



3 March 2017 Ken Walker ([kwalker@museum.vic.gov.au](mailto:kwalker@museum.vic.gov.au)) Museum Victoria. Edition 50.

Hi All – And, a belated Happy New Year and welcome to 2017. I apologise the first Bugle for 2017 is a bit later than expected – I have been busy writing a grant application. I mentioned previously that on 21 November 2016, Greg Hunt as then Science Minister, announced an Inspiring Australia grants program for Citizen Science. The government obviously had a clear target in mind as to apply you had to be a scientific institution which receives government funding to conduct research. That excluded all private research bodies. By answering the grant eligibility questions, it was clear that the government wants to fund a research institution to present a research project that involves the public. They were also quite specific in that the public involvement must involve in the public with the collection and transformation of data. Applications closed last week. I have requested a grant to develop a BowerBird smartphone mobile device – a BowerBird app. I did some research on the use of mobile devices and I was astounded. In 2016, 63% of all web traffic was via a mobile device (ie. smartphone or tablet or some newfangled thing called a phablet which combines a phone and tablet – Gad!!). The estimated use of mobile web access in 2017 was as high as 80% which is just amazing. Apparently, PC and laptop sales are in decline while mobile device sales are increasing. Of course, none of this thinking or usage was around in 2011

when we first began developing BowerBird but now in 2017 with the increased computing power of mobile devices and the innovation that has transformed such hand devices, we believe that it is imperative that we offer a BowerBird app to the growing demographic that uses mobile devices.

As mentioned in the previous Bugle, the Opportunistic style of BowerBird citizen science made is somewhat difficult to precisely state what the grant funding will achieve over a three year period. However, I was certainly able to present a strong defence of what new discoveries and solid biodiversity science BowerBird members had contributed over the past three years. One of the questions I had to answer was how would citizen science participants be acknowledged and contacted. Our grant bid has the strong advantage of having already established BowerBird data uploads to ALA which clearly acknowledges each contributor and the data source. And, although I did not know of this grant when the first edition of the Bugle was published, having such a member publication contact means as the Bugle can only assist our grant application.

I do not know when the successful grants announced and whether or not they will be fully or partially funded. \$4 million over three years for open and competitive grants is a relatively small amount so fingers crossed we can deliver the BowerBird app.

Finally, I must make a wee confession that I did not make in the grant application. I am probably one of the few people in Australia who does not use a mobile phone – much to the annoyance of my family. If we receive the grant, I may have to break the drought a get, what I call a milestone, a smartphone – not something I look forward to! (:->!



**Something to watch out for in the Victorian high country.**





Remember the last issue of the Bugle, I put out a call for people to collect for me some of the brilliant red galls on *Bossiaea* plants from high altitude locations such as Falls Creek, Mt Buffalo and Bogong High Plains. Roger Farrow's 2016 book called "Insects of South-eastern Australia" figured these galls but only identified the gall maker to a superfamily.



Linden Gillbank from Melbourne Uni spends a fair bit of time up at those high altitudes with sniffer-spaniels to detect pest hawkweed species. She kindly took a few cuttings of gall infested *Bossiaea* which she placed in various fridges and transported in various cars and finally Linden rode her push bike between Melbourne Uni and the Museum to hand deliver me the cuttings – PHEW! By the time the galls reached me they had lost their bright red colour and were more a dull brown colour – hopefully, a sign of gall maturity.

I placed the galls in a plastic bag on my desk and was ready for the long haul of examining the bag each day for signs of insect activity. I did not have to wait too long as the next day I saw several small wasps running around inside the bag. Over the next week, each day new wasps appeared inside the bag which I carefully collected, pinned and photographed. What a story these pinned insects told me.

The first 4 insects to emerge were two Ichneumonidae wasps and two initially unidentified wasps. The yellow ichneumonid wasps were *Xanthopimpla* sp. near "*rhapalocerus*". I was surprised to see these two wasps and I can only surmise that the cuttings in the bag must have contained a parasitised moth caterpillar. Nice to see but not associated with *Bossiaea*.

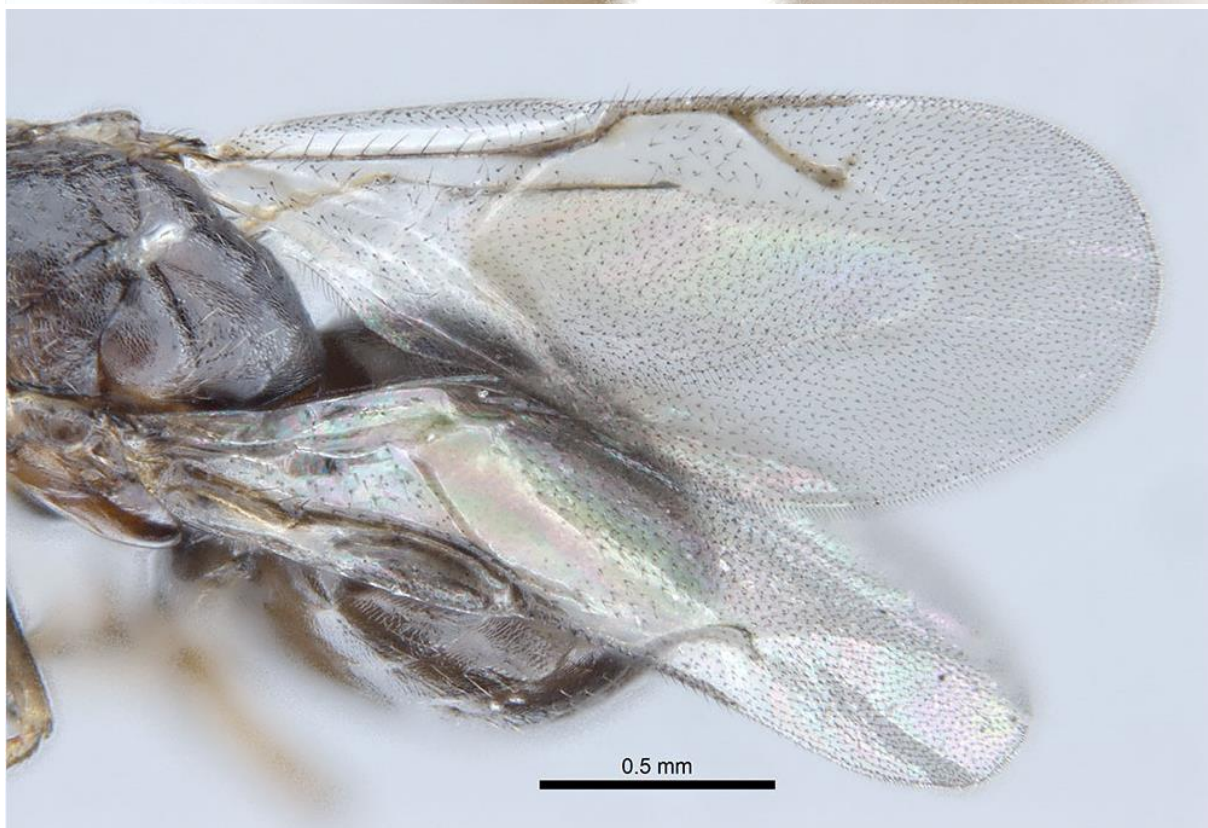


*Xanthopimpla* Ichneumonid wasp.

The other two wasps, less than 2mm in body length, were what caught my interest. I appeared to have both sexes. The next day another male and female emerged and then no more. What fascinating and beautiful wasps when viewed under a scope.







I checked the literature and the only *Bossiaea* gall wasp I could find was one described in 2005 by Dr John LaSalle and a group of Canberra primary school children – yep, school kids! John's son went to the Aranda Primary School where a number of the

children had an interest in entomology. So, with an entomologist father in the group, who was then the Director of the Australian National Insect Collection (ANIC), Canberra, the students formed the Aranda Primary School Entomology Club (Apssec) and decided to name a new species of tiny wasp. A species of *Bossiaea* occurs around Canberra – different to the Victorian species. *Bossiaea* is a pea plant and this Canberra species adds a sugary package to the top of the seed called an eliasome. The presumed idea for this sugary package is that it will attract ants to pick up the sugary package (with plant seed attached) and move it. From the plant's point of view this is great. The plant itself cannot disperse the seed so to sacrifice some energy to add a sugary treat to the seed which will enlist the help of ants to move the seed is a win situation for the plant to disperse its seeds. The Canberra Apssec group found that some of the seed eliasomes had been used to form galls. They bred out the insects that formed these eliasome galls and found they had a new species of wasp. The gall wasp belonged to the family Tanaostigmatidae and the genus was *Tanaostigmodes*. At the time, the students all liked the movie Shrek so they decided to name this new gall wasp species *Tanaostigmodes shrek* Apssec, 2005.

There are 10 Australian species of the genus *Tanaostigmodes*. Apart from the 2005 *T. shrek* species, most had been described by a curious entomologist called Girault, all between 1915 and 1933. Girault combined the science of entomology with misogyny – as I said he was a curious entomologist. Several of his scientific papers were published privately as no scientific journal would accept his misogynistic comments interspersed with new species descriptions. Here is the title of his 1933 privately published paper describing a new species of *Tanaostigmodes* although the species was originally placed in



another genus: *Saavedra velasquezi* Girault, A.A. 1933. *Some beauties inhabitant not of commercial boudoirs but of nature's bosom, notably new insects*. Privately Published. 5 pp. [5].

(Here is another title from his privately published collection: 1923: *Microscopitis, womanitis and new hexapods*. Privately Published. 7 pp.)

*Tanaostigmodes skrek* was the first wasp to be associated with *Bossiaea* galls so I started with the 2005 paper that accurately described the genus *Tanaostigmodes* and I soon found I had a match. I took a series of high quality images of the Victorian *Bossiaea* wasps which I sent to John LaSalle who confirmed the genus and new species status.

I offered John the specimens and to describe the new species. John is now the Director of ALA and unfortunately no only has the time to describe new species but he said he would be happy to co-author a paper describing this new species of wasp.

The high quality images of the new wasp have been taken, we know the characters that distinguish it from all other *Tanaostigmodes* so when I get quiet moment (Ha!), I will put some text together and get a name for this very cool *Bossiaea* Victorian high country wasp gall.

I really enjoy taking a public enquiry through to a species determination or in this case the discovery of a new species. I never know when such enquiries will arrive or how they will pan out – some have a great ending and some finish up asking more unanswered questions. I do have a very interesting job that has kept me busy and engaged now for almost 36 years.

## **I have a love/hate relationship with Facebook.**

I must confess that I do have a Facebook account but I call myself a “Facebook Lurker” rather than “Facebook User”. I kept receiving emails asking me to identify Facebook posted insect or bee image so finally I joined Facebook and then joined the Amateur Entomology and Native Bee groups. Personally, I think Facebook is such a waste. The images are great but rarely do they contain spatial or temporal data – where and when was the image taken. Then when someone spends the time to identify an image the post “dies” within Facebook as the records are not shared outside of Facebook.

But, I had an ulterior motivation for joining Facebook. When some rare bee or wasp record is posted, I ask the owner if I could reproduce their image(s) onto BowerBird where I know the record will then populate ALA. Sometimes the Facebook posts are the first ever images or records for some species.

Over the January 2017 holidays, I had a bit of down time to troll through the Facebook posts and I found two gems that were too good not to make better use of the rare information posted to Facebook. Here are their stories.

The first “star find” was a post by Max Hearne on 2<sup>nd</sup> January 2017. As you can see below, Max had a number of insects occupying his wooden bee hotel and wanted to know what bee or wasp had created the extensions protruding from the holes he had drilled. His number 2 image is what caught my eye.

Initially, Max had only image of the protrusions rather than an image of the wasp or bee that had built the protrusions.

What intrigued me was that the protrusion was constructed using pieces of plant tissue glued together with some type of resin. Such a protrusion is highly unusual in the insect world.



**Max Hearne**

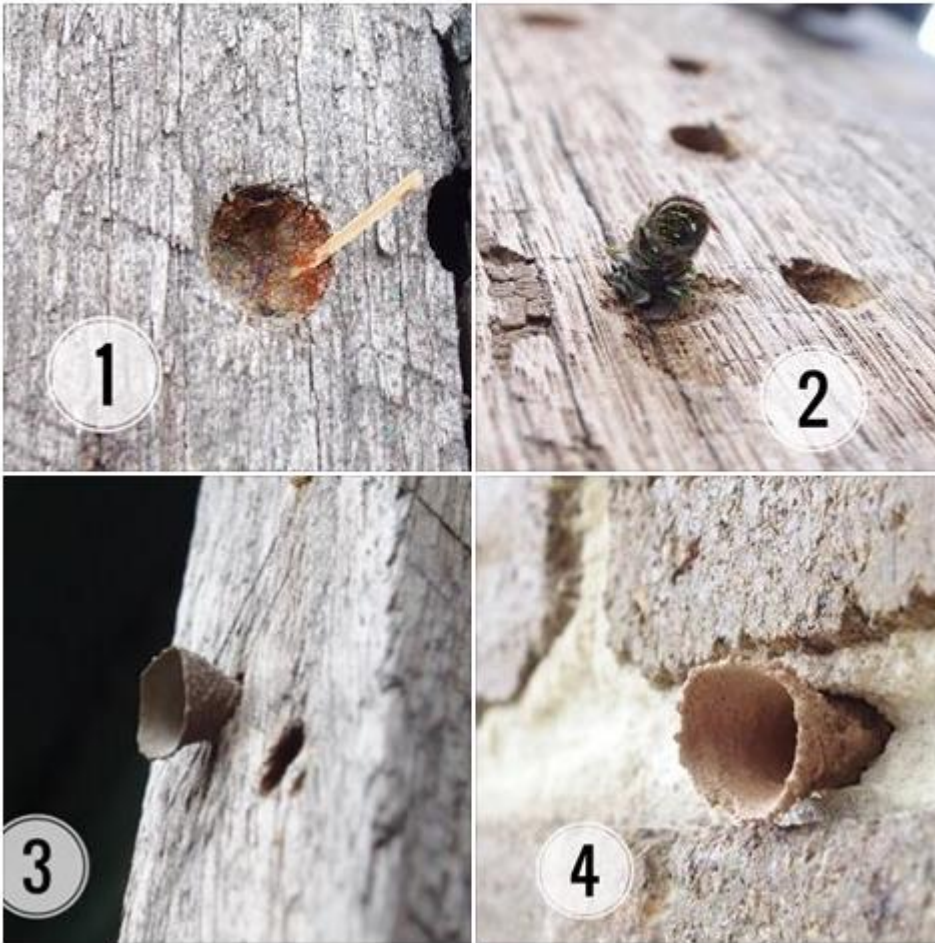
January 2

Could I get some advise on what bees and or hopefully pollinators have taken to my bee hotel. The holes are all 6 mm dis and approx 90 mm deep.

I have numbered the pics to help.

No 3 and 4 seem to be the same style, one in mortar the other in timber.

Thank you.



Following my expressed interest, Max added a number of additional images of this “plant tube”. He then staked out the plant tube and finally photographed the “culprit” in action. WoW! I was stunned and it was a prize. I searched the web and there were no similar images. I then checked ALA and while there were locality records, there were no images.





Max took a wonderful series of images of the wasp that had built the plant tube.



The longitudinally folded wings along the entire length of the wing places the wasp in the family Vespidae and within the subfamily Eumeninae. These are what we call the “mud or potter wasps” but this wasp uses leaf material rather than mud. The choice of material used to build the nest and tube places



this was in the genus *Ischnocoelia*. The location was Sydney and there are two species recorded from that area – *I. elongata* or *I. integra*. So I contacted Max who gave me permission to copy his images and posted them on BowerBird and then onto ALA. As you can see, this is the only image on ALA for this genus.

## *Ischnocoelia* Perkins, 1908

genus Accepted Name authority: Australian Faunal Directory

Overview

Gallery

Names

Classification

Records

Literature





Pat Johnston has a cattle farm about 70km west of Moree in northern NSW. On 10 January 2017, Pat noticed yellow and black wasps visiting his cattle water trough. The wasps were alighting on the water and then flying off. Pat asked if they were wasps or bees or the European wasp.



**Patrick Johnston**

January 10 at 10:16pm

To Bee Or Not To Bee?

Are these native bees? Or Wasps and a European Honey Bee?

Drinking from a cattle trough NW NSW. Very fast darting back and forth difficult to capture in focus..



Like

Comment

Share

His images of flying wasps diving into his cattle water trough were magnificent.



Initial replies to this Facebook post suggested a possible European wasp or Honeybee.



**Alison Mellor** My guess is not to be native bees! Great pics...look like wasps in the water though. And the one bee looks like a Euro honeybee 😊  
Like · Reply · January 10 at 10:49pm · Edited

**Megan Halcroft** I agree with Alison, they are wasps. But hard to tell the f they are European wasps. Check this ID site  
<https://www.agric.wa.gov.au/.../european-wasp...>

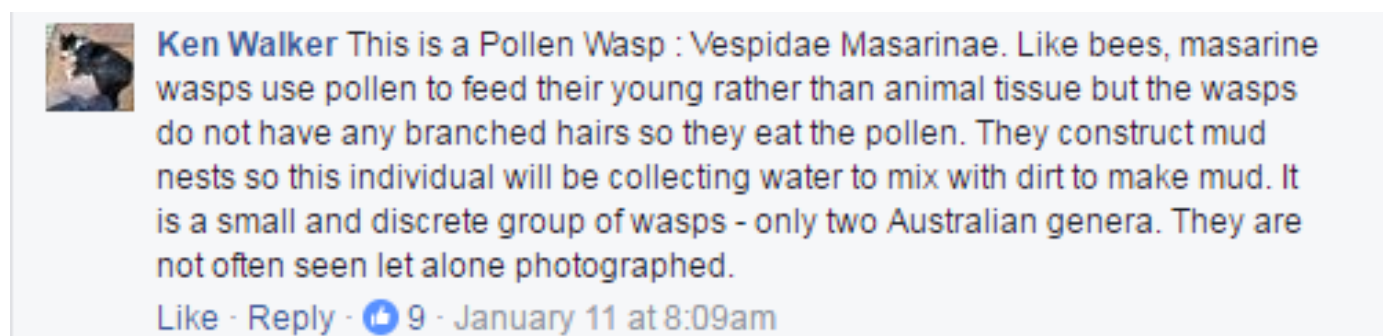
 **European wasp identification guide | Department of Agriculture and Food**  
AGRIC.WA.GOV.AU


Like · Reply ·  1 · January 10 at 10:58pm

↳  **Megan Halcroft** replied · 3 Replies

**Ivi Hiview** European wasps horrid things  
Like · Reply · January 10 at 11:31pm

I recognised the images as Pollen wasps. They were a rare subfamily (Masarinae) of Vespidae (paper wasps). Museums Victoria has only 5 specimens of this entire group. I sent this reply to Patrick's post:



**Ken Walker** This is a Pollen Wasp : Vespidae Masarinae. Like bees, masarine wasps use pollen to feed their young rather than animal tissue but the wasps do not have any branched hairs so they eat the pollen. They construct mud nests so this individual will be collecting water to mix with dirt to make mud. It is a small and discrete group of wasps - only two Australian genera. They are not often seen let alone photographed.  
Like · Reply ·  9 · January 11 at 8:09am

I checked ALA to see what Masarinae wasp records and found no records and no images for this ENTIRE SUBFAMILY.



On Facebook, I then asked Patrick:



**Ken Walker** Hey Patrick. Your images and the record are valuable science. Currently, our national Biodiversity database/website, the Atlas of Living Australia (ALA), does not have a single record or image for any of these pollen wasps (see attached image). I seek your permission to reproduce your images, with full credit to you as the photographer, on the BowerBird citizen science website which will then upload your images on to ALA. I need both your permission and a location (rather than NW NSW) and I will do the rest. Thanks for your consideration.



Like · Reply · 1 · January 11 at 9:45am

Patrick replied:



**Patrick Johnston** Ken Walker I've uploaded the pics and locality map of trough to Bowerbird site. Approx 70km west of Moree as the Wasp flies.

Like · Reply · 1 · January 11 at 10:35am

Patrick then registered on BowerBird, uploaded his wasp images and created a record on 11 January 2017.



For me, the expert on Australian Masarinae wasp, Dr James Carpenter, who works at the American Museum of Natural History in New York. I emailed Patrick's images to James on the 11<sup>th</sup> January and James replied on the 12<sup>th</sup>. James confirmed the subfamily Masarinae and identified Pat's wasps as *Paragia decipens alicae*.

So, a record posted on Facebook on 10 January is added to the BowerBird website on the same day and the images were identified by an expert in New York on 12 January 2017. Patrick sent me two specimens of these wasps which are now lodged in Museums Victoria's collections.

I'm a Facebook lurker and I strike when I see something good!

While on the subject of masarine pollen wasps, another of these rare species popped up on Facebook and BowerBird this week from over in Perth, WA – but it took a while to find out what it was. Kerry Stuart (a BowerBird member) posted this to Facebook.



**Kerry Stuart**

February 27 at 4:51pm

Need an ID on this insect asap please as there are alot in my daughter's backyard and she has a young puppy , chocolate Labrador who is starting to show alot of interest in them while he is outside. The insect doesnt seem at all aggressive , makes a loud buzz while flying and is fairly large in size . They seem to fly from her orange citrus trees to another flowering tree that has bright pink flowers on it ( doesnt look like a native tree and sorry I dont have any photos atm of it .) Did not see them at any time land or settle on the plants or trees. This insect builds mud tubular structures in the ground (so Im lending strongly towards it being a wasp ) I watched it taking mud balls out from these tubular structures and drop the mud balls in mid flight .





The wasps looked a bit like a *Bembix* sand wasps but they were building mud tubes coming out of the ground – something I had never seen before. *Bembix* dig in sand and have no tube.

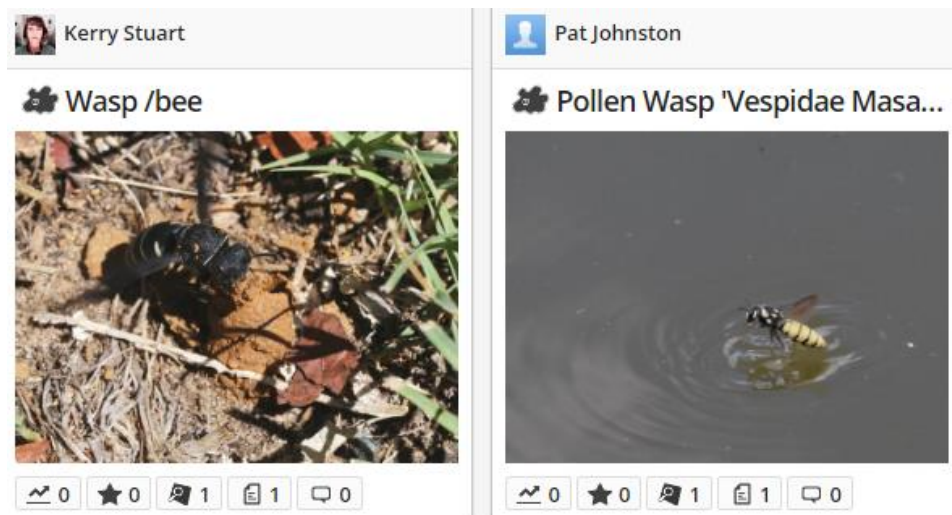






I suggested that Kerry contact Terry Houston at the WA museum. Terry is a wasp and bee person and being a local he may have seen this wasp before.

Not only had Terry seen these wasps but he had written a paper on their biology in 1984: Houston, T. 1984 *BIONOMICS OF A POLLEN-COLLECTING WASP, PARAGIA TRICOLOR (HYMENOPTERA VESPIDAE MASARINAE), IN WESTERN AUSTRALIA*. in the Records of the Western Australian Museum. Kerry added her images to a BowerBird record which will soon be uploaded to ALA.



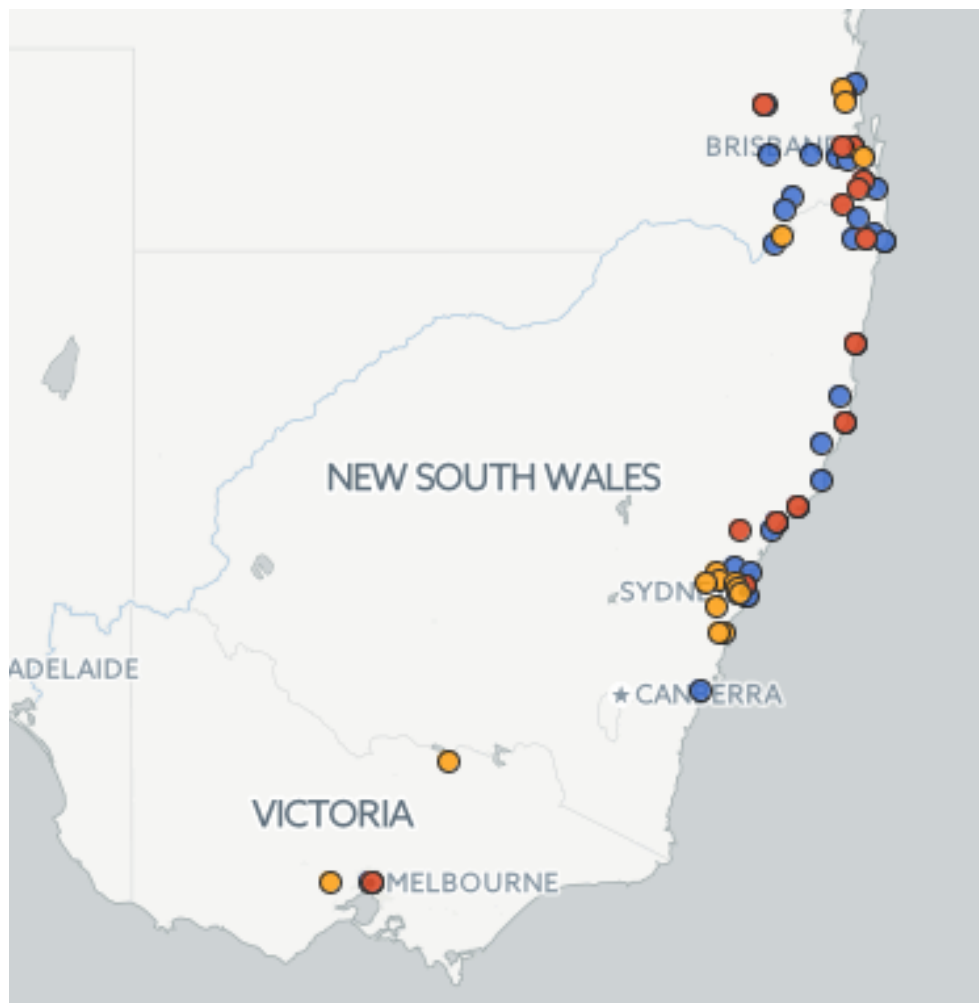
## **Sometimes I don't believe what I'm seeing !**

Cathy Powers has a passion for plants. A few years ago, Cathy was the President of the Australian Plant Society (APS) and roped me into giving talks to APS societies around Victoria. Then Cathy discovered moths and everything changed. Cathy runs a light sheet almost every night outside her home at Balliang, Vic out to the west of Melbourne. She now recorded, and photographed, over 500 moth species at her property. Cathy is a volunteer at the Museum and comes in on Tuesdays to work on the collection, identify her photographs and to contribute to the writing of the next Moths of Victoria book series on Noctuidae. Every Tuesday Cathy sticks her laptop under my nose and asks me to identify non-moth images that she photographed. Last week, Cathy showed me a series of images that I could hardly believe.



Photo by Erica Siegel Location: Mount Cotton QLD

The above image is of a beautiful Teddy bear bee - *Amegilla Asaropoda bombiformis*. These bees occur primarily in SE Qld and coastal NSW. There is a single record from Albury and a few records from Melbourne. I have always been something sceptical about the Melbourne records as I have never seen this species down here. Obviously I need to get and about more! Cathy showed me images of *A. bombiformis* males roosting outside her house! Lots of them. Amazing.



I really was pleasantly surprised to see these images and confirm this species does occur in and around Melbourne.

Many thanks Cathy !





Roosting males of *Amegilla bombiformis*. Photo by Cathy Powers Location: Balliang Vic.



A tiny lacewing, *Coniopteryx maculithorax*, at Cathy's lights sheet,

## I love the intrigue of BowerBird photos!



Glenda Walter Location: Bellthorpe QLD

Glenda Walter posted this image labelled “A drop of jelly”. She had found the jelly droplet next to a creek in SE Qld.

If you look closely you can see cloudy, white spots throughout the viscous fluid. But what laid or made such a drop and what are its contents.

To me, it looks like something a frog or perhaps snail would lay.

A few days after posting, Glenda has found the answer.

Dr John Stanisc from the Queensland Museum (we call him the “Snail whisperer”) had identified it as the egg mass of introduced snail *Physa acuta*. Glenda thanked John and added: “No frogs were involved!” Ha!!



Shield bug, Bellthorpe

Glenda Walter Location: Bellthorpe QLD

Here is another wonderful image taken by Glenda again in Bellthorpe, SE Qld.

I asked our local Hemiptera expert Dr Malipatil and he was unsure. Fortunately, Dr Geoff Monteith, ex curator of entomology at the Queensland Museum new this bug. Here is what Geoff told Glenda:

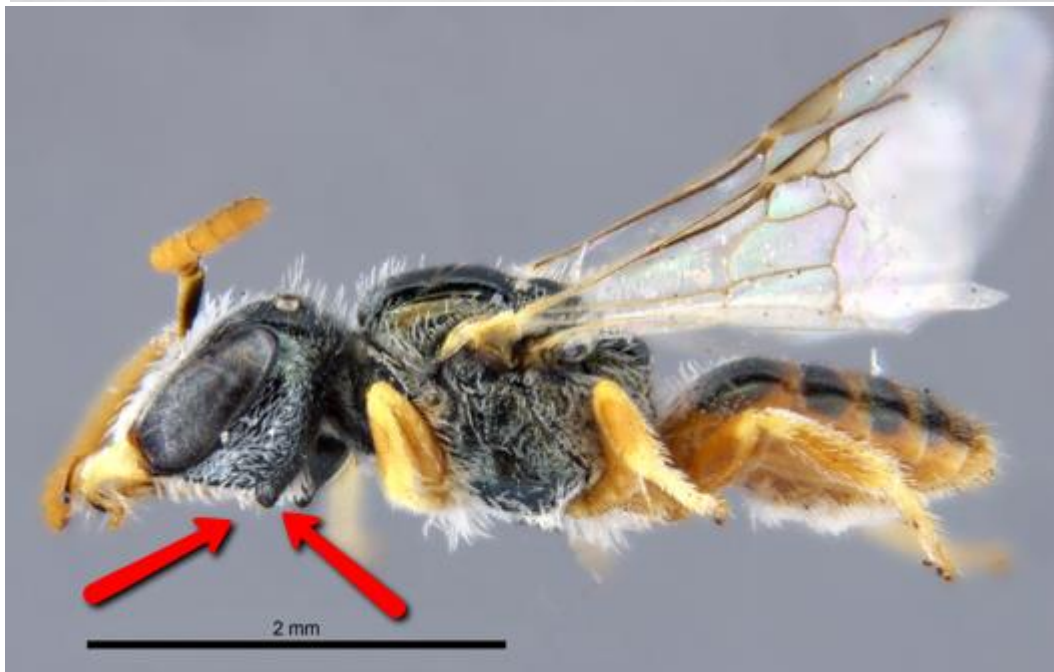
Arthropoda: Insecta: Hemiptera: Tessaratomidae: *Erga longitudinalis*.

Geoff said: "The adults crouch over their eggs until they hatch. Their only known food plant is the Blood Vine, *Austrosteenisia blackii*." I am always amazed and grateful to the expertise that BowerBird taps into.



## Winding back the clock to 1979 .....

Laurence Sanders posted an image of a male macrocephalic bee on Facebook and BowerBird. Macrocephaly, or “big headed”, is not unusual in a number of halictine bees. Typically, as can be seen in the below images, macrocephalic bees have just the head enlarged while the body length remains normal.



The lateral view of the image above shows the enormous expansion of the area behind the eyes (red arrows), called the genae, which presumably allow much larger and better muscle attachment required to move and manage the expanded mandibles. Again, we presume the enlarged mandible has something to do with enhanced fighting male's ability. So, macrocephalic males have big head but normal bodies.

In the 1980s, Michael Schwarz found a different form of macrocephalic male in *Lasioglossum (Chilalictus) hemichalceum*. These males had an enormous head but also their body length was proportionally enlarged but importantly, their wings were reduced in length meaning they were flightless. These males acted as guard bees at the entrance of an underground nests as would normally female bees take turns as guard bee. This allows all nesting females to forage.



Observations showed the macrocephalic males of this species would fight each other to be the guard bee for a nest containing up to twenty females. Being the only male inside the nest gave this male first opportunity to mate with any freshly emerged female – an envious position for male bees. Below is a side view showing the enormous genal expansion required to support the enlarged fighting mandibles.



Way back when I was still a student at the University of Queensland and I was a research assistant to Dr Exley – Australia's leading bee researcher. She sent me off on a collecting expedition across southern Queensland from Brisbane out to Thargomindah, up to Charleville and back home. I caught and pinned hundreds of bees but one specimen in particular caught my eye that I collected at eucalypt flowers on 26 November 1979 at Drillam, Qld – 38 years ago! Below are dorsal and lateral images of that specimen.





You can see this is a macrocephalic male bee (note the genitalia has been removed for examination). This was a second type of macrocephalic in which the entire body was enlarged rather than just the head. The important character of this bee was that it was fully and functionally winged as I had

collected the bee at flowers. But what species was it? It was not *Lasioglossum (Chilalictus) hemichalceum* but it did not match any of the known *Chilalictus* species at the time I had seen. I had to wait until 1994 when I complete my PhD and I described a new species called *Lasioglossum (Chilalictus) quadratum* that I was finally able to put a name to the bee I collected in 1979.

I will now mount and stand on top of my proverbial soap box to deliver this sermon !

*Taxonomy is a funny science. I say that taxonomy answers questions before the question is asked. I identify insects to species every day to answer public questions. People want to know if their insect can cause: A Medical problem; or an Economic problem; or is just a nuisance species. To answer these questions, I need to know the species name of the insect which provides me with the key to open the relevant literature (book and web) to find out about the enquirer's species. Without such a key, I cannot provide specific answers.*

*Saying you have a beetle is of little help. The difference between how you would act if you had the Drugstore beetle, *Stegobium paniceum* compared to the Carpet beetle, *Anthrenus verbasci*, is enormous. Or another example is termites. Australia has about 330 species of termites and yet only 6 species can cause economic damage to houses. A termite infestation treatment by a professional pest controller can cost upwards of \$10,000 so knowing which termite species to treat and which to leave alone is an expensive and important decision to make and it relies on taxonomy to name the species correctly. Me saying – yep, that's a termite and go see your pest controller would be irresponsible on my part.*

*Every time I provide a species name as an answer, it means that someone years ago has spent several years of taxonomic work revising a group to determine which are the valid species names and which are synonyms, to write descriptions and illustrate all valid species and also to describe new species in a peer-reviewed journal – no easy task.*

The catch of course, is that society rarely wants to finance answers to questions that have not yet been asked and therein lies the rub and problem with poorly funded taxonomic research.

So, stepping down from my soap box, I did a double look at Laurence's posted macrocephalic bee image below.



Photo by Laurence Sanders Location: Emerald, Qld



I was whisked back to 1979 as I immediately recognised the bee as the same as I collected in 1979. We taxonomists often say that every specimen we collect and every label we write is like a postcard we send to ourselves and when we look at the specimen or label in the future we can travel back to the exact spot and time when we originally collected that specimen.

My 1979 specimen now sits in the Museums Victoria collection. I dusted it off during my PhD days in the mid-1990s and then again recently when I saw Laurence's image. It was such a thrill to see this bee alive as we still have no idea what function it plays within the semi-social colony of this species. Why are there not other species with full body enlarged macrocephalics? How does the *L. quadratum* macrocephalic role differ to the *L. hemichalceum* macrocephalic? The male genitalia of the *L. quadratum* that I examined appeared to be normal in size and features so I presume it is a mating male. As per usual for almost anything Laurence finds in Emerald, this record becomes the most northern record for that species. The ALA map below for *L. quadratum* show its current known distribution and the arrow of when Laurence's new record when added.



## A beetle with white spots

Matt Campbell posted an image of a scarab beetle with several, obvious white dots on its pronotum. What was the beetle and what were the white dots?

Several BowerBird members have contributed to the online discussion (Liz O'Donnell, Tony D. and Matt).





*Sericesthis nigrolineata* Photo by Matt Campbell Location: Jeeralang Junction VIC

I contacted a mite expert friend of mine, Dave Walter, to see if he thought they may be mites but Dave soon ruled out my theory.

Matt added a cropped closer image of the white dots and there appears to be a mycelium like fringe surrounding each of the white dots. Dave, the mite expert, suggested possible slime mould but all of the slime mould I have seen have a roughened surface compared to the smooth surface to the white dots in these images – which is why I wondered about mites.

Well, we have solved the name of the beetle, *Sericesthis nigrolineata* (the Dusky Pasture Scarab), which occurs from SE Qld all the way down the coast and into Tasmania but the white dots remain a mystery. All suggestions welcomed.



## Time-lapse of plasmodium growing on log

Steve Young posted a link to a fascinating YouTube video showing a time lapse video of a plasmodium growing on a log.



Steve said – “I found this first on 31st January growing on a very sheltered section of a fallen forest giant. The last 2 images are from that day. I returned on 3rd Feb and spent 98 minutes recording its growth and the feature image is from that record. I have turned the 300 odd images into a time-lapse and it can be viewed on YouTube here. Enjoy!”

<https://www.youtube.com/watch?v=z5lzydkigRA>

The video goes for 1 minute and 7 seconds and well worth a watch.

## You will see the egg cases before you see the spider

These are the lovely egg cases of the Bird dropping spider - *Celaenia excavata*. Here are some notes about this spider from the Australian Museum. “Despite its large size, this squat, black, brown and white spider sits huddled on a leaf or branch during daylight hours, often in quite exposed positions. Its colouration and immobile posture fools predators into thinking that the spider is a blob of dung rather than a healthy meal.



Photo by Jeannie Location: Woollongong, NSW

The Bird-dropping Spider also uses mimicry of a quite different sort to capture its prey, which consist almost exclusively of male moths. At night the Bird-dropping Spider hangs from the edge of a leaf or twig on a short silk thread, its forelegs outstretched. While doing this it releases a chemical scent (pheromone) that mimics the airborne sex pheromone released by female moths to attract their mates. The unfortunate male moths that are attracted by the spider's deceiving pheromone eventually flutter close enough to the spider to be grabbed by its strong front legs.”

## Orchid pollinators

I would like to encourage people to photograph any insect that you may see of native orchids. Orchid pollination is a fascinating subject and one that requires much time and effort. BowerBird is fortunate to have a number of orchid pollinator enthusiasts/experts that are happy to share their enormous knowledge on this little known subject. There is a BowerBird project called “Orchid Pollinators” dedicated to enhancing the knowledge of orchid pollinators. I encourage people to join this Project to share photos and read the comments. I would like to reproduce the comments by Mitch Smith to an orchid pollinator post by Judith Sanderson.



Vanusta X Dilalata Image A

Below is the wealth of knowledge provided by Mitch:



“We spent some time last season in the Grampians region trying to understand the pollinator relationships between the parents of these often seen *venusta*/Greencomb hybrids. Whilst observing quite a few hybrids in a several locations we believe fire to be a contributing factor in the resulting cross-pollination. The year preceding a fire the principle pollinators of both species are generally low in numbers and secondary or incidental pollinators are in greater abundance. We noted many incidences of flies, beetles and bees visiting *C. venusta*, but none were convincing pollinators. In your instance two things lead us to believe that hoverflies or other insects are not the vectors of the hybrids in question. Firstly hoverflies visit florally deceptive orchids and not sexually deceptive ones, and only visit *C. venusta* (and other colourful spider orchids) which exhibit both of these syndromes, and when they do they either fail to pick up the pollinia, or when they come into contact with the viscida it gets stuck and do not have the strength to extract themselves. The greencombs are unattractive to flies, beetles and bees due to their colour and lack of nectar and are not tempted to be visited for food. Secondly, It's is the way the pollen is presented in Spider orchids which is the primary function in preventing cross pollination by insects other than the principle pollinator. Orchids possess no anthers and the pollinia, or solid packet of pollen, is concealed in the upper section of the column, surrounded by flanges which prevent pollen being robbed or accidentally removed. The base of the pollinia is situated high in the column and only the right sized wasp can remove it by first contacting the glue like viscida, proceeding past the pollinia and collecting it as it is retreating from the flower while attempting to fly off with the labellum thinking it is a female wasp. Whilst we have not seen the actions of hoverflies that you describe they would not be able pick up any pollen this way. So, the supposed reason for fire to

be a factor is as follows. These hybrids were most likely conceived during the last disturbance and have matured and flowered with the present triggers. The two wasp species that pollinate these two orchids are very closely related and are attracted to their respective orchids via sexually deceptive mechanisms. The problem with fire induced flowering is that there is generally a large number of flowers in relatively small areas, leading to confusion and accidental pseudocopulation amongst newly emerged, naive wasps. It only takes one wasp to accidentally visit a flower of a different sp. to create many hybrid plants, and yes this amazing evolutionary trait is fallible. Having said that there is always a possibility that somewhere, somehow another insect(incidental pollinator) may come into contact with the pollinia, or part of, and transfer this to another but it is highly unlikely and even less so in "normal" conditions without fire. Your observations are excellent and further efforts may reveal more secrets and another piece to the puzzle. Thank you for sharing.”



Orchid images by Judith Sanderson Location: Brenanah VIC

## How close to you have to get to identify a snake?

John Read lives on the Eyre Peninsula in South Australia, has a passion for the natural sciences and he travels to some of the remote parts of central Australia. I always enjoy seeing John's posts because I know they come of locations that I will never see. John posts mainly to a BowerBird project called WOMPA? The project takes its name from the Aboriginal (Anangu Pitjantjatjara) word "wampa", which means "I don't know" or "It's a mystery" and symbolises the key role and excitement of natural history discovery in this project. I recommend that you join the WOMPA? project and see something about the natural history of arid Australia. Here is what John needed to see/measure to identify this snake and to name it as a Dugite.



John wrote: "difficult to distinguish from aspidorhyncha without measuring head scales because throat not very grey".



So, John's next image shows the head scales of the throat – that's a bit too close for me but obviously not for John!



*Pseudonaja affinis* Photos by John Read Location: Middleback Range SA

As you can see from this ALA distribution map for the dugite, the species just makes it onto John's patch.



John likes to capture the curious images. Here is one with an ant about to take a dead hoverfly back for lunch.



Photo by John Read Location: Nilpinna Station SA



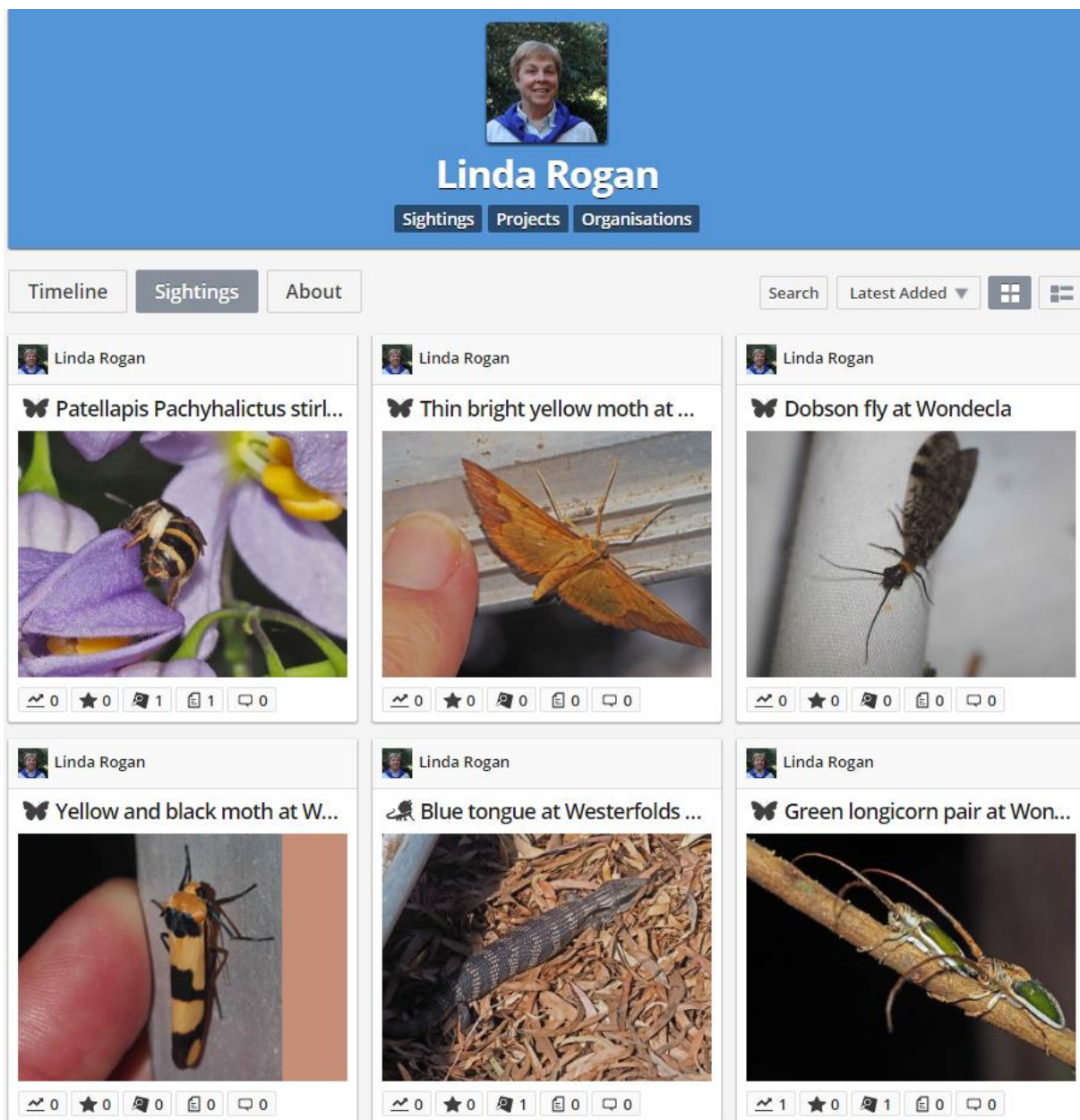
Monk snake *Parasuta monachus* Photo by John Read Location: Walalkara IPA, SA





# BowerBird tracks when you go on a trip.

I enjoy watching BowerBird posts when people go into the field or on extended holidays somewhere new. I have been enjoyed the recent posts of Linda Rogan who is sending a wide range of plant, vertebrate and invertebrate images to BowerBird from Cape York and North Queensland. Linda lives in Melbourne but does head off to WA to northern Qld. I recommend watching her posts.



The screenshot shows the BowerBird profile for Linda Rogan. The profile header includes her name, a profile picture, and navigation tabs for 'Sightings', 'Projects', and 'Organisations'. Below the header, there are tabs for 'Timeline', 'Sightings', and 'About'. The main content area displays a grid of six insect sighting posts, each with a title, a photograph, and interaction icons (likes, stars, comments, shares).

Post Title	Image Description	Interactions
Patellapis Pachyhalictus stirl...	Close-up of a bee on a purple flower.	0 likes, 0 stars, 1 comment, 1 share, 0 messages
Thin bright yellow moth at ...	A bright yellow moth on a person's hand.	0 likes, 0 stars, 0 comments, 0 shares, 0 messages
Dobson fly at Wondecla	A large, dark dobson fly on a white surface.	0 likes, 0 stars, 0 comments, 0 shares, 0 messages
Yellow and black moth at W...	A yellow and black moth on a person's hand.	0 likes, 0 stars, 0 comments, 0 shares, 0 messages
Blue tongue at Westerfolds ...	A blue snake on a bed of dry leaves.	0 likes, 0 stars, 1 comment, 0 shares, 0 messages
Green longicorn pair at Won...	A pair of green longhorn beetles on a branch.	1 like, 0 stars, 1 comment, 0 shares, 0 messages



I had never before seen these green cerambycid beetles that Linda photographed.



*Rhytiphora nigrovirens* Photo by Linda Rogan Location: Wondecla QLD



Nesting Figbird (*Sphecotheres vieilloti ashbyi*) Photo Linda Rogan Location: Lockhart, QLD

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

## **Nature Place**

*Robotic, staccato movement of tiny feet across the flowers.*

*Behind her a trail of silk to anchor.*

*Big eyed beauty sees all in her world, strangers above a certain size reveal themselves at their peril.*

*Such confidence she has, or lack of self consciousness – unaware of the sharp eyed crow overhead.*

*Pure instinctive being, untouchable by discursive thought or emotion – as we know it.*



© Mark Berkery

[Click on the pictures for a bigger version ...](#)



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© Mark Berkery



© Mark Berkery

*The fiddler beetle was zooming round the flowers in the garden,  
frisky little thing.*

*So when it stopped a moment I was prepared for some fast  
action on its part.*

*As soon as I touched the flower head it was on it dropped off.*

*Survival strategy at times demands a creature plays dead.*

*It would have unfolded its wings and taken flight ...*

*... but there was my hand to catch it.*

*Then it dropped from my hand ...*

*... and took to the skies.*

*Gracefully.*



© Mark Berkery

[Click pictures for a closer view ...](#)



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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](mailto:kwalker@museum.vic.gov.au) – else share with your friends)