



24 July 2015 Ken Walker (kwalker@museum.vic.gov.au) Museum Victoria. Edition 18.

Hi All – Fame is fleeting but furious! Over the past few months, I have had several interactions with the Gardening Australia TV show staff. I've been on Jane Edmanson's Sunday morning radio show and I've been in Jerry Coleby-Williams famous backyard. A few weeks ago, there was a TV segment about Bugs in the Garden and I was asked to answer bug questions on the Gardening Australia's Facebook page. The session was an hour long and they "hit me" with photos and questions – the hour flew by in a flash before I finally came up gasping for air. I then showed some of the TV show's Producers our Museums insect collection and they said it was too good not to share so yesterday they sent out a film crew – Tony the Producer, Peter the camera-man and Stuart the sound-man. The Gardening Australia TV show has allocated a 4 minute segment to the collection story but Tony, Peter and Stuart were here yesterday for 8 hours! First, they had me re-enact my arrival at work. Then Tony interviewed me for 42 minutes asking a wide range of questions. They also had me talking about individual specimens and of course, there were the obligatory shots of me pulling out drawers and having a "Eureka" moment! That's why I love radio – It's live, It's short and I do it over the phone! There will need to be some serious editing done to reduce 8 hours of filming down to 4 minutes of TV. "Rooster one day – Feather duster the next" is my motto!

I never know what I will be asked to identify.

During this week, a pest company dropped me off some insects for identification.

I always read the information supplied with a specimen before examining it. This often helps me to narrow down what the specimen could be. The information supplied was: "Insects appearing on walls of restaurant in eating area– driving owner crazy. It's (name removed) the TV Chef – he's a little crazy anyway!"

I opened the container and waited for a few moments while my brain ran through combinations of characters versus various insect Orders and finally an identification "popped up" in my head. At first, I questioned myself but with more detailed examination and following seeking a second opinion, I was satisfied with my ID.

The specimens were the shed skins of sub-imago mayflies – Family Baetidae.

When mayflies first emerge from spending their nymphal period in water, they are not fully formed – in particular their wings. They are covered by an outer skin that must be shed before they become adults. This stage is called the "sub-imago" stage and it is usually brief. Having identified the specimens, the next question was where are these mayflies breeding? The restaurant is in South Melbourne and the closest permanent fresh water is over 1km away – too far for the sub-imago to walk. Perhaps someone nearby may have an outside bath tub or aquarium. Unfortunately, without seeing the site, it can be difficult to explain the presence of insects. Anyway, the pest company person now has sufficient information to look around the area to find a solution.

Mayfly subimago images:



You can always tell when it's an adult mayfly as the wings are transparent rather than dull as in the sub-imago:



Photo by David Akers



Photo by Julian Finn

Fungal help may be on the way !

I am amazed at the level of fungal knowledge amongst the BowerBird community but finally the Australian fungal expert, Dr Tom May of FungiMap fame, is looking at BowerBird. Believe it or not, but FungiMap is all done by spreadsheet. Tom and others receive CDs of images and locations. They identify the images and transfer their identifications and supplied locations to a spreadsheet which is sent to ALA. Over a 20 year period, Tom and his crew have added over 100,000+ records to the FungiMap spreadsheet. Tom told me a few months ago, that it was time for FungiMap to go digital and that he would be looking at a range of citizen science websites to decide which one to support and promote for FungiMap supporters. Last weekend and during this week, Tom has been exploring BowerBird and providing me with feedback and identifications to a number of fungal images. Fingers crossed that Tom chooses BowerBird as the new FungiMap home.

For example, this Koala scat covered with fungal discs was identified by Tom as:

Fungi: Ascomycota: Pezizomycetes: Pezizales: Ascobolaceae:
Ascobolus sp.



Photos by Matt Campbell

A “sleeping” wasp queen.

Over the weekend, I ventured out to the Warburton area to see what was on offer – in particular fungi. Up in the mountains, I stopped at the Warburton CFA station and walked around to inspect their fire-wood pile. After rolling several logs, I had found what I thought may be hiding there. A mated, overwintering European wasp queen covered in water droplets.

At the end of autumn 2015, European wasp nests would have produced hundreds of new virgin queens. These queens fly off, mate and then seek a secure place where to overwinter until spring arrives and wood piles is one of their favourite hiding places. I must admit that after photographing this queen wasp, I did dispatch her as this single queen wasp had the potential to produce 30-40,000 worker wasps by the end of summer 2016. They are an introduced pest species that we not control.



Photo by Ken Walker

Don't be fooled just because they are all occur together on the same few leaves.

Jean and Fred Hort recently created a single record which had 5 images which superficially all looked to be similar flies.



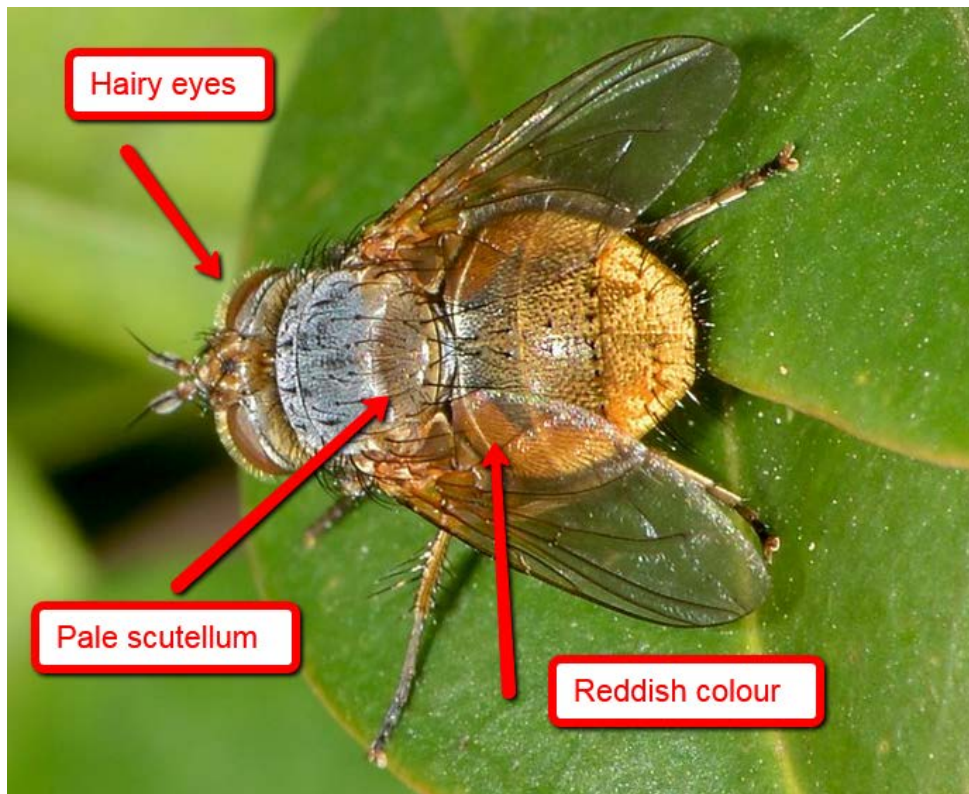
However, a closer examination showed that this set of fly images represented two completely different Families of flies! – Calliphoridae and Tachinidae.

Tony D. first spotted these differences and posted such a comment. So I asked our resident Tachinidae fly expert, Dr Bryan Cantrell, to comment on these images.

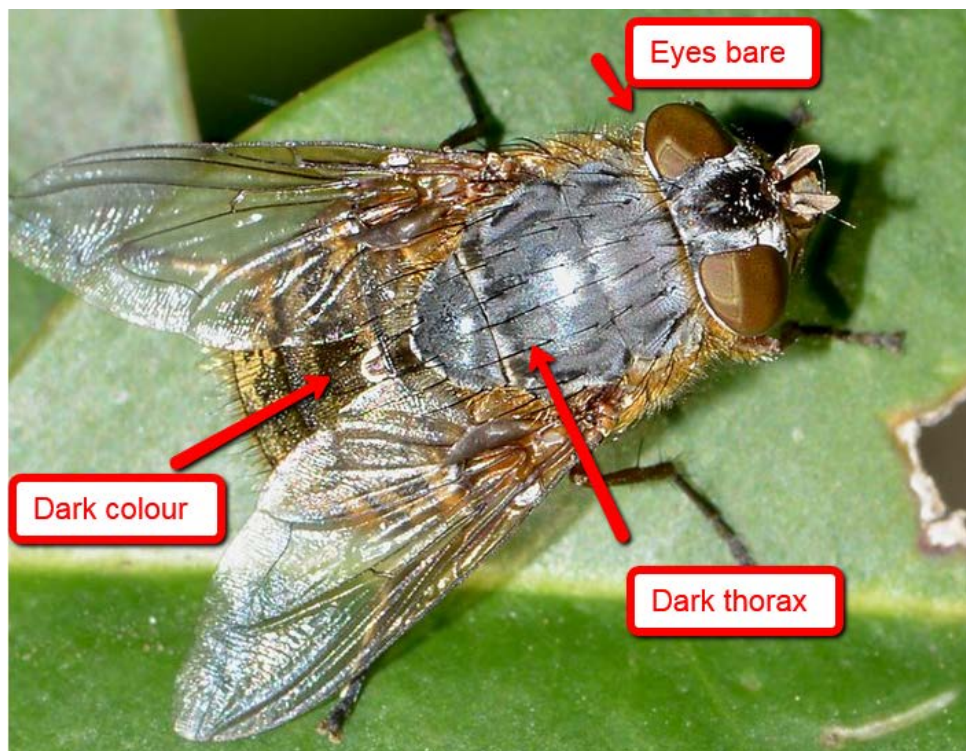
Bryan replied: “Once again nice fly images and Tony D. was correct in surmising that there is one tachinid species and one calliphorid species in these images. The tachinid species is *Chaetophthalmus similis*, subfamily Tachininae, tribe Linnaemyini, and their fly maggots are parasites of Lepidoptera.

Despite their superficial appearance to the calliphorid fly species, you will note that *C. similis* has densely haired eyes; a pale scutellum and posterior section of the thorax; and reddish ground colour to the abdomen, although the bright golden pollinosity obscures this on the posterior segments. This species is known to occur right across the southern half of Australia, including Tasmania.

Tachinidae - *Chaetophthalmus similis*. Note the characters.



The calliphorid is *Calliphora stygia*; note its bare eyes, thoracic dorsum dark and dark ground colour of the abdomen.”



Photos by Jean and Fred Hort

Don't be fooled by not looking close enough.

One of the aspects of BowerBird identifications I like is the “peer-review” that each record goes through. Anyone at any time can suggest an identification or someone else may suggest an alternative identification to the one already there. Such was a recent case when Jean and Fred Hort submitted a spider record and wondered whether it was a huntsman spider or not. I was more interested in relaying why it is not a huntsman spider than looking at the eye pattern of this spider. You can always distinguish any of the 145 Australian huntsman species by the length of their legs. The front two pair of legs is noticeably longer than the leg length on the hind two pair of legs. The legs of the spider in this image below are all about the same. I looked at the thorax colour markings and I named it a Wolf spider - Lycosidae



Photo by Jean and Fred Hort

However, Nick Porch voted down my identification and sent me an email suggesting it was a Mitguridae spider. I had correctly described the characteristic eye pattern of a Wolf spider but I had not looked closely to ensure this spider had the eye pattern I described – which it didn't! The eye pattern of a Wolf spider characteristically has on the front vertical section of the head, one large pair of eye and two smaller pairs of eyes – that's 6 eyes on the front. Then there is another pair of eye distinctly separated and set back along the horizontal section of the head.



Photo Dr Bevan Buirchell

Jean and Fred's spider does not have the characteristic one pair of eyes separated back along the thorax but rather all eight eyes together. You can see in the blown up image below, there is no pair of eyes on the horizontal surface of the head.



Photo by Jean and Fred Hort

Unlike many citizen science websites, I believe BowerBird has an effective “peer-review” system in place for identifications.

Thanks Nick!

The case of the “Mystery fly”.

Use the resources on BowerBird

Kristi Ellingsen recently uploaded two images of a beautiful fly she photographed this month at Standley Chasm, west of Alice Springs, NT and she titled her record as: Mystery fly.



Mystery fly

0 votes	★ 0 favourites
+ -	
3 Identify	2 Describe

Sighted 6 Jul 2015



Unnamed Road, Hugh NT 0872, Australia

Projects



Kristi correctly identified the fly to the Order Diptera and Tony D. correctly identified it to the family Bombyliidae and he commented: “This threw me and led me all over the place. Though following the “What Bug Is That” keys it lands in Bombyliidae, and the Bombyliidae subfamily keys leads to Phthiriinae which this fly fits. I see there are three Australian genera, of which I can't separate from the incomplete info I can find.” That was great detective work from Tony D.

When I saw this fly image it reminded me of a similar BowerBird fly image that I had sent to the World Expert for Bombyliidae flies, Dr Neal Evenhuis at the Bishop Museum in

Hawaii several months ago. One of the great things about being a taxonomist is that there are not too many of us even world-wide so we tend to globally network to help each other and to borrow specimens to aid our research. Over the years, I have visited the Bishop Museum several times and I now even follow Neal on his Facebook page.

BowerBird currently has over 24,000 identified, image based records which is a great place to start to look for animals similar to the ones you have photographed. So, I did a BowerBird search on Bombyliidae and scrolled through the results until I found the below two records which looked very similar to Kristi's image:

Home

Timeline Sightings News

Search In Field

Bombyliidae All Fields Go



Remember that Tony D. had keyed the fly down to the subfamily Phthiriinae so I checked the Australian Faunal

Directory (AFD-

<http://www.environment.gov.au/biodiversity/abrs/online-resources/fauna/afd/home>) website which showed the three genera Tony D. had mentioned belonged to this subfamily.

- [-] Family BOMBYLIIDAE
 - [+] Subfamily Mythicomysiinae
 - [+] Subfamily Toxophorinae
 - [+] Subfamily Bombyliinae
 - [-] Subfamily Phthiriinae
 - [+] *Acreotrichus* Macquart, 1850
 - [+] *Australiphthiria* Evenhuis, 1986
 - [+] *Pygocona* Hull, 1973

One of those genera is the genus “*Pygocona*” which is the name Neal Evenhuis gave to the above yellow striped abdomen flies. So now if you query on BowerBird for the genus *Pygocona*, you get 4 returns – Kristi’s record is now named:

The image shows a screenshot of a BowerBird search results page. It displays four search results for the genus *Pygocona*. Each result includes a user profile picture and name, a title, a photograph of the fly, and a set of interaction icons (likes, stars, reports, shares, comments).

- Kristi Ellingsen**: Title "Mystery fly", photo of a fly on a yellow flower. Interaction: 0 likes, 0 stars, 3 reports, 2 shares, 0 comments.
- Ken Walker**: Title "A bombylid fly", photo of a fly on a white flower. Interaction: 1 like, 0 stars, 1 report, 1 share, 0 comments.
- Carol Page**: Title "Fly in Pygocona genus (Than...", photo of a fly on a yellow flower. Interaction: 0 likes, 2 stars, 1 report, 1 share, 0 comments.
- Jenny Holmes**: Title "Pygocona species", photo of a fly on a white flower. Interaction: 0 likes, 0 stars, 2 reports, 0 shares, 0 comments.

Interestingly, currently there are only 3 *Pygocona* records on ALA and all have come from BowerBird – next week, there will be 4 *Pygocona* records on ALA:

3 results for **GENUS: Pygocona**

Records **Map** Charts Record images

Downloads Alerts

Genus: ***Pygocona*** Date: 2015-02-11 State: Victoria
Data Resource: BowerBird Basis Of Record: Human Observation [View record](#)

Genus: ***Pygocona*** Date: 2015-01-11 State: Victoria
Data Resource: BowerBird Basis Of Record: Human Observation [View record](#)

Genus: ***Pygocona*** Date: 2014-11-09 State: Victoria
Data Resource: BowerBird Basis Of Record: Human Observation [View record](#)

And Kristi's new *Pygocona* record will substantially expand the known distribution for this genus into the Northern Territory. Every biodiversity record is special.



I've seen that image before!

Remember in last week's Bugle I told you the story about the prickly caterpillar that Jean and Fred had photographed on a granite outcrop? Suddenly, the same granite outcrop image popped up again but this time with two magnificent flatworms!





Photos by Jean and Fred Hort

A call to our resident flatworm expert, Dr Leigh Winsor in Townsville, soon had the answer :

"These superb images appear to be of the same species as sightings #4513 and #39105. The mid dorsal stripe is evident in the greenish coloured one. The variation in colouration, from a greyish pink, through to a brownish pink, and a greenish colour is intriguing. I am now wondering whether the species could be *Fletchamia fusco-dorsalis* in which case the ventral surface would be cream, whereas in *Lenkunya arenicola* it will have pale paired brownish longitudinal stripes. Photos of the underside of the planarians would help resolve the problem."

There is a tip to all flatworm photographers – try to photograph the underside of the planarians.

The importance of temporal data!

I often speak about the importance of recording spatial (location) data with a sighting; however, the temporal (date and time) data can be equally important as well. Insects are cold blooded which means they rely on their surrounding air temperature to warm their bodies sufficiently for them to even move. Usually, that's between 5-10C. I know that to fly, bees need a core body temperature of above 12C to get their thorax muscles to beat sufficiently fast enough to enable flight. Non-flighted insects probably do not need as high a core body temperature just to walk. This was shown by Reiner when he recently photographed a bullant walking up the side of a eucalypt tree about 9:30pm near Bendigo, Vic. Reiner was out spot-lighting when he spotted this ant and he commented "interesting how active they still are in the middle of winter." Without Reiner temporal data, we would not have this valuable information.



Photo by Reiner Richter.

Keeping with Reiner's nocturnal spot-lighting activities, here are some beautiful images – a harvestman or an Opiliones.

These arachnids sometimes are mistaken with spiders but there is one easy rule that will separate them from spiders.

They have a segmented abdomen which is not seen in Australian spiders. Indeed, there is only one primitive spider family that does have a segmented abdomen. The spider family Liphistiidae comprises 8 genera and 91 species and it occurs from Southeast Asia to China and Japan.



Photos Reiner Richter.

And, Reiner found a treasure trove of different centipedes:



Photos Reiner Richter.

My favourite images from this week.



Paropsisterna sexpustulata from Coomera, Qld

Photos by Martin Lagerwey

Just for fun – blowing bubbles!



Photo and copyright to Mark Berkery

Time to put on the thinking caps!

Torbjorn von Strokirch uploaded this image this morning from east of Melbourne titled "Bread crumbs".

Notice the tube-like shapes of the deposits. This suggests the possible wood shavings have passed through the gut of a larval insect. As we say, larvae are simply a "food bag" with teeth at one end!

What could make such shapes? Well, perhaps beetle, moth or termites are possibilities. Maybe a fungus?

I will share this image around my "network" and see what wise consensus identification decision is reached.



Photo by Torbjorn von Strokirch

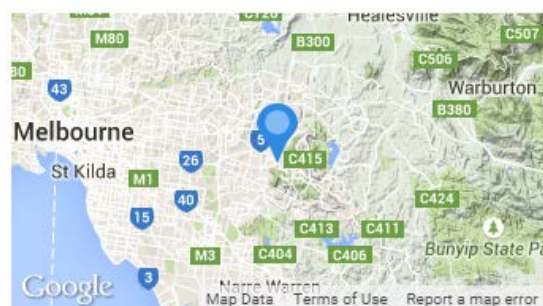
Blasts from the past!

I have been told that back in the 1950s, 1960s and 1970s the Gum moth larvae could be found commonly on eucalypt trees throughout Melbourne. Nowadays, it is a rare treat to find them in Melbourne. We suspect the European wasps have decimated their populations. So, it was with joy that two images of gum moth larvae appeared on BowerBird.



Helena Gum moth - *Opodiphthera helena* Photo by Reiner Richter.

Sighted 23 Jul 2015

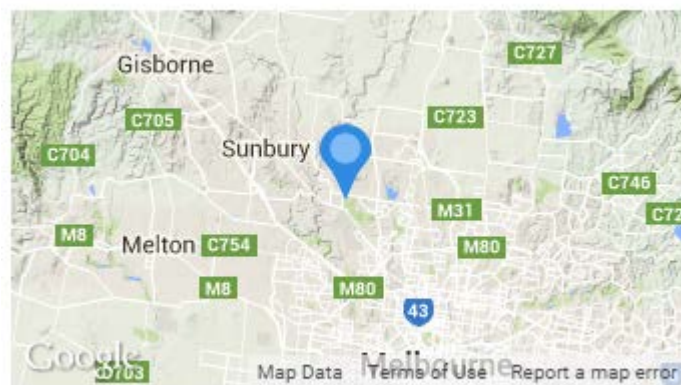


Wicks Reserve East, The Basin VIC 3154, Australia



Emperor Gum moth - *Opodiphthera eucalypti* Photo by Reiner Richter

Sighted 23 Jul 2015



Woodlands Historic Park, Greenvale VIC 3059,
Australia

Look at the dates!

This month they are about so look out for them.

Fungal delights from this week.

This one is new to me and from remote western Qld.



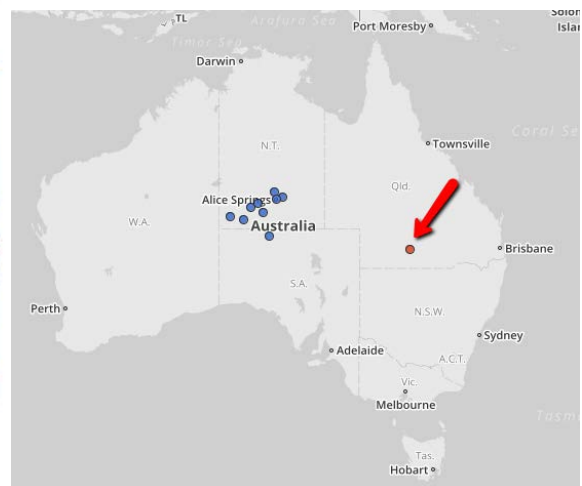
Itajahya galericulata - Photo by Dianne

Other ALA records are from NT only. Dianne's record arrowed.

Sighted 16 Jun 2015



877 Humberburn Road, Humberburn QLD 4490,
Australia





Antrodiella citrea - Frankston 19 July 2015

Photo by Torbjorn von Strokirch

What would a fungal page be without something from Matt?



Basidiomycota: Tremellales: Tremellaceae: *Tremella globispora*
18 July 2015 south of Morwell — Photo by Matt Campbell



Basidiomycota: Polyporales: Phanerochaetaceae: *Rhizochaete filamentosa*
18 July 2015 south of Morwell — Photo by Matt Campbell



Basidiomycota: Hymenochaetales: Hymenochaetaceae:
Hymenochaete cruenta 19 July 2015 south of Morwell –

Photo by Matt Campbell

Our grasshopper expert from Kuranda, David Rentz, has uploaded images of a magnificent Bridal Veil Fungus - *Phallus indusiatus*.



David wrote: "We have been having an odd winter. We had several cold nights where it got down to 6-7C. Now a few days later, it has warmed up to 16-18C overnight. As a result some of the plants and animals are a bit confused.

One forest plant that seems to have taken advantage of the warm night is the Bridal Veil Fungus, *Phallus industriatus* (Phallaceae). Warm, moist conditions seem to suit this odd fungus. Innocuous enough from a photo but it has an awful

smell. For a couple of days I smelled what I thought might be escaping LPG gas, then I recalled the smell of flowering *Amorphophallus bulbifera* but it is the wrong time of the year for this plant. I searched the usual pots but could find no bulbifera.



Then I stumbled on the above-my first encounter with the Bridal Veil Fungus. The "veil" is initially intact but after a couple of days with turkeys and birds about, the veil has become detached. This one measures about 10 cm. The smell attracts flies, especially Blowflies (Calliphoridae) which feed on the juices of the plant. In so doing the spores of the fungus attach

to the fly and as it moves around the rainforest the spores detach and spread the fungus to additional habitats. Blowflies are not the only flies that feed on the fungus. I also found this *Drosophila* species had also been attracted to the food source.



The odour of this fungus is so strong that campers have been known to abandon campsites due to fetid smell.



Photos by David Rentz

More of my AP (Aesthetically Pleasing) moments ...

Coprophyllic fungi on dog poo!



Tom May suggested: “could be a young *Phycomyces*”. Photos by Ken Walker

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)