

Mentoring for Kids Teaching Kids week By Arron Wood

Issue 82

Winter 2012

*Time of Makuru and
Djilba in the Nyoongar
calendar.*

Urban Nature update

Page 2

**Weedwatch: African
box thorn**

Page 3

**Econote: Seabirds and
climate change**

Page 4

Little penguins

Page 5

Rakali research

Page 5

Learning opportunities

Page 5

What's on

Page 6

Funding opportunities

Page 7

Regional reports

Page 8

WA Herbarium

Page 9

EcoEducation

Page 9

Place-based learning

Page 10

Group profile:

Yellagonga

Page 11

Resources

Page 12

www.dec.wa.gov.au

The Kids Teaching Kids program began 13 years ago and has delivered more than 2,600 workshops with kids teaching kids on energy, water, waste, biodiversity and climate change. This has resulted in hundreds of on-ground projects with communities coming together around the environment – an issue that unites us all.

Having worked with many Landcare and environment groups over the years I know that one of the most pressing issues is succession planning, and connecting with the next generation. I've also seen wonderful things happen when the knowledge of the older generation is combined with the enthusiasm of the younger generation. Finding this link between generations isn't always easy, but that's where getting involved in the Kids Teaching Kids (KTK) program may help.

More than 55,000 students in hundreds of schools around Australia have been involved in KTK. Students choose an environmental topic, research that topic with the assistance of their teacher and an industry expert mentor and then deliver a workshop presentation to their peers, school and community. Trees have been planted, weeds cleared, water-saving devices installed and the list goes on. The program has also built many partnerships with environmental organisations, government and business. Importantly, students are empowered to take responsibility for their own learning and the challenges of saving our environment.



Students from St Mary's Primary in Melbourne host students from Kundat Jaru near Halls Creek, WA to launch the 2011 KTK week with founder Arron Wood (from left), St Mary's Principal Jim Sheedy, best-selling author John Marsden and Victorian Education Minister Martin Dixon. Photo – Kids Teaching Kids

Our mentors work with teachers and students to bring real-world learning and expertise to the workshops being developed by students. The mentor's role is very important as they do not attempt to control the presentation, but are there to provide relevant information and valuable industry links – the students take responsibility for their presentations.

The trick is connecting great mentors with enthusiastic teachers, and this can be facilitated in a number of ways. A mentor can sign up directly with KTK at our website. If you're a community group you may already be linked with a school so you can encourage the school to sign up and be part of the Australia Post KTK Week during August 27–31 this year. You could choose to host a local event and invite schools to be part of it.

The KTK team provides support on developing a workshop, on how to host your event and on how to access grant funding. We've worked with everyone from Landcare, Rotary, local government and catchment management authorities, to universities, community groups and local businesses. Through this work we give these groups' school partners the skills to take the content or project and present it to their local communities, and tell more people about the wonderful work being done.

I've seen the students that come out of the program and they are more resilient and optimistic, have a sense of future, are capable public speakers and can communicate ideas in many different forms. To be a part of the KTK program visit www.kidsteachingkids.com.au.

Ecological burn in Paganoni Swamp By Kate Brown

During the past five years there has been an increasing interest in Paganoni Swamp from researchers and from the local community. The 700 ha reserve is one of the few remaining tuart woodlands in the region in excellent condition, representing a continuous and relatively undisturbed ecosystem ranging from woodlands into low-lying wetlands.

Fire history maps indicate the area has not burnt for at least 30 years, and in autumn 2011 DEC put a prescribed burn through 70 ha of tuart-banksia woodland in the reserve. To gain an understanding of the management implications and impacts on biodiversity, a series of adaptive management research projects were put in place investigating resilience of tuart, associated plant communities and fauna to an autumn prescribed fire. The objective is for the results of the research to inform fire management in Paganoni Swamp.

In April this year, 12 months after the fire, the Department of Environment and Conservation's (DEC's) Urban Nature program held a workshop to discuss early results of the various projects. The workshop brought together researchers from UWA (Brian Chambers) and Murdoch University (Katinka Ruthrof, Leonie Valentine), DEC officers and the Friends of Paganoni Swamp.

Early results from the tuart work indicate that recruitment was patchy, occurring mostly where the fire had been hot and ash beds were created by large fallen trees. Recruitment of tuart has been helped by a peak flowering and fruiting event prior to the fire. Work on reptile assemblages is indicating there may not be a significant difference in assemblages between burnt and unburnt areas, and this may be related to the fact that the burn was a mild autumn burn.

Early results on the resilience of tuart-banksia woodland to weed invasion following fire indicate a series of weeds are occurring much more frequently across the burnt woodland



Autumn prescribed burn in the Paganoni Swamp tuart-banksia woodland. Photo – Kate Brown

than the unburnt. Of particular concern is the weedy pigface (*Carpobrotus edulis*). Results are all preliminary and research is continuing. The work will inform an ecological burn plan currently being developed for the reserve by DEC. The workshop was followed by a walk through the tuart-banksia woodland that was part of the prescribed burn, visiting the various project sites.

Quenda survey underway By Geoff Barrett

WWF-Australia and DEC are pleased to announce that the 2012 community survey for quenda is now underway. Thanks to the early birds who have sent in sightings, we already have recent records from more than 600 locations.

Quendas or bandicoots (*Isodon obesulus*) are native mammals about the size of a rabbit with brown to yellow-brown fur, a long pointed nose, very short ears and a short tail. They prefer to live near waterways where dense low vegetation persists. We're keen to hear from people across the south-west if they have seen quendas in their local area.

Our intention is to map important habitat for quenda, compare your sightings with earlier quenda surveys, and identify unoccupied habitat. While all sightings are useful to us, we are particularly interested in records from the Perth region.

We ask that you tell us where the animals were seen (GPS, Google map or street location), the date they were seen and an estimate of how many were present. We are also interested in whether there were family groups with young quendas. A photo of the quenda would be ideal. Please include your

contact details so we can ring and confirm the sighting if necessary.

If you have seen a quenda, please contact WWF-Australia species conservation manager Katherine Howard at khoward@wwf.org.au or phone 9442 1203, or DEC Swan Region ecologist Geoff Barrett at geoff.barrett@dec.wa.gov.au.



The rustling in the dog food bin gave it away. This resourceful quenda had climbed up, lifted the lid and got inside without any help. We are interested in quenda sightings and photos. Photo – Nigel Dudley

Contacts

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Email urban.nature@dec.wa.gov.au

Current and archived issues of *Bushland News* are available at www.dec.wa.gov.au/programs/urban-nature/index.html.

Winter Bushland News

Spring *Bushland News* contributions should be sent to Urban Nature at urban.nature@dec.wa.gov.au by **Thursday 23 August 2012**. *Bushland News* seeks original contributions. If your submission has been or may be published elsewhere please let us know. Compiled and edited by Jo Tregonning.

African boxthorn

By Julia Cullity

African boxthorn (*Lycium ferocissimum*) is one of 12 new additions to the Weeds of National Significance list. It was introduced to Australia from South Africa as a hedging plant. Capable of invading bushland, African boxthorn can form dense impenetrable thickets and has been known to affect colonies of seals, sea lions and seabirds on offshore islands.

A spiny, woody perennial shrub, African boxthorn is present across inland and coastal areas of southern Australia. In Western Australia it is found from Carnarvon to the South Australian border, with infestations in the Wheatbelt, northern and southern coastal heaths and offshore islands from the Houtman Abrolhos to the Recherche Archipelago. Intensive management during the last decade is aiming to eradicate it from the Abrolhos Islands. A major project is underway to tackle African boxthorn over 400 ha on the south coast NRM region including Esperance, Stokes Inlet and Ravensthorpe.

Identification

African boxthorn is commonly a 2–3 m multi-branched shrub that can grow up to 6 m high. The downward curving branches are hairless with numerous long spines at right angles to the stem, and all branches terminate with a spine. The leaves are commonly bright to sometimes dark green, oval and slightly fleshy, 10–40 mm long and 4–10 mm wide. They occur in whorls of 5–12 at nodes along the stems and at the base of spines. Flowering occurs year round with flushes in autumn and spring. The flowers can be white or lilac-purple, are funnel-shaped and hang from a long stalk. The berries are round, and ripen from green to bright red and contain 35–70 seeds.

Similar species

On islands and the limestone coast, African boxthorn could be mistaken for the native nitre bush (*Nitraria billardierei*). Lacking spines, the egg-shaped nitre bush fruit contains only one seed.



African boxthorn forms dense spiny thickets on coastal dunes at the Pelsaert Group of the Abrolhos Islands. Photo – DEC

The native Australian boxthorn (*Lycium australe*) occurs in the Wheatbelt, Goldfields and south coast of WA. It is best distinguished from the weedy African boxthorn by its smaller height, smaller but broader leaves and fruits that contain 5–20 seeds.

Biology

African boxthorn re-sprouts readily and broken stem or root pieces can stay alive for some months before resprouting. Seed is highly viable and presumed to have a life of up to six years. Disturbance can result in mass germination of seedlings. It is mostly dispersed by foxes and birds, which consume the red berries and excrete the seeds. Seedlings take two or more years to begin fruiting. African boxthorn will shut down and shed their leaves during warmer periods when average temperatures exceed 28°C.

Control

All control methods should be undertaken when the plant is actively growing. An easy way of testing for plant dormancy is by giving the plant a shake – if leaves stay attached it is actively growing and can be treated. Wear protective clothing to prevent injuries from spines. Hand pull or dig out very small seedlings, removing all roots. For mature plants, cut at the

base and paint with 50 per cent glyphosate or spray a basal bark treatment of 250 ml Access® or 250 ml Garlon® in 15 L of diesel to the bottom 15 cm of stem of the uncut plants. Do not leave cut stems in contact with the soil. Alternatively, foliar spray with glyphosate (450 g/L) 100 ml to 10 L of water and 25 ml of Pulse®, making sure the entire plant is covered. Follow up treatment on any resprouting stems or new seedlings for up to six years. Monitor boxthorn-free areas every two years to detect and remove seedlings before they fruit.

More information

African boxthorn, Herbiguide. Visit www.herbiguide.com.au/Descriptions/hg_African_Boxthorn.htm.

Contact invasive species coordinator Matthew Kennewell at South Coast NRM on 9845 8537 or mattk@southcoastnrm.com.au.

Brown KL and Bettink KA (2009–) *Lycium ferocissimum* – *Swan Weeds: Management Notes*, Florabase – The Western Australian Flora, DEC. Visit florabase.dec.wa.gov.au/browse/profile/6968.

Weeds CRC African Boxthorn Weed Management Guide. Visit www.aabr.org.au/images/stories/resources/ManagementGuides/WeedGuides/wmg_african_boxthorn.pdf.

Winners and losers in a sea change By Nick Dunlop

The annual monitoring of seabird populations off south-western Australia is one of the longest ecological studies in the state. This work, supported by numerous enthusiastic citizen scientists, is bringing together a body of information on the dramatic changes in the distribution and/or abundance of tropical seabird populations in the region, and the links with shifts in ocean climate.

In recent decades there has been a general weakening of the Leeuwin Current due to the increasing frequency and duration of *El Nino* events and a background rise in mean sea-temperature of up to 0.9°C since the 1950s. These changes in ocean climate and associated shifts in marine productivity have been implicated in the establishment of frontier colonies of tropical seabirds off south-western Australia, south of the Houtman Abrolhos Islands.

Bridled tern a climate change winner

2011 was the 25th consecutive year of monitoring bridled tern (*Onychoprion anaethetus*) population dynamics on Penguin Island. During that time the tern population has expanded from 400 pairs to something like 4,500. The bridled tern has expanded its breeding range 1,400 km south of the Houtman Abrolhos Islands since the ornithological records began. The populations in its recently occupied realm continue to expand and some of the frontier colonies are now the largest in the world. There are now 40–50 colonies (occupied islands) south of the Houtman Abrolhos.

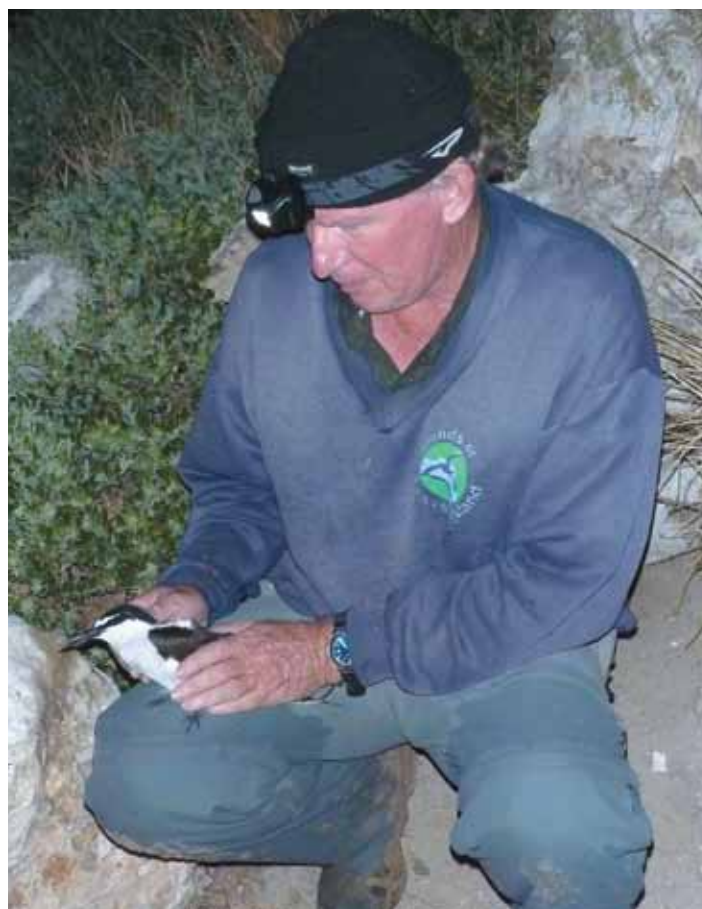
This species breeds in colonies on rocky islands. It nests in a ground scrape or hole and lays one egg. Bridled terns breeding off south-western Australia are present at their colonies between September and April. They migrate about 14,000 km each winter to the north-west Sulawesi between June and August.

The bridled tern feeds by 'contact dipping' – picking small prey items from near the surface including post larval fishes and crab megalopae associated with rafts of *Sargassum* and other flotsam. They are able to exploit vast additional areas of relatively unproductive continental shelf waters made available by the observed rise in background sea-temperature in the region. This tern is a climate change winner.

Climate change strugglers

Other populations of tropical dark terns have also been the subject of largely unfunded citizen science projects spanning nearly two decades. Common or brown noddies (*Anous stolidus*) and sooty terns (*Onychoprion fuscata*) have been studied by Chris Surman at the Abrolhos Islands and Nic Dunlop at Lancelin Island. These terns require more productive water masses that attract the roaming concentrations of tuna.

Five pairs of brown noddies were first discovered nesting 280 km south of Pelsaert Island at Lancelin Island in 1991–92. Emigration from the large (130,000 pairs) brown noddy colony on Pelsaert Island in the Houtman Abrolhos continued until 1998–99. The frontier colony at Lancelin Island reached around 900 pairs in 1998–99 and was estimated to be around 1,300 pairs in 2010. Prospecting brown noddies were recorded at Penguin Island



Dr Nick Dunlop assesses a bridled tern as part of the annual monitoring of seabird populations on Penguin Island. Photo – Erin Biggs

(400 km south of Pelsaert Island) during late December and January in most years since 2003 but breeding has not been initiated there.

Brown noddies breeding off south-western Australia are migratory, being present at or around their colonies from September to April and absent from May to August. These birds are thought to winter in the subtropical Indian Ocean. Brown noddies have frequently suffered low breeding performance, or complete failure, over at least the last two decades related to low prey availability generally associated with *El Nino* events.

Potential breeding islands, with suitable foraging areas within reach, may be few and far between south of the Abrolhos Islands. This may also explain the inability of prospecting brown noddies and sooty terns to establish colonies at Penguin Island over the past eight years.

Overall the species-specific responses to changes in ocean climate are expected to result in a significant decline in brown noddy, and probably lesser noddy and sooty tern populations in the region. The re-distribution of the bridled tern has, however, already resulted in an increase in abundance such that south-western Australia, south of the former breeding range, is now a global stronghold for this species.

For more information email Dr Nick Dunlop at the Conservation Council of WA on Nick.Dunlop@conservationwa.asn.au.

Conservation of little penguins By Belinda Cannell

The colony of little penguins (*Eudyptula minor*) on Penguin Island near Rockingham is the largest colony in WA, with an estimated 2,000 penguins. It has the highest conservation status of all major colonies in Australia and is the most western colony in the world.

Researchers at Murdoch University, The University of Western Australia and the University of NSW have studied many aspects of the ecology of little penguins. Volunteers have also provided invaluable assistance to some of these research projects. For many years we have monitored nest boxes in the Penguin Island and smaller Garden Island colonies. Little penguins usually lay two eggs in a clutch from April–October. They can lay two clutches a year but the number of chicks raised per year is dependent on food abundance, breeding experience and even how long a pair has been together. Collection of regurgitant and faecal samples show a diet of whitebait,

pilchards and other small baitfish. Data from radio-tracking and satellite tags reveal that birds may venture more than 200 km from Penguin Island on extended feeding trips, but while raising chicks they feed within 20–30 km of the island. After breeding they undergo a two-week moult, sometime between December–February. All of their feathers are replaced during this moult so they cannot go to sea to feed.

Collecting dead penguins along the coast has helped us understand the causes of their death. For example, 49 penguins were found washed ashore on Penguin Island and the south-west coast between August–December 2011. Some had died from watercraft injuries, but many had died from starvation. A strong *La Nina* and Leeuwin Current in summer 2010–11 resulted in high sea temperatures and a likely decrease in the fish little penguins feed on. The lack of food also meant



A little penguin (Eudyptula minor) and two chicks inhabiting one of the nest boxes on Penguin Island. Photo – Belinda Cannell

that some penguins were not able to find enough food to build up their fat reserves, vital to surviving their summer moult. It will take several years of monitoring to determine how this recent spike in deaths will affect the long-term viability of the population.

For more information contact Dr Belinda Cannell at Murdoch University on B.Cannell@murdoch.edu.au.

Have you seen a rakali? By Karen Bettink

As part of my masters study at The University of Western Australia I am interested in any sightings of rakali (*Hydromys chrysogaster*). Rakali are water rats, are larger than introduced brown or black rats, spend more time in the water diving and hunting for prey and have a characteristic white tail tip. (For more information on identifying rakali see *Bushland News*, Issue 79 p.10 available at www.dec.wa.gov.au/content/view/445/2026/.)

Please report sightings of rakali including the date and location where the animals were seen and supply a photo if you can. For genetic research, tissue samples are sought from any dead rakali specimens. If possible, the entire animal should be collected, stored in a plastic bag and frozen. Contact Karen at 19301655@student.uwa.edu.au or 9423 2904 to report sightings or to submit DNA samples.



Rakali (Hydromys chrysogaster) are well adapted to an aquatic lifestyle with foot webbing, oversized whiskers and powerful tail with a distinctive white tip. This young female rakali was recently trapped on the Murray River as part of the research project. Photo – Karen Bettink



Learning opportunity

Are you ready for a 'New Leaf'?

Bridging the Gap and Ngulla Community Nursery are now recruiting participants for their New Leaf training program. This is a free and nationally accredited Conservation and Land Management qualification.

The New Leaf program pairs industry experience with networking opportunities to offer under-employed persons aged 20–65 a free four-month full-time study and industry accredited field training course with potential for permanent employment and/or further training. Participants will complete a Certificate II in Conservation and Land Management, covering units such as natural area restoration and tree planting, plant and animal biology, first aid, occupational safety and health training as well as plant propagation and nursery work. Training will occur on-site at Ngulla Community Nursery in Casuarina along with field work south of Perth including the Peel and Serpentine–Jarrahdale areas

For more information contact Sarah Carberry on 9550 1111 or training@bridgingthegap.org.au.

what's on

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

Recurrent activities






-  **Saturdays**
Bushcare activities with the **Mt Henry** Conservation Group are on the fourth Saturday of each month. Email Jan.King@acquinas.wa.edu.au.
-  **Saturdays 8am-9am**
Guided walks with Friends of **Koondoola**. Second Saturday of the month. Meet at Gate 2, corner of Koondoola and Burbridge Ave.
-  **Saturdays 8am-9am**
Guided walks and meeting with Friends of **Landsdale**. First Saturday of the month. Meet at third gate Landsdale Rd, east of Landsdale Farm School, Darch.
-  **Saturdays 9am**
Bushcare activities with the Friends of **Brixton Street** Wetlands are on the third Saturday of each month. **FBW**
-  **Saturdays, Sundays 9am-12 noon**
Koala maintenance at **Yanchep** National Park. Call Ciara 9405 0771.
-  **Sundays**
Work morning with the **Wilson Wetlands** Action Group. Exact site is decided a week prior. Email wilsonwetland@gmail.com.
-  **Sundays 8am-9am**
Guided walks with Friends of **Marangaroo**. Fourth Sunday of the month. Meet at Gate 3, Decourcy Way.
-  **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** are on the second and fourth Sunday of each month. Meet at main car park. Contact Margaret 0402 105 649 or s3mmatthews@hotmail.com.

-  **Sundays 8.30am-9.30am**
Guided walks followed by meeting with Friends of **Mirrabooka**. First Sunday of the month. Call Jan 9344 2872.
-  **Sundays 9am-11am**
Bushcare activities with **Cottesloe** Coastcare are on the first Sunday of each month. Visit www.cottesloecoastcare.org for details or contact Robyn on 9384 7668 or info@cottesloecoastcare.org.
-  **Sundays 9am-10.30am**
Bushcare activities at Throssell Reserve, **Eastern Hills**, Jane Brook Catchment. Second Sunday of each month. Call Una Bell 9572 1447.
-  **Sundays 9.45am-12 noon**
Bushcare activities with the Friends of **Piesse Brook**. Third Sunday of each month. Contact Gerry Brown 9293 2517, Bridgett Hogarth bhogarth@ozemail.com.au, linda@johnstanley.cc.
-  **Sundays 9am-12 noon**
Bushcare activities with the Friends of the **Spectacles** (Kwinana) are on the third Sunday of each month. Contact Lynda Smith on 9439 1928 or outback3@iinet.net.au.
-  **Mondays, Wednesdays, Fridays 9am-12 noon**
Bushcare activities and wetlands walk trail maintenance with **Yanchep** National Park Volunteers. Call Ciara 9405 0771.
-  **Thursdays 8am-9am**
Bushcare activities every Thursday with **Byford** Enviro-Link. Call Johanne Garvey or Kristy Gregory 9526 0199.
-  **Thursdays 9am-2pm**
Bushcare activities in **Margaret River** with the Capes Volunteer Team. Call 9757 2202.
-  **Conservation Volunteers activity schedule**. Free one-day local activities or overnight country trips. Call Jodi 9335 2777 or visit www.conservationvolunteers.com.au.

-  **Research into bird populations** with the **Herdsmen Lake** Bird Banding Group. Call Bill Rutherford (ABBBS Coordinator) 0438 910 252.

July

-  **1 Sunday 9am-2pm**
Planting at Folly Pool, Baldy. **WCG**
-  **1 Sunday 9am-12 noon**
Planting at Janis St Reserve, corner of Clipper Way and McLarty Rd, Halls Head. **CoM**
-  **1 Sunday 9.30am**
Beach walk at Sorrento. Contact Lynda 93428684 or arnoldlynda@iinet.net.au.
-  **1 Sunday 2pm-4pm**
Sharing Nyoongar culture, Baldy's Children's Forest. Dance, stories, tool-making, craft and food. **BCF**
-  **2 Monday 9.30am**
Fungi walk with the Friends of Paganoni Swamp. Contact Leonie 9536 8195 or FoP@westnet.com.au.
-  **6 Friday 7.30pm**
Relocating fauna with guest speaker Peter Kendrick. **WA Nats(P)**
-  **7 Saturday, 12 Thursday, 15 Sunday 9am**
Guided walks on restoration initiatives with Friends of Bold Park Volunteer Guides. Meet at Tuat car park, Perry Lakes Dr. Call 9480 3996. Visit www.bgpa.wa.gov.au.
-  **7 Saturday 9am-1pm**
Planting at Yangebup Lake. Free barbeque lunch. **CoC**
-  **8 Sunday 9am-12 noon**
Planting with the Friends of Lake Claremont. Contact Heidi 0416 614 696 or folc.wa@gmail.com.
-  **8 Sunday 9am-12 noon**
Planting at Warrangup Springs Reserve, Estuary Rd, Dawesville. **CoM**
-  **10 Tuesday 8pm**
Horticulture and ecological restoration of jarrah forest geophytes with guest speaker David Wilyams. **WSWA(P)**
-  **11 Wednesday 7.30pm**
Forest fauna: 200 million years with guest speaker Mike Bamford. **WA Nats(B)**
-  **14 Saturday 9am**
Work day with Canning River Regional Park volunteers. Contact Jo 9458 3669 or Pam admin@canningriver.org.au.
-  **14 Saturday, 15 Sunday, 21 Saturday 9am-2pm**
Planting at Maramanup Pool, Baldy. **WCG**
-  **14 Saturday 9am-12 noon**
Planting at Marlee Reserve, end of Mulga Dve, Parklands. **CoM**
-  **15 Sunday 8.30am-9.30am**
Fungi walk at Cottonwood Crescent Bushland Reserve. **FDB**


-  **15 Saturday 9am-12 noon**
Planting at Roberts Point, cnr Halls Head Pde and Sharland St, Halls Head. **CoM**
-  **18 Wednesday 6.30pm-8.30pm**
Feral animal control forum. Cockburn Wetlands Education Centre. **CoC**
-  **20 Friday 7.30pm**
Climate change with guest speaker hosted by WA Naturalists Club (KRM). Rockingham Regional Environment Centre, Safety Bay Rd, Peron. \$2 door entry. Email info@wanaturalists.org.au.
-  **21 Saturday 8.30am-10am**
Bushcare activities with the Friends of Mary Carroll Lake. **FMCL**
-  **21 Saturday 9am-1pm**
Planting at Denis De Young Reserve. Free barbeque lunch. **CoC**
-  **21 Saturday 9am-12 noon**
Planting at Boulevard end of Melros Beach Rd car park. **CoM**
-  **22 Sunday 9am-12 noon**
Planting at Comet Central, Town Beach car park, Dolphin Dve, Mandurah. **CoM**
-  **28 Saturday 9am-12 noon**
Planting at Island Point Reserve, 267 Southern Estuary Rd, Herron. **CoM**
-  **29 Sunday 9am-12 noon**
Planting at Rotary Wildflower Reserve. Meet cnr Sulphur Rd and Nottingham Pkwy, Orelia. Contact Angela 9439 0418 or Angela.Jakob@kwinana.wa.gov.au.
-  **29 Sunday 9am-12 noon**
Planting with the Friends of Lake Claremont. Contact Heidi 0416 614 696 or folc.wa@gmail.com.
-  **29 Sunday**
Family tree planting with Greening Australia. Alcoa Landcare Education Centre, Yarloop. Morning tea and lunch provided. Registrations contact Michelle 0458 302 732 or mmullarkey@gawa.org.au.
-  **29 Sunday 9am-1pm**
Planting at Bibra Lake. Free barbeque lunch. **CoC**
-  **29 Sunday 10am-12 noon**
Fungi foray, Baldy's Children's Forest. Morning tea included. \$5pp. **BCF**

Registration/contact details

- BCF Baldy's Children's Forest**
\$10 adults, \$5 children (5-16 years). Bookings Michelle 0405 998 598 or bookings@baldy-childrens-forest.com.au.
- BSH Bush Skills for the Hills** Free community workshops. Bookings 9424 2216 or rebbekah.lamont@emrc.org.au.
- CoC City of Cockburn** Contact Linda 9411 3444 or customer@cockburn.wa.gov.au.
- CoG City of Gosnells** Registrations essential. Contact Peta 9397 3111 or plucas@gosnells.wa.gov.au.
- FBW Friends of Brixton Street Wetlands** Alton St Kenwick. Contact Regina 9459 2964 or tjdrd@bigpond.net.au.
- FDB Friends of Dianella Bushland** Meet at reserve car park. Enter from Dianella Dr, Gay St, then Channel 7 Private Rd. Contact Jan 9344 2872 or bant@aapt.net.au.

- FMCL Friends of Mary Carroll Lake**, Gosnells. Eudoria St car park. Contact Unice 93987126 or unicerobinson@gmail.com.
- FSSB Friends of Star Swamp Bushland** Henderson Environment Centre, Groat St North Beach. Contact Christine 0430013364 or randccurry@three.com.au.
- WA Nats(B) WA Naturalists Club (Busselton)** RSL Hall, Busselton. Call 9727 2474.
- WCG Waterbird Conservation Group** Email Ruth on ruth.clark@iinet.net.au.
- WSWA(P) Wildflower Society of WA (Perth)** Subiaco Community Centre. Email wildflowers.perth@ozemail.com.au. \$2 door entry.

August

-  **4 Saturday 9am-12 noon**
Planting at Coodanup Wetland, Peel Pde (near Faith Crt) Coodanup. **CoM**

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.

- 5 Sunday 9am–12 noon**
Planting at Eastport end of Estuary Pl, Wannanup. **CoM**
- 4 Saturday, 9 Thursday, 19 Sunday 9am**
Guided walks on life after fire with Friends of Bold Park Volunteer Guides. Meet at the end of Wollaston Rd. Call 9480 3996. Visit www.bgpa.wa.gov.au.
- 13 Monday 6pm**
Status of black cockatoos of the south-west with guest speaker Geoff Barrett. Urban Bushland Council, CityWest Lotteries House 2 Delhi Street, West Perth.
- 14 Tuesday 8pm**
Birds of Australia with guest speakers Irene and Michael Morcombe. **WSWA(P)**
- 25 Saturday–26 Sunday**
Fungi photo exhibition hosted by WA Naturalists Club and Friends of Star Swamp. **(FSSB)**
- 26 Sunday 8.30am–10am**
Bushcare activities with the Friends of Mary Carroll Lake. **FMCL**
- 26 Sunday 9am–11am**
Frogs and turtles with Friends of Mary Carroll Lake. **CoG**

September

- 1 Saturday 9am–1pm**
Cockatoo nest box workshop. Cockburn Wetlands Education Centre. Includes lunch. **CoC**
- 5 Wednesday 6:30pm–8:30pm**
Restoration of clay based wetlands with guest speaker Kate Brown. Mud Hut Kenwick Community Hall. **FBW or CoG**
- 7 Friday–9 Sunday 10am–4pm**
Spring Fling hosted by Friends of Star Swamp and Wildflower Society, Northern Suburbs Branch. Displays and plant sales. Guided Star Swamp walk Saturday 8am; Spring Wildflower Walk Sunday 2pm. **FSSB**
- 8 Saturday 9am–12.30pm**
Chemical free weed control workshop at Polytechnics West, Eddie Barron Dr, Midland. **BSH**
- 9 Sunday 9am–11.30am**
Nature ramble with Friends of Ellis Brook Valley. **CoG**
- 9 Sunday 10am–12 noon**
Threatened species with Project Numbat & Kanyana Wildlife Rehabilitation Centre. Baldvis Children's Forest. **BCF**
- 11 Tuesday 8pm**
The little things that count: bees, wasps, beetles and wildflowers with guest speaker David Pike. **WSWA(P)**
- 15 Saturday 9am–11am**
Flora walk with Friends of Brixton Street Wetlands. **FBW or CoG**
- 15 Saturday 9.00am–11am**
Guided Indigenous wildflower walk at Denis De Young Reserve. Meet Banjup Hall, Oxley Rd. Includes morning tea. **CoC**
- 16 Sunday 8.30am–9.30am**
Orchid walk at Cottonwood Crescent Bushland Reserve. **FDB**
- 19 Wednesday 7pm–9pm**
The secret life of plants workshop, Shire of Mundaring Civic Centre. **BSH**
- 22 Saturday 8.30am–10am**
Bushcare activities with the Friends of Mary Carroll Lake. **FMCL**
- 22 Saturday 10am–12 noon**
Discovery walk with Friends of Mary Carroll Lake. **CoG**
- 23 Sunday 9am**
Wildflower walk at Whicher Escarpment. \$10 bus. **WA Nats(B)**

1 July Wildflower Society of WA Annual Conference, Cockburn Wetlands Education Centre, Hope Rd, Bibra Lake. *From Weeds to Wildflowers.* Visit http://members.ozemail.com.au/~wildflowers/up_coming.htm.

10 August Great Southern Great Science 2012 Symposium, Albany. Visit www.cenrm.uwa.edu.au/home/conference.

3–5 September 2012 National Landcare Conference, Sydney. Visit www.daff.gov.au/natural-resources/landcare/national_landcare_conference_-_sydney.

13–14 September Camera Trapping in Wildlife Management and Research Colloquium, Taronga Zoo, Sydney. Visit <http://www.onqconferences.com.au/events/ctc/home.php>

23–28 September Australasian Systematic Botany Society Conference 2012, Perth. Visit www.asbs2012perth.com/.

30 September–3 October 2012 Australian Association for Environmental Education Conference 'Creating your next Courageous Steps', Melbourne. Visit www.aeee.org.au/about/conference-2010/.

8–11 October 8th Australasian Weeds Conference 2012, Melbourne. Developing solutions to evolving weed problems. Visit www.18awc.com

27–29 November Australasian Wildlife Management Society Conference 2012, Adelaide. Visit www.awms.org.au/pages/events.html.

3–7 December Ecological Society of Australia 2012 Annual Conference, Sebel Albert Park, Melbourne. Ecology: Fundamental Science of the Biosphere. Visit www.esa2012.org.au/index.asp?IntCatId=14.

Funding opportunities

Coastwest Grants 2012/13 Projects may involve site or local area planning, on-ground action, identification and monitoring, project support, capacity building or any combination of these activities. The total funding pool is \$500,000, with up to \$150,000 available for individual projects. **Closes Thursday 26 July 2012.** Visit www.planning.wa.gov.au/coastwest.

Foundation for National Parks and Wildlife Conservation Project Grants assist public caretakers of Australia's reserve system in the protection of our native species, habitats, landscapes and cultural heritage. Grants support conservation projects and environmental education programs with conservation outcomes. Most grant amounts range from \$2,000–\$20,000. Opens **August 2012**. Visit www.fnpwv.org.au/foundation-grants/conservation-grants.

City of Gosnells Community Sponsorship program supports community organisations to deliver high quality services to the local community, and for individuals to excel in their chosen field. Grants of up to \$5,500. Closes **Friday 3 August 2012**. Visit www.gosnells.wa.gov.au/scripts/viewoverview_contact.asp?NID=12657.

City of Armadale Community Grants for projects such as community events, equipment, workshops, printing information leaflets and brochures. Grants \$1,000. **Closes August 2012.**

Visit www.armadale.wa.gov.au/Home/Your_Community/Community_Support.

City of Joondalup Environmental Development Grants assist community groups and schools with projects, events and activities that increase awareness of environmental issues, promote positive environmental behaviour and protect the City's natural areas. \$25,000 is available across two funding rounds each year. Round one **opens in August 2012**. All applicants should discuss their proposal prior to submitting. Phone 9400 4232. Visit www.joondalup.wa.gov.au/Govern/GrantsandFunding/CommunityFunding.aspx.

City of Mandurah Community Assistance Grants Scheme provides funding of \$1,000–\$5,000 to projects that increase community participation and develop the skills of community associations. Two funding rounds per year. Opens 1 July. **Closes Friday 31 August 2012**. Visit www.mandurah.wa.gov.au/support.htm.

City of Rockingham Community Grants fund community projects, including environmental initiatives, for the Rockingham community up to \$20,000. Funding quarterly. **Closes Friday 14 September 2012**. Outcome mid-November 2012. Visit www.rockingham.wa.gov.au/Leisure-and-recreation/Grants-and-awards/Community-grants.aspx.

City of Wanneroo Community Development Grants fund projects in environmental sustainability. All applicants should discuss their proposal for 2013 with the City prior to submitting. Opens Monday 6 August and **closes Friday 26 October 2012**. Phone 9405 5691 or email grants@wanneroo.wa.gov.au. Visit www.wanneroo.wa.gov.au/Council/Community_Funding.

2012 Earthwatch Rio Tinto Prize for Citizen Science. Established to recognise outstanding environmental research that directly involves, educates and inspires the Australian community. \$25,000 prize. Applications are likely to close **September 2012**. Visit www.earthwatch.org/australia/.

Please send us your regional report (150–200 words) and a photo by Thursday 23 August 2012. Text may be edited in response to volume of submitted reports.

Conservation work at Moore River *By Steve Collett*

The Lower Moore River Working Group is a non-political working group that focuses on the Lower Moore River and its environs. The much-loved area near Guilderton, just one hour's drive north of Perth, has increasingly become a recreational playground for Perth residents and the impacts are being felt in the environment.

Our group actively manage weed infestation, revegetation, walk trails, boardwalks, fishing platforms and bank erosion due to boat traffic and livestock. We also work with local landholders to revegetate, fence and prevent stock from degrading the river banks. Grant funding has enabled the completion of water sampling and various studies of the river system and its health.

Our constitution is quite simple: 'Rehabilitation, conservation and maintenance of the Lower



Volunteers from the Lower Moore River Working Group maintain boardwalks along lower Moore River. Photo – Steve Collett

Moore River and its riparian zone'. We encourage any volunteers or groups that are interested in assisting with planting, fencing, sand-bagging, construction or weed management to register with us.

For more information email Vic McCartin at vpmc@bigpond.com.

Perth urban bushland fungi

By Julia Cullity

For the past eight years the Perth Urban Bushland Fungi project (PUBF) has been inspiring and educating nature lovers and the general public about the little-known kingdom of fungi. In a much-understudied area of biodiversity, PUBF have made a huge contribution to science, surveying bushland, describing and vouchering fungi specimens, holding workshops and forays, and publishing field guides, survey reports and other educational materials. Sadly efforts to fund this project were unsuccessful this year, so it will be a winter without any fungi forays open to the general public. The end of such an effective community biodiversity program is a great loss but at the same time we should recognise and celebrate the founding work of the Urban Bushland Council and the WA Naturalists' Club, the work of community volunteers and the club for keeping it going.

WA Naturalists' Club will continue to support the PUBF project by maintaining the PUBF website www.fungiperth.org.au and holding some fungi events for club members this year. Friends groups who would like to learn more about their local fungi and keep the momentum of PUBF going are encouraged to hold fungi forays or surveys at their patch.

From golf course to urban biodiversity hotspot *By Heidi Hardisty*

More than 50,000 seedlings will be planted this winter at Lake Claremont. The Friends of Lake Claremont will coordinate the planting of two-thirds of the seedlings with the help of hundreds of volunteers! This is part of a massive, long-term project to protect and enhance the biodiversity of Lake Claremont, which is a conservation category wetland and Bush Forever site.

Tucked away in the western suburbs of Claremont and Swanbourne, Lake Claremont is a seasonal wetland providing habitat for more than 80 species of bird, bats, skinks, frogs and long-necked turtles. It is also an important wildlife corridor between Kings Park and the coast, serving as a Carnaby's cockatoo flight path and foraging ground.

In 2009, the Town of Claremont closed the larger of two golf courses around the lake adding 21 ha to the existing park.



This winter 50,000 seedlings will be planted at Lake Claremont. Photo – Heidi Hardisty

About 10 ha of this area will be planted with native vegetation to restore part of the wetland and wetland buffer, and to reconstruct tuart and peppermint open woodland. This will include candle and firewood banksias – a favourite food of the Carnaby's cockatoo. The Friends of

Lake Claremont are one of the leading forces behind the work, winning six grants from the federal and state governments totalling \$185,000 during the past three years.

For more information contact Heidi on folc.wa@gmail.com or 0416 614 696.

Now recruiting at the WA Herbarium *By Cheryl Parker*



The WA public reference herbarium contains thousands of flora specimens and is equipped with microscopes and computers for community use. Photo – Skye Coffey

In 2011 the WA Herbarium moved its research collection and reference herbarium into the WA Conservation Science Centre in Kensington. The herbarium was temporarily closed during the move and opened in March 2012. This new state-of-the-art complex is at the forefront of herbarium facilities in Australia.

The plan to move the herbarium to new premises began in the late 1990s when it was clear the old building, despite being designed for expansion, had reached capacity. This is not surprising given the dynamics of plant research in WA and the enviable number of new species continuing to be discovered each year. The new herbarium is designed to house

up to 1.2 million specimens, and the current research collection of just over 750,000 specimens including flowering plants, moss, lichens, macro-fungi, marine and fresh water algae is now safely stored in purpose-built water and insect-proof boxes, inside climate-controlled vaults.

The reference herbarium houses representative specimens of WA's flora including threatened and priority species and is open to the public Monday–Friday from 8am–5pm (except public holidays). The herbarium is recommencing its volunteer program and is looking for new recruits. For more information visit www.dec.wa.gov.au/content/category/41/831/1821.

New weeds of national significance

Twelve new weeds have been added to the list of Weeds of National Significance (WoNS) bringing the total to 32 weeds. The additional weeds have been selected based on factors such as their economic, environmental and social impacts, invasiveness and potential to spread. They include African boxthorn (*Lycium ferocissimum*), arrowhead (*Sagittaria platyphylla*), asparagus weeds (*Asparagus* spp.), bellyache bush (*Jatropha gossypifolia*), brooms (*Genista monspessulana*, *G. linifolia*, *Cytisus scoparius*), cat's claw creeper (*Macfadyena unguis-cati*), fireweed (*Senecio madagascariensis*), gamba grass (*Andropogon gayanus*), Madeira vine (*Anredera cordifolia*), opuntoid cacti (*Opuntia* spp., *Cylindropuntia* spp., excludes *O. ficus indica*), silver leaf nightshade (*Solanum elaeagnifolium*) and water hyacinth (*Eichhornia crassipes*). The WoNS expansion will help coordinate national and local efforts to ensure these weeds are managed effectively. For more information visit www.weeds.org.au/WoNS/.

Celebrating 20 years of *EcoEducation*

By Stephen Crane

How did you spend your spare time as a child? Wandering your local patch of bush? Climbing trees, discovering all sorts of cool insects? Or down the local shopping centre hanging out with mates? Research is showing that children's engagement with nature is important, possibly critical, for physical, physiological, cognitive and emotional development.

DEC's *EcoEducation* at the Perth Hills Centre provides opportunities for students (pre-primary to university) to connect and immerse in nature and culture while doing curriculum-linked activities. *EcoEducation* started in 1993 and has grown to offer 25 different programs on a range of topics such as threatened species, biodiversity and

Aboriginal culture. More than 250,000 students and teachers have participated in *EcoEducation* programs with consistent positive and encouraging feedback. Experienced leaders aim to engage students' minds, hands and hearts through hands-on experiences. Pre- and post-excursion activities are provided to compliment and expand upon the work teachers do in the classroom. For more information visit www.dec.wa.gov.au/eoeducation.

DEC's *Nearer to Nature* program provides nature- and culture-based activities for families, groups and clubs at locations



Catchment Carers' Trail is a joint project between DEC and Water Corporation to give students the opportunity to learn about catchments. Photo – Lisa Ingram

such as Chidlow, Canning River, Karakamia Sanctuary, Perth Hills Centre, Woodloes Homestead and Yanchep National Park. For more information visit www.dec.wa.gov.au/n2n.

Place-based learning By Fiona Marr

What got most of you started in caring for your local bushland, wetland or coastal dune? Recent research suggests that an emotionally powerful childhood experience of nature helped to set you on your caring course. Alarming, many young Western Australians are now growing up having spent little or no time immersed in nature. Like *EcoEducation* and *Nearer to Nature*, *Place-based learning*, a pilot project in WA, aims to connect students to their local wild places and community.

The chances are that if you were lucky enough to get outdoors to enjoy nature as a child, your heart was opened to nature by some powerful moments spent there. Many children who have natural experiences can reawaken that experience as an adult.

Many WA children are now growing up having spent little or no time in wild, local places. Many lack special experiences of our bush, wetlands or oceans. They haven't grown up with any significant heart, head or hand connections to these places.

Richard Louv coined the term Nature Deficit Disorder (NDD) for this disconnection. NDD occurs because people lack their own sense of local place built up by playing, working or learning in local natural places. This is a concern for those of us who want to nurture young people's ability to protect and conserve our local places for future generations of Western Australians.

In WA, the Department of Education and DEC have partnered to undertake a Place-based Learning Project with the aim of getting all WA students out of doors to experience and better care for their local places through action-based learning projects.

Standing on the shoulders of giants

We've learnt quite a lot about what works in place-based learning by visiting and talking with principals, teachers and students from several schools that have successfully adopted place-based learning through real, local, action-learning projects.

Projects such as the Baldivis Children's Forest, or environmentally conscious school communities like North Dandalup Primary, Bridgetown High and Bertram Primary or



It is important for educators to foster a stronger sense of local place through action-based environmental learning projects in schools. A frog bog (left) is a wonderful example rather than the sterile alternative (above). Photos – Fiona Marr

leadership in sustainability programs like those offered at Saint Hilda's Anglican School for Girls, all demonstrate a range of successful place-based learning approaches. In these school communities there is a strong sense of action learning in the outdoors and caring for local place.

Why place-based learning?

Perth sits on the Swan Coastal Plain where 74 per cent of all Western Australians live. This place, which about 1.8 million of us call home, is a crowded coastal fringe of land between hills and sea.

DEC is committed to working with the WA community to care for our plants, animals and landscapes – many of which are found nowhere else on Earth. The Department of Education has a commitment to build the capacity of our youth – our future leaders, workers and carers of our special places and our society.

Working with whole school communities, including school leaders, teachers,

students and gardeners, to support real outdoor learning experiences will increase everyone's understanding of their environment. These experiences will help participants move towards a collective vision and environmental actions to create a better place in a cost-effective manner.

The Place-based Learning Project in WA is now 15 months old. Pilot programs are planned in up to four closely located primary and secondary schools during the second half of 2012. Our goal is to foster deeper communication and connection between schools, their wider community, and to get better environmental and educational outcomes. Improved student leadership and teamwork skills will be one of several benefits of the Place-based Learning Project.

For more information contact Fiona on 6467 5124 or fiona.marr@dec.wa.gov.au.

Friends of Yellagonga Regional Park By Heather Chester

The Friends of Yellagonga Regional Park Inc (FOY) was started in 1992 by a group of enthusiastic local volunteers wanting to make a difference. They aim to restore and protect Yellagonga Regional Park for passive recreation and conservation for everyone to enjoy. Some of our founding members are still actively involved 20 years on.

We work with DEC and seek to involve the local community as much as possible, as management bodies such as DEC cannot do all that is required to care for our wonderful natural areas. Currently FOY has more than 250 members, about 70 of which are regularly active, with others helping when they can. We have 11 degraded sites within the park, many of which have been restored to their former glory by volunteer site managers.

Yellagonga Regional Park extends from Hepburn Avenue (Lake Goollelal) to Burns Beach Road (Lake Joondalup) and includes Beenyup and Wallaburnup swamps. It is one of the largest urban wetland regional parks in Australia with a total area of more than 1,400 ha.

Biodiversity

The park includes open woodlands and wetlands containing a rich diversity of plants and animals of high conservation value. The wetlands and uplands are representative of the unique natural environment that once occurred in the area.

Biological surveys have documented 86 native plant species (including one declared rare plant), 122 bird, seven mammal and six frog species, long-necked turtles and a vast number of invertebrate species. FOY carries out bi-annual population surveys of long-necked turtles (*Chelodina oblonga*). In order to prevent foxes from eating turtle eggs and/or hatchlings, FOY promoted a long-term joint fox control program with DEC and the Cities of Joondalup and Wanneroo.

A study by DEC around Lake Goollelal in 2009 recorded one of the largest urban populations of rakali (*Hydromys chrysogaster*). Rakali are amphibious Australian native rodents and are quite different to the introduced black rat (*Rattus*



Volunteers weeding at Bindaree Bush site in 2011. Photo – Heather Chester

rattus). Rakali have webbed feet, water repellent fur, a flattened head, long blunt nose, many whiskers and small ears and eyes. They are brown-black in colour with an orange-white belly and a black tail with a white tip. Until the early 1950s, rakali were hunted for their pelts due to their magnificent coats. They feed on aquatic insects, fish, crustaceans, mussels, frogs and birds' eggs.

The discovery of rakali is exciting news for Lake Goollelal, as trapping in other suburban wetlands such as Lake Joondalup and Herdsman Lake has not revealed any other significant populations. Their reed island habitats in the centre of Lake Goollelal have no doubt contributed to their survival, but, on rare occasions, they can be seen in the water – swimming with their heads just above the surface. To get involved in Karen Bettink's rakali survey see page 2.

Activities

FOY's main activities are weeding and planting work days (held on the last weekend of the month April to October). Weeding might sound like a chore, but surprisingly it can be fun and no-one has yet been heard to say they didn't enjoy the morning. A valuable lesson learnt is to provide detailed descriptions of what is a weed and what isn't to enthusiastic newcomers!



*Dr Jacqui Giles collects data on long-necked turtles (*Chelodina oblonga*) during a bi-annual population survey carried out by the Friends of Yellagonga. Photo – Gary Tate*

To ensure plants in the park are endemic, we collect seed and grow them in our own nursery located at Landsdale Farm School before planting. The nursery holds work days a couple of times a week. FOY also conduct bushwalks, hold information seminars and run a myriad of other environmental-related activities. New members are always welcome.

For more information phone 9302 4677 (please leave a message) or email friendsofyellagonga@bigpond.com. Visit www.friendsofyellagonga.com.au.



Resources

New publications

On a Wing and a Prayer (2012) Leighton De Barros. Department of Environment and Conservation. RRP \$24.95. Written and photographed by a wildlife documentary maker this is an amazing story of a Carnaby's cockatoo family; one of five species of black cockatoos whose populations have declined dramatically. Every milestone in their struggle to survive is documented through this engaging story. This is a story of love, loss and sheer endurance.



A botanical journey: The story of the Western Australian Herbarium

(2011) Roger Underwood. Department of Environment and Conservation. RRP \$49.95. Explore the Western Australian botanical journey through many fascinating personalities; botanists, internationally famous scientists, artists and more in this well-researched book.



Recent research

Carter A, Luck G and McDonald S (2011) Fox-baiting in agricultural landscapes in south-eastern Australia: a case-study appraisal and suggestions for improvement. *Ecological Management and Restoration* **12** (3): 214–223.

McLeod LJ, Saunders GR and Miners A (2011) Can shooting be an effective management tool for foxes? Preliminary insights from a management programme. *Ecological Management and Restoration* **12** (3): 224–226.

Dalling JW, Davis AS, Schutte BJ & Arnold AE (2011) Seed survival in soil: interacting effects of predation, dormancy and the soil microbial community. *Journal of Ecology* **99**: 89–95.

Wittkuhn RS (2010) Wind-aided seed dispersal of Perennial Veld Grass (*Ehrharta calycina*): implications for restoration in weedy urban bushland remnants. *Ecological Management & Restoration* **11**(2): 148–50.

Website watch

Friends of Wellard Bushland. Visit www.friendsofwellardbushland.com.

Tree Deaths transcript from the ABC Catalyst story archive. Thursday, 26 April 2012. Coverage of tree decline in WA's south-west positions it among similar tree declines at a global scale. Visit www.abc.net.au/catalyst/stories/3488105.htm.

Weeds of Australia identification tool

The Lucid team at the University of Queensland—now based in the Queensland Alliance for Agriculture and Food Innovation (QAAFI)—have been involved in the development of weed identification tools for the past 10 years. Recently, the key to Environmental Weeds of Australia has now been made available online, courtesy of Biosecurity Queensland. This key is freely available at www.business.qld.gov.au/agriculture/land-management/weed-identification-tool.html.

Are your details correct?

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 entitled 'email me' to urban.nature@dec.wa.gov.au.

