

## Conservation in an urban landscape

Compiled from text by Christine Randall and Kristy Gregory

**THE population of Byford, located about 30 kilometres south-east of the Perth city in the Serpentine Jarrahdale Shire, is predicted to soar from 4500 residents to 35,000 by the year 2020. This has necessitated a change of focus for those working in natural resource management (NRM) and is fostering some excellent initiatives to preserve biodiversity in a landscape rapidly being urbanised.**

Until now, the Serpentine Jarrahdale Community Landcare Centre has focused predominantly on rural issues, but there is now a need to include urban landcare in their overall program.

"The speed of development and number of people moving into these areas is the main challenge," said Natural Resource Management officer Kristy Gregory.

"A grant from the Peel Development Commission will enable us to run 'Great Gardens' workshops for new residents. The aim is to influence the mindset and behaviour of the changing population to recreate local native bushland in their gardens so that new housing estates do not become a 'no-man's land' for our native plants and animals.

"Another important aspect of urban landcare will be the formation of new Friends groups to look after areas of remnant bushland. There are more than 100 bushland reserves in our district, with 10 community groups currently working in a small proportion of these."

### Friends group emerges

During question time at a Serpentine Jarrahdale Shire council meeting in 2006, local resident Christine Randall raised her concerns about what was going to happen to the native flora and fauna as Byford was urbanised. These concerns were shared by others at the meeting and a new landcare group, Byford Enviro-Link, was formed.

Members spend at least one hour each Tuesday working together on a bushland, roadside or railway reserve to weed, plant, collect seed, mulch and pick up litter.



Byford Enviro-Link members planting at Linton Street Reserve (corner Brown Street and Stevenson Place) on World Environment Day. Photo – Colleen Rankin

"Byford has a wonderful natural setting that needs preserving and we have spent more than 300 hours in the past 12 months doing what we can to maintain and enhance our precious natural environment," Christine said.

One of the members owns a local shopping centre and has funded rehabilitation of the degraded rail reserve near the centre car park. *Watsonia* was cleared from the reserve in November 2006 and to everyone's surprise small native plants emerged. Infill planting was done this year and the area mulched.

To lift the group's profile, signs were produced for the rehabilitation sites and everyone has a t-shirt with a blue wren logo on it. Membership has been steadily increasing and the group has set up displays at local events including World Environment Day. Weekly emails keep members in touch and informed of the next work location. Weed control and seed collection courses were enjoyed by some members.

"Collecting the seeds, propagating them at a local nursery, planting and seeing them grow, gave us ownership of the seedlings planted this winter," Christine said.

Funding was obtained from Bendigo Bank, Australia Post and the Byford Progress Association to produce a brochure to make people aware of native wildlife and how to create a garden suitable for them. This has been distributed to every Byford household.

The Serpentine Jarrahdale *Green Towns Study* (1995) identified the need for urban water-sensitive design with open waterways and green corridors. To this end, Byford Enviro-Link through its close association with the Byford Progress Association takes part in providing input into the council's planning decisions, to try to influence developers in the early stages of urban planning.

### More information

Did you know Byford is a very special place? A brochure and more information is available by phoning Kristy Gregory on 9526 0199.

Issue 64

**Summer** 2007-2008

Time of Birak and Bunuru in the Nyooongar calendar.

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*Bushland News* is a quarterly newsletter of Urban Nature, a Department of Environment and Conservation (DEC) program to support community involvement in bushland conservation.

## Urban Nature UPDATE

The Urban Nature team completed a hectic spring work program of research, monitoring, field days and training. Summer will provide us with an opportunity to collate and write up the results of this work, recuperate and plan for 2008. Some of the highlights from the past three months are included below.

## Nature conservation muster

Staff from Urban Nature took part in the annual Department of Environment and Conservation (DEC) Swan Region Nature Conservation Muster from 23 to 25 October. DEC staff from the Swan Region visited a range of field sites, traversing from Swan View south to Pinjarra, then north from Dwellingup to York and to Toodyay in the north-east of the region. The muster included guest speakers, training and information workshops. Setting and checking mammal traps in Julimar Conservation Park provided staff with the experience of handling chuditch – a rare opportunity in most of the locations where Urban Nature Staff work.

Visits to several field sites such as Talbot Road and Meelon nature reserves provided an opportunity for us to demonstrate to a wider audience some of the work Urban Nature has done. It also enabled discussion about future projects and collaboration with other DEC staff.



Urban Nature staff handled a chuditch (*Dasyurus geoffroyi*) as part of their activities at the Nature Conservation Muster. Photo – Karen Bettink



John Randall (above), an invasive weed specialist from The Nature Conservancy in California, visited WA and helped run a workshop with DEC staff on setting priorities for weed management in natural areas. Urban Nature hosted a field trip to Perth bushlands, including Serpentine River at Lowlands to look at the control of arum lily (*Zantedeschia aethiopica*) and the recovery of riverine vegetation. Photo – Karen Clarke

## Skills for nature conservation



Participants at a Skills for Nature Conservation workshop 'Understanding Rivers for Sustainability'. Photo – Andrew Napier

understanding of factors influencing river systems, the difference between algae and plants, effects of high-nutrient inputs and algal blooms on river systems.

A visit to Margaret River as part of a weed management workshop enabled participants to see where DEC staff have been working with the Cape to Cape Catchment Group and local community to eradicate isolated populations of the highly invasive *Asparagus scandens* – some of the only known population of this weed in WA. This work has been funded through the DEC's Saving our Species program. Photo – Kate Brown



The Skills for Nature Conservation 2007 workshops were very popular and provided invaluable knowledge and skills to a range of people. Of note was 'Frogs of Perth – Indicators of Ecosystem Health' held in October. 'Frog doctor' Johnny Prefumo taught techniques for species identification, suitability of species as ecosystem indicators and habitat indicators.

The 'Understanding Rivers for Sustainability' workshop in November aimed to teach a broad

## Autumn Bushland News

Autumn *Bushland News* contributions should be sent to Urban Nature by **Tuesday 26 February 2008**.

Compiled and edited by Jo Tregonning.

## Contacts

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Previous newsletter issues available at [www.naturebase.net/urbannature](http://www.naturebase.net/urbannature)

# BUSHLAND WEEDWATCH: Willows go wild in WA

By Sarah Holland Clift and Mark Hincksman

**SURVEYS of south-west Western Australia in 2007 by the National Willows Program have raised concern for the potential of willows (*Salix* spp.) to become a problem in the State.**

Before on-ground surveys in May and November in 2007, there was only one record of willows lodged with the WA Herbarium (weeping willow, *Salix babylonica*). There are now more than 250 records of willows in WA, with at least six different species identified. They occur from Gingin in the north, to Albany, Augusta and Esperance in the south. Although many have been planted in townships, waterways and homesteads, there is clear evidence of many naturalising (i.e. growing and spreading) in streams and wetlands.

## Willows in waterways

Willows are among the most serious riparian and wetland weeds in temperate Australia. They infest thousands of kilometres of waterways and cause substantial economic and environmental impacts including reduced water quality and availability, increased erosion and flooding, reduced aquatic and riparian biodiversity and obstructed access to streams for fishing and aquatic sports. More than 100 species have been introduced, of which more than 30 have become naturalised. Although the largest infestations currently occur in the eastern states, they also have the potential to become a significant problem in WA.

Willows spread vegetatively or by seed. When growing along waterways, branches can break off and carry downstream to sprout. Distribution by seed requires both male and female flowers which generally



Weeping willow (*Salix babylonica*) growing along a drainage line at Mullalyup. Photo – Mark Hincksman



Male (left/above) and female flowers of the grey willow (*Salix cinerea*). Controlling male willows will prevent seed formation and dispersal of this weed in WA. Photos – Matthew Baker and Sarah Holland Clift



occur on separate plants. Seed can be dispersed long distances by wind and if conditions are right a catastrophic explosion in numbers may occur in just one season.

## The outlook for WA

Currently, few male plants are known to occur in WA, with less than 10 per cent identified as male during the survey. Male willows should therefore be a high priority for management to prevent pollination and thus distribution by seed. Plants growing along waterways that have fragile branches should also be prioritised for management, as they can quickly and easily spread downstream.

There is the potential for willows to spread into and impact on the following wetlands, as they are currently present in nearby streams and townships: Forrestdale and Thomsons lakes, Peel-Yalgorup System, Muir-Byenup System and Becher Point Wetlands. Such sites need to be monitored and kept protected from invasion by seeding willows.

Of most concern was the discovery of the grey willow or wild pussy willow (*S. cinerea*) at Bayswater and Armadale near Perth. Grey willow is extremely adaptable and invades boggy and intermittently moist sites from sea level to above the alpine tree line. Areas which are bare and wet at the time of seed shed (October to November) are most likely to be invaded. Given the right conditions, grey willow can explode from less than 50 plants to thousands of seedlings in just one season.

## Halting the spread

Management of willows in the eastern states of Australia is required for many years to come and will cost millions of dollars. This situation could have been avoided by controlling willow infestations while they were still small.

WA has an opportunity to ensure willows do not become a similar problem and expense. Managers need to take proactive management to prevent future spread by learning to identify male and female willows and whether they are producing seed; and by reporting and controlling male willows occurring in your area or along waterways.

For information on willows, their identification and control visit [www.weeds.org.au/WoNS/willows](http://www.weeds.org.au/WoNS/willows).



## ECONOTES:

# Flora licensing

By Conor O'Neill

**IF YOU are involved in seed collection for revegetation purposes, flora collection for herbarium voucher specimens or education, wildflower shows or hobby purposes then read on. This article provides advice as to which flora licences best suit the various collection activities and the guidelines for applying for a licence.**

Most people are aware of the long-standing slogan 'picking of wildflowers is prohibited'. All flora native to WA is protected throughout the State under the *Wildlife Conservation Act 1950* because many species are susceptible to damage or destruction from uncontrolled collection.

Despite the efforts of many botanists and volunteers, there is still much that needs to be discovered about our WA flora. More than 2000 WA plant species are considered to be rare or poorly collected. There are also a number of threats to protected flora within the State. Changes in land-use, drainage, the spread of disease, fire, weeds, stock, rubbish and increased vehicle and foot traffic are examples of some of the threatening processes which impact upon the long-term survival of many plant species. Our protected flora has a wide range of uses and many flora licence applications are received each year. It is important to balance these needs with the needs of the general population who use natural areas for tourism and recreation.

Protected flora is defined as any plant (including any wildflower, palm, shrub, tree, fern, creeper or vine) and includes any part of a plant including seeds and spores. Protected flora may only be 'taken' under specific circumstances. Under the legislation the term 'to take' includes 'to gather, pluck, cut, pull up, destroy, dig up, remove or injure the flora or permit the same to be done by any means'. This therefore includes hobby sampling, and scientific collection through to the commercial harvesting of flowers and seed.

### SOPP licence

Individuals or groups who wish to collect seed and cuttings from Crown land (all land that is not private property) for non-commercial revegetation projects and for

vouchering specimens at a herbarium must hold a Scientific or Other Prescribed Purposes (SOPP) licence. The standard fee for this licence is \$10. This can be waived, particularly if the State's knowledge of its flora and flora conservation is likely to benefit from the proposed flora collecting activities.

It is also necessary to have the permission of the land's managing authority. In the case of DEC-managed land, this is done by applying for a 'Regulation 4 Authority'. Permission will not automatically be granted and a number of collection activities (including commercial) are restricted or excluded within conservation areas (e.g. national parks, nature reserves and conservation parks). Many volunteers registered with DEC have recently been granted permission to collect within the conservation estate to assist with surveys and to collect specimens for lodgement at the regional or WA herbariums.

No licence is required to take protected flora for non-commercial purposes from private land, but you do require the permission of the owner or occupier of the land.

### Checklist

When applying for a licence it is important you:

- submit a covering letter from your organisation or group which describes what you intend to do and supports your application;
- complete all fields on your application form;
- state (in the 'Proposed Use' or purpose section of your application) if your proposed collection will involve the supervision of volunteers (please note that if volunteers or members of your group intend collecting without your supervision, they must obtain their own licences);
- state whether you are proposing to collect root material or whole plants, as the standard licence conditions will need to be amended to permit these activities;
- if you do not know in advance which species you will be collecting,



Licences to collect flora must be held by each individual flora collector. An exemption may be granted in certain cases if you do not know who will be collecting with you on a given day. For educational collectors (teacher or lecturer with students), or community groups comprising of volunteers, a 'group licence' held in the name of a supervisor of that group may be issued. This person is responsible for the collections of each person in the group and must be on-site for collection activities. A covering letter must be included with applications of this nature. No fee is required.



state that you propose to collect any or all flora which is not declared rare (a list of the rare flora is available upon request);

- if you are unable to state the specific location, note down the general location and land tenure of the areas where you propose collecting e.g. south-west, Shire lands;
- obtain written permission from the managing authority of the land where you intend collecting flora prior to collection;
- if the collection of flora from DEC-managed lands is approved, this authority will be provided in the form of a 'Regulation 4 Authority' which must be applied for separately;
- ensure that all licence conditions (e.g. reporting or the lodgement of voucher specimens) of your previous licence have been completed (renewal will not be granted until conditions are met); and
- send your request for a licence renewal one month before the expiry date shown on your current licence. Licence renewals will not automatically be granted and are treated as a new application.

More information is available if you seek to obtain a licence for display and wildflower exhibitions; other identification and/or taxonomy; surveys undertaken by community groups, individuals or consultancies; hobby and recreation purposes; educational or teaching purposes; research; collection of seeds and cuttings for commercial rehabilitation projects; the cut flower and oil processing industries; bio-prospecting; and the commercial craft industry.

Application forms are available at [www.naturebase.net/content/view/863/1217/](http://www.naturebase.net/content/view/863/1217/). For more information contact the DEC licensing section on 9334 0440.

## Conservation Week 29 March–6 April 2008

Conservation Week celebrates WA's unique environment and the work of conservation organisations, community groups and individuals across the State. It highlights environmental issues in WA and promotes awareness and action to build a sustainable future. In 2008 the theme is *WA's Water Future* to emphasise the scarcity and value of our water resource in WA, particularly in the face of climate change.

You are invited to take part by registering an event during Conservation Week to communicate the importance of the environment. You will be provided with promotional material and your event and group advertised. If you would like to be involved contact Jessie Cochrane on 9420 7266, email [clo@conservationwa.asn.au](mailto:clo@conservationwa.asn.au) or visit [www.conservationwa.asn.au](http://www.conservationwa.asn.au).



*Jesse Cochrane (left) and Kaitlyn Height planting habitat for the endangered western swamp tortoise (Pseudemydura umbrina) at Twin Swamps Nature Reserve. Photo – Jan Bant*

## Volunteers help celebrate 25 Years

Conservation Volunteers Australia is celebrating 25 years of helping protect the Australian environment. As Australia's leading organisation for practical conservation, Conservation Volunteers Australia complete more than 2000 conservation projects across Australia every year.

Together with the dedication of hundreds of volunteers from Australia and overseas, CVA has helped to conserve areas in Western Australia from the far north to the most southern tip of the state. Projects range from such exotic locations as Purnululu (Bungle Bungle Ranges) in the Kimberley, Exmouth on our beautiful coastline, Coolgardie in the Goldfields and Denmark in our famous south-west.

Volunteering with Conservation Volunteers Australia is a great way to enjoy the outdoors, meet new people and learn new skills – while making a real difference to the environment. You choose the level of your commitment, and can enjoy the experience with family and friends.

Are you an individual who wants to become a conservation volunteer, or an organisation that is keen to help create a better Earth? Conservation Volunteers Australia welcomes everyone who shares a love of the outdoors and a commitment to the Australian environment. To get involved Freecall 1800 032 501 or visit [www.conservationvolunteers.com.au](http://www.conservationvolunteers.com.au).

To volunteer any time call Conservation Volunteers Australia on 9227 5711 or visit its website.

For more information regarding the Conservation Volunteers Australia Better Earth program contact Andrew Soltys, Regional Manager on 9227 5711 or Karen Dimmock on (03) 5330 2600 .



## 50th anniversary for the Wildflower Society of WA

Since its inauguration in 1958, the Wildflower Society has played a significant role in the community in developing an appreciation of the unique flora of WA, participating in its study and encouraging its place in our landscapes. Members can be found in many areas of biodiversity and conservation management.




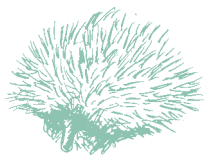
The society is planning a varied and interesting program of events for 2008. Opportunities will be available for the society's many friends to join with present and past members to celebrate the significant achievements of this voluntary community organisation (see What's On, for a breakfast in March). For more information phone 9383 7979 or email [wildflowers@ozemail.com.au](mailto:wildflowers@ozemail.com.au).

**Opportunities for you to take part! Visitors always welcome but please confirm activities with the contact person. Most activities are FREE!**

 **Sundays 8am–10am**  
**Bushcare activities** every Sunday with the Friends of Shenton Park Bushland. Contact Dani 9381 3470 or bojel@it.net.au.


 **Sundays 8.30am**  
**Bushcare activities** with the Friends of Wireless Hill. Held second and fourth Sunday of each month. Meet at main car park. Contact Margaret 9315 9075 or s3mmatthews@hotmail.com.


 **Tuesdays 8am–9am**  
**Bushcare activities** every Tuesday with Byford Enviro-Link. Call Kristy on 9526 0199.



## January

 **19 Saturday 9am**  
**Activity morning** with Friends of Brixton Street wetlands. Call Regina 9459 2964.

 **19 Saturday 8am**  
**Guided nature walk** at Lake Gwelup. Contact **FLG**.

 **26 Saturday 8am**  
**Guided walk** at Star Swamp Bushland. Contact **FSS**.


 **26 Saturday 1pm–2pm**  
**Native garden workshop.** Call Naragebup Rockingham Regional Environment Centre on 9591 3077.




## February

 **2 Saturday 8.30pm–10.30pm**  
**'Goin' batty in the bush'.** John Forrest National Park. Bookings **N2N**.


 **2 Saturday 1pm–2.30pm**  
**Attracting butterflies to your garden.** Call Naragebup Rockingham Regional Environment Centre on 9591 3077.

 **9 Saturday 9am–11am**  
**Chidlow Marsupial Hospital.** Learn basic identification, threats to native fauna and how we can help. Cost: donation. Contact **BSFH**.


 **16 Saturday 8am**  
**Guided nature walk** at Lake Gwelup. Contact **FLG**.

 **16 Saturday 6pm–10.30pm**  
**Summer Sunset Paddle.** Swan River, Guildford. Bookings **N2N**.

 **16 Saturday 9am**  
**Activity morning** with Friends of Brixton Street Wetlands. Call Regina 9459 2964.

 **23 Saturday 8pm–10pm**  
**Moonlight on Matilda Bay,** Matilda Bay Reserve. Bookings **N2N**.




 **23 Saturday 8am**  
**Guided walk** at Star Swamp Bushland. Contact **FSS**.

 **27 Wednesday 7pm–9pm**  
**Safety Risk Management workshop** for Friend's group coordinators and volunteers on work safety in the bush, OH&S, risk assessment and hazard identification at Kalamunda Library. Contact **BSFH**.


## March

 **2 Sunday 9am–12 noon**  
**'Clean Up Australia Day'** at Star Swamp Bushland. Contact **FSS**.

 **15 Saturday 8am**  
**Guided nature walk** at Lake Gwelup. Contact **FLG**.

 **15 Saturday 9am**  
**Activity morning** with Friends of Brixton Street Wetlands. Call Regina 9459 2964.

 **18 Tuesday 7.30am**  
**50th anniversary breakfast** with the Wildflower Society of WA. WA Ecology Centre, Bold Park. Contact Julie 9383 7979 or email wildflowers@ozemail.com.au.

 **22 Saturday 8am**  
**Guided walk** at Star Swamp Bushland. Contact **FSS**.

 **29 Saturday 1pm–5pm**  
**Bushland management workshop.** Learn revegetation, weed control, dieback, erosion control. Boya Hall, Helena Valley. Contact **BSFH**.

## April

 **4 Friday**  
**Earth Day Expo.** Hands-on environmental activities for primary-aged children. Volunteers needed to run activities. Lunch provided. Edith Cowan University, Mount Lawley. Email Jennifer Pearson on j.pearson@ecu.edu.au.

 **12 Saturday 1–4pm**  
**Seed collection and germination for flora of the Eastern Hills.** Octagonal Hall, Glen Forrest. Site selection, permit requirements, picking methods, cleaning, preparation and storage. Contact **BSFH**.

## Highlights

**Friday 1 February 9am–5pm**  
**2008 WA Wetland Management Conference** – celebrating World Wetlands Day. Cockburn Wetlands Education Centre. Contact Denise on 9417 8460 or email denise@cockburnwetlands.org.au. Expected fees: \$20 (concession) and \$40 (full). Includes proceedings and all catering. Visit [www.ramsar.org/wwd/8/wwd2008\\_in tro.htm](http://www.ramsar.org/wwd/8/wwd2008_in tro.htm) for more information on World Wetlands Day.

**Sunday 2 March**  
**Clean Up Australia Day**  
Visit [www.cleanup.org.au](http://www.cleanup.org.au) for more information.

**29–30 March**  
**10th WA Environment Festival 2008 'Winds of Change'**  
Naragebup Rockingham Regional Environment Centre. Activities, performances, eco-educational displays, stall holders and wildlife presentations. Phone 9591 3077.

**31 March–3 April**  
**WA Natural Resource Management Conference,** Bridgetown. Visit [www.nrmconferencewa2008.com.au](http://www.nrmconferencewa2008.com.au).

**March 29–6 April**  
**Conservation Week 2008 WA's Water Future.** Become involved and organise an event to raise awareness of WA's environment. Contact Jessie Cochrane on 9420 7266 or email [clo@conservationwa.asn.au](mailto:clo@conservationwa.asn.au) or visit [www.conservationwa.asn.au](http://www.conservationwa.asn.au).

## REGISTRATION/CONTACT DETAILS


**BSFH** **Bush Skills for the Hills** offers free hills-focused workshops. Contact Robbie 9424 2216 or [roberta.circosta@emrc.org.au](mailto:roberta.circosta@emrc.org.au).

**FSS** **Friends of Star Swamp Bushland.** Meet at Henderson Environment Centre, Groat St, North Beach. Call Christine 9447 2983 or [starswamp@hotmail.com](mailto:starswamp@hotmail.com).

**FLG** **Friends of Lake Gwelup.** Meet at scout hall carpark Huntriss Rd, Gwelup. Call Betty 9444 5640.

**N2N** **Nearer to Nature,** DEC. Affordable prices for all activities. Bookings: Perth Hills National Parks Centre on 9295 2244 or visit [www.naturebase.net/nearertonature](http://www.naturebase.net/nearertonature).

## Activities key

 **Hands on** – bushland and wetland management activities.

 **Walks and tours** – look, listen and enjoy guided walks and excursions.

 **Skills development activities** – talks, presentations, training courses and workshops.

 **Meetings and events** – group meetings, expos, festivals and conferences.

Please send us your April, May and June events by Tuesday 26 February 2008.

## Bunuru (February–March)

The hottest part of the year in south-west WA with little rainfall and hot easterly winds. This is the time of fishing and fruits. The Nyoongar men fished using spears, stone fish-traps, wooden weirs or by herding fish into shallow water where spiky-leaved branches (i.e. *Dryandra sessilis* or *Acacia pulchella*) had been laid to catch the fish.

Yorgas (women) and cooloongars (children) collected the poisonous fruit of the zamia (*Macrozamia reidleyi*). The fruits were soaked, wrapped in paperbark and buried for two weeks before being ground up and cooked. The underground parts of bulrush (*Typha* spp.) were pounded and cooked into 'damper cakes'.

## Learning opportunities



### Courses at Swan TAFE, Midland

#### Bushland assessment

Monday 1pm–3pm. Learn how to assess your bushland site using natural area assessment forms developed by the Perth Biodiversity Project, including soils, map reading, plant recognition, flora surveys, reference sites, environmental threats and problems.

#### Grow your own native plants from seeds and cuttings

Monday 7.30pm–9pm. Learn the techniques of propagation including hygiene, sowing seed, pricking out, cuttings, planning and selection of potting mixes. Take home your propagated plants.

#### Bush restoration of natural areas

Monday 5.30pm–7.30pm. Includes soil type management, weed control, revegetating degraded areas, direct seeding, brushing and planting. Weekend practical on riparian (stream bank) restoration.

Courses begin on 4 February 2008. Enrolments 30–31 January 8.30am–6.30pm. Contact Anne Taylor on [anne.taylor@swantafe.wa.edu.au](mailto:anne.taylor@swantafe.wa.edu.au) or 9374 6314.

### Courses at Challenger TAFE, Murdoch

#### Conservation and land management

Level 2 and 3 (L2 also at Peel Campus). Full-time, part-time, flexible delivery and skills recognition options available at all levels.

#### Bushland weed control

This short course includes completion of the ChemCert WA certificate and is recognised by the Health Department of WA. Successful students will be eligible for a Licence for the Use of Pesticides in Bushland and Minesite rehabilitation areas.

Courses begin on 4 February 2008. Contact Diana Corbyn on 9229 8412 or Steve Ross on 9229 8425.

## Funding opportunities

### Westpac Operation Backyard

Westpac Operation Backyard is a Westpac employee grant program which provides funding for environmental projects that Westpac employees are involved in as volunteers. Program guidelines can be obtained by emailing Westpac at [community@westpac.com.au](mailto:community@westpac.com.au) or email David Hehir at Landcare Australia on [david@landcareaustralia.com.au](mailto:david@landcareaustralia.com.au) or phone (03) 9662 9977.

### Junior landcare grants program

Any school or community organisation that would like to involve students in landcare projects, in conjunction with local landcare groups, can apply for grants of up to \$500. The program targets major issues relevant to our natural environment e.g. on-ground rehabilitation, conservation of natural resources, environmental monitoring, waste minimisation or undertaking an environmental field trip. Mitre 10, Coles and Australia Post are supporting the Junior Landcare Program. The closing dates for 2008 will be available soon. Visit [www.landcareonline.com](http://www.landcareonline.com).

### Gordon Reid Foundation

The Lotteries Commission's Gordon Reid Foundation Conservation of Natural Heritage Grant is available to support community organisations to conserve the State's natural habitats and diversity. Previous projects include revegetation and rehabilitation, flora and fauna surveys, fencing, weed and pest control, management plans and environmental education. Applications may be submitted to Lotterywest at any time. Organisations not legally incorporated can apply for grants to a maximum of \$5000. Organisations not registered for GST can apply for single or multiple grants with a combined total of up to \$15,000 in any one financial year. For more information phone 1800 655 270 or visit [www.lottery.wa.gov.au/](http://www.lottery.wa.gov.au/).

## regional reports

Please send us your regional report (150–200 words) and a photo by Tuesday 26 February 2008. Text may be edited in response to volume of submitted reports.

### Dieback-resistant jarrah for Alps Street Reserve

By Valerie Jenner



The Friends of Alps Street Reserve were thrilled to be included in a project by Murdoch University and Alcoa to trial dieback (*Phytophthora cinnamomi*) resistant jarrah seedlings. In July we travelled to Alcoa's Marrinup mine and nursery to learn about the research and cloning undertaken by Dr Ian Colquhoun and his team, and to collect our allocation of seedlings. About 100 people were treated to a barbecue lunch and site tours.

The Shire of Mundaring generously donated stakes and tree guards. Seedlings were

'hardened' for a month in my front yard before most – 12 – of our members gathered to plant them. The ground in Alps Street Reserve is mostly granite and gravel with a thin leaf mulch, so digging 80 holes with augers and crowbars was the most challenging job. Nonetheless, we had the job completed in a couple of hours and most workers wandered over to my place for a well-earned cuppa and sandwich.

The rain during spring and early summer and the relatively cool weather has been a

welcome and gentle beginning for the seedlings, and although a few have not survived we have a success rate of more than 85 per cent to date. The Shire of Mundaring has erected signage at the reserve and sponsored the distribution of a flyer we created. Both the signage and flyer remind residents and users of the reserve how easily the spores of dieback can be spread and the penalties for using vehicles in the reserve.

Contact Valerie on 0423 237 473 or email [val2@westnet.com.au](mailto:val2@westnet.com.au).

## Volunteers the backbone of landcare

By Kristy Gregory

The work of the Serpentine Jarrahdale Community Landcare Centre revolves around, and relies upon, the energy and vitality of community groups that have developed to care for bushland reserves in Serpentine Jarrahdale and North Murray. There are more than 100 bushland reserves in our districts, with 10 community groups currently working in a small proportion of these.

Brickwood Reserve in Byford is a 40-hectare 'island' that is one of the few intact bushland remnants of what once existed throughout the eastern side of the Swan Coastal Plain. With development planned to the boundaries of this reserve, it is important that the community is aware of the reserve's existence and is actively involved in its management. An Australian Government Envirofund grant in partnership with Serpentine Jarrahdale Shire enabled Serpentine Jarrahdale Community Landcare Centre staff to run a number of community activities to introduce the reserve to new and existing residents. Activities throughout 2007 included a bird walk, night stalk, frog search and flora walk. The project also involves management activities in Brickwood Reserve, including a weed and dieback survey.

Future controlled mosaic burning may be carried out in Brickwood Reserve due to the proximity of residences, including an aged-care facility. In anticipation of this, flora transects are being surveyed so ongoing monitoring can occur pre- and post-burning to determine the effect on vegetation. Seed will be collected for revegetation and, if burning proceeds, used to direct seed.

Byford Enviro-Link is a new group in Serpentine Jarrahdale (see 'Conservation in an urban landscape' on page 1 of this issue) that has agreed to include Brickwood Reserve as part of its weekly bushcare activities to get some of these projects under way.

If you are interested in assisting with bushcare activities, particularly at Brickwood Reserve, contact Kristy on 9526 0199 or email [kristy@landcaresj.com.au](mailto:kristy@landcaresj.com.au).

## Morning glory at Canning River Regional Park



Canning River Regional Park Volunteers bag blackberry (*Rubus* spp.) brambles ready for replanting the site with natives. Photo – Pam Agar

By Pam Agar

Recent efforts by the Canning River Regional Park Volunteers to control morning glory (*Ipomoea indica* and *I. cairica*) have concentrated on one side of the stream connecting Nicholson Billabong and the Canning River. Extensive tracts were sprayed by contractors in April 2006. Three days' work with Ecojobs removed 55 cubic metres of dead vine and more was removed by the volunteers and the South Perth Soroptomists.

In October 2006 replanting began with 4000 *Baumea juncea* seedlings, 200 *Melaleuca teretifolia* and some *Lobelia alata*. Group work days in mid-2007 focused on the eastern end of the site where DEC had sprayed blackberry (*Rubus* spp.). Dead canes were removed and *B.*

*juncea* planted. Weed removal resulted in considerable natural regeneration, particularly *Centella asiatica*, *Eucalyptus rudis* and *Melaleuca raphiophylla*. The site will receive ongoing treatment and there is a need to tackle the other side of the stream.

The bonuses of working on-site were the discovery of south-western cool skink (*Bassiana trilineata*), two-toed earless skink (*Hemiergis quadrilineata*), a baby turtle (*Chelodina oblonga*), motorbike frog (*Litoria moorei*) and buff-banded rail (*Gallirallus philippensis*). Spotless crane (*Porzana tabuensis*) and yellow-billed spoonbill (*Platalea flavipes*) were also observed using the area.

For more information contact Jo on 9458 3669 or Pam on 9457 2292.



The Friends of Bellevue Wetlands continued planting along Astroloma Creek in Koongamia, completing the plantings along the length of the creek within Elder Park. A final planting was done by Year 4 students from St Anthony's Primary School in August 2007. Contact Penny (Chair, Helena River Catchment Group) on 9299 7024. Photo – Penny Hussey



## Reconciliation reaps rewards at the forest *By Jo Tregonning*

2007 was a very busy year for the community group Baldivis Children's Forest Inc. A total of 1756 school children, teachers, local residents, volunteers and community groups were involved in revegetating the degraded tuart woodlands with 2977 native seedlings, weeding, constructing trails, attending workshops, surveying birds, making bat nest boxes, feral bee control and creating signs and artwork for installation at the forest.

One of the most memorable experiences was our Reconciliation 'Nyoongar Nganka Maalak' day in August. Funded by a Department of Indigenous Affairs grant and BHP Billiton Nickel West, the day aimed to foster reconciliation and promote Aboriginal culture. The day celebrated through songs, planting tuart seedlings, constructing a mia mia, painting boomerangs, story-telling, learning Aboriginal dances and eating lots of food (emu eggs, kangaroo, damper) cooked over open fires.

The day was a culmination of partnerships and friendships that have developed since 2004 when we had our first Aboriginal-

guided walks at the forest. It was attended by 150 people and recognised the sustainable partnerships between Baldivis Children's Forest, Baldivis Primary School, Kulbardi Aboriginal Centre, local Aboriginal elders and extended family and linked with the Department of Education and Training's Better Outcomes for Indigenous Students (BOIS) program. This work to foster reconciliation and promote Aboriginal culture was recognised at the Wardarnji Festival at Fremantle in November 2007. Baldivis Primary School was the overall BHP Billiton Iron Ore/Department of Indigenous Affairs (PALS – Partnerships Acceptance Learning Sharing) winners for 2007. A book, quilt and two large banners created as part of the PALS reconciliation entry were displayed at the festival.

Inclusion of Aboriginal culture in many of our activities at the forest gives another dimension to managing the reserve and seeing our environment. It teaches us to quietly observe and understand the complexity of ecosystem interactions and apply this knowledge.



Marie Taylor from Kulbardi Aboriginal Centre prepares emu egg omelette as part of reconciliation festivities at Baldivis Children's Forest. Photo – Jo Tregonning

For more information visit [www.childrens-forest.com.au](http://www.childrens-forest.com.au) or email Jo at [jtregonning@iprimus.com.au](mailto:jtregonning@iprimus.com.au).

## Micro-chips for quendas *By Diana Corbyn*

The 'Great Gladly Grab' is now a spring tradition at Challenger TAFE's Murdoch Campus and this year there were more than 170 'grabbers' ensuring no gladdies set seed. Chemical wiping trials are also proving successful. Many students are surprised to learn that *Gladiolus caryophyllaceus* is not 'pretty in pink' at all but a technicolour alien from South Africa.

Early summer is a busy time for seed collecting from the 'once-a-year' producers such as *Patersonia occidentalis*, *Hemiandra pungens* and *Acacia pulchella*. It's also a great time to collect seed from the drying openers when they are in full flower and easy to spot in the bush. We call this colour-coded seed collecting! Good examples are orange-flowering *Eremaea pauciflora* and purple flowering *Beaufortia elegans* and *Melaleuca seriata*.

Diploma students have been monitoring the Murdoch bushland quenda (*Isoodon obesulus*) population under the guidance of lecturer Mark Heath. The quendas are trapped, micro-chipped and released.



A micro-chipped quenda (*Isoodon obesulus*) in Murdoch bushland ready for release. Photo – Sue Fawcett

As our bushland is scheduled for clearing to make way for the new Fiona Stanley Hospital, this work will help to ensure that the quendas can be monitored closely when they are relocated.

Contact Diana during work hours on 9229 8412 or email [diana.corbyn@challengertafe.wa.edu.au](mailto:diana.corbyn@challengertafe.wa.edu.au).

## Landholders partner with the Friends of Piesse Brook

*By Linda Stanley*

The Friends of Piesse Brook Inc are in the seventh year of their project to remove invasive weeds from Kalamunda National Park. In 2007 they turned their sights upstream to remove weed seeds from washing back down and reinfesting the park. The first 11 landholders upstream immediately joined the project and have been working with the Friends to remove invasive weeds from their own properties.

There are another 75 landowners upstream to the source of Piesse Brook in Pickering Brook. The Friends hope in time to get all 75 landowners 'on board' to work with them to rid their properties of invasive weeds.

The efforts of the Friends of Piesse Brook were recognised in November when they were named the winner of the 2007 Bush, Land and Waterways Award in the Western Australian Environment Awards.

Email Linda on [linda@johnstanley.cc](mailto:linda@johnstanley.cc).

# Feral bee control on the Canning



By Jim Prince

**CANNING River Regional Park Volunteers began a project in February 2006 to remove feral European honeybee (*Apis mellifera*) colonies in a section of the park. Removal appeared to be successful and a further Swan Alcoa Landcare Program grant in 2007 and for 2008 has enabled the treatment area to be extended to cover the whole park (668 hectares from Shelley Bridge, Leach Highway to Nicholson Road Bridge) and adjacent urban areas.**

Canning River Regional Park is ideal for feral bees – with a mild climate, convenient water supply from the Canning River and many hollows in mature flooded gums (*Eucalyptus rudis*) and at Kent Street Weir in sugar gums (*Eucalyptus cladocalyx*). These colonies originated from other feral colonies or managed beehives and disrupt the nesting activities and habitats of native animals.

The volunteers identified feral bee colonies and recorded the entry and hollow sizes, GPS locations and colony heights within the park. A total of 323 feral bee colonies were found in 235 trees and a colony found in a drum under some bracken. At Kent Street Weir 12 large sugar gums contained 24 colonies, three free-hanging (not in hollows) colonies and a colony in a peppermint tree (*Agonis flexuosa*). *Casuarina* trees don't develop suitable hollows but a colony was found around the roots of one. The remaining 295 colonies were in flooded gum hollows. Two flooded gums at Masons Landing each had at least six colonies in them. Colonies can form in paperbarks, but not been found in Canning River Regional Park.

It is important to remove all feral bee colonies from the regional park and surrounding urban areas, as bee swarms from any remaining colonies will be attracted to the honey and beeswax aroma and recolonise previously cleared hollows. Canning River Regional Park Volunteers arranged for the City of Canning and a bee control contractor to remove the bees. Suitable treated hollows are rehabilitated. Where the colony entrance size is too small for native fauna to use, or the colony position makes it a hazard to the public, the entrance is closed with sand, a piece of wood or expanding foam filler.

Although the intention is to clear the regional park of feral bees and keep it that way, reports suggest a small percentage of feral colonies will remain. There are several reasons for this:

- finding some colonies is difficult (e.g. if their entrances are obscured by leaves);
- access into areas of the park infested with blackberries is currently impossible;
- small bee colonies with low numbers of flying bees are easily missed in a survey;
- flooded gums develop large diameter hollows which often extend for metres, making removal of the colony difficult;
- if the queen and some nurse bees survive treatment, the colony can slowly breed up again; and
- some hollows become active again when reinfected by a swarm.

An interesting adjunct of feral bee control is the large number of potential nesting



*Duck eggs in flooded gum (Eucalyptus rudis) at Canning River Regional Park following eradication of feral bees. Remnant beeswax is visible on the walls of hollow. Photo – Jim Prince*



*City of Canning pest control officer Paul Greenslade removing feral bees from a flooded gum (Eucalyptus rudis) at Kent St Weir Park. Photo – Darren Graham*

hollows found. Our work has been rewarding with a duck nest and a possum seen in hollows lined with beeswax from previous feral bee infestations. We are developing a monitoring system using a small security camera with infrared LEDs on a seven metre pole and a wireless LCD monitor. The camera will be cautiously moved to the hollow entrances and notes taken on what is happening in there.

For more information contact the City of Canning's Parks Conservation Officer on 9231 0628 or Canning River Regional Park Volunteer Jim on 9397 0026 or jimandchrisp@westnet.com.au.



## GROUPPROFILE:

# Friends of Paganoni Swamp By Leonie Stubbs



**THE Friends of Paganoni Swamp group aims to increase the on-ground knowledge of Paganoni Swamp (Paganoni) as well as carry out on-ground activities which increase the park's resilience to degradation. This small but highly motivated group has achieved both in a very short time.**

Paganoni is one of the most significant conservation reserves south of the Swan River in the metropolitan area and the southern-most reserve of Rockingham Lakes Regional Park. It is approximately 650 hectares in size and represents a continuous and undisturbed ecosystem from woodlands to low-lying wetlands. The area supports a range of plant communities and wetland types that are now uncommon due to land clearing and urban development. The diversity of wetlands and woodlands in the area provides a wide range of habitats for invertebrates, birds, mammals, frogs and reptiles.

### Weed control

Our small group formed in 2004 to address the serious threat posed by Geraldton carnation weed (*Euphorbia terracina*) that was invading the western boundary of Paganoni. We have been successful in receiving ongoing grants for this work from DEC as well as funding from Readymix. The group works closely with DEC's Regional Parks Unit, which manages Paganoni, and staff in the department's Urban Nature program. Kate Brown and Grazyna Paczkowska from Urban Nature have established 15 plots to monitor the success of the weed control program. The group is now working to expand weed control to include annuals such as cape tulip (*Moraea miniata*), pretty betsy (*Centranthus macrosiphon*) and the perennial dune onion weed (*Trachyandra divaricata*).

### Field herbarium

In 2005, Paganoni was included in the Wildflower Society of WA's Bushland Plant Survey Program. This resulted in the production of an eight-volume field herbarium containing specimens from 345 taxa (271 native taxa and 74 weeds) representing 68 families. Specimens were collected from 12 plots established in five different vegetation sites at Paganoni. The specimens were meticulously sorted, identified and mounted by volunteers from the Wildflower Society during weekly sessions at the WA Herbarium where some specimens were vouchered. The field herbarium is held at Naragebup Rockingham Regional Environment Centre.



Cedric Bakewell (left), Leonie Stubbs, Anne Bellman and Norm Hodgkinson at the Paganoni Swamp brochure launch in October 2007. Photo – Kate Brown

### Current projects

Dieback (*Phytophthora cinnamomi*) is present on Paganoni's eastern boundary. Due to the conservation significance of Paganoni, funding from the Swan Catchment Council's Project Dieback initiative was provided to map the outbreak and prepare a management plan to minimise its spread.

Our latest project has been the production of a brochure funded by the City of Rockingham in collaboration with Urban Nature. The plan is to distribute the brochure to residents surrounding Paganoni to highlight its ecological, amenity and spiritual values. It is hoped that residents will then contribute to its wellbeing through increased vigilance to combat rubbish dumping and the intrusion by motor vehicles and motor bikes.

Our project for the coming year is to research the history of Paganoni to gain a better understanding of the impacts that disturbances such as fire and grazing have had on the park. In addition, one of our members is planning guided walks in 2008 so the public can learn more about the wonderful attributes of Paganoni.



Scarlet robin (*Petroica multicolour*). Photo – Colin Prickett

### More information

Contact Leonie on 0439 921 298 or email Friends\_Paganoni\_Swamp@westnet.com.au for more details about the group.

# Resources

## Publications

### **Geology and landforms of the Perth Region** (2007)

By J. R. (Bob) Gozzard. Published East Perth, WA Geological Survey of Western Australia. 126-page, full-colour guide book. RRP \$22.00. Includes the geology and landforms of the Swan Coastal Plain from Rockingham to Yanchep, and the Darling Range from Walyunga to Jarrahdale. Lavishly illustrated with photos, maps and diagrams explaining the key aspects of geology that can be seen in the Perth Region.



**New weed management guides** for African boxthorn (*Lycium ferocissimum*) and coolatai grass (*Hyparrhenia hirta*), the first of eight in this new series, provides information on biology, control and managing weeds for biodiversity outcomes. Visit [www.weeds.crc.org.au/publications/weed\\_man\\_guides.html#biodiversity](http://www.weeds.crc.org.au/publications/weed_man_guides.html#biodiversity) or [www.weeds.crc.org.au/projects/project\\_4\\_2\\_3.html](http://www.weeds.crc.org.au/projects/project_4_2_3.html) or contact Meg Robertson on (08) 8950 7166 or email [meg.robertson@csiro.au](mailto:meg.robertson@csiro.au).

**Urban Antics – tales of an urban naturalist** (2005) Kensington, WA Naturally Publications. RRP \$16.95. The stories in this book are true accounts of observations throughout the suburbs of Perth during the last half of the twentieth century. They are not just about nature; they are about life and perceptions in a simpler time, when family influences were more valued and the primeval urge of any kid to explore and learn started somewhere in the backyard or the spare lot across the road. John Hunter's colourful, irreverent and, above all, humorous style of writing will appeal to everyone who picks up this book.

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Please check your mailing details and let us know if we need to change anything by phoning us on 9423 2914. If you'd prefer to receive this newsletter electronically, send an email titled 'email me' to [urban.nature@dec.wa.gov.au](mailto:urban.nature@dec.wa.gov.au).

## Website watch

**Invasive weeds in Australia** includes information on what is a weed, their management and identification. Visit [www.weeds.gov.au](http://www.weeds.gov.au).

**Be green** Australia's largest environmental portal, local green products directory, search news and blogs, educational resources, get involved in community activities. Visit [www.begreen.com.au](http://www.begreen.com.au).

**Climate Change in Australia** (2007) Bureau of Meteorology and CSIRO, provides the latest information on observed climate change in Australia and its likely causes, as well as updated projections of changes in temperature, rainfall and other aspects of climate that can be expected in coming decades as a result of continued global emissions of greenhouse gases. Increasing levels of greenhouse gases are likely to cause decreases in rainfall in the future in southern areas during winter, in southern and eastern areas during spring, and in south-west WA during autumn, compared with conditions over the past century. The full report is available at [www.climatechangeinaustralia.gov.au](http://www.climatechangeinaustralia.gov.au).

**The Nature Conservancy**, California. Visit [www.nature.org](http://www.nature.org).


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