

PERTH'S BANKSIA WOODLANDS IN THE SPOTLIGHT

Supported by a grant from Lotterywest, the Urban Bushland Council ran a successful symposium on the biodiversity of Perth's Banksia woodlands on March 25th. More than 150 interested people came together to listen to 11 speakers at the Wollaston Conference Centre adjacent to Bold Park in Mount Claremont. The day began with an optional bushwalk led by Bold Park Guides. Then the event kicked off with the Honourable Liz Behjat on behalf of government opening the day. Vice President of the Urban Bushland Council Mary Gray chaired the first session, which included Greg Keighery from the Department of Environment and Conservation discussing the uniqueness of our local iconic trees, such as Banksia trees found nowhere else in the world and specially adapted to the sandy Swan Coastal Plain with its periodic fires, its wet winters and dry summers. He noted that Banksias in the evolutionary record are 60 million years old.

Neale Bougher, specialist in fungi, provided a fascinating introduction to fungi in Banksia woodland. Following the fungal explorations, animal expert Mike Bamford spoke about reptiles, birds and other fauna in bushland. Mike's observation over many years have enabled him to determine which native animals can persist in patches of bush adjacent to human populations and which cannot.

Next was a discussion of the importance of groundwater for the survival of the Banksias and their associated species. Philip Groom of the Curtin University Institute for



Photo by A Kendrick

Marg Owen, Urban Bushland Council assists conference participants at the publications stall.

Biodiversity and Climate presented his own research and reviewed other studies, which showed how the physiology of our unique Swan Coastal Plain plants is adapted to use a combination of ground and surface water throughout the year.

Groundwater studies were followed by an introduction to plant diversity. Curtin University Professor Emeritus Byron Lamont presented a parade of colourful photos and stories of the diverse shrubs and flowers found within these local woodlands. Byron's research into Banksia woodlands has spanned more than four decades. After Byron's extensive expose on the understorey, advocate for invertebrates David Knowles gave a passionate plea for land managers to get to know the majority of the animals which live in the reserves they manage. David made the point that the majority of our woodland fauna is a diversity of insects, spiders and other species without backbones. David showed slides of many amazing pollinators, decomposers and predators of the Banksia woodland, including his special focus, the jewel beetles.

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Photo by A Kendrick

Hon Sally Talbot MLC, Shadow Minister for Environment, Neale Bougher, fungi specialist and Kim Sarti, Urban Bushland Council enjoying morning tea, Banksia Woodlands Symposium

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Editorial

Bush Forever motion before the Legislative Council 25th May 2011

Perth is the only city in the world built on a natural landscape dominated by Banksia Woodlands. Furthermore the two most common Banksia trees (*Banksia menziesii*, *B. attenuata*) are truly iconic and ancient species having been present for 40 - 60 million years.

As well as being intrinsically rich in flora, fauna and fungi species, our Banksia Woodlands provide us with valuable ecosystem services. This includes clean fresh air, a carbon sink, a quiet relaxing place to escape the stresses of city life, mental health benefits, a place to enjoy nature's gifts of wildflowers and birds, a place for passive recreation, and a priceless educational and learning resource for children.

Bush Forever is a comprehensive plan, introduced by a Liberal Government in 2000, to retain and protect an interconnected series of conservation areas across the Swan Coastal Plain part of the Perth Metropolitan Region. The planning and environment agencies of the day are to be highly commended for their rigorous scientific surveys and plans based on national criteria and published in the Government's Bush Forever documents of December 2000. No other city in Australia has this standard of information, nor the outstanding biodiversity values inherent in our natural landscape.

Ten years of implementing Bush Forever has progressed with acquisition of some sites, a major amendment to the Metropolitan Region Scheme to show the boundaries of all sites, and gazetting of the Statement of Planning Policy 2.8. But there is still much to be done to secure and protect all sites, provide fencing and signage, foster community awareness and appreciation of bushland, and to manage threatening processes such as weeds, dieback, foxes, rabbits and feral cats. There are more than 100 Bush Forever sites where portions have no managing agency and there is no on ground management to protect and maintain the values. This lag in implementation is unacceptable in a rap-

idly expanding metropolis and requires urgent allocation of substantial infrastructure resources.

In some areas community volunteers in Friends groups are helping to care for and promote their local bushland in conjunction with land managers. Many Bush Forever sites, however, have no Friends groups and are not being managed to retain their natural heritage values while suburbia is encroaching and costly degradation follows.

Thus the process of implementing Bush Forever according to the Government's plan is far from complete. There is no statutory framework for protection and management of sites under the Environment portfolio and we believe that this is a key reason for lack of 'on ground' Government commitment and action. We therefore seek your support for the immediate introduction of a formal statutory framework via a mechanism, such as a regulation under the Environmental Protection Act, which includes provision for:

- * site protection,
- * setting appropriate standards of management,
- * provision of Government resources for management,
- * ongoing community education and awareness,
- * facilitation of establishment of new Friends groups by land managers and
- * co-operation with and support for Friends groups.

Our Bush Forever sites and the associated local bushland areas are irreplaceable natural assets which belong to and benefit the whole community.

The Urban Bushland Council therefore looks forward to your interest and support of a formal initiative as suggested above to protect our precious bushland landscape of the Perth region for the benefit of present and future generations. We seek your support of the motion now on the notice paper before the Legislative Council likely to be debated on 15th May and/or 15th June. The title of the notice of motion is **"Bush Forever sites - Perth Metropolitan Area."**

A copy of letter sent by the Urban Bushland Council to all members of the Legislative Council.

UBC's New Website – Progress Report

John Baas, UBC Project Manager (Web)

Work has continued apace since my report in the last Newsletter issue on this important initiative. Readers may recall that funds for the project were made available via a Lotterywest grant enabling the Urban Bushland Council to develop a modern website that will provide a range of needs.

The Council's executive has selected Digital Dialogue, working in association with Webthread, to produce the overall website design and subsequent site build; this innovative arrangement allows the Council to make best use of the different talents of these two companies.

Webthread has produced an approved pages design and Digital Dialogue commenced the web site build process early in May. In addition, Webthread has developed a number of concepts for a revised UBC logo and a honey-eater/banksia theme has been approved for further design

work. Work has also recently commenced to enter site content onto the new web pages.

In response to a recent survey, Group specific information has been received so far from 47 Groups – thank you to all the respondents. The result is about 50/50 for those indicating they want a page, or simply a link to their own or a 3rd party site (such as a local Shire), with a few Groups not wishing to be on the UBC site.

We estimate that we will launch the new web site (in Spring) with about 15–18 'full' individual Group pages, with the bulk of the remaining pages being hyperlinked or contact details only. The Group responses contain rich information about Group priorities and their aspirations for the Council. The next milestone is a prototype web site due by May 31st. Please contact me on 9271 6595 for any questions etc you may have regarding this great initiative.

Does the law protect Black Cockatoos?

Urban Bushland Council Seminar

Held on 4 May 2011

Case study: Burns Beach/Tamala Park

Presented by David Wake, Quinns Rocks Environmental Group

Background

Much of the remaining bushland on the Swan Coastal Plain portion of the Perth metropolitan region is in the north-west corridor, around Tamala Park/Burns Beach and north of Quinns Rocks. However most of this land is zoned for urban development and is being planned, subdivided and gradually cleared. This includes Banksia shrublands and woodlands that are a seasonal foraging resource for the endangered Carnaby's Black Cockatoo as well as being habitat for a range of other species. This case study considers the Burns Beach-Tamala Park area and how environmental and planning laws have or have not protected habitat for the black cockatoo.

Context

Burns Beach is situated on the coast about 28km north of the Perth CBD, it adjoins the locality of Tamala Park. The subject area covers about 840ha including three landholdings:

Former Pt Lot 2 Burns Beach – 290ha – owned by Burns

Beach Property Trust, managed by Peet Ltd

Former Lot 17 Mindarie – 432ha – owned jointly by the Cit-

ies of Perth, Stirling, Joondalup and Wanneroo and the

Towns of Cambridge, Victoria Park and Vincent

Pt Reserve 35890 – 121ha – reserve set aside for recreation,

vested in the City of Wanneroo.

The area is partly within the City of Joondalup and partly within the City of Wanneroo.

The area extends from within a 100m or less of the beach, includes mixed heathlands on Quindalup dunes and extends to the western margin of the Spearwood dunes including patches of Parrotbush (*Banksia sessilis*, formerly *Dryandra sessilis*) on shallow soils over limestone, *Banksia attenuata*-*B. menzeisii* woodlands through to Tuart and Banksia woodlands to the east. The area includes most of a cusped foreland including a parabolic dune that runs about 2km west to east – an important feature that illustrates past geomorphic processes in this sector of the coastal plain. The area is also important in retaining a transect of landscape and variety of habitats from the beach through to Neerabup National Park.

Conservation proposals

The conservation value of the area has been recognised in a number of regional conservation strategies and land use plans, and more recently, environmental assessments of proposed development in the area. These include the 1970 Corridor Plan and 1977 North-west Corridor Structure Plan that proposes an east-west band of regional open space between the coast and Neerabup National Park. This idea was given more definition in the 1981 System Six Green Book and the 1983 System Six Red Book recommendations of the Environmental Protection Authority (EPA).

An environmental audit of the North-west corridor was commissioned by the then Department of Planning and Urban Development to inform strategic land use planning. The audit highlighted the coastal dune landforms and vegetation between Burns Beach and Mindarie as a significant feature worthy of protection (V&C Semeniuk Research Group 1991). Later studies as retaining examples of coastal vegetation and

the interface between the Quindalup and Spearwood dune systems and providing one of the few remaining opportunities to protect these natural features amidst Perth's urban expansion (Griffin 1993, Griffin 1994, Trudgen 1996). Most of the subject area was identified as having regional conservation value and proposed for protection in the State Government's Perth Bushplan and Bush Forever studies.

Development proposals

Part of the area was earmarked for urban development from the 1970s, though part was also identified for regional open space. The use of the Burns Beach/Tamala Park area has been contested over the past thirty years with community groups seeking to have conservation proposals implemented and opposing inappropriate development.

Lot 17 Mindarie was purchased by the then Cities of Perth and Stirling and Shire of Wanneroo for a municipal waste landfill in 1981. The closest settlements at the time were Burns Beach and Quinns Rocks and local residents opposed the landfill. The proposal was subject to a public environmental review and the EPA recommended in favour of the landfill. In addition to waste management and groundwater pollution issues, the plan to site the landfill on an area proposed for conservation was a concern raised in objection. The landfill opened in 1991 and continues to take most solid household waste from Perth's northern suburbs; some efforts have been made to retain and rehabilitate the surrounding bushland.

Urban development of about 250ha immediately west of Marmion Avenue and north of Burns Beach Road was proposed in 1994. The proposal was subject to a public environmental review and prompted a campaign by conservation groups seeking retention of the bushland. The EPA found that most of the bushland was regionally important (as highlighted in the Bushplan report) and only 55ha was suitable for development (EPA 1998).

The development proposal was reduced to 170ha and included in an amendment to the Metropolitan Region Scheme, under which the balance of Lot 2 would be reserved as parks and recreation. The amendment also proposed rezoning 135ha of Lot 17 Mindarie, north of the landfill site, for urban development (a 60ha portion of the landholding west of Marmion Avenue had been zoned urban some years before). Conservation issues were raised in public comments on the amendment and a campaign that focused on retaining the Burns Beach bushland. The EPA reiterated its earlier finding on development of Lot 2 (i.e. only 55ha could be considered for urban development) and found development of the northern portion of Lot 17 to be acceptable, subject to a buffer while the landfill remained in operation (EPA 2000).

Many appeals over the EPA's recommendations concerned Lot 2 Burns Beach and a review team was formed to consider the issues and report to the Environment and Planning Ministers. The committee sought a balance between conservation and development proposals for Lot 2 and recommended urban development of 146ha and conservation of 144ha, achieved with the purchase of additional land by the State Government (Review Team 2002). The Environment and Planning Ministers adopted this recommendation and announced their deci-

sion in March 2003. A conservation park of about 380ha is now proposed to protect bushland west of Marmion Avenue including part of Lot 2 Burns Beach and Lot 17 Mindarie.

The northern 180ha of what was Lot 17 Mindarie, now managed for the local councils that own it by the Tamala Park Regional Council, is zoned urban and a structure plan has been prepared to enable subdivision and development of the land, mostly for residential use. The use of the bushland by Carnaby's Black Cockatoo trigger a referral of the proposal under the Commonwealth Environmental Protection and Biodiversity Conservation Act and it is to be assessed.

Protecting Carnaby's cockatoo

Throughout debate over the use of the subject land at Burns Beach and Tamala Park the conservation of bushland, and the diversity of flora and fauna inhabiting it, has been central. The arguments for retaining the bushland recognised its value in representing vegetation, habitats and landforms that are inadequately protected and threatened by continuing urban expansion along Perth's coastline. No single species has been the focus; this includes Carnaby's Black Cockatoo, which has been given little attention in technical information or public discourse over the Burns Beach/Tamala Park area until recently.

The Federal Government in exercising its powers under the Environmental Protection and Biodiversity Conservation Act has in recent years been giving greater regard to proposals affecting Carnaby's cockatoo, which is listed as a threatened species under the Act. The Tamala Park Regional Council as proponent of the current development proposal at Tamala Park referred the matter under the Act.

The referral documents argue that the development would not have a significant impact on Carnaby's cockatoo as a large area of potential foraging habitat remains in the region and any local impacts have been offset by retaining bushland nearby. While foraging habitat does occur in the surrounding region this includes pine plantations that are gradually being removed to address low groundwater on the Gnangara Mound and other areas where habitat is threatened by land use change. Bushland on the northern Swan Coastal Plain may be increasingly important to the future of Carnaby's Black Cockatoo given:

- reports that the species is now breeding in or near Yanchep National Park (whereas breeding was understood to be confined to the northern Wheatbelt), and so retaining food resource nearby is additionally significant
- the loss of the pine plantations that have been an acted as a key food source for the species, so retaining other foraging grounds should be retained.

The Federal Government has recently decided that the proposed urban development is a controlled action and so will be assessed under the Environmental Protection and Biodiversity Conservation Act. This will provide greater scrutiny of the proposals impacts on the species that has occurred under state environmental legislation. Specific issues that warrant attention include the proposed clearing of potential roosting trees within the development site and the adequacy of proposed offsets, which includes land agreed for conservation some years ago under a 'negotiated planning solution' to retain some regionally significant bushland in the western

portion of former Lot 17 Mindarie covered by Bush Forever. Another point to note is the limited opportunity for public participation in assessment of proposals under the Act – including short comment periods and lack of communication with third parties by the assessing agency.

Carnaby's cockatoo may use much of the remaining bush on the Swan Coastal Plain, though it is a seasonal visitor. It is difficult to argue that a specific site is critical to the species yet the continuing loss of habitat makes what remains more important. A regional approach to retaining habitat is needed to seek to improve the prospects of this and many other species that depend on our remnant bushland.

Environmental and planning decisions for the Burns Beach and Tamala Park area have been involved compromises. Community pressure has been important in influencing decision by the State Government, but valid arguments for maximising the area of bushland retained have been overshadowed by strong development interests, high land values and inadequate public funds for the acquisition of land for conservation. Perth's continuing expansion into bushland is taking a toll on the region's biodiversity. One species impacted by habitat loss is Carnaby's Black Cockatoo. It remains to be seen whether the recent increase in attention given to protecting the species will bring tangible benefits.



Two other case studies were presented at the seminar organised by the Urban Bushland Council to examine how our current legislation protects threatened species, focusing on Carnaby's Black Cockatoos on the Swan Coastal Plain. Margaret Owen from the Friends of Underwood Avenue talked about the environmental assessment process for various proposals for urban development at Underwood Avenue bushland. Sabine Winton from the Lake Nowergup/Carabooda Valley Community Group highlighted how the planning framework seems to pre-empt outcomes of environmental assessments, discussing the proposal for a limestone quarry next to a national park and a nature reserve with a Conservation Category Wetland.

A panel consisting of two **lawyers Greg McIntyre and Hannes Schoombe** and an academic with long experience in environmental law **Associate Professor John Bailey of Murdoch University** responded to questions from the audience, further stimulating the discussion on issues raised by the case studies.

Development proposals in bushland that are referred to the EPA and are 'not assessed' are treated as 'approved' by planners. This is the case for the Nowergup quarry proposal. In theory the City of Wanneroo can refuse to approve the proposal - as they initially did but they changed their position after pressure from proponents and the threat of legal action in the SAT. In discussion, a legal opinion was that 'not assessed' by the EPA under existing State laws effectively means approved.

In another case discussed on the evening, the City of Nedlands changed its position on the Underwood Avenue proposal for housing after the Minister for the Environment approved a proposal that was assessed by the EPA despite strong community opposition and years of deliberations.



Chris Phillips' Speech to the Cockatoo Coalition Rally Parliament House Perth and given on the steps of parliament on 12.4.2011

My name is Chris Phillips and I am from the Black Cockatoo Rehabilitation Centre.

In many ways our centre is on the front line of the battle to protect this species.

Unfortunately...I must be the bearer of bad news. Last year the centre admitted over 600 Black Cockatoos from 5 different subspecies. By some of the lower estimates this is between five and ten percent of the entire population of Carnaby's White Tail Black Cockatoos left in the wild. The injured birds we receive are only a tiny percentage of the total number of injured or shot birds out there, most of whom will never make it to the centre and will perish in the wild. Many of the birds we receive have been shot, some have been hit by cars and trucks. Some of these birds survive, many do not.

We are working around the clock to rehabilitate and re-release the Cockatoos which come into our care, and last year we re-released over 100 cockies, however, considering the severity of some of the injuries that present to us it's not always good news. In fact it is my strong belief that it is all bad news, this species cannot sustain this level of population loss.

I almost didn't come today because part of me feels that it is too late to save our precious Black Cockatoos, part of me feels that it is too late for petition signing, letter writing and posturing on the steps of parliament house. The government already knows how bad the situation is and by the time our letters are read, by the time our petition is passed around bureaucratic hands, another 100 Black cockatoos will be dead and another 1000 hectares of bushland will have been cleared*. (*Alcoa is clearing 600ha a year).

The time to act is now; the time to act is today if we are to have any chance of preserving this iconic species. These magnificent birds only exist in the south west of WA and we are losing them faster than we are losing our water.... When we run out of water there is a chance of rain.... When we run out of Black Cockatoos they are gone forever**.

(**Black Cockatoos are an iconic species; Their loss a silent indicator of the loss of so many other species in this world biodiversity hotspot. Their loss indicates the collapse of our natural environment).

If we cannot save the cockatoos, forget about the bigger issues, if we cannot save the cockatoos there is no hope and the government of Western Australia will have presided over one of the greatest environmental catastrophes of (our) time.

Western Bushland Forum Lobbies...

The citizens living west of Perth have been working to save four bushland areas from inappropriate development proposals since the end of last year. This is on top of working to save Underwood Avenue Bushland, the housing proposal for which the UWA has not yet referred to the Federal Government under the EPBC Act.

Fourteen years ago Alan Tingay and Associates identified Greenways over the Swan Coastal Plain. Bush Forever included these Greenways as regionally significant ecological linkages and the state government and local governments were to protect and enhance them. However no statutory mechanism was put in place to make this happen through planning decisions.

In the EPA's Environmental Protection Bulletin No 8, *South West Regional Ecological Linkages*, it states: ; *'However, elsewhere on the Swan Coastal Plain native vegetation is highly fragmented. Therefore the maintenance of conservation reserves and all existing bushland patches, and the strategic restoration of ecological linkage function between them is a priority.'*



Greenway 19 is the regionally significant ecological linkage between Bold Park and Kings Park and within this linkage are Underwood Avenue Bushland, Shenton Bushland and the four bushland areas.

Bushland area no 1: Last year a bushland area was bulldozed in this linkage to allow the Autism Association

to build an Early Childhood Intervention Centre and offices. The construction is now nearly completed.

Bushland on both sides of Bedbrook Place links Underwood Avenue Bushland with Shenton Bushland. Carnaby's Cockatoos fly south out of Underwood Avenue Bushland, using the bushland along Bedbrook Place to feed and to perch and observe. From there the cockatoos go into Shenton Bushland.

Bushland area no 2: The City of Nedlands commissioned a company to investigate the vegetation along Bedbrook Place and to recommend retention of some of the bushland as a linkage. Although this was on the agenda to be discussed at two City of Nedlands Council meetings, the agenda item was withdrawn at the last minute each time. The reason was that the owner of the 1.2 hectare lot in Bedbrook Place was worried that his developer of part of the lot would get anxious about environmental restraints. Designed for 0.8 hectares of the 1.2hectare lot is a massive Clinipath pathology laboratory and processing centre. The remaining 0.3hectares will also be developed later. As 0.8 hectares is under 1 hectare (as the environmental company points out helpfully), it is not considered significant enough to assess properly. We believe that the 1.2 hectare site should be assessed in the context of the ecological linkage which is supposed to be retained and protected and enhanced, not destroyed.

This site also has Rainbow Bee-eaters nesting on it each year and Graceful Sun-moths breed there. The discovery of a moth or moths there in early March of this year was considered to be a 'very interesting record' by Dr Matt Williams, Senior Research Scientist, DEC.

While we were putting forward objections to this proposal, the Government had bowed to the pressure of local public opinion about putting temporary car-parking spaces on Hollywood Reserve playing fields. The proposed car-parks were to be temporary until the QE11 multi-storied car-park is built.

Bushland area no 3: In place of the rejected Rosalie proposal, two other areas were then proposed for temporary car-parking. Both are in Monash Avenue, at the QE11 site. One is a lovely piece of bushland, 0.6 hectares, with large old Jarrah, Casuarina and Banksia trees. Carnaby's Cockatoo roost adjacent to this bushland and use it on the path to Kings Park. Tawny Frogmouths have bred there. In the Master-plan for the hospital this bushland is shown as remnant bushland. The WAPC had commented previously that; "The retention of Crawford Lodge and the adjacent remnant bushland in the core of this high accessibility activity centre would represent a lost opportunity".

Bushland area no 4: This is at the corner of Monash Avenue and Winthrop Avenue. The understorey is grass although a few native plants have survived the lawn-mowing assault. However this site has fifteen Jarrah trees, one very old with hollows, and five old Banksias. Even if both of these sites were approved for car-parking spaces, there would still be a shortfall of 600 spaces.

Seemingly as an afterthought, the community found out that Ronald McDonald House was proposed to be built on the QE11 bush block after it is used for temporary car-parking. We were told that planners had forgotten about siting Ronald MacDonald House in the hospital precinct. Using the bushland was seen as the easy way out.

Environment Minister Marmion withdrew himself from considering whether the proposal can be approved or not, because he said he would be perceived to have a conflict of interest as Nedlands is his electorate. Surely other Ministers for the Environment have made decisions on bushland and wetlands in their electorates and indeed it is their duty as elected representatives to look after the assets and affairs of their electorate. The Minister chosen to make the decision now is Minister Day. As Minister for Planning, surely he could be perceived to have a conflict of interest. Does Minister Day withdraw from making planning decisions when they are in his electorate?

By this time a new group 'The Western Bushland Forum' had formed to be a united voice for bushland and other natural areas in the western suburbs and to support the retention of the ecological linkages. The group believed that their activities could act as a model or catalyst for protection of other threatened areas beyond the western suburbs. Some of those in the group were WREN, the Friends of Shenton Bushland, the Friends of Underwood Avenue Bushland, the Friends of Bold Park Bushland, the Friends of Allen Park, the Friends of Lake Claremont, and the Swanbourne Coastal Alliance and also local residents.

A group of thirteen people from the Forum and local government councillors met QE11 Trust planners at Minister Marmion's office. We had expected the Minister to be present but he did not attend. We eloquently argued for retention of the bushland and suggested alternative ways to fit all the desired buildings onto the less than adequate site. Our suggestions from the meeting were also put in a letter, sent mid March, to the Minister and to the QE11 Trust member and the commitments the QE11 Trust people had made at the meeting were recorded in the letter. There has been no reply.

The UBC has recommended that all Greenways shown in Bush Forever and other regionally significant ecological linkages in the Perth region be declared by the Minister as 'Environmentally Sensitive Areas.' If the Minister did this, then exemptions from requiring a clearing permit would not apply, thus clearing permits would be required and proposals would have to be assessed against the 10 clearing principles.

Now we await the recommendations of the Appeals Convenor and the decisions of Minister Marmion on the Clinipath proposal and Minister Day on the QE11 Bushland proposal.

WESTERN BUSHLAND FORUM

The time after the formation of the Forum was one of heightened activity where the things to be done did not fit into the cloth of the days. Group members organised a public walk from Winthrop Avenue, down Monash Avenue, through Hollywood Reserve, through Shenton Bushland to near Underwood Avenue Bushland. The purpose was to point out to participants the bushland sites under threat, the bushland already lost and as publicity for a Western Bushland Forum symposium to be held.

Was it three people who registered for the walk? We thought we would just be having a walk with ourselves but on the morning of the walk 35 people attended and it was very successful.

The Western Bushland Forum's symposium was held on the afternoon of 2nd April. We wish to express our great thanks to all the speakers. Everyone we asked agreed to speak as volunteers, and all stayed for the whole forum where possible, and participated in the panel discussion. The generosity shown by the speakers in giving so much time, effort and sharing of their expertise was much appreciated.

Minister Marmion opened the symposium and was able to stay to hear the first speaker, Greg Keighery. Other speakers were Bronwen Keighery, Ric How, Tegan Johnstone, Prof Paul Hardisty, Barbara Wilson, Loretta van Gasselt and Renata Zelinova. Heidi Hardisty spoke on the WESROC's Greening Plan, a great initiative between local governments in the western suburbs but an initiative which has not been implemented.

The vitally important ecological linkage between Kings Park and Bold Park is under imminent threat. This means that more species will be lost from Kings Park. And the long-term survival of our Banksia woodlands is threatened.

"The risks have never been clearer and the case for action has never been more urgent." (The Climate Commission-the Critical Decade)

Group News Group News Group News

Bungendore Park Management Committee held a formal dinner evening on 25th March to celebrate its 30 years of positive achievement in bushland management. The 3-course dinner, catered by The Manse restaurant, was attended by 46 guests including past councillors, past committee members and some neighbours of the park. Thanks to Armadale Christian College for the use of its facilities next to Bungendore Park.

Irene Morcombe and Kim Sarti, both inaugural members, were presented with Certificates of Appreciation from the City of Armadale in recognition of 30 years' service to Committee. Don Griffiths was also awarded a certificate for 27 years' service.

Further events are planned for the year to help celebrate this 30 year milestone.

Kim Sarti



Cr Guenter Best (Chairman), Miriam Stanborough (MC for the evening), Kim Sarti, Don Griffiths and Irene Morcombe.

Armadale Branch of the Wildflower Society held a dinner on 13th May to mark 50 years since the branch was formed. There were 22 people at the first meeting in 1961 and over the years the membership has remained static, but has been ambitious in the activities it has tackled. Short speeches during the evening dinner were given by Anne Pilgrim, State President, Wildflower Society and Cr Jeff Munn, Deputy Mayor, City of Armadale. Irene Morcombe, a founding member and joint patron of the Branch with husband Michael, also pointed out an interesting fact. The first President of the Branch was Rev. Ewan Watts and committee meetings were held at his manse, which has now been converted into The Manse restaurant where we were holding a celebratory dinner some 50 years later! Member Kim Fletcher closed the evening's festivities with a toast to the Branch and then he conducted a lively auction of the potted plants used to decorate the restaurant. Many thanks to Nancy Scade for providing the decorative flowering plants.

Kim Sarti

Friends of Cockburn Wetlands Education Centre
Dry summers in recent years have always left a stretch of water along the western side of Bibra Lake. However, by March 12th, 2011 this had receded to a putrid puddle.

When the birdwatching Friends of the Cockburn Wetlands Centre did their quarterly count of waterbirds they noted a total of 32 birds which represented 8 species. Contrast this with 601 waterbirds representing 22 species counted in March, 2010. The highest numbers in 2011 count were 8 purple swamphens & 6 white faced herons. In 2010 there were 107 pacific black duck & 103 silver gull.

At nearby South Lake, North Lake & Little Rush Lake there were no waterbirds counted on the March, 2011 count.

All four lakes were at best nearly completely dry with extensive rusty coloured vegetation where there is usually water. The counters were able to walk across the dry cracked bed of South Lake (as they did in 2010).

Concern is also felt for the Long Necked Turtles of the region. More were seen lying dead on the lake bed than usual. Whatever has caused them to surface they are likely prey for raptors. City of Cockburn Environmental Officers are considering how best to scientifically investigate this.

Many trees have died in the Bibra Reserve.

Across Bibra Drive on the southern side of the lake is a large retirement village. Unusually, Quendas have been seen close to residents' villas. Probably they were drawn by the benefits of the reticulation.

I wrote this article on the April day when showers broke Perth's summer drought. Oh that they may be followed by good rain and restoration of these and other such precious areas and their inhabitants.

Marion Shaw

National Tree Day at Lake Claremont July 31st 9:00 am -1:00 pm

This winter, the **Friends of Lake Claremont (FOLC)** and the Town of Claremont have a goal: **plant over 30,000 native seedlings at Lake Claremont!** Over 2 weeks of planting will commence on June 27th with many schools and community groups involved. We will finish the planting season on National Tree Day, Sunday July 31. Please join us and help us reach our goal! A sausage sizzle will be provided.

Help enhance the health and biodiversity of Lake Claremont: **A Conservation Category Wetland and Bush Forever site.**

Please register on the Planet Ark National Tree Day website: <http://treeday.planetark.org/>
Check-in and registration (mandatory): 9:00- 9:30 am
Sunday July 31st South End of Strickland St.
Swanbourne

For more information contact FOLC: e-mail
FOLC.WA@gmail.com M 0416 614 696

Bush Remnants in Ardross

I live near Wireless hill in Ardross. Whilst this is a splendid area with some bushland struggling to survive, there are a few pockets of natural bush in other parts of this suburb as well.

Near the Ardross Primary school is a small patch of original bush. It is at the end of a school oval and part of a children's playground. This little patch consisting of jarrah, banksia, acacia, macrozamia and understorey plants, is valiantly trying to resist the onslaught of kikuyu grass, the over keen lawn mowing contractor and drought! I was very happy to see that a nearby project of Men of the Trees had adopted this patch. Some areas of it have been replanted with local plants raised by that organisation with the co operation of the local primary school.

The sadness for me is that this is a precious piece of original bush that still has to defend against human carelessness. Waste is thrown in there, fires lit and the area trampled. Despite this I have noticed that some plants seem to thrive, and a variety of local insects and plenty of birds in the taller trees.

It would be wonderful if there was community action to preserve this tiny piece of bush so it could be an exemplary illustration of the original bush.

Some suggestions:

1. Should it be fenced to keep out dogs?
2. Protect it from zealous lawn mowing
3. Develop a 'Watch' group of locals to care for it
4. Encourage young members of the community to study and record the diversity.

This is one of the local bushland spots.

Pia Parker

Friends of Paganoni Swamp

One of the activities Friends of Paganoni Swamp has been involved in since 2009 are Rapid Bushland Assessments. Six activities are undertaken at random sites within a bushland reserve, and repeated at least five times (if possible, quarterly). The project was developed by Geoff Barrett from the Department of Environment and Conservation (DEC) to provide a simple way for volunteers to assess the condition of the bushland and whether it is functioning ecologically.

The activities include:

- A short walk to identify which birds are present within the area. Birds such as Scarlet Robins and Western Spinebills are usually found in larger patches of bush that are in good condition and surrounded by at least 30% remnant vegetation;
- Whether birds are visiting flowering trees. If flowering Banksias and Eucalypts are visited by birds pollination is occurring and seeds are more likely to be dispersed. So bird activity in flowering trees is a measure of ecological function;
- Evidence of rabbits and native mammals through

presence of scats, tracks and burrows/diggings.

Rabbits limit regeneration of native trees and shrubs to the long term detriment of bushland sites. Native animals such as quenda (bandicoots) are ecosystem engineers, turning soil and distributing seeds and fungi. Their presence identifies larger patches or landscapes in which the ecological linkages are intact. It also identifies sites with moist soil and dense ground cover, two features that are under threat from the drying climate and frequent burning;

- Degree of weed cover. Weed invasion tends to occur along the edges of reserves and is made worse through disturbance by vehicles and frequent fire. Weeds will smother areas of bushland resulting in a loss of plant diversity and native fauna species.

While DEC is still evaluating the data, early results suggest that larger patches of metropolitan bushland or small patches surrounded by other bushland are in better condition and show improved ecological function. From the perspective of our Friends Group, the assessments provide a tool for volunteers to formally monitor and record changes over time that they might otherwise overlook. For example, the gradual spread of weeds or loss of a particular bird species. As volunteers take part, each activity reinforces the ecological connections within the landscape and clarifies what may be missing from their particular bushland site.

For information on our activities, please contact Leonie on 9536 8195.

Leonie Stubbs

Discovering a Sense of Place

"... the problem of sustainability can be solved only by defining who we are, by understanding where we are and how we can enhance and preserve our sense of place." (Hanover Principles, Design for Sustainability, 2000).

In December 2002, the United Nations (UN) declared its Decade of Education for Sustainable Development (DESD, 2005 – 2014). One of the main goals of this initiative is to mainstream sustainability across communities through education and life long learning.

In response, a global network of Regional Centres of Expertise was established, all unique in terms of their locales yet connected by their shared experiences of promoting and realising sustainable futures through community education. The newly acknowledged Regional Centre of Expertise Western Australia, 'Sense of Place' Network (RCE WA) is the first such centre in Australia and joins a growing community network of 85 centres world-wide.

RCE WA is focusing on school children as a conduit for delivering of Education for Sustainability to the wider community and encouraging the sector to support community research programs. RCE WA also places a strong em-

Group News Group News Group News

phasis on instilling a sense of place, with support for programs that provide students with intimate and meaningful opportunities to connect with their local environment.

One of the projects that helped shape the direction of RCE WA is the adoption of a 1.7 hectare area of bushland known as the Inglewood Triangle Reserve and the extra-curricular involvement of a group of local high school students.

“There are some great opportunities to engage and enthuse students, by helping them create interpretive experiences, to collect real data which can contribute to existing scientific knowledge and to incorporate technology, such as iPads in the identification of plant species.” reports Andrew Paul, Chaplain and Bushranger Cadet Leader, of Mount Lawley Senior High School (MLSHS).

Located five kilometres from the centre of Perth, the residential suburb of Inglewood was initially developed in the 1890s, making it one of Perth’s oldest suburbs.

Inglewood Triangle Reserve is a rare area of remnant bushland and provides a window into the ecosystems that once covered the now, well established suburban landscape. In 2010 the Friends of Inglewood Triangle, a collaborative volunteer group affiliated with the Urban Bushland Council Inc (UBC), implemented an adoption plan to protect and conserve the area.

One of RCE WA’s founding partners involved in the Friends of Inglewood Triangle group, Mount Lawley Senior High School (MLSHS), was eager to create links to the RCE WA network to enrich and diversify the experiences of its students. Through their extracurricular Bushranger Cadets program, students have already engaged in several activities including litter clean ups, hand weeding and mapping plant locations. Future planned activities include identifying plant species and creating signs to inform the wider community who use the area.

Using the networking opportunities of RCE WA partnership links, MLSHS is keen to work towards extending their involvement by using the Inglewood Triangle Reserve as an outdoor “laboratory” for science classes, with the development of a set of specific resources to support activities such as practical fieldwork and plant identification techniques.



Photo by A Paul

Bushranger Cadets from the Mt Lawley Senior High School at Inglewood Triangle Reserve.

In-kind support for the development of curriculum materials is one of the valuable areas of expertise that SPICE, a secondary teachers’ enrichment program based at The University of Western Australia (UWA), brings to RCE WA.

RCE WA welcomes the UBC as a partner and encourages you as members to join us in celebrating our uniquely Western Australian sense of place and to explore the possibilities and opportunities for collaboration.

For more information contact Deborah Bowie, Project Officer, RCE Western Australia, ‘Sense of Place’

Network via email: deborah.bowie@uwa.edu.au

or visit our website <http://www.science.uwa.edu.au/community/regional-centre>



Photo by A Paul

Students from the Mt Lawley Senior High School weeding and collecting rubbish at Inglewood Triangle Reserve.

Friends of Inglewood Triangle

We have finally had some rain and the plants in Inglewood Triangle are coming back from a very tough summer. And with the rain, has come the weeds. The veldt grass has already freshened up and fumaria and bridal creeper are germinating.

We have negotiated with the City of Stirling that herbicides will not be used for weed control in Inglewood Triangle this year and we have committed to controlling weeds by non-chemical means (and usually that’s by hand weeding!).

Therefore, we will have weeding days every **Sunday (9am - 11am)** including morning tea) and every **Wednesday (8am - 9.30am)**. We meet at Eighth Ave entrance near corner Hamer Pde, Inglewood. Please wear sturdy shoes or boots, bring clean gloves and a mug for morning tea. No dogs thank you.

The City of Stirling is providing us with plants for some revegetation in several areas of the Reserve. We will be doing that revegetation with the Bushranger Cadets from Mount Lawley Senior High School. The planting days are **MONDAY JUNE 20TH** and **MONDAY JULY 4TH** both from 2.30 PM.

We are very keen to engage with local schools to show case Inglewood triangle as an example of urban bushland and to promote values of conservation and sustainability. We have already arranged a “day in the bush” with the Mount Lawley Primary School and plan to talk with other local schools about excursions to Inglewood Triangle. I will confirm those dates in a future email.

Christine Richardson

Group News Group News Group News

Friends of Hollywood Bushland

On Friday, 27th May, a planting day with the school children was held. About 900 plants were planted. As always it was an extremely busy morning as children do have to be supervised and we try to dig holes for them. Watering, marking with sticks and putting the bags on, all takes quite a bit of supervision. Helpers were rewarded with refreshments.

Next working bee will be **Sunday, 12th June** at the usual time of 9 am. Work will involve more planting and checking on seedlings planted by the children. We will stop for our usual morning tea at 10.30 am in Jaqui's beautiful garden. We do thank her sincerely for making it available to us and for setting everything out.

We find all sorts of things, lost, stolen and strayed in the bush. The last thing found was a very nice yellow Scooter - looked like it had run out of fuel and been abandoned. It is with the Police.

Now that we have had some rain, the fungi will be appearing. Keep a look out for them and Kay is always pleased to have reports on them.

David & Trish Hewson

PLANTING DAYS AT BALDIVIS WETLANDS

The **Waterbird Conservation Group** is having a number of planting and work days in May and June this year at Folly Pool and Maramanup Pool Baldi- vis, both Bush Forever sites, approximately 35 minutes from Perth.



All are invited to help restore the wetlands. Your help is appreciated. This is a great opportunity to get outside with family and friends and do something good for the environment. Yummy food will be provided.

Please wear sturdy shoes, long shirt, pants and hat. Please also bring gloves, a hammer, water and yourself and lots of energy. Pliers for the fence removal work day.

Ring Ruth on 9339 5501 or email waterbirds@mac.com to RSVP and for information on meeting places.

5 & 12 June 9am-2pm Planting at Maramanup Pool
19 & 26 June 9am-2pm Planting (subject to further information)

This project is sponsored by the Australian Government's Caring for Our Country Community action grants and DEC's Environmental Community Grants. Planting equipment has been provided by the City of Rockingham and South Eastern Regional Centre for Urban Landcare.

Friends of Warwick Busland will focus on fungi at their upcoming bush care days. Sunday 19 June and Sunday 10 July those interested in fungi spotting or fungi and slime mould spotting are welcomed at 9 am. On Sunday 21 August a guided nature walk and bush care day will be held. Meet at the Bowling and Tennis Club car park, Lloyd Drive, Warwick. For more information contact Janina on 9404 8756 or email friendsofwarwick@gmail.com.

'Hocking; our Future?'

By Rob Greenwood

It was a shock to pass the Berlingeri's....
sole remaining market garden, on the hill
where only a few short years ago bushland
had, then market gardens, once stood....
swept away in a tsunami of suburbia
fuelled by oil; first destruction, then erection
now roof to roof with not a tree in sight
blacks and browns and greys of rendered walls

we there for a kids' easter sunday egg hunt
the tired couch (grass) struggled in the barren sand
no sound of bird.... George the schitzo dog...
Charlie and Isabelle learned about (grass) roots...
Jacob,...and, a lost ladybird blown on the wind
as William rocked in his electric cradle
mimic ancestors in the ancient forest
now a forgotten memory of what once was

is this the best place to raise our kids
marooned in a (now) biodiversity desert?
trapped in a mortgage belt and SUV's
energy drinks and aircon, just to survive
what happens when the (Aus) oil runs out (in 2020)?
willing servants (unwitting slaves?) to the multi nationals
***** & *****, ***** & ****. *Hocking; our future?

*The 'burb' of Hocking, City of Wanneroo, where once pristine bushland, then market gardens, once stood Hocking; pawning something of high value to borrow a small amount at high interest rates, that the person borrowing, because of their desperate circumstances, is very unlikely to be able to redeem in the future...
Not at all the fault of the individual/s involved, simply a failure in sustainability of successive government/s

A MOTH MYSTERY

Underwood Avenue Bushland has been quiet for some time with few insects about. Like many other bushland areas, some trees and plants are dying, because of lack of water. Although our bushland plants and animals are superbly adapted to the conditions, some have reached tipping point between life and death.

It was sprinkling a little on 27 April when I went to Underwood Avenue Bushland and saw this beautiful moth on a daviesia.

This lady has proved difficult to identify. Is she in the family, Arctiidae? Is she a species of Tussock Moth, (Fam; Lymantriidae), perhaps a Euproctis? Are her wings raised because she has just emerged as an adult?

Marg Owen



Photo by M Owen

REPORT ON PILOT PROJECT

To introduce native pellitory (*Parietaria debilis* G. Forst.), into the coastal bushland to provide more local breeding sites for the Yellow Admiral Butterfly (*Vanessa itea* (Fabricius)).

*Extract from a report prepared by Georgina Lambert and Sheldon Pritchard
Stirling Natural Environment Coastcare (SNEC)*

Natural breeding plants for the Yellow Admiral butterfly (*Vanessa itea* (Fabricius)) are linked with Australian members of the Nettle family (Family Urticaceae). There are several species which form a continuum across Central to Southern Australia and, to east and west, on the neighbouring coastal islands. Over millennia and through the processes of natural selection, Yellow Admiral adults (butterflies) have evolved into strong fliers able to migrate across the continent. *En route*, the female seeks out Nettle plants to lay her eggs on the leaves. The eggs hatch into larvae (caterpillars). They remain on these plants for shelter and to feed on the leaves. Once grown they move to a secure site nearby, to busily enclose themselves in a silky cocoon or pupa. Inside a metamorphosis takes place from which, after an interval, emerges an adult butterfly; and the lifecycle of the species starts again.

With the advent of weed species establishing across Australia, female Yellow Admirals are recorded now to also select exotic Nettle species as their breeding plants, namely Babies Tears, *Soleirolia soleirolia* (Req.) Dandy and the Stinging Nettle, *Urtica urens* L. SNEC was not interested to add another weed species to the coastal bushland and, besides, Stinging Nettles cause unpleasant dermatitis.



Photo by G Lambert

Pellitory plants growing at site W1, July 2010

Compared to our spectacular WA flora, pellitory plants, though common, are unimpressive. Easily mistaken as weeds, and often smothered by weeds, the unknowing would pass them over as hardly a significant component of the bushland. They are annuals, so, locally, the opportunity for them to be selected for breeding spans just over half a year, from about June to November. Further, threatened populations of such plants would mean diminishing breeding/feeding potential for associated fauna, such as the Yellow Admiral. This example is just one of a myriad of plant - invertebrate relationships which depend upon our bushland flora for their food, shelter and breeding locale.

Within the environs of Perth, many known stands of pellitory are nurtured in Reserves by Friends and Conservation groups. Where SNEC works, only one small and vulnerable stand of pellitory is known in the coastal dunes north of Scarborough (Powell, pers. com. 2010). Fortunately, pellitory occurs within Trigg Bushland Reserve, a Bush Forever Site, where it enjoys some environmental protection.

2010 was the year chosen to introduce pellitory into SNEC's area of operation. Most timely was the United Nations declaration of 2010 as the Year of Biodiversity, which celebrated the perfect sets and balances of a healthy Earth.

Seed Sourcing and Sorting

In November 2009, seeds were sourced from Robert Powell's bush garden, where, since 1991, he has grown Pellitory of the correct local provenance. He is WA's known authority on the pellitory story and well acquainted with the life cycle of the Yellow Admiral butterfly. He showed us how to extract seed from the plants, sort, count and store them.

Selection and Maintenance of Sites

From February through to April, eight sites were selected and lightly weeded. A Garmin Etrex GPS, kindly loaned from the Friends of Trigg Bushland Reserve's "Tuart Survey Project", marked the co-ordinates for each site.

Sowing of Seed

The significant hailstorm at the end of March 2010, dampened

the soil sufficiently to warrant the sowing of seed a month later (mid-April). Approximately, 1000 seed were scattered over one metre square area within each of the eight chosen sites.

Germination and Growth of Pellitory

No germination was observed in April or May 2010, but in June there was germination at 7 of the sites. Unfortunately, germination remained low at all sites (0-40 in September 2010), due to a winter of very low rainfall. Sites W1 and W2 grew the most and healthiest plants, so we concentrated on just these two sites .

Observations at Sites W1 and W2

From June, we checked the sites about once a fortnight to assess the health of the plants, lightly weed and to learn to recognize signs of Yellow Admiral butterfly visitations. No butterflies were ever seen.

Mid-August, Sites W1 and W2 had to be covered for four (4) days to protect the plants from a 2-day herbicide application on the surrounding *Oxalis*. Fortunately, they survived this inconvenience.

On 7 September, we noticed the characteristic signs of "Leaf Curl" (see photo). This proved that one or two female Yellow Admirals had visited both sites about mid-August and laid their eggs on the pellitory leaves. About three to four weeks later they would hatch into tiny caterpillars or larvae and remain in residence on the pellitory to feed. It was at this youngest larval stage (1st instar) that we were first alerted to the visits.

To protect themselves from the elements and from predators, the tiny larvae roll over a pellitory leaf, with their silk thread, into a small pendent umbrella, under which they shelter except when they come out to feed in the late afternoon and night. This behaviour is termed "Leaf Curl". Now we made observations more frequently at different times of the day and night.



Photo by S Pritchard

Larva under the protection of its pendent 'leaf curl'. Note the defoliated stem: September 2010

During the afternoon visit on September 15, fifteen larvae were counted at Site W1. There was evidence of several moults (discarded exoskeletons) and at least 80 "Leaf Curls". This might suggest more larvae were present than we could count. At Site W2, five larvae were counted and there were several moults and empty "Leaf Curls".

The best time to observe the larvae is at night, when they are actively feeding. There were no larvae to observe during our night visit on September 22. The large larva, at Site W2, may have moved successfully and safely into the confines of the *Acacia cyclops*; and it is possible that a few more larvae did the same. Much more likely, though, we had to conclude that a good number of the larvae, maybe all, had been eaten.

The pellitory plants were left *in situ* to reach the end of their living stage, dry out and shed their seed. This will add to any

viable seed stock, still in the ground, from the original sowing. There is some guarantee that, after the first winter rains of 2011, another pellitory crop will rise again.



Photo by S Pritchard

CONCLUSION

Even these very small stands of pellitory survived an unusually dry winter yet did indeed attract breeding Yellow Admiral butterflies. It is more than encouraging to believe that this project has succeeded in its aim. It also indicates that the hard work SNEC has put into rehabilitating the coastal vegetation is steadily improving its health and sustainability, enough to support a more sustainable balance of endemic species. Though we were disappointed to lose the vulnerable larvae to predators, this act of predation has actually contributed to another stage in the natural Food Web and ecology of the coastal biota.

If left undisturbed, these two nuclei of pellitory now have a chance to expand their distribution with every succeeding generation. The fact that female Yellow Admiral butterflies actually located and visited such sparse stands is more than encouraging for us to predict that they will come again.

Pellitory supports several interesting invertebrate species, as yet unknown to us. So, SNEC is only at the start of an exciting learning curve of understanding how just one, now not so insignificant a plant species, plays a role in the balance of Nature. Our project's *finale* for 2010 is featured in figure below.



Photo by S Pritchard

A newly emerged Yellow Admiral Butterfly clinging to its pupal cage, photographed at 11.34am on 31st October 2010

SNEC will continue this project into 2011. We will maintain Sites W1 and W2. We will record more data on the pellitory - Yellow Admiral relationship; and maybe learn about the plant's other faunal associations. Also, we will take up any opportunities to pass on our experiences to interested persons.

(Continued from page 1)

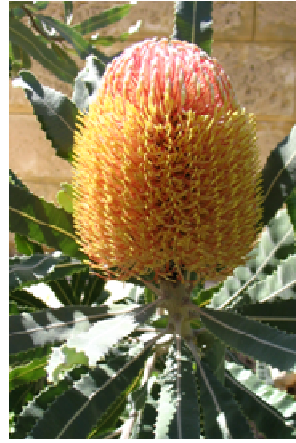
PhD researcher Shannon Dundas showed delightful video footage and slides of her subjects, the honey possums and their food plants, the Banksias and other nectar-rich wildflowers. Dr. Nicola Mitchell told the fascinating story of turtle frogs and their unusual methods of reproduction, which she has been studying in the sands around Banksia woodland. UWA researcher Judy Fisher then described the serious issues of invasive plant species moving into the Banksia woodlands and the need to control them.

Grant Wardell-Johnson of Curtin University wrapped up the day, giving a rich summary of all the speakers and noting the significance of climate change trends for all of their biodiverse perspectives. Whether in relation to fauna, flora, water or managing invasive species, the drying, warming trend in our corner of the world is contributing to processes that threaten the sustainability of our diverse species and communities.

The audience was very vocal, asking many questions after each session and using the morning, afternoon and lunch breaks to engage in lively conversation. The proceedings of the day and video footage of all sessions were recorded. Some of the material will be accessible on the re-vamped Urban Bushland Council website, currently under construction. And the papers will be published in the next couple of months as Proceedings. Copies will be sent to all participants and further copies, either on thumb drive or printed can be ordered for \$25 plus \$3 postage from the Urban Bushland Council, ubc@iinet.net.au.

◇ What's new? ◇ What's new? ◇

SYMPOSIUM PROCEEDINGS



Order the Proceedings of the Banksia Woodland Symposium held March 25, 2011. \$25 plus \$3 postage for each copy, either electronic or printed.

Order via email at ubc@iinet.net.au or by mail at Urban Bushland Council, PO Box 326, West Perth 6872. Payments by direct deposit or cheque.

These papers address the ecosystem of the Banksia woodland, its fauna, flora and aspects of management. The evolutionary history of the Banksia group and ecophysiology of groundwater use by banksias and the understorey plants of the woodlands are included. Studies of the fungi and the vertebrate and invertebrate fauna found in Banksia woodland are also presented. Management issues such as climate change, fragmentation of bushland and invasive plants are discussed. Other papers address the ecology of honey possums and turtle frogs. Honey possums depend on the flowering plants of Banksia woodland, some of which are threatened by *Phytophthora dieback*. Turtle frogs use the sandy soil beneath Banksia woodland for their unique reproductive activities. Also, an example is provided of citizen science surveys of Banksia woodland conducted by the Wildflower Society over the last two decades.

What's new? ◇ What's new? ◇

BIRDS AUSTRALIA WA ADVANCED BIRD ID CLASSES **VENUE: WA ECO CENTRE – JUNE 11TH - 12TH and** **JULY 30 - 31ST 2011**

Another opportunity to learn more about identification, field marks, characteristics and bird sounds to add to your enjoyment of birds. The BAWA Community Education Committee will be presenting the following classes in June and July at the WA ECO CENTRE, 167 Perry Lakes Drive, Floreat.

Presenters: John Blyth, Frank O'Connor, Kim Onton, Rod Smith and Brice Wells

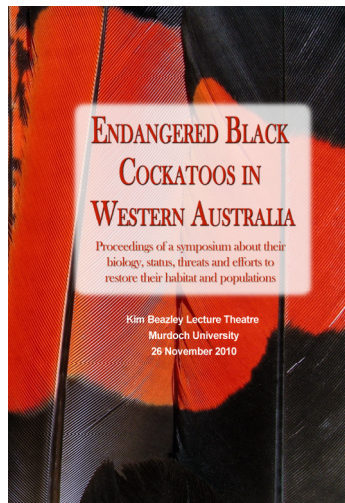
DATE: Sat - June 11th Migration, local and international, covering resident, nomadic and eruptive topics.
Sun - June 12th Parrots, Cockatoo's, Night birds, Owls, Frogmouths.
Sat July 30th Waders
Sun July 31st Robins, Cuckoo's, Babblers, Treecreepers

REGISTRATION: 8.45am Class: 9.00am – 12.00pm –morning tea provided

COST: \$12 Dollars per class, to be paid on the day.

Bookings: phone the Birds Australia office on 9383 7749 during office hours, Mon-Fri 9.30am – 12.30pm or email: mail@birdswa.com.au State your name, a contact number, email address and the date of the sessions you wish to attend.

SYMPOSIUM PROCEEDINGS



Order the Proceedings of the Endangered Black Cockatoos in WA Symposium held November 26, 2010.

Cost: \$25 plus \$3 postage for each copy, either electronic or printed.

Order via email at ubc@iinet.net.au or by mail at Urban Bushland Council, P O Box 326, West Perth 6872. Payments by direct deposit or cheque.

STOP PRESS!

The Western Australian Naturalists' Club is to be congratulated for committing co-funding that has enabled the awarding of a 3 year Research Grant under the Australian Biological Resources Study (ABRS) National Taxonomy Research Grant Program. The project will enable fungi studies to continue at the Western Australian Herbarium.

Support the Urban Bushland Council

Join or renew your membership

Groups:

Membership with voting rights is available to groups committed to the protection of urban bushland for \$35 a year (GST included). A growing membership strengthens the cause and groups benefit from the network.

Individuals:

Supporter membership is only \$25 per year (GST included). Supporters can attend meetings and receive copies of the "Urban Bush Telegraph"

Groups and supporters are reminded that annual membership fees include one printed copy of the *Urban Bush Telegraph* (currently published quarterly). Additional printed copies can be ordered at a cost of \$5.00 per copy per annum.

Send your name, address and cheque or postal order to:

Treasurer, Urban Bushland Council WA Inc, PO Box 326, West Perth WA 6872

Urban Bushland Council Activities

Preventing fire in urban bushland: Focus on arson

Wednesday 6th July 2011

at 5.30pm for refreshments before a 6pm start

To be held at conference room Citywest Lotteries House, 2 Delhi St, West Perth

The launch of the new UBC website

Wednesday 3rd August 2011 at 3.00 pm

To be held at Biodiversity Conservation Science Centre, Bentley

For more information contact the UBC office on 9420 7207

All welcome

UBC PUBLICATIONS

Endangered Black Cockatoos in Western Australia

- proceedings of a symposium about their biology, Status, threats and efforts to restore their habitat and populations. Available from the UBC for \$25 plus \$3 postage.

Wetlands to Wastelands? - proceedings of a seminar about the future of bushland at Perth Airport (2004)

Available at UBC's website

<http://www.bushlandperth.org.au/html/infosheets.htm>

Burning Issues—proceedings of a workshop about fire management in urban bushland. (2002)

Available from the UBC for \$11, postage included.

Building Partnerships between Community Groups and Local Government for Our Bushland –proceedings of a seminar (2000). Available from the UBC for \$5.50, postage included

Managing our Bushland - proceedings of a conference about the protection and management of urban bushland (1998). Out of print; available in libraries.

Burning our Bushland - proceedings of a conference about fire and urban bushland (1995). Out of print; available in libraries.

NEWSLETTER ITEMS

Compiled by: Renata Zelinova

PLEASE SEND CONTRIBUTIONS TO:email

ubc@inet.net.au

Copy deadline - 15 August 2011

PERTH'S BUSHLAND BIRTHDAY & PERPETUAL CALENDAR

\$15 plus \$2 postage

Available by mail order from the UBC office.

Office:

URBAN BUSHLAND COUNCIL WA Inc
Lotteries House

2 Delhi Street West Perth WA 6872

Ph 9420 7207 E-mail: ubc@inet.net.au

Web site:

www.bushlandperth.org.au



Urban Bushland Council WA Inc



<http://twitter.com/#!/UrbanBushlandWA>