



THE NATURALIST NEWS

PUBLISHED FOR NATURALISTS IN WESTERN AUSTRALIA

THE WESTERN AUSTRALIAN NATURALISTS' CLUB INC

FOUNDED 1924

ABN 97 932 293 116

POSTAL ADDRESS PO BOX 8257, PERTH BUSINESS CENTRE, WA, 6849

PHONE: (08) 9228 2495

Email: info@wanaturalists.org.au

Website: www.wanaturalists.org.au

JULY 2016

MISSION: To encourage the study and protection of the natural environment

CONTENTS

DARLING RANGE BRANCH MEETING REPORT

NORTHERN SUBURBS BRANCH MEETING REPORT

KWINANA ROCKINGHAM MANDURAH BRANCH
MEETING REPORT

RETIRED & LEISURED GROUP MEETING REPORT

MAIN CLUB EXCURSIONS

DARLING RANGE BRANCH EXCURSION

NORTHERN SUBURBS BRANCH EXCURSION

KWINANA ROCKINGHAM MANDURAH BRANCH
EXCURSION

COMING EVENTS

INSTRUCTIONS TO CONTRIBUTORS

ADVERTISING IN THE NEWSLETTER

NEW MEMBERS

WE NEED YOU!

DARLING RANGE BRANCH MEETING REPORT

FROGS OF THE SOUTH-WEST

Dr Paul Doughty, Curator of Herpetology at the WA Museum was our speaker for the May meeting. Presenting to a packed hall, Paul outlined the history of frog species identification in WA as well as acknowledging prominent researchers who have contributed to this work. As well as the PowerPoint presentation, a sound system played us a series of calls identifying the males of many frog species.

Within WA frogs are distributed largely between two areas of relatively high rainfall: the Kimberley region, which has the highest diversity—approximately 40 species—and the south-west where about 30 species are recorded. These two regions are separated by extensive arid areas.

Most south-west species were described by the 1960s and most of the far north arid species of the Kimberley region were described by the 1980s. In the 1990s, a further three south-west frog species were described.

There are 83 currently named species in WA and these are broadly grouped into: 26 that are 'tree' frog species (*Hylidae*), 22 large-bodied ground frog species (*Limnodynastidae*), 34 small ground frogs (*Myobatrachidae*) and the Cane Toad—an introduced, naturalised species (*Bufo* family).

There are three main breeding seasons that encompass the season of rains: autumn, winter and spring. Some frogs also breed in seasons that span more than one period. Among the autumn breeders are members of the *Heleioporus*, *Pseudophryne* and *Geocrinialeai* groups.

THE NATURALIST NEWS

The **Hooting Frog** (*H. barycragus*) (*below*) is found in the Darling Range and Forrestfield areas. Its eggs are laid as a foamy mass in a long burrow (*below right*), the entrance of which is often hidden by fallen leaves. Once rains flood into these burrows the eggs hatch and the tadpoles develop (*below, bottom left*) in the confines of the burrow.



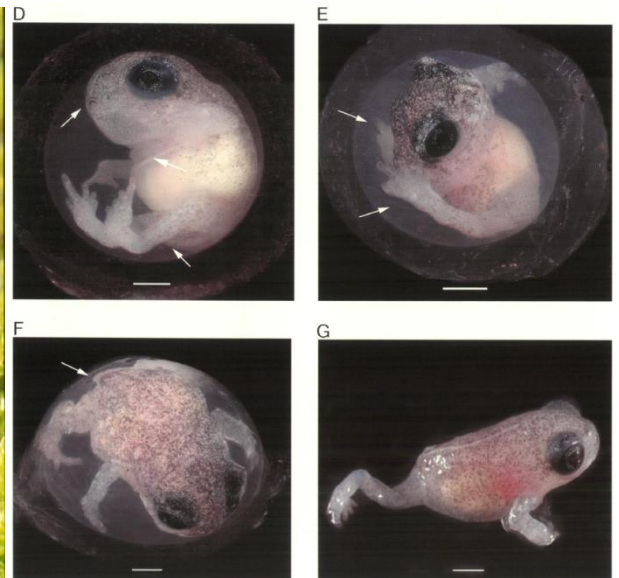
Winter breeders, utilising bogs and swamp areas, include the Slender Tree Frog (*Litoria adelaidensis*), *Crinia* species and *Neobatrachus* species. As an example, *Crinia georgiana* breeds in very shallow water and has a large egg size compared to other *Crinia*. Some of the antics and frenzy of courtship and breeding, where several males can be found clumped around one female (*above right*), are a feature of frogs breeding within swamp areas.

Spring breeders include *Litoria* (Motorbike and Slender frogs), *Limnodynastes* (the Western Banjo Frog, *L. dorsalis*) and other members of the genus *Crinia*.

The Motorbike frog, one of the species susceptible to a pervasive fungal disease, has a distinctive eponymous call and produces a foam type nest for its eggs with tadpoles reaching lengths of up to 15 cm under certain conditions. Of special interest is its ability to devour large prey, including mice and other frogs. The Motorbike Frog has been described under several scientific names (*Litoria moorei*, *Dryosophus moorei*, *Ranoidea cyclorhyncha* and *Ranoidea cyclorhyncha cyclorhyncha*) by different researchers working in different areas, based on variations in its appearance and colouration. However, genetic research shows these appearance differences are due to local variation. Paul cited other examples where genetic work has clarified earlier nomenclature; Sandhill Frogs found in the Shark Bay area and as far south as Kalbarri, have been identified by the names *Arenophryne rotunda* and *A. xiphorhyncha*, but genetic research has demonstrated they are one species.



Compared to the delicate form and colourful appearance of the slender frogs, the so-called **Turtle Frog** (*Myobatrachus gouldii*) (left), provides a startling example of an unattractive, squat member of the frog family. However it has certain points of interest. Their food source is termites and it has no tadpole phase in its lifecycle; froglets emerge from the egg capsules that are laid in the sand. The **Forest Toadlet** (*Metacrinia nicholli*) (below, left) also has no tadpole phase, which was illustrated with an image of **tiny froglets** within their transparent eggs (below).



Some of the least known frogs are those of the arid zone, consisting of the following groups: *Cyclorana*, *Litoria rubella*, *Neobatrachus*, *Notaden* and *Platyplectrum*.



Images of **tadpoles of the Ticking Frog** (*Geocrinia leai*) in various stages of growth (right) showed us the progress of development in a typical lifecycle. Examples of some of the range in size and appearances of tadpoles was also illustrated, with reference to the large research tome by Marion Anstis*, who is also known as 'the tadpole lady'.

Rather like the study of fungi, observing and studying frogs is a particularly wet season activity, but the images Paul showed us illustrated a wide array of interesting frogs, whose calls are probably more familiar to members of our audience than their appearance.

The WA Museum website has information on frogs, including Frog Watch <http://museum.wa.gov.au/explore/frogwatch>

Susan Stockmayer

**Tadpoles and frogs of Australia*, published by CSIRO.

All images by P Doughty / WAM

NORTHERN SUBURBS BRANCH MEETING REPORT

UNVEILING THE PERTH CANYON

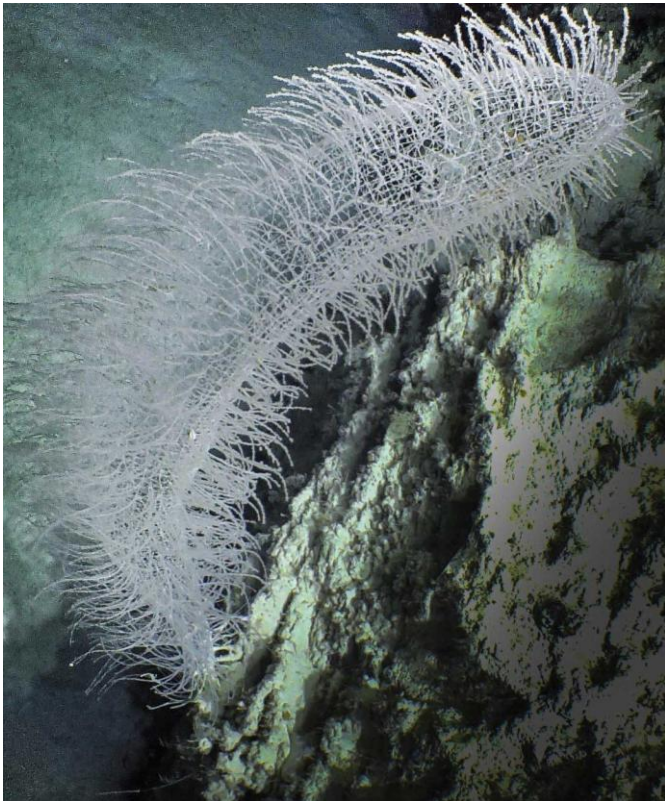
Over 50 members and visitors turned up for our May meeting to hear Professor Malcolm McCulloch, ARC Laureate Fellow in the School of Earth and Environment at UWA, tell us about the results of last year's survey of the Perth Canyon. Prof. McCulloch led a team from the UWA, the Western Australian Museum, CSIRO and the Institute of Marine Sciences in Italy, which used a Remotely Operated Vehicle (ROV) to record video footage and to collect samples from many locations along the canyon's near-vertical walls.

Prof. McCulloch began his talk by telling us about his interest in corals and other organisms which depend on calcification (the precipitation of calcium carbonate) to build their skeletons and hence for their survival.

During the remainder of his talk we learnt that:

- Anything which prevents this process, or worse still, causes dissolution (the dissolving of existing calcium carbonate), reflects a change in the pH of seawater. The decrease in the pH of the Earth's oceans, caused by the uptake of carbon dioxide (CO₂) from the atmosphere is referred to as ocean acidification—a phenomenon which has been occurring for at least the last 250 years.
- Calcium carbonate occurs in two common crystalline forms: aragonite and calcite. Aragonite is much more soluble than calcite, which means those organisms that produce aragonite may be more vulnerable to changes in ocean acidity than those that produce calcite.
- As the water in the Perth Canyon is just above the aragonite saturation point, a significant increase in CO₂ levels and the resulting increase in acidity, would lead to decreased calcification or dissolution in marine organisms in the canyon.
- Conversely, existing organisms can be used to tell us about past ocean conditions—and indirectly, climate change. Because many deep corals live for hundreds of years, changes in their carbonate skeletons act as archives, recording changes in ocean temperature and chemistry over long periods of time.
- At 200 km in length and up to 15 km in width, the canyon has roughly the same dimensions as the Grand Canyon, but is twice as deep.
- The canyon floor reaches a depth of greater than 4500 metres but the survey team was limited in how deep it could survey. The only ROV available at the time—one being used by the oil and gas industry on the Northwest Shelf—had a cable of only 2500 metres.





- The water temperature in the canyon varies between 23°C and 5°C.
- The origin of the canyon has not been satisfactorily explained. While the east-west orientation of the canyon is similar to the Swan River, there is no demonstrable connection between the two.

Professor McCulloch then showed us snapshots and videos recorded at six different sites along the canyon wall. These featured many different species of corals, sponges and



other organisms which he said are now being examined by staff from the WA Museum. Among the creatures were

Venus Flytrap Anemone (*Actinoscyphia*) (*bottom right*), **Brisingid Sea-stars**, **Basket Stars** (*Gorgonocephalidae*), **Golden Coral** (*Metallogorgia*), **Mushroom soft coral** (*Anthomastus*) and a **Glass Sponge** (*above*), complete with **entrapped shrimp** (*top right*).

Don Poynton



KWINANA ROCKINGHAM MANDURAH BRANCH MEETING REPORT

RESTORATION OF HABITAT ON PENGUIN ISLAND

The guest speaker for our May meeting was Kate Brown from the Dept. of Parks & Wildlife, who presented a talk entitled "Restoration of native plant communities and critical habitat on Penguin Island and the reintroduction of a species that has disappeared from Penguin Island—Native Hollyhock (*Malva preissiana*)". The restoration project was initiated after a researcher studying Bridled Terns (*Onychoprion anaethetus*) on Penguin Island noticed that the vegetation favoured by the terns for nesting was quite disturbed. Seabirds can have a significant impact on island ecology due to trampling of vegetation and the deposition of guano at significant nesting sites. Kate presented a geological map of Penguin Island, explaining that soil types drive vegetation types. It has been previously noted

that in areas used by cormorants as massed nesting sites there is a transition from woody shrubs, through hairy leaved shrubs, succulent shrubs, bower formers, succulent creepers, and annuals to bare sand. The birds will not nest on bare sand so they occupy a new site allowing the old site to slowly regenerate. Intact systems used by Bridled Terns feature *Tetragonia implexicoma* and *Rhagodia baccata*, however an influx of Silver Gulls has resulted in trampling and guano deposition leading to a replacement of the *Tetragonia-Rhagodia* vegetation with annual weeds. In June 2014 a project to investigate suitable methods for the restoration of the vegetation commenced. Trial plots were planted with *Tetragonia implexicoma* and *Rhagodia baccata* seedlings; however, by December 2014 the Silver Gulls had pulled out all but three of 490 seedlings. It was evident that the seedlings would require protection if the restoration was to be successful. In June 2015 the trials were repeated with steel mesh cages installed over the plots to protect the plantings. The June 2015 trials investigated a number of techniques; direct planting of seedlings, direct seeding, with and without matting to prevent weeds and brushing with cuttings of *Rhagodia baccata* covered in ripe fruit. The brushed sites showed prolific germination during winter with seedlings rapidly covering whole plots. Direct seeding did not deliver the same rate of success. However, by late October the dense stands of *Rhagodia* in the brushed sites appeared to be drought-affected and many seedlings died but the remaining cover was then stable through to December. The use of weed mats for cover in December was much better than in plots without matting. The conclusion was that brushing with *Rhagodia baccata* cuttings was the most cost effective method of creating native cover.

The second part of the presentation discussed the restoration of Native Hollyhocks (*Malva preissiana*), which had disappeared from Penguin Island in the 1970s. A short-lived perennial and a guano-loving species, it used to occur in different areas of the island previously used by the bird colonies. A site was selected that had previously been used as a nesting site by Pelicans. Seeds were collected on Carnac Island and sown into a number of trial plots in June 2014. Germination occurred and the plants flowered in November and December. They re-grew in 2015 and then died off towards the end of 2015. The findings of the trials were that the sites should be weeded first; with no weeding, the success rate was low. After the *Malva* dies off in an area, the shrubs return. For a more detailed report on the trials an illustrated scientific report can be found at:

https://www.dpaw.wa.gov.au/images/documents/conservation-management/off-road-conservation/urban-nature/workshops/shoalwater_islands_proceedings_final_23021016.pdf

Colin Prickett

RETIRED & LEISURED GROUP MEETING REPORT

CHINGARRUP SANCTUARY AND THE GONDWANA LINK

Eddie Wajon spoke to us about his property 'Chingarrup' at Boxwood Hill in the south-west and the efforts being made to restore the bushland to a sanctuary. It is 571 hectares (6 km²) in size and was originally fully cleared.

The aim is to restore the bushland—and also the bushland of a number of properties, some owned by Bush Heritage and some privately owned between Margaret River and Kalgoorlie—in order to protect threatened species and form a chain of Gondwana Link properties.

Chingarrup has a creek which is quite saline and some remarkable Corackerup Ochre Cliffs which are highly subject to erosion and bear a laterite cap. The property is very diverse geologically.

The trees are of lower stature and the plants are dominated by the *Proteacea* family: Southern Plains and Prostrate Banksias, eight species of *Dryandra* and Pincushion Hakea. Roe's Cypress Pine has tiny floral structures which turn into cones. Forty-four orchids grow in the area making a current total of 370 plant species. Cate Tauss is currently doing a 50-quadrat survey to further investigate the flora. Insects include bees, wasps, scarab beetles and 222 species of moth.

Among the animals seen on Chingarrup are Western Pygmy and Honey Possums, dunnarts, wallabies and bats. Malleefowl occur in the area and a Dept. of Parks and Wildlife baiting program has increased their number. Reptiles and amphibians include Dugites and Tiger Snakes, lizards and a frog. In all there are 540 fauna species.

Large-scale revegetation has included 50 species of *Eucalypt*, *Acacia*, *Melaleuca* and *Calothamnus*. There is a sandalwood plantation of eight hectares. Small-scale revegetation has had a 35 per cent success rate.

Feral animals such as foxes, cats and rabbits are a problem, handled by pit trapping—the cats are being fitted with collars to discover their habits. Birds are mist-netted and banded, which produces a result of 90 per cent New Holland Honeyeaters. Motion sensitive cameras are set up to track animal movements on the property. Erosion control is another landscape management technique being used.

There was a considerable amount of disused farm equipment left on the property and when it was removed it amounted to 20 tonnes of steel.

Revegetation has been successfully carried out leading to birds and insects being attracted to restored areas, restoration of the water balance and healthier land. It proves that private nature conservation can make a difference; that co-operation can achieve success in large scale projects and that ‘citizen scientists’—many of whom have volunteered on this property—can be an important factor in successful results.

Our large audience greatly enjoyed Eddie’s excellent material and presentation and our special thanks go to Don Poynton who handled the technical back-up so quickly and well, in response to a late request.

Eddie would like any volunteers from any branch of our Club who would enjoy doing voluntary work on his property, or any group who would like to visit his property, to contact him. His address is Eddie Wajon, 16 Eckersley Heights, Winthrop, WA 6150.

Margot Bentley

MAIN CLUB EXCURSIONS

EXCURSION: HI VALLEE FARM, BADGINGARRA, JUNE 4-6

On Saturday afternoon of the long weekend I travelled up to Hi Vallee Farm. The weather predicted more rain on the way but thus far we had managed to evade any showers.

At Hi Vallee Farm we found we were the only Club members there and as the nights were cold, we stayed in one of the caravans near the farmhouse.



On Sunday morning, farm owner Don took me on a private tour to find one of the greenhood orchids that could be out flowering in Banksia woodland. We found the common greenhood, *Pterostylis vittata* but not *Pterostylis* sp. ‘Coastal’. Presumably it is still a bit too early for that one. Under *Eucalyptus leprophloia* we found a good number of *Pterostylis vittata* orchids, probably because of the good rains they have had. I think one of them was *Pterostylis* sp. ‘Dongara’ which I had not seen before. This orchid had reddish veined sepals and labellum instead of the green ones found in the common banded

greenhoods. I have lodged the orchid with the WA Herbarium so am awaiting their confirmation.

In the afternoon I went looking for the Hare Orchid (*Leporella fimbriata*) around the northern side of the butte and found several specimens in flower and hundreds of Hare Orchid leaves.

The next day I returned to the butte area and in the loamy soil found some other tiny *Pterostylis* Snail Orchids. As it was raining heavily, I didn’t stay around too long to take photos. Found for the first time on the property by Don and Joy earlier this year, *Muehlenbeckia adpressa* was seen flowering along the creek line. It is early but the rains must have been favourable this year. In the afternoon I went up to the lookout and found the Winter Donkey Orchid (*Diuris perialla*) flowering.

On both survey days I kept an eye out for fungi and was pleased to see a good variety, in particular *Lichenomphalina chromacea*, a *Lentinellus* sp. (below), two coral fungi species and various *Amanita* sp.



It rained most of Monday and also Tuesday, when we returned to Perth. It was a good weekend with quite a lot of flowering plants, fungi and orchids spotted. **Jolanda Keeble**

EXCURSION: FUNGI FORAY, JELlicOE RD GLEN FORREST, JUNE 4

The forecast predicted some morning rain but luckily we had a lovely mild day for our first fungi foray. A dedicated group of seven arrived by 10 am, equipped and ready to look for the first fungi of the season. A patch of bush at the Myles' Jellicoe Rd residence, burnt 12 months previously, was the first area to be searched and turned up a bountiful array of various gilled fungi (e.g. *Cortinarius* spp., *Russula* spp., *Amanita* spp.) with a couple of bracket fungi (e.g. *Fomitopsis lilacinogilva*, *Pycnoporus coccineus*). A number of these that were in pristine condition were wrapped to take back to the table for a better look, using reference books and hand lenses.

We moved to an area on the same property that hadn't been burnt recently and found some of the same fungi but also coral fungi (*Ramaria* spp.) and some cup and dung button (*Poronia erici*) fungi. By then we probably had our eyes tuned in a bit better for observing the smaller fungi.

Just for interest we decided to walk out to a trig point off the property, on Crown land, with a lovely view up to Mundaring Weir and found a few more interesting fungi (*Boletellus* sp. and *Gymnopilus* sp.) on the way—even though we hadn't intended to look.

Alan Keeble assisted with spotting some of the more interesting, rarer fungi. Everyone had a very interesting and informative excursion, guided by Roz and Jolanda who identified and listed 23 species for the property.

Around 12.30 pm the group returned to the Myles' patio, where specimens were set out on a table, lunch eaten then the identification of the collected specimens began, using a variety of reference books.

Specimens collected that weren't required for further identification were dutifully returned to where they were collected, to set their spores and continue their great decomposing / partnering work. **Lyn Myles**

DARLING RANGE BRANCH EXCURSION

GLENBURN ROAD, GLEN FORREST

In spite of the threat of inclement weather, 17 doughty naturalists turned up on May 22 for the two-hour ramble adjacent to Beelu National Park near Glen Forrest on the Darling Range. Among the group, the presence of several enthusiastic experts on fungi, local flora and fauna greatly enhanced the experience.

The Darling scarp and plateau are geologically significant at a global scale. The scarp extends approximately 1000 km north-south, with up to 13,000 m of mixed terrestrial and marine sediments to the west, beneath the Swan Coastal Plain. The Darling plateau, with its deeply incised valleys, comprises the western portion of the Yilgarn craton that was once part of Gondwanaland. The Yilgarn separated from India and Antarctica some 150 million and 60 million years ago, respectively. Local exposures of granite and younger dolerite intrusions reflect an ancient history, with the granites dating back around 2.6 billion years. Ridges are capped by much more recent lateritic duricrusts which here—and elsewhere in the Darling ranges—are not underlain by deep-weathered kaolinised materials. This indicates that the processes responsible for the formation of the duricrusts, and deep weathering, are probably unrelated—contrary to accepted wisdom.

Extending from the granite outcrops, a clear zonation of soils and vegetation was observed, reflecting the influences of aspect, soil depth, pH and moisture. The granites directly support algae and lichens, with progressively increasing soil depths at distance from the outcrops associated with increasing plant sizes, from ground covers through to shrubs and trees. Broadly, scarp and valley slope support shrubland and Jarrah/Marri communities are associated with granite-derived soils, whereas Wandoo are distinctive indicators of underlying dolerite dykes.

It was pointed out that the oft-cited 'infertility' of local soils belies their amazing capacity to support one of the most biodiverse regions in the world. Plant adaptations to these so-called soil deficiencies are reflected, for example, in a number of complex and unique adaptations such as the use of dual root systems, proteoid roots and algae, designed to extract trace nutrients and moisture when optimal conditions prevail. Similarly, plant defence to drought and fire is displayed through features such as the presence of tough leaves, and unique seeding and resprouting mechanisms.

Often the Aboriginal connections to these areas are overlooked. The Helena Valley was, for example, an important route for the Noongyar mythical Wagyl or Dreamtime Serpent (Hughes-Hallet, 2010). Ceremonial and sacred sites lay along the valley which was also important for food and shelter, especially during the winter months. North-south trade routes are believed to have traversed the ridges.

Impacts of European settlement on local vegetation are visibly marked by the paucity of large trees, the prevalence of 'staghorn' tree canopies, and exposed and eroding soil surfaces (even under the forest), due to logging, controlled burns, disease, feral animals, use of off-road vehicles and other physical disturbances. In turn, such disruptions affect the variety and abundance of fauna habitats.

Immediately below the walk area, in Hardey Road, Glen Forrest, we could see the terraced remains of a former late-19th century vineyard *Glen Hardey*. At the time, it was one of WA's largest and may have been part of a 1000 acre selection made in the early 1800s by the government botanist and naturalist, James Drummond. Other early activities in the area were a large orchard nursery and several gravel quarries

Regardless of historical and contemporary pressures, the walk revealed a surprising richness of flora and fauna. Undoubtedly recent rains contributed to the early flowering of some plants, and the goodly presence of fungi and birdlife.

With the help of Eric McCrum and several eager birders, 17 bird species were sighted. First seen in the trees were the Grey Butcher-bird, Australian Raven, Australian Ringneck Parrot, Magpie, and a flock of Forest Red-tailed Black-Cockatoos. A flock of nine noisy Magpies drew attention to the presence of two Peregrine Falcons in the valley below, as well as a Brown Goshawk. Completing the surprising list of birds were a pair of Scarlet Robins, a Grey Fantail, some Splendid Wrens, a Rufous Whistler, several New Holland Honeyeaters, a White-Cheeked Honeyeater, Brown Honeyeaters, and a lot of Western Spinebills.

The cooler weather had seen much of the daytime animal life head into hibernation; but a few sluggish ant species, a spider's nest and moth cocoon were seen, as well as an impressive under-bark cluster of beautifully banded large native millipedes, somewhat larger than their pesky black Portuguese imports.

Around the granite outcrops the surrounding stand of *Verticordia* is known to be spectacular in spring. Granite-favouring *Borya* was springing to life after its summer dormancy, as were *Caloplaca* and *Xanthoparmelia* lichens, and several mosses. We saw a couple of striking *Kingia australis* in the nearby shallow soil (one over 2 m high), along with more numerous *Xanthorrhoea preissii*. In the ash bed of a burnt-out log we found Fire Moss, *Funaria hygrometrica*.



The earlier than usual flowering of some native plant species caused some surprise. A handsome small colony of *Conostylis androstemma* (Trumpets) (left, Wikimedia Commons by Ilena Gecan) was particularly impressive. Others in flower included: *Hibbertia hypericoides* (Buttercups), *Synphaea polymorpha*, *Dryandra sessilis* (Parrot Bush), *Andersonia lehmanniana* (Heath family), *Olearia paucidentata* (Autumn Scrub Daisy), *Styphelia tenuifolia* (Common Pinheath), *Astroloma pallidum* (Kick Bush), *Adenothos barbiger* (Hairy Jug Flower), *Grevillia pimelioides*, several *Drosera sp.* and *Acacia alata* (Winged Wattle). Some sculpturally handsome *Casuarina humulis* also lined the paths.

Recent rains had also brought out an array of fungi, to the joy of Kevn Griffiths, Laurton McGurk and Eric. These included the yellow-capped *Russula sp.*, a mustard-yellow pored *Boletus*, an *Amanita sp.*, and a small red bracket of the common Scarlet Bracket Fungus, *Pycnoporus coccineus*. Laurton also found *Anthracoxyllum archeri*, *Coltriciella dependens* and *Phlebia suberacea*. Kevn further identified several other *Boletes*, an *Agaricus* (possibly an edible mushroom), some white *Amanitas*, *Coltriciella cinnamomea*, white *Russulas* (Snappy-caps) and a beautiful skin fungus with

white labyrinthine skin (visible under a magnifying glass), maybe one of the *Perenniporia sp.*, and possibly a *Limacella pitereka*. The benefit of carrying a small hand lens on these excursions is apparent when the amazing intricacy and beauty of generally unobserved fungi and their microscopic cousins can be seen.

Acknowledgements: Many thanks to Eric McCrum, Hirono Kami, Kevn Griffiths and Laurton McGurk for input to this report.

Further reading:

Burns, C. and S. (2011): *Darlington and surrounds: local flora and bushlands*, Shire of Mundaring, WA.

Griffiths, Kevn (1985): *A field guide to the larger fungi of the Darling Scarp and south west of Western Australia*, published by Kevn Griffiths.

Hughes-Hallett, D. (2010): *Indigenous history of the Swan and Canning Rivers*, Compiled by Hughes and others, Curtin University for the Swan River Trust.

Marshall, J. (n.d.): *Wildflowers of the West Coast Hills region: Field guide*, Quality Publishing, Australia.

Jeanette and Arthur Conacher

NORTHERN SUBURBS BRANCH EXCURSION

GOLLY WALK— ERIC SINGLETON BIRD SANCTUARY, BAYSWATER

Following an alert from Gordon Elliot at our evening meeting the week before, our visit to the Eric Singleton Bird Sanctuary on May 25 was focussed on spotting the elusive Yellow-billed Spoonbill (*Platalea flavipes*).*

The 23 walkers—including five visitors (the walk was advertised as an EcoMay event)—were held in suspense until the very end of the walk when sharp eyes spotted our target partially hidden by reeds (*below left, Frank Walker*). The bird was characteristically shy and spent most of the time with its head down but a few lucky people with long-range lenses got reasonable photos when, on the odd occasion, it showed its tell-tale beak (*below right, T Marwood, taken June 11*).



We did not see the dotterels which have recently taken up residence but spotted Little Pied Cormorant, Little Black Cormorant, Little Egret, Pacific Black Duck, White Ibis, Eurasian Coot, Purple Swamphen (*left, F Walker*) and Little Grebe. Also, an unidentified falcon was spotted high in the sky.



Prior to our walk the City of Bayswater's Environment Officer, Jeremy Maher, who has watched over the sanctuary for the last 13 years, provided us with a very informative introduction covering the history of the site as well as the recent restoration.

The sanctuary is named after a local bird enthusiast and long-time resident in the area, Eric Singleton. Eric was a member of a hunting club and was aware of the large number of birds

that lived in the swampy area that in fact, was where the Bayswater Brook entered the Swan River. He began renovating the area himself and was successful in having the wetlands officially recognised in the 1970s. Jeremy told us that the friends group that was established—while its intentions were good—had practices were not in keeping with those of today. The volunteers planted many Eastern States species and used bore water to keep the water level up, whereas today we know wetlands should be allowed to partially dry out over summer to lower the build-up of contaminants, acid soil and algal bloom.

The City of Bayswater is working to reduce by 30 per cent the 1.2 tonnes of nitrogen and 200 kg of phosphorus which enters the Swan River from the city each year. The recent \$3 million rehabilitation of the bird sanctuary wetlands will be a significant contributor to this plan.

The wetland itself was reshaped and given a new depth profile so that it takes approximately 24 hours for the water to flow from the intake point to the outlet—this being the time required for most of the nitrogen to be released into the atmosphere. To assist with the filtering of contaminants, over 170,000 plants—mainly sedges and rushes—were planted along the edges and within the deep and shallow pools.



Nesting boxes for birds and bats have not been as successful as hoped and foxes are a big problem.

However the most disturbing news was that 20 of the South-western Snake-necked Turtles (*Chelodina colliei*), which had been returned to the wetland after being temporarily looked after elsewhere, were stolen from their fenced enclosure! GOLLY, what a low act!**

*Note: Nevill's *Birds of Western Australia* has mistakenly swapped the scientific names of the Yellow-billed Spoonbill (*Platalea flavipes*) and the Royal Spoonbill (*Platalea regia*).

****Editor's note:** as a member of the Turtle Oblonga Rescue & Rehabilitation Network (www.turtleoblonganetwork.org.au/) I recall this unfortunate incident. We urge people to safeguard our turtles from poachers by being alert to suspicious behaviour around wetlands and by not 'advertising' whereabouts of the turtles' habitat (e.g. don't post it on social media.) Call DPaW's Wildcare 9474 9055 (24/7) with any specific concerns.

Don Poynton

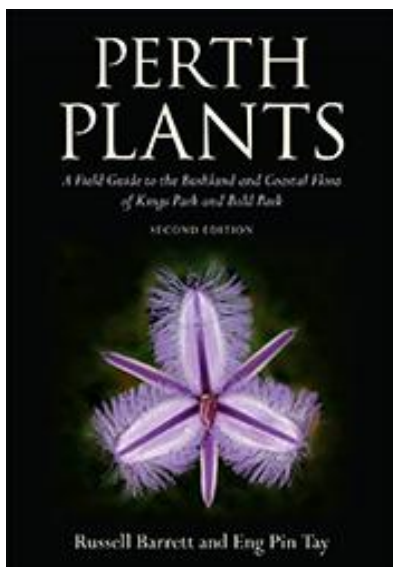
KWINANA ROCKINGHAM MANDURAH BRANCH EXCURSION

ACADEMY OF TAXIDERMY & MUSUM OF NATURAL HISTORY, GUILDFORD

The excursion on May 22nd was a visit to the Academy of Taxidermy—which is also the home of the Museum of Natural History—in James St, Guildford. Nine members made the trip up and enjoyed a very sociable morning. The museum has over 2000 taxidermy items on display, which enables visitors to closely study specimens of animals from all over the world. The proprietor, Michael Buzza, provides training in taxidermy as well as taxidermy services where required. The fauna represented includes birds, mammals (both small and large), reptiles, fish and crustaceans. The quality of the taxidermy is first class and provides a very life-like representation of each specimen. Notable exhibits included a Barn Owl, Wedge-tailed Eagles, a Sailfish, a Cape Buffalo and a Rhinoceros. There is also a cabinet with drawers containing mounted insect specimens. Although only a small facility, we spent a couple of hours exploring the exhibits, and each time we went around we discovered something that we had not noticed on a previous circuit. While not the same as encountering live animals in their natural habitats during a walk through bushland, this museum is certainly worth a visit—especially during winter when the weather may be unsuitable for outdoor activities. Afterwards we had a pleasant lunch in a nearby café before catching the train home.

Colin Prickett

BOOK REVIEW: *PERTH PLANTS* by RUSSELL BARRETT & ENG PIN TAY, 2nd edition



Perth Plants has long been a valuable resource to learn more about our local plant species. It is a well laid out book with many beautiful photographs. The book has a wider use than identifying the plants seen Kings Park and Bold Park, as the distribution map given with each plant species so well shows.

In this second edition, published by CSIRO 11 years after the first edition, the authors have improved on an already incredibly useful book. The book includes 22 additional species and updated nomenclature. I noticed that the darker plant photos in the first edition have improved in this second edition and new photos have been added to replace photos of dried specimens. There is now also a section on traditional plant usage, with some aboriginal plant names and an explanation of the seasons as recognised by the Noongar people. Additionally, the introductory texts have been enhanced by adding photographs to the fire and restoration sections.

I can recommend this book to anybody with an interest in our local native bushland or in the flora of the Swan Coastal Plain.

Jolanda Keeble

COMING EVENTS

Visitors are welcome at any meetings or excursions

FRIDAY 1 JULY

With the MAIN CLUB — OUR RICH & VARIED UNDERSEA MEADOWS

- Speaker:** Dr Marion Cambridge, The Oceans Institute & School of Plant Biology, UWA
Venue: Hew Roberts Lecture Theatre, Clifton St, Nedlands
Time: 7.30 pm
Details: The title of the talk will be: 'Our rich and varied undersea meadows: Seagrasses of south-west Australia'.
The south-west contains extensive seagrass meadows along 2,500 km of coastline from the shallow subtidal to 50+ m water depths, and in many of the estuaries along the coast. We'll hear why the seagrass meadows play such an important role in the marine ecology along our coastline and highlight some of their remarkable features, such as submarine pollination, which enable such an ancient group of flowering plants to flourish in a salty submarine environment.
Marion Cambridge is a marine biologist specializing in the ecology of temperate seagrasses. Her interests include the effects of human pressures on seagrasses, growth and nutrient dynamics of seagrasses, connectivity of land and shallow coastal systems, and seagrass habitat restoration and recovery.
Door fee \$3 includes raffle ticket, tea/coffee and biscuits after.
Contact: John Gardner, 9389 8289

FRIDAY 8 JULY

With the DARLING RANGE BRANCH — MEMBERS' NIGHT

- Speaker:** All of us! Visitors are also very welcome.
Venue: St Barnabas' Anglican Church Hall, Spring St, Kalamunda (NOTE VENUE CHANGE)
Time: 7.30 pm
Details: Bring up to 10 images/slides with associated stories to share. Please hand them to John Abbot at least 10 minutes prior to the meeting, to load onto computer.
Door fee \$3, includes raffle ticket, tea/coffee & biscuits after.
Contact: Diana Papenfus 0470906620 / 92931676

THE NATURALIST NEWS

WEDNESDAY 13 JULY

With the RETIRED AND LEISURED GROUP — OTTO MUELLER

Speaker: Otto Mueller
Topic: "A speck on the wall and below the surface"
Venue: Naturalists' Club Library, 1st floor, 82 Beaufort Street, Perth
Time: 10 am - 12.30 pm
Contact: Margot Bentley, 9386 1974. RSVPs requested.

MONDAY 18 JULY

With the KWINANA-ROCKINGHAM-MANDURAH BRANCH — PEEL-HARVEY BIRD COUNT

Speaker: Bob Paterson, Convener for the Mandurah Bird Observer Group
Time: 7.00 pm
Venue: Gary Holland Centre, Kent St. Rockingham
Details: Door fee of \$3
Contact: 9524 7451 for further details

WEDNESDAY 20 JULY

With the NORTHERN SUBURBS BRANCH — WA NATURALISTS' CLUB RETROSPECTIVE, EARLY WA NATURAL HISTORY AND RICA ERICKSON COLLECTION

Note: not our usual 7.30 pm meeting.

Part 1: We start with an optional visit to the last day of the *WA Naturalists' Club Retrospective* in the Perth Town Hall Foyer, to view an exhibition celebrating the 1966 Wild Life Show, which was 50 years ago. Presentations are at 2.00 pm - 3.30 pm. For more information: <http://www.visitperthcity.com/events/wild-life-show>

Meet: Any time, **Perth Town Hall**. Free entry. We will leave Town Hall at 3.30pm for Alexander Library Building.

Part 2: Battye Library, talk and guided tour: *Natural history relating to William Dampier, Nicholas Baudin, Robert Brown, George Vancouver, Johann Preiss, Charles von Hugel, James Drummond, Rica Erickson.*

Meet: 3.45 pm, foyer of **Alexander Library Building**, Perth Cultural Centre

Bookings essential; maximum 36 people. Members Only, preference to NSB affiliated members until 13 July.

Contact: Graham Ezzy (Secretary NSB): ezzygraham@gmail.com; SMS (0432 855 971) or hm ph: 9307 5726 (after 6 pm)

EXCURSIONS

TUESDAY 28 JUNE – WEDNESDAY 20 JULY

RETROSPECTIVE WILD LIFE SHOW

The City of Perth is creating an exhibition at the Perth Town Hall inspired by the past activities of the WA Naturalists' Club and its ground-breaking Wild Life Shows that took place there in the 1950s and 1960s. They are aiming to present an exhibition which represents (as much as possible) the original shows, particularly including the institutions and individuals that participated in the 21st Wild Life Show in 1966, (exactly 50 years ago) and drawn from the program produced at the time. Organisers are also aiming to show the progression of the people or institutions—what has happened over the past 50 years?

During the July school holidays the spirit of the Shows will be recreated with displays from many of the organisations that participated in the 1966 Show. The Town Hall foyer will come alive with, for example, the opportunity to touch hermit crabs in a salt water rock pool, to observe and pet live native animals and for children to participate in free workshops on how to use recycled materials to make 'Bug Hotels'.

The Wild Life Shows dynamically entertained and educated generations of West Australians in understanding our native flora and fauna. Harry Butler famously gave demonstrations in how to eat bardi (witchetty grubs) and naturalists organised for thousands of school children to visit the event.

This is a FREE exhibition for all ages. Grandparents who visited the Shows as children may want to relive their own childhood memories and bring along their own grandchildren. The exhibition will acknowledge the work done by previous generations in setting up many of the laws and groups that now protect our native environment. It will

THE NATURALIST NEWS

also be a rare opportunity to see Tawny Frogmouths, possums, frogs, Bobtails and Western Bluetongue lizards, turtles, scorpions, spiders, stick insects, pythons, joeys and other animals. Wildflowers will also be on display.

If you can help on the Club's stall, even if just for a morning or afternoon, contact the office 9228 2495, info@wanaturalists.org.au

Opening times 9.30 am – 4.30 pm; FREE entry

Daily Presentations to crowd and petting/photography sessions: 11.00am - 12.00pm & 2.00pm - 3.30pm

SUNDAY 10 JULY

YANGEBUP LAKE—with the BUSHWALKING GROUP

Location: Yangebup Lake

Time: 9.30 for 10 am start

Meet: Parkes St, off Osprey Dr, off North Lake Rd, Yangebup [UBD map 368, A5].

Details: A flat walk on good paths in open bushland around two lakes in the Lake Yangebup Flora and Fauna Reserve and Beeliar Regional Park. About 9 km. Leader Sue Gardner. Visitors always welcome. Please visit our website for more details: <http://www.wanaturalists.org.au/branches-groups/bush-walking/> or visit our Meetup page <http://www.meetup.com/WA-Natural-History-Lovers/> - upcoming events.

Contact: Sue Gardner, suezendave@outlook.com

SUNDAY 17 JULY

FUNGI AT BUNGENDORE—with the DARLING RANGE BRANCH

Location: Bungendore Park, Bedforddale. (A fungi foray) Details to follow.

Time: 9.45 for 10 am start

Meet: Red Gum Loop, Bedforddale (TBC)

Details: Bungendore Park Bushland Reserve is home to a wide variety of plants and animals. Its location on the western edge of the Darling Scarp means the park displays a wide range of soils, topography and vegetation types, with well over 300 plant species. Most of the park is open Jarrah-Marri forest with a typical suite of understorey shrubs and orchids. The park also features many blossoms—a fact which helped it to earn its local Noongar name, which means 'place of the gum blossom' and 'top of a hill'.

Contact: Kevn Griffiths, 9255 1965, kmagriffiths@iprimus.com.au

SATURDAY 23 JULY

FUNGI FORAY—with the YOUNG NATURALISTS

Location: Henderson Environment Centre, Groat St, North Beach

Time: 10 am — 2 pm

Activities: Learning all about the life of fungi with fungi expert Roz Hart. We will collect fungi of all kinds in the adjacent Star Swamp bushland and classify them into their major groups.

Bring: Lunch. Wear suitable shoes and dress for the weather.

Contact: Mike Gregson, 9384 8393 or Steve Page youngnats@wanaturalists.org.au

SUNDAY 24 JULY

KRMB ANNIVERSARY BREAKFAST—with KWINANA ROCKINGHAM MANDURAH BRANCH

Time: 9:00 am

Details: Anniversary breakfast at the Rockingham Golf Club

Contact: 9524 7451 for further details.

SUNDAY JULY 24

YANCHEP NATIONAL PARK (GHOST HOUSE TRAIL)—with the BUSHWALKING GROUP

Location: Yanchep National Park

Time: 9.30 for 10 am start

Meet: Car park 'Lakeview' at Loch McNess, Yanchep Nat Pk, first turn left after entrance gate [UBD map 44, A9]

THE NATURALIST NEWS

Details: This is an easy flat loop walk of about 12 km on a good track, with a brief inspection of the Ghost House. We will have the customary afternoon tea at the lake picnic area near the cars. Leader Cheryl Bushney. Visitors always welcome. Please visit our website <http://www.wanaturalists.org.au/branches-groups/bush-walking/> for more details or visit our Meetup page <http://www.meetup.com/WA-Natural-History-Lovers/> (upcoming events)

Contact: Cheryl Bushney cherylbushney@gmail.com

WEDNESDAY 27 JULY

GOLLY (GO locally) WALK, CARNABY RESERVE, CONNOLLY—with NORTHERN SUBURBS BRANCH

Location: Carnaby Reserve, Connolly (to be confirmed—City of Joondalup is awaiting results of investigation into sudden death of numerous Banksias and other species).

Time: 10:00 am

Meet: Kissing Gate, Fairway Circle (east side, near primary school), Connolly. Park on Fairway Circle 100 m north of school crossing.

Details: This will be a short walk so there's an option to have coffee/tea at 28 Café, Joondalup Resort, afterwards whilst listening to birds and watching the kangaroos. No facilities before then, however. Please see website for more details: <http://www.wanaturalists.org.au/golocally-walks/>

Contact: Don Poynton 0419 460 301 dpoynton@iinet.net.au; Graham Ezy 08 9307 5726 ezzygraham@gmail.com

**NOTE: THE PROGRAM IS UPDATED EVERY MONTH ON OUR WEB SITE www.wanaturalists.org.au
IT IS OFTEN AVAILABLE THERE BEFORE YOU RECEIVE YOUR NEWSLETTER.**

A tip from our web manager: If you want to see the calendar of events for the whole year, rather than looking in each Branch page for the corresponding 2016 Program of Events, please look in [Events Calendar](#) and change from the default Month View to the List View. You can then use the filter to show just your Branch's events. This will always be the most up-to-date information.

INSTRUCTIONS TO CONTRIBUTORS

Please send all **contributions** by email in **MS Word format**, as a clearly labelled file, to Tanya Marwood tanya.m@globaldial.com and to info@wanaturalists.org.au by the nominated closing date.

Articles need to be a *MAXIMUM OF 500 WORDS* (note new article length)

Photos to accompany articles are really appreciated; I prefer to receive these. in 'jpeg' format, all appropriately named, with information on who took it and a suggested caption.

Many thanks to those who send in contributions: Reports and accounts of Club activities help members appreciate and enjoy the diversity of talks and excursions organized under the Naturalists' Club umbrella. If you require help or advice when planning or writing your piece, please contact the editor. Ideas, constructive comments and suggestions from members are welcome.

The next issue of this newsletter will be **August 2016**.

Deadline for next issue: Monday 11 July (Earlier if possible please)

ADVERTISING IN THE NEWSLETTER

In order to offset some of the costs of preparing the monthly newsletter we invite environmentally minded companies to advertise in the Newsletter. Here is the opportunity to publicise your business to friends and associates.

Costs are: Full page \$200; Half page \$100; Quarter page \$50; Eighth page \$30. Prices do not include GST.

Copy to be sent to Newsletter Editor, Naturalist News by email one week before the advertised closing date.

THE NATURALIST NEWS

WE NEED YOU!

Journal mail out volunteers needed for the 2nd week of August. Full instructions available; streamlined process.

If you have an hour or so to spare (it's a good excuse to come into the city anyway) then contact the office on 9228 2495.

NEW MEMBERS

Jessica Hadlow, Palmyra (Serventy Prize UWA)

Perth

Vicki Gouteff, Karrinyup

NSB

We welcome these new members to our club.

Western Australian Naturalists' Club (Inc)

PO Box 8257, Perth Business Centre, WA 6849

Office and Library

1st Floor, 82 Beaufort Street, Perth.

Phone: (08) 9228 2495

Email: info@wanaturalists.org.au

Website: www.wanaturalists.org.au

Facebook: www.facebook.com/WANaturalistsClub/ and www.facebook.com/groups/669398193192578/

Darling Range Branch

PO Box 348, Kalamunda, WA 6926

Facebook: www.facebook.com/WA-Naturalists-Club-Darling-Range-Branch-449071211807090/

Kwinana/Rockingham/Mandurah Branch

PO Box 479, Rockingham, WA 6968

Phone: 9524 7451

Northern Suburbs Branch

Don Poynton, 0419 460 301; dpoynton@inet.net.au