

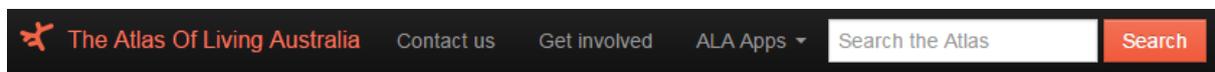


03 July 2015 Ken Walker (kwalker@museum.vic.gov.au) Museum Victoria. Edition 15.

Hi All – In Melbourne, we have reached the depths of winter but still great new records keep appearing on BowerBird and new members keep popping up. I am a member of several entomological (amateur entomology and native bee) Facebook groups where I assist with comments and identifications. I keep seeing great images of species and wonderful new distribution extensions for species and I think what a waste the Facebook records are not shared with other Biodiversity records on ALA. Well, this week I have had some success. I contacted two Facebook members with interesting uploads and I asked them to join BowerBird and to share their records – and they did !! YAH! Fortunately, I wrote a use guide to BowerBird earlier in the year so I have everything I need to kick start off a new member - sometimes I even register them myself and join them to a number of projects. I am sure I have shared my BowerBird User Guide PDF before, but just to remind you of this URL: http://researchdata.museum.vic.gov.au/images/How_to_use_BowerBird.pdf

Now, let's have a look at some of the Facebook loads that I was able to shift across to BowerBird and then onto ALA.

Giant willow aphid - The giant willow aphid, *Tuberolachnus salignus* (Hemiptera: Aphididae) is a European/Asian aphid species that has spread to a number of other regions of the world. It was detected in New Zealand in 2013 and in Tasmania, later that same year. Since then, it has been found in the Australian Capital Territory and New South Wales. It was detected in Victoria for the first time in 2014, in Wodonga and Melbourne. BowerBird now has its first record and images for this species. Not only will this BowerBird record create the first record on ALA, it will be the first inclusion of the scientific name!



[Home](#) → [Search the Atlas](#)

Search for **Tuberolachnus** did not match any documents



Photos by Dacre England

The location is Tarcutta NSW, which is a new location record for the species and the host tree, of course, was a willow tree.



This Facebook upload really caught my eye and it generated much comment and discussion. The insects are the Brachychiton psyllid (*Protyora sterculiae*) and the images show all life stages – eggs, nymphs and adults.



Photos by Dacre England

Notice the extruded “honeydew” droplets from their abdomen.



Photos by Dacre England

Here is another Facebook “transfer”. Laurence Sanders is an existing member of BowerBird and he puts many great bee images on both Facebook and BowerBird. I noticed this recent Facebook image was not on BowerBird. The reason I asked Laurence to share his image on BowerBird, was that the location (Emerald, Queensland) is the most southerly record for this species by many hundreds of kilometres. Laurence has now uploaded these images and location to BowerBird –



Male *Hylaeus albonitens* – Photos by Laurence Sanders

As a Museum entomologist, I identify specimens and images most days of the week. For the past 33 years, my identifications have literally disappeared into thin air but now with BowerBird, I seek permission from the image owners to upload their identified image onto BowerBird and share the knowledge. One such recent case was from Wilma Bob who sent in this image. I forwarded the image to Australia's scale insect expert, Dr Penny Gullan who replied: "The photo is an adult of *Icerya purchasi*, before the ovisac has properly formed. The wax is just starting to form on the fluted structures."



Photo by Wilma Bob

Here is a BowerBird image showing the wax cover fully formed.



Photo by Daniel Heald

A bee ID request came in via the Queensland Museum on behalf of the Ranger in Charge (Natural Resource Management) Great Barrier Reef Region, Portsmith QLD. The location was Kent Island, off the coast south of Innisfail. The bee is from a monotypic Halictidae genus *Mellitidia tomentifera*. Importantly, this is the first recorded proof that the bee nests in the soil. Now, it's on BowerBird.



Photos by Richard Lindeman

Update – The fly maggot

You may recall that during last Friday's afternoon "witching hours", I received an urgent identification request from a Melbourne Pathology company. The case notes read: "Female, 26 years old, recently returned from Rwanda, Africa. Removed fly maggot from left buttock."

A charming way to finish the week!

This was a case of "myiasis" which is defined as fly maggots infesting a warm blooded mammal. There are two genera of myiasis causing flies on two continents. The South American myiasis flies are called "Bot flies" and belong to the genus *Dermatobia*; whereas, the African myiasis flies are called "Tumbu flies" and they belong to the genus *Cordylobia*.

The adult Bot and Tumbu female flies employ ingenious and different ways to get her maggots onto a suitable host.

The South American *Dermatobia* is a fly you must admire! The adult female fly catches, on the wing, a blood sucking insect such as a mosquito or March fly or Stable fly. She then lays and attaches her eggs onto the insect she has captured and then lets it go. She knows that the insect she caught will seek out a warm blooded mammal – these insect they find their host by picking up the mammal's carbon dioxide vapour trail and following the CO₂ trail to the host. Once close to the host, they use body warmth to find a piece of suitably exposed skin to bite. When the insect lands of the on warm blooded host, the Bot fly eggs sense the warmth and immediately hatch and crawl down onto the mammal's skin and begin to burrow under the skin. A few years ago, I must have received about 30 Bot fly identifications in a single year – South American was a popular holiday location that year. When the victim returns to

Australia, the fly maggot presents as a raised boil so the victim visits a doctor who proceeds to “lance” the boil and extract a rather large maggot. Often both doctor and patient are equally surprised! Usually doctors preserve specimens they send to pathology, but I have received many bot fly larvae still alive in the yellow top specimen jars. The smell of ammonia is characteristic of these larvae.

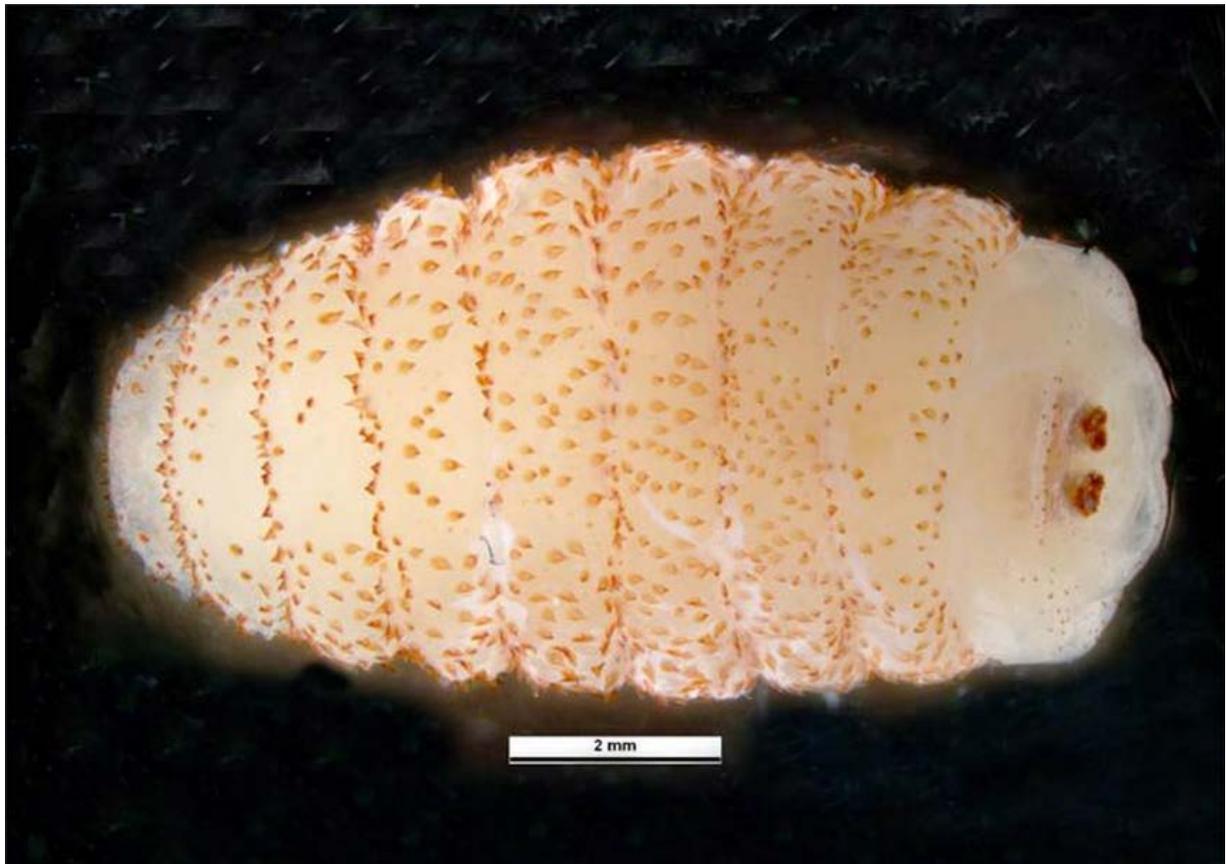
The “Tumbu fly” employs a completely different method to find a host. It seeks out urine soaked soil and lays its eggs on top of this soil. When a warm blood animal stands on the urine soaked soil, the eggs hatch and they crawl up the leg of the host. In this recent case, the patient must have sat down to rest on urine soaked soil and that did the trick.

South America has only one common Bot fly, *Dermatobia hominis* whereas Africa has two species of Tumbu fly, *Cordylobia anthropophaga* and *C. rodhaini*. The first African species is relatively common whereas the *C. rodhaini* is extremely rare due to its very limited distribution.

Several years ago, we were all very excited to receive our first specimen of *C. rodhaini* which came from a scientist who had spent 3 weeks sitting in a tree house in Uganda observing monkeys. As befitting a “true” scientist, for several weeks after I identified the maggot, she sent me images of her right buttock showing me the healing process of the wound – all in the name of science!

So, what do these myiasis maggots look like? Let’s get close up and personal

African “*rodhaini*” Tumbu fly maggot



Final instar maggot



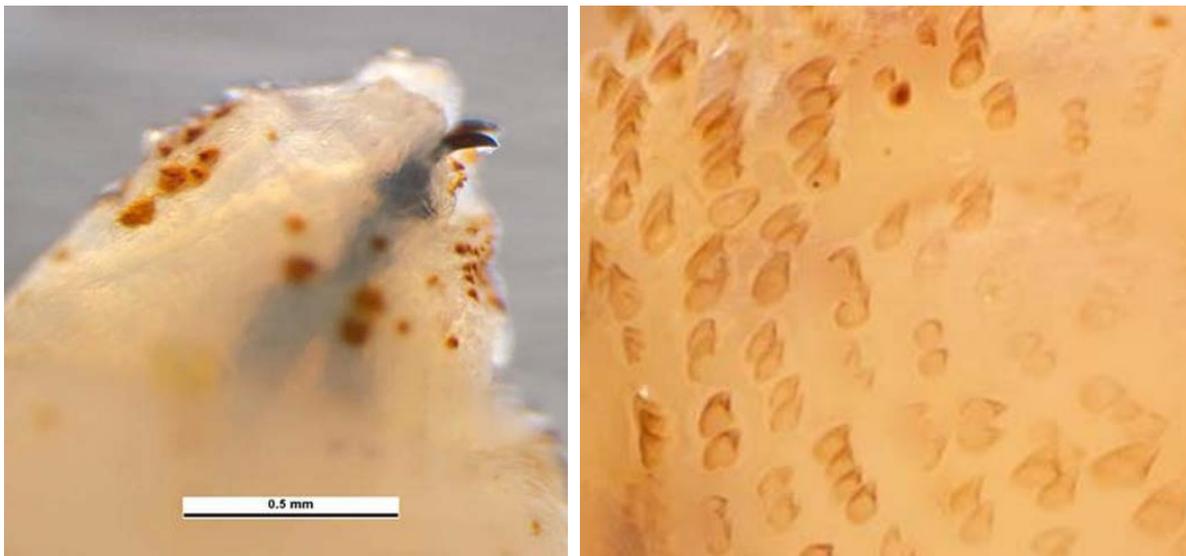
Close up of the larval body spines.

Cordylobia rodhaini - Photo by Ken Walker

African “*anthropophaga*” Tumbu fly maggot



Third instar maggot



Cordylobia anthropophaga : Lateral view, mouth-hooks and larval body spines. Photos by Ken Walker

South American “hominis” Bot fly maggot



Dermatobia hominis: Lateral view, mouth-hooks and larval body spines. Photos by Ken Walker

So, how do you tell them apart? Well, the location where the person has recently visited is the first clue. I usually ring up the doctor and ask if their patient has recently returned from South America or Africa – “How did you know that?” they sometimes ask. However, the best way to distinguish these maggots is by looking at their spiracles. All fly maggots breathe through their anal spiracles and each maggot has a distinctive anal spiracle shape.

Cordylobia rodhaini

Cordylobia anthropophaga



Dermatobia hominis



Happy Travels – I’ll be here when you return!! – Photos by Ken Walker

This image sent a shiver down my spine ..

This image record was uploaded today and it sent a shiver down my spine. The image is of the dreaded “Museum beetle” or “Carpet beetle” *Anthrenus verbasci*.

Keeping this beetle and its larvae out of Museum Victoria’s collections is why we keep our collection rooms at about 17C – Remember, insects are cold blooded so the ambient air temperature determines their development rate. If we were to keep the collection rooms at about a pleasant 22C, then the life cycle for this species would be about 4 weeks from egg to adult. If we keep drop the temperature to about 17C, then the life cycle from egg to adult is about 6 months.

The extra time gives us more of a chance to find any infestations and reduce the severity of the damage.



Photo by Martin Lagerwey

I applaud the Moth-ers ...

Insects can sometimes be extremely difficult to identify.

Not only do identifiers have to cope with dimorphic sexual differences (ie. males and females) but they often need to know and understand the massive infra-specific morphological differences within a single species – ARRRGGGHHHHH !!

There are many cases in the literature where different sexes of the same species have been described as different species and variation is the bane of a taxonomist's working life!

Here is a wonderful case on BowerBird where both morphs are shown to demonstrate the variability within this moth species.



Lepidoptera: Pyralidae: Parapoynx: polydectalis

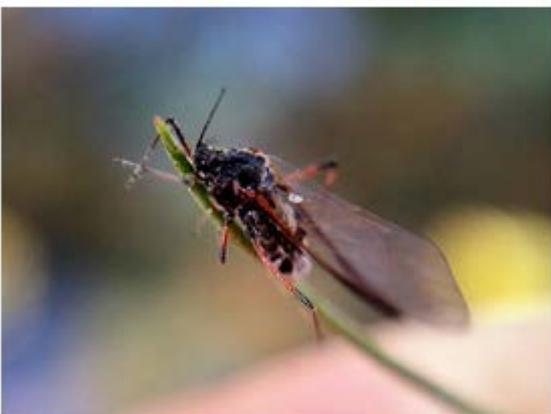
Photos by David Mules.

David commented: “With such dissimilar forewings I was confused as to the ID for either of these. Thanks to Tamara and then John Hawking via Peter Marriott for helping me out. Both are apparently the same species which has a variable forewing.” Like moths to a flame – our moth-ers come together to assist a colleague.

Some new members from this week

 Dacre England

 Giant Willow Aphid (Tuberol...



 0  0  1  1  0

 Andrew Haysom

 Rainbow Lorikeet



 0  0  1  0  0

 Marlis Schoeb

 Common Bluetail male, with...



 0  0  1  2  0

 Tom Nataprawira

 A flock of white-naped hone...



 1  0  1  0  0

Wilma McNabb



No sightings yet!

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 Torbjorn von Strokirch

 Tiny Orange Balls



My favourite image for this week was

....

Two peas in a pod

wondering what that silly human is doing below



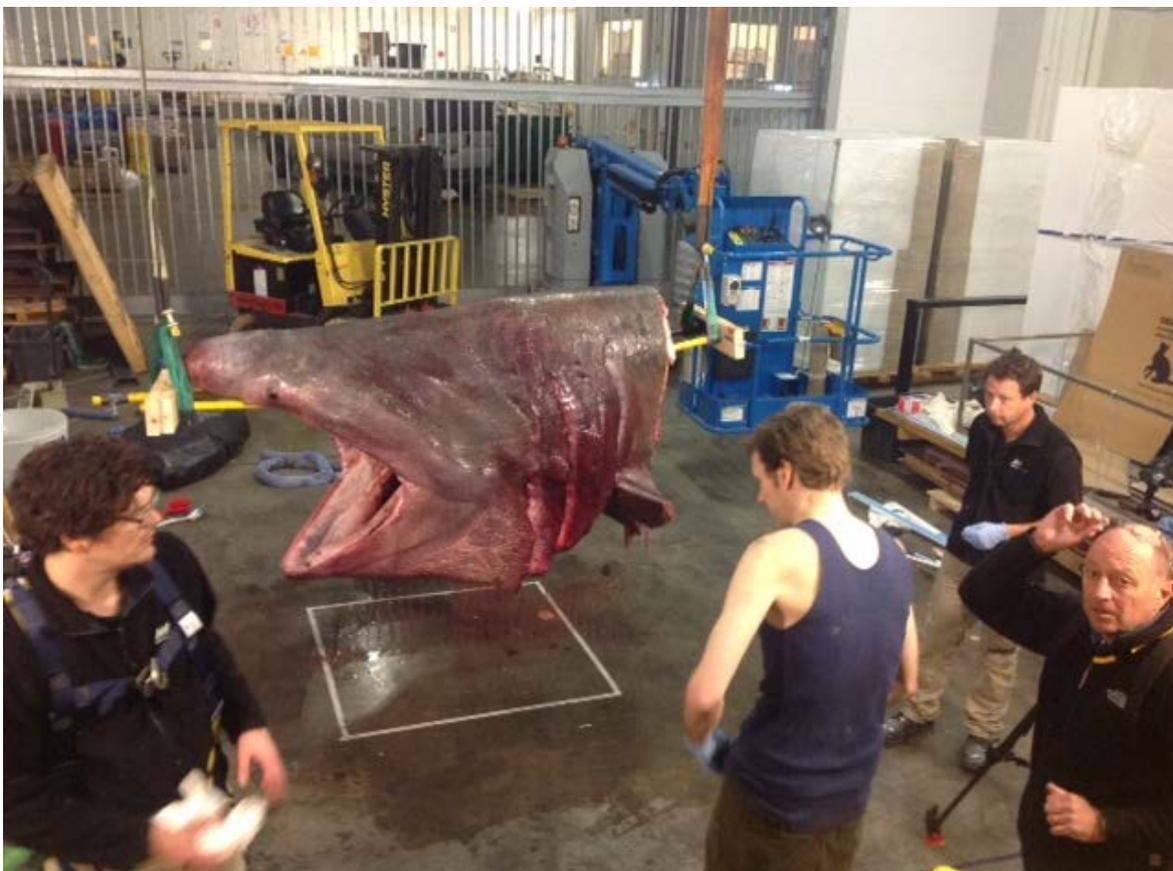
Photo by Andrew Haysom

A fishy story

Some of you may have seen the news story last week of the basking shark that was accidentally caught in a commercial fishing net off Victoria. This species of shark is rarely seen or collected. Museum Victoria did not previously have a specimen of this species – only a few teeth collected in the 19th century.

The specimen caught weighed about 2 tonnes and was approximately 7 metres in length. Our fish department has tissue sampled for DNA analysis while our preparators have cut the body into sections in preparation to make a plaster cast mold of the shark so that copies of the cast can be sent to other Museums – “for a price”.

Today, the preparators thawed out the head in preparation to make a plaster cast next week. The head alone is enormous. The entire Museum currently smells like a fish market!



Your fungal fixes for the week



Found by participants on the foray searching for Fire Fungi or Fruits of the Fire. A Fungimap Target Species. Found on old dry decaying wood. Cap inrolled developing a deep funnel as it matures; densely hairy. Gills decurrent and run down the stem. Stem to 25mm central and very hairy. Often sighted in dryer areas. Photo and comments by Teresa Van Der Heul



Pseudohydnum gelatinosum – Photo by David Akers



Gymnopilus junonius - Photo by David Akers



Peziza sp. (probably *vesiculosa*) - Photo by Russell Stanley



Russula neerimea - Photo by David Akers



Pin Mould on Dung - Photo by Reiner Richter

As always from BowerBird

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)