Alice Springs Field Naturalists Club

December 2014

ANN Special

Alice Springs Field Naturalists Club Newsletter

When I first picked up this Hermit Crab in his adopted whelk shell, at Adventure Bay on Bruny Island, I thought he was dead – bright orange and not moving. Jim pocketed him and 10 minutes later brought him out to show Rosalie. We then realised he was very much alive. After a few photos, a quick walk returned him to the safety of the beach close to a small rockpool. He is a Stridulating Hermit Crab *Strigopagurus strigimanus.* He can produce a sound by flexing and extending parts of his claws to scare predators away. Barb Gilfedder.

Next meeting will be held Wed 11 Feb 2015 at 7:00 PM at Higher Education Building at Charles Darwin University.

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Australian Naturalists Network Get-together in October 2014 was hosted by Hobart Field Naturalists Club.

Field Naturalists from Alice Springs, Ararat & District, Ballarat, Bendigo, Canberra, Castlemaine, Central North, Dubbo, Canberra, Victoria, Geelong, Hamilton, King Island, Latrobe valley, Launceston, Queensland, Fassifern, Sale & District, Stanthorpe, Toodyay and WA NATS clubs attended, including Rosalie Breen, Rhondda Tomlinson, Barb and Jim Gilfedder and Bob and Leonie Read from Alice. Bob Read is a former President and a Life Member of ASFNC. He and Leoni now live in Tasmania and he is now a Member of Central North FNC, Tasmania. He was elected Webmaster of the ANN at the General meeting in Hobart. Get-togethers have been held every two years since 2000.

The following draft Statement of Purposes for the ANN was agreed to unanimously at the general ANN meeting held during the get-together.

The purposes of the Australian Naturalists Network are:

i To increase knowledge of, and encourage the preservation and protection of the natural environment.

ii To foster and promote communication and cooperation between Field Naturalists Clubs and other natural history groups from all states and territories of Australia.

iii To initiate and encourage member clubs to host biennial Get-togethers which further the appreciation and study of natural history.

iv Maintain and publish a register of Field Naturalists Clubs and other natural history groups from all states and territories of Australia.

v To support and promote conservation issues, advocating well-researched strategies.

vi To be acknowledged as a responsible apolitical voice on environmental matters.

vii To encourage the establishment of new natural history clubs.

viii To provide and disseminate natural environment information, at whatever level required, in pursuit of the above items.

A complete record of the minutes of that meeting can be seen along with other information on ANN on their website at https://australiannaturalistsnetwork.wordpress.com/

Barb's take

The Get-together consisted of nine extremely busy days around Hobart. It was like all the talks and excursions and discussions that would take us a year to get through in our own Field Naturalists Club condensed into just over a week. The event was based at The Lea Scout Camp just south of Hobart. Some participants stayed on site in cabin and dormitory accommodation, while others had found beds within easy driving distance. The event was fully catered, so everyone appeared for breakfast each morning. After breakfast and collecting a packed lunch, we boarded the two large luxury coaches for the day's excursions.

These included visits to Buckland Bushland Garden, Calverts Lagoon, The Styx and Mount Field National Park, Bruny Island - the Neck and Adventure Bay walks, WaterFall Bay Track and the Tessellated Rock pools at Eaglehawk Neck, Hartz National Park, Bonorong Wildlife Park, the Tasmanian Museum and Art Gallery and the replica of Mawson's Hut, Marion Bay for beach and lagoon-side walks and the summit and other places of interest on Mount Wellington. Each coach also had one or two local guides from the Hobart club who passed on interesting information about where we were going and also the country we passed through. Everything was organised, toilet stops, lunch stops, walks and so on.

My particular favourites were the Buckland Bushland garden, see John Gregurke's write-up on page 8, the forest walks at The Styx river, and the Bonorong Wildlife Park and Mount Wellington.
Jim and I had already spent a couple of weeks along the East Coast of Tasmania and I had been photographing wild flowers and trying to identify them, using the *Flora of Tasmania* app on my new ipad mini. It was great at Buckland to see so many local natives in flower and all clearly labelled. It is a place not to be missed on any visit to Tasmania, if you are interested in plants.

The walks at the Styx River were a complete contrast. They were through those beautiful green, drippy, mossy, ferny rainforests. Not many flowers but so many fungi, lots of brown ones but other bright yellow, orange, scarlet, purple and green. The one pictured is Eyelash Fungus, *Scutellinia aff. scutellate.* Only a centimetre across and so beautiful.

The Bonorong Wildlife Park is a privately run refuge for injured native animals and also has breeding programs for endangered wildlife including the Tasmanian Devil and some species of Frog. This was my first meeting with Tasmanian Devils. The guide said they are not really fierce, more like Staffy dogs with attitude. I loved them instantly.

The day we were taken up Mount Wellington, it was shrouded in cloud, really atmospheric, and really cold. A shame we couldn't see the views, but the alpine plants were interesting. Jim and I returned a few days later, on a clear day and the views were magnificent.
Buses usually returned to the Lea late afternoon, a delicious dinner was served and then at 8.00pm each evening there would be a talk, or sometimes several talks - see Rosalie's write-up on page 8. They were all long days, and more than one or two people couldn't manage without a little shut-eye during the talks. The organisation and planning must have been an enormous effort by many members of Hobart FNC. Well done and many thanks!

ANN GET-TOGETHER 2014 HOBART, TASMANIA By Rhondda Tomlinson

What was the highlight of the ANN Get-together in Hobart apart from catching up with Bob and Leoni Read.?

After much thought and going through my diary and photos I decided that the colour **ORANGE** presented some amazing results.

The Fairy Lanterns, *Thismia rodwayi*, are very small plants with bright orange flowers and no leaves, that appear in the mulch on the forest floor. They are incapable of photosynthesis but take their energy from fungus and can be found covered in leaf litter in very isolated areas. The roots are wormlike. On our forest walks ,several people tried to find these elusive plants but failed. Just as well **Mark Wapstra** had a sample in an ice cream container.

In the Styx Forest there were fungi that looked like orange fruits hanging from the trees, ground mushrooms and orange fungi attached to dead, decaying tree branches on the forest floor.

At Adventure Bay, Bruny Island, on the rocks out near Penguin Island, rock pools was a bright orange lichen. Even Barb's Hermit crab was orange.

The live-bearing sea star at the Tessellated Pavement rock pools was described as apricot-orange. This is the first sea star known to brood its young within the body. The babies leave the mother through the dorsal plates and crawl away. Apparently the larger juveniles can cannibalise the younger ones before birth.

In the Hartz Mountains there was orange dotted all through the habitats from flowering forest trees to heath in the moorlands and the mosses and lichens in the wet alpine areas.

Even the Pineapple Candle Heath on Mount Wellington had an orange presentation for us.

Now to look forward to Perth in 2016 for the next ANN Get-together.

Congratulations to all who made this amazing event possible.

Tasmanian Bushland Garden

By John Gregurke of Ballarat Field Naturalists Club

The Tasmanian Bushland Garden has been developed adjacent to the Tasman Highway near Buckland approximately 50 km north-east of Hobart. The 22 ha timbered dolerite hill had been degraded by grazing , firewood collection and a quarry when purchased in 2000. Over the next 10 years it was developed into a regional botanic garden to show case the native flora of south-east Tasmania. The garden opened to the public in 2010.

The Display Gardens occupy about half a hectare, and have been developed on a gentle sunny slope facing SW. Display beds have been planted to simulate natural plant communities growing on dolerite in the south-east and some of the rare and plants of eastern Tasmania. The landscaping features many local rocks and logs, which give a natural setting, and the gardens merge into the surrounding grassy woodland.

South-eastern Tasmanian species planted on scree slope in former quarry.

Grassy Dolerite Heath community with Tussock Grasses Poa sp. *and Guineaflowers* Hibbertia sp.

The quarry site has been transformed into a safe area with local fauna planted in a carefully designed scree slope, sculptures of Wedge-tailed Eagle, Tasmanian Tiger and dinosaur, a waterfall and vegetated pond.

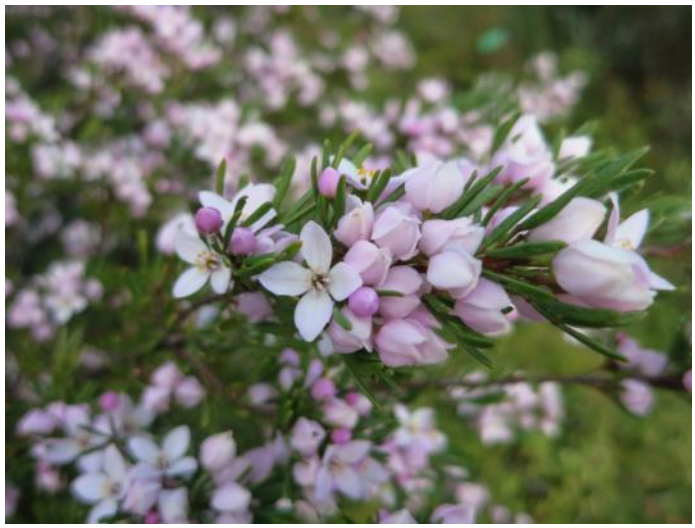
Tasmanian Tiger sculpture

The leaders for this ANN excursion were Keith and Sib Corbett who were involved with the development of the garden. They gave us an excellent account of the transformation of the degraded area into beautiful area which informs the public and encourages the uses of the local flora in gardens.

A few of the stunning plants that were flowering in Buckland Bushland garden

By Barb Gilfedder

Keith Corbett told me that our own Olive Pink Botanic Garden was one of the inspirations that led to the creation of Buckland Bushland Garden, which also contains all local natives.



Pictures, clockwise from top left:- *Pultenea prostrata, Boronia pilosa var. floribunda, Platylobium triangulare, Hibbertia empertrifolia , Comesperma volubile, Ozothamnus lycopodioides*

ANN talks

By Rosalie Breen

At the ANN get together at Hobart, we had talks every night after tea. Here is a snapshot of the presentations, to introduce you to some fascinating information and ideas. You can ask any of us who were lucky enough to go to Hobart and we might be able to help with more details, or checkout books or the internet.

Some talks had messages. **Dr Lisa-Ann Gershwin** was a flamboyant American lady who was passionate to inform us about jellyfish blooms which indicate that our oceans are out of balance. Conditions like overfishing, introduced species, coastal constructions such as dredging, pollution and ocean acidification are all contributing to environmental stress. Jellyfish thrive in nutrient rich and turbid waters, eating fish larvae and plankton, becoming the top of the food chain. Multiplying to such an extent they have been sucked in with seawater into the cooling plants of nuclear power plants causing shutdowns. In Japanese and Chinese waters, there are jellyfish that can kill people. Even in Australia around Broome, blooms have caused havoc on the pearling industry and of course swimming in some waters is unsafe. She also warned us that jellyfish are the perfect weed, in that they can shrink if food is short, and grow bigger when conditions are good again. Also if you chop up one, it can regenerate a new organism from each piece. It will take years, perhaps centuries, to repair damages done to oceanic ecosystems but it is imperative that steps are taken now to slow the decline and buy time for our future generations, so they can enjoy beaches and the seas in all their biodiversity.

Dr Eric Woehler said that after his talk, we would not look at beaches the same way again. Beaches are habitat. Shorebirds and waders lay their eggs in the sand and because beaches are threatened by people and dogs, bird numbers are declining. So we now need to consider how to protect the beach. This is being done by educating the public and sharing information and organizing community gatherings, such as Dog Breakfasts. On the beach at Adventure Bay on Bruny Island we saw this notice. He reminded us to always walk in the wet area along the beach not in the dry sand as nests and eggs are well camouflaged and easy to step on.

We had a feast of pictures from **Mike Driessen** to show us what is so special about Tasmanian fauna. Many species are found only in Tasmania. There are five endemic mammals, our largest marsupial carnivores, Tasmanian Bettong, Eastern Quoll, Tasmanian Pademelon, Tasmanian Devil and Long-tailed Mouse. Twelve birds species are endemic, including the Orange-bellied Parrot found around Melaleuca Inlet, and the Ground Parrot which has a stronghold in the western moorlands around Lake St Clair. Some reptiles, particularly skinks, have adapted to cold alpine conditions by giving birth to live young. Three of the twelve frogs that live in Tasmania are endemic. A whopping 91% of freshwater crayfish are endemic, which includes *Astocopses* the largest in the world, and the Burrowing Crayfish that likes highly acidic waters is globally unique. Best (from my point of view) is the Mountain Shrimp *Anaspides sp.*, 5-6 cm long, it is a living Gondwana fossil from 250 million years ago and found only in Tasmania. *(picture right)* We actually saw these in a little pool on the slopes of Mt Wellington. Also many grasshoppers and crickets, dragonflies, marine invertebrates, cave fauna and glow worms were shown.

To prepare us for explorations of beaches and rock platforms, **Dr Simon Grove**, the author of the book "Between Tasmanian Tides", showed pictures of the many shells and other marine life, including algae and sea grasses, which frequent the shorelines. I certainly was impressed with the number and variety of life. Rhondda has the book if anyone is interested.

Rock pool at the tesselated pavement

Dr Kevin Bonham is the president of the Tasmanian Field Naturalists. His passion is snails. On one trip he scrabbled around in leaf litter to pick out sand grain sized snails to show in his talk. He was also successful in finding a semi slug at Lake Osborne (a glacial lake in Hartz Mountains) to show too. That is a "snail" with just a hint of a shell. The number of known species of Tasmanian snails is steadily increasing, standing at 175 at the moment. Many are still to be described, and at genus level are unique to the island. Kevin recently rediscovered, after 100 yrs, a rare tiny snail *Roblinella roblini,* sometimes called the Wedding Cake Snail. Snails vary in size from 5.5 cm down to 1.1mm wide. They are important decomposers feeding on detritus, fungus, bacteria and some snails are carnivorous.

Helicarion cuvieri on lichen on a Mount Wellington rock.

My favourite talk was given by **Dr Keith Corbett,** a now retired geologist, who explained simply and clearly the main geological features of Tasmania. On our excursions we could look with knowing eyes at the three main rock types found around Hobart. The eastern part of Tasmania, the Central Plateau, consists of old sediments, horizontal layers of Permian Mudstones overlaid by Triassic Sandstones. Into this, as Gondwana was stretching , was intruded Jurassic Dolerite which pushed up through the sediments and near the surface spread out in flat sheets, often below the surface of the sandstone. Folding, faulting and weathering has created the big ranges of Mount Wellington, Cradle Mountain area and others with dolerite boulder peaks and steep scree slopes, similar to scenes in the dry valleys of Antarctica. In the west, the geology is more complex, quartzites and conglomerates predominate, with multiple peaks, and mineralized rocks are the basis of mining enterprises. Coastlines have been drowned as at Melaleuca Harbour. Ice Age glaciation has moulded the landscape too, as we saw glacial lakes and erratics in the Hartz Mountains National Park. Keith showed an animation of Australia drifting away from Antarctica, Tasmania resisting until finally the "zipper tear" broke to the south along the west coast 45 mya. He and his wife Sib along with other volunteers developed Tasmanian Bushland Gardens at Buckland which we had the joy of visiting, as an introduction to the botanical variety set out in their different habitats.

Dolerite boulders on top of Mount Wellington

Dr Lisa Cawthen talked about bats and afterwards we went out in the grounds to see if we could spot any**.** Bats are divided into two groups, Megabats, the so called flying foxes which eat fruit and nectar, and Microbats which are

insectivores and use echolocation for navigation in the dark. Eight species of Microbats live in Tasmania. They inhabit tree hollows, though one species in particular, the big Eastern Falsistrelle migrates to the city where the buildings keep it warm. Each species has a unique call and an electronic bat detector can pick up the high frequency sounds to identify the species, converting it to audible frequencies so we can hear the noises and clicks. These of course, aid in monitoring populations with the aim of protecting, creating and retaining habitat for bats. Even bat boxes are added when needed. Work using trapping and installing tiny radio transmitters on the bats has also been useful for study and finding roosts.

Pink Finger Orchid

Phil Collier introduced us to the concept of Adaptive Management for the benefit of natural values of the environment. The emphasis for Field Naturalists is changing from mainly recording to knowledge gathering. We need to learn what each organism requires for its successful growth, ie. understand population demographics. Then management objectives can be better defined, leading to decisions for action, and after monitoring , evaluation of those actions. For example in restoring a degraded area, the overall biodiversity needs to be sustained while concentrating on the threatened species and reducing threats. Phil is putting this into practice on his covenanted property near Port Sorrell – Rubicon Sanctury. This is an endangered forest community and a hotspot for orchids, 45-50 different species. Also a home to a nationally threatened dollybush, *Cassinia rugata*. Learning the life cycle and needs of the orchids and other unusual plants will ensure the populations of these priority species are sustained and improved. The fire management regime requires a delicate balance between frequency and the season of burn.

Thismia rodwayi , Fairy Lanterns, caught my imagination. **Mark Wapstra** is the expert . This is an underground plant with no chlorophyll, small elusive cryptic, another "scrabble around in the leaf litter" to find it. It's called after Thomas Smith using an anagram as there was already a genus Smithia, and its initial collector Leonard Rodway. The bright orange Lantern shaped flower is 1-1.5 cm, and pokes out of the soil, often hidden in the litter of wet damp forests usually *Eucalyptus obliqua,* and associated with "indicator" plants of Dogwood, a musk Olearia, Native Currant and Blanketleaf or Blackwood. It relies on micro fungi living among its roots for nutrients (as do orchids). Its life cycle is still a bit of a mystery, more research is needed. A few specimens came in an ice cream container of leaf litter and it was as intriguing as beautiful. I am sure everyone took a photo. There is a picture of *Thismia rodwayi* on page 4.

Sarah Lloyd talked about her new book "Where slime moulds creep: The fascinating world of Myxomycetes" which was launched that night. Genevieve Gates, an expert on Fungi and co-author of "A Field Guide to Tasmanian Fungi", gave an entertaining introduction to the book and the author. The bushland adjacent to Sarah's home in Birralee is perfect for the growth and easy observing of these organisms being a wet forest with old logs, and well rotted stumps, plenty of leaf litter. The life cycle of Myxomycetes or acellular slime moulds, is quite complex (at least to me). The most noticeable stage is the plasmodium, a colourful mass, which creeps along as it feeds, engulfing fungi, algae and bacteria. It consists of virtually one cell, a membrane containing multiple nuclei. This develops fruiting bodies which produce spores. The fruiting bodies are so tiny. We examined a couple of specimens which were kept in a matchbox and needed a hand lens to see them. The pictures of these organisms varied in form and were delicate and beautiful, tiny glistening beads on fine stalks in some instances.

You can ask any of us who were lucky enough to go to Hobart and we might be able to help with more details or checkout books or internet.

Pictured left: Participants check out the lagoon edge at Marion Bay.