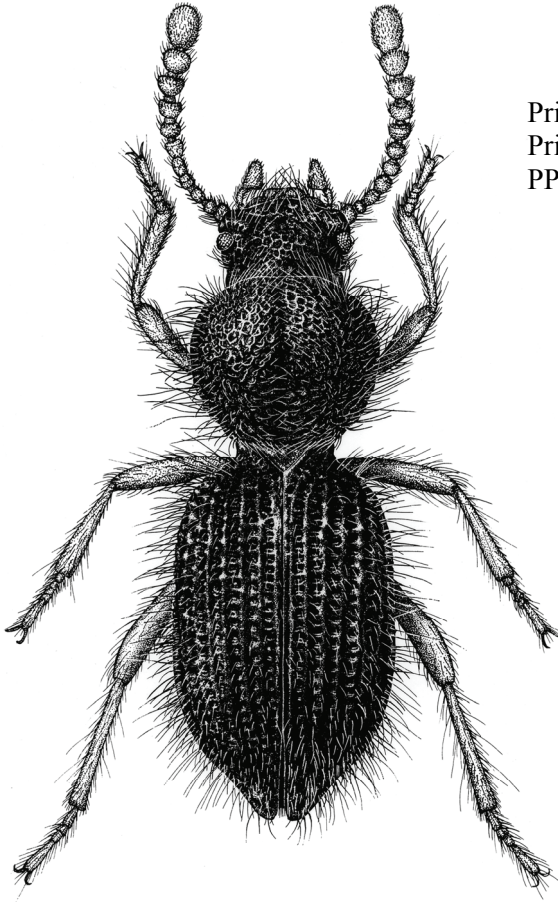


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THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND

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Front Cover Illustration: *Apocryphodes thompsoni* Matthews, 1998 (Tenebrionidae; Adeliini). This specimen is a paratype illustrated by Geoff Thompson for the original description; collected from leaf litter in 1984 on one of Geoff Monteith's North Queensland field trips by Val Davies, Geoff Thompson and Julie Gallon, at Gayundah Creek on Hinchinbrook Island.

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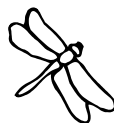


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The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC.**, since its inception in 1923, has striven to promote the development of pure and applied entomological research in Australia, particularly in Queensland. The Society promotes liaison among entomologists through regular meetings and the distribution of a *News Bulletin* to members. Meetings are announced in the *News Bulletin*, and are normally held on the second Monday of each month (March to June, August to December), or on Tuesday if Monday is a public holiday. Visitors and members are welcome. Membership information can be obtained from the Honorary Secretary, or other office bearers of the Society. Membership is open to anyone interested in Entomology.

Contributions to the *News Bulletin* such as items of news, trip reports, announcements, etc are welcome and should be sent to the News Bulletin Editor.

The Society publishes **THE AUSTRALIAN ENTOMOLOGIST**. This is a refereed, illustrated journal devoted to Entomology in the Australian region, including New Zealand, Papua New Guinea and the islands of the South Western Pacific. The journal is published in four parts annually.

EMBLEM: The Society's emblem, chosen in 1973 on the 50th anniversary of the Society, is the king stag beetle, *Phalacrognathus muelleri* (Macleay), family Lucanidae (Coleoptera). Its magnificent purple and green colouration makes it one of the most attractive beetle species in Australia. It is restricted to the rainforests of northern Queensland.

The issue of this document does **NOT** constitute a formal publication for the purposes of the "International Code of Zoological Nomenclature 4th edition, 1999". Authors alone are responsible for the views expressed.

Minutes of General Meeting

Held in the Seminar Room, Ecosciences Precinct, Boggo Rd, Dutton Park, Tuesday September 11, at 1.00pm.

Chair: Geoff Thompson.

Attendance: Justin Bartlett, Bradley Brown, Stephen Cameron, Lixin Eow, Alexandra Glauert, Manon Griffiths, Andrew Hayes, David Holdom, Judy King, Chris Lambkin, Simon Lawson, Diana Leemon, Lance Maddock, Jaime Mayoral, Brenton Mills, Geoff Monteith, Bill Palmer, Brenton Peters, Matt Purcell, John Purdie, Don Sands, Mark Schutze, Helen Schwencke, Owen Seeman, Noel Starick, Kathy Thomson, Geoff Thompson, Desley Tree, Federica Turco.

Visitors: Lynne Griffin, Rosie Hayes, Heather Kelly.

Apologies: Lyn Cook, Julianne Farrell, Ross Kendall, Morris McKee, Robert Raven, Vanessa Ryan.

Minutes: The minutes of the last General Meeting were circulated in News Bulletin Vol. 40, Issue 5, August, 2012.

Don Sands name added to the list of attendees.

Moved that the amended minutes be accepted as a true record: Geoff Thompson.

Seconded: Don Sands.

Carried unanimously.

Nominations for Membership:

No nominations were received.

General Business:

1. Bug Catch will be on October 6th at the Brisbane Koala Bushlands, Burbank, from 10.00 am, with evening light trapping. We will be joined by Entomology students from UQ. Contact Christine Lambkin if you are intending to go, but note she will be away from the office 18-27 September.

2. Officers for 2013 – the Society a Secretary for 2013, Judy King is retiring after 3 years as Secretary. Please contact Judy or Geoff Thompson if you are interested.

Main Business

Australian Plant-feeding Mites or When a Duck is Definitely Not a Duck

Owen Seeman, Queensland Museum

Mites are tiny arachnids that, on a whole, do anything anywhere you can think of. Parasites, predators, herbivores, fungivores, they do it all, from deserts to oceans, insect trachea to accompanying astronauts to the moon (hair follicle mites) – one never has to look far for these fascinating creatures. The mites are so diverse that arachnologists give them their own Subclass, the Acari, which is split into two superorders, the Parasitiformes and the Acariformes. While the Parasitiformes is enormously diverse, one thing its members never do, at least seriously, is herbivory. Likewise, the acariform Order Sarcoptiformes includes just a smattering of species that attack healthy plant tissues. On the other hand, the Order Trombidiformes alone does just about everything, including herbivory. Feeding from healthy plant tissues has evolved at least 11 times in this Order, with the ancestral feeding habit being mycophagy and perhaps predation too (Lindquist 1998). Once equipped with needle or sickle-like chelicerae for piercing fungal hyphae or prey, it seems the shift to plants becomes all the easier.

The biggest radiations of herbivorous mites are the Tetranychioidea (peacock, spider and flat mites; 2,211 species) and Eriophyoidea (erinose and gall mites; 4,400 species). Like most mites, their diversity is a small proportion of what actually exists, and it wouldn't be unreasonable to expect the world's ca. 350,000 plant species to be matched by a similar diversity of herbivorous mites. For the past decade Dr Jenny Beard has worked on the systematics of the Tetranychioidea: originally at the University of Queensland, then through AQIS, the Queensland Museum, and the University of Maryland and USDA. No Australian family has been left

untouched: the obscure Linotetranaidae, the beautiful peacock mites (Tuckerellidae), and the two large and economically important families Tenuipalpidae (flat mites) and Tetranychidae (spider mites). My own role has been relatively minor, with contributions to our work on flat mites on she-oaks and the diagnostics of spider mites of the genus *Tetranychus*.

The peacock mites

The Tuckerellidae are a small family of red mites with broad white setae and long filament-like hairs arising from their rear ends (Figure 1). They are usually found creeping in the crevices of stems and, although sometimes difficult to find, on some host plants can be abundant. They have no known economic importance but have been poorly

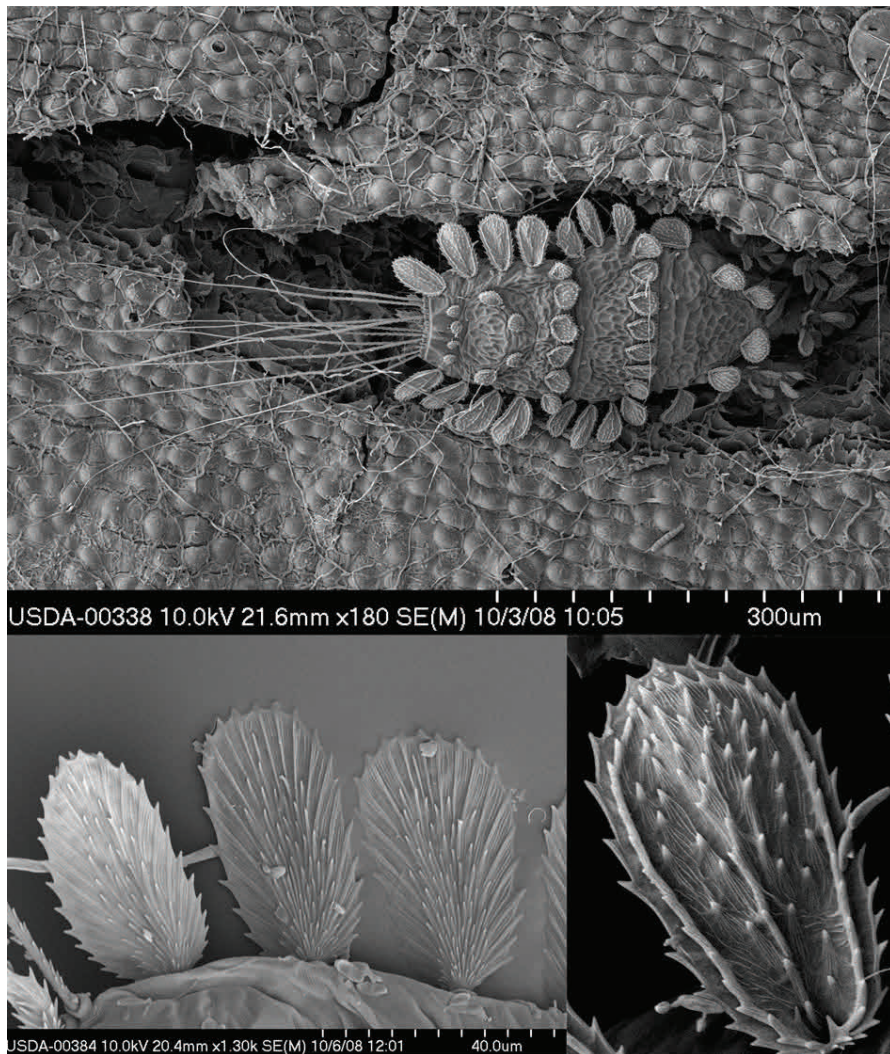


Figure 1. Top: *Tuckerella* wedged into a crevice. Note the long movable filament-like setae. **Bottom:** Detail of the broad body setae. Photos: USDA and Jenny Beard.

studied in this regard, especially *T. japonica*, which feeds on the stems of camellias, including tea. In Australia, Jenny has added a new species that inhabits insect galls on Burrow's Wattle, *Acacia burrowii* (Beard & Walter 1995).

The flat mites

The flat mites, otherwise known as false spider mites, are a large family of ca. 900 species that includes about 20 species of minor to major importance as pest species. These pests include the broad mites (*Brevipalpus*) which are the only mites outside the Eriophyoidea known to vector plant viruses – in their case, citrus leprosis. Pests or not, many flat mites are attractive little creatures, especially when viewed with the Low Temperature Scanning Electron Microscope at the USDA in Maryland. This equipment has allowed for some stunning images of mites 'caught red-handed', as the specimens are frozen in liquid nitrogen and

examined at – 140 degrees Celsius.

One such application of this technique is the study of Red Palm Mite, *Raoiella indica*, which uncovered some surprising habits of these mites (Beard *et al.* 2012). This species is native to the Middle East and SE Asia, but about a decade ago arrived in South America and has since spread rapidly in the Americas. Their hosts are palms, bananas and gingers, but curiously the palmettos are immune to attack.

Herbivorous mites feed on the nutritious spongy mesophyll and palisade parenchyma, usually by puncturing the epidermis with their mouthparts. Not so Red Palm Mite. Instead, these pretty little mites head straight for the stomata, thereby bypassing the epidermis (Figure 2). This unique feeding habitat is likely the reason Red Palm Mite cannot exist on palmetto. Palms, bananas and gingers all have different leaf

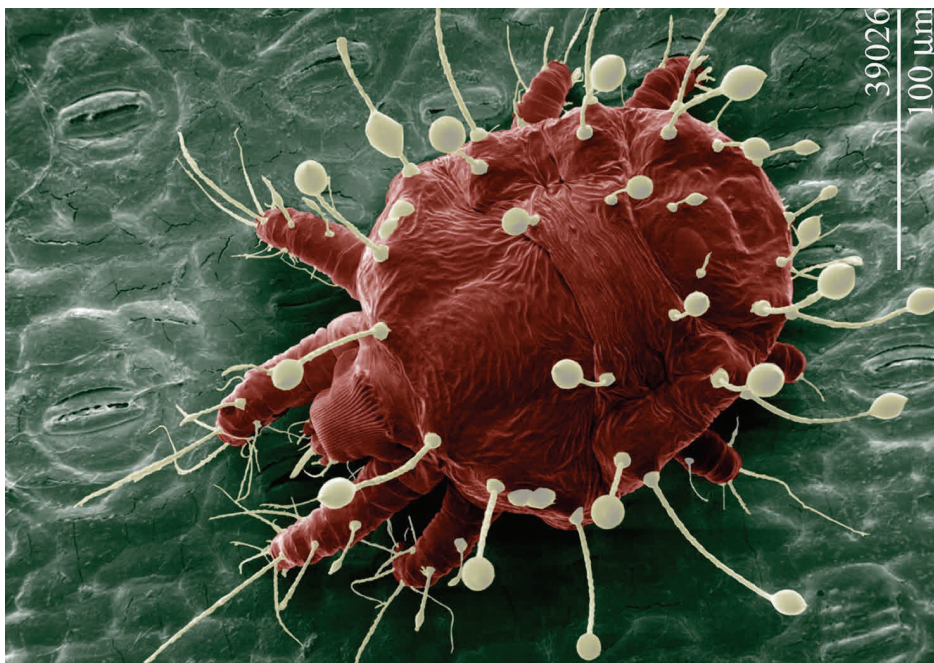


Figure 2. *Raoiella indica* (Red Palm Mite) feeding from stomata. Note the droplets on the setae, which are seemingly formed on the setae and are of an undetermined function and composition. Photo: USDA and Jenny Beard.

surface morphology, yet all share exposed stomata typical of many plants. On the other hand, the stomata of palmettos are concealed in pits, each filled with a porous cutinous plug, likely keeping probing mouthparts at bay.

Australia is thankfully free of Red Palm Mite, but it's no surprise we have our own horde of undescribed native species, including numerous *Raoiella* whose usual hosts are found in the Myrtaceae. Jenny has also added four new genera from Australian sedges (*Acaricis*, *Cyperacarus*, *Gahnia-carus*, *Prolixus*), and numerous species from various native plants, many of which are popular backyard and parkland plants, demonstrating how many new flat mite taxa live almost under our noses (e.g., Beard & Ochoa 2011; Figures 3,4,5). My work with Jenny has largely been restricted to the mites on she-oaks (Figure 6). Despite

having rather inhospitable looking foliage, a multitude of insects (e.g. Taylor *et al.* 2011) and mites live exclusively on these plants. Of the mites, the flat mites are most abundant and diverse.

She-oaks have been colonised at least four times by flat mites. The genera *Aegyptobia*, *Pentamerismus* and *Ultratenuipalpus* all account for at least three host shifts, but these are large genera whose species dwell on all sorts of plants. That they should turn up on she-oaks is no great surprise, although the absence of the most diverse genera (*Brevipalpus* and *Tenuipalpus*) is notable. On the other hand, the subfamily Tergopalpinae is almost exclusively Australian (one species on coastal she-oak in the Philippines) and almost exclusively found on she-oaks (*Australopalpus alphitoniae* lives on Soap Tree). Previously, the work of Smiley & Gerson (1995) and Smiley *et al.*

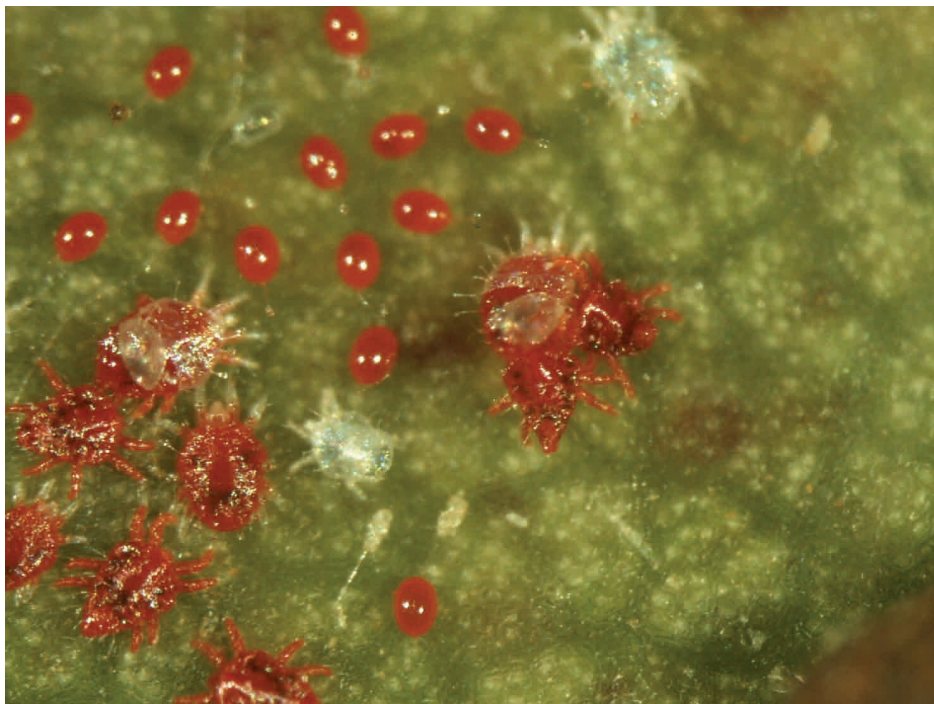


Figure 3. A colony of Australian native *Raoiella* showing eggs, moulting females and the point-bummed males eagerly waiting the arrival of new females. Photo: USDA and Jenny Beard.

(1996) added several tegopalpines to the Australian fauna, and it didn't take too long for us to realise they were just scratching the surface of a deep vessel. At this point we have stopped to write up our work, with

20 species, all of which are host-specific. Each species of she-oak has up to four species, meaning we could be around 10% of our way through this admittedly small part of the Australian fauna of flat mites.

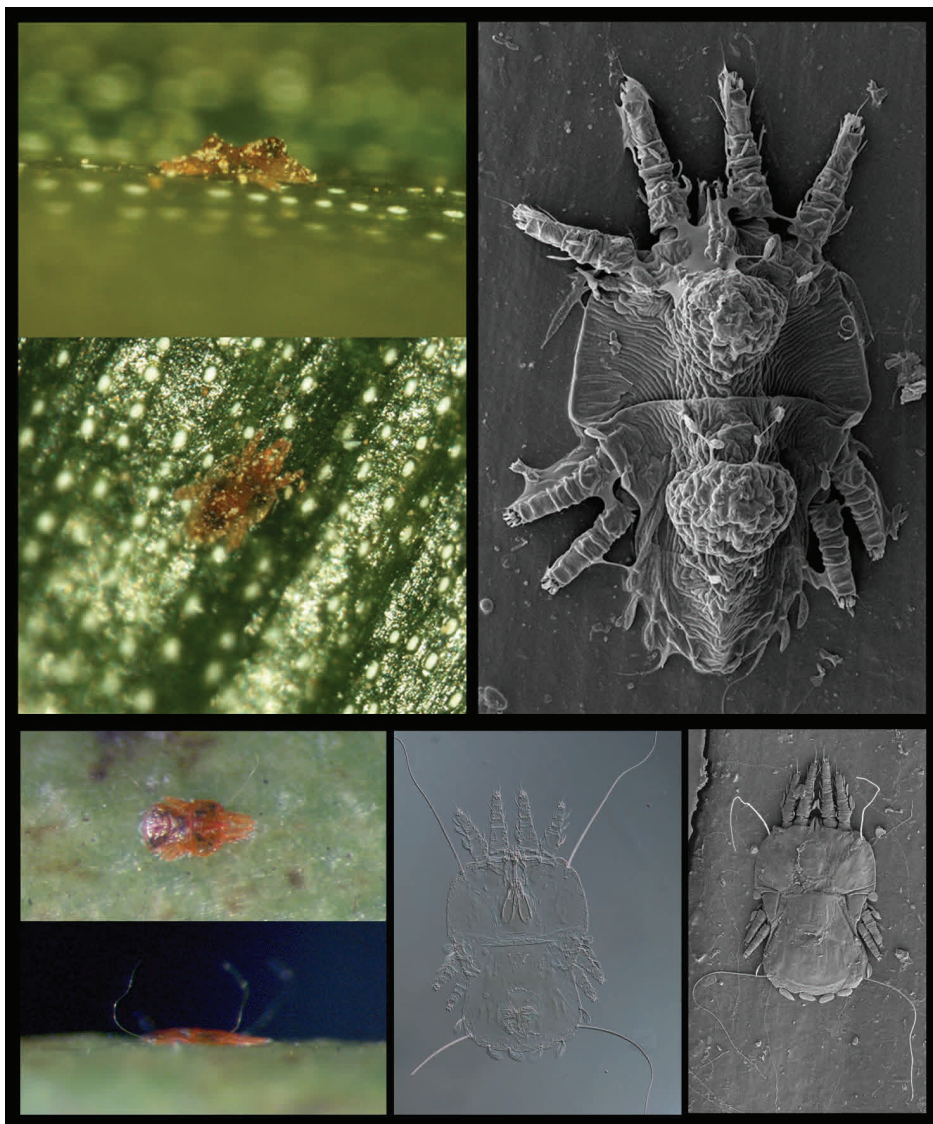


Figure 4 (above). An undescribed species of *Tenuipalpus* from Bunya Pine. Photos: USDA and Jenny Beard. **Figure 5 (below).** *Urigersonus bunyai* from Bunya Pine. The figure at the bottom left shows the four long setae this mite holds over its body, which have an unknown function but perhaps deflect roving predators. Photos: USDA and Jenny Beard.

For anyone wishing to admire these mites further, Jenny Beard and her colleagues have produced a free on-line Lucid key at: <http://idtools.org/id/mites/flatmites/>

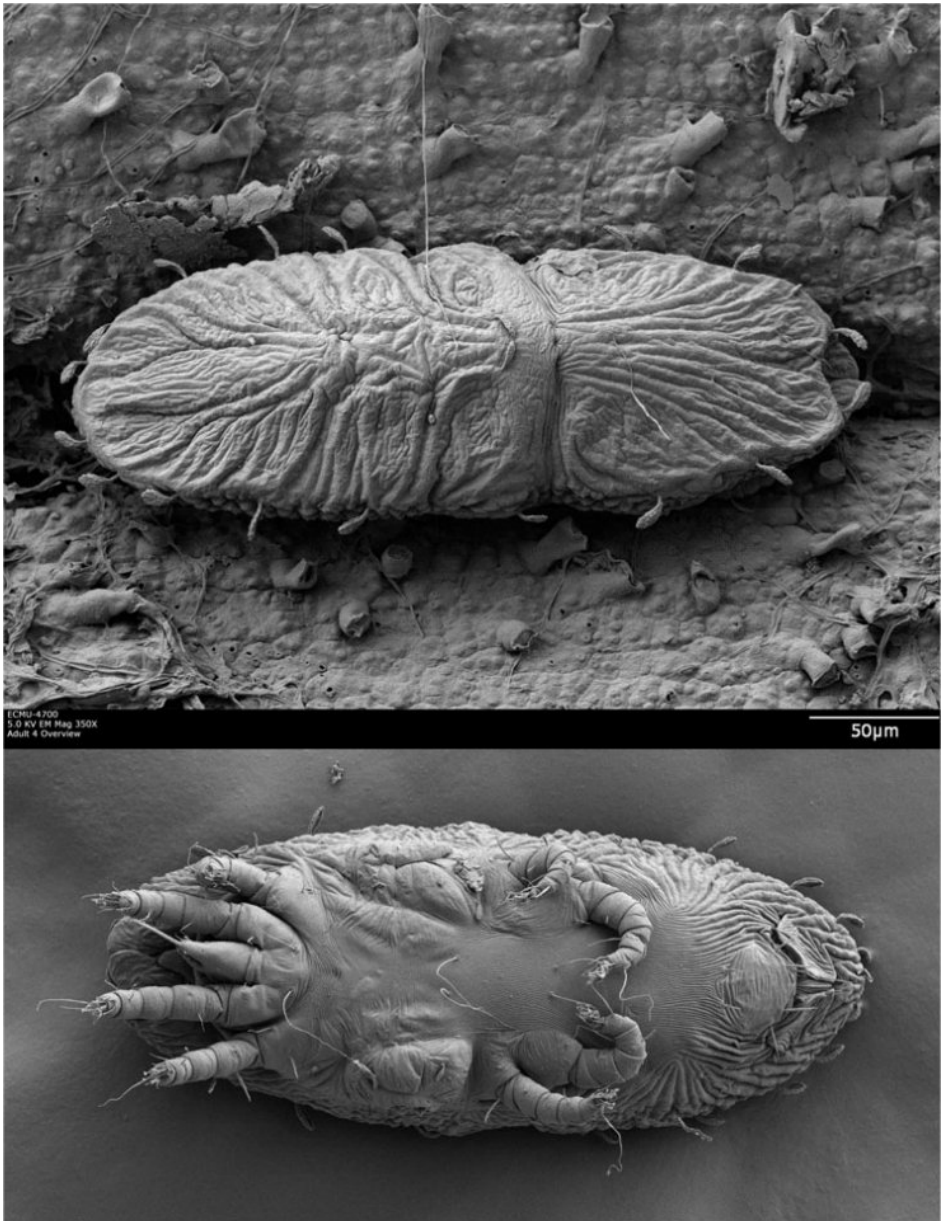


Figure 6. *Tegopalpus conicus*, one of the tegopalpine flat mites found on she-oaks.

The spider mites

It's perhaps a little unkind to call the spider mites the big ugly sister group, but they do seem to lack the intricate daintiness of the flat mites. Coupled with comprising more than double the described species and about six times more pest species (ca. 125), and it becomes harder to wax lyrical about their beauty and the issues become more about economics. Nevertheless, Australia has an abundance of native species, most of which are undescribed. A great amount of work was done by Queensland acarologist James Davis about fifty years ago, whose work remains well respected and reliable, and Jenny Beard has also made several important contributions over the past decade (e.g., Davis 1968a; Beard *et al.* 2003). About sixty species are known from Australia (about half being exotic pests), so like the flat mites there remains an extraordinary number of taxa awaiting description.

My work with the group is more limited, restricted to the genus *Tetranychus*, and specifically those that eat stuff we like to grow and the Australian fauna. That still leaves a reasonable pool of species, and thanks to a project funded by Plant Health Australia, Jenny Beard and I tackled the diagnostics for the Australian species and those exotic pest species regarded as the greatest threat of introduction. The main part of the project was completed six years ago, but we kept updating our unpublished report, and the lockdown of the museum during the 2011 floods turned out to be the perfect opportunity to turn our work into a manuscript (Seeman & Beard 2011). This work is freely available at <http://www.mapress.com/zootaxa/2011/f/z02961p072.pdf>.

Tetranychus is a notoriously difficult genus to work on. Typically, a systematic acarologist has all sorts of characters to choose from, but we especially love looking for differences in setae. Their presences or absence, form, lengths and distances between each other are usually enough to produce diagnoses for all sorts of taxa. Not so

Tetranychus. Precious little varies between species, and prior to our efforts the best available key was almost entirely reliant on the form of the male aedeagus – a very tiny structure, as you can imagine for a mite (Figure 7). The bit of the aedeagus we're interested in is 2-5 micrometres long. All this presents several hurdles, the first being the necessity of collecting a male, which is often not possible. Then it must be prepared as a perfect lateral mount. And then there's the key itself.

All of us have been frustrated by keys before, but the previous key to *Tetranychus* is a fine specimen, likening the aedeagus to birds or, more specifically, ducks. Some aedeagi are certainly a bit beaky, but the real cracker is one couplet after you decide there's something ducky about your specimen, where you are asked whether or not the aedeagus is *definitely* duck shaped (Figure 8).

Thus it's little wonder that one of the first things we discovered in our work is that the name Two-spotted Spider Mite (*Tetranychus urticae*) is often applied without checking the species. In Brisbane, the usually ubiquitous *T. urticae* is often difficult to find, the fauna being dominated by *T. neocaledonicus* and *T. ludeni*, with

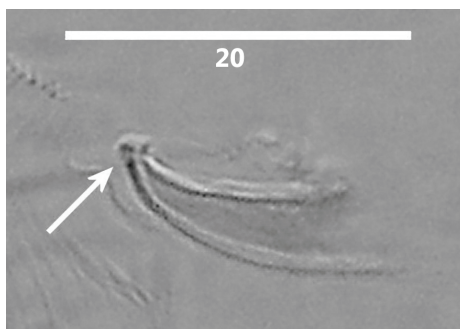


Figure 7. The aedeagus of Vegetable Spider Mite (*T. ludeni*) showing the “pseudo-hook” that causes confusion with *T. desertorum*. Note the minute size of the aedeagal head, which is the main diagnostic character for species of *Tetranychus*.

17. Aedeagus with long, slender neck, small birdlike head with pointed beak; empodium I with spur	18
Aedeagus with short neck, head not birdlike, angular, more or less anvil-shaped.....	18
18. Aedeagus head slightly indented dorsally, with short pointed beak	20
Aedeagus head nearly rounded-convex dorsally, anvil-shaped	20
19. Pregenital broken striae lobed; aedeagus head fairly large, angular, with tapered pointed beak	21
Pregenital broken striae smooth or lobed; aedeagus head small or ducklike profile	21
20. Aedeagus head small, nearly flat dorsally, with short pointed beak.....	21
Aedeagus head ducklike profile, with short beak	24
21. Aedeagus head tilted upward, with beak directed upward.....	22
Aedeagus head directed forward, beak not pointed upward.....	22
22. Aedeagus head upright at 90 degree angle.....	23
Aedeagus head tilted at 45 degree angle.....	23
23. Aedeagus head flat dorsally, angular, with thinly tapered beak	23
Aedeagus head rounded dorsally, anvil-shape, with sharp angulations.....	23
24. Aedeagus head upright, long neck, with short pointed beak.....	24
Aedeagus head definitely ducklike profile.....	25
25. Aedeagus head tilted upward, with beak pointed at 45 degree angle.....	25
Aedeagus head directed forward, ducklike, similar to <i>merganser</i>	25
Aedeagus head directed forward, ducklike, similar to <i>gloveri</i>	25

Figure 8. The infamous dicky duck key, with the magnificent couplets 20 and 24.

T. urticae third, or perhaps fourth in abundance after *T. lambi*. Collections from northern Australia suggest a similar scenario, with *T. urticae* being fifth or sixth after tropical species, especially *T. mariannae*. Nevertheless, in temperate zones it seems *T. urticae* is the main pest species.

Our work produced a much needed duckless key, but it's still not easy for beginners. Adult females are distinguished mostly by just three sets of characters: the pattern of striae (rather like fingerprinting for mites), arrangement of tarsal setae, and size of the empodial spurs. With just these characters we can avoid using the male aedeagus for many species, but eventually we hit the same wall: that several important species are absolutely identical except for the form of the male's aedeagus. The sensible thing to do would be to use DNA, and we have

the data for many species, but at least for the foreseeable future morphology remains the primary method for identification.

Finally, through this project we established that two pest species thought to be present in Australia are absent: *T. desertorum* and *T. gloveri*. The former species was recorded by Dodd (1929, 1940) attacking prickly pear – as *T. opuntiae*, which was later synonymised with *T. desertorum*. Dodd's specimens do not exist, and *T. desertorum* is often confused with the common pest Vegetable Spider Mite, *T. ludeni*, thanks to a reliance solely on the aedeagus for identification. At the right focal point, the aedeagus gives the illusion of a strong hook – the feature for *T. desertorum* – leading to misidentification. However the two species are easily separated on the basis of females alone, and all records of *T. desertorum* in

Australia are instead *T. ludeni*. The other species, *T. gloveri*, has an appalling taxonomic history, but its presence in Australia is based on the misidentification of *Oligonychus digitatus* – a fact discovered independently by ourselves before realising Davis (1968b) had also uncovered the same error 40 years previous to us.

Acknowledgements

Numerous people have contributed to our work on the Tetranychidae and a fair summary of their contributions can be found in the lengthy acknowledgements of our paper on *Tetranychus* and the *Flat Mites of the World* key. Here, I'm especially grateful for the LTSEM images produced by Gary Bauman, Eric Erbe, Chris Pooley and Marie Metz.

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Vote of Thanks: Christine Lambkin

Any other business:

1. The next meeting will be on Tuesday October 9, and the speaker will be Jonathan Darbro from QIMR. His topic will be mosquito control.

The meeting closed at 1.55pm

NOTICE OF NEXT MEETING

Tuesday 9th October 2012, 1pm

~

Dr JONATHAN DARBRO

Queensland Institute of Medical Research

Biological Control of the Primary Dengue Vector *Aedes aegypti*: Three Tales

Abstract: Dengue is the most medically important arthropod-borne virus and continues to be an increasing threat to global health, with an estimated 50-100 million cases per year and 50,000 deaths due to dengue hemorrhagic fever. Two-thirds of the world is thought to be at risk for dengue infection. With no vaccine in sight, control of this disease rests mostly on control of its primary mosquito vector, *Aedes aegypti*. Control by chemical insecticides is threatened by growing insecticide resistance in mosquito populations worldwide, so additional tools are sorely needed, such as biological control of the insect vector. The Queensland Institute of Medical Research (QIMR) has been involved in research of three examples of biological control of *Ae. aegypti*, each with varying levels of success: 1) the copepod *Mesocyclops* in Vietnam as a tool for killing first instar larvae, 2) entomopathogenic fungi *Metarhizium anisopliae* and *Beauveria bassiana* as adulticides, and 3) the bacterial endosymbiont *Wolbachia* as a tool for reducing the vector's ability to transmit virus. These methods will be discussed in more detail, including the importance of such factors as exploitation of mosquito behaviour and participation of the community.

~

ABOUT DR DARBRO: Dr. Jonathan Darbro is a research officer at the Queensland Institute of Medical Research, where he serves as the medical entomologist for the Mosquito Arbovirus Research Committee (MARC) and also collaborates with Eliminate Dengue: Our Challenge (www.eliminatedengue.org). He received a Master's degree in Medical and Veterinary Entomology from the University of California, Riverside and a PhD in medical entomology from Cornell University. He is interested in the influences of pathogens and the environment on vectorial capacity of mosquitoes.

Seminar Room 1
Ground Floor, Ecosciences Precinct
Boggo Road, DUTTON PARK

ALL WELCOME



National Science Week Exhibits Insect Art at Ecosciences Precinct

Justin Bartlett, DAFF (Qld) Entomology

Now in its fifteenth year, National Science Week is a Federal Government Initiative which celebrates science in Australia. This year, National Science Week events were held across the nation from 11 to 19 of August. One such event, held in the foyer of the Ecosciences Precinct building, Dutton Park, exhibited an array of science-themed artworks. Among these, insects featured heavily in works produced, separately, by Therese Flynn-Clarke and Walter Stahl.

Using natural fibres and recycled materials and employing Basketry methods of construction, Therese Flynn-Clarke, Artist and Teacher of Bannockburn, SE Qld, creates large sculptural pieces, many which are insect-themed. Among the numerous of her wonderful made objects exhibited during National Science Week were several large 'Moths of the Caldera' (Figs 1 & 2), plus 'A Lek of Pippi Shell Butterflies' (Fig. 3) and a 'Green Backed Insect' (Fig 4).

From her Science Week Didactic Panel Theresa tells us ... "I believe the commonality between artist and scientists is their power of observation - both notice things and then do something about/with it".

The theme of this years National Science Week was "Ignite Your Imagination" - certainly also something both scientists and artists have the power to do.

To find out more about Therese Flynn-Clarke, and her art, visit :

<http://thereseflynnclarke.blogspot.com.au/>



Fig. 1: 'Basketry' moth, from 'Moths of the Caldera' series , suspended in the foyer of the Ecosciences Precinct (Photo courtesy Department of Science, Information Technology, Innovation and the Arts).



Fig. 2 (top left): More 'Moths of the Caldera' - in their natural environment. **Fig 3 (top right):** 'A Lek of Pippi Shell Butterflies' congregating on *Melaleuca*. **Fig 4 (bottom):** 'Green Backed Insect'. (Photo credits: Figs 2&3 courtesy Therese Flynn-Clarke; Figs 1&4 courtesy Department of Science, Information Technology, Innovation and the Arts).

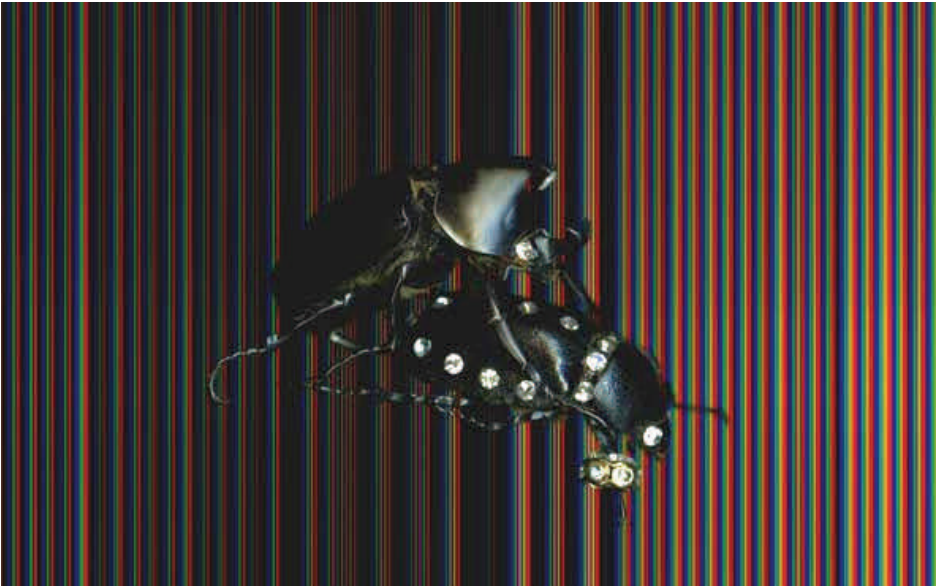


Fig. 5: 'Bling Bang [nasal delivery]', 2010, from the 'Unnatural History' series (Image courtesy Walter Stahl).

Walter Stahl is a Brisbane based artist working in photomedia, drawing, sculpture, video and art education.

He has won several awards for his photomedia work; examples of which are held in public and private collections in Australia. Apart from the video works of 'Anstralia' (in which a map of Australia is 'drawn' with live ants) the still images are recorded with a flatbed scanner, utilizing its peculiarities of time-and movement-based exposure.

During National Science week, Walter's striking insect-themed still images were projected onto screens in the conference room adjoining the Ecosciences Precinct foyer. These included experimental works from series produced between 2003-2010 and showcased this highly original artist

More of Walter Stahl's art can be viewed at <http://www.stahlwerk.ws/>



Fig. 6: 'Teenage Lightning [Coil]', 2009, from 'Krautrock' series (Image courtesy Walter Stahl).

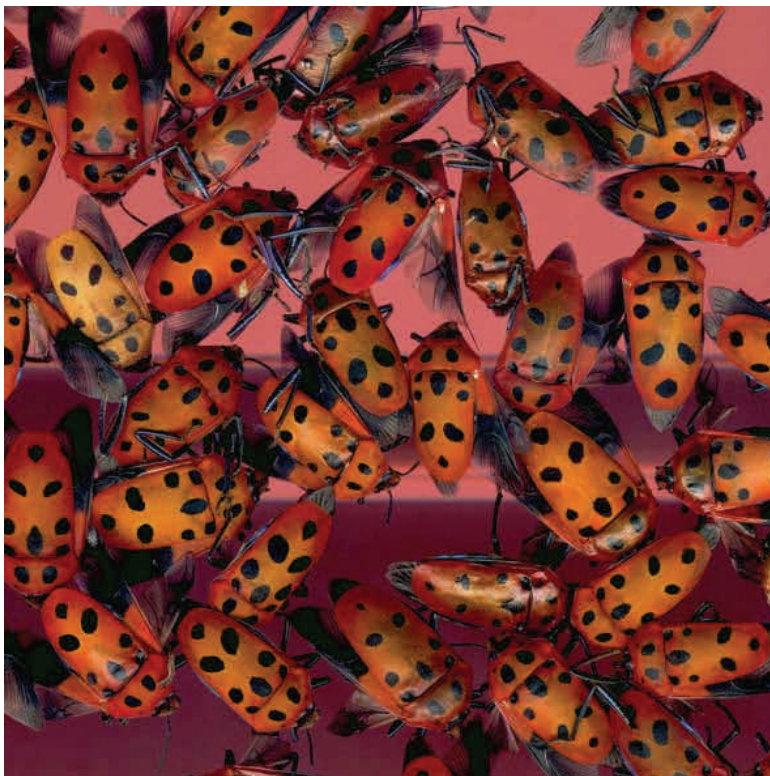


Fig. 7: 'Mallotus Harlequin [gutterbug colourfield]', 2006, from 'document|monument' series (Image courtesy Walter Stahl).

NOTICES

A message to friends of Kathy Hill

Kathy Hill and David Marshall, ESQ members abroad in the United States (University of Connecticut), and frequent cicada collectors in Australia, were involved in a night time house fire on August 7th that has been ruled arson. David escaped through a window, but Kathy succumbed to the smoke and suffered anoxic brain damage of unknown extent before being rescued. Kathy is attempting to recover her consciousness at Spaulding Rehabilitation Hospital in Boston, Massachusetts, and she still cannot communicate. David, Kathy's parents and brother from New Zealand, and many

friends and family, have been with her ever since and they say that she continues to change each day so there is the possibility of recovery, hopefully a good one, especially because Kathy is an especially smart, determined, and healthy person. Anyone interested in sending wishes or stimulating news updates to Kathy (Dave reads them to her each day) can email them to david.marshall@uconn.edu.

A local weekly did a very nice story on our situation. Here's a link:

<http://www.remindernews.com/article/2012/09/10/couple-deals-with-nightmare-of-arson>

David Marshall

OCEANIA BIODIVERSITY FORUM

Eskitis Institute Griffith University, Brisbane 19-23 November 2012

The Australian Government established the **National Biodiversity Forum** series in 2009, providing biodiversity stakeholders with opportunities to exchange ideas, understanding and experiences. In 2012 this series has been extended to Pacific nations who can join their Australian counterparts in the first **Oceania Biodiversity Forum**. These forums are designed to encourage all parties involved to realise the potential of biodiversity research and create a thriving global industry.

The Forums

Day 1 and 2 (19-20 November 2012) :

Presentation themes.

- Regional case studies of research leaving the lab – what are some real-life strategies for a successful transition from research to product development?
- Industry perspectives on the Protocol and their needs– what turns research into an attractive commercial proposition? What are the must-haves?
- A consultation process for stakeholders on implementation and ratification of the Nagoya Protocol in Australia – what framework can best provide certainty for all stakeholders?

Presentations will address a number of questions.

- To make research attractive to investors, what is required from resource providers and from researchers?
- To participate in the emerging global system, what is required of governments?
- To allow access to genetic resources and associated traditional knowledge, what are the needs of provider countries and communities?

Day 3 (21 November 2012) :

Providing an opportunity to continue discussions of the previous days, and for a guided tour of the host Eskitis Institute.

The Institute works towards the development of new strategies to prevent and treat disease with an emphasis on multi-disciplinary research and collaboration within the Institute and with national and international partners.

Research at the Institute is supported by the unique Nature Bank resource, a storehouse of chemical diversity served from the natural world. Nature Bank is an integrated drug discovery platform encompassing a library of over 200,000 optimised natural product fractions derived from a diverse collection of over 45,000 samples of plants and marine invertebrates.

Eskitis is also home to the Queensland Compound Library, an automated library of nearly 400,000 pure compounds from Australian chemists.

Day 4 and 5 (22-23 November 2012) :

Focusing on capacity development for stakeholders from Pacific Island States.

Prior informed consent (PIC) and mutually agreed terms (MAT) are the cornerstones of any access to genetic resources for utilisation in research project. Therefore participants will discuss and elaborate on key elements which need to be included in PIC and MAT ensuring a fair and equitable relationship between provider and user of genetic resources and associated traditional knowledge.

—————

The forum will be free of charge, however you will need to RSVP by 29 October 2012, indicating how many people from your company/institute/group will be attending on which days.

For more information or to RSVP please email GRM@environment.gov.au

Entomological Society of Queensland BRISBANE KOALA BUSH- LANDS BUG-CATCH

Saturday 6th October, 2012

The BugCatch will be held at the **Alperton Rd Visitor Centre** in the Brisbane Koala Bushlands at Burbank, 15 to 17 km SE Brisbane, organised in conjunction with Mick Lawson, Natural Area Coordinator, East Local Asset Services, Brisbane City Council, and Kathy Ebert from the School of Biological Sciences, at the University of Queensland, as part of a field trip for the Insect Science and Terrestrial Invertebrate university courses.

About Bug-Catch

“Bug-Catch” is a program of collecting trips run by the Entomological Society of Queensland, in conjunction with the Queensland Environmental Protection Agency. The object of the trips is to utilise the specialist insect collecting and identification skills of Society members to assist DERM to compile lists of invertebrates for protected areas (National Parks, Forest Reserves, State Forests, etc). Members are asked to supply lists of species collected, and these are included by DERM in their faunal databases.

Brisbane Koala Bushlands

Brisbane Koala Bushlands is a series of conservation parks extending from the Daisy Hill area to Logan City and the Redland Shire. Most of the parks are linked and total 800 hectares of Eucalypt forest, creating invaluable habitats for the koala. An estimated three to five thousand koalas reside in the Bushlands that remain relatively undisturbed. Other animals can be spotted in the parks, including grey kangaroos, red-necked wallabies, a variety of frogs, squirrel gliders, peregrine falcons, and white-bellied sea eagles.

Malaise traps and pitfall traps will be set up beforehand. Sweep netting, beating, bark spraying, and hand searching will be used from **10am** with light sheets being set up at dusk at the **Alperton Rd Visitor Centre**.

The **Stockyard Creek** circuit track and boardwalk at the Alperton Rd Visitor Centre gives good access to permanent freshwater, riparian habitat, spotted and scribbly gum, *Casuarina* stands, and some stringybark and ironbark.

The Alperton Rd Visitor Centre (UBD page 203) is in the Brisbane City Council's Brisbane Koala Bushlands at Burbank, 15 km SE Brisbane.

See (http://www.brisbane.qld.gov.au/documents/environment/bushlandandwaterways_brisbane_koal_bushlands_track_map.pdf)

Date/Time.

It all happens on Saturday, October 6th from 10 am. We will have some organised activities for UQ students. Participants may come and go at anytime.

Food

You are responsible for all your own food and drink. There is no drinkable water at the site. There are electric BBQs available, power, tables and benches, large shelters and toilets at Alperton Rd Visitor Centre.

What to Bring

Bring all your collecting gear. A daypack could be useful as there is the opportunity to walk and explore quite a way into the reserve along the tracks. There is some water to collect in so bring dip nets and some white trays. A torch or headlight and jumper will be good if you are staying for the evening.

Let us know by phone or email if you are coming....

Christine Lambkin & Kathy Ebert

Bugcatch Coordinators

Queensland Museum

Telephone 38407699

Email christine.lambkin@qm.qld.gov.au

Note: Chris will be out of the office from 18-27 September, but will get emails on her return.

UQ students should email Kathy Ebert at k.ebert@uq.edu.au

Entomological Society of Queensland 2013

\$500 Student Award

This is an award by the Society to encourage entomological research. Entries are judged by a panel of three entomologists appointed by the President of the Society. The winner will be announced at the May General Meeting and is then invited to present a summary of their research at the June Notes and Exhibits meeting of the Society.

Honours, Diploma and 4th year Degree students who received their qualification from any Queensland tertiary education institution in 2012 or 2013 may submit their entomology-based thesis or report for consideration.

Entrants need not be Society members.

These reports can be directed to the Society's Senior Vice President at the address listed on the entry form. However, please note that a hard copy of your thesis/report does not need to be submitted, and the submission of a PDF version is encouraged.

This should be emailed together with a signed copy of the completed entry form to Simon Lawson
at simon.lawson@daff.qld.gov.au

Closing date for submissions is Friday 12th April 2013

Entomological Society of Queensland

2013 Student Award Entry Form

Name

Title of thesis or report

Degree

Supervisor

Date of Examiners report or grading

Return address for thesis/report (if applicable)

Signature_____ Date_____

**Send a copy of your thesis/report with a signed and completed entry form to:
Senior Vice President of the Entomological Society of Queensland**

by email : simon.lawson@daff.qld.gov.au

or by mail: Simon Lawson

DAFF — Forestry

Level 3A West

Ecosciences Precinct

GPO Box 267

Brisbane Q 4001

Title	First name
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Surname

Email

Address

postcode	Date
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Nominated by _____

Seconded by

- ☐ General membership **\$30 AUD**
- ☐ Joint membership **\$36 AUD**
- ☐ Student membership **\$18 AUD**

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Name on Card

Expiry Date _____ Signature _____

Please return completed form to : Honorary Secretary
Entomological Society of Queensland
P.O. Box 537
Indooroopilly
Qld. 4068

Please retain the receipt below for your records

Entomological Society of Queensland—Receipt for payment of membership fees

Name _____ Date _____

Amount paid \$ _____ for year/s _____

DIARY DATES 2012

Nine general meetings held per year on the 2nd Tuesday of the respective month

MAR—Monday 12th	Lyn Cook	AGM and President's Address
APR—Tuesday 10th	Stephen Cameron	Insect Evolutionary Genomics
MAY—Monday 14th	Bill Palmer	Weed biocontrol. Where to now?
JUN—Tuesday 12th	Notes & Exhibits / Student Award Presentation	
AUG—Tuesday 14th	Ross Wylie	Qld's fire ant war—upping the ante
SEP—Tuesday 11th	Owen Seeman	Australian Herbivorous Mites
OCT—Tuesday 9th	Jonathan Darbro	QMIR — mosquito control
NOV—Tuesday 13th	Ken Walker	Bowerbird—Citizen Science Portal
DEC—Tuesday 11th	Xmas BBQ	

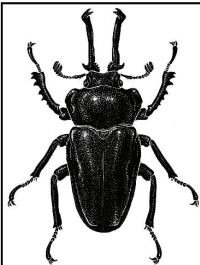
SOCIETY SUBSCRIPTION RATES

GENERAL:	Person who has full membership privileges	\$30pa
JOINT:	Residents in the same household who share a copy of the <i>News Bulletin</i> , but each otherwise have full membership privileges.	\$36pa
STUDENT:	Students and others at the discretion of the Society Council	\$18pa
Student membership conveys full membership privileges at a reduced rate.		

THE AUSTRALIAN ENTOMOLOGIST SUBSCRIPTION RATES

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	Institutions	AU\$37pa
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	Institutions	AU\$45pa
ELSEWHERE:	Individuals	AU\$45pa
	Institutions	AU\$50pa

Subscriptions should be sent to the Business Manager,
The Australian Entomologist PO Box 537, Indooroopilly QLD 4068.



THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND



NOTICE OF NEXT MEETING

Tuesday 9th October 2012, 1pm

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Biological Control of the Primary Dengue
Vector *Aedes aegypti*: Three Tales

Dr JONATHAN DARBRO

Queensland Institute of Medical Research

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Seminar Room 1
Ground Floor, Ecosciences Precinct
Boggo Road, DUTTON PARK

More venue details available at
<http://www.esq.org.au/meetings.html>

ALL WELCOME

NEXT NEWS BULLETIN

Volume 40, Issue 7 (October 2012)
due early November

CONTRIBUTIONS WELCOME

DEADLINE - Monday October 22th, 2012

Send your news/stories/notices to the editor
(justin.bartlett@daff.qld.gov.au)