



Do you have a reference site?

By Karen Clarke

EVER wondered where to start getting information about your local patch?

While the best place is specific reports about your area, often none are available, or your area may not be in good enough condition to show what it should really look like. There is a great benefit in having access to other areas of bushland as reference sites.

A reference site is the best-condition bushland area you can find that closely matches the physical and biological characteristics of your area. Utilising reference sites will greatly improve your knowledge and understanding of the natural values of your own area, provide an idea of how it fits into the 'bigger picture' in the landscape, and may indicate what you could aim towards with your regeneration efforts.

The key is to select reference sites that most closely match the characteristics of your area for example, position in the landscape (topography, aspect), geology, soils, hydrology and plant and animal communities.

For those of you on Perth's Swan Coastal Plain it is easy. A free copy of *Bush Forever Volume 2* is available from the Department of Environment, and includes information on the site that most closely match your local conditions. Maps in *Bush Forever Volume 1* are available free from the Department for Planning and Infrastructure or from their website (www.wapc.wa.gov.au/Publications/99.aspx). Detailed Bush Forever Site descriptions in Volume 2 provide a great starting point for you to learn about your local patch.

To further assist with the identification of reference sites, the Perth Region Plant Biodiversity Project (PRPBP) was established in September 2003 as a collaboration between the Perth Biodiversity Project (based at the Western Australian Local Government Association), the Department of Environment, and the Department of Conservation and Land Management. The project's aim is to build on the extensive existing knowledge of plant biodiversity information for the Swan Natural Resource Management (NRM) Region. The purpose of the PRPBP is to support Local Government and other stakeholders in understanding, protecting and managing Perth's unique biodiversity.

This project will provide a detailed and publicly accessible information system for a selection of



Viewing wetland vegetation on a Bassendean Dune in Melaleuca Park (Bush Forever Site 399), during a professional training workshop in August 2005. (Photo: Karen Clarke)

reference sites on the Plain and in the Hills (Swan NRM Region). Associated with this will be a training program on using and interpreting the information.

Following the first two years of hard work, the outputs from the first phase of this project are almost complete. The PRPBP has compiled reference site information for a selection of Bush Forever Sites. The selected sites are in public ownership, easily accessible and represent major landforms, soils, vegetation complexes, floristic community types and threatened ecological communities on Perth's Swan Coastal Plain.

Each of these sites is within a series of east-west and north-south reference transects, showing natural variation across the landscape. A selection of sites representative of original vegetation along the rivers/estuaries, and sites representing major wetland systems have also been included.

The PRPBP will compile and make available information on the flora and vegetation for each reference site which will include detailed reference plot data and photo reference points. Reference plots are standard size areas (10 x 10 m) for which vegetation and flora information, such as species lists, has been recorded. Photo reference points have been designated within each reference site, with an assessment of current vegetation condition.

These areas demonstrate a given plant community in a given condition. In most cases, photo reference points also represent a reference plot, for which the plot information will be made available.

The PRPBP hopes that by providing comprehensive information on easily accessible reference sites that managers will have a greater understanding and appreciation of the unique biodiversity of the region. This will enable land managers to better understand their own area.

Further information on the PRPBP and reference sites can be obtained at www.councils.wa.gov.au/directory/walga/index.html/pbp or by contacting Project Ecologist Karen Clarke (9222 7074 or karen.clarke@environment.wa.gov.au). Future phases of the project will establish reference site information for Perth's hills.

* **Kambarang** is the season of decreasing rain during the months of October and November. It was a sign to return to the coast as warmer weather approached. A time for a natural increase in game, and for collecting wattle-tree gum, yams and native potato. **Birak** is the warmer and dry time of December and January, when controlled local fires were lit in the scrublands.



Spring has sprung! The days are noticeably longer and it is getting warmer. The sunnier, warmer

weather is drawing people out into the bush and the butterflies soon will follow. Check out Matthew Williams' Econote (page 5) on butterflies in the metropolitan area.

The past year has seen several changes to the Urban Nature team, the most recent being the appointment of Karen Sanders as the new program coordinator. Karen started working for Urban Nature in September, moving from the Department for Planning and Infrastructure's Bush Forever office. We are looking forward to her enthusiasm, skills and experience.



I would like to acknowledge the extra effort that the Urban Nature staff – Kate Brown, Grazyna

Paczkowska, Lisa Bland and Renee Miles – have given to keep the program running smoothly while we filled the coordinator position. It has been a very busy time and I would like to thank them all for a great job.

Lisa Bland has taken a position with the Marine Parks and Reserves Authority. Lisa has been with the Urban Nature team since 2003, and has always been a very keen and capable contributor to the program and our



Viewing wetland vegetation on the Pinjarra Plain in Bullsbrook Nature Reserve (Bush Forever Site 292) during a professional training workshop in August 2005. (Photo: Karen Clarke)

regional office. I know Lisa is looking forward to the new challenges but will miss the work here, as we will miss her.



Continued funding has been confirmed for the Skills for Nature Conservation (SFNC) program, from the Natural Heritage Trust, through the Swan Catchment Council. The SFNC program partners, Greening Australia WA, Swan Catchment Centre and Urban Nature, will soon be developing and planning the courses for 2006 and are holding focus groups in November (see What's On).

The Urban Nature staff supported and took part in a recent two-day workshop titled 'Understanding and Assessing Natural Values and Biodiversity'. The workshop was a joint project by the Department of Environment, Perth Biodiversity Project and Urban Nature, and catered for staff from local government, State agencies and Natural Resource Management groups. The workshop consisted of a one-day lecture component, followed by a one-day field trip along either a northern or southern coast-to-hills transect. A similar two-day training workshop 'Plant Patterning across the Plain' is being provided through SFNC on 18 and 22 October.



Urban Nature has a busy field schedule at two demonstration sites established by the program. Bushland Restoration Days happen at Brixton Street Wetlands in Kenwick on the first Wednesday of the month, and at Talbot Road Bushland in Swan View on the last Friday of the month between 9am and 12 noon.

Kate and Renee organised the professional four-day 'Managing Weeds in Bushland' course held in the first week of September, which was a huge success and attracted CALM District staff from all over the state. Community groups participated in a similar two-day SFNC weed management course on 27 August and 17 September.

Contacts

Urban Nature Office

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email: ecoplan@calm.wa.gov.au
website: www.naturebase.net/urbannature

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email: admin@apacewa.org.au

Conservation Council of WA ☎ 9420 7266
email: conswa@conservationwa.asn.au

Greening Australia (WA) ☎ 9335 8933
email: general@gawa.org.au

Perth Biodiversity Project (WALGA)
Ryan Taylor ☎ 9213 2047
email: info@walga.asn.au

Regional Parks (CALM) ☎ 9431 6500

Swan Catchment Centre & Council
Alison Nesbit ☎ 9374 3333
email: saicc@wrc.wa.gov.au

Urban Bushland Council ☎ 9420 7207
email: ubc@iinet.net.au

Wildflower Society of Western Australia ☎ 9383 7979
email: wildflowers@ozemail.com.au

Summer Ecoplan News

Forward your news, activities and regional reports for the Spring issue of *Ecoplan News* by **Thursday 1 December 2005**. Please keep your regional reports under 250 words and articles as brief as possible. Please also send your photos! Fax, email or write to Ecoplan (see Ecoplan contacts above). Thanks to all contributors.

Newsletter compiled and edited by Jo Tregonning.

Congratulations on Green Stamp

The printers of *Ecoplan News*, Character Print, have recently been awarded accreditation in the Department of Environment's Green Stamp Program. The Green Stamp is only obtained when a business implements the best possible environmental practices.

These practices and accredited printing systems save 47 per cent of paper wastage, 60 per cent of chemical wastage and reduce landfill by up to 45 per cent. The company has also committed to continue to explore more efficient processes and improve reductions in environmental pollution and has produced an environmental policy.

Talking up tree decline By Liz Manning



Ryan Hooper (left) and Green Corps team members in Helena Catchment assessing wood-boring insects and fungal pathogens on wandoos.

Wandoo (*Eucalyptus wandoo*) is a common tree of the South-West and wheatbelt, and is one of Western Australia's most significant woodland species. In recent times, severe crown decline has affected the health and vitality of many wandoo trees and woodlands. The Government's Wandoo Recovery Group (WRG) was formed in 2003 to investigate the causes of crown decline and to develop strategies and actions.

Environmental stresses

The University of Western Australia (UWA) is conducting research into wandoo decline. A team led by Dr Pieter Poot is examining environmental stresses, thought to be exerting an influence on tree decline and death. To gain insight into whether wandoo is more vulnerable to drought, the team is monitoring waterflow through the stems of wandoo, powderbark wandoo, jarrah and marri at sites in the Julimar State Forest. This research into water-relations may explain why wandoo is more vulnerable than some of its co-occurring species. The tolerance of young seedlings from 30 wandoo populations, covering the whole distribution range, to environmental stresses of salinity, drought and waterlogging are being compared. Results will be important in guiding future decisions about conservation, genetic diversity utilisation, and the role of insects and fungal pathogens (biotic factors) in crown decline.

Wood-borer and fungal pathogen interactions

Ryan Hooper, a PhD student from UWA, is examining the link between a wood-boring insect and fungal pathogens causing canker. These are likely to be responsible for the damage found in declining wandoo canopies

and recent flagging corresponds with borer activity. Traps will be erected in trees with patches of flagging to catch the insect larvae, which will be bred and monitored for their life cycle and habits. This will help to identify the borer, describe its biology and life history, and clarify the interactions between the wood-borer and fungal pathogens in relation to environmental change that result in the decline of tree health.



Rural tree decline workshop at Dandaragan focusing on wandoo (*Eucalyptus wandoo*) and marri (*Corymbia calophylla*). (Photos: Liz Manning)

Helena Catchment surveys

The WRG encourages community groups and individuals to become involved in research, mapping and related projects. A Green Corps team, volunteers from Beverley Naturalists' Club, and York Land Conservation District Committee spent 10 days conducting surveys within the Helena Catchment. The survey aimed to improve our knowledge about movement patterns of wood-boring insects, and find suitable sites to place Ryan's traps. The team also assessed the health status of wandoo trees by recording the condition of the canopy, percentage of decline, and presence of flagging along specific transects. Estimating the diameter of the tree's main stem gives an indication of age. Tree maturity influences its ability to resist and overcome insect invasion and decline. To ensure survey and

recordings were consistent, the team followed an assessment procedure developed by the WRG. Data from the surveys will be collated by WRG and made available for research and monitoring.

Community education and involvement



A number of information days and field trips have been held to raise awareness and understanding of the causes of wandoo decline and what is being done about it.

Earlier this year the WRG and the West Midlands Natural Resource Group co-hosted a rural tree decline workshop at Dandaragan with a focus on wandoo and marri. The event attracted widespread interest from farmers, local catchment groups and government agencies.

Dr Poot, Ryan Hooper and Trudy Paap (PhD student at Murdoch University) explained their research and why it was important. Trudy is examining canker disease in marri. Her work involves collecting tissue samples from infected lesions, growing them on agar plates, and conducting pathogenicity trials by inoculating young marri saplings with fungal spores. She found that two fungal species, *Endothia eucalyptica*, and *Sporothrix*-like fungus consistently caused significant lesions and were likely contributing causal agents.

Jenni Borger from Three Springs, spoke of the various species of mistletoe found in the region, and their effects on host plants. The local perspective was discussed during a field trip to view wandoo and marri decline on farmland and private remnants. Mistletoe infestations in marri at the Dandaragan Golf Club afforded everyone the chance to learn about the complexity of plant/pathogen/parasite relations.

A community forum into wandoo decline held at Technology Park attracted government, business and community interest from throughout the South-West. Environment and Science Minister, Dr Judy Edwards, officially opened the forum and acknowledged wandoo's ecological value and considerable economic contribution to the State's development, while stressing the importance of community involvement.

The half-day event was a show-and-tell of WRG activities, followed by an interactive question and discussion period. This gave comprehensive feedback on community concerns and ideas for research. The WRG welcomes community participation in its projects and decision-making.

Contact Liz Manning, Executive Officer WRG on 0427 441 482 or by email (lcdcyork@westnet.com.au) or WRG chairman, Alan Sands on 9368 4399.

Learning opportunities

Growing wetlands - Advances in wetland conservation and restoration

The Botanic Gardens and Parks Authority (WA) is holding a two-day workshop at the WA Ecology Centre (Bold Park) from 7-9 November 2005 to review current global 'good practice' in wetland biodiversity conservation and restoration. Presenters include USA wetland restoration ecologists Dr Lyndon Lee and Dr Peggy Fielder, as well as other scientists, consultants and community groups. For further information contact 9480 3623 or email (droklich@bgpa.wa.gov.au).

Stormwater conference Perth October 2006

The Stormwater Industry Association of WA is planning a conference on 'Stormwater as a Resource: a Precious Commodity' to be held in Perth in October 2006. The conference theme will examine alternative techniques of managing stormwater. The association is seeking expressions of interest for papers to showcase projects that are being worked on. For more information contact the association's secretary and Stormwater Coordinator for the North Metro Catchment Group, Debbie Besch on 9271 7922 or by email (debbie.b@nmcg.com.au).

Rottnest Island Authority environmental awareness courses

These two-day courses aim to introduce teachers, community group leaders and visitors to the culture and natural environment of Rottnest Island. Bike riding, snorkeling and beach walking are included in these rewarding and enjoyable weekends. The courses will run on 21 and 22 October and 11 and 12 November. For further information contact Education Services on 9372 9796 or email (education@rotnnestisland.com).

2005 Adventures in landcare

Tammin Alcoa Landcare Education Centre is offering practical courses to people who have a passion about landcare. Using hands-on activities and a variety of site visits this course provides insight into landcare practices being used in the wheatbelt to address a range of environmental issues. The year's final course will be held on 13 and 14 October. The residential course provides accommodation, catering, field transport and resources. The cost is \$77 per person (including GST). Contact Patricia Dames on 9622 0200 or by email (Patricia.Dames@det.wa.edu.au).



Get a group together and discover Perth's nature

Nearer to Nature has released its Group Activity Information book for 2005/06, also available at www.naturebase.net/nearertonature. It contains a range of unique activities that provide groups with fun, interesting experiences in Perth's marine, regional and national parks. Do something different when you next have a training course, seminar or staff outing, and book a Nearer to Nature activity. Nearer to Nature also provides activities for social or sport clubs, kids outings or community groups, from one hour to a whole day (or night) of nature experiences. For more information or bookings contact Nearer to Nature on 9295 2244.

From the Water's Edge to the Red Centre

18-21 April 2006 Alice Springs, NT

Australian Water Association's water education conference will be relevant to a broad range of professionals who work in or with the water sector. Delegates will represent organisations from the community, government, industry, education and private sectors. The conference is now calling for 300 word abstracts to be submitted by 1 November 2005. Visit www.awa.asn.au/events/educationconf06.

Funding opportunities

Lotterywest grants information seminar

Lotterywest supports the work of many community organisations through the provision of grants for initiatives that improve the life of Western Australians. Members of the Lotterywest grants team will present information about their grants and the application process to community organisations and local government authorities between 3pm and 5pm on Monday 24 October at the City of Rockingham in Civic Boulevard. To reserve a place contact Marlene Walker on 9340 5270 or email (walker_m@lotterywest.wa.gov.au).

Community water grants

The Australian Government Department's of Agriculture, Fisheries and Forestry and Environment and Heritage will provide grants of up to \$50,000 to eligible community organisations for on-ground projects under the three areas of activity: water savings-efficiency, water reuse-recycling and surface and groundwater health (including protecting or enhancing the health of rivers, wetlands and groundwater resources). Projects are allowed 15 months for completion. The first round of applications closes on 4 October 2005. Round two will be advertised in March 2006. <http://www.communitywatergrants.gov.au/>.

Envirofund

Community groups and individuals can apply for grants of up to \$30,000 (including GST) to carry out on-ground and other actions to target local problems. Round 8 (regular round) will open September/October 2005. Contact 1800 303 863 (toll-free) or <http://www.nht.gov.au/envirofund/> for further information.

Rare orchid surveys – spring 2005

CALM is looking for volunteers to assist in surveying a number of rare orchids in the metropolitan area this spring. Orchids include the *Caladenia huegelii* (grand spider orchid), *Drakaea elastica* (glossy-leaved hammer orchid) and *Dunis purdiei* (Purdie's donkey orchid).

The surveys will enable CALM and volunteers to reassess known populations and locate new populations. Volunteer assistance will enable a greater area to be surveyed this flowering season, resulting in valuable information that CALM can use to plan for the management of these rare and threatened species.

Surveys will be carried out south of Perth at Swan Coastal Plain bushland locations on 1, 3, 4, 6, 8, 10 and 14 October. Surveys will take place in the Hills from 15-17 October.

Places are limited. If you would like more information or to register your interest, please contact Nicole Willers on 9474 7056, 0427 081 398 or email (nicolew@calm.wa.gov.au) or Gillian Stack on 9405 5157 or email (gillians@calm.wa.gov.au).

Econotes: Butterflies – where (and when) to look for them

MANY people are surprised to learn that there are more than 50 different species of native butterfly in the South-West, with more than 30 found in the metropolitan area.

Where are our butterflies?

Native butterflies fall into two groups: a small group of highly mobile species, which ranges widely and can be found in both gardens and native bush, and a larger group of less mobile species which is restricted to native bush. In the Perth metropolitan area, most native butterflies are now isolated in the remnant bushlands where they breed – these are the 'resident' species. Only the highly mobile species, such as the Australian painted lady and yellow admiral, and introduced species such as the cabbage white and monarch, are frequently seen outside bushlands.

Over the past three years, surveys at 40 metropolitan bushlands have recorded 35 species of native butterfly or day-flying moth (day-flying moths look and behave just like butterflies). Most of the outer metropolitan bushlands had 10 or more resident species. Koondoola bushland, north of the Swan River, had the richest fauna, with 15 resident species.



The tiny fringed heath-blue can still be found in many bushlands, but is sensitive to disturbance. (Photo: T. Lundstrom).

Nearby, Warwick, Marangaroo, Errina Road and Cottonwood bushlands had between nine and 13 species. The richest surveyed sites south of the Swan River - Ankerell Road bushland, Banksia Nature Reserve, Casuarina Prison bushland, Dennis de Young Reserve, Sandy Lake, Shirley Balla Swamp and Wandie Nature Reserve - had between eight and 11 species. Bushlands in the inner suburbs usually had less than six species.

A species list of surveyed sites can be obtained from the local Friends group or relevant local council.



The western xenica is common in many Perth metropolitan bushlands between late September and early November. (Photo: Matt Williams)

Butterfly habitat needs

Butterflies need specific plants on which to breed, and are generally intolerant of disturbance such as fire. Bushlands with the most butterfly species are those in good condition, with an open canopy and diverse understorey.

The absence of resident butterflies is most noticeable in small bushlands close to the city, which have been isolated for a long time, or have suffered past disturbance. Harry Sandon Reserve, Hillview and Shenton bushland still have three resident species, but Kensington, Wal Hughes, Point Resolution and Signal Hill bushlands now have no resident native butterflies.

Some native butterflies actually increase after disturbance. These species have caterpillars able to feed on widespread, introduced weeds. The Australian painted lady (caterpillars can feed on cape weed), the tiny western grassdart (feed on various introduced grasses), and the western and marbled xenicas (feed on veldt grass) are commonly seen in most suburban bushlands. Kings Park and Bold Park both support thousands of western xenicas.

When to look

Most resident bushland butterflies breed only once a year. They can be seen only for a few weeks each year, during their brief 'flight period'. The rest of the time they are in their other life stages: egg,

By Matt Williams

caterpillar, pupa. Almost all these butterflies have their flight period in spring, between late September and mid December. A few, including the endangered graceful sun moth, have it in autumn. For each species, the flight period is synchronised for the entire population – so you need to know both where, and when to look. To find a particular species, you should find out its peak flight period. Although late October to early November is the best time to find the western jewel, fringed heath-blue, blue iris-skipper and spring sun moth, it is not until mid-November that other species such as the western brown and large bronze-azure are at their peak.

Overall, the best time to look for butterflies is in warm sunny weather during October and November, when the majority of species are on the wing, and the chances of seeing them are greatest. Late morning is usually the time when butterflies are most active.



The meadow argus (left) and Australian painted lady are common widespread butterflies that can be seen in both bushlands and gardens. (Photo: Matt Williams)

Resources

- CALM's Naturebase website has pictures and information on many of the more common native butterflies. www.naturebase.net/plants_animals/butterflies/index.html.
- A field guide to Australia's 416 butterfly species has recently been published by CSIRO Publishing. <http://www.publish.csiro.au/nid/23/pid/3948.htm>. (See Resources page 12).
- Hay, R.W., Houston, T.F., Williams, A.A.E. and Williams, M.R. (1994). Bring back the Butterflies – butterfly gardening for Western Australians. Western Australian Insect Study Society Inc. and WA Museum.

What's On Spring 2005

Opportunities for you to participate! Visitors always welcome. Most activities are FREE!

REGISTRATION/CONTACT DETAILS

for organisations providing a series of activities are as follows:

- Ⓞ **Friends of Dianella Bushland** Meet at Reserve carpark. Enter via Dianella Dr, Gay St and then into Channel 7 Private Road. Carpark on right before Channel 7 gatehouse. Compacted limestone tracks suitable for prams. Contact Jan 9344 2872 or visit webrite@crystal.com.au.
- ◆ **Friends of Kensington Bushland** Etwell St, Victoria Park. Call Gwynth 9361 8674
- ◆ **Friends of Lake Gwelup** Meet at Scout Hall carpark, Huntriss Rd, Gwelup. Call Betty 9444 5640.
- ★ **Friends of Star Swamp Bushland.** Meet at Henderson Environment Centre, Groat St North Beach. Call Christine 9447 2983.
- Ⓞ **Perth Conservation Volunteers Australia (CVA)** 20 Stack St, Fremantle. Free pick-up from Fremantle railway station 8am daily. Contact Linda 9336 6911 or visit perth@conservationvolunteers.com.au.

- Ⓞ **Naragebup** Rockingham Regional Environment Centre, Safety Bay Rd, opposite Lake Richmond, Peron. Contact 9591 3077 or www.naragebup.org.au.
- * **Nearer to Nature (N2N) CALM.** Affordable prices for all activities. Bookings 9295 2244 or visit www.naturebase.net/nearer-tonature.
- ◆ **Skills for Nature Conservation (SFNC)** A partnership between the Swan Catchment Centre (SCC), CALM and Greening Australia (WA). Call SCC on 9374 333.
- Ⓞ **Western Australia Gould League (Inc)** Herdsman Lake Wildlife Centre Cnr Flynn St and Selby St, Wembley. Contact 9387 6079 or visit www.wagouldleague.com.au.
- ▶ **Urban Nature (CALM)** Bushland restoration training days. Talbot Road Bushland (Cnr Talbot Rd and O'Connor St, Swan View) and Brixton Street Wetland (Alton St, Kenwick). Call Kate 9474 7032.

17 Saturday 8am
Guided nature walk with the Friends of Lake Gwelup. ◆

Get Your Hands Dirty

October

- Thursdays 7.30-8.30am
Weekly bush regeneration works with Friends of Kensington Bushland to target Geraldton carnation weed. ◆
- 1 Saturday 9am-12 noon
Weeding and maintenance with the Friends of Yellagonga at Kingfisher Cove. Call Jennifer 9448 0053.
- 2 Sunday
Weed control and green stock maintenance with CVA at Wilson Park Wetlands and Canning River Regional Park. Free sausage sizzle. Ⓞ
- 3 Monday-7 Friday
Sign maintenance and visitor access improvements with CVA at Marmion Marine Park. Also planting of native sedges along the Swan River foreshore. Ⓞ
- 8 Saturday
Rehabilitation activities with CVA, Friend's groups and the City of Joondalup at Porteous Park, Sorrento. Free sausage sizzle. Ⓞ
- 9 Sunday 9am
Field day with Friends of Baigup. Meet at river end of King William St. Morning tea supplied. Bring your safety gear and water. Call Harry 9271 3242.
- 15 Saturday 1-4pm
Bush regeneration with Friends of Warwick Senior High School Bushland. Meet Warwick SHS car park, entry off Erindale Rd. Call Robyn 9342 6840.
- 16 Sunday 10.30am-12.30pm
Weeding watsonia, arundo grass and blackberry with Friends of Piesse Brook. Meet end of Schipp Rd in Piesse Brook, Kalamunda. Call Linda 9293 3102.
- 16 Sunday
Weed control and green stock maintenance with CVA at Wilson Park Wetlands and Canning River Regional Park. Free sausage sizzle. Ⓞ
- 22 Saturday 9-12noon
Planting and maintenance with the Friends of Yellagonga at Edgewater Site. Call Jennifer 9448 0053.
- 29 Saturday
Feral pigeon survey with Naragebup and City of Rockingham. Call Farhan 9527 3386.

November

- 1 Tuesday 7.30pm
Acid Sulphate Soils by guest speaker Dr Steve Appleyard (Department of Environment) for the Urban Bushland Council. National Trust, 4 Havelock St, West Perth. Contact 9420 7202 or ubc@inet.net.au.
- 2 Wednesday 9am-12 noon
Bushland restoration training day with Urban Nature at Brixton Street Wetland. ▶▶
- 4 Friday 7pm
Frog Fest at Herdsman Lake with WA Gould League. Sausage sizzle, spotlight for frogs (BYO torch). Bookings essential (\$7 per head). Ⓞ
- 6 Sunday 7.30-8.30am
Breakfast (cereals, fruit, fully cooked) and **optional bush walk** in Bungendore Park, Admiral Rd, Bedfordale. Entry via Armadale Christian College. Cost involved and bookings essential by 2 November. Call Jim/Elaine 9497 3353 or Irene 9399 3386.
- 9 Wednesday 7.30pm
Talk on Feral Animals in Natural Areas with AABR (WA). Feral animal management in natural areas, latest research and programs using cat control as a case study. Kings Park. RSVP Anna-Marie Penna 0411 040 706 or aabrwa@westnet.com.au.
- 11 Friday 7.30pm
Night walk with Friends of Dianella Bushland. Ⓞ
- 11 Friday 7-8pm
Night stalk with Friends of Kensington Bushland. ◆
- 18 Friday 8pm
Snakes Alive! talk hosted by WA Naturalists' Club at Naragebup. Ⓞ
- 18 Friday 8pm
Night walk with the Friends of Periwinkle Bushland. BYO torch covered with red cellophane. Meet Periwinkle Bushland gate opposite Mullaloo Heights Primary School, Charonia Ave, Mullaloo. Contact Dot 94013724 or Dluffit@spartan.com.au.
- 19 Saturday 7am
Bird walk at Herdsman Lake with WA Gould League. (Gold coin donation). Ⓞ
- 19 Saturday 3-8pm
SFNC evaluate and celebrate. Help SFNC plan an exciting and effective program for 2006 (3-5pm). Afterwards, celebrate your achievements and enjoy Nyoongar cultural activities. Venue TBA. ◆
- 19 Saturday 8am
Guided nature walk with the Friends of Lake Gwelup. ◆
- 25 Friday 9am - 12 noon
Bushland restoration training day with Urban Nature at Talbot Road Bushland. ▶▶
- 26 Saturday 8am
Morning bushwalk with Friends of Star Swamp. Features birds, flora and fauna. ★

November

- Thursdays 7am and 8am
Weekly bush regeneration works with Friends of Kensington Bushland to target Geraldton carnation weed. ◆
- 6 Sunday 9am
Field day with Friends of Baigup. Meet at river end of King William St. Morning tea supplied. Bring your safety gear and water. Call Harry 9271 3242.
- 13 Sunday 8-10am
Re-establish quadrats at Gumblossom Reserve with Quinns Rock Environmental Group. Meet at Community Centre carpark Tapping Wy, Quinns Rocks. Call Renata 93059382.
- 13 Sunday 8-10am
Bushcare with Quinns Rocks Environmental Group at Quinns Beach Bushland. Meet cnr Seaham Wy and Kinsale Dr, Mindarie. Call Karyn 9305 1405.
- 19 Saturday
Remove exotic Victorian tea tree and fence coastal species from rabbits with CVA at Vlamingh Memorial, Cottesloe. Free sausage sizzle. Ⓞ
- 20 Sunday 9am-12 noon
Bush regeneration with Friends of Warwick Conservation Area. Meet at bowling/tennis club carpark, Lloyd Dr. Contact Karen 9342 8482.
- 20 Sunday 10.30am-12.30pm
Weeding watsonia, arundo grass, and blackberry with Friends of Piesse Brook. Meet end of Schipp Rd in Piesse Brook, Kalamunda. Call Linda 9293 3102.
- 27 Sunday 9am
Field day with Friends of Baigup at Hinds Reserve. Weed monitoring and evaluation, seed collection, discuss 2005 achievements and reset goals for 2006. Morning tea supplied. Meet near Garrett Road Bridge. Call Harry 9271 3242.
- 27 Sunday
Maintenance and mulching with CVA, City of Cockburn & Friends group at Manning Lake. Ⓞ

December

- 12 Monday-16 Friday
Installing protective fencing with CVA around 2005 plantings at North Lake and Thomsons Lake, Beelii Regional Park. Ⓞ

HIGHLIGHTS

Bushcare Month - October
October is designated as Bushcare Month. Visit www.ea.gov.au/land/bushcare.

National Weedbuster Week - 9-15 October
Held in the second week of October each year and aims to raise awareness and increase public understanding about the problems weeds cause. Visit www.weedbusters.info/

National Water Week - 16-22 October
To encourage Australians to protect, conserve and get involved in water resource management.

National recycling week - 7-13 November. www.planetark.com

Coastcare Week - 1-7 December (Natural Heritage Trust)

International Volunteer Day - 5 December
This day celebrates the efforts of volunteers who have made important contributions to society. Visit www.volunteer.org.au/.

Develop Your Skills

October

8 Saturday 9am-1pm
SFNC Managing Phytophthora dieback in bushland Disease recognition, minimizing spread and managing affected bushland. Practical experience with trunk injection and phosphite spraying. Presenter: Dr Christopher Dunne. ◆

15 Saturday 9am-4pm
Bushland regeneration workshop with Bush Skills for the Hills. Regeneration, revegetation, weed management, basic plant identification and planning your project. Ledger Rd, Multi Use Community Centre, Gooseberry Hill. Call EMRC 9424 2222.

15 Saturday 1-4pm
The Backyard Wildlife Haven with Bob Goodale at Naragebup. Habitat to attract butterflies, birds, and frogs. Cost involved Ⓞ

18 Tuesday 6-8.30pm
SFNC Plant patterning across the Plain. Part 1 - "A Virtual Tour". Advanced course to understand how landforms, soils and water availability contribute to the patterning of plant distributions on the Swan Coastal Plain. Presenter: Bronwen Keighery (Botanist - Department of Environment). ◆

22 Saturday 10am-3.30pm
SFNC Plant patterning across the Plain, Part 2 - "Seeing is Believing". A field trip along a bushland transect across the Swan Coastal Plain. See the change in plant communities and landforms across the Plain, explore the associated biodiversity patterning and gain a deeper understanding of our bushland environment. Presenter: Bronwen Keighery. ◆

29 Saturday 9am-1pm
SFNC Bushland management skills - brushcutting. Accredited course including OH&S, maintenance and types of safety equipment, practical component. Register by 30 Sept. Presenters: Challenger TAFE. ◆

22, 29 Oct and 5 Nov Saturday 1-4pm
Organic vegetable growing at Naragebup. Cost involved Ⓞ

November

5 Saturday 9.30am-3.30pm
Native grass walk and workshop with Eastern Hills Wildflower Society. 9.30-12 noon: discuss grass structure and a walk at Coulston Rd. 1.30-3.30pm grass identification. Octagonal Hall, McGlewe Rd, Glen Forrest. Registration essential. Call Anne 9295 4249 or Una 9295 1668.

26 Saturday 9am-12 noon
In-stream habitat creation workshop with Bush Skills for the Hills. Food webs, native fish and macro-invertebrates, habitats in your stream and practical hands-on training. Venue TBA. Call EMRC 9424 2222.

Delivering the Message

October

1 Saturday - 7 Friday
'West's Wonderful Wildflowers' ASGAP Conference. Hosted by the Wildflower Society of WA at Hale School, Perth. Contact 9383 7979 or www.ozemail.com.au/~wildflowers.

4 Tuesday - 6 Thursday
Sustainability Side by Side: State NRM Conference Aims to explore environmental, economic and social systems (sustainability) at a local community and paddock level in WA. WA College of Agriculture, Denmark. www.wanrmconf2005.org.

14 Friday - 17 Monday
Mt Barker Wildflower Festival. Contact Mt Barker Tourist Bureau 9851 1770.

16 Sunday 10am-2pm
Family Freshwater Festival at Herdsman Lake Wildlife Centre, Wembley. Ⓞ

25 Tuesday - 27 Thursday
Flora Conservation Symposium - Advances in plant conservation: implications for flora management and restoration. National and international speakers. Venue: Technology Park. Contact David Coates floras@calm.wa.gov.au.

Bunbury/ Busselton Region

Bunbury Naturalists' Club meetings and natural history talks are held every second Tuesday evening of the month at 5.30pm in the conference room, Lotteries House, 101 Victoria St, Bunbury. Club excursions occur every third Saturday. The club's Herbarium group meet every Tuesday morning at the South West Regional Herbarium at CALM. Interested visitors are most welcome.

For Busselton Naturalists' Club activities confirm details by checking the Busselton Margaret Times or contact Bernie on 9727 2474 (h) or 9752 1949 (w), bmasters@inet.net.au. Meetings are held at the RSL Hall, Causeway Rd, Busselton. Visitors welcome.

The South West Region Herbarium Group meets every Tuesday morning working on the South West Regional Herbarium. Visitors are welcome to all activities. For further information call Shirley 9791 5915.

Leschenault Community Nursery Inc. For further information call Shirley 9791 5915 or Mark 9791 4670.

October

23 Sunday
Bird-watching walk with Busselton Naturalists' Club in the Whichee Range Nature Reserve. Moderate-level 15km walk. Bus transport.

November

9 Wednesday
The future of renewable and sustainable energy in WA presented by Shelley Liddelow for the Busselton Naturalists' Club. RSL Hall, Causeway Rd, Busselton.

20 Sunday
Milyeannup National Park excursion with Busselton Naturalists' Club. Moderate-level 15km walk. Bus transport.

December

7 Wednesday 6pm
Christmas party with Busselton Naturalists' Club at the RSL Hall, Causeway Rd. Bring food and drinks. Entertainment, raffle, slides, 'Squashed Possum Award'.

These events are forwarded for inclusion in the Swan Catchment Centre's monthly information sheet and Riverlink web site at www.wrc.wa.gov.au/swanavon as well as the Environmental Education Network.

Please send us your January, February, March events by December 1, 2005.

The categories bring similar types of activities together in chronological order:

Listen, Look and Learn - talks, walks and seminars

Get Your Hands Dirty - bushland, river, wetland and coastal hands-on care

Develop Your Skills - courses, workshops, training and development

Delivering the Message - expos, festivals, conferences and 'theme weeks or days'

Listen, Look & Learn

October

2 Sunday 1-3pm
Preparing for summer fires with N2N. Learn how to prepare your property for the possibility of a bushfire. Free talk for 15+ years. Hills Forest Discovery Centre, Allen Rd, Mundaring. *

3 Monday 7pm
Bush Foods - New Directions in Research in WA presented by Dr Woodall from the Department of Agriculture. Music and Drama Centre, Hale School. Call Wildflower Society 9383 7979.

5 Wednesday 9am-12 noon
Bushland restoration training day with Urban Nature at Brixton Street Wetland. ▶▶

8 Saturday 8-9am
Spring orchids guided nature walk with Friends of Kensington Bushland. ◆

9 Sunday 8.30-9.30am
Theme walk with Friends of Dianella Bushland. Ⓞ

9 Sunday 10am-12 noon
Maintaining your native garden with N2N. Cost involved 12+ years. Hills Forest Discovery Centre, Allen Rd, Mundaring. *

9 Sunday 10am-1pm
Nature photography - digitally with N2N. Produce imaginative and creative pictures with the help of a specialist. Cost involved, 12+ years. Margaret Forest Centre, John Forest National Park, Hovea. *

14 Friday 7.30pm
Night walk with Friends of Lake Gwelup. ◆

14 Friday-15 Saturday
Community Talk 'Snakes Alive' and family sleeper (optional) with WA Gould League. BYO food, BBQ facilities supplied. Night stalk along swamp boardwalk (BYO torch). Breakfast and guided birdwalk at 7am. (\$10.00 a head). Ⓞ

15 Saturday 10am-1pm
Tjuntalup Kadujin walk and talk with N2N. Hear stories of the Swan River with a Nyoongar guide. Cost involved, 12+ years. Meet at jetty, Honour Ave, Bicton. *

15 Saturday 8am
Guided nature walk with the Friends of Lake Gwelup. ◆

21 Friday 8pm
Nature talk hosted by WA Naturalists' Club at Naragebup. Ⓞ

21 Friday 7.30pm
Nocturnal walk with Friends of Star Swamp. Nocturnal birds, spiders, frogs and insects. ★

22 Saturday 8am
Morning bushwalk with Friends of Star Swamp. Features birds, wildflowers, and insects. ★

22 Saturday 1-3pm
Preparing for summer fires with N2N. Learn how to prepare your property for the possibility of a bushfire. Free talk for 15+ years. Hills Forest Discovery Centre, Allen Rd, Mundaring. *

23 Sunday 1-3pm
Beelii Regional Park scenic cycle with N2N. Cost involved, 9+ years. Cockburn Wetlands Education Centre, Hope Rd, Bibra Lake. *

28 Friday 9am-12 noon
Bushland restoration training day with Urban Nature at Talbot Road Bushland ▶▶

November

1 Tuesday 7.30pm
Acid Sulphate Soils by guest speaker Dr Steve Appleyard (Department of Environment) for the Urban Bushland Council. National Trust, 4 Havelock St, West Perth. Contact 9420 7202 or ubc@inet.net.au.

2 Wednesday 9am-12 noon
Bushland restoration training day with Urban Nature at Brixton Street Wetland. ▶▶

4 Friday 7pm
Frog Fest at Herdsman Lake with WA Gould League. Sausage sizzle, spotlight for frogs (BYO torch). Bookings essential (\$7 per head). Ⓞ

6 Sunday 7.30-8.30am
Breakfast (cereals, fruit, fully cooked) and **optional bush walk** in Bungendore Park, Admiral Rd, Bedfordale. Entry via Armadale Christian College. Cost involved and bookings essential by 2 November. Call Jim/Elaine 9497 3353 or Irene 9399 3386.

9 Wednesday 7.30pm
Talk on Feral Animals in Natural Areas with AABR (WA). Feral animal management in natural areas, latest research and programs using cat control as a case study. Kings Park. RSVP Anna-Marie Penna 0411 040 706 or aabrwa@westnet.com.au.

11 Friday 7.30pm
Night walk with Friends of Dianella Bushland. Ⓞ

11 Friday 7-8pm
Night stalk with Friends of Kensington Bushland. ◆

18 Friday 8pm
Snakes Alive! talk hosted by WA Naturalists' Club at Naragebup. Ⓞ

18 Friday 8pm
Night walk with the Friends of Periwinkle Bushland. BYO torch covered with red cellophane. Meet Periwinkle Bushland gate opposite Mullaloo Heights Primary School, Charonia Ave, Mullaloo. Contact Dot 94013724 or Dluffit@spartan.com.au.

19 Saturday 7am
Bird walk at Herdsman Lake with WA Gould League. (Gold coin donation). Ⓞ

19 Saturday 3-8pm
SFNC evaluate and celebrate. Help SFNC plan an exciting and effective program for 2006 (3-5pm). Afterwards, celebrate your achievements and enjoy Nyoongar cultural activities. Venue TBA. ◆

19 Saturday 8am
Guided nature walk with the Friends of Lake Gwelup. ◆

25 Friday 9am - 12 noon

Bushland restoration training day with Urban Nature at Talbot Road Bushland. ▶▶

26 Saturday 8am
Morning bushwalk with Friends of Star Swamp. Features birds, flora and fauna. ★

December

4 Sunday 9am-12 noon
Nature walk and Christmas celebration with Friends of Warwick Senior High School Bushland. Meet Warwick SHS car park, entry off Erindale Rd. Call Robyn 9342 6840.

10 Saturday 8-9am
Guided nature walk 'Christmas Celebration' with Friends of Kensington Bushland. ◆

REGIONAL REPORTS

All groups welcome visitors and new members.

South West Region

Good things have been happening at Paganoni Swamp

By Leonie Stubbs

A successful fungi walk was held in June with Roz Hart and members of the Perth Urban Bushland Fungi Project. Three groups headed off in different directions, but all were soon deep in discussion examining the variety of fungi found just off the tracks. It is remarkable how quickly you become attuned to looking out for, not only flowers and birds, but also fungi.

Kate Brown, Grazyna Paczkowska and Renee Miles from CALM (Urban Nature) assisted volunteers and contractors from Ecojobs to pull mature Geraldton carnation weeds for three days in July. The use of contractors was made possible through a grant from CALM Regional Parks Unit.

A photography workshop was held in August led by Alex Graham from the WA Naturalists' Club and ably assisted by Karen, Peter and Stan. They passed on some simple, but extremely useful, techniques to improve the quality of our photos, as well as providing lots of encouragement.

For more information contact Leonie Stubbs on 9537 1831.

South East Region

World Environment Day at Serpentine-Jarrahdale

By Colleen Rankin

The Serpentine-Jarrahdale Shire Council's World Environment Day celebrations were a huge success, with more than 200 primary school students coming together in Mundijong to present their perspective on the environment. Students from years five to seven displayed posters, photos and models of their school's environmental studies, and each gave a short presentation.

Council provided two \$200 prizes and a number of library books, which were won by Marri Grove and Mundijong Primary Schools. Marri Grove won the best display for their map of Australia showing where albatross can be found. Mundijong won the presentation section, showing an enormous commitment to recycling throughout their school.

Jarrahdale Primary School also focused on recycling. Byford's theme was revegetation while Serpentine presented a 'Plan for the

Planet'. All schools were given a tray of native plants and a set of posters. Everyone who attended received two calico shopping bags containing fruit from a local orchard, environmental information and small gifts.

Children were enchanted with special guest, Myla the Little Eagle, brought along by volunteers from the Byford Raptor Rescue and Rehabilitation Centre. David and Jenny Pette from the Centre explained the danger to birds of prey ingesting rats and mice poisoned by baits. They also discussed the importance of native vegetation.

The Serpentine-Jarrahdale Shire Council has sponsored World Environment Day for local schools since 1999. Other sponsors this year were Fawcett Orchards, Australian Native Nursery Group, Greening Australia WA, Serpentine-Jarrahdale Landcare Centre, Water Corporation, Cockatoo Care Conservation Partnership and the Department of Agriculture, CALM and Department of Environment.

'Junkie jarrahs' at Bungendore Park

By Kim Sarti

Bungendore Park Management Committee has completed another year of its revegetation program for disused gravel pits and degraded areas in the park. About 500 seedlings were planted on the Community Planting Day on 16 July. A further 500 seedlings were planted by students of nearby Armadale Christian College, on National School Planting Day on

29 July. All seedlings were grown from seed collected on-site by the Armadale Wildflower Society to maintain genetic integrity. The revegetation program commenced in 1982, and since then 91,000 seedlings have been planted.

Funding from Swan Alcoa Landcare Program and the City of Armadale has allowed the committee to engage Dieback Treatment Services to continue dieback control in Bungendore Park this year. The control treatment involves the spraying and injection of susceptible plants with phosphite (a biodegradable fungicide). This is carried out in dieback-affected areas, and along the interface between affected areas and dieback-free areas. It's quite a strange sight to see rows of jarrah trees with syringes poking out of their bark.

For more information contact Kim on 9470 2297 or kimsarti@bigpond.net.au.



'Junkie Jarrah' tree with syringe treatment for dieback control in Bungendore Park. (Photo: Kim Sarti).



Glen Tuffnell (Dieback Treatment Services) undertaking dieback control treatment in Bungendore Park. (Photo: Kim Sarti)

REGIONAL REPORTS

Central Region

Joint venture successful

By Harry Bastow

Now at last it is all falling into place. The Friends of Baigup and Friends of Eric Singleton Bird Sanctuary joint venture is successful. Our happy productive group is able to manage the programs for both Hinds Reserve and the Bird Sanctuary.

The large task of mulching the sanctuary's perimeter was completed in time to plant more than 7000 seedlings along the meandering bird flight path, the butterfly patch in front of the hide, and melaleucas along the north side of the water course. The planting at Hinds Reserve will be the last for a while. Now it is up to Mother Nature to do its job.

The major management problem is not *Salvinia*, narrow leaf cotton bush, or parrot feathers, but acid-sulphate soils at both sites. At present all we can do is keep the water up to a manageable level. The Friends group would like to take this opportunity to thank all the experts for their strong support and encouragement with this problem.

With the help of our sponsors we are now able to provide a long-sleeve shirt and cap with the Friends logo to all our group members. The controller's shirt and cap are in a bright colour for ease of locating.

For more information contact Harry on 9271 3242.

Wild places in the city

Summary from Friends of Shenton Bushland newsletter #57

We would encourage readers to make time to visit Shenton bushland soon, to view the flowers as the spring season unfolds! With good rains, and a long cool winter, we have had a great winter flowering period. As the weather warms up again, many spring flowers, especially orchids are starting to appear.



We are presently hand-weeding bulbous weeds (*watsonia*, *freesias*, and *lachenalias*), as well as other weeds such as Geraldton carnation weed. We welcome you to join us any Sunday morning from 8am to 10am if you have time. After three years of intensive work, the *watsonia* patch is now quite small, and



The Friends of Baigup 'Meandering Bird Flight Path' team. (Photo: Harry Bastow)

becoming easier to deal with. However, the *lachenalias* are still spreading, and will need intensive work for the next few years.

We held the annual 'Bush to Beach' walk on Sunday 18 September. This year, we have also been collaborating with the Friends of Lake Claremont, and the Friends of Allen Park to survey a much longer walk. The 15km route traverses through Shenton Park, Underwood Avenue bushland, Lake Claremont (talk on birds), Allen Park in Swanbourne and finishes at Cottesloe Beach (Grant St Reserve).

Our aim is to create a network of trails linking all of the natural areas between Kings Park, the ocean, and the Swan River. If you live near a natural area that is not currently part of the trail, we encourage you to help us work out a way of making it part of the network!

For more information contact Dani on 9381 3470.



North West Region

Friends of Periwinkle Bushland, Mullaloo

By Rene Duthie

Periwinkle is a 3.7-hectare bushland reserve bounded by Periwinkle, Charonia and Meridian road. The reserve is representative of

tuart-banksia woodland that once occurred in this area.

A fungi foray was recently held, and to our delight approximately 30 people joined in. Experts from the Urban Bushland Fungi Project assisted with finding and identifying fungi, and the Friends assisted with recording. It was a huge success, with even the most sceptical participants finding the walk and information interesting. Since the fungi foray a huge ghost mushroom and many other fungi have been sighted.

An expert in native plants accompanied us on our spring walk on 10 September. Donkey orchids, running postman, native wisteria, *leschenaultia*, yellow autumn lily, *banksia*, and *mulla mulla* are already in flower in our bushland.

We would like to further reduce Geraldton carnation weed, and this will be our targeted weed for this month. We are still attempting to find a solution to our drain area which gets flooded. If the amount of water entering the drain cannot be reduced, we will need to consider specific plants that can cope with floods, or possibly a small bank. Our feral bees are still multiplying, and each year a swarm has broken off and flown away. We are further investigating a solution with the help of our local council.

For more information contact Dot Lullfitz on 94013724 or Dhullfitz@spartan.com.au.

REGIONAL REPORTS

Friends of Star Swamp commence weed control trial

By Christine Curry

The Friends of Star Swamp Bushland has commenced a monthly weeding morning in the Reserve, on the fourth Sunday of each month. The group has chosen a clearly defined section of the reserve, opposite the Henderson Environment Centre, as the initial focus of the weeding effort. Over the next 12 months, volunteers will work through this area, removing and bagging veldt grass, pigface, bridal creeper and other low weeds, poisoning selected species such as freesias, and chopping out larger weedy trees and bushes. This initial weeding program will serve as a trial for future efforts. Weed regrowth will be monitored and the growth of indigenous species documented and photographed over time. This will help us determine if this method of weed control is successful. If so, volunteers will gradually move out over a wider area of the Reserve, although at the current rate of weeding, this is a very long term project. However, in conjunction with Local Government spraying programs and the annual Star Swamp Lupin Pulls, it is hoped that it will once again be proved that volunteers can make a difference in local urban bushland.

For more information contact Christine on 9447 2983.



North East Region

Lake Goollellal sites and nursery news

By Jennifer Hawkes

This planting season, the Friends of Yellagonga established a new rehabilitation site on Lake Goollellal, temporarily named 'Two Ducks Landing' as it is north of our established site, 'Ducks Landing'. The name stuck, and we have had two planting days there during the past months, the first just before a period of prolonged dry weather. Our site managers watered by hand to ensure their survival, but good rains took over and all are thriving. There are now three almost-contiguous rehabilitation sites on Lake Goollellal: a CALM site at the rear of Waldecks; 'Ducks Landing'; and finally the most northerly 'Two Ducks Landing'. On the western side, our well-established 'Bindaree Terrace' is alive with birds.

All of our plantings are from our own nursery. Over the winter period we have supplied approximately 28,000 plants, not only to our own sites within the Yellagonga Regional Park, but also to local government, schools and organisations. The nursery has become a focal point for us to ensure that healthy local plants are available for the whole catchment. These plants are also available to the general public for a gold coin donation.

Currently, the nursery is in a transition stage and we are looking for an assistant manager or someone who, if suitable, could become a full-

time manager in the future. If there is anyone out there who feels that he or she could fulfil this role, please contact our chair, Will Carstairs, on 9300 3763.

A 'fungi foray' at Neil Hawkin's Park in July resulted in 13 fungi species being found. During 2004, a total of 36 species have been located within the Park. A summary of the fungi in Yellagonga has been prepared by Roz Hart. It includes maps, GPS coordinates, and some photos. This will assist us with monitoring the number of fungi species, their abundance, and provide a gauge of our bushland health.

For more information contact Jennifer on 9448 0053.

Hills Region

Eastern Hills

By Jenny Mackintosh

Weeding and planting is under way in all groups. We badly miss the help of Green Corps which is no longer available in the outer metropolitan area. They were really good and willing workers. For some of us it will be hard to get all the allocated plants into the ground but we will do our best! In Mundaring, the 'Trek the Trail' walk from Mount Helena to Parkerville was a great success. Community groups had stalls and a lot of interest was shown in the environmental ones. Not a lot of offers to help though!

For more information contact Jenny on 9572 1697.

Survey of environmental education programs in Western Australia

A survey of environmental education programs was undertaken in 2005 as part of the Department of Environment's *Environmental Education Strategy and Action Plan (1994)*. The survey has revealed a broad spectrum of approaches currently disseminating environmental information throughout the community.

The three main environmental issues addressed by the programs surveyed were habitat protection (73 per cent), flora and fauna conservation (71 per cent) and water conservation/source protection (61 per cent). By far the most common issue identified at the Commonwealth and State Government levels was the provision of funding for environmental education programs. Also identified was the need for greater coordination of environmental education at all levels of government. The survey results will form a central part of recommendations to be made to government at the end of the year. Copies of the survey summary are available from Bernie Riegler on 9278 0644 or by email (bernie.riegler@environment.wa.gov.au).

Enthusiastic volunteers wanted for the 2005 Children's Groundwater Festival

The 2005 Children's Groundwater Festival will be held at Whiteman Park from 9.30am-2.30pm Tuesday 22 November (or 29 November if it rains on 22 November). Its purpose is to teach children about groundwater and related environmental topics through their participation in a variety of fun and educational activities. Whiteman Park and Tammin Alcoa Landcare Education Centre are looking for volunteers interested in supervising some of the free time activities planned for the day. These include art and craft activities, catchment models and the Water Café.

Festival volunteers do not need any specific environmental knowledge. An interest in the environment and enjoyment of working with children is desired. A two-hour training session is available if required. Contact Patricia Dames on 9622 0200.

Group Profile: Friends of Kensington Bushland

Bushland in need of a friend

NEARLY six years ago following a spring walk and morning tea discussions with enthusiastic wildflower lovers, I realised that Kensington Bushland had no protector and was in severe need of a Friends group.

A friend and I had weeded the dreaded pink 'gladdies' for several years, and I had worked with Cathy Taylor in the late 1980s to save the bushland from various development proposals. Despite this, I had no idea that Kensington Bushland was zoned 'urban', and was in danger of development.

With the assistance of Andrew Thomson, Paul Flint, Cathy Taylor and Isabella Jennings from the Urban Bushland Council I tottered into the world of politics. I was completely naïve as to the complications and barriers that exist at all levels of Government. I believed that a Bush Forever site was just that, inviolate!

So began the Friends of Kensington Bushland (FoKB) along with a round of meetings, discussions, workshops, phone calls, lists of unknown organisations, and people to contact. The first major event was a large meeting to discuss the internal fencing at Kensington, which was precipitated by an explosive reaction on my part. Concerns were raised about the width and positioning of the fencing to create a dual-use track (walking and fire access).

A Town of Victoria Park (ToVP) Environmental Committee was set up, with another large meeting held at the Council Chambers. The Environmental Advisory Liaison Group was formed (now Community Environmental Advisory Group).

Persistence brings achievements

Over the years we have produced a brochure (funded by the ToVP) and a virtual herbarium with photos by John Barnett and produced by Paul Flint. We have designed an environmental and recreational area for the Kensington sandpit next door (contains endangered hop bush) which was endorsed by the council. Regular events in spring and summer have continued over the years.



Paul Flint and friends holding 'gladdies' weeded during Children's Activity Day 2003.



Left: Isabella Jennings (from left), Andrew Thomson and Jeanette McPhee enjoying morning tea, September 2001.

Right: Gwynth (from left), Neil (holding a Kensington Bushland Virtual Herbarium CD), and Ros, fungi walk July 2005. (Photos: Gwynth Schlipalius)

With involvement and insistence from our group, the *Remnant Vegetation Management Plan* has been updated and a *Bushland Enhancement Plan* has been completed. A 'bush-crew' has been employed and an environmental officer appointed to the ToVP.

Maximising resources

I think the most important lesson I have learnt was at a 'Skills for Nature Conservation' workshop. People from different Friends groups presented their histories, and how they had evolved. It emphasised the need to look at what resources you have and maximise them. Most groups have a small, dedicated core of people, with a large floating group of interested and caring members who are time-poor but like to know what is happening and attend events.

It was obvious that our group was not able to deal with large, time-consuming issues such as weed control; plant and animal surveys, and funding applications. The best way to achieve these was to encourage local council and environmental students to take on the tasks.

By Gwynth Schlipalius

FoKB has a very loose structure, is not incorporated, and has about six regular active members. We don't spend time on newsletters, but put a lot of effort into promoting our three or four major events of the year. These events are attended by 30 to 40 people and always involve morning tea and time to chat.

Bushland attractions

Kensington Bushland is 9.2 ha of jarrah-banksia woodland. It is situated off Etwell Street, behind Kent Street Senior High School, Victoria Park. It contains at least 160 plant species, lots of beautiful fungi, many birds and reptiles (including the rare slender legless lizard). About 23 species of orchids can be found flowering for about five months of the year. Recently a Murdoch University environmental student found scratchings which are very like those of a bandicoot.

Kensington Bushland is one of the largest bushland remnants so close to Perth city, and is one of two remnants in the ToVP. It provides the only major fauna habitat of its type for kilometres. It has reference sites for the Perth Region Plant Biodiversity Project which indicates the excellent condition of this area.

Contacts

The members of our group are committed to the protection and preservation of Kensington Bushland, as we all feel it is essential to keep a place for local plants and animals that once inhabited this area. We fear the loss of biodiversity, which was so common until recent times, and fear the loss of this heritage to future generations.

Our group meets at 7pm on the second Tuesday of the month at the Victoria Park Centre for the Arts, 12 Kent Street. Regular members include Paul Flint, Cathy Taylor, Anne Pettit, Helen Brown, Michelle Walker, Gwynth Schlipalius, Jeanette McPhee, and Sarah Mitchell from the ToVP.

For further information contact Gwynth on 9361 8674 or visit www.vicpark.wa.gov.au and follow the environment links to information about Kensington Bushland Reserve.

Resources

New publications

- Braby, M.F. (2004) *The Complete Field Guide to Butterflies of Australia*. CSIRO Publishing. \$39.95. This is the first complete field guide to all of the 416 currently identified butterfly species on Australia's mainland and islands. The introduction covers adult structure, classification, distribution and habitats, and life cycle and behaviour. This is followed by accounts of each of the 416 species, giving common name, scientific name, and other names (if any), as well as details of behaviour, habitat, status, and larval food plants. Accompanying each species is a distribution map, and photographs of the upperside and underside of both male and female specimens.
- *A biodiversity survey of the Western Australian agricultural zone* (2004) *Records of the Western Australian Museum* Supplement No. 67. A 385-page hard-cover book containing 13 papers on the biodiversity of over 1000 terrestrial and wetland sites across the Wheatbelt. The survey was conducted during 1997-2001, and highlights a number of important findings for biodiversity management, the threat of secondary salinisation to terrestrial and aquatic biodiversity, and provides new information about the area's ecosystems and biological richness.

Website watch

- **Bush Forever Reference Sites** have been identified through the Perth Region Plant Biodiversity Project. The sites are in public ownership, easily accessible and represent each of the major landform and soil units, vegetation complexes, floristic community types and threatened ecological communities occurring across the Swan Coastal Plain portion of the Perth Metropolitan Region. Designated 10m x 10m **photo reference points** at each site provide an assessment of current vegetation condition, plant community or floristic community type. Utilising Reference Sites that best match the characteristics of your area of interest will greatly improve your knowledge of the natural values of your own area, indicate comparative vegetation condition rating, or guide species selection for revegetation projects. **Reference site files** currently contain maps, aerial photos, and plant biodiversity information. It is hoped to expand the information in the files in the future. Each metropolitan Local Government and NRM region will also

hold copies of the relevant reference site files for their area. Community groups and other stakeholders will be able to obtain copies from these central locations. Visit www.councils.wa.gov.au/directory/walga/index.html/pbp

- A new **Swan River Trust** website provides up-to-date information on the Swan-Canning River system. The site includes management, recent events, glossary, alerts, and links to publications. Visit www.swanrivertrust.wa.gov.au



Ecoplan News is a quarterly newsletter of Urban Nature, a Department of Conservation and Land Management program to support community involvement in bushland conservation

If not claimed within 7 days, please return to
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