



April 2023

# Alice Springs Field Naturalists Club Newsletter



*Duck species each have a distinctive silhouette and sit differently in the water. In this photo by Dorothy Latimer there are four Pacific Black Ducks, one Grey Teal, hiding among them, one Hardhead, and one Musk Duck. The Musk Duck was a first sighting of this species at Alice Springs Sewage Ponds. Well spotted, Dorothy! See information and another photo on page 2.*

Meetings are held on the second Wednesday of the month  
(except December and January) at 7:00pm  
at the Olive Pink Botanic Garden.

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The next newsletter will be published on 1 May 2023.  
We appreciate all contributions, articles and photos both local and elsewhere.  
Please have them to Marg Friedel, [capparis@iinet.net.au](mailto:capparis@iinet.net.au) by 23 April 2023.

### ALICE SPRINGS FIELD NATURALISTS CLUB

Wednesday 12 April 7pm Speaker night. Peter Yates and Pamela Bladon: "Bee-keeping and bees around Alice Springs."

Saturday 15 April Trip to Serpentine gorge. Meet at Flynns Grave at 7.30am – home by lunchtime. Leader: Neil Woolcock.

Wednesday 10 May 7pm Speaker night. Peter McDonald and Alistair Stewart re Central Rock Rats.

### AUSTRALIAN PLANTS SOCIETY - ALICE SPRINGS

[apsalicesprings@yahoo.com.au](mailto:apsalicesprings@yahoo.com.au)

Wednesday 5 April 7pm at OPBG. Doug McDougall Trip photos from Pittsburgh USA, Bergen Norway and Frankston Australia.

### OLIVE PINK BOTANIC GARDEN

**AUTUMN NATIVE PLANT SALE – Saturday 22 April**  
Sale from 8am until sold out.

### Alice Springs Field Naturalists Club

#### Committee Members

<b>President</b>	Marg Friedel	0417 849 743
<b>Vice-President</b>	to be appointed	
<b>Secretary</b>	Suzanne Bitar	0419 897 735
<b>Treasurer</b>	Neil Woolcock	0428 521 598
<b>Property Officer</b>	Claire Norman	0448 341 795

<b>General Members</b>	Jan Black	0400 303 123
	Wendy Mactaggart	0434 495 903

<b>Public Officer</b>	Anne Pye	0438 388 012
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#### Other Club Responsibilities:

Newsletter – Marg Friedel / Barb Gilfedder

Facebook Organiser – Meg Mooney [moon3@iinet.net.au](mailto:moon3@iinet.net.au)

Website controller – position vacant

## **Musk Duck - A first sighting in Alice Springs and the Northern Territory**

The Musk Duck (*Biziura lobata*) is a large stiff-tailed duck with a heavy triangular bill that is native to southern Australia. Both the male and female are dark grey in colour, the male having an obvious lobe of skin dangling from its chin. Musk Ducks get their name from the strong musk odour produced from a gland on the rump.



Usually observed on the water, regularly diving while feeding. The legs of the Musk Duck are placed far back on the body, an aid for swimming and diving; however it does make them clumsy walkers and they prefer to stay in the water. This is the first documented sighting of the Musk Duck in Alice Springs and the Northern Territory. Musk ducks are moderately common through the Murray-Darling and Cooper Creek basins, and in the wetter, fertile areas in the south of the continent: the southwest corner of Western Australia, Victoria, and Tasmania.

Photo: Dorothy Latimer. Report from Colin Leel <https://ausemade.com.au/destinations/northern-territory-nt-australia/alice-springs/alice-springs-fauna/as-birds-in-alice-springs/musk-duck-biziura-lobata/>



## What's out there?

Clare Pearce talked to the ASFNC on Wednesday 8 March 2023, summarised here by Marg Friedel.

Before Clare Pearce, our former President, left us for Darwin, she gave a very entertaining and instructive talk about how to be a citizen scientist and add to our knowledge of what's out there. We are all citizen scientists she assured us and, as Field Naturalists, we spend a lot of time searching for elusive species. What should we do to ensure a successful outcome? Here's a quick guide:

1. What are we looking for? Maybe we won't see the animal or plant but we might see telltale signs as in the pictures below – tracks (Clare Pearce), diggings and seed pods (Marg Friedel)



2. When are we looking? Is it the right time of day, or the right season?
3. Who are we looking with? Go with good observers who share knowledge readily, not noisy school kids!
4. How are we looking? Am I looking in the right habitat?

Ready to be a citizen scientist? Here's a definition of citizen science: *The practice of public participation and collaboration in scientific research to increase scientific knowledge. It's contributory, collaborative and co-created.*

So how do I contribute? Clare introduced us to iNaturalist <https://www.inaturalist.org/>, where species observations can be uploaded and verified by other citizen scientists. This is an international website but there is also a subsidiary Australian iNaturalist website <https://inaturalist.ala.org.au/home>, discussed by Marg Friedel in the March 2023 Newsletter.

Clare next introduced us to the Atlas of Living Australia (ALA) <https://www.ala.org.au/>. The records in the Atlas were not verified early on but now, new records are only imported from iNaturalist after verification.

Ready to find out what species you're likely to find in an area you want to visit? Want a field guide to carry with you? Here are Clare's instructions for Olive Pink Botanic Garden.

- Go to the [Atlas of Living Australia](https://www.ala.org.au/)
- In the top panel you will see a list that starts with 'search and analyse'
- Click on search and analyse and choose 'Explore your area' from the drop-down menu
- This will take you to [Explore Your Area | Atlas of Living Australia \(ala.org.au\)](https://www.ala.org.au/explore-your-area)
- In the box titled 'Enter your location or address' put 'Olive Pink Botanic Garden'
- Choose to display records in a 1km radius (section just under the location box)
- The Atlas will now give you a complete list of the records that it holds for OPBG
- You can choose to download all records, but it is easier and perhaps more useful to download records in groups such as 'birds' or 'plants' – so let's create a bird list for OPBG
- In the left hand column you will see a list called 'Group', select 'Birds' from this list, the Atlas will then give you a list of all the bird records it has for the area (see screen shot of OPBG list; only a partial list of birds is visible but they are all there on your screen)

## Explore Your Area

Enter your location or address:



E.g. a street address, place name, postcode or GPS coordinates (as lat, long)

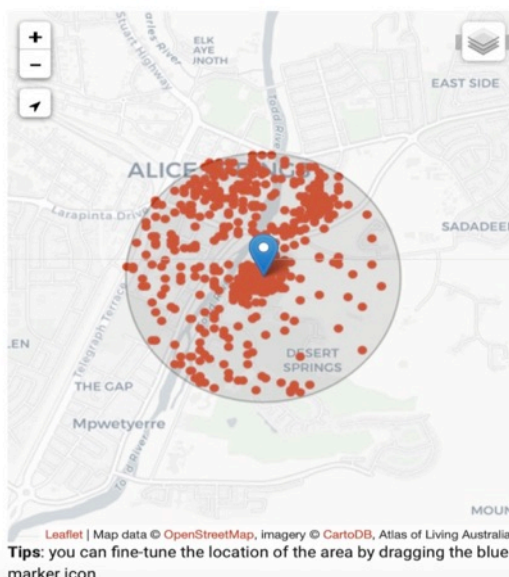
Need help?

Showing records for: Olive Pink Botanic Garden, 27 Tuncks Rd, Alice Springs NT 0870, Australia

Display records in a  km radius



Group	Species	Common Name	Scientific Name	Records
<b>All species</b>	<b>713</b>			
Animals	427	1. Yellow-throated Miner	<i>Manorina (Myzantha) flavigula</i>	948
Mammals	26	2. Crested Pigeon	<i>Ocyphaps lophotes</i>	908
Birds	172	3. Magpie-lark	<i>Grallina cyanoleuca</i>	863
Reptiles	55	4. Australian Ringneck	<i>Barnardius zonarius</i>	862
Amphibians	6	5. White-plumed Honeyeater	<i>Ptilotula penicillata</i>	823
Fishes	0	6. Galah	<i>Eolophus roseicapilla</i>	768
Molluscs	3	7. Western Bowerbird	<i>Chlamydera guttata</i>	597
Arthropods	148	8. Spotted Dove	<i>Streptopelia chinensis</i>	576
Crustaceans	5	9. Little Crow	<i>Corvus bennetti</i>	501
Insects	134		<i>Pomatostomus</i>	
Plants	283	10. Grey-crowned Babbler	<i>(Pomatostomus) temporalis</i>	487
Bryophytes	0			
Gymnosperms	3	11. Spiny-cheeked Honeyeater	<i>Acanthagenys rufogularis</i>	454
Ferns and Allies	7	12. Black Kite	<i>Milvus migrans</i>	434
Angiosperms	270	13. Willie Wagtail	<i>Rhipidura (Sauloprocta) leucophrys</i>	421
Monocots	44			
Dicots	226	14. Black-faced Cuckoo-shrike	<i>Coracina (Coracina) novaehollandiae</i>	353
Fungi	3			
Chromista	0	15. Zebra Finch	<i>Taeniopygia guttata</i>	285
Protozoa	0	16. Pied Butcherbird	<i>Cracticus nigrogularis</i>	219
Bacteria	0	17. Brown Weebill	<i>Smicromis brevirostris</i>	203
Algae	1	18. Mistletoebird	<i>Dicaeum (Dicaeum) hindlewoodi</i>	202



Leaflet | Map data © OpenStreetMap, imagery © CartoDB, Atlas of Living Australia  
 Tips: you can fine-tune the location of the area by dragging the blue marker icon

- To download this list, click on the 'download' button that is situated directly above the orange 'common name' title
- The Atlas will give you a couple of different options for your download. For your purposes I think it would be most useful to download your records as a Species Field Guide
- Click on the 'select' button for the 'Species Field Guide' option
- Click on the 'select a reason' drop down in the 'industry / application' section and select 'education', then click the 'next' button
- Your OPBG bird field guide will now download. This will sometimes take a little while, but it's worth the wait!
- When the field guide is completed you'll get a 'download now' button to press. Press this and your field guide will open
- Save your field guide as you would any other document

If you would like to have an image of the country underlying the species locations, click on the symbol in the top right corner of the map and chose 'satellite' (see screen shot of Simpsons Gap frog species list for a 5 km radius).

## Explore Your Area

Enter your location or address:



E.g. a street address, place name, postcode or GPS coordinates (as lat, long)

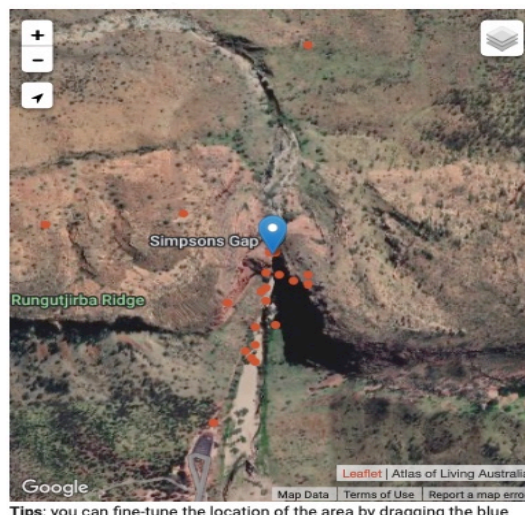
Need help?

Showing records for: 655 Darken Dr, Burt Plain NT 0872, Australia

Display records in a  km radius



Group	Species	Common Name	Scientific Name	Records
<b>All species</b>	<b>843</b>	1. Spencer's Frog	<i>Platyplectrum spenceri</i>	88
Animals	390	2. Centralian Tree Frog	<i>Litoria gilleni</i>	34
Mammals	46	3. Desert Tree Frog	<i>Litoria rubella</i>	23
Birds	165	4. Main's Frog	<i>Cyclorana maini</i>	5
Reptiles	59	5. Green Tree Frog	<i>Litoria caerulea</i>	3
<b>Amphibians</b>	<b>6</b>	6. Desert Spadefoot	<i>Notaden nichollsi</i>	1
Fishes	1			
Molluscs	10			
Arthropods	102			
Crustaceans	0			
Insects	99			
Plants	437			
Bryophytes	0			
Gymnosperms	3			
Ferns and Allies	9			
Angiosperms	410			
Monocots	82			
Dicots	328			
Fungi	13			
Chromista	0			
Protozoa	0			
Bacteria	0			
Algae	0			



Leaflet | Atlas of Living Australia  
 Map Data Terms of Use Report a map error  
 Tips: you can fine-tune the location of the area by dragging the blue

Now you're ready to go. Many thanks Clare for showing us how.

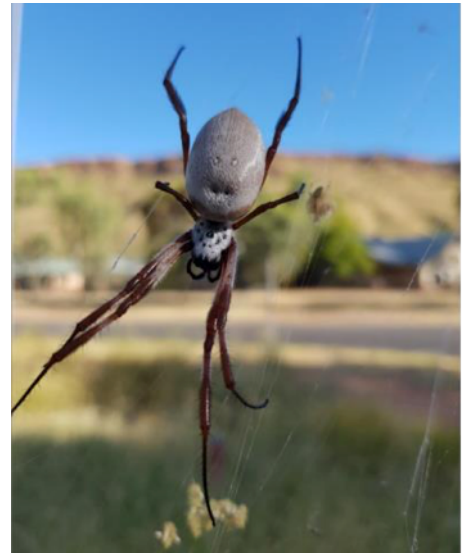
Alice Springs Field Naturalists Club



## Alice Springs Golden Orb Weaver Spiders by Colin Leel

Alice Springs has seen a great number of Golden Orb Weaver Spiders (*Trichonephila edulis*) over the 12 months. For those lucky to see them every day (at work or maybe at home), they present a fascinating study. We all know the juicy plump female Golden Orb Weaver (did you know that these spiders were eaten by people, hence the name "edulis" from the Latin for edible).

Some things we observed and learnt was that the young female can look slightly different to what we recognise as the mature female. *Mature female -right*



From research and based on observation we know that the female and male are sexually dimorphic, in shape, colour and especially in the size difference, the male being considerably smaller.

*Left: Two pics show small males with large females*

So it was a surprise when we observed another large spider in the orb web, only to learn that yes, the males can be large, almost as large as the female. They are known as "dimorphic males".



*Right: A large dimorphic male at the Olive Pink Botanic Garden.*

*Left: The large dimorphic male with the female.*



It was interesting to observe the different insects that were caught in the orb webs, ranging from flies, native bees, European honey bees, butterflies, beetles, dragonflies and geckoes.

*Left: Golden Orb Weaver with Tau Emerald Dragonfly (Hemicordulia tau).*

*Right: Golden Orb Weaver with Megachile (Rhodomegachile) deanii, a native bee.*

A challenge we put to ourselves was to try and find the Golden Orb Weaver egg sacs. Where the web was hung between trees, especially those with pendulous foliage or with the bark peeling away from the tree trunk, made it very difficult to find the egg sacs. We did however, see eggs sacs at the uppermost branches of the Dead Finish (*Acacia tetragonophylla*) Shrubs, also in the botanic garden. It was interesting to see whilst many eggs sacs were wrapped in the white silk, some had the golden silk also partly wrapping the egg sac.

*Below left: Egg sacs in the Dead Finish close to the web.*

*Below right: Eggs can be wrapped in white or gold silk.*



Now it appears that most Golden Weaver live less than a year, if they survive getting snatched out of their webs by birds etc. One day, the large Golden Orb Weaver we had been observing over the months suddenly disappeared and the next day another female Golden Orb Weaver, which was also living on the periphery of the web, took up centre stage in the web.



*Left: The original queen... who suddenly disappeared and centre: the new queen has stepped in.*

*Right: An unfortunate gecko caught in the golden strands.*

Check out the website for more detailed observation and photos.

<https://ausemade.com.au/flora-fauna/fauna/spiders/australian-golden-orb-weaver-spider-trichonephila-edulis/>

Source : Colin Leel © Ausemade PL

Alice Springs Field Naturalists Club



## Patrick Nelson reports on his most important central Australian fossil finds

The discovery of two mysterious invertebrate fossils near Alice Springs in 2020 and 2021 adds a new and exciting chapter of intrigue to the central Australian fossil record.

The small weathered body imprints are yet to be scientifically described but an early majority opinion is that they are euthycarcinoids (see images). These are extinct amphibious marine arthropods whose combination of characteristics has prompted much debate about where they should fit taxonomically.



*This specimen above is held by the Museum and Art Gallery of the Northern Territory (MAGNT) in Alice Springs.*

The better of the local specimens is about 3cm long, fully articulated (i.e., cephalon, preabdomen and postabdomen joined together) and looks a bit like a tadpole. The second is slightly smaller and may be the exoskeleton from the preabdomen (like the thorax in many modern arthropods). It has been blackened by mineral staining, likely to be manganese oxide.



While the specific location of discovery cannot be publicly disclosed, the specimens were found in the Amadeus Basin in the southern part of the Northern Territory. They were about 1km apart in seemingly the same sedimentary bed of a geological unit known as the Stairway Sandstone. This sediment settled on the floor of the warm shallow Larapintine Seaway when it inundated much of what we now know as inland Australia during the Darriwilian stage (458–467 million years ago) of the Ordovician Period. It was part of east Gondwana at the time, occupying the lower latitudes of the Northern Hemisphere. Whilst these specimens are the first euthycarcinoids reported from the Stairway, the unit is known for its many other invertebrate fossils, including bivalves, trilobites, brachiopods, rostroconchs, gastropods, cephalopods and many types of trace fossil.





For all its taxonomic ambiguity, the euthycarcinoid is credited by some, as the first invertebrate to have made the transition from water to land and thus its place in evolutionary theory is significant. The fossilised tracks (protichnites) which support this assumption, were found overseas and in rock dating to the late Cambrian, making them somewhat older than the local specimens. Nonetheless, the prospect that these creatures existed in the Paleozoic waters of central Australia is an exciting addition to the knowledge of our region's natural heritage.

While paleontologists in the United States, the United Kingdom and elsewhere implied interest in acquiring the first fossil, both specimens remain in central Australia. One has been donated to the Museum and Art Gallery of the Northern Territory and is on public view at the Megafauna Central Museum in Alice Springs. The other remains with its finder, who continues to study the euthycarcinoid.

*Left: An artist's impression of what the euthycarcinoid, an early relative of the millipede, may have looked like.*

[See Adam Yates' talk about the fossils of the Larapinta Seaway, in the Oct 2020 newsletter. Ed.]

## And here, Patrick recalls the day he made his first discovery:

I'd like to say that I was ecstatic about the find, but truth be known, my first reaction was one of bemusement. I had seen many invertebrate fossils in the Ordovician sandstones of the Amadeus Basin but never one that looked like this. My best guess was that it may have been a juvenile trilobite, but frankly, I didn't know.

It was Monday 8 June 2020 – the Queen's Birthday public holiday – and a perfect day for a fossil fossicking day trip in central Australia. It was not that I wanted to collect more specimens; indeed, I had more rocks and fossils in my collection than I had room for. My plan on this day was to return some of the excess rocks to the area I had found them.

Having done that, we (brother Alex and I) stopped at the base of a hill I hadn't visited before. Its gentle slope promised it wouldn't be too onerous to explore. Typical of so many hills, it contained a good mix of mostly trace fossils and pieces of nautiloid. As noon approached, and with shadows (so useful when fossicking) at their weakest, we decided to return to my motor vehicle for lunch - a peanut butter sandwich. But moments later, at 12.10pm, I was arrested by the site of a mysterious impression in a musk-pink Stairway Sandstone slab. I photographed it from several angles before recording its latitude and longitude to six decimal places, as was my habit at the time. I then stepped back, still in a mindset of divestment rather than procurement, before concluding that this oddity merited scientific investigation. And so, I collected it. Fortunately, it took just a little effort for the slab to pop free from the bed in which it had sat for the past 460 million years. I took a mental note of the spot, and then I set forth for my car.

Had this been my only find that day I would have been well satisfied. But 200m hence I found myself arrested by a second curious fossiliferous oddity. Embedded in the surface of a flattish stone that snugly fitted into my hand were about 15 partially filled roundish depressions. They reminded me of rain drops, but again, I couldn't really make sense of what I was looking. Thinking that this too merited inquiry, I collected it. It was a fortuitous case of instinct,

as this specimen has turned out to be the trace fossil crescentichnus, a feeding trace made by euthycarcinoids.



Each to their own, but for me, a fossil fossicking day trip is always the highlight of the week. I won't always find something significant to science, but it has helped me develop a strong sense of observation, and an understanding of a dimension of central Australia that is easy to overlook.

The crescentichnus specimen also is registered with MAGNT, although it is currently on loan to an interstate paleontologist for analysis.



## What is this caterpillar saying to you and its would-be predators?

Patrick Nelson's photo (Right)

### *Hippotion celerio*, Vine Hawk Moth (Ntyalke)

Many of you will be familiar with these caterpillars, particularly if you grow grapes in your garden.

It occurs world-wide. The caterpillar can occur in several different colour forms progressively as it ages: green, brown, red or dark grey. It usually has an eyespot each side of the first and the second abdominal segments, those on the first segment being larger. The first and larger eyespot is usually black with a pale ringed outline, and contains four pale spots. There are variable cryptic stripes and bands along the rest of the body. The caterpillar has a tailhorn curved slightly backwards, which tapers to a point. It can pull in the front 2 segments probably for protection but also to expand the segment with the false eyes on it, as in Patrick's photo.



I have seen them mainly feeding on cultivated grape vines (*Vitis Vinifera*), but they do use a range of other plants too, including being a pest species on Taro (*Colocasia esculenta*). The caterpillar can grow to a length of 8 cm and it pupates in a shelter made from debris on the ground. The pupa is about 4.5 cm long and is brown, with pale wing cases marked by dotted dark lines.



The adult moth has striped brown and white forewings, red hind wings, and a long tongue, with which it can suck nectar from flowers while hovering in front of them. It has a wingspan of about 6 cm. The moth can usually be seen in the morning or evening twilight, hovering above flowers, and sipping nectar through its uncurred haustellum.

[Other photos by Barb Gilfedder.](#)

[Thanks to Max O'Callaghan who collected some caterpillars for me which I fed and watched grow, pupate and emerge as adults. Barb Gilfedder]





## Relaxing at the claypans

It was a beautiful evening at the Ilparpa claypans on Wednesday 22 March. The day had been hot but a light breeze kept us cool enough as we shared food, news and chats. Fifteen came, both Field Nats and Australian Plant Society members.

Most of the water had evaporated in the high temperatures, but there was still a little and the mud formed beautiful patterns as the water receded. See Patrick Nelson's photo below. He said it might easily be overlooked but in fact does harbour life, The sunburnt tree silhouette photo is also his. Other 2 photos of 'the gang' and the *Eragrostis australasica*, Swamp Love Grass are by Marg Friedel.



There are 60 species of *Eragrostis* grass listed on NT Flora website and this is probably the tallest, up to 3 m. It loves this type of muddy saline environment.

