

AUSTRALIAN PLANTS SOCIETY

Southern Highlands Group

...your local native garden club

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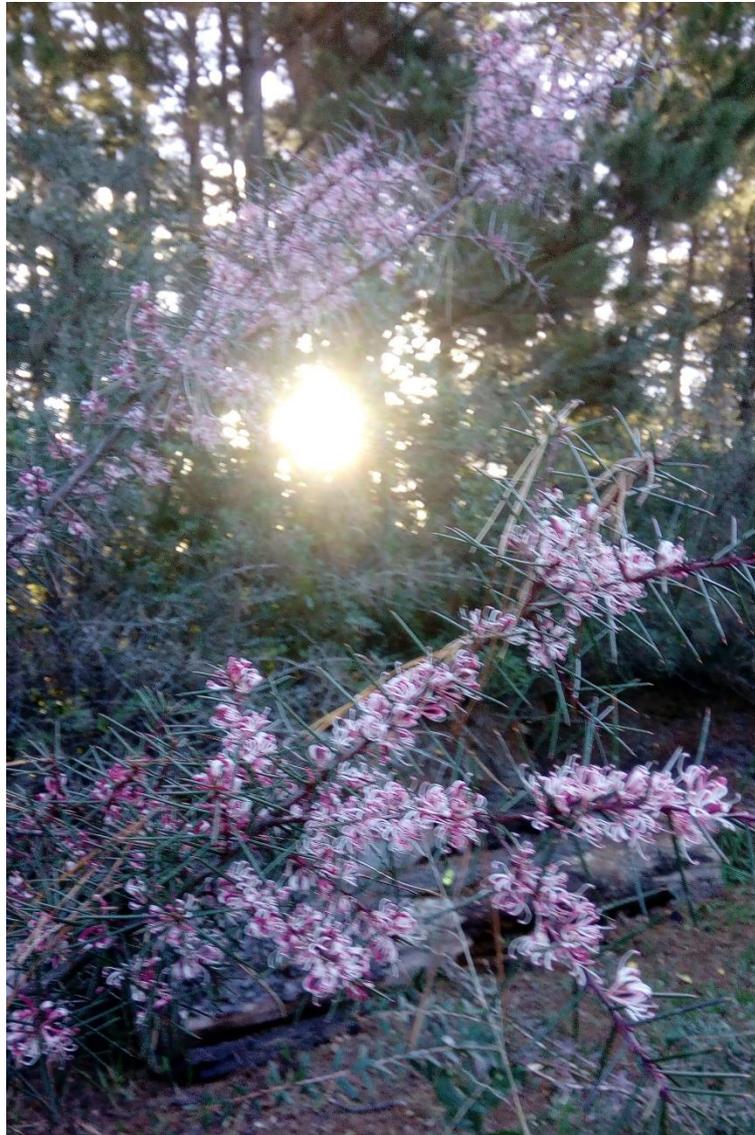
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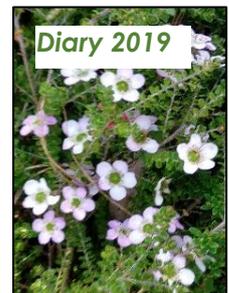
A really wintry view of the pink form of *Hakea sericea*, on a July late afternoon in Bundanoon. You can almost feel the cold. But the pleasure of seeing those masses of pink flowers is intensified by the wintry surrounds.

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The Next Diary Dates Details

Thursday 1st August. 2pm at the CWA rooms Moss Vale. Den Barber, Director of Koori Country Firesticks Aboriginal Corporation (KCF SAC) will be talking to us about this not-for-profit organisation whose aims are to revive Traditional Aboriginal cultural practices of burning Country as an alternative approach to Hazard Reduction techniques used by private and public landholders and managers.



Thursday 5th September. Wattle walk at Mt Annan Botanical Gardens, meeting at 2pm at the coffee shop. If you want afternoon tea after the walk you'll need to bring your own, as the café closes early.

Those who wish to car pool please meet at Bowral pool ready to leave at 1pm.

Program for 2019

You might like to bring a friend, to enjoy the talks and outings. Any member is welcome to attend committee meetings.

Your newsletter or emails will keep you posted on further details and any changes. Newsletters are published mid-month: in January, March, May, July, September and November. Please feel free to share this newsletter with anyone who might be interested.

Date	General Meetings	Outings	Committee Meetings
2019	<i>1st Thursday of the month at 2pm Feb. April, June, August, Oct, Nov. at the CWA rooms, Elizabeth Street, Moss Vale</i>	<i>1st Thursday in the month following the CWA General Meeting. 2pm unless otherwise advised</i>	<i>2nd Tuesday of month at 2pm</i>
Aug	1st August Talk by Den Barber of Koori Country Firesticks Aboriginal Corporation		13th August Kay's
Sept		5th Sept Wattle walk at Mt Annan Botanical Gardens	10th Sept Sarah's
Oct	3rd October Louise Egerton talk on Birds of the Southern Highlands through the seasons		8th Oct Kris's
Nov	7th November Erica Rink on her W.A. wildflower trip		12th Nov Trisha's
Dec		Sunday 1st Dec Xmas party at Sarah Cains	

Southern Highlands Conservation Story, 2019

Jane Lemann

When Trish Arbib of Southern Highlands Australian Plant Society suggested volunteer groups should tell their stories in the Newsletter we realised we needed to start with the historical framework of our conservation story. This is what I remember and would like others to correct, confirm and fill in details and names.

In the 1980s Rachel Roxborough and Roslyn Badgery drove the formation of the local volunteer National Parks Association and with the help of MP Tom Lewis created the Gibbergunyah Reserve. By the 1990s everyone was getting pretty concerned about the neglected and damaged state of our Natural Areas, particularly those people in the National Parks Association such as Helen and David Tranter, John Dorman, Arthur Beasley, Trevor Bensley, Jan and Len Hainke and others.

The Robertson Environment Protection Society was formed in 1990 'to protect and enhance the environment'. It produced 3 free booklets for the community, *Yarrawa Brush* about the local rainforest, *A House for all Seasons* about sustainable housing for the local climate and *The Wingecarribee Tree Book* to encourage more tree planting. As well as public lectures, ongoing weeding and regeneration projects were started at Robertson Nature Reserve and along Caalang Creek.

Meanwhile Roma Dix, Jenny Simons and myself started weeding at Ironmines Oval embankment without any authority. We proved bush regeneration could be done. Later Jenny and botanist Joy Thompson collected and made a comprehensive herbarium for that area with identification

confirmed by the Royal Botanic Gardens. Jenny has since donated it to the Wollongong University Herbarium with the Janet Cosh collection, but first John Dorman took photos of every page and made a beautiful DVD record of it all.

In 1993 the National Parks Association and others pushed the Wingecarribee Shire Council to hold a public meeting to establish Management Committees for the five big Reserves, Mount Alexandra, Mount Gibraltar, Hammock Hill, Mansfield Reserve, and Gibbergunyah. This was revolutionary as until then WSC had refused to insure volunteers so no one could work on council reserves except the fire brigades which were burning the guts out of them.

Very soon after that John Dorman got Glow Worm Glen group going, and later Ken Pogson, Lyndal Breen and Jan Hainke got the Moss Vale Landcare group going for Whites Creek, followed by the Currabunda Wetland by Sheila Michelson and Alan Hyman in Bundanoon, and John Shepherd's group on Forestry Land at Stingray Swamp. We were all well supported by Pat Hall from National Parks and Wildlife Service and Geoff O'Connor from Landcare. The Sydney Catchment Authority and the Hawkesbury Nepean Catchment Management Authority also helped, keen to ensure clean water left the Shire.

In 1995, representing their groups, Trevor Bensley, Arthur Beasley, Lou Flower, Geoff Allen, Annie Baillieu and John Dorman put all our group volunteer in-kind hours together to apply for a matching Landcare grant for WSC to employ a qualified adviser. We won it, much to Council's surprise and our scientist, Larry Melican was employed for the next four years within Charles Dunlop's Engineering Department, and he set us all up on a sound footing.

In 2000 a further public meeting persuaded the council to introduce the Environment Levy of .00006% on everyone's rates. WSC formed an Environment Committee with 5 community representatives to administer the Levy. This has paid for the WSC qualified bush regeneration team known as Bushcare - now five people and 3 vehicles. They support all the volunteer groups working on council owned lands and as the Levy is now set in perpetuity it assures volunteers that their work will be maintained and the whole community is contributing to the care of the environment in some way.

The Wingecarribee Landcare and Bushcare Network Inc. again run by volunteers, especially Lou Flower as Secretary /treasurer, was set up to represent all the groups both at the council and Landcare and to auspice projects outside WSC domain, such as the Stingray Swamp group.

There are now 18 volunteer Bushcare groups, 4 Landcare Groups, 4 NPW groups

Meanwhile Local Land Services, National Parks and Wildlife Service and Greening Australia organise and carry out assorted programs like the current Great Eastern Ranges Initiative, Glossies in the Mist, Bungonia to Bullio, Wall to Wollondilly planting and others depending rather erratically on grant monies being allocated.

I would also like to mention Warren Walker from the Wariapendi Native Plant Nursery and Greg Stone from Woodlands Revegetation who have supported us all and have really made a difference to the natural landscape of the Southern Highlands.

Further details of individual group efforts will follow in later newsletters.

Winter Flowers in the Southern Highlands

Trish Arbib

With contributions from Pam Tippett, Bill Mullard, Erica Rink, Kay Fintan, Kris Gow, Louise Egerton and Sarah Cains



Eucalyptus erythronema, Red-flowered mallee. Photo by Bill Mullard

In Bundanoon just now the wind is blowing at 61km/hour, it's 8.7 degrees, and "feels like **minus** 4.6 degrees" according to BOM.

Not a lot flowering in local gardens. Of course daphne, proteas and the first jonquils... But what about native plants?

Once you start looking [rugged up in a warm

winter coat] it is surprising how many you find, either in flower or just coming into flower. Just look at these Eucalyptus flowers, stunning against the blue winter sky.

A group of us scattered throughout the Southern Highlands pooled our observations to produce a list of native plants flowering in our cold, windy and wintry gardens.

The **Grevilleas** are the stars, not in size of flowers [the large flowered hybrids don't generally do well in our Highland gardens] but in the number of different Grevilleas flowering, in plant sizes from shrubs to ground covers, in their reliability, and in the range of colours. Flowers are green, pink, red, lemon, orange and mixtures of these. I think it's worth specifying some of them.

Half a dozen small grevilleas like *G. 'Pink Pixie'*, *Grevillea rosmarinifolia*, *G. baueri x rosmarinifolia*, Diane's blush Grevillea, *G. rhyolitica 'Deua Flame'* and '*Deua Yellow*', *Grevillea iaspicula*, *G. 'Lady O'* in profusion. *G. lanigera* forms including '*Mt. Tamboritha*' seem to flower all year. Also the first flowers are showing on green *Grevillea jephcottii* and grafted *Grevillea flexuosa*, *Zigzag grevillea*.

The **Banksias** make a strong impact, their spikes like candles in the low angled sunlight. *B. ericifolia*, *B. marginata*, *B. spinulosa* and var. *collina*, and the prostrate '*Birthday Candles*', and *B. marginata* are in flower. *Banksia spinulosas* have been flowering all through winter.

We tend to think of **wattles** as spring flowers, but *Acacia iteaphylla* is in full flower as is *Acacia podalyriifolia* and *A. terminalis* whilst *Acacia fimbriata*, *boormanii* and *vestita* are full of buds.

Correas – '*Lemon Twist*' and '*Reddex*', and *C. pulchella*.

Callistemon '*Tangerine Dream*' in flower, and *C. 'White Anzac'* just opening.

There are some **Epacris** flowering including the rich red *E. impressa*, and pink and white '*Pan Pipes*'.

Croweas, lovely in posies, are flowering sparsely but with their colour made darker by the cold.



Crowea exalata
'Rhapsody'



Epacris impressa,
photo by Pam Tippett



Hardenbergia
violacea White Form



Acacia boormanii

A Mittagong garden has the wonderful **Hakea** 'Burrendong Beauty' still going, *Hakea laurina* just starting to flower and *Hakea petiolaris* about to finish. The pink form of *H. sericea* is a mass of colour everywhere in the Highlands.

And if that isn't enough, some of my correspondents have flowers on their *Pimeleas*, *Westringias*, *Homoranthus*, *Brachyscomes*, *Melaleuca thymifolia*, *Thryptomeme saxicola* 'F.C. Payne', *Hardenbergia violacea*, Winter pink, *Astartea clavulata x astarteoides* and *Senna artemisioides*.

A promise of future flowers is evident in the growing buds on *Philotheas*, *Telopea*, *Hypocalymma*, and *Acacias*.

And let's not forget the foliage and form of other plants in the garden - the arching pale green fronds of *Asplenium bulbiferum* are looking good, the coloured foliage of some *Leptospermums*, the weeping habit of some of the wattles and the silver backs of the *Banksia integrifolia* leaves - very visible in these strong winds.

Also from Kris Gow:

Providing a food source for birds in winter is a good start to creating a bird friendly garden. The New South Wales endemic *Lambertia formosa* ticks all the boxes, supplying food and shelter. Commonly known as the mountain devil due to the shape of the fruit with its two "devil horns". A widespread local species with prickly foliage, red nectar rich tubular flowers and growing to about 2 metres high and wide. The flower head consists of up to 7 individual flowers, each flower has a furry barrier to prevent insects taking the nectar. The flowers are visited by longer beaked honey-eaters, shorter beaked feeders pierce the base of the flower to extract the nectar and parrots break off the flowers. The parrots' method in turn creates side shoots encouraging more flowers.

An uncommon species in cultivation, occasionally available by mail order but worth the effort.

Outing to Goulburn Wetlands

Kay Fintan



Ray talking to our group

On a wonderful clear autumn day our group travelled to Goulburn for a tour of the Goulburn Wetlands. We were met at our destination by Ray Shiel who had arranged to be our guide for the afternoon. Ray is a founding member of the FROGS Group and was extremely knowledgeable about the work undertaken and the transformation that has taken place on the site.

The Goulburn Wetlands project has as its aim, the conversion of an abandoned industrial brickworks into public parkland incorporating a natural stormwater collection and treatment system by restoring local ecosystems.

This 13.5 ha Council owned site is bordered by the Goulburn Golf Course to the south and Mulwaree Chain of Ponds River to the north of the Mulwaree flood plain.

The entire area is undergoing the development of a Wetland and Woodland Habitat and parkland by the volunteer community group called FROGS Landcare Inc. (Friends and Residents of the Goulburn Swamplands). Once heavily infested with weeds and polluted the site has now been transformed. The group have been responsible for the installation of rock berms, walking and cycling tracks, viewing platforms, disability access, on-site parking and free community WIFI.

The site now acts as a natural water collection and filtration site for local storm water returning to the Mulwaree Ponds River. With the improved water quality and habitat there has seen a dramatic increase in birdlife with up to 128 species recorded in the site. Two bird hides constructed with the dual purpose of providing storage for ongoing maintenance work have clear illustrations for visitors to identify visiting birds. Unfortunately at the time of our visit and ongoing drought conditions there were few birds visible.



Bird hide

Extensive tree and shrub planting with plants mainly propagated by the local APS Southern Tablelands Group has been undertaken in planned areas. Over 900 plants being given over the past few months. All plants are indigenous to the area and local providence with seed collected within approx. 40 km of the wetlands site. High survival rates and exceptional growth rates have been achieved for native plantings by using the latest science of improving soil Biota to suit the native plants in the form of adding wood chip fudge and the use of special pink tree guards. Two demonstration sites at the carpark entrances show how native plants can be used in landscaping for home gardeners.

With many local community groups and using a variety of Government funding opportunities the wetlands have developed as a successful model for environmental projects just by the way it has evolved since its inception in 2010. After a wonderful afternoon wandering through this very interesting development it was time to retreat to a more commercial venue for afternoon tea. Here we had the pleasure of Ray's company and we could in some small measure repay his wonderful hospitality to our group.

Frogs in the Wingecarribee Shire

Fran Mullard



Litoria dentata, Bleating Tree Frog

On Thursday 6th June 2019, our APS group enjoyed an informative and engaging presentation on frogs by Geoff Goodfellow. Geoff worked at Wingecarribee Shire Council for forty years. He grew up on a large property at Bullio, on the Wombeyan Caves Road and enjoyed a childhood where he was free to roam the surrounding bushland at will. These experiences gave Geoff a respect for and a wonderful knowledge of the native flora and fauna and the natural environment generally.

Geoff became particularly interested in frogs and was able to study them in depth in their natural habitats, thus becoming an expert in all things froggy, sharing his knowledge of frogs in general, frogs found in our area, as well as advising on the merits of creating frog-friendly dams on properties.

Frogs are a good gauge of the health of an ecosystem and are part of the web of life. Frogs have very permeable skins which allow water to move in both directions. Frogs can dehydrate very quickly but can also regain liquid quickly from moist surfaces. This makes them highly reactive to changes in the climate and to the drying out of their immediate surrounds. We humans need to ensure that we create supportive conditions for the continuation of their diversity and survival and that we endeavour not to mindlessly destroy their existing habitats.

Frogs primarily eat insects and other creatures that move. They don't eat dead food. They enjoy mites, earthworms, snails, spiders, termites and smaller frogs. Larger frogs will also eat baby birds, lizards and small snakes. Frogs also keep pesky crop and garden-eating creatures under control. Tadpoles eat algae and plant matter.

Frogs attract birds and make a delicious food source for them...not such a great outcome for the frogs, but it's all part of Nature's grand plan! And yes, frogs also attract snakes, who enjoy a frog or two for dinner. And don't forget tortoises.....you guessed it, they are also attracted to frogs, for obvious reasons. And by the way, don't put fish with frogs.....it will end badly for the tadpoles and consequently the life cycle. It's a jungle out there!

It's difficult to identify frogs in the environment as they are secretive creatures and rarely seen except during the breeding season when they are out and about searching for food. Geoff recommends that you listen to their calls. There are CDs available and some useful websites and books with good pictures to help with identification.

It is also positive that many property owners are making their farm dams and waterways more frog-friendly because it's good for the ecology and the resultant enhancement of the environment is good for the soul. When considering your dam, perhaps provide native reeds and rushes, some logs and rocks along the edges to form protection and access/egress. Frogs have lungs so it is possible for them to drown. Many farm owners create an island to protect native wildlife from predators or plant appropriate native trees, such as melaleucas, not only for the frogs but for other vertebrates and invertebrates, therefore creating more diversity. Sensitive local native plantings and lack of chemical usage in the dam's catchment area will improve water quality and help prevent erosion. Such dams can provide wonderful habitat for many species of frogs as different species use different zones, depths, etc.

It's worth mentioning that these suggestions can also be applied, albeit on a much smaller scale, to your garden pond. Firmly resist the temptation to introduce tadpoles and frogs from elsewhere. Amphibian Chytrid Disease is a huge threat to native frog populations. It is extremely virulent and spreads rapidly with fatal results. There is no cure.

Here follows a list of frogs found in Wingecarribee Shire.

- | | |
|---|--|
| Green and Gold Bell Frog (<i>Litoria aurea</i>) | Booralong Frog (<i>Litoria booroolongensis</i>) |
| Lesuer's Frog (<i>Litoria lesuerii</i>) | Eastern Banjo Frog/Pobblebonk
(<i>Limnodynastes dumerlii</i>) |
| Leaf Green Tree Frog (<i>Litoria phyllochroa</i>) | Blue Mountains Tree Frog (<i>Litoria citropa</i>) |
| Peron's Tree Frog (<i>Litoria peronii</i>) | Verreaux's Tree Frog (<i>Litoria verreauxii</i>) |
| Bleating Tree Frog (<i>Litoria dentata</i>) | Striped Marsh Frog (<i>Limnodynastes peronii</i>) |
| Eastern Brown Froglet (<i>Crinia signifera</i>) | Smooth Toadlet (<i>Uperoleia laevigata</i>) |
| Brown Toadlet (<i>Pseudophryne bibronii</i>) | |

There may be more frog diversity than we know of tucked away in some secret spots in the Southern Highlands. Some, such as the Stuttering Frog, the Red Crowned Toadlets and the Giant Burrowing Frog appear to have gone and the Booralong is feared gone. We can do better.

Thanks, Geoff for a great presentation.

For more information on suitable planting, Wariapendi has informative leaflets. Wingecarribee Council has pertinent information.

References: Geoff's talk to APS SHG on 6th June 2019 and "frogs for farms" written by Geoff Goodfellow for a WSC Land For Wildlife workshop run at Bundanoon on 28th August 2014.

Reptiles and Amphibians of Australia, Harold G Cogger, Fifth Edition, Reed Books 1992

The frog image above is from the Australian Museum web site, attributed to GA Hoyer.

Abertillery Rainforest Visit

Fran Mullard



On Thursday 4th July 2019 a group of our members visited the Abertillery Rainforest in Dale St Burrawang. This rainforest, created by Dean Pryke-Abertillery, is obviously a labour of love fuelled by a desire to recreate the environment that once was.

The building block within the township itself was purchased in 1989 and planting commenced in 1991, after the arduous task of ridding the block of introduced weeds such as privet and English Holly.



One of the magnificent Brown Barrels (*Eucalyptus fastigata*) which remained.

Two huge, magnificent and very old Brown Barrels [*Eucalyptus fastigata*] remained.

Fifty tubestock of Coachwood (*Ceratopetalum apetalum*) were provided by Randwick Council Nursery to start the ball rolling. Dean had always intended to create a predominantly Coachwood forest so this was a good start. Given time other rainforest species such as Beefwood (*Rapanea howittiana*) and Tree Violet (*Hymenanthera dentata*) supplanted themselves.

Other species planted by Dean were sassafras (*Doryphora sassafras*), Sweet Pittosporum (*Pittosporum undulatum*), Illawarra Flame Tree (*Brachychiton acerifolia*), Native Mulberry (*Hedycarya angustifolia*) Red Olive plum (*Cassine australis*), Scented or Bastard Rosewood (*Synoum glandulosum*), Featherwood (*Polyosma cunninghamii*), Brown Beech (*Pennantia cunninghamii*), Cabbage Tree Palm (*Livistona australis*),

Bangalow Palm (*Archontophoenix cunninghamiana*), Blueberry Ash (*Elaeocarpus reticulatus*), Plumwood or Pinkwood (*Eucryphia moorei*), Lillypilly (*Acmena smithii*), Red Cedar (*Toona ciliata*), Black Wattle (*Callicoma serratifolia*), Native Quince (*Alectryon subcinereus*), Kanooka or Water Gum (*Tristaniopsis laurina*), Wombat Berry Vine (*Eustrephus latifolius*) and Pigeonberry Ash (*Elaeocarpus kirtonii*). This list is not definitive.

Concurrently with those plantings, Dean was busy with building infrastructure such as basalt rock lined pathways, a suspension bridge over a frog pond and a viewing platform, all of which were constructed from recycled hardwood timber collected over time.

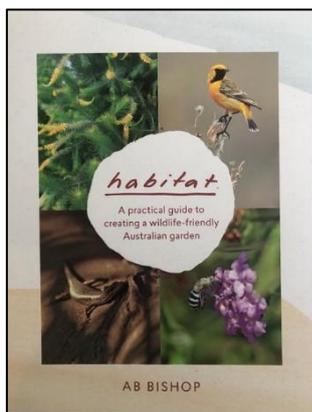


The rainforest was a beautiful place to be, despite the cold, damp and moody weather on the day. It covers the rear of the backyard and must afford a cool and soothing retreat on a hot summer's day. It is a fine example of what is possible to achieve through hard work, drive and passion for the environment. Thank you, Dean, for sharing it with us. We enjoyed it immensely.

References: Dean and Ziggy's Rainforest in Burrawang by Dean Pryke-Abertillery 2013
Native Plants of the Sydney Region Fairley and Moore 3rd Ed. 2010

Book Review – Habitat by A. B. Bishop

Louise Egerton



Like many of Southern Highland gardeners, I display a Habitat for Wildlife plaque* on my front fence but I have been painfully aware that, since wildlife can't read, this declaration rings a bit hollow unless I am prepared to create a truly suitable habitat for our native wildlife.

Habitat is a book with a difference. Yes, it's a gardening book but instead of making the plants the focus, it looks at gardens from the perspective of animals: large, small and microscopic. In fact, this book helps you think like an animal.

There are some obvious ways in which we can encourage wildlife. You can entice birds and insects with nectar-rich plants. You can refresh birdbath water for drinking and bathing through those scorching summer days (even dropping in the odd ice-cube). You can provide some basking rocks for lazing lizards. But, Bishop advises us, even if you can lay on all of these facilities, few creatures will avail themselves of them without shelter because, for animals, predators are a constant preoccupation. For example, 'There's no way I'm crossing the open lawn to reach that bird bath because that currawong may snatch me up mid-way'.

At the beginning, the author whips us through a 101 Ecology overview for Dummies. She gently explains that if we have a healthy soil, teeming with bacteria, fungi, mosses, lichens and creepy crawlies, we have the foundations of countless food webs. From here we can build up a smorgasbord of biodiversity, and so on to the big-stuff. Chapter by chapter, she takes us through the needs of earthworms and insects, frogs and reptiles, birds and mammals. These chapters are studded with entertaining case studies of Australian gardens from all regions of the continent. The latter part of the book is full of practical projects: pest control methods without harmful chemicals, a compost tea recipe, how to test your soil and build insect hotels, bat boxes and ponds.

Habitat is a book I will go back to. I garnered several useful tips that I can easily incorporate into my garden. I would have liked a reference section at the back of the book to follow up on some fascinating information. For example, buzz pollinators apparently buzz 'to the pitch of middle C and octaves either side' (wow, tell me more). But, the one thing I loved about this book is its conversational style. It is as if you are sitting with the author on the sofa. And it's full of gentle humour, too; nothing preachy.

* available from Wingecarribee Council

MANY THANKS
to all
contributors to
this newsletter.



Thank you to Jane Lemann, Kay Fintan, Fran Mullard, Louise Egerton, Kris Gow, Pam Tippett, Bill Mullard, Erica Rink, and Sarah Cains.

I'd love to hear from any of you with stories to tell, snippets and gardening tips to share, books to review or questions you want answered.... There is so much knowledge in our membership. Let's share it as much as possible. trisharbib@gmail.com