economic and technological credibility will be settled on.

What politicians seem reluctant to accept is that global warming is primarily a moral problem, of how we human beings – that's all of us – ought to behave towards each

other and the global environment.

Economics and technology may address the issue, but will they eliminate the moral problem?

The ethical issues surrounding global warming reduce to a few deceptively simple questions. Do we humans have a right to exploit the earth's resources without regard to the consequences for future generations? Do we have a duty of care towards the earth and the natural world? On what conditions can we rightly take the earth's resources for our own use?

The effectiveness of most of the proposed fixes is by no means assured. Some, including nuclear power, may well bring new economic, technological and moral problems.

Do we humans, who regard ourselves as the species chosen by nature or God to dominate nature, have obligations to ourselves and future generations to preserve and conserve global biodiversity?

How then should we 'exploit' global resources, including minerals beneath the earth's surface, the surface of the earth itself, the seas and waterways and all therein?

An issue facing policy makers is whether approaches can be applied to global warming that define those human activities that ought to be tolerated or prohibited as the world seeks at least a stable state of affairs.

If economic and technological fixes cannot sufficiently ameliorate global warming, policy makers will have to confront perhaps the toughest and most contentious issues in environmental ethics – the status of human beings in the global environmental order. What a challenge! Could it be that unchecked human numbers and human activity have become a threat in themselves to human and non-human survival?

Will it become necessary for policy makers to confront such moral issues if future generations are to inherit a tolerably habitable planet?

While seemingly pointing the finger at our political leaders, let us look closely at ourselves and our daily practices. Visit a rubbish tip and see first hand the mountain of 'rubbish' we discard. Go to a football or cricket match and see the mess we leave behind. Look for a moment at the disgraceful waste in the form of packaging. Yes, let us all do a stock take.

Keith Wilson, President



Photographed crossing the Victoria Crescent/Maud Street bill, 4th March 2007

BERG welcomes new members:

Peter Kim and Luke and Emma Wade

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Vice President Harry Harris
Secretary Mary Stemp
Minutes Sec. Pam Hearn

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FIELD NEWS

Over the next few months we are planning a major assault on weeds in our Envirofund grant site, the area between the boardwalk and firetrack south of the creek and east of Augusta Bridge (below Balcombe Creek Close). We hope to encourage regeneration and prepare for planting – if we get good rain!

Working bees

We made a good start in this area at the March working-bee, mostly removing Boneseed that had sprung up since our last big 'pull' there a number of years ago. The aim is to remove any regrowth before it begins to flower and seed.

At the next working-bee, **Sunday 15th April**, we'd love a big turnout to continue the attack and clean out this area. The work will complement selective spraying and special control works by our contractors, Naturelinks.

The Hopeton Creek/Greenfield Way Group held a working-bee in March to remove *Pittosporum* from the riparian area along their section of Hopeton Creek. Their next working-bee will be on **Sunday 6th May**, when they hope to do a big plant out (we forgot Mothers Day when we set the date – but everyone will need a good workout before the big family lunch!)

Clean Up Australia Day

We cleaned up the beach and foreshore reserve pretty well, but there were a number of areas we didn't get to as there was a

relatively poor Mt Martha turnout. We feel this was probably due to a lack of forward planning and publicity. We hope that a meeting next week with the Shire and local coordinators will put in place a more effective campaign for 2008.

Studies on the reserve

Two Deakin University honours students have started projects focusing on our Reserve.

Jay Goetze is investigating water management and processes of Balcombe Creek and its tributaries, working closely with Melbourne Water, the Shire's Natural Systems team and BERG.

Melissa Simpken's project will explore the historical and social perspective of the Reserve, researching historical records and interviewing long-time residents. If you have any anecdotes or memories of the creek, estuary or adjoining areas, or know of others who can contribute, Melissa would love to hear from you – email majem@deakin.edu.au or contact Mary Stemp – ph 59743996.

Liz Barraclough, Field Officer

A BIODIVERSITY PARK AT SOUTH EAST WATER

South East Water has recently developed plans for a Mt Martha Biodiversity Park to be open to the public, on part of their 260 acres bounded by Craigie and Moorooduc roads and Balcombe and Tuerong creeks. A sewage treatment plant has operated here since 1978. Eventually the biodiversity park will cover some 120 acres of the site, along the

frontages to the two creeks and Moorooduc Road.

Liz Barraclough, Tony O'Connor (of the Century Drive Group) and Geoff Kaye (Mt Martha Rotary) recently met with the South East Water team to walk over the proposed area and discuss the plans. Also at the meeting were consultants from Australian Ecosystems (landscape and vegetation management), Civil & Landscape Design, and civil engineering (design of walking track and boardwalk).

The first stage of the plan covers about 10 acres, with 2.75 km of walking track around and beyond a lake inhabited by many species of waterbirds. The surrounding land will be revegetated. There will be interpretive signage, a birdhide, and parking for visitors.

The South East Water team is working closely with The Briars (with whom they share the creek boundary) and the Shire Natural Systems team.

The work will be done in stages. Weed and pest control programs are in progress, and planting the southern wetland area is planned soon. It is hoped that the track will be constructed by June, and the lake revegetation will be a second stage. Much of the planting will be done by contractors, but South East Water hopes to involve schools and other groups as well.

At later stage there is the possibility of linking this track with other tracks and trails along the creek.

WATERWATCH

Since the late 1990s, BERG has been keeping a check on the water in Balcombe Creek through the national Waterwatch program.

Water quality is, of course, crucially important to creek's ability support its plant and animal life, and it reflects the health of the whole catchment.

Waterwatch was set up by the Australian Government in 1993, and is supported by the Commonwealth Government's Natural Heritage Trust. It offers standardised methods and equipment for local groups to monitor water quality in their rivers, streams and lakes, and nearly 3000 groups across the country are now monitoring water quality at over 7000 sites throughout 200 catchments. The

information collected provides the basis for action to tackle problems and improve waterway health.

On the Mornington Peninsula, BERG is one of 11 community or friends groups that monitor 23 sites on 10 different waterways. Other sites monitored are at Coolart Wetlands, Balnarring Wetlands, Mantons Creek, Stoney Creek, Chinaman's Creek, Warrangine Park, Sunshine Creek,

Merricks Beach drainage, and Watson Creek.

Balcombe Creek is monitored at five sites: by BERG at Augusta Street; The Briars staff and volunteers at three creek and wetland sites; and the Mt Eliza Association for Environmental Care (MEAFEC) at Eramosa Road, and by Mt Eliza Regional Park at Claremont Street. We look at six measures of water quality.

Electrical conductivity is a measure of salinity (dissolved salt increases water's conductivity). The Augusta St testing site is within the creek's tidal zone, and what is normal in a tidal estuary will be quite different to further upstream. Salinity will also vary in the estuary depending on whether or not the creek mouth is open, and how much water is flowing downstream. We still have much to learn about these variations and what actually constitutes a healthy range of readings in our creek.

pH is a measure of acidity. The main potential influence on this in Balcombe Creek is agricultural and garden fertilisers, which increase acidity.

Turbidity – the cloudiness of water – is caused by suspended particles that reduce the passage of light. The particles can be soil (clay, silt, sand), algae, plankton, micro-organisms, and other substances. Major contributors include soil erosion and run-off from farm land, eroded or stock-trampled creek banks, and dirt roadways. In cloudy water, less light reaches aquatic plants, frog spawn, and other living things. Turbid water also absorbs more heat and so tends to be warmer than clear water.

Dissolved oxygen is essential for creatures with gills – not only fish, but the small bugs and beasties (macroinvertebrates) that populate waterways. The higher the water temperature, the lower the level of dissolved oxygen in water, so there is a link here to turbidity.

Phosphorus is released by rotting organic matter and is

essential for plant growth. Australian flora are adapted to the naturally low levels in Australian soils. But agricultural and garden fertilisers contain phosphorus to meet the higher needs of exotic crops and garden plants, and run-off can carry this into waterways. High levels of phosphorus support toxic algal blooms.

Finally, every six months we count **macroinvertebrates** in a sample of the creek water – the tiny but visible insects, worms, snails, shrimps, water fleas and the like that are a key part of the food chain. The diversity and abundance of these creatures is an excellent indicator of stream health.

Our test results are collated in the Waterwatch Victoria database, which allows community data to be pooled, analysed and interpreted at the catchment level and beyond. Over the past couple of years, we have also been recording our results on our own database. The graphs show what we've found.

Other than a few individual readings, most levels are within the levels that Waterwatch identifies as healthy. Oxygen saturation is slightly borderline. The one exception is electrical conductivity (salinity), but the levels set by Waterwatch are probably not relevant for our tidal test site. Levels set for estuaries in other countries, in fact, suggest our readings are well within healthy limits.

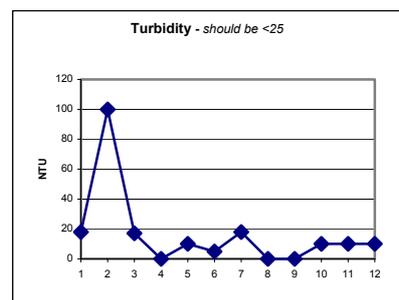
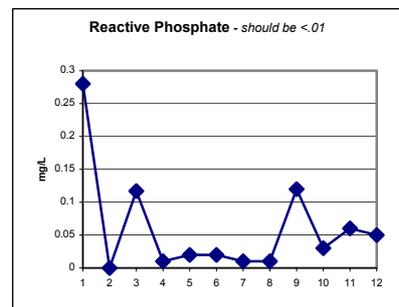
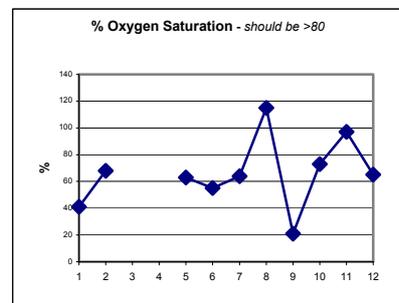
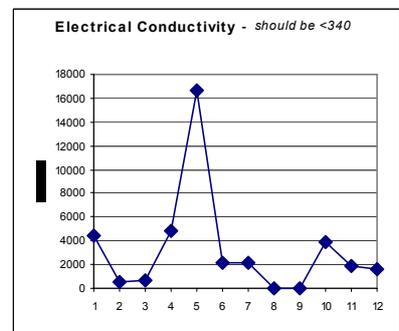
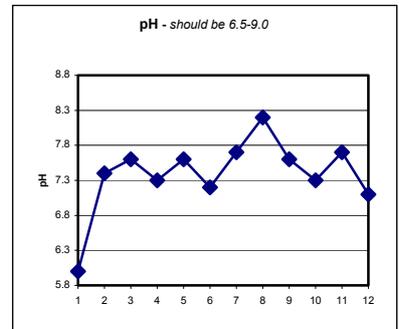
For macroinvertebrates, our testing shows sufficient numbers and range of species to indicate a healthy environment, though species are limited due to the salinity of the estuarine environment. Again, we still have much to learn about what is normal in such environments.

In the future, we hope to look more closely at what happens to water quality under a variety of conditions. For example, after heavy rain, does turbidity increase? If so, does this come from storm water draining into Harrap Creek, or from further up Balcombe Creek? How are the various water

quality parameters affected by opening and closing of the Creek mouth?

In the meantime, congratulations and thanks to our inveterate Waterwatch testers Isobel Cook and Mary Stemp.

Quarterly readings at Augusta Street, May 2004 to Feb 2007



Diary Dates

BERG Working Bees

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Coffee and BERG-baked delicacies at 10.30. If you're running late, phone Liz's mobile (0408 388 430) to find where we are working. Next working bees

SUNDAY 15TH APRIL

SUNDAY 20TH MAY

❖ Plus: Hopeton Creek/Greenfield Way Group:

SUNDAY 6TH MAY – meet Greenfield Way, 9.30

❖ **Tuesdays** from 9.30 to 12.00. Coffee break at 10.30.

All queries to Mary Stemp on 5974 3996.

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Donation (tax deductible over \$2)	\$
Total	\$

Please send to:

Membership Secretary
BERG, PO Box 433
Mount Martha 3934

Name

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Mobile..... Email

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Volume 11 No 3

June 2007

PRESIDENT'S COLUMN

This issue we share with our good friend and committee man Andy McGuigan the sad loss of his beloved wife, Eleanor. For some time we have admired Eleanor's courage through her illness. To you, Andy, and to your family we extend our heartfelt condolences.

As I write this, steady rain is pattering on the roof and the news is full of marvellous falls across Victoria and elsewhere. Ten years ago – maybe less – who in Melbourne would have been singing about the joy of rain!

My latest electricity bill shows our greenhouse gas emissions were zero, equating to a saving of 1.5 tonnes in emissions. It cost an extra \$1 per week.

Recent reports indicate increased illegal rubbish dumping. We are asked to look out for dumpers. If you see one:

- Do not approach the person/s.
- Gather as much information as possible, eg car registration number and colour, description of the person, time and date.
- Notify Council on 1300 850 600.

Have you noticed the new, very attractive seat on the boardwalk fishing platform? The plaque on it recognises the outstanding contribution of BERG's founding President, Richard Hawkins.

Until next time,

Keith Wilson, President

BERG welcomes new members:

Sue Glover
Kirsten & John Freeman
Ian Hicks

Do you remember...?

Melissa Semken, an Honours student at Deakin University, is conducting a study on the ecological history of Balcombe Estuary Reserve.



Melissa's research is part of the work Deakin University is undertaking with BERG to improve our understanding of

the estuary.

She hopes to build up a picture of things such as changes in land use and management over time, what the bushland around the estuary looked like, the estuary's wildlife, the openings and closings of the mouth, how people have used the creek.

Knowing an area's history can help in building up an understanding of its ecosystems, and the changes that have shaped it – it provides direction for sustainable management.

Can you help? If you are interested and willing to share your stories and memories – even if you've only small snippets to contribute – please contact Melissa, phone 0425 769 952 or email: masem@deakin.edu.au

FIELD NEWS

from Field Officer **Liz Barraclough**

At the April working bee we continued work started in March along the boardwalk from Augusta St bridge east towards Uralla Rd. The work complemented the selective spraying and special weed control being done by Naturelinks and (except for the 'plague' of emerging Smilax) it is now pretty clear of woody weeds.



had a most morning on the creek, along the the Uralla Rd vest for about been prepared who removed (mainly and Boneseed) the Wandering Jew and grassy weeds. We planted about 750 sedges and grasses and 100 shrubs (Hop Goodenia, Prickly Wattle) in the riparian Swamp Paperbark zone nearest to the creek – taking

At the May working bee – Jo Thyer, Naturelinks contractor, telling us how to pull and bag Angled Onion

BERG Committee

President Keith Wilson
Vice President Harry Harris
Secretary Mary Stemp
Minutes Sec. Pam Hearn

Treasurer Richard Kirsner
Field Officer Liz Barraclough
Rotary Club Liaison Andy McGuigan
Newsletter Angela Kirsner

Schools Liaison Jenny Selby
Century Dve Friends Tony O'Connor
Kotor Friends Margaret Caldwell
Greenfields Friends Hazel Athey

Address for correspondence: Hon Secretary, BERG Inc, PO Box 433, Mt Martha 3934.

Phone: 5974 3996

Website: <http://berg.org.au>

BERG is a member of Coast Action/Coastcare Program and Greening Australia Victoria

advantage of recent rains and moist soil. The regeneration of various weed species will have to be closely monitored and controlled until the indigenous plantings thicken up enough to out-compete the weeds.

In **June** we are planning another extensive planting – at least two or three hundred shrubs and overstorey trees as well as more groundcover species.

All those who love this rewarding activity please come along – meet at 9.00am at the rotunda at the end of Mirang Ave.

(If you can't make it until later we shall leave a directions on where to find us. We appreciate even an hour of your time – you can plant, water or guard a lot of tubestock in an hour!)

Foolishly, we arranged the **Greenfield Way/Hopeton Creek working-bee** for Mothers' Day – the turn-up wasn't great! Even so, we managed to remove and stack a few more piles of Pittosporum and Mirror Bush.

The locals are doing a great job, chipping away at this area, and we hope to have it well prepared for a big winter planting working-bee on **Sunday 24th June, 9.30am**. If any of the regular BERG working-bee people are free it would be great if you could join the Greenfield Way/Hopeton Group to plant some 700 plants – meet outside .

Another burn site

For years we have been planning a trial burn in part of the Rabbit Paddock – the area of land in from Hilton Court and parallel to Hopeton Creek. Back in 2001, Greencorps fenced the area in two rectangles, one with rabbit-proof fencing, the other with open fencing (grey and white respectively in the diagram, next column). Across these, we have marked off three long areas. In two, we are trialling two management strategies – burning and slashing – with the third area as an untreated control.

At last, in early April, Transfield was able to burn the designated one third (and a little more by

mistake!). We will now monitor regeneration in each zone.

BURNT	
SLASHED	
CONTROL	

Rabbit-proof fencing Open fencing

This whole area is classified as Grassy Woodland (EVC 175) and would once have been an open Manna Gum wood-

land with patches of Sheoak.

We hope the experiment will demonstrate the effect of the different management methods and help us to adapt these to get the desired outcomes of suitable weed control and regeneration of species for similar landscapes.

Large Moist Ginger Cake

Another working bee morning tea recipe from Liz – seen below engaged in cake quality testing with Mary Stemp

Microwave to mix:

- 250 gms butter
- 250 gms sugar
- 250 gms treacle

Add:

- 375 gms plain flour
- 2 tsps arrowroot
- 2 tsps bicarb soda
- 2 eggs (lightly beaten)
- 2 tbls powdered ginger

Sift dry ingredients, mix and stir into melted mixture with beaten eggs. Then add:

1½ cups warmed milk

Pour the very runny mixture into a lined 8-10 inch/20-25 cm round (or square) tin. Cook about 1½ hours at 340°F / 170°C.



Waterwatch

Notes from the field

Mary Stemp reports

In June 1998, three BERG members attended the first Streamwatch Training Day at The Briars. We learned how to test the waters and we gathered macroinvertebrates from the creek and attempted to identify them.

I have since attended several training days, along with Liz Barraclough and others. BERG shared a testing kit with Padua College, Rosebud, and we tested regularly at a couple of sites. Our team was led by Norm Stevens (since moved north), with Brian Pullman, Isobel Cook and myself – all still regulars.

Melbourne Waterwatch is part of the Waterwatch Australia network. The program has several sponsors including, over recent years, our local Council. Amy Paraman, our local coordinator, is ever willing to help in the field, collate data and work with schools.

We are now using an updated testing kit, and we test at the Augusta St footbridge every three months. The aim is to have all groups along the creek test on the same day and time, so the data are comparable. Isobel takes care of our equipment, testing it regularly for accuracy and ensuring the chemicals are up-to-date.

Macroinvertebrates are indicators of the health of the creek – some, like *Caddis Fly* larvae and *Mayfly* larvae, are sensitive to pollutants; others survive anything. At our current testing site, I have never found significant numbers or range of species. In February we found a couple of tiny shrimps and five freshwater crabs, also tiny. Last November we found none.

Why? Theories include, that the water is too saline; that there aren't many reeds where we test; and that the silt in the creek (from drains, etc) inhibits them. And, of course, other pollutants could be coming down the creek from time to time, killing them off.

Hopefully we'll find some answers in time.

THE MOUNT MARTHA BUNDY

Based on an article in the most recent edition of the Shire's Bushland Bulletin



The Mount Martha Bundy is an endangered tree known only from a single sub-catchment of Balcombe Creek within Mount Martha. A recent survey found 497 living trees – these are thought to be the entire remaining population.

The Bundy varies in appearance, but can be identified from its fruit, juvenile foliage and epicormic growth. Height varies from about 20 to 40 metres, and there seems



to be no consistent pattern to the tree's structure.

The Bundy population covers a healthy age range, from senescent trees showing old-growth characteristics, through mature and semi-mature trees, to saplings or young trees – about 44% of the population.

With only 7% of the population on private land, Council is taking a number of steps to conserve and extend the population. It is crucial to reduce weed cover to a negligible level so seedlings are able to grow. This has been started, and funding is needed for at least ten years.

Mount Martha Public Golf Course provides an opportunity to expand the tree's present area of occupancy on public land, and specific areas of the course land will be rezoned and fenced to provide a dedicated conservation area, with revegetation and restoration planned.



MANAGING THE MOUTH

Estuary management in Victoria has received a boost with the development, by Deakin University, of a new decision support tool, the Estuary Entrance Management Support System (EEMSS).

Why is it important?

Estuaries are one of our most valuable natural assets – and at Mt Martha, we have the largest and most intact one on the eastern side of Port Phillip Bay.

Estuaries provide spawning and nursery areas for fish and breeding and foraging areas for birds. They have an important function as natural sediment and nutrient filters, providing cleaner water within the estuary and the inshore zone.

An opening question

Many estuaries in Victoria – Balcombe included – close intermittently following the formation of a sand bar at the estuary mouth. This is a natural event. The increased water levels that result within the estuary bring significant environmental benefits when wetlands and fringing vegetation are flooded.

Catchment activities such as clearing and water extraction can alter the flow to estuaries, and this may affect when and how often the estuary mouth closes.

Historically, estuaries in Victoria have been opened to protect infrastructure and agricultural land. There has been limited consideration of environmental values. Yet artificial opening can carry a high risk of damage to the health of the estuary.

There is the risk of a mass fish kill – something that has happened several times in Victoria as a result of artificial openings done under the wrong conditions. Possibly no less damaging is the potential for a long-term decline in health of the estuary as a result of impacts such as premature drainage of wetlands and the disruption of fish spawning.

Making decisions

The EEMSS gives estuary managers a powerful tool for accounting for all the likely risks involved in decisions to open or not open a river mouth. It provides a consistent process for making these decisions, and takes into consideration socio-economic, environmental and cultural factors.

Decisions are based on an impact assessment, using an assets-threats model, which compares opening with not opening an estuary, at a range of water levels. This entails assigning to each socio-economic, cultural and environmental asset a value that reflects the asset's importance. A threat value is also assigned, and an 'impact score' calculated for the various water levels.

The manager makes up an *Impact Assessment Report* based on this information. Then a *Checklist Report* has to be completed, to ensure a consistent protocol is followed and openings are safe and effective – for example, warning signs, sea conditions and tides.

For the estuary to be opened, the impact assessment and checklist reports must both support that decision.

The EEMSS also provides data storage for information on estuarine water levels, mouth status, water quality data, and species lists. The data collected will help inform future management decisions and allows monitoring programs to be targeted more effectively.

Simon Thorning, the Shire's Natural Systems Team leader, is organising a workshop on the EEMSS with Dr Helen Arundel, Research Fellow, Deakin University. BERG will be there.

In the next issue of The Creek – a report on Melbourne research into native fish in estuarine habitats.

BERG Working Bees

All welcome!

Meet at the Rotunda BBQ (Mel: 144 K11) on:

❖ **3rd Sunday** of every month, from 9.00 to 12.00.

Coffee and BERG-baked delicacies at 10.30. If you're running late, phone Liz's mobile (0408 388 430) to find where we are working. Next working bees

SUNDAY 17TH JUNE,

SUNDAY 15TH JULY.

❖ Plus: Hopeton Creek/Greenfield Way Group:

SUNDAY 6TH MAY – meet Greenfield Way, 9.30.

❖ **Tuesdays** from 9.30 to 12.00. Coffee break at 10.30.

Bring gloves – other equipment provided.

All queries to Mary Stemp on 5974 3996.

Waterwatch testing: Tuesday August 21st (every 3 months, third Tuesday of the month)

Meetings

BERG Committee meets every 6 weeks at Mt Martha House, Saturdays 9.30. Next meetings on Saturday 9th June, Saturday 21st July. All members welcome.

SPIFFA (Southern Peninsula Indigenous Flora and Fauna Association) meets 1st Monday of the month, 7.30 pm, at Parks Vic, Hinton Street, Rosebud (Mel 170 C4). Contact Jan Dwyer on 5986 6566.

Friends of Harrap Creek field days 4th Sunday of the month, 9.30. Contact Mary Stemp on 5974 3996.

Fairbairn Bushland Reserve Friends Group working bee: 10 am, Sunday 24th June (changed from 11th June) – meet at top of Margeurita Ave. Contact John Stoker on 5974 4726.

Membership Application

I wish to become a family/individual member of BERG and enclose cash/a cheque payable to BERG for:

Joining fee \$1	\$
Individual subscription (per year) \$4	\$
Family subscription (per year) \$5	\$
Donation (tax deductible over \$2)	\$
Total	\$

Please send to:
Membership Secretary
BERG, PO Box 433
Mount Martha 3934

Name

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.....

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THE CREEK

Newsletter of BERG, the



Balcombe Estuary Rehabilitation Group Inc.

No A0034645Y
ABN 50 224 628 623

Volume 11 No 4

August 2007

CONGRATULATIONS LIZ!

The Mount Martha Rotary Club has awarded Liz Barraclough the Paul Harris Fellowship – Rotary's highest award, only rarely awarded to someone outside Rotary. Nomination for the award read as follows:

"Liz Barraclough is nominated for a Paul Harris Fellowship because of her substantial and sustained contribution to Mt Martha through her membership of the Balcombe Estuary Rehabilitation Group. Liz is a founding member of the group,

which celebrates 10 years of achievement this year and she has served on the Committee throughout that period.

"She brings to her role as Project Officer knowledge, commitment, enthusiasm and common sense, and she has the ability to enthuse others. She understands the funding application process and the regulatory requirements, as well as she does the natural environment.

"This has enabled Liz, with many others in BERG, to make a contribution to the Balcombe

Estuary, and beyond, that will be valued many years into the future."



Liz received the award from outgoing President Steve Daly, at the Harba restaurant in Mornington

PRESIDENT'S COLUMN

I was prompted recently to read again *Triumph of the Nomads*, published 1975, by eminent historian Geoffrey Blainey, and I want to pass on some extracts. Blainey writes:

"...The end of the last glacial phase was accompanied by the rising of the seas. As parts of the ice cap were melting at the earth's poles, the release of water slowly raised the level of the ocean.... perhaps 20,000 years ago some coastal lands in Australia were being slowly drowned. In parts of the interior this change was visible in the climate. There is evidence that the belt of territory near the latitude of Sydney or Perth had a moister climate that today, but

17,000 years ago that climate was perhaps no longer so wet. On the plains of south-western New South Wales the fish and birds and animals in the rivers and billabongs were perhaps less prolific because the supply of water was less assured. Lake Mungo and the line of adjacent lakes were becoming saltier – a hint that fewer floods were rushing down periodically to flush out the salt.

"The low-lying bridge of land which linked Tasmania and Victoria was slowly narrowed... by the invasion of the sea. About 14,000 year ago the once-dry land between King Island and Cape Otway was cut, and in stormy weather at full-moon it must have been frightening for tribes to see the surf licking the grasslands

where they had lived for generations. About 13,000 years ago the water also broke through the ledge of land linking Wilson's promontory to Flinders Island...

"As the level of the sea rose, it carved slices from the north and north-west of Australia. There the slope of many coastal plains was gentle, enabling the sea to encroach at a pace which was clearly perceptible in one lifetime and sometimes visible in the space of a week.... The average rise of the sea level over a span of ten to fifteen thousand years was perhaps half an inch or an inch a year. That meant that in the span of a lifetime many sea-crossings became hazardous..."

continued page 3

President	Keith Wilson	BERG Committee			
Vice President	Harry Harris	Treasurer	Richard Kirsner	Schools Liaison	Jenny Selby
Secretary	Mary Stemp	Field Officer	Liz Barraclough	Century Dve Friends	Tony O'Connor
Minutes Sec.	Pam Hearn	Rotary Club Liaison	Andy McGuigan	Kotor Friends	Margaret Caldwell
		Newsletter	Angela Kirsner	Greenfields Friends	Hazel Athey

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ASSESSING THE IMPACT OF ESTUARY MANAGEMENT ON THE SUSTAINABILITY OF AQUATIC ECOSYSTEMS

In the last newsletter, we reported on The Estuary Entrance Management Support System – a project funded by the Natural Heritage Trust. In this issue, we bring you a report of a parallel project, also funded by the Natural Heritage Trust. The report is available via <http://www.dse.vic.gov.au/>

A diversity of Australia's native fish species use estuarine habitats at some stage in their life cycle – for spawning, as a nursery habitat or foraging ground, or simply as a transition zone on their migration between rivers and the ocean. Native fish biodiversity is therefore critically dependent on the existence of connections between these habitats, and the effective management of estuaries must consider the requirements of these species.

One issue of particular concern in coastal Victoria is the development of sand bars at the mouth of estuaries that results in closure of the estuary. These events, and the subsequent opening of the mouths through natural or artificial means, can have big implications for fish species that rely on the connection between marine and freshwater habitats.

A team of researchers at the University of Melbourne, with funding from the Natural Heritage Trust and support from coastal CMAs, is investigating how connectivity between freshwater and marine ecosystems, and the management decisions that affect these connections, influence native fish populations.

BERG welcomes new members:
David Briggs
Lel & Ray Stella

The model species

We are using a native freshwater fish, the common galaxias, *Galaxias maculatus*, as a model species to investigate factors that influence how natural populations of migratory fish are regulated. *G. maculatus* adults live in rivers, spawn in estuaries, and their larvae develop at sea before migrating back to freshwater habitats as juveniles (commonly called 'whitebait').



Galaxias maculatus, common galaxias

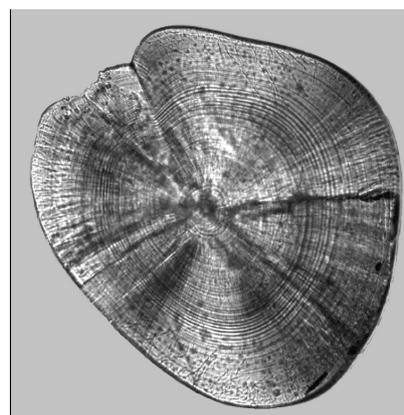
Factors that may impact upon species with this type of life cycle include the availability of spawning habitat in estuaries, water quality, estuary mouth closure and timing of artificial openings, and potential for dispersal to other rivers while at sea.

We have selected *G. maculatus* as a model species because its life cycle is typical of many native migratory fish. Furthermore, this species is abundant throughout most of its biogeographic range (southeastern Australia), and it is an important food source for wading birds and many of the commercially and recreationally important fish species found in rivers and estuaries.

How do we track fish?

All fish have tiny bones in their ears called otoliths. These structures form at birth and grow continually as new layers are deposited around the core, forming rings like those in a tree trunk. During this process naturally occurring chemicals from the surrounding water are incorporated into the otolith.

Natural variation in the chemical 'signatures' of different estuaries will translate into unique chemical signatures in the otoliths of fish from different locations. We can therefore use the chemistry of otoliths to determine where a fish was born, how far it dispersed to its new home, and thus how connected the populations in different rivers are.



Unique chemical properties of an estuary (top) are taken up by larval galaxiids (middle) and incorporated into their otoliths (lower) as they grow

Implications

Do all *Galaxias maculatus* disperse far from their natal home? Do some stay in the estuary in which they were born? Are some rivers more important than others as a source of new fish? How does the timing of estuary mouth closure and subsequent opening affect the sustainability of the fish population in that river?

These are just some of the questions we will be able to answer through our research. Our aim is to provide natural resource managers with essential information about the biology of estuarine systems that will feed directly into their management policies. It is only one piece of a complex puzzle, but one which will ensure sounder management decisions and better environmental practices.

For information on this project, contact Nicole Barbee, Department of Zoology, University of Melbourne, ph 03 8344 6251

AGM ADVANCE NOTICE

Saturday 10th November,
9.30 am

Mount Martha Community House
with Dr Beth Gott,
Honorary Research Associate,
School of Biological Sciences,
Monash University,
speaking on
"Koorie Landscapes"

FIELD NEWS

from Field Officer *Liz Barraclough*

With a terrific turn-out at the June working bee, we planted over 800 trees, shrubs, grasses and sedges along the boardwalk close to Uralla Road, where regeneration is funded by Envirofund and Melbourne Water. And despite a small crew in July, we planted another 250 grasses and 50 trees in the same area. More is planned for August (Saturday 19th). This follows spraying of weeds in the area by Naturelinks. We really want to out-compete and prevent the return of weeds, so the mass planting will continue, especially while the weather is so conducive to plant survival.

The Hopeton Creek Greenfield Way Group working-bee in July did a great job, planting 400 diverse plants, and over the next few weeks at least another 400 will be added. Bob and Hazel Athey have removed great thickets of woody weeds, Blackberries and grassy weeds have been sprayed; leaving lots of room to establish a more indigenous habitat.

We have applied for an Envirofund Grant, Round 10, 2007 (Coastal and Marine) to tackle the high profile and very degraded coastal strip between Coolangatta Rd and Bay Rd. Council's concern about the dieback of foreshore vegetation, particularly of Coastal Banksia, led it to commission study of dieback across the Peninsula. We aim to restore Coastal Banksia woodland and its supporting habitat.

In June, I attended a Vegetation Management Forum at Coolart,

run by Denis Cox, of Coast Action Coastcare. A major benefit was networking with the various coastal groups on the Peninsula, swapping ideas and exploring ways to cooperate and tackle common issues along the coast as a whole.

I also represent BERG on a number of committees.

The Mt Martha Foreshore Advisory Committee meets about once a month. At the moment members are walking and examining the coastal processes and infrastructure of the coastal strip between Martha Cove (Safety Beach) and Linley Pt (Mornington end). They are looking at access paths, car parks, amenities (toilet blocks, bathing boxes), state of the vegetation, and the cliffs (erosion, safety issues etc.).

Consultants have been appointed to develop a management plan and the committee will meet with them soon. Any BERG members with issues or comments could contact me (as BERG's rep), or wait for the public consultation process in the next few months.

The Devilbend Foundation Council will soon be releasing Devilbend – A Strategic Planning Approach, outlining their approach for a partnership between government and community. Contact me for a copy (0408 388 430 or liz.barra@bigpond.com).

I have also been appointed to Parks Victoria's Devilbend Advisory Committee. Over the next 12 months, this group will develop a management plan for the Devilbend Reserve. It was stressed that appointment of the committee was skills-based and is not representative of groups.

Balcombe Creek Moorooduc Plains Landcare Group has at last been formed. This is great news, as it sets almost the final piece into the mosaic of groups on the Mornington Peninsula. It has a representative and diverse group of people on the committee and the 'interested' list. For information, contact me (see above), or the president, Paul Bertuch, on 0488 762 179).

Two more Landcare groups are now up and running:

Devilbend Landcare Group held a very successful weeding working-bee (about 50 turned up!) at Devilbend Reserve in June. Contact the president, Roger Turner, on 5979 8388.

Watson's Creek Landcare Group was formed a few months ago. The origin of this creek dovetails with that of Balcombe Creek, also arising on the Moorooduc Plain, but running in the opposite direction to drain into Western Port Bay.

CENTURY DRIVE HABITAT LINK GROUP is planting on the last Saturday afternoon of each month until December, from 2.00 to 4.00pm. Helpers most welcome! Contact Tony O'Connor, 0404 951 500, or Glyn Rowlands, 5975 8853

President's report, from page 1

"In one way or other the rising seas disturbed the life of every Australian for thousands of years. Salt water drowned perhaps one-seventh of the land...

"The rising of the seas was accompanied by, and largely caused by, warmer temperatures... The climatic changes were perhaps slow, being spread over scores of generations, but the adaptation required might have been considerable... Seven thousand years ago the sea had virtually completed that slow rise which had been occurring for at least 13,000 years. The level of the sea was now only about thirty feet below its present level."

This is fascinating reading, and puts our current situation in a wide historical and pre-historical context. Are we facing inevitable climate change? Whatever the answer, there is no doubt that modern civilization, especially the Western variety, needs to do a serious stock take. All of us can make a contribution.

Keith Wilson

BERG Working Bees

Meet at the Rotunda BBQ (Mel: 144 K11) on:
v 3rd Sunday of every month, from 9.00 to 12.00.
Coffee and BERG-baked delicacies at 10.30. If you're running late, phone Liz's mobile (0408 388 430) to find where we are working. Next working bees

SUNDAY 19TH AUGUST & SUNDAY 16TH SEPTEMBER

v Century Drive Group – planting on Saturday 25th August & 29th September, meet next to 9 Century Dve, 2.00 – enquires Tony O'Connor, 5977 2810

v Tuesdays from 9.30 to 12.00. Coffee break at 10.30.

Bring gloves – other equipment provided.

All queries to Mary Stemp on 5974 3996.

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Meetings

BERG Committee meets every 6 weeks at Mt Martha House, Saturdays 9.30. Next meetings on Saturday 25th August and Saturday 13th October. All members welcome.

BERG AGM Saturday 19th November, 9.30, at Mt Martha House

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Donation (tax deductible over \$2)	\$
Total	\$

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THE CREEK

Balcombe Estuary Rehabilitation Group

Volume 11 No 5

No A003 4645Y ABN 50 224 628 623

October 2007

COLOUR!

Our grateful thanks to Geoff Lawyer, BERG member and Director of Complete Colour Printing, for our splendid, new-look colour newsletter. Complete Colour has taken over printing of *The Creek* at no cost to BERG.

Complete Colour Printing is a leader in Environmentally Responsible Printing (ERP). The newsletter is printed using vegetable-based inks on Monza paper, which is 55% recycled and 45% Forest Stewardship Council certified.

Complete Colour provides high quality full colour offset and digital printing services to businesses – visit www.completecolour.com.au to find out more.



Geoff Lawyer with daughters Charlotte and Emily at the August working bee.


complete
COLOUR PRINTING

ENVIRONMENTALLY RESPONSIBLE PRINTING

Thanks also to our local MPs

Our sincere thanks to David Morris, Member of the Legislative Assembly for Mornington, to his predecessor Robin Cooper, and to their office staff, who have photocopied *The Creek* efficiently, cheerfully and free of charge for many years. We are most grateful.

Annual General Meeting Saturday 10th of November 9:30am

Mount Martha Community House
with Dr Beth Gott.

Honorary Research Associate,
School of Biological Sciences,
Monash University,
speaking on

“KOORIE LANDSCAPES”

For 40,000 years the Indigenous people of Australia lived off what the land would provide, and when Europeans arrived they were well-fed and healthy.

Plants were an important part of the diet, and had many other uses. The talk will concentrate on the plants used in south-eastern Australia, and on the way the land was managed by fire to ensure that the resources continued to be available.

Dr Gott is a wonderful speaker, and her wide knowledge of her subject has gained her the respect of Aboriginal people.

She has published numerous articles and two books on the subject – ‘Victorian Koorie Plants’ and ‘Koorie People’.

FIELD NEWS

from Field Officer Liz Barraclough

Planting and more planting

At the August and September working-bees, there was planting and more planting! However we shall not tempt fate and risk any more planting other than right near the waterline. We have been so lucky with the weather this year and all our new Envirofund and Melbourne Water funded planting should be well enough established to cope with any drought the summer can throw at us.

We were joined at the August working bee by our Federal MP, BERG member and neighbour of the Reserve, the Hon Greg Hunt, and two-year-old Poppy (see picture, next page).

And weeding...

At the **October working-bee (Sunday 21st)**, we may be putting our follow-up weeding skills into practice. *Note: this 3rd Sunday is late in the month.*

The Weedbuster Stand will be set up again this year, on Saturday 6th October, manned by BERG and the Sunshine Conservation and Fireguard Group. It will be stationed outside the supermarket to help people identify threatening weed species and give appropriate information on their control. We shall provide examples of as wide a range of weeds as possible, and we encourage anyone to bring along their own problems. If we can't give an answer directly, we shall seek more expert advice.

BERG COMMITTEE

PRESIDENT KEITH WILSON TREASURER RICHARD KIRSNER SCHOOLS LIAISON JENNY SELBY
VICE PRESIDENT HARRY HARRIS FIELD OFFICER LIZ BARRACLOUGH CENTURY DYE FRIENDS TONY O'CONNOR
SECRETARY MARY STEMPT ROTARY CLUB LIAISON ANDY MCGUIGAN KOTOR FRIENDS MARGARET CALDWELL
MINUTES SEC. PAM HEARN NEWSLETTER ANGELA KIRSNER GREENFIELDS FRIENDS HAZEL ATHEY
ADDRESS FOR CORRESPONDENCE: PO BOX 433, MT MARTHA 3934.

PHONE: 5974 3996 WEBSITE: [HTTP://BERG.ORG.AU](http://BERG.ORG.AU)

BERG IS A MEMBER OF COAST ACTION/COASTCARE PROGRAM AND GREENING AUSTRALIA VICTORIA



August working bee, from left to right: Isobel Cook, Jenny Selby, Michael Sanders, Gillian Montgomery, Jackie Hartnell, Liz Barraclough, Keith Wilson, Greg & Poppy Hunt, Gayle O'Connor, Mary Stemp

Fauna Survey

It is ten years since BERG's initial fauna survey of the Reserve, and so Mal Legg, the Peninsula fauna ecologist who did that initial survey, is resurveying the area over twelve months to determine the state of the indigenous fauna populations.

He began in August and may be seen out and about at all times of the day and night with his special traps, tape recorder and paraphernalia.

It will be fascinating to see the results and whether they reflect any significant changes since 1997. We shall keep you up-to-date via the newsletter.

RUSTY SUCCESS

Mary Stemp reports

If you've recently walked along the boardwalk, you will surely have noticed great infestations of *Smilax* (Bridal Creeper) climbing vigorously over everything in their path. This shiny, vivid-green leafed plant is one of our worst environmental weeds, smothering indigenous plants and creating huge dinner-plate-sized biomasses just under the topsoil.

Ten years ago control seemed impossible, as spraying would threaten the host plants as well as the weed. Since *Smilax* comes from South Africa, it has no enemies in Australia.

However, the Department of Primary Industries (DPI) imported a couple of biological controls and, after some years of research, found they were *Smilax*-specific (not 'cane toads' of the plant world!).

I contacted DPI about 7 years ago when I learned of leaf hoppers, and we organised releases. Mt Martha Primary School became involved, breeding the tiny creatures and releasing them into the *Smilax*. But each summer, when the *Smilax* died down, the 'hoppers' disappeared and didn't come back in any significant numbers.

Rust fungus, another safe control, has been more tenacious. Three years ago and again last year DPI introduced the fungus onto *Smilax* near the Geoff Kaye Bridge. The results are fantastic. Some plants are already defoliated and all are affected by the little yellow spots on the underside of the leaves.

The rust has spread along the firetrack to Uralla Road and along the boardwalk to the junction with the Augusta Road section. And we can now make our own spray. BERG is delighted!



Nodding Greenhood orchid – the flower about to open.

NODDING GREENHOOD

(Pterostylis nutans)

Article & photos by Angela Kirsner



In the dappled shade of late winter and early spring, you could see colonies of these lovely, translucent green orchids in the Reserve.

They are common throughout many areas of south eastern Australia, and range from about 10 to 30 cm high, but ours are closer to 10 cm. The hood, made up of petals and sepals that fold over each other, curves forward around the pollen and style.

The narrow lower petal, the labellum or lip, normally hangs downwards, but if an insect climbs inside, the lip flicks upwards to trap it briefly. As the insect struggles to get free, it picks up pollen, which it then takes to fertilise the next flower.

Aborigines harvested the tubers, taking a little from the outside of each clump, and eating them raw or cooked.



**BERG WELCOMES
NEW MEMBERS!**

*Jennifer Thomson
Ross Wiley
Ian & Meredith
Horton*

MELBOURNE'S INDIGENOUS PLANTS MOVEMENT

by Dr. Valerie Tarrant,

—a historian with a particular interest in Australia's social and natural environments, and a moving force in preserving bushland in Sandringham.

In 1950, May Moon, a Kalorama resident, took unprecedented action to save well-loved Eucalypts and wildflowers close to the Mount Dandenong Highway, which were threatened by developers. She contacted Professor John Turner, Head of the Melbourne University Botany School and a graduate of the world-renowned Cambridge Botany School, and the two spear-headed the formation of the Save The Dandenongs League – an early example of a society dedicated to the conservation of indigenous flora.

May Moon and John Turner displayed five qualities that came to distinguish members of the community societies concerned to value and grow indigenous plants. They had knowledge of areas they wanted to conserve, they loved the trees and wildflowers, they were passionate about conserving them, they used networks, and they possessed the drive needed to turn their visions into action.

People in Eltham, Blackburn, Beaumaris and later in Black Rock, the Merri Creek area and other parts of Greater Melbourne followed their lead.

In Eltham in the early fifties, the affection and respect for the landscape and its vegetation that inspired the builder Alistair Knox also affected Ellis (Rocky) Stones, Gordon Ford, Peter Glass and others. They created landscapes using boulders and rocks that looked as though they belonged in the land, and planted indigenous species, often mingled with those of other native or exotic origin. Years later, Gordon Ford referred to the relationship between the work of the garden designer Edna Walling and that of Ellis Stones.

In post-war Beaumaris, residents founded the Beaumaris Tree Preservation Society. With the slogan '*To Chop Is To Cheapen: Bury Your Axe*', they encouraged the community to look after the local flora in their own properties and on public land, to plant additional trees and wildflowers and to publicise the interest and beauty of these plants.

These people called on naturalists and professional botanists, including John Turner. By the 1950s, Turner had learned a great deal about the plants of his new country from Professor Ethel McLennan, Professor Samuel Wadham and others.

He wrote about the special characteristics of the Sandringham heathland – far richer in species than the heaths of Europe, and needing care. Jim Willis, later Dr Jim Willis and a world-renowned botanist, also urged the conservation of these beautiful areas.



Val Tarrant (foreground) at work with the Friends of George Street Reserve, Sandringham (photo courtesy of Bayside Council)

People today often hear of the extinction of plant species and of the need to protect and conserve the great diversity of flora with which our planet has been blessed.

I have discovered important examples, in many countries, of projects designed to protect indigenous species and to regenerate areas from which they have been lost.

In New York I read of moves to bring back the local Maple to Central Park. Six years ago in the Edinburgh Botanic Gardens I found a poster calling for 'The Return of The Natives' – the original forest trees of Scotland.

In Kew Gardens two years later I scanned photographs of English wildflowers in an exhibition entitled, 'Growing Wild Flowers'. The text explained how 'gardeners and landscapers have become increasingly interested in using native plants in cultivated settings'.

Thus the Melbourne movement to value and grow our own indigenous species has counterparts across the globe.

The Melbourne indigenous plants movement is relatively recent, and has gained impetus from the drought of the last few years, but its roots are in the ancient past. Aboriginal Australians relied on the plant world for food and for the raw materials of essential artefacts. The new settlers from the time of the landing at Sydney Cove in 1788 looked at the land with different eyes, cutting trees for the construction of their buildings and often regarding the bush as an enemy to be conquered. Yet some of these men and women came to value the land's vegetation.

Rachel Henning in her *Letters* wrote to her sister of how she missed the dear, familiar flowers of England, but later changed her attitude and recorded how she 'dressed' a vase of wildflowers from the bush every day as adornment in the house.

In most of Melbourne the original vegetation was cleared and in some areas almost disappeared. For years most people planted introduced species in their home gardens. The changes particularly from the 1950s are exemplified in the Royal Botanic Gardens, South Yarra, in the recently developed Long Island area, near Alexandra Avenue. Indigenous plantings flourish on either side of the small path that winds along the verge of the lake, providing reminders of the time when Aboriginal Australians lived in such a place. Nearby, masses of Melaleucas grow next to water where native birds swoop and soar.

Communities and individuals have established indigenous plant nurseries; many golf courses, including the Royal Melbourne Golf Club, conserve and plant indigenous flora; and publications such as *The Flora of Melbourne* and *Indigenous Plants of The Sandbelt* now provide vital information about a heritage which is increasingly in the public eye.

BERGs WORKING BEE

All welcome!

Meet at the Rotunda BBQ (Mel: 144 K11) on:

❖ **3rd Sunday** of every month, from 9.00 to 12.00. Coffee and BERG-baked delicacies at 10.30. If you're running late, phone Liz's mobile (0408 388 430) to find where we are working. Next working bees

SUNDAY 21ST OCTOBER,

SUNDAY 18TH NOVEMBER

❖ Century Drive Group – planting on:

SATURDAY 27TH OCTOBER,

meet at the retarding basin (next to 9 Century Dve)

2.00pm – enquires Tony O'Connor, 5977 2810

❖ **Tuesdays** from 9.30 to 12.00. Coffee break at 10.30.

Bring gloves – other equipment provided.

Contact Mary Stemp on 5974 3996.

Waterwatch testing: Tuesday November 20th (every 3 months, third Tuesday of the month)

MEETINGS

BERG Committee meets about every 6 weeks at Mt Martha House, Saturdays 9.30. Next meetings on 13th October and 24th November. All members welcome.

BERG AGM: Saturday 10th November, 9.30, Mt Martha Community House

SPIFFA (Southern Peninsula Indigenous Flora and Fauna Association) meets 1st Monday of the month, 7.30 pm, at Parks Vic, Hinton Street, Rosebud (Mel 170 C4). Contact Jan Dwyer on 5986 6566.

Friends of Harrap Creek field days 4th Sunday of the month, 9.30. Contact Mary Stemp on 5974 3996.

Fairbairn Bushland Reserve Friends Group working bees: 10 am, Sunday 8th October, Sunday 25th November – meet at top of Marguerita Ave. Contact John Stoker on 5974 4726.

Membership Application

All Welcome!

I wish to become a family/individual member of BERG and enclose cash/a cheque payable to BERG for:

Joining fee \$1	\$.....
Individual subscription (per year) \$4	\$.....
Family subscription (per year) \$5	\$.....
Donation (tax deductible over \$2)	\$.....

Please send to:
 Membership Secretary
 BERG, PO Box 433
 Mount Martha 3934

Total \$.....

Name

Address.....

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Newsletter of BERG, the

Balcombe Estuary Rehabilitation Group Inc.
No A0034645Y
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Volume 11 No 6

December 2007

KOORIE LANDSCAPES

Dr Beth Gott, Honorary Research Associate, School of Biological Sciences, Monash University, was the speaker at BERG's AGM on 10th November 2007. This article presents highlights from her talk



When Europeans arrived in Victoria, reports described the Aborigines as healthy and well-fed. Gellibrand wrote of people who were 'strong and athletic, often 6 ft tall, very intelligent and quick in their perceptions, with exceptional eyesight and particularly fine teeth'.

Food was abundant, and half of the diet was from plants. About a quarter of the plant species in Victoria are documented as being used for food, and many more must have been used but never documented. It was the underground 'roots' – rhizomes, tubers, corms – that formed the staples, available year round.

The Common Reed (*Phragmites australis*) grows abundantly around Balcombe Creek and its soft, underground shoots make excellent eating. Tall reeds from around the Murray were also traded to the south for spears.

The rhizomes of Cumbungi, or Bull Rush – another aquatic plant –

THANKS!

...to all of you who support BERG through your membership, donations, involvement and hard work. We depend on you and value you very highly.

Best wishes to all for a happy and safe festive and holiday season.

Keith Wilson. President

would be cooked in an earth oven, and the outer layer stripped off, leaving fibre and granular potato-tasting starch. People would twist this into a knot, chew it for the starch, then make string from the remaining fibre.

Probably the main source of food around Melbourne was the Murnong (like a small dandelion). New milky tubers form each year, and the women would reach below the plants to remove them, leaving the top to grow more tubers. Within five years of settlement, the Murnong was almost entirely gone from around Melbourne, victim to grazing.

Dr Gott spoke of the large form of Vanilla Lily that flowered so profusely on Victoria's High Plains after the recent fires. It is easily cultivated and, she said, 'When I had occasion to dig up one of my plants, I counted 190 edible tubers on one plant'. The corm of the Bulbine Lily is also good eating, but like so many small lilies that were sources of food, its

[continued on page 3]

FIELD NEWS

In her report at this year's AGM, Field Officer Liz Barraclough outlined a very full and productive year. Here are some highlights.



Moving into new areas

We've wanted for some time to tackle the rampant weeds between the Augusta and Uralla St bridges, on the south bank of the creek. Grants from Melbourne Water and Envirofund have made this possible in the past year. We have removed many of the woody weeds, planted densely in the understorey along the creek, and hope to extend the planting next year. Rust Fungus, a biological control for Smilax (Bridal Creeper) is also starting to take an encouraging hold in this area.

Downstream a little, a Community Water grant supported weeding and planting in the area we've dubbed the 'Horror Patch.' Hopefully we are on the road to changing its name!

And with an extra \$50,000 from Melbourne Water (the new drainage authority for the Peninsula), Naturelinks was able to begin work across the creek, on the north bank, beyond Augusta St.

[continued over]

BERG COMMITTEE

PRESIDENT KEITH WILSON **VICE PRESIDENT** HARRY HARRIS **SECRETARY** MARY STEMPE **TREASURER** RICHARD KIRSNER
FIELD OFFICER LIZ BARRACLOUGH **NEWSLETTER** ANGELA KIRSNER **MINUTES SECRETARY** PAM HEARN
SCHOOLS LIAISON JENNY SELBY **ROTARY CLUB LIAISON** ANDY MCGUIGAN
HOPETOUN CREEK GREENFIELDS GROUP HAZEL ATHEY **CENTURY DVE HABITAT LINK GROUP** TONY O'CONNOR

ADDRESS: PO Box 433, Mt Martha 3934. **PHONE:** 5974 3996 **WEBSITE:** [HTTP://BERG.ORG.AU](http://BERG.ORG.AU)

BERG IS A MEMBER OF COAST ACTION/COASTCARE PROGRAM AND GREENING AUSTRALIA VICTORIA

FIELD NEWS (continued from p.1)**Planting**

After last year's dry, we finished most of this year's planting by the end of August. It will be interesting to see survival rates, given the minimal spring rains.

Grant funding also allowed us to offer indigenous plants to interested residents. We see this as an effective way of informing and involving the community, as well as increasing the indigenous vegetation and habitat.

...and burning

We conducted a long-planned trial burn below Hilton Court, parallel to Hopetoun Creek.. Half the area has rabbit-proof fencing, and the plan is to compare management strategies – burning, slashing, and no treatment – both inside and outside the rabbit-proof area.

Working-bees

With up to a dozen people at most of our monthly Sunday working bees, we have been able to achieve lots, weeding and planting in new and on-going project areas.

Mary Stemp and her small crew have also worked every Tuesday around the Bunyip. They have made this area the show piece of the reserve – an example of what can be achieved with constant follow-up.

BERG's wonderful sub-groups

The **Hopetoun Creek Greenfield Group**, under Hazel Athey's tireless leadership, has weeded mountains of Pittosporum and Mirror Bush, sprayed grassy weeds, and planted over 700 indigenous plants. Further up Balcombe Creek, the **Century Drive Habitat Link Group**, led by Tony O'Connor and Glyn Rowlands, has worked on the riparian vegetation, a new retarding basin, and enhancing the streetscape with indigenous species. Both these groups have received Community Water grants to support their work.

We welcome the **Friends of Harrap Creek**, who join BERG as another sub-group at the end of 2007.

Fauna Survey

Ten years on from our initial fauna survey, Mal Legg, a Peninsula fauna ecologist, is resurveying the Reserve over 12 months. He began in August and may be seen day and night with his traps, tape recorder and binoculars.

Other Activities

BERG has been involved in a host of other activities, including:

- **Clean-up Australia Day**
- **Weedbuster Week**, with an information stand outside the supermarket
- the annual **Environment Week at The Briars**, for primary schools
- **rabbit control**, working with Transfield and private landowners
- **working with schools** – five groups of 25 Mt Martha Primary School students spent a morning weeding and planting with Mary Stemp's Tuesday Group, while Derinya Primary School brought 80 fifth graders for a guided walk through the Reserve
- **bats!** – twenty new nesting boxes for our tiny indigenous bats, and a new interpretive sign, all supported by a grant from Esso Australia
- **seats from recycled materials**, funded by members' donations, to replace the rotting ones removed from the fishing platforms.

Liz also represents BERG on the

- **Devilbend Foundation Council**, concerned with the preservation, conservation and ongoing management of the Devilbend Reserve
- **Mount Martha Foreshore Advisory Group**, formed in 2007 to examine the processes and infrastructure of the coastal strip between Martha Cove (Safety Beach) and Linley Point (Morrington) – paths, carparks, toilet blocks, bathing boxes, vegetation and cliffs. The group is working with consultants appointed by Council to develop a management plan. There will be a meeting in the new year for the community to have input.

Looking ahead

With Envirofund funding of \$15,052, we are embarking on a project to restore the rapidly deteriorating Banksia woodland around the estuary and the foreshore from Coolangatta Rd to Bay Rd. The Shire has researched the dieback, and it seems there are a number of compounding causes – drought, insect attack, lack of predators (especially birds), lack of indigenous understorey to provide bird habitat, and salt-laden winds reducing the Banksias' waxy leaf coating.

We hope to break this cycle with weed control and dense replanting of under, middle and upper storey indigenous coastal plants. We also hope to engage neighbouring residents and clubs (eg. the Lifesaving and Yacht Clubs) in this ongoing work.

Deakin University

We are excited to be involved with the Deakin University's School of Ecology and Environment in their research program. Many of you took part in Melissa Semken's Honours project, to explore the ecological history of the Balcombe Estuary Reserve. She and her supervisors were delighted at high level of community response to her survey.

The next step, building on Melissa's work, will be a PhD or post doctoral study – still awaiting funding approval – into how far from its original condition Balcombe Estuary has shifted, and the speed and trajectory of change – both environmental and social. The study will also analyse current planning constraints and assess current catchment conditions.

The final part of the project will be to develop a decision-making tool for the sustainable management of small estuaries across the continent – a truly exciting outcome.

<p>BERG welcomes new members: Bruce Ross, Mr & Mrs Lachlan Donges, David Morris MP, Jane Lloyd, and Michael, Donna, Ben & Shannon White</p>
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KOORIE LANDSCAPES

(continued from p.1)

populations have been decimated by agricultural grazing and fertilisers.



Vanilla lily with tubers (Image: Beth Gott)

Orchid tubers contain starch in an easily digestible form, and European orchid bulbs have been considered good food for invalids and children. Many native orchids were used, including the common Nodding Greenhood, which spreads into large patches via long horizontal roots that give rise to new plants.



The bat-faced orchid has fat tubers that are a source of food (Image: Beth Gott)

Managing the landscape

These herbaceous perennials all need an open situation to thrive, and the Aborigines used fire to keep the forest open, and on the plains to prevent large tussocks from spreading and shading out the smaller food plants.

They burned in small, controlled patches, after the seeds had been shed, generally just before the autumn rains. In dry sclerophyll forest, each area was burnt every three to five years to produce a mosaic of different stages of fire recovery.

In digging for food, the women took what they needed, thinning the patch and leaving the rest to thrive. The digging left the soil loose and friable, so it absorbed any water. At the same time, the ash from burning fertilized these plants.

'It's as if the whole bush was being farmed or managed', said Dr Gott.

The fruit basket

Many plants yielded berries. With Kangaroo Apples, you must wait until the fruits soften and turn from yellow to dull orange. Ruby Saltbush, with its tiny red fruits, will grow almost anywhere. There were the native Raspberry, the native Elderberry, and the red swollen fruit stalk of the Cherry Ballart. Pigface produces juicy, red fruits that ripen in late summer, with a flavour combining sweetness, slight acidity, and – if the soil is salty – saltiness. The very young leaves were also used to give salt to meat.

Muntries is an attractive woody ground cover with fruit the size of a small cherry – delicious, according to Dr Gott. In the sand dunes beyond Portland in late summer, you can smell these fragrant fruits before you see them. They need soil over limestone or alkaline beach sand; and to fruit they must have full sun.

A diet needs greens, and New Zealand Spinach – native to both Australia and New Zealand, common and easy to grow – was one source. It should be cooked, not eaten raw.

The smooth leaves of the Mat Rush, *Lomandra*, makes beautiful baskets, and were also used to make eel traps. People would build a fence across a creek, with holes into which they threaded a long, narrow basket to trap the eels.

The resin at the base of the leaves of Grass Trees provided an excellent, waterproof adhesive. The flowers provided nectar and the flower dry stalk was one preferred for making fire.

For 40,000 years, Aboriginal people have managed the environment that supported and sustained both the land and the people. The challenge facing us today is to understand the land and look after it in a way that will sustain it and us for another 40,000 years.

More information

Beth Gott's books: *Victorian Koorie Plants*, and *Koorie Plants, Koorie People* (with Nelly Zola) are available from the Koorie Heritage Trust, in King St, Melbourne.

Meet the Eastern Kulin: the Aboriginal people of central Victoria (CD and resource book), by Iain Luck and Pauline Byrt, is available from Hawker Brownlow Education, Cheltenham, phone 9555 1344

...and plants

Bush tucker plants are increasingly available from general nurseries, but Dr Gott also recommended *Ceres*, in East Brunswick; and Kuranga Native Nursery, at Mt Evelyn.

Fire Ready Victoria

Street meetings, organised by the CFA and attended last summer by many Mt Martha residents, are being held again this summer. The aim is to keep residents informed and alert, and help them prepare in the case of fire. Four Mt Martha meetings have been held and four more are planned:

- o **Monday 07 Jan**, 10.00–11.30am, cnr Augusta & Maude Sts
- o **Monday 07 Jan**, 3.00–4.30pm, cnr Lempriere Ave & Two Bays Cres
- o **Sunday 20 Jan**, 10.00–11.30am, Pre school car park, cnr Watson Rd & Moore St
- o **Sunday 20 Jan**, 3.00–4.30pm, cnr McLeod & Barrow Rds

For more details, see

<http://cfaonline.cfa.vic.gov.au/mycfa/Show?pageId=publicMeetings>

WORKING BEES

❖ **BERG monthly working bee:** 3rd Sunday (not December), from 9.00 to 12.00, with coffee and BERG-baked delicacies at 10.30. Next is Sunday 20 January. Meet at the Rotunda (Mel: 144 K11). If you're running late, phone Liz's mobile (0408 388 430) to find where we are working.

❖ **Tuesdays** (not January) from 9.30 to 12.00. Coffee break at 10.30. Contact Mary Stemp on 5974 3996.

❖ **Hopetoun Creek Greenfield Reserve**, first Monday of the month (not January), 9.30 to 12.30. Contact Hazel Athey 5974 3034.

OTHER ACTIVITIES

❖ **Waterwatch testing:** Tuesday 19th February (every 3 months, third Tuesday of the month)

❖ **Fairbairn Bushland Reserve Friends Group** working bees: 10 am, Sunday 30th March, Sunday 22nd June 2008, meet at top of Margeurita Ave. Contact John Stoker on 5974 4726.

MEETINGS

❖ **BERG Committee** meets every 7-8 weeks at Mt Martha House, Saturdays 9.30. Next meeting **12th January 2008**. All members welcome.

❖ **SPIFFA** (Southern Peninsula Indigenous Flora and Fauna Association) meets 1st Monday of the month, 7.30 pm, at Parks Vic, Hinton Street, Rosebud (Mel 170 C4). Contact Jan Dwyer on 5986 6566.

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