

5 May 2017 Ken Walker (kwalker@museum.vic.gov.au) Museum Victoria. Edition 51.

Hi All – Well, the last 2 months have been interesting indeed. The CEO of the Museum, Patrick Greene, resigned/retired after 15 years at the helm. That's a long time for a CEO to remain as they are appointed initially for a 5 year period and then extended for periods of 5 years at a time. The usual period for our previous few CEOs has been between 5 to 10 years so 15 years was a long run. The Museum's new CEO is Ms Lynley Marshall – the first female CEO in the Museum's 163 years! Lynley comes to us from heading the ABC's International Digital Unit where she was well respected. As with any new CEO, there is always an initial flurry of activity and Lynley's arrival has been no different - I have now seen 6 CEOs at the Museum in my time.

In her first few weeks, Lynley made a point of walking the corridors of the Museum to meet and greet as many staff as possible – not just to shake hands but to have a chat and to visit the collections under the charge of the staff. That's a great way a great way for a new CEO to extend the hand of friendship and to visit "our patch". However, before Lynley ventured to the Level 3 East corridors, where our insect and spider collections are held and staff reside, I was warned – Lynley is "badly" arachnophobic and doesn't like "creepy

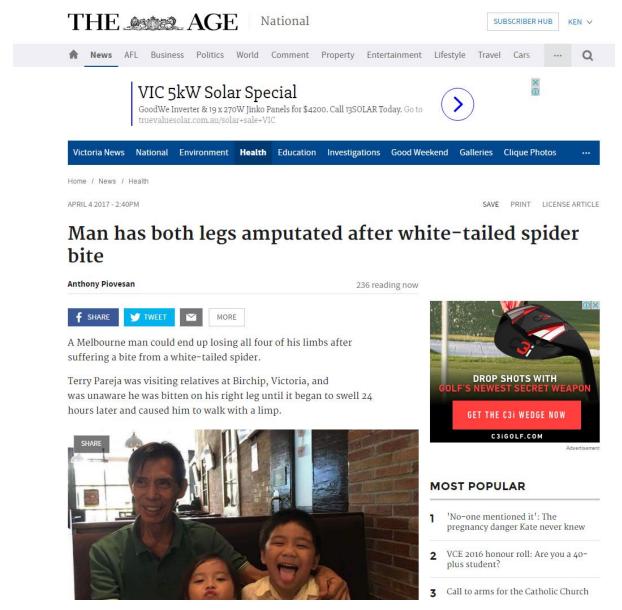
crawlies". Oh great I thought – so much for me pushing to finally employ the museum's first ever arachnologist.

We finally met and I introduced myself as the Museum's entomologist and arachnologist and she said – "I know and my palms are already sweaty." Yes – Lynley is a classic arachnophobe. Any sign of a spider is accompanied by an increased heart rate, sweaty feeling and the old "fight or flight" body action kicks in. I have made several offers to attempt to desensitise her to spiders but to date all offers have been "kindly" refused – but, I'll keep offering.

About one month after Lynley arrived I read the morning Age newspaper and there was a story about a man who had just had both of his legs amputated and his arms were in danger of being amputated as well and the newspaper article blamed this all on the bite of a white tailed spider! As soon as I arrived at work, I had our PR people camped outside by room as they had been inundated with interview requests for me from almost every Melbourne TV and radio station. I began by speaking with an Age reporter – unfortunately, not the "journalist" who had written the original article as I had some "choice and unrepeatable" words I wanted to convey to him. Instead I spoke to another journalist who fortunately had already begun to doubt the truth about the story. By midday on the same day, the Age had removed the online version of the original story and replaced it with one doubting the man's predicament had been caused by any spider bite let alone the white tailed spider.

The story was that the man with the amputated legs had recently arrived from the Philippines and had gone to Birchip in NW Victoria where he was staying with his daughter and son-in-law. While there, he had decided to clean up their backyard – TV footage of this backyard showed it to be somewhat of a

dumping ground for all sorts of bits and pieces of wood, metal and compost. Apparently, the diagnosis of the presumed white tailed spider bite had been made at the Melbourne treating hospital. I suggested that the Museum should employ the person who made the spider identification – anyone who can identify a spider, sight unseen and about 1,000kms away must be "good"! Obviously, while cleaning up the yard the man had scratched himself which caused bacterial infections to erupt.



I lost most of that day and many friends contacted me to say they had seen me on the 4pm, 6pm and 10pm news on various TV stations and/or heard me on the radio as well. But what a waste of time.

Interestingly, not long before this story erupted I had listened to a Richard Fidler podcast interview with the Curator of Arachnology at the Queensland Museum, Dr Robert Raven. Of course the white tail "mythology" question was raised. Robert said the myth was complete rubbish and there had been several medical papers published in 2003 and 2004 refuting any relationship between spider bite and massive skin rotting. Indeed, Robert stated that the fangs of the white tail spider were too small to penetrate the skin of humans. The white tailed spider's favourite food is the black house spider, Badumna spp. The black house spider is commonly seen on the sides of fences or in the corners of windows where it makes a white, scruffy silken web which always has one or two funnel like entrances back into the back. The white tail spider approaches the web of the black house spider and tweaks the web as if it is an insect caught in the web. When the black house spider emerges from the web to investigate, the white tail spider attacks the black house spider. However, due to the small fangs on the white tailed spider, it can only attacks the legs of the black house spider. Robert also told us that tests on the white tail spider venom showed it actually had an antibacterial effect. He also asked the listener to use logic. If the white tail spider did indeed kill its prey but injecting a flesh eating bacteria which took more than 24-48 hours before taking effect, how was the spider supposed to track its prey over a 24 or 48 hour period waiting for the presumed bacteria to overcome the bitten prey. I can think of one such animal that uses such a technique and that's the Komodo Dragon lizard.

The white tail spider myth has been around since the mid 1980s when it was initially called the "mystery spider". Medical evidence soon showed the rotting, skin lesions blamed on the "mystery spider" was indeed caused by a soil borne bacterium called *Mycobacterium ulcerans* – originally known as the Bairnsdale ulcer. Unfortunately, the human body temperature is the perfect inoculation temperature for this bacterium and any skin wound can become a penetration entrance site for this bacterium. Sadly, a presumed spider venom is treated quite differently to a bacterial infection so the skin degradation of some victims was horrific indeed requiring amputation – as was the result case from Birchip.

Getting back to our new CEO, she sent me a congratulations email after the white tailed spider media interest died down. Her email said:

"Pleased about this on two counts – first, because you had a great day and science won out and secondly, I wasn't there!" My mission is to get Lynley to "love" spiders!!! (:->!~

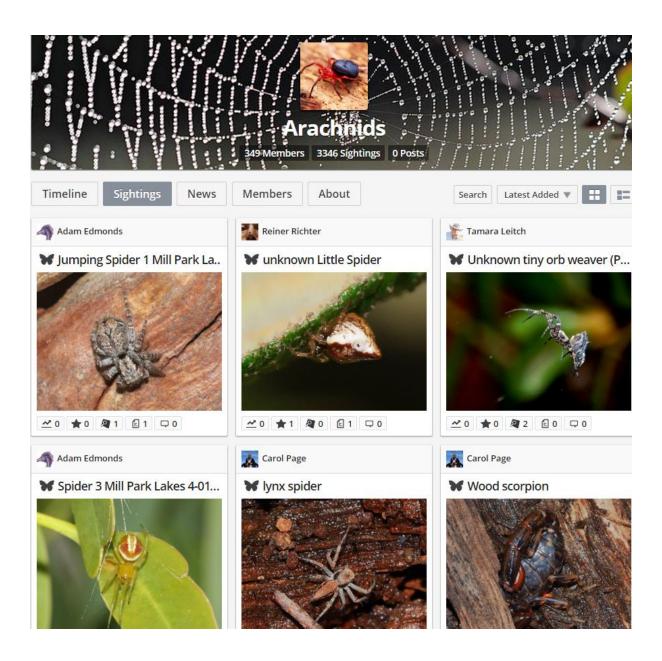
Continuing with the spider theme

Marlis Schoeb photographed this spectacularly coloured dragonfly, *Tholymis tillarga*, tightly bound up with spider silk. *Tholymis tillarga*, known as the "twister" or "the coral-tailed cloudwing", is a species of dragonfly in the family Libellulidae. It is found from tropical West Africa to Asia, Australia and the Pacific Islands. In Australia, this species has been recorded across northern Northern Territory, into Queensland throughout Cape York Peninsula and then extending coastally down to Brisbane.

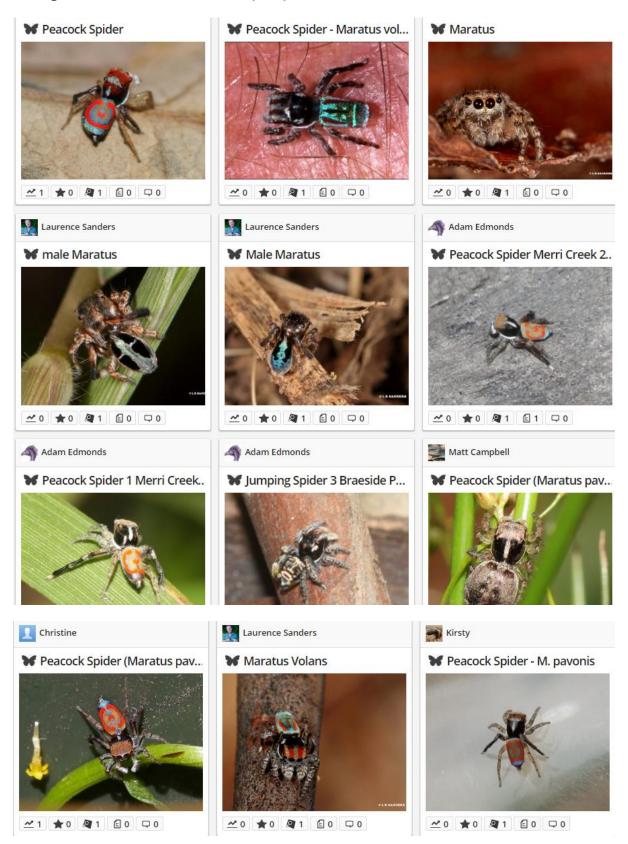


Tholymis tillarga Location: Mount Jukes QLD Photo by Marlis Schoeb

I really do recommend people to join the "Arachnids" BowerBird project and enjoy the amazing array of images that abound. There are now 349 members of this project who have uploaded 3346 records which include: spiders, scorpions, pseudoscorpion and mites.



My favourites are the Peacock spider images. Do a search for the genus "Maratus" and prepare to be stunned.



Did you know there is a species of wasp that parasitises only red-back spiders?!

Mark Newton captured a wonderful series of images showing this pompilid wasp approaching a red-back spider, paralysing it and dragging it away. The wasp is called *Agenioideus nigricornis* and was originally described by Fabricius back in 1775 when he placed the species in the genus *Sphex*. I wonder who collected the specimen(s) used by Fabricius to describe this species – perhaps Joseph Banks? Interestingly, in the original description the location is "nova Hollandia" – ie. Australia.







Agenioideus nigricornis Location: Morgan SA Photos by Mark Newton

Flatworms – I can't get enough of them.

For those following the flatworm project, they continue to amaze me with their shapes and colours added with Leigh Winsor's brilliant commentaries. Here are some uploads from the past month or so ... Enjoy!

PS. Leigh Winsor recently sent me an email explaining that he would be offline for a bit while he did post Cyclone Debbie repairs! Good luck Leigh.



Fletchamia quinquelineata Location: Oberne Creek NSW Photo by: Dacre England





Cenoplana-cf-coerulea Location: Cambarville VIC Photos by Carol Page





Unidentified Location: Belgrave South VIC Photo by Reiner Richter





Unidentified Location: Moorina TAS Photo by Reiner Richter





Australoplana sp. Location: Moorina TAS Photos by Reiner Richter



Artioposthia nichollsi? Location: Pelverata TAS Photos by Reiner Richter



Fletchamia cf sugdeni Location: Caveside TAS Photos by Reiner Richter

Have you ever consider putting a bee hotel in your yard?

Backyard bee hotels have become the fashion statement for backyards in the past decade. I have seen so many now and the shapes and varieties of bee hotels is mind boggling!

Basically, a bee hotel is a block of wood with 6mm or 8mm holes drilled to a depth of about 2cm. Or, you can purchase some bamboo sticks which you cut into lengths between 10-20cms and tie them into bundles. Then suspend the block of wood or bundles of bamboo in a shaded and protected from rain area and let nature take its natural course.

Jenny Thynne of Brisbane has some such bee hotels in her backyard and they recently produced the most amazing results!

Below are a couple of males of *Meroglossa itamuca* freshly emerged from a bamboo bee hotel home.



Jenny took a wonderful series of these emerging bees with some surprises.

What surprised us was this image Jenny took showing a female of the same species below and pushing out the male bees from inside the bamboo shoot. This is unrecorded behaviour.





Meroglossa itamuca Location: Sunnybank, Qld Photos by Jenny Thynne

In a second record from the same bamboo shoots, Jenny showed the female bee removing the cell remains so that the female bee could reuse the same bamboo hollow for nesting.





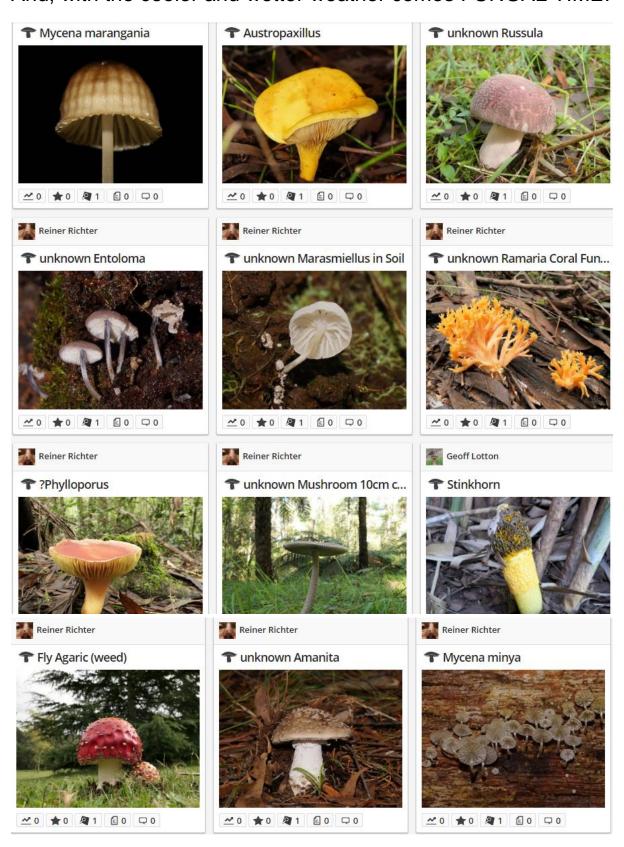




Meroglossa itamuca Location: Sunnybank, Qld Photos by Jenny Thynne

I love watching the seasons change on BowerBird

And, with the cooler and wetter weather comes FUNGAL TIME!





Fly Agaric Amanita muscaria Location: Silvan VIC Photos by Reiner Richter



Mycena marangania Location: Jeeralang Junction VIC Photos Matt Campbell



Stinkhorn Phallus multicolour Location: Allenstown QLD Photo by Geoff Lotton



Stinkhorn *Phallus indusiatus* Location: Allenstown QLD Photo by Geoff Lotton



Mycena sp. Location: Sherbrooke VIC Photo by Reiner Richter



Coprinellus sp. Location: Sherbrooke VIC Photo by Reiner Richter



Marasmiellus sp. Location: Jeeralang Junction VIC Photo by Matt Campbell



Lachnum sp. Location: Jeeralang Junction VIC Photo by Matt Campbell



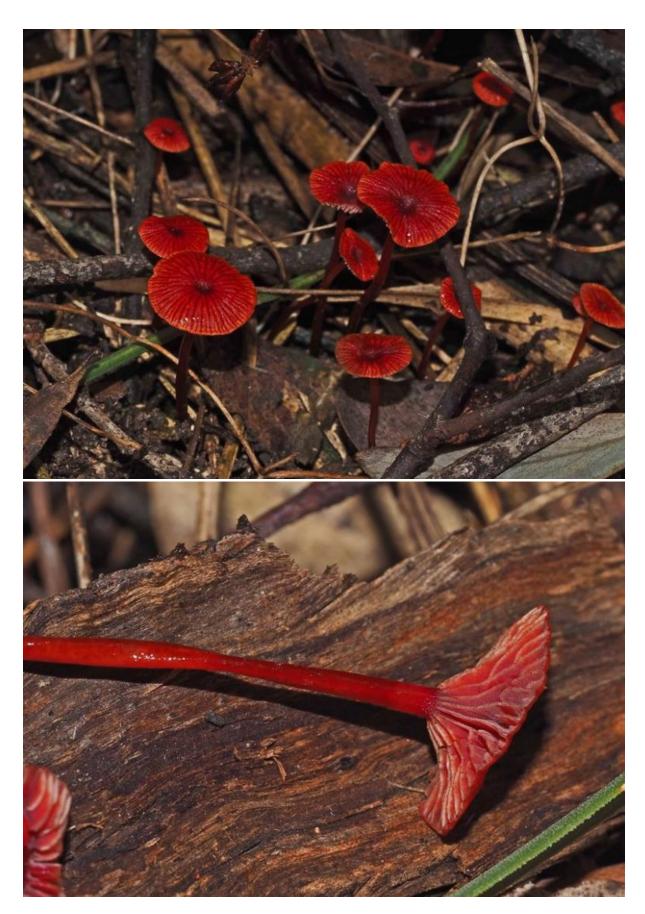
Psathyrella echinata Location: Baw Baw VIC Photo by Tamara Leitch



Pezizomycetes Location: Mawbanna TAS Photo by Reiner Richter



Calvatia sp. Location: Great Western VIC Photo by Jenny Holmes



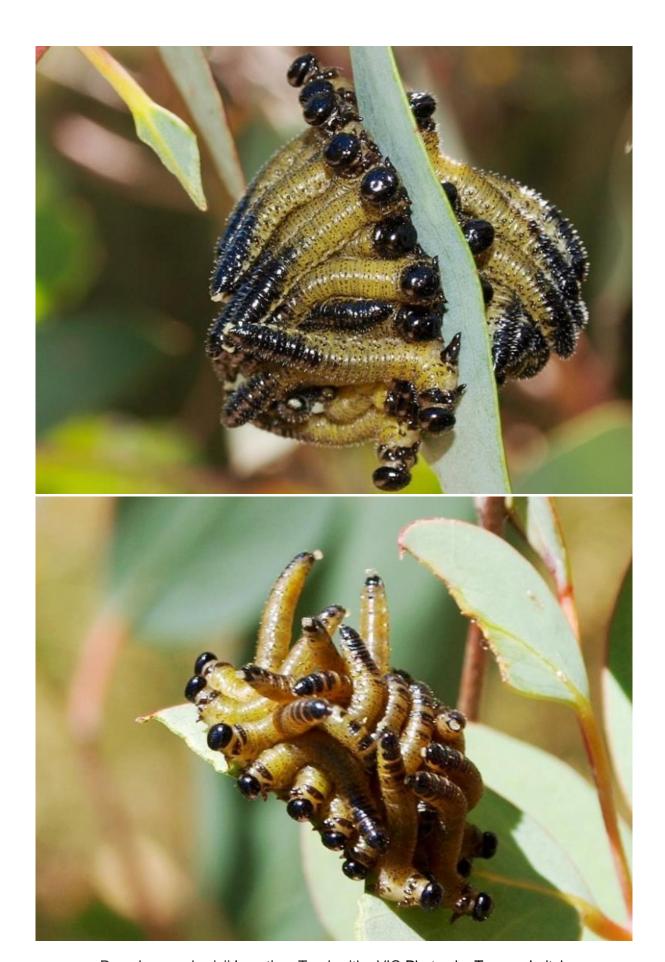
Mycena viscidocruenta Location: Eltham North VIC Photos by Linda Rogan

Sawfly photographed giving live birth!

Tamara Leitch spotted this sawfly giving live birth to a series of young. What a find !! Tamara wrote: "This medium-sized sawfly was giving birth to a large number of live young on a eucalypt leaf. Clusters of similar-looking larvae, of two different sizes, were present on other eucalypt plants at the site."







Pseudoperga lewisii Location: Tamboritha VIC Photos by Tamara Leitch

Moth or Caddisfly? What's the difference?

David Mules uploaded a curious looking insect that was tentatively identified as a Trichoptera or caddisfly. It just so happens that currently, two of Australia's Trichoptera experts are working at the Museum. After some umming and arrring, the consensus was moth not caddis. One of the main differences between these two Orders is the presence of wing scales on the moth and absence of wings scales on caddisflies – after all, the Order name Lepidoptera is Greek for "Lepido" meaning "scale" and "ptera" meaning wing so "scale-wing". The antennae were also thickened which is unusual in caddis.



Piestoceros conjunctella Location: Toorloo Arm VIC Photo by David Mules

I sent the image around to our resident "moth-ers" and the image finally found Axel Kallies who made the identification. This species currently resides in the family Psychidae but Axel says that is incorrect – watch this space. Currently, ALA has no images of this species and only one genetic BOLD record which does not have a locality – another knowledge gap plugged and we all learnt something new.

Mite infestations.

Some mites actively feed on their host (parasitic) while other mites hitch a ride on a host during their non-feeding stage called "hypopial". Here are some examples of both forms:



Curculionidae with hypopial mites Location: Emerald, Qld Photo by Laurence Sanders



Pterolocera caterpillar with parasitic mites Location: Tonimbuk VIC Photo by Ken Harris



Harvestman with parasitic mite Location: Noojee VIC Photo by Reiner Richter



Triaenonychidae harvestman with parasitic mites Loc: Sherbrooke VIC Photo by Reiner Richter



Ripiphoridae with hypopial mites on hind legs Loc: Sunnybank QLD Photo by Jenny Thynne



Anthomyia punctipennis with parasitic mite Loc: Randwick NSW Photo by Dacre England



Sphaeroceridae fly with hypopial mite Location: Huonville TAS Photo by Tony D



Hypopial form of Macrocheles muscaedomesticae mite Loc: Parkville VIC Photo by K Walker



Neosparassus salacious with parasitic mite Loc: Smithfield QLD Photo by Andrea Lim



Ant with parasitic mites Loc: Strangways VIC Photo by Patrick Kavanagh

A weird looking caterpillar!

Glenda Walter took a wonderful series of images of a most weird looking caterpillar. Too good not to share! Of course – it's a looper or Geometridae caterpillar.









Geometridae: Gonodontis Iuteola Loc: Rangeville QLD Photos by Glenda Walter

Speaking of weird caterpillars – Here is the so called "Trilobite" larva.

This one is actually a beetle larva belonging to the family Lycidae and genus *Porrostoma*. There is nothing else like them.



Porrostoma sp. Location: Kianga NSW Photo by Teresa and John



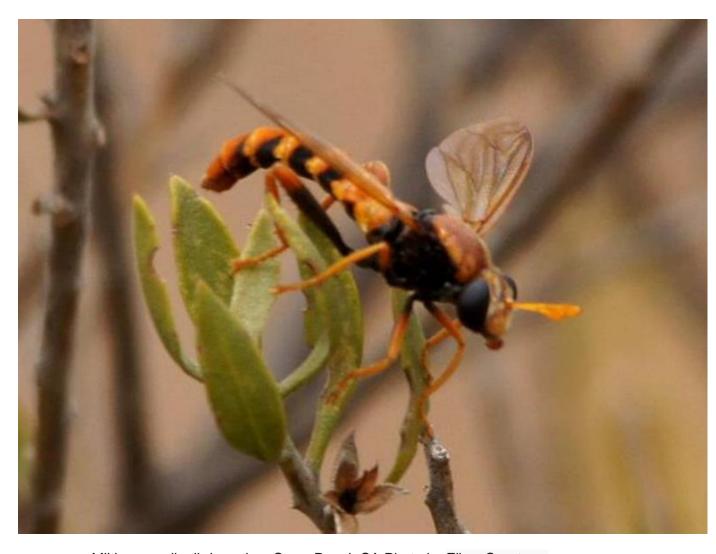
An image of an adult lycid Porrostoma beetle.

Porrostoma rhipidium Location: Heath Hill VIC Photo by Tamara Leitch

Another BowerBird record is a first for ALA.

This colourful wasp mimicking fly was, after a BowerBird team effort of several players, identified as a Mydidae fly called *Miltinus cardinalis* and was the first image and record on ALA.

Well done!



Miltinus cardinalis Location: Swan Reach SA Photo by Ellura Sanctuary

New state record from our Kimberleys/Kununurra WA BowerBird resident

Simon Ong is a keen naturalist stationed in northern WA – it's always good to see what Simon posts from his remote location. Now it is difficult to find a bird species outside of its known range, but that's Simon has done! and Congratulations!



Savanna Nightjar Caprimulgus macrurus Loc: Durack WA Photo by Simon Ong

Below is the current ALA distribution map for this bird species with no records in WA and to the right is Simon's new +BowerBird record!





What is it wasp or bee?



Wasp - Paralastor Location: Boronia VIC Photo by Reiner Richter



Bee - Hyleoides concinna Location: Black Rock VIC Photo by John Eichler

The best way to distinguish the wasp from the wasp mimicking bee is to look at the wings. If they are folded along their length then it's a wasp as the wing character is diagnostic of the wasp subfamily Vespidae – Eumeninae. Look at the fully expanded wings of the bee – that's the difference!

There are only two species of wasp mimicking bees in the genus *Hyleoides – concinna* (found in SE Australia) and *zonalis* (found in SW WA). Faye Arcaro was very excited when she recently spotted *H. zonalis* on the driveway at her home.



Hyleoides zonalis Location: Jandakot WA Photo by Faye Arcaro

Here is a rarity!

When I first saw this wasp image I knew it was something I had seen only once or twice before and only as dead, pinned specimens. I had to scout around a few of my hymenopterist colleagues to finally get an answer – it's a beauty!





Aulacidae Pristaulacus sp. Location: Wollongong NSW Photo by Jeannie.

The Aulacidae are a small, cosmopolitan family, with two extant genera (*Aulacus* and *Pristaulacus*) containing some 200 known species worldwide and 31 species in Australia. They are primarily endoparasitoids of wood wasps (Xiphydriidae) and xylophagous beetles (Cerambycidae and Buprestidae).

And finally, what's a Bugle without Mark Berkery's

Nature Place

There's a place along the way, an opening onto a tidal creek, where people sometimes fish, and birds call loudly after a while.

I sometimes stop there to have a look at the water passing, and anything else that might be, small black crabs peeping from dark holes.

Today, as I came to the edge and looked down I saw a swarm of small bees flashing green in the afternoon sun, flying to the bank beneath my feet.

On closer inspection I could see they were each disappearing into a small hole in the clay, many diggings still visible, at and above the high tide mark.

I stood and looked for a while to see what was happening, and if there was any opportunity for a few shots of these fast moving new-to-me non-stop bees.

Camera at the ready to move in for a shot, I positioned myself and waited to see if any would land on my left hand as I held it outstretched in the sun.

After a while standing still one bee then another landed and did what bees often do, sat and rested, preened and blew 'bubbles', but not on my hand.

Instead they started landing on the stick I had set standing in the mud, the one I usually have with me and use for so much besides just a stick. After a while in the hot sun, bothered now by clouds of tiny midges – you have to endure a little hell for a little gold, one presented.

And another ... so I went to work, the easiest part of this particular shoot-out, and took what angles and focus were afforded.

These are some of the best ... of this metallic green and yellow masked bee ... so far.

Now, if only ... but if can never be.

Time's up ... for now.







For once with Mark, there was a Part 2 to his bee story which is as follows

Another chapter in the life of the Green and Yellow Masked Bee on the edge of the world.

It all happens on the edge of a huge coastal mangrove forest, where a tidal creek separates it from the mainland.

The nest entrance is a comfortable size, and they always go in head first, but then they always come out head first. So, it seems, they have room in there to turn around.

At first I thought they could only be laying their eggs for hatching in the spring, until I saw the one that spent some time cleaning hardened clay from its back. It looks like a youngster to me.

You can see how it uses the hooked feet to scrape at the dirt. It suggests to me either a cave-in or it has just emerged from incubation. It looks smaller too, less full bodied than the others.

And then there was the one dead bee I found. It looks to have a torn wing suggesting struggle of some kind. Maybe the crab kind.

Just below the nest site are the homes of small crabs that peep out and occasionally risk a journey across the dark mud.

They are shy creatures, not comfortable being photographed, but they can be tricked into it.

Things to do, lives to live ... the coming and going, reminds me of ... ways to be.















By the way, Mark's green bee is a Colletidae called *Palaeorhiza* parallela. Here is where this bee is found:



As always from BowerBird .. that's your lot for this month.

Haveagoodweekend all Happy photographing ...

Cheers - Ken

(If you wish to leave this email list, please contact me directly at kwalker@museum.vic.gov.au – else share with your friends)