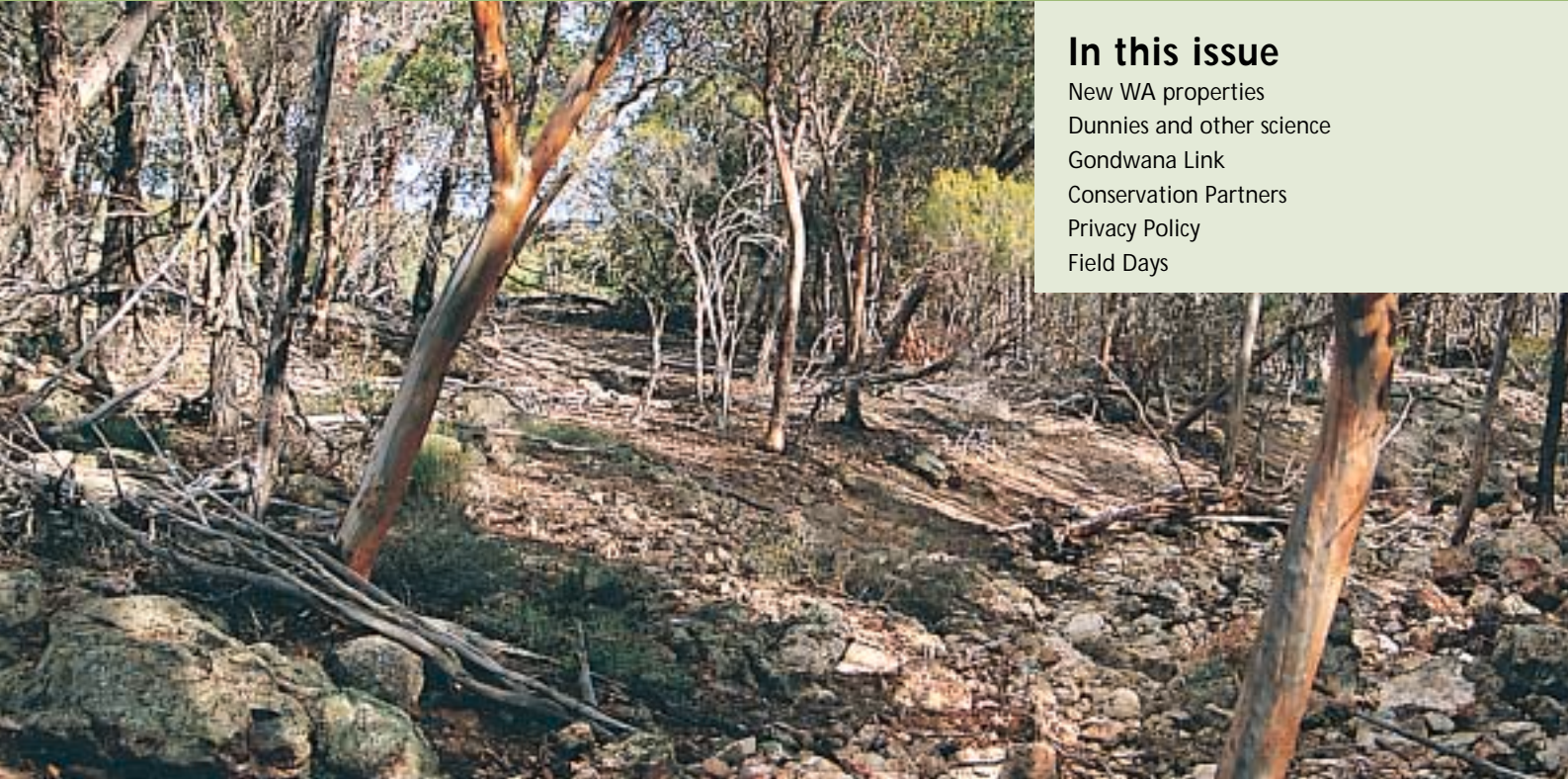




## In this issue

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## Western Australia - again in the spotlight

**Phil Cullen** reports on new land purchases in Western Australia

The tremendous support for Chereninup Creek left us with enough funds to purchase another important property in the Gondwana Link reserve system. On a recent trip to Western Australia I visited a number of possible key blocks. These new properties lie within ten to 15 km of our latest reserve, and yet the biodiversity in this region is so high, that all of them support many significant species and communities which are not present at Chereninup Creek.

On these new blocks, 15 distinct vegetation types have been identified so far. At least eight are poorly reserved. Threatened species present include the malleefowl, Carnaby's cockatoo, western whipbird and the western mouse. Rare species not known from Chereninup Creek include

the beautiful black-gloved wallaby and rare sandplain sun orchid.

We are currently negotiating property boundaries and prices and will soon, with your help, have put another protected link in the Gondwana habitat chain (see page 5 for more details).

On another front, we are also looking at larger properties on the northern edge of the Western Australian wheatbelt. This area has been heavily cleared of its woodland vegetation. I was delighted to find around 15,000 hectares of york gum, salmon gum and gimlet (*Eucalyptus salubris*) woodlands on one property. These communities have been all but lost over much of the region. Only about six percent of their former extent now remains, much of this is threatened by salinity, and only a very small proportion is in conservation reserves.

These woodlands are extremely important for a wide range of birds that are in decline throughout much of their range, including the Major Mitchell cockatoo, malleefowl, regent parrot, hooded robin and redthroat. The possibility of a Bush Heritage reserve in this area is a very exciting prospect. We'll keep you posted.

My thanks to Margaret Robertson, Kaye Vaux, Keith Bradby and Charlie Nicholson for their expertise and hospitality.

Clockwise from top: Mallet (*Euc. astringens*) on breakaway on a property being considered for the second Gondwana Link purchase. PHOTO: PHIL CULLEN

Black-gloved wallaby; PHOTO: JIRI LOCHMAN/LOCHMAN TRANSPARENCIES

Outstanding intact gimlet woodland on the northern edge of the wheatbelt. PHOTO: PHIL CULLEN





# Dunnies, smokewater, salt and other science

Bush Heritage staff **Joss Bentley** and **Stuart Cowell** and researchers **James Fitzsimons**, **Viki Cramer**, **Katriona Hopkins** and **Susan Jungalwalla** have contributed to this article.

Choosing the right site for an environmentally friendly dunny might seem straightforward, as might the revegetation of an old quarry site. But this is not always the case. Environmental variables often combine to make apparently simple land management decisions any thing but simple.

Rock type, weathering, soils, slope, sun, fire, water, wind, living things and human impacts all interact to mould the variety of landscapes around us. And these moulding forces continue to operate, despite our desire to work, or even our belief that we work, in a stable environment. In making effective land management choices therefore, we need to understand these dynamic processes and their interactions, and work in sympathy with them. Only then will we be successful in our long-term land management and not waste precious resources. This understanding requires knowledge and knowledge requires research.

The types of research needed on Bush Heritage reserves are as different as the reserves themselves. Staff and volunteers

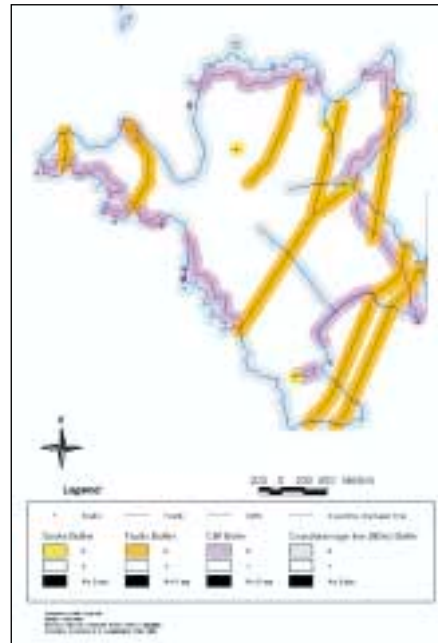


FIGURE 1. Buffer zones on faults, cliffs and soaks at Erith Island.

undertake much of the work, but on more complex issues we are increasingly working with research institutions. The skills and resources which they can bring are invaluable. Take the environmentally friendly dunny as an example.

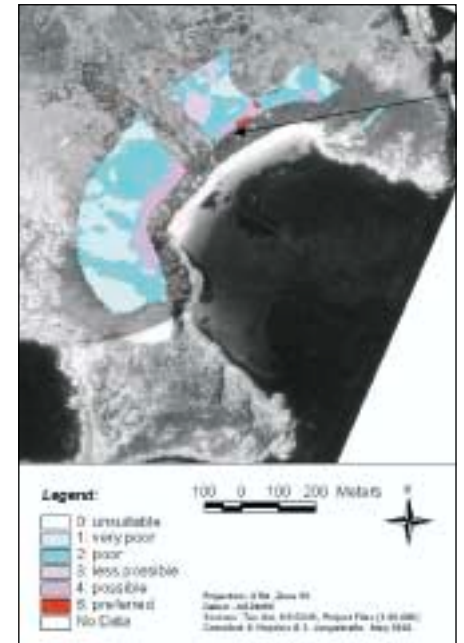


FIGURE 2. Siting options for the dehydrating toilet. The arrow indicates the final resting place for the toilet.

## ERITH ISLAND

Erith Island has many visitors during summer with campers and 'yatchies' on the island over a number of months. The lack of any toilet facilities meant unpleasant health and environmental consequences. The steep, rocky, wind-swept terrain, the free-draining soils and the large quantities of waste deposited over short periods of time, created challenges for resolving the problem. Students from the University of Tasmania studying Geographic Information Systems (GIS) examined the environmental and social factors that would influence the effectiveness of four different types of toilets in different locations. Proximity to landing

Above: Unloading the prefabricated dehydrating toilet.

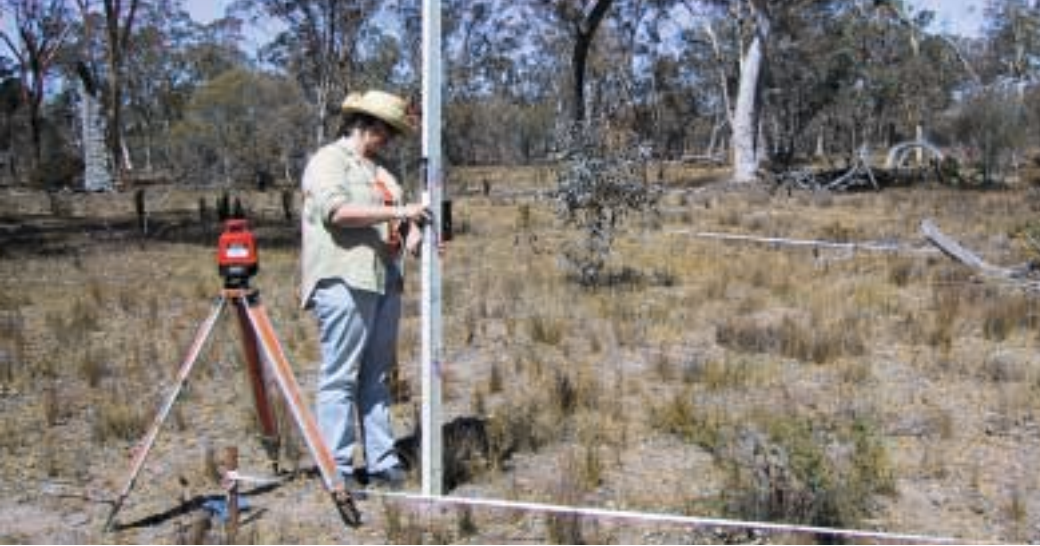
PHOTO: BARBARA MADDEN

Left: Erith Island landing bay.

PHOTO: BUSH HERITAGE







as delivering vital information to guide Bush Heritage management.

### KOJONUP

Bush Heritage's Kojonup Reserve in Western Australia is a field site for a project run by Murdoch University in collaboration with CSIRO, entitled 'Risk and Restoration Potential of Remnant Vegetation in Salinising Landscapes'. Researchers are examining how saline run-off from surrounding land interacts with the Reserve's shallow water tables to degrade the drainage lines. The research at Kojonup is looking at how local changes in plant species, soil types, and elevation could help reduce the effects of rising, salty groundwater.

sites, cliffs, fault lines and wet areas (where there is a risk of groundwater contamination) (Figure 1) and the effects of wind, sun, substrate and vegetation height were all assessed. With this information the students identified 'zones' where different types of toilets would be more effective (Figure 2).

The result was the installation of a 'dehydrating' toilet, in a 'zone' where it was easy to use and maintain and where the dehydrating effects of wind and sun were maximised. The prefabricated toilet housing, designed by the University's Architecture School, ensured visitors a pleasant experience by providing good light, ventilation and a great view. This guaranteed that the toilet would be used and the negative environmental impacts minimised.

### SOUTH ESK

The revegetation trials at the old quarry site at the South Esk Pines Reserve in central Tasmania show how a relatively simple research project can save hours of labour and other precious resources.



Part of the site is in poor condition with a hard, crusted surface, continuing erosion and very little natural regeneration. Attempts by the previous owners to revegetate, by planting large numbers of seedlings in and around the quarry, had failed. Bush Heritage established two revegetation trials to find out what essential factors were missing.

The first investigated the potential for 'smokewater'<sup>1</sup> to increase germination levels. The second examined the effect of providing a seed source, modifying the germination environment and controlling grazing. The experiments were monitored closely for two years and will continue to be monitored for another three to four years.

What we found was that the absence of a 'soil seed bank' and suitable microclimate were the key problems. Grazing was potentially a secondary issue. This information has now been used to develop a regeneration plan for the quarry.

Work will begin this year using volunteers. Local native plants, still carrying their seed, will be mulched and spread over the regeneration areas. The mulch will provide a suitable microclimate for germination by holding moisture, softening the underlying clay and providing the vital seed stock. Additional fencing will reduce any grazing pressure.

Outside Tasmania other research projects are underway. These projects have relevance in the wider landscape, as well

The study has found that even small differences in elevation (i.e. height above the water table) will have a big influence on the amount of salt in the soil. This has implications for the vegetation which is often closely linked with elevation. It is good news for species on higher ground, but the species which occur in or adjacent to drainage lines will be significantly threatened by rising salinity.

Understanding the different roles that shallow water tables and saline surface flows play in the decline of natural vegetation will actually increase the management options available. The results will apply not only to the Kojonup Reserve, but also to other remnant vegetation in the Western Australian wheat belt.

<sup>1</sup> Smoke water is water that has been infused with wood smoke. It has been shown to increase germination rates in many native species.

Clockwise from top, Lyn Atkins from CSIRO Sustainable Ecosystems, uses a laser level to survey elevation along transects at the Kojonup Reserve. PHOTO: WIKI CRAMER

Salinity affected drainage line on the southwest corner of the Kojonup Reserve. PHOTO: WIKI CRAMER

Trial revegetation plots at South Esk Reserve. PHOTO: JOSS BENTLEY

Bush Heritage ecologist Joss Bentley pegging out revegetation plots at South Esk Reserve. PHOTO: GREG BLAKE







## TARCUTTA HILLS

At Tarcutta Hills in New South Wales, a very different type of research is happening. The 433 hectare Reserve is one of 36 sites, including 17 cemeteries, which are part of the Grassy Box Woodland Conservation Management Network (CMN). The CMN aims to build links between the owners and managers of these sites, and other interested parties, to enhance the management and protection of these widely dispersed remnants.

Research by Deakin University PhD student, James Fitzsimons, is exploring the benefits for conservation of such networks and endeavouring to answer the following questions. Can we get good conservation outcomes on land under a range of tenures, management regimes and production uses? Can such networks assist us in reaching national

conservation targets, such as a comprehensive, adequate and representative reserve system?

His results could be particularly important for Bush Heritage. If it is shown that the 'multi-tenure' approach is good for conservation then Bush Heritage may well purchase core areas and put more effort into working within, and through, such networks. If they prove to be unsuccessful then our priority may be to just get more land solely under conservation management.

Management-centred research is also guiding our activities at Fan Palms, Brogo and Goonderoo, using a mix of Bush Heritage staff, supporters and other agencies. The ongoing baseline work continues throughout the reserves.

Working in biodiversity conservation means that the scale of the issues is always greater than the resources needed

to address them. With limited resources available to us, combined with the continuing devastation of Australia's remaining native vegetation, we must focus these precious resources on land purchase. However, without the research we cannot be sure that our management is successfully protecting the values for which the reserves were purchased. Thus developing partnerships with research institutions, scientists and the community



to undertake the needed research work is essential. The results of this work will often be relevant to land management well beyond the Bush Heritage boundaries and thus it will assist others in understanding our environment and its management challenges.

[For more information on any of these projects please contact Stuart Cowell at Bush Heritage] Thanks to: University of Tasmania, Murdoch University, CSIRO, and Deakin University. Our apologies to the Queensland Herbarium for omitting a report on research at Goonderoo prepared for this newsletter.

Bush Heritage's Tarcutta Hills Reserve (above and top) is the largest protected area of Grassy White Box Woodland.

PHOTOS: MATT NEWMAN; DAVID NELSON RESPECTIVELY

The 9ha Woodstock Cemetery (left) is one of the smaller remnants in the Conservation Management Network.

PHOTO: JAMES FITZSIMONS





# Gondwana Link

Gondwana Link is a visionary project initiated by five environmental organisations in Western Australia. These are the Fitzgerald Biosphere Group, Friends of the Fitzgerald, Greening Australia (WA), The Malleefowl Preservation Group Inc. and The Wilderness Society (WA). Bush Heritage is now a major stakeholder in this initiative.

Gondwana Link aims to secure and restore ecologically functional habitat links between the wet forests of the southwest of Western Australia and the woodlands of the Goldfields/Norseman region, via a series of interlinked reserves. Currently there is a chain of relatively large, privately owned patches of remnant bush and existing public reserves that will form the basis of Gondwana Link. Over much of its length this chain is unbroken. However, between the Fitzgerald River National Park and the wet forests, agricultural clearing has fragmented the landscape. Here habitats have been reduced to roadside strips and stream verges. In the worst cases, natural vegetation now exists as scattered remnants in paddocks or as regrowth on areas where



land clearing initially extended over rocky or otherwise unproductive soils.

The purchase of Chereninup Creek is the first major acquisition for Gondwana Link. As well as reserving a large patch of bush, including near-pristine woodlands, mallee vegetation and heathlands, Bush Heritage will be regenerating around 80 hectares of paddocks. Once the vegetation is reestablished, this section will provide the initial link from Chereninup Creek to the Peniup Nature Reserve - a second foundation stone in Gondwana Link. Another positive step is that privately-owned bushland adjacent to the Chereninup Creek Reserve has recently been fenced to protect its conservation values. Land purchase for conservation,



private conservation management and bush regeneration will be the core activities in the Gondwana Link project. The next Bush Heritage land purchase will help build on this progress (see page 1).

Clockwise from top left: Net-bush *Calothamnus sp.* Gum blossom *Eucalyptus sp.* Heathland and mallee on the granite hills of a property being considered for the second Gondwana Link purchase.

PHOTOS: PHIL CULLEN

Chereninup Creek Reserve (foreground) lies between areas of agricultural land. After some revegetation work the Reserve will link up with the Peniup Nature Reserve. The Stirling Ranges are in the distance.

PHOTO: BARBARA MADDEN

The purchase of Chereninup Creek Reserve in southwest Western Australia is nearly complete. The survey, to enable the cleared land to be subdivided from the title, has been finalised. The contracts have now been exchanged and final settlement is likely before the end of the year.

Lesser bottlebrush *Callistemon phoeniceus*

PHOTO: BARBARA MADDEN





# Conservation Partnerships

**Nathan Males** manages the Conservation Partners program

Winter is a quiet time for land management in the southern states; a time for taking stock and making plans for the coming year. In the north however, work continues apace while the days are pleasant for hard work.

Nowhere is this work more evident than at Carnarvon Station Reserve in central Queensland. Here the Volunteer Rangers, a very important part of our Conservation Partners' program, have worked on many projects over the last three months.

John and Jenni Pass have fenced one of the springs, preventing further degradation by pigs; Graham Wrightson and Otto Fischer have mapped the roads using Global Positioning System coordinates and gathered information for the visitor's guide; Carmel Kerwick and Tom Verkaaik brought the road-signs they had constructed at home and installed them at the Reserve and Bob Cochrane, Kel Allison and Brian Thicknesse have built tank stands and a propagation house to grow plants for regeneration, painted roofs and repaired water pipes. Our sincere thanks go to them all.

The enthusiasm for the Volunteer Rangers' program at Carnarvon Station Reserve has been astounding and it is



now booked up until mid 2003. With more accommodation planned, hopefully we can increase the number of volunteer rangers at the Reserve at any one time. Tarcutta Hills Reserve near Wagga Wagga in New South Wales will be the next reserve to have such a program. More on that in the next newsletter.

Our limited resources mean we will always need your help in the care and improvement of the reserves. This year, we especially need assistance with weed control, fence maintenance and ecological research and monitoring at nearly every reserve.

## FIELD DAYS

Two more field days are being planned. In southwest Western Australia visit Kojonup Reserve, resplendent with wild- flowers, on Monday 30 September (public holiday), guided by local botanists and reserve managers. On Wednesday 16 October our local staff, Doctors Peter and Sigrid Pavlov, will lead a field

day at the Fan Palm Reserve (Daintree, Queensland).

For more information on field days or the Conservation Partners' program please contact Nathan Males on 03 6223 2670 or [nmales@bushheritage.asn.au](mailto:nmales@bushheritage.asn.au)

Above: Carnarvon Station Reserve. PHOTO: WAYNE LAWLER/ECOPIX

Below: John and Jenni Pass fencing the spring.

PHOTO: JOHN AND JENNI PASS



## Carnarvon Commemorative plaque

The Carnarvon Commemorative Plaque is on its way to Carnarvon Station Reserve. It will be installed under cover on the old hut in the camping area. We hope that soon you will be able to view the plaque on the Bush Heritage website, scanning from distant views of its location right down to your name on the board.

## David Tatnall and World Expeditions

Internationally renowned landscape photographer David Tatnall, has recently toured Australia with an exhibition of his landscape images. World Expeditions organised and sponsored the tour. Our sincere thanks to both David Tatnall and World Expeditions for their very generous support. At David's request, Bush Heritage received all the proceeds of the tour to assist our work.



## From the CEO

Recent national reports, including the State of the Environment Report 2001 ([www.ea.gov.au/soe](http://www.ea.gov.au/soe)), have highlighted the global value of Australia's biodiversity. The reports alert us to the threats to biodiversity, the immense cost of the growing environmental repair bill and the losses to primary production.

Bush Heritage's approach of buying intact native vegetation for the diversity of life it contains, remains, in my mind, as the simplest and most cost-effective solution to the greatest threat to Australia's biodiversity - loss of habitat. Bush Heritage is determined to make a difference and the purchase of Carnarvon Station Reserve highlights the effectiveness of our work.

We have never cast our net wider in seeking suitable properties to acquire. Every state and the Northern Territory are coming under scrutiny. The buoyancy of the cattle market and rapid turnover of properties for sale has not assisted our efforts but several opportunities are before us. I value your support in our continuing attempts to acquire large, ecologically-viable areas of the highest priority for conservation, which we can still protect.

There has been significant interest in Bush Heritage's collaboration with other organisations involved in biodiversity protection on private land. In particular, Birds Australia, the Australian Wildlife Conservancy and various state-based

groups such as Victoria's Trust for Nature have been identified. We do work together with these and many other organisations, agencies and individuals both here and overseas.

Our united voice can achieve more for conservation. For example, with other groups we have recently presented a paper to the Federal Government recommending further tax incentives for conservation (on our website). Bush Heritage was one of a coalition which prepared and supported the second national forum on Nature Conservation on Private Land, held in Adelaide in August.

On a practical level we frequently exchange information about land and water of conservation significance and discuss which organisation is in the best position to act. Inquiries from people interested in giving, buying or selling conservation land are passed between us and we match the property's size, location and long-term needs to our organisations' particular strengths. It is an informal but effective alliance.

An Australian Geographic magazine flyer has been included with your newsletter. We are happy to help support Australian Geographic which has provided valuable assistance to Bush Heritage.

I look forward to reporting on exciting developments over the next few months.



## Bush Heritage Privacy and Donor Choice Policy

Bush Heritage respects your privacy. We do not sell, rent, or exchange personal information with any other organisation. Most commonly, we use your information to process and ask for donations, and to provide information about Bush Heritage's activities.

Bush Heritage may disclose personal details to companies which provide services such as address updating, the supply of lists of prospective supporters or demographic analysis of our supporters collectively. This analysis is never reported at the level of individual people. Bush Heritage only uses services which provide contractual guarantees of non-disclosure.

We use a variety of physical and electronic security measures to keep personal information secure from misuse, loss or unauthorised use or disclosure. These include restricting physical access to our offices, firewalls and secure databases.

We also respect your choice. You can request not to receive communications such as our newsletter or appeals. If you would like to receive some, but not all, of our mail communication, we will help you select an option which suits you.

There are additional guidelines about your privacy which apply when you use our website. You will be able to view these on the website shortly.

Bush Heritage is not legally covered by the Privacy Act, however your privacy and choice are still important to us. For more information on our privacy policy, or to elect how you receive communication from us, please contact us by letter, email, fax or telephone. All our contact details are on the back page of this newsletter.

Cabbage Gun (*Euc. papuana*) at Goonderoo Reserve in central Queensland. PHOTO: WAYNE LAWLER/ECOPIX



## In celebration

Julie Hamilton celebrated the 70th birthday of her mother, **Margaret Hamilton**, with a donation to Bush Heritage. Margaret Kinny gave 'in celebration of **our two new grand-daughters**'.

## In memory

The passing of **Janet Wright** has been commemorated through gifts from her husband Bruce and many of her friends. Donations were given in memory of **Mrs R C Rance** by her daughter, Mrs R Hajinakitas and Mrs C Jenkins.

Baby **Morgan Maffey-Bland** will be remembered on the Chereninup Creek Commemorative Plaque through a gift from his aunt, Siobhan Bland. R West and A Howley and Ester and Clunie Palliser have given donations in memory of young **Noah Skaberne-Pryor**. Noah will also be remembered on the Chereninup Creek plaque.

## Upcoming supporter activities

You and your friends are warmly invited to join us at a supporter luncheon in Melbourne on Thursday 31 October at the Tower Hotel in Camberwell from 12 noon to 2 pm.

A supporter information evening will also be held in Sydney on Friday 1 November at Level 2, 149 Castlereagh Street, Sydney from 5:30 pm to 7:30 pm.

At both functions we will have a short slide presentation and give you an opportunity to meet others and ask questions of staff. We look forward to seeing you there. Please RSVP to Kalina Koloff on 02 9290 8548 or [kkoloff@bushheritage.asn.au](mailto:kkoloff@bushheritage.asn.au)

## Walk the Freycinet and benefit Bush Heritage



Freycinet Experience is offering a special, guided four-day walk to Bush Heritage supporters and friends. Walk the length of the magnificent Freycinet Peninsula, enjoying outstanding lodge and camp stays, for only \$1,350 per person (all inclusive Hobart to Hobart). The walk is graded moderate, with opportunities for the more hardy. Visit the Friendly Beaches Reserve with a Bush Heritage guide.

The Walk departs on Wednesday 5 Feb 2003. For each booking taken (minimum of four needed) Bush Heritage will receive a \$1,000 donation from Freycinet Experience – a wonderful offer. For more information and to book contact Freycinet Experience on 1800 506 003, email [walk@freycinet.com.au](mailto:walk@freycinet.com.au) or check [www.freycinet.com.au](http://www.freycinet.com.au)

## Good Bye Mel, Steve and Matt

Mel Sheppard and Steve Heggie, inaugural managers at Carnarvon Station Reserve, have left Bush Heritage to work at Kakadu National Park. They have done an outstanding job through the difficult establishment phase and we thank them for a job well done. They will certainly be missed and we wish them well in their new endeavours.

Matt Newman, one of Bush Heritage's longest serving staff, has accepted a new position working in environmental planning and management, still based in Tasmania. Matt will be sorely missed by us all and has played an important role in the development of management strategies for the Bush Heritage reserves over the last five years. We wish him well.

## A new baby brings new staff



Bronwyn Brown, Bush Heritage administrator, has done her bit to populate the island state and produced a beautiful, healthy son,

Reuben. Congratulations to Bron and Mark. While Bron is on maternity leave her position is being ably filled by Julie Marshall. Before coming to Bush Heritage Julie was marketing local art and craft interstate and overseas. We welcome her to the Bush Heritage team.



buying back  
the bush

Return to: **Australian Bush Heritage Fund, Reply Paid 101, Hobart TAS 7001**

Freecall: 1800 677 101 Fax: (03) 6223 2680 Email: [info@bushheritage.asn.au](mailto:info@bushheritage.asn.au) Website: [www.bushheritage.org](http://www.bushheritage.org)

Office address: 2 Kelly Street Battery Point TAS 7004 Phone: (03) 6223 2670

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### I wish to join the Friends of the Bush and give a tax-deductible monthly donation.

Please deduct monthly donations of \$ \_\_\_\_\_ from the credit card below until further notice

Please deduct monthly donations of \$ \_\_\_\_\_ from my bank account by Direct Debit. (ABHF will forward an authority form)

I would rather give a single, tax-deductible donation of:  \$30  \$60  \$100  \$500  Other \$ \_\_\_\_\_

I am paying by:  Cheque/Money Order  Bankcard  Mastercard  Visa  Diners Club  American Express

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Card holder's name: \_\_\_\_\_ Card holder's signature: \_\_\_\_\_

I have enclosed a donation of \$60 or more. Please send me a pack of four Bush Heritage greeting cards.

Name (Please print) Dr/Mr/Mrs/Ms/Miss

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