



11 March 2016 Ken Walker (kwalker@museum.vic.gov.au) Museum Victoria. Edition 40.






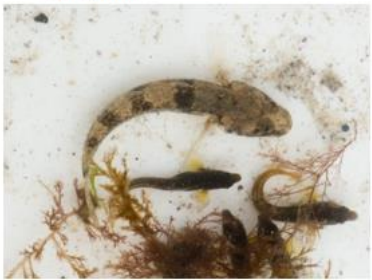



Hi All – Melbourne City Council currently has a very active team of people determined to improve the biodiversity of the City of Melbourne – generally considered to be a concrete jungle. Their stated aim is to reduce the temperature of the CBD by 4C – an ambitious but worthy target. So, their plan of attack is to get the people living in the Melbourne CBD to become more aware of their local biodiversity. And, the best way to do that is through a BioBlitz where you get the public themselves looking for all creatures “Great and Small”. The first Melbourne City BioBlitz was conducted in the month of November, 2014; however, this year they decided to run the second CBD BioBlitz in March – not the best of months considering insects begin to wind down as the day length shortens and prepare for the Melbourne winter chills. Still, they paid the Museum some money and we were there “in a flash” to provide our expertise.

The 2016 BioBlitz was held over 4th and 5th of March at several locations. The first was a late afternoon marine walk below the WestGate Bridge. Our marine department went out with sieves, nets and core samplers to survey the foreshore – and they found quite of few marine animals of interest. These made great additions to the BowerBird City of Melbourne BioBlitz project.

A wide range of marine vertebrates and invertebrates were found, photographed and uploaded to BowerBird and then released. Fish, crabs, snails, urchins, flatworms, polychaetes, mussels, starfish etc.

Here is the URL to the City of Melbourne BioBlitz Project – I recommend you take a stroll through these pages:

<http://www.bowerbird.org.au/projects/4481/sightings>

<p>🦋 moon snail</p>  <p>👍 0 ⭐ 0 📷 1 📄 0 💬 0</p>	<p>🦋 heart urchin</p>  <p>👍 0 ⭐ 0 📷 1 📄 0 💬 0</p>	<p>🦋 European shore crab</p>  <p>👍 0 ⭐ 0 📷 1 📄 0 💬 0</p>
<p>👤 Robin Wilson</p> <p>🦋 Red-handed rock pool shrimp</p>  <p>👍 0 ⭐ 0 📷 1 📄 0 💬 0</p>	<p>👤 Robin Wilson</p> <p>🦋 European fan worm</p>  <p>👍 0 ⭐ 0 📷 1 📄 0 💬 0</p>	<p>👤 Robin Wilson</p> <p>🐟 gudgeon?</p>  <p>👍 0 ⭐ 0 📷 2 📄 0 💬 0</p>
<p>👤 Robin Wilson</p> <p>🦋 polychaete worm</p>  <p>👍 0 ⭐ 0 📷 1 📄 0 💬 0</p>	<p>👤 Robin Wilson</p> <p>🦋 flat-backed crab</p>  <p>👍 0 ⭐ 0 📷 1 📄 0 💬 0</p>	<p>👤 Robin Wilson</p> <p>🦋 moon snail egg mass</p>  <p>👍 0 ⭐ 0 📷 1 📄 0 💬 0</p>

A couple of records caught my eye. Since I was a child walking on the beaches of SE Queensland, I have seen these transparent, jelly like masses on the shore between the high and low tide marks and I had wondered what they were. I had assumed an egg mass of something but I had not known what had made the presumed egg mass – now I know: A gastropod!!

moon snail egg mass



Photo by David Paul – Museum Victoria



Polinices
(genus)

Taxonomy: Animalia: Mollusca: Gastropoda: Hypsogastropoda: Naticidae: Polinices

And here is an example of snail that lays this form of egg mass.



We have 5 marine invertebrate curators and a marine fish curator so our expertise is high in this area.



Photo by Patrick Honan

This pipefish also caught my eye –



Photo by David Paul.



Stigmatopora argus
(species)

Taxonomy: Animalia: Chordata: Actinopterygii: Gasterosteiformes: Syngnathidae: Stigmatopora: argus
Common Names: Pipefishes, Seahorses, Gulf Pipefish, Peacock Pipefish, Spotted Pipefish

Also that Friday evening, a small BioBlitz occurred in Royal Park. Richard Marchant sampled the local pond life, the Victorian Entomological Society “Moth-ers” set up a light sheet and our museum herpetologist unsuccessfully listened for the local frog population.

Here is Richard giving the assembled masses chapter and verse of what he found in the local ponds.



Photos by Patrick Honan

I was “called to duty” the following Saturday morning. If anyone knows the Melbourne Museum site, there is an enormous eucalypt tree on the corner opposite IMAX. We estimate from its age of more than 100 years, it was probably planted either when the Royal Exhibition building was first opened in 1880 or when that same building hosted Australia’s first parliament meeting that announced Federation of the States in 1901.

We decided to set up a number of tents beside this large tree and literally hundreds of people visited and chatted with us.



Photos by Patrick Honan

And, below is Richard still talking to anyone who will stop and listen to him! If anyone remembers, the European Wasp model was from an exhibition we did on these wasps in the late 1980s – the model is still looking good and always enjoys a “fly” in the park.



Photo by Patrick Honan

Someone (actually My Boss!) decided to send me up in a cherry picker for a close encounter with the enormous eucalypt tree – an interview with the tree if you please! Lots of fun. I found a few flowers, flies and other insects and the characteristic marks of *Uraba lugens* – the gum-leaf skeletoniser. The view was magnificent, especially back along the promenade along the front of the Museum.

Below is an image of me about to head up. It looks as if I am pointing to where I want my ashes to be spread if the trip did not go well.



Photos by Patrick Honan

Equally famous as the Carlton Garden eucalypts are the enormous Moreton Bay Fig trees that are spread throughout the gardens. We had a team of enthusiastic, professional tree climbers who scaled one of the large Moreton Bay Fig trees on the western side of the Royal Exhibition Building (REB) almost opposite Queensberry Street. They are enormous trees which are dotted throughout the Carlton Garden parkland. These trees are not native to Victoria so may have been planted here at the time of the REB construction (in 1880) or for Federation in 1901 – either way, they are old trees. When they were brought to Melbourne, they somehow also brought along their pollinator. Each species of fig has its own unique pollinator which is a wasp in the family Agaonidae.



Photo by Patrick Honan

These are typical looking chalcid micro-wasps except for the uniquely elongate head and radula like mouthparts beneath the head – see images below. The wasps use this radula to scrape open the entrance of the syconium to gain access into the flowers. Fig ‘flowers’ themselves do not open and expose themselves for pollination on the outside, rather they open and require pollination on the inside – something called “inverted inflorescence” – which makes pollination rather difficult, hence the unique relationship between fig and pollinator. Both male and female flowers occur inside the fruiting-like body, called a syconium, but the different sex flowers open at different times.



The fruit-like fig flowers called syconium.

The Moreton Bay Fig is exclusively pollinated by a symbiotic relationship with *Pleistodontes froggattii*, a species of agaonid

fig wasp. The fig tree sacrifices some of its flowers to be parasitised and eaten by the wasp larvae and in return for the female fig wasp to fly from syconium to syconium picking up pollen and then crawling around inside the inverted inflorescence to pollinate the flowers. Magic!

Anyway, several of the tree climbers collected a number of syconiums from high up in the tree and showed them to me. You could clearly see a number of the pollinating female wasps jammed into the single, small opening at the end of the syconium. I photographed what they gave me and then I cut open the syconium to expose what was happening inside and then I took a lateral image of the female wasp itself. These wasps were just one of many exciting finds of the City of Melbourne BioBlitz last weekend.

This first image shows a number of female fig wasps all trying to gain access into the single entrance at the top of the syconium. This image is a lateral view.



Here is a dorsal view of the same.



Here I have cut the syconium length ways to expose the single entrance into the flowering body. You can see the wasps have completely clogged the entrance and all the way along the passage to the flowers.



A close up view of the same.



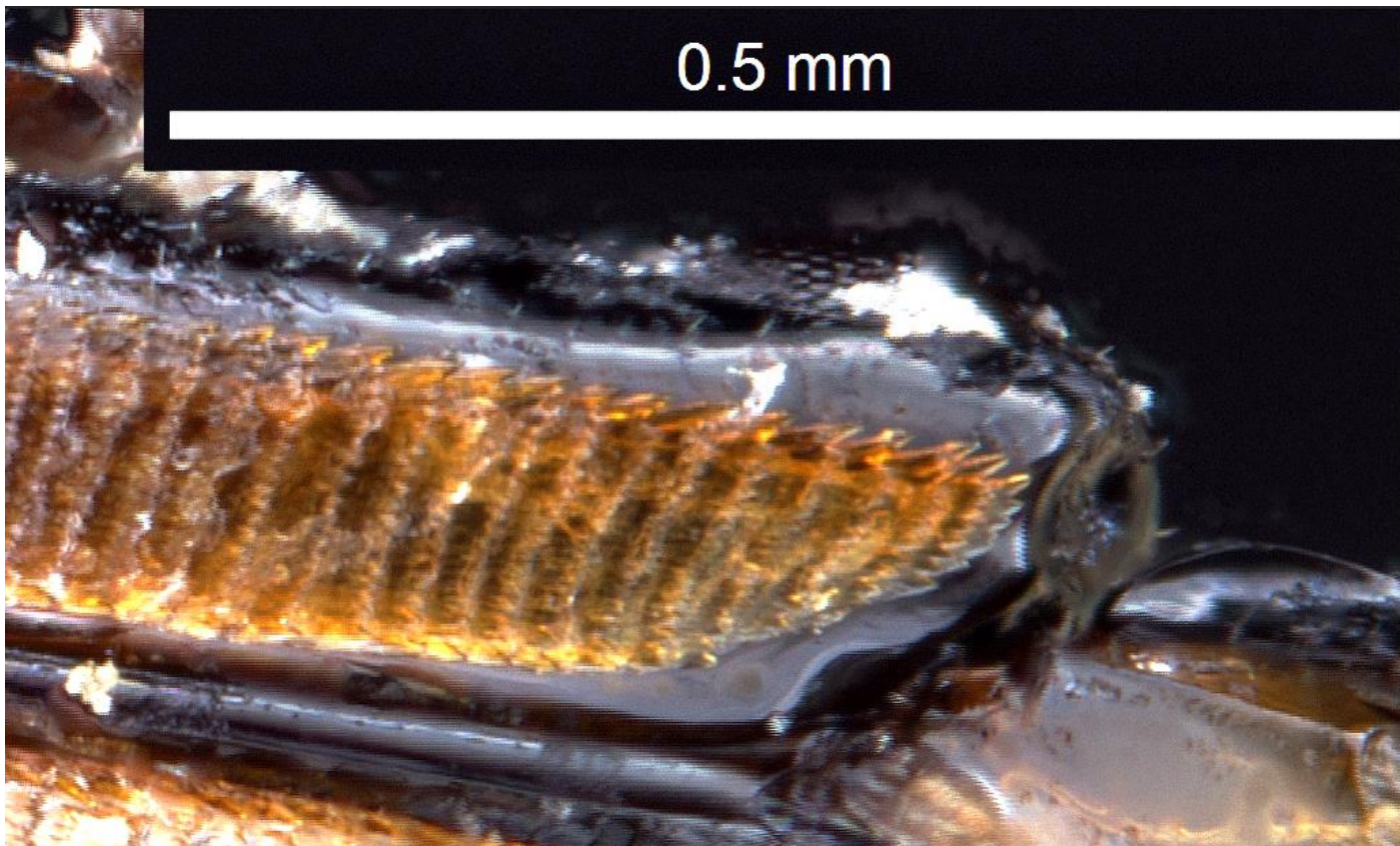
Pollinating and parasitising female wasps amongst the fig inverted inflorescence flowers. There would have been at least 30 wasps down amongst the flowers.



A female *Pleistodontes imperialis* (lateral view) – Notice the white granules of pollen on her body and note the long ovipositor she uses to inject her eggs into the flowers. And of course, the unique elongate head found only in agaonid fig wasps.



Radula like mouthparts underneath the elongate head – see arrow above. Very “Aliens” looking. The below image is a close up of the arrowed section above. Noted the serrated teeth like structures probably used to scrape open the entrance of the syconium.



And finally, it looks like the man at the top right of the photo has heard enough from Richard and his pond sampling !!



A fun day was had by all. Melbourne BioBlitzes will be run every 2 years.

The Fungi ARE BACK ! YEAH !!

It's fun t watch the seasons change on BowerBird. One of the best changes I see is the uploading of fungal images after a hot and dry summer throughout Australia. But, a bit of cooler weather and a few showers of rain and these fairy delights make their appearances. Here are a but a few of the recent uploads: WOW – Isn't this a stunning photp!



Omphalotus nidiformis Photo by Reiner Richter. Location Mount Erica, Baw Baw VIC 27 Feb 2016. Reiner commented: Growing on trunks of *Eucalyptus regnans* in *Nothofagus cunninghamii* (= *Lophozonia cunninghamii*) rainforest on the upper southern slopes of the Baw Baw Plateau. To the naked eye this bioluminescent fungus looks like the dappled light spots a full moon might make shining through trees.



Favolaschia calocera Photo by David Akers Location: Tarra Valley VIC 5 March 2016



Currently unidentified. Photo by Linda Rogan Location: Mareeba QLD 11 Feb 2016



Tremella mesenterica Photo by Tamara Leitch Location: Baw Baw VIC 5 Feb 2016



Mycena sp. Photo Steve Young Location: Woolgoolga NSW

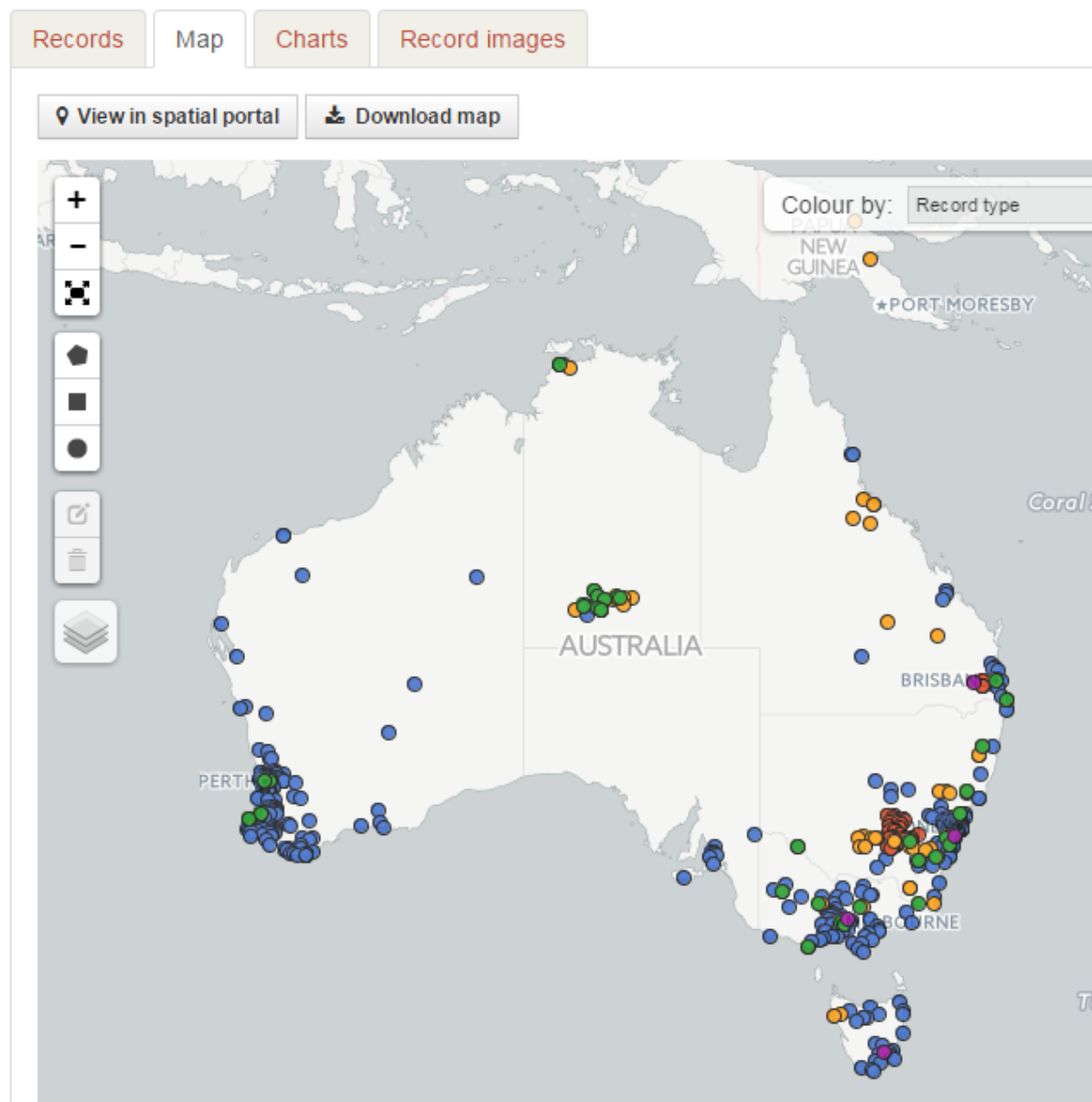


Unidentified fungus Photos by Steve Young Location: Wingham NSW

Even common species need to be recorded !

A recent post by Reiner Richter of a European Honeybee reminded us that even common species need to be recorded to show where they occur. Currently, there are 5,395 *Apis mellifera* records on ALA. Have a look at the map below. Can you fill a distributional gap? Good – Go out and photograph a honeybee and other common insects and upload them. It will help so much!

5,395 results for SPECIES: *Apis (Apis) mellifera*



Dianne Clarke heeded to call to fill gaps and added this lovely images of a European Honeybee from her area – which currently does not have a record of this bee on ALA.



Photo by Dianne Clarke Location: Mapleton QLD

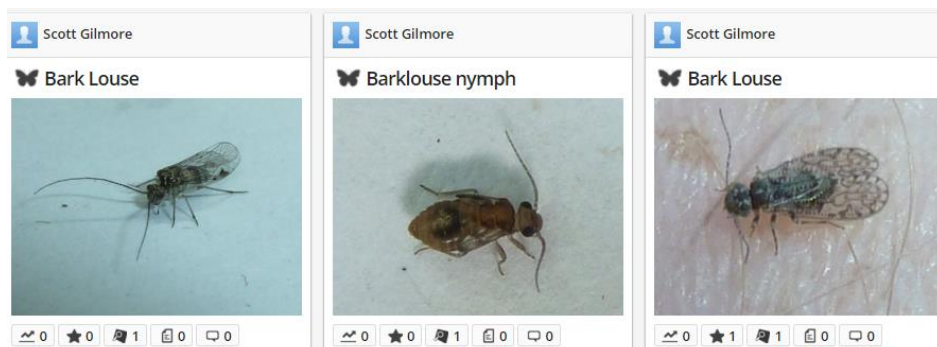
And here is Reiner “calls to arms” image :



Photo by Reiner Richter Location: Woods Point VIC

New members with new passions.

I always enjoy seeing new BowerBird members arrive and I watch with interest to see what their passion is. One such new member arrived in the past week or two with a passion I have not seen in other members – booklice or Psocoptera. Scott Gilmore from west of Sydney has come along a begun to add images of booklice – a curious small group of insects usually found in damp places under bark. The common booklice we see around the house is an introduced species so to see the native psocids of Australia is a treat for me and hopefully others. The BowerBird community gets richer and broader by the day and that is fun to watch.



Speaking of new members – Simon Ong has been another interesting new members. Simon is located in the top of WA and is uploading a wide range of local insects. For me, this is a chance to see the fauna of an area I have never visited.



LOT 347 Great Northern Hwy, Durack WA 6743, Australia

Simon obviously has a keen eye as his recent images of newly hatched ascalaphid Neuroptera lacewings shows.





Great stuff!!

They larvae may be the same as this adult Ascalaphid species that Simon loaded earlier:



Suhpalacsa dietrichiae
(species)

Taxonomy: Animalia: Arthropoda: Insecta: Neuroptera: Ascalaphidae: *Suhpalacsa*: *dietrichiae*

Common Names: Lacewings, Owl-flies

Finally, I love it when taxonomists squabble !!

Ian Bell recently uploaded this image from an extremely remote location - I love the “Unnamed road” notation:



Unnamed Road, Purnululu WA 6770, Australia



To me, they looked like Bombyliidae flies so I sent the image off to my friend Christine Lambkin who is curator of Diptera at the Queensland Museum. She identified them as *Acridophagus flaviscutellaris* in the family Bombyliidae but suggested I send the images to another friend of ours at the Bishop Museum in Hawaii – Neal Evenhuis who works on this group of flies. Neal replied almost immediately that they were a new genus and species that he was describing at present but said they should be in the new Family Mythicomyiidae. I showed Christine Neal's email and she replied: "I would include it under Bombyliidae, much to the angst of NE who would place them under Mythicomyiidae!!!"

That's about as strong as taxonomists get to disagreeing with each other! Ha! But – I just love the flies in that image.

Ian also uploaded this extremely well camouflaged grasshopper from the deserts of WA – the first WA record on ALA.



Urnisiella rubropunctata Location: West Lyons River WA

BowerBird Tip

Someone asked me recently me to explain the BowerBird voting system. Unlike many other citizen science websites, BowerBird allows anyone to provide an identification for any record. Indeed, multiple identifications can be added for the same record. We did this for 2 reasons:

1. Progressive identifications – which is where someone initially identifies an image to an Order or Family rank then someone else adds a Genus name and perhaps someone else can add a species name. All of these names can be added in one day or spread over months or even years.
2. The second reason for allowing multiple identifications is if someone believes that the initial identification on the record is incorrect.









Now ALA allows for only one identification per record so the problem was to indicate to ALA which identification it should upload and record for the image.

ALA uploads the BowerBird dataset every Sunday afternoon. So what happens if ALA uploads a record this Sunday and the following week, someone suggests a different identification? What should ALA do? Remember, it's a computer that does the uploading of records and computers are not renowned for making independent identification decisions!

That's why we introduced the VOTING system. Anyone can add a "SINGLE" vote for or against any particular record's identifications. The identification with the most positive votes is the one that ALA will upload. ALA will even look at the votes and change an identification that was first uploaded months ago. It's a nice BowerBird feature that I call "peer-review". Anyone can look at and image and offer their opinion – I call it a


community effort and for me it is how people learn, make mistakes and have those mistakes corrected. Remember, it is not about how many plus or minus votes a record gets, just one positive vote is sufficient for ALA to upload a record.


So, here is an example of a “Progressive identification.” Glenda initially added the beetle family name “Chrysomelidae” on 5 March 2016 and today (11 March 2016), I added a generic name. Because Glenda’s Family is correct, I have not voted it down but I have voted up my generic identification so that ALA knows which identification to select and upload. In this case, Glenda’s Chrysomelidae identification on ALA will be updated next Sunday by my generic identification.


 Glenda Walter 5 March 2016	 Chrysomelidae (family) Taxonomy: Animalia: Arthropoda: Insecta: Coleoptera: Chrysomelidae	0 votes  
Glenda Walter says Several beetles like this were seen on vegetation at The Palms NP, Cooyar. They were about 10 mm long. I'd love an ID please.		
 Ken Walker 11 March 2016	 Oides (genus) Taxonomy: Animalia: Arthropoda: Insecta: Coleoptera: Chrysomelidae: Oides	1 votes  


And, below is an example of a replacement identification. The initial identification was for the fly family Pipunculidae which at the time seemed reasonable on the available internet information. But, never trust what Google serves up so I contacted several American entomologists who told me what it really was – a wasp not a fly. Notice how I voted up the


Dryinidae identification and voted down the Pipunculidae identification.


 **Ken Walker**
8 December 2015


 **Dryinidae**
(family)
Taxonomy: Animalia: Arthropoda: Insecta: Hymenoptera: Dryinidae



 **Ken Walker says**
ID by Doug Yanega.

 **Andrea Ruhl**
2 December 2015

 **Pipunculidae**
(family)
Taxonomy: Animalia: Arthropoda: Insecta: Diptera: Pipunculidae



Just to jog your memory, this was the leaf hopper parasite that caused so much confusion but a pleasing final result.



Photo by Andrea Ruhl. Location: Melbourne

BowerBird collects a millipede

By Bob Mesibov (BowerBird's millipede expert)

ACT naturalist Michael Bedingfield posted images of a live millipede in early February:



Being a millipede taxonomist, I could mentally run the animal down the hierarchy as order Polydesmida, family Paradoxosomatidae, subfamily Australiosomatinae and tribe Antichiropodini, just from the photos. But being a millipede taxonomist, I also knew I hadn't a hope in Hades of getting the beast to genus, let alone to species, without a close look at the 'gonopods' of an adult male. These are modified legs used to transfer sperm to females, and are located about a third of the way back from the head on the underside of the body.

That's just the way it is with millipedes. They vary a lot in gonopods and not much else. Paradoxosomatidae are particularly conservative, and there are an awful lot of similar-looking, brown or black paradoxosomatid species in this country. BowerBirders please note: a top-down or side-on photograph of one of these tells us zilch about its identity, unless it's from a place with a very well-documented millipede fauna, and even then an ID would be a guess.

But Michael's millipede wasn't just brown or black. It had a red-brown stripe down its back, and the only genus I knew of in Antichiropodini that might be in the ACT and had a stripe like that was *Pogonosternum*. To confirm that, I contacted Michael through Ken Walker and asked if Michael could get me a male.

The first specimen had been seen in the Pine Island area just west of Greenway, ACT. Michael found a male a few days later in the same general place:



He posted the male to me after freezing and careful packing, and I was amazed when I looked closely at the genitalia:



Photo by Bob Mesibov

Not only were the gonopods relatively enormous, they placed the male solidly in the genus *Solaenodolichopus*, not *Pogonosternum*. *Solaenodolichopus* is a dry and wet tropical and subtropical Australian genus, with a few New South Wales species, but none I know of from cool, dry, elevated places like the ACT.

What's this species doing there, and why hadn't it ever previously been collected in NSW or the ACT? I'm not sure yet, but I suspect that Michael's *Solaenodolichopus* is introduced from Queensland, and that it might be the same as an undescribed *Solaenodolichopus* species from near Toowoomba that I've seen as pickled specimens in the Queensland Museum.

If it's indeed introduced in the ACT, this millipede joins a short list of 'native exotic' Paradoxosomatidae that have been spread around the country by us humans. Another *Solaenodolichopus*, from the Brisbane area, now calls Perth WA home. Another 'native exotic', described by myself and fellow millipede specialist Cathy Car in 2015, probably started out in mid-coastal NSW. It's now scattered in towns, urban parkland and farmed landscapes in inland NSW, Victoria and Tasmania.

And Pine Island in the ACT? It's a popular recreation and picnicking area, with formed tracks, a playground, electric barbeques, toilets etc. Good place for a 'native exotic' to establish a colony.

For more about *Polydesmida* see <http://www.polydesmida.info/polydesmida/>, for a picture-key to the millipede orders see <http://www.polydesmida.info/millipedesofaustralia/key2orders.html>, and be sure to post your millipede pix in BowerBird's Millipedes project!

Thanks Bob.

Did you please know that BowerBird has a Project devoted to Millipedes? Bob visits this project regularly so if you want a millipede identified, then please place it in the project and Bob will soon provide an answer. Below is a snapshot of this project.



Nick Porch

Dalodesmidae



0 0 2 0 0

Nick Porch

Donna Buang Lissodesmus



0 0 2 0 0

Nick Porch

Propolyxenus forsteri (Polyx...



2 1 1 0 0

Tamara Leitch

Paradoxosomatid millipede



0 0 2 2 0

Geoff Lotton

Millipede



0 1 0 1 0

Geoff Lotton

Millipede



0 1 0 1 0

Geoff Lotton

Millipede



0 1 1 3 0

Michael Bedingfield

Millipede, male, black with r...



0 0 1 1 0

Reiner Richter

Patterned Polydesmid Millip...



1 1 1 2 0

Michael Bedingfield

Millipede, black with red-bro...



0 1 2 1 0

Bob Mesibov

Siphonophorida



1 0 1 1 0

Reiner Richter

Murray Millipede



0 0 1 0 0

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

Nature Place

Old Haunts ...

After a few days rain dead things come to life. Deserts turn to flower. It's a resurrection of sorts. Water does that, breaks the run, of baking heat and absent form.

Walking in the old places, still shooting above the waist, at first there was nothing to be seen. Where is all the life gone ...

Stopping still long enough to examine an old leafless tree, still standing, nothing. Then she walked into view.

Over the horizon she came, and after some examination planted her egg, another burgeoning form.

Is there really such a thing as an old dead tree. Or is death always the 'other' side ...

Where no imagination can go.



© Mark Berkey



© Mark Berkey







© Mark Berkery



Now – I have a lot of fun writing the Bugle each month and I would like to share that fun. If anyone has a BowerBird related story they would like to tell, please send me your story and I will include it in the next Bugle.

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

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)