

Castlemaine Naturalist

October 2022

Vol. 47.9 #513

Monthly newsletter of the
Castlemaine Field Naturalists Club Inc.



A Powerful Owl with possum prey
photo by Noel Young

Unlocking the secret life of Powerful Owls

Nick Carter's talk to the club at our September meeting was on recent research conducted by Deakin Uni of the Powerful Owl, a subject of special interest to many of our members who have witnessed the appearance and occasional breeding of these magnificent birds in the Castlemaine Botanical Gardens over a number of years.

An endemic species confined to the South-east of Australia, the PO is listed as Vulnerable or Threatened in most States, due no doubt to the fact that it is a top predator, requiring a reasonably large territory to sustain it, and facing habitat destruction or diminution. However, though basically a woodland bird, it has adapted to some other environments. Nick explained that it needs three things to sustain it; sufficient prey, suitable daytime roost sites, and large nest hollows.

Prey: it needs a sustainable diet of medium sized arboreal animals, mainly Brush-tail and Ring-tail Possums, Sugar Gliders, possibly Phascogales, Greater Gliders, often supplemented by bats and birds.

Roost: It needs bushy trees often found in gullies, which provide protection from both the elements and mobbing birds. Their presence is generally indicated by ground evidence - "whitewash", pellets containing bones, and feathers.

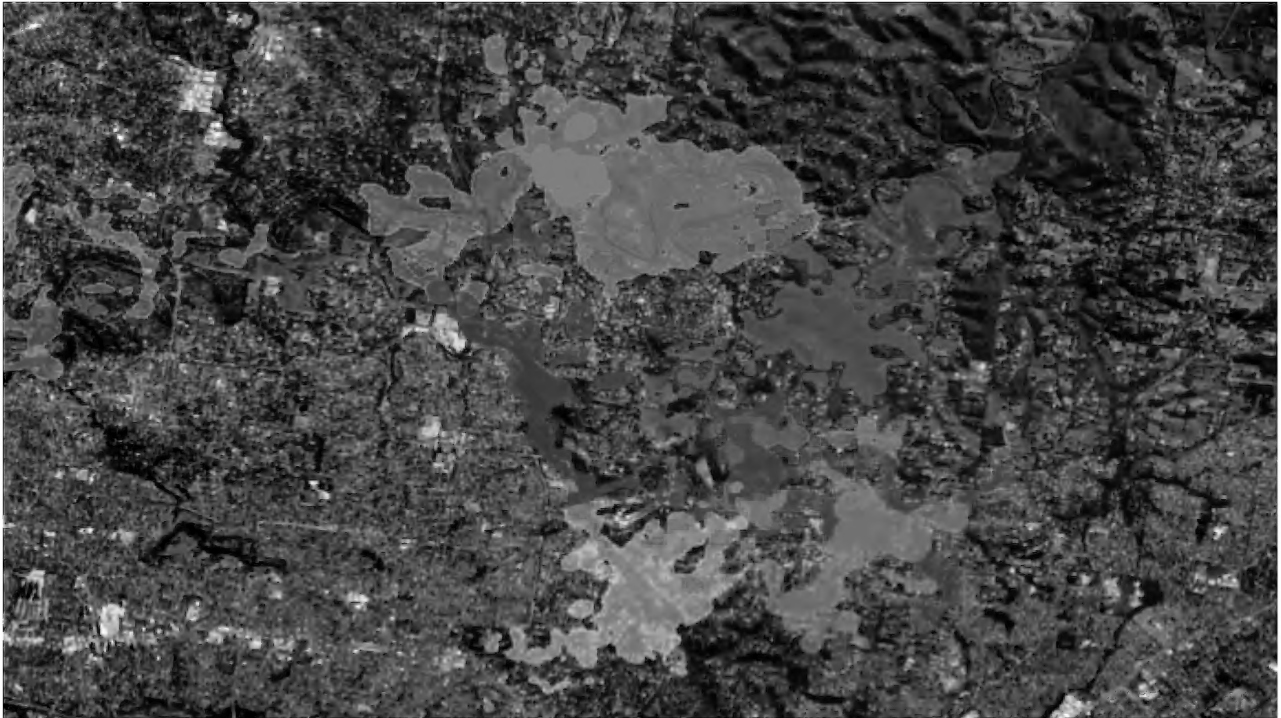


A Powerful Owl pellet –
mainly fur and bones

Nest trees: Large hollows are required, usually found only in very old Eucalypts, and used only for nesting between May and October.

Characteristically very elusive and highly mobile, they are difficult to study, but the Deakin Uni program over the last 6 years has managed to capture and track some 30 birds using GPS, yielding a large database of location points transmitted every 20 minutes between sunset and sunrise. The aim was to study birds in differing environments from urban to forest, and map the home ranges to establish their size, whether territories overlap and so on. Studies have been mainly in the Mornington Peninsula, the Otways, and Brisbane Ranges. Nick showed us examples of data

maps in different areas, with colours representing different territories covered by each bird.



Images courtesy of Nicholas Carter

With a dense accumulation of data points, the area used can be defined as a “core area” with peripheral excursions. The only overlaps occur in the latter. Individual birds are very protective of their territory.



A GPS transmitter attached to the tail

It is obvious that cleared areas are avoided, indicating the dependence on forests. Some home ranges may be only 300 to 500 Ha., often on urban fringes, perhaps owing to abundance of possums in urban areas. One bird covered 1000 Ha., because of scattered habitat – farming country with bush patches. On the screen Nick showed us an animated track of a bird through the sequence of GPS points, illustrating its movement in time; a fascinating insight into the detail

that can be gleaned from this method. Genetic studies are also being carried out from owl feathers.

To round out a fascinating presentation the less savoury subject of poisons was discussed. 18 dead owls have been examined for toxins including rat poison. The current theory is that possum prey are being poisoned by rodenticides, and the owls may be secondary casualties. Either the possums are helping themselves to baits intended for rats and mice, or some people may be intentionally poisoning them (illegal, though to some they can be a nuisance). In ongoing research, owl pellets are being examined to see if P.Os are eating rats, and possums are being examined for poisons.

A number of questions were raised by the members, such as what happens to the

chicks when they are told to leave sometime around February. Nick thinks that they may have a tough time, because available territories are mostly occupied. Trackers have not yet been used on juveniles, but may be in future. And can nesting boxes be set up to augment the diminishing tree sites? Apparently they don't seem to like them, but someone at Melbourne University is experimenting with 3D printed artificial hollows.

Finally Nick was thanked for bringing us up to speed on the latest research being carried out on one of our fascinating birds of the night.

– Noel Young

Conserving Native Orchids: Excursion Report, Saturday 10 September 2022

On Saturday 10 September we were privileged to visit the laboratory and nursery of ecologist and orchid expert Julie Radford, whose passion for conservation overall and her expertise and commitment to native orchids in particular are completely inspiring.

Julie explained in some detail the parlous conservation state of many of Victoria's terrestrial orchids and her efforts over many years to propagate, pollinate and replant the most endangered spider orchids in the Bendigo and surrounding districts, including Castlemaine. Julie recently did an assessment of 185 orchid species that occur in the central Victorian region. Of those, 32 species occur in small numbers and few populations in the region and are at risk of local extinction. Seventeen of them are seriously facing extinction without intensive intervention. One of these is our own endemic orchid, *Caladenia clavescens*, or Castlemaine Spider Orchid, which VicFlora identifies as critically endangered, and which Julie has been monitoring.



Close-up of *Caladenia audasii* (McIvor Spider Orchid) flowering in Julie Radford's nursery.

In more recent years Julie's focus has shifted beyond the immediate region to also work on endangered orchids in other parts of Victoria. For example, she is currently contracted to deliver 1500 *Diuris basaltica* (Small Golden Moth) plants for a privately funded restoration project west of Melbourne.

Orchids need a complex and interconnected confluence of conditions in order to survive and thrive, which, in addition to the major problem of loss of habitat, explains why many orchid species are endangered. Most importantly, spider orchids (and most other terrestrial orchids) require a symbiotic relationship with mycelium (the thread-like state of fungus found underground or under the bark of trees, etc). This relationship, which is referred to as mycorrhiza, sees the mycelium colonising the root system of the host plant, providing increased water and nutrient absorption capabilities while the plant provides the fungus with carbohydrates formed from photosynthesis. Some orchids will only form a mycorrhizal relationship with one fungal type, whereas others will use multiple types.

Julie explained the processes she uses to obtain and grow the mycelium that she needs for the plants she is growing from seed, as well as the labour-intensive process to propagate and nurture the orchid seeds. Her laboratory is a sterile, climate-controlled environment, and Julie informed us that she plays classical music – preferably cello music – to create a calm atmosphere for the concentrated work she does for the early stages of propagation!



Julie in her laboratory explaining the processes and stages of growth relating to the containers on display.

Julie has experimented with propagating orchids without mycelium; while some species will germinate, they do not thrive as well as the seeds provided with mycelium. It is, however, less labour-intensive and less expensive to germinate seeds without mycelium, so Julie uses this method to check that a batch of seeds is not contaminated prior to the ‘real’ propagation she does with mycelium.

Julie described five phases of growth of the orchid plants, from germination to maturity, and the different types of medium she uses for the different phases.

Without doubt the highlight of the excursion were the three endangered spider orchids flowering at the time in Julie’s nursery: 1. *Caladenia audasii* (Mclvor Spider Orchid); 2. *Caladenia sp. aff. fragrantissima* (Mandurang Spider Orchid); and 3. *Caladenia cretacea* (Stuart Mill Spider Orchid).

Caladenia audasii (Mclvor Spider Orchid), is one of the rarest orchids in Australia. There are only five known colonies, all in the central Victorian region, however four of the colonies have just one plant in them, and the other only has two! Very few people have ever seen this orchid in the wild. It is lime green with red colouration on the sepals and petals (see the close-up for a clearer indication of the colour). All three of these orchids have red calli.

Caladenia sp. aff. fragrantissima (Mandurang Spider Orchid), which is a pale lemon colour, is another of Australia’s extremely rare orchids. There are only three known colonies of this orchid in the wild, but it tops *Caladenia audasii*, with a total of 7 plants.

Caladenia cretacea (Stuart Mill Spider Orchid) is a white orchid with a red base to its sepals and petals. It is an endangered species with only a few hundred flowers in



1. *Caladenia audasii* 2. *Caladenia* sp. aff. *Fragrantissima* 3. *Caladenia cretacea*

the wild, occurring in a limited number of sites between Dalyenong and Stuart Mill. Julie has been working with the Australian Native Orchid Society and Bush Heritage for some time to strengthen the colonies of this orchid, with successful replanting of over 340 plants.

In the immediate future Julie wants to turn her attention to orchids that, while not yet listed in Victoria or nationally as threatened species because they occur in good numbers in specific areas, will soon become threatened because the number of locations they are found in is limited. This is a good time to intervene because the gene pool is large enough to support a conservation programme underpinning sustainable populations.

We – and the orchids – are the beneficiaries of Julie’s knowledge, experience and commitment. We left Julie’s place with a much greater understanding of the challenges orchids face in the wild and the extraordinary effort that is going into the conservation programmes Julie is involved with.

Report and photos: Cathrine Harboe-Ree

Birds of Sutton Grange September 2022

Nigel Harland

Spring time means Cuckoos!

Superb Fairy-wren
 Australian Raven
 Sulphur-crested Cockatoo
 New Holland Honeyeater
 Red Wattlebird
 Grey Currawong
 Southern Boobook
 Fan-tailed Cuckoo

White-browed Scrubwren
 Laughing Kookaburra
 Long-billed Corella
 Welcome Swallow
 Galah
 Eurasian Blackbird
 Horsefields Bronze-cuckoo
 Black-faced Cuckoo-shrike

Australian Magpie
 Yellow-tufted Honeyeater
 Crimson Rosella
 Common Bronzewing
 Striated Pardalote
 House Sparrow
 Shining Bronze-cuckoo
 Brown Falcon

Youngmans Track Wildflower Wander Wed. 7 September

Peter Turner

Flowering plants (f)

		Stop 1	Stop 2
<i>Craspedia variabilis</i>	Billy Buttons	f	f
<i>Pterostylis curta</i>	Blunt Greenhood		f
<i>Wurmbea dioica</i>	Common Early Nancy	f	f
<i>Hovea linearis</i>	Common Hovea		f
<i>Pimelea humilis</i>	Common Rice-flower		f
<i>Stackhousia monogyna</i>	Creamy Candles		f
<i>Grevillea alpina</i>	Downy Grevillea	f	f
<i>Spyridium parvifolium</i>	Dusty Miller		f
<i>Pterostylis nana</i>	Dwarf Greenhood		f
<i>Philotheca verrucosa</i>	Fairy Wax-flower	f	f
<i>Acacia acinacea</i> s.s.	Gold-dust Wattle	f	f
<i>Acacia pycnantha</i>	Golden Wattle	f	f
<i>Grevillea dryophylla</i>	Goldfields Grevillea	f	f
<i>Daviesia ulicifolia</i> ssp <i>ruscifolia</i>	Gorse Bitter-pea	f	f
<i>Diuris pardina</i>	Leopard Orchid	f	f
<i>Pterostylis nutans</i>	Nodding Greenhood	f	f
<i>Caladenia carnea</i> s.s.	Pink Fingers	f	f
<i>Tetralochea ciliata</i>	Pink-bells	f	f
<i>Hardenbergia violacea</i>	Purple Coral-pea		f
<i>Acacia aspera</i>	Rough Wattle	f	f
<i>Cyrtostylis reniformis</i>	Small Gnat-orchid	f	f
<i>Acacia genistifolia</i>	Spreading Wattle	f	f
<i>Pterostylis melagramma</i>	Tall Greenhood	f	f
<i>Drosera auriculata</i>	Tall Sundew	f	f
<i>Glossodia major</i>	Wax-lip Orchid		bud
<i>Rhytidoporum procumbens</i>	White Marianth	f	f

Stop 1 - corner of Youngmans and Escape Tracks

Stop 2 - corner of Youngmans and Reilly's Tracks

On 18th August visiting these sites with Geraldine, the *Grevillea dryophylla* looked very healthy. Since then there appears to have been extensive attack (insects?) on leaves. No other plants seem to be affected.



Dusty Miller at stop 2

Photo by:
Euan Moore



Hillside covered in Dusty Miller
Photo by Jenny Rolland



Grevillia dryophylla
showing leaf damage
Photo by Jenny Rolland



Gnat Orchid
Photo: Cathrine Harboe-Ree

A mystery greenhood

Euan Moore

When checking the circuit walk for the Wildflower Wander at Kalimna Park Jenny Rolland found an unusual greenhood, *Pterostylis* sp., near the top of the golf course. See photos.

It was approximately 13cm tall and more slender than *P. nutans* that was growing nearby. The flower had some of the characteristics of *P. nutans*, e.g. short lateral sepals, a relatively short hood and a hairy labellum, but was not nodding and the flower was about half the size of *P. nutans* flowers. The rosette was different too, being more open and not pressed to the ground.

When trying checking Bush Gems¹ it seemed closest to *P. nutans* but with some obvious differences. Cathrine Harboe-Ree has sent photos to Australian Native Orchid Society in the hope of getting an ID. Any suggestions as to what it might be are welcome. My thoughts are that it is a hybrid, perhaps *P. nutans* x *nana* as there were colonies of both these species nearby and they flower at similar times.



1 Backhouse G., Kosky W., Rouse D., Turner J., Bush Gems, A guide to the Wild Orchids of Victoria. 2016. Published as and ebook by the authors.

Kalimna Wildflower Wander Wed. 14 September

Euan Moore

Plant List

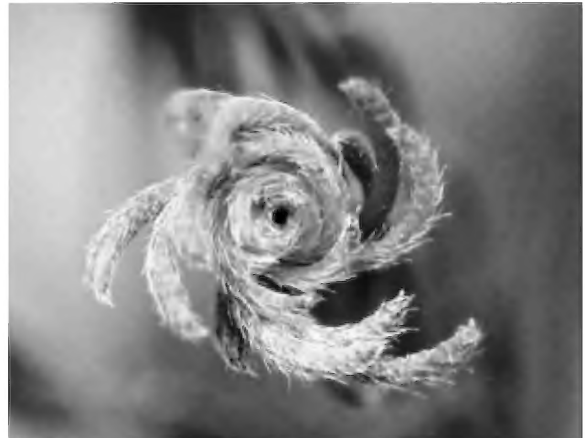
Common Name	Scientific Name	Comments
Yellow Star	<i>Pauridia vaginata</i> var. <i>vaginata</i>	One small patch along eastern contour
Early Nancy	<i>Wurmbea dioica</i>	Common throughout
Common Wood-rush	<i>Luzula meridionalis</i>	
Pink Fingers	<i>Caladenia fuscata</i>	
Hooded Caladenia	<i>Caladenia cucullata</i>	
Blue Caladenia	<i>Cyanicula caerulea</i>	
Golden Moths	<i>Diuris chryseopsis</i>	On the ridge south from our starting point
Leopard Orchid	<i>Diuris pardina</i>	Sparse and scattered
Wax-lip Orchid	<i>Glossodia major</i>	Leaves with buds
Tall Greenhood	<i>Pterostylis melagramma</i>	One plant found
Dwarf Greenhood	<i>Pterostylis nana</i>	Several large patches
Nodding Greenhood	<i>Pterostylis nutans</i>	Several large patches
	<i>Pterostylis</i> sp	Unidentified, possible hybrid
Billy Buttons	<i>Craspedia variabilis</i>	
Yam Daisy	<i>Microseris walteri</i>	
Sticky Everlasting	<i>Xerochrysum viscosum</i>	In bud
Creamy Candles	<i>Stackhousia monogyna</i>	
Climbing Sundew	<i>Drosera macrantha</i> subsp. <i>planchonii</i>	Leaves of other sundew species seen but none were in flower
Pink Bells	<i>Tetralthea ciliata</i>	
Gold-dust Wattle	<i>Acacia acinacea</i>	
Rough Wattle	<i>Acacia aspera</i>	
Early Black Wattle	<i>Acacia decurrens</i>	Environmental weed
Spreading Wattle	<i>Acacia genistifolia</i>	
Hedge Wattle	<i>Acacia paradoxa</i>	
Golden Wattle	<i>Acacia pycnantha</i>	
Narrow-leaf Bitter-pea	<i>Daviesia leptophylla</i>	
Gorse Bitter-pea	<i>Daviesia ulicifolia</i> subsp. <i>Ruscifolia</i>	
Purple Coral-pea	<i>Hardenbergia violacea</i>	
Rough Mint-bush	<i>Prostanthera denticulata</i>	
White Marianthe	<i>Rhytidosporum procumbens</i>	
Downy or Mountain Grevillea	<i>Grevillea alpina</i>	Both red and yellow colour morphs.
Fairy Wax-flower	<i>Philotheca verrucosa</i>	
Slender Rice-flower	<i>Pimelea linifolia</i>	



Three colour variants of *Grevillea alpina*, Kalimna walk – Cathrine Harboe-Ree



Above: Splashes of colour – Gorse Bitter-pea and Purple Coral-pea; right: Tall Greenhood.
 Below left: Fairy Wax-flower with characteristic pink buds. Photos by Noel Young



We also saw this intriguing small green plant that was unfurling its new growth like a Catherine Wheel. Any suggestions about its identity welcome! - Cathrine Harboe-Ree

Our excursions this spring have born out the expectations of a bumper wildflower season following an unusually wet year. As we go to print, there is still a great showing which will continue well into October, so go out there and enjoy!
 Wednesday walks 3 and 4 will be featured in next month's issue of CN - ED.

Observations October (“Wildlife” 1944)

George Broadway

There were not so many observations/specimens sent to the Editor of “Wildlife” in October 1944. I imagine people were engrossed in the progress of the war in Europe at the time, I remember I was. The Allies were approaching Berlin from the west, while the Russians were doing the same from the east. It was difficult to get

out and about as petrol was severely rationed. Many of these observations we have already seen, some of them seem to appear regularly. Why did not people read their magazine carefully?

An item of interest to me was an article contributed by Mr L.G.Chandler R.A.O.U. describing features of the Kulkyne National Forest. This brought back to me memories of the times I had spent as a fellow member of the Sunraysia Field Nats roaming through the Kulkyne in the company of Les and his wife and daughter Mary, who was also the secretary. The Sunraysia Field Nats were mainly returned soldiers of WWI who had settled on fruit blocks around the town of Red Cliffs and they were all very knowledgeable on the subjects of the Mallee birds and plants. For me as an ignorant beginner it was very instructive to follow them around in the bush and learn from them. My wife was very keen to follow them closely as there was such a maze of tracks we felt that we would never be able to find the way out by ourselves.

Once Les showed me a book he had of the poems of C.J.Dennis with whom he had spent time in the trenches. Inscribed in the book was written by Dennis;- (words to the effect). 'To Les Chandler with my permission to recite any of these poems any time he b----- well likes'

At that period a large area of the Kulkyne was practically denuded by rabbits. (early 60's). Hardly a young Cypress Pine could be seen. Several years later we went back to revisit old haunts to find that a large area had been fenced with a rabbit-proof fence and the rabbits excluded. Inside the fence was a veritable forest of young Cypress Pines showing what a difference the rabbits had made.

Great Southern Bioblitz 2022

Get involved! Join the fun! Let's beat last year's effort!

Great Southern Bioblitz 2022 (GSB22) will be taking place over four days from 28th October to 1st November.

This is your chance to get out into nature with a purpose. During the four-day period, go out into nature, photograph the all the living things around you; plants, fungi, animals, record their location and load your photographs onto iNaturalist. Last year our club loaded 1826 observations and was number 13 for Oceania and number 27 for the Southern Hemisphere.

Observations must be made (photographs or recordings taken) during the four days of the bioblitz but may be loaded anytime up until 13th November. Identifications on iNaturalist can also be made in the 2 weeks following the bioblitz.

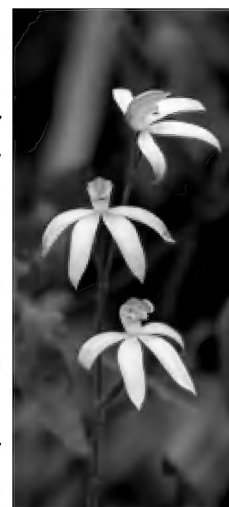
Our club will be running two iNaturalist training sessions for anyone who would like to get involved but doesn't know where to start or for anyone wanting a refresher on iNaturalist.

Training Session 1 Friday 14th October at 2pm

Training Session 2 Wednesday 19th October at 7pm

Each session will run for about 2 hours with numbers limited to 6 participants.

Bookings to Euan Moore, calamanthus5@bigpond.com



Caladenia moschata
Musky Caps, will you be able to find these during GSB22?

MEETING: Friday 14th October.
7.30 pm at the Uniting Church Hall, Lyttleton St

Speaker: Geogie Custance:
Monitoring Fryerstown Grevillea, a very special plant in our region.

Would you like to learn how to look after this unique and rare plant that is only found in your backyard?

Join ecologist Geogie Custance from the Threatened Species Conservancy to learn more about a locally endemic and amazing plant, the Fryerstown Grevillea (*Grevillea obtecta*). Learn how to record and monitor this species using a threatened plant monitoring app called **ProofSafe** on your smartphone or tablet.



G obtecta photo by John Walter

Please load the free phone app, ProofSafe, to your mobile phone or tablet before the meeting as Geogie will provide instructions on how to use it as part of her talk. Detailed instructions on how to load and use ProofSafe, can be found [here](#). Further information on the Fryerstown Grevillea project is on our website [here](#).

EXCURSION: Saturday 15th October.

Enjoy a walk in the bush to visit some local populations of this wonderful species as well as the many other native plants that are flowering at the moment. During the walk we will use ProofSafe to record Fryerstown Grevillea and practice what we learnt at the meeting. Location to be confirmed but either Fryers Ridge or Porcupine Ridge which are some of our best wildflower areas.

We hope to see you there to learn how you can contribute to the crucial monitoring and conservation of a rare plant that is thriving in our neighbourhood.

Meet: 1.30 pm at the Octopus (Duke St, opposite the Castle Motel)

Bring: Binoculars, water, afternoon tea and hat. There may be off-track walking in rough terrain, so sturdy shoes and a walking stick are recommended.

The Field Trip will be cancelled in extreme weather conditions.

Disclaimer: The opinions expressed in this newsletter are those of the contributors and not necessarily those of the club

Castlemaine Field Naturalists Club

PROGRAM

Please note that we are returning to the Uniting Church Hall for meetings this year, provided there are no changes to current Covid requirements. We strongly recommend that you wear a mask during the meeting.

If you have observations to report at the meeting and photo(s) to illustrate your report, please email them to Euan Moore (calamantus5@bigpond.com) by noon on the day of the meeting.

Excursions are on the Saturday after the monthly meeting. Meet at the Octopus (opposite the motel in Duke St) for departure at 1.30pm unless otherwise advised.

Fri Oct 14 Meeting 7.30pm: Georgie Custance “The Fryerstown Grevillea (*Grevillea obtecta*) – a threatened species in our area”

Sat Oct 15 Excursion 1.30pm: Georgie Custance “*Grevillea obtecta* project – learn how to identify and record sightings of this rare species in the field”

Fri Nov 11 Meeting 7.30pm: Dr. Christina McCowan (Melbourne University) “*Mycobacterium ulcerans* (Buruli ulcer) in our native mammals in the wild”

Sat Nov 12 Excursion 1.30pm: Castlemaine Botanical Gardens Nature Reserve

Mon Nov 14 Roadside Cleanup: 9am

Fri Dec 9 Meeting 7.30pm: Members’ night – a chance to share highlights of your nature-related experiences from the year. You can show photos, a video or a short power-point presentation.

Tues Dec 13: Picnic in the Castlemaine Botanical Gardens

Club website (Web master: Ron Wescott) - www.castlemainefieldnaturalists.org.au

Castlemaine Naturalist - email newsletter material to: newsletter.cfnc@gmail.com

*Deadline for the November edition is October 25.

Subscriptions for 2022

Ordinary membership: Single \$35, Family \$50

Pensioner or student: Single \$25, Family \$30

Subscription includes postage of the monthly newsletter, Castlemaine Naturalist

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