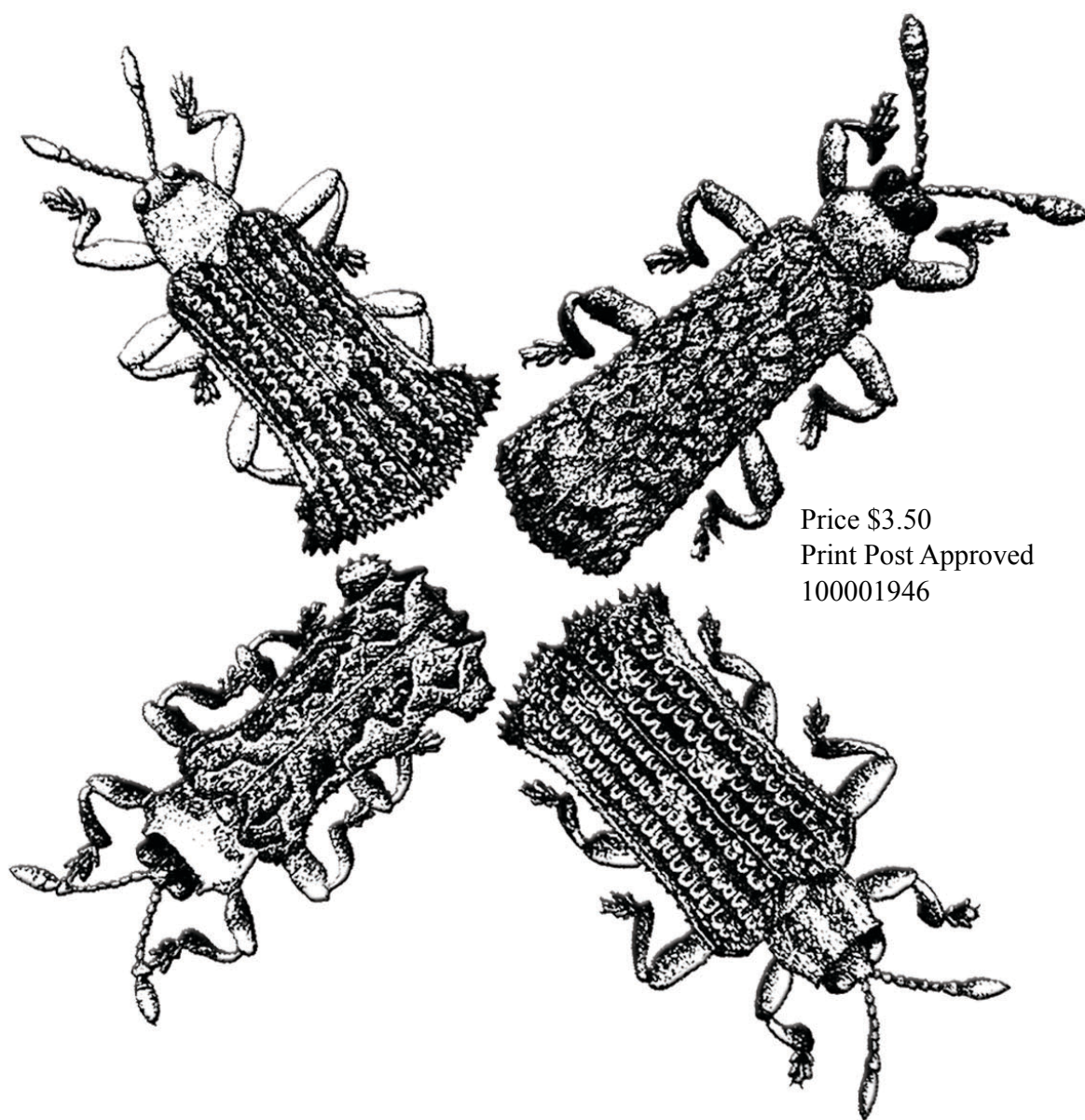


Entomological Society of Queensland

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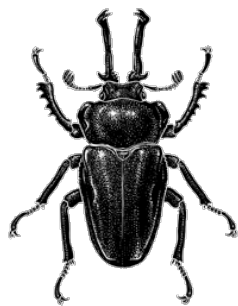
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Front Cover Illustration: Illustrations by Bill Haseler, 1964 President of the

Entomological Society of Queensland, of four leaf-mining beetles introduced for the biological control of lantana. The beetles are, clockwise from top right, *Octotoma scabripennis* Guerin-Meneville, *Uroplata girardi* Pic, *Octotoma chamioni* Baly and *Uroplata fulvopustulata* Baly (Coleoptera: Chrysomelidae: Hispinae). All species are now established in Australia.

ISSN 1037-2989



Entomological Society of Queensland

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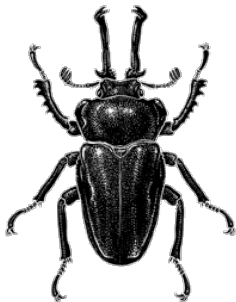
The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND**, since its inception in 1923, has striven to promote the development of pure and applied entomological research in Australia, particularly in Queensland. The Society promotes liaison among entomologists through regular meetings and the distribution of a *News Bulletin* to members. Meetings are announced in the *News Bulletin*, and are normally held on the second Tuesday of each month (March to June, August to December). 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. Other common names include Rainbow, Golden and Magnificent Stag Beetle. 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.



Entomological Society of Queensland

Minutes for General Meeting

Tuesday, December 9, 2014

Held in the Seminar Room, Ecosciences Precinct, Boggo Rd, Dutton Park at 4pm

Chair: Bill Palmer

Attendance: Gurion Ang, Nadine Baldwin, Lyn Cook, Kathy Ebert, Julianne Farrell, Bjorn Fjellstad, Stephen Frances, Manon Griffiths, David Holdom, John Lawrence, Yen-Po (Paul) Lin, Christine Lambkin, Simon Lawson, Lance Maddock, Penny Mills, Geoff Monteith, Mike Muller, Helen Nahrung, Brenton Peters, Matt Purcell, Jane Royer, Don Sands, Owen Seeman, Tom Semple, Noel Starick, Geoff Thompson, Desley Tree, Andy Wang, Susan Wright, Richard Zietek

Visitors: Carl Hughes, Laurence Mound, Archie Nahman, Anna Namyatova

Apologies: Weng Chow, Gary Cochrane, Morris McKee, Lisa Rigby, Federica Turco

Minutes: The minutes of the last meeting were circulated in News Bulletin 42[8] November 2014.

Moved the minutes be accepted as a true record: Penny Mills

Seconded: Christine Lambkin *Carried:* all

Nominations for membership:

The following nominations for membership were recommended by council and approved at the general meeting:

1. Live Exhibits Unit, Melbourne Museum. *Nominated:* Kathy Ebert, *Seconded:* Brenton Peters, *Carried:* all

2. Mr John Neilson, Downer, ACT. *Nominated:* Geoff Monteith, *Seconded:* Kathy Ebert, *Carried:* all

General Business:

Bill Palmer presented a general overview of the council meeting. The revised constitution will be sent with this month's Bulletin. There was a reminder that nominations for Council 2015 are now open as well as the Student Award.

Main Business:

1. **Lyn Cook** - "A quest for a beautiful place"
2. **Geoff Monteith** - "Unusual pupal structures constructed by the heterocerid mud-beetle, *Heterocerus flindersi*."
3. **Geoff Monteith & R. Richter** - "An unusual new king cricket species and first record of the family from Victoria."
4. **Chris Lambkin and Noel Starick** - Carnarvon BushBlitz experience.
5. **Mike Muller** - Oviposition behaviour of *Toxorhynchites speciosus* in a suburban backyard. AND Mosquitoes feeding on reptiles and amphibians
6. **Geoff Thompson and Andy Wang** - Peacock spider photos
7. **Archie Nahman** - an interesting entomological phenomenon: "What hot insects do"

Displays:

1. **Kathy Ebert** - Moths from Paluma
2. **Julianne Farrell** - pictures & pinned specimens of newly described *Omorgus bachorum* beetle
3. **Bradley Brown** - Potential agents for *Casuarina* biocontrol

Next meeting: March 10th, 1pm with Annual General Meeting.

Meeting closed: 5:10pm



Bush Blitz Carnarvon Station (Bush Heritage) 2014

*Chris Lambkin, Noel Starick, Susan Wright
from Queensland Museum*

The rugged country of Carnarvon Station.

Photo: Noel Starick.

Coordinated by the Australian Biological Resources Study (ABRS), the Bush Blitz project documents the plants and animals in Australia's National Reserve System, with the core focus on nature discovery – identifying and describing new species. The Queensland Museum (QM) is a key partner in the Bush Blitz project together with the Australian Government (ABRS), global resources company BHP Billiton, and not-for-profit conservation research organisation Earthwatch.

In October 2014, a team from Queensland Museum collected specimens over 10 days from over 40 sites in Central Queensland at Bush Heritage's Carnarvon Station, a 6,000 ha property situated 600 kilometres west of Bundaberg in Queensland. The QM team was contracted to collect, access, and curate into the QM collection, terrestrial organisms including flies, butterflies, moths, dragonflies, damselflies, ants, spiders, lizards, frogs, and small mammals.

The QM team including Dr Christine Lambkin (Curator Entomology), Noel Starick (Volunteer



Entomology), Susan Wright (Collection Manager Entomology), Dr Andrew Amey (Collection Manager Herpetology), and Heather Janetzki (Collection Manager Vertebrates) joined by Drs Barbara Baehr and John Stanisic (QM Honorary Associates), Desley Tree (QDPIC, DAFF), Dr Remko Leijds (South Australian Museum), Dr Anna Namyatova (University of New South Wales); Murray Haseler, Bush Heritage ecologist, ABRS staff Mim Jambrecina, Brian Hawkins, and Beth Tully; Earthwatch's Bruce Paton and eight BHP Billiton employees.

More than 170 samples were collected by the QM Entomology team containing thousands of

specimens of flies, wasps, ants, beetles, spiders, moths, butterflies and dragonflies using 13 Malaise and 160 pitfall traps, coloured pans, pyrethrum sprays, berlesate funnels of leaf litter, light sheets and hand nets.



One of the target fly groups were the Mydidae. Photo: Noel Starick.

Oviposition behaviour of *Toxorhynchites speciosus* in a suburban backyard

*Mike Muller, Senior Medical Entomologist,
Brisbane City Council*

Toxorhynchites mosquitoes are the giants of the mosquito world and can have a wingspan up to 20 mm. However, size doesn't correlate with threat, as these mosquitoes do not bite as adults and do not feed on blood. And their larvae are predators of other pest mosquito larvae that share their container-breeding habitat.

I have found *Toxorhynchites* mosquitoes quite commonly in my yard in the western suburbs where the males have a predilection for resting on a Sydney blue gum in my driveway. I can't explain that, and neither can my colleagues in mosquito land, as there are no obvious tree-hole cavities on this tree that might attract females to the vicinity of the waiting males.

Based on previous experience of running a colony of *Toxorhynchites* for a short time, I had recognised their oviposition behaviour as not unlike the Lancaster bombers featured in the Dambusters. The female flies in a loop facing the opening into the container and launches her ping pong ball-shaped eggs individually like miniature bombs that skip across the water surface. I was lucky enough to record a short video clip over a drain opening in my backyard to illustrate this behaviour.



Toxorhynchites speciosus female. Photo: Stephen Doggett, Dept of Medical Entomology, Westmead Hospital

Mosquitoes feeding on reptiles and amphibians

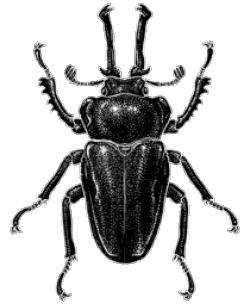
Mike Muller, Senior Medical Entomologist,
Brisbane City Council

In August 2013, unidentified mosquitoes were observed and photographed feeding on a carpet snake on Peel Island in Moreton Bay. While reptile feeding by mosquitoes has been recognised, this event led to contemplation of just what do we know about mosquitoes feeding on reptiles and amphibians. It is also well recognised that some mosquitoes, particularly in the genus *Uranotaenia*, will feed on frogs.

This begs the question of what parasites might be transmitted by mosquitoes to these hosts. In the 1950s and 1960s, Josephine and Ian Mackerras published studies of the Haematozoa of Australian vertebrate animals, including fish, reptiles and amphibians. Using mainly blood smears, they found many protozoan and filarial parasites. There were many detections of *Haemogregarina*, *Hepatozoon*, *Plasmodium* and *Trypanosoma* species. While some of these have cycles involving leeches and predation of infected animals, mosquitoes are certainly known to transmit members of some of these genera. Josephine Mackerras also published work indicating that mosquitoes were vectors of the filarial parasite *Oswaldofilaria chlamydosauri* in bearded dragons, and vectors of *Hepatozoon breinli* in goannas.

Arboviruses have also been

found in reptiles in Australia. In the 1960s, a new rhabdovirus was isolated from *Phlebotomus* sandflies at Charleville and also from a Northern Dtella lizard at Mitchell River (now Kowanyama). The virus was named as Charleville virus.

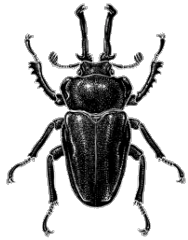


In the USA, there is mounting evidence that snakes are a reservoir for the arbovirus Eastern Equine Encephalitis, which will cause fatalities in humans. In Brazil, various mosquito species feed on caimans and have been implicated as vectors of *Hepatozoon caimani*. Mosquitoes have also been observed feeding on mudskipper fish in Japan.

There must be so much still to learn about such vectors, parasites and hosts but one wonders where the support for this basic research could be found. Now if someone could find a parasite that will selectively take out cane toads.....



Unidentified mosquitoes feeding on a carpet snake, Peel Island, Moreton Bay, August 2013. Photo: Mike Muller.



Unusual pupal capsules of mud beetles (Heteroceridae)

Geoff Monteith, Queensland Museum

The Heteroceridae, sometimes called mud beetles, is a cosmopolitan family of small beetles whose adults and larvae burrow through the surface layers of wet substrate around the margin of water bodies, feeding on organic particles such as diatoms and algae. There are about ten species in Australia, mostly in the genus *Heterocerus*.

Lake Nuga Nuga is a shallow ephemeral lake north of Injune in the old eroded sediments of the Arcadia Valley in Central Queensland. It filled for the first time for some years during the big wet season of 2013 and when I camped on its margin in May 2014 it was rapidly drying and contracting with a wide band of sticky black mud around the edge (Fig 1).

Close to the water's edge the surface was covered with numerous small circular structures cut into the mud surface (Fig 2). Further back from the water edge, where the mud was dried out, the structures had dried to small hard mud capsules each resting in a conical depression in the dry mud surface and most with an emergence hole on the top surface (Fig 3). Opening the capsules up revealed an oval chamber inside connected to the emergence hole in the top surface. In the chamber of newly formed capsules near the water margin were either mature larvae or pupae (Fig 4). The exit hole of these was lightly filled with mud particles. The older capsules, further away from the retreating water edge, usually contained newly emerged adults or were empty with the emergence hole

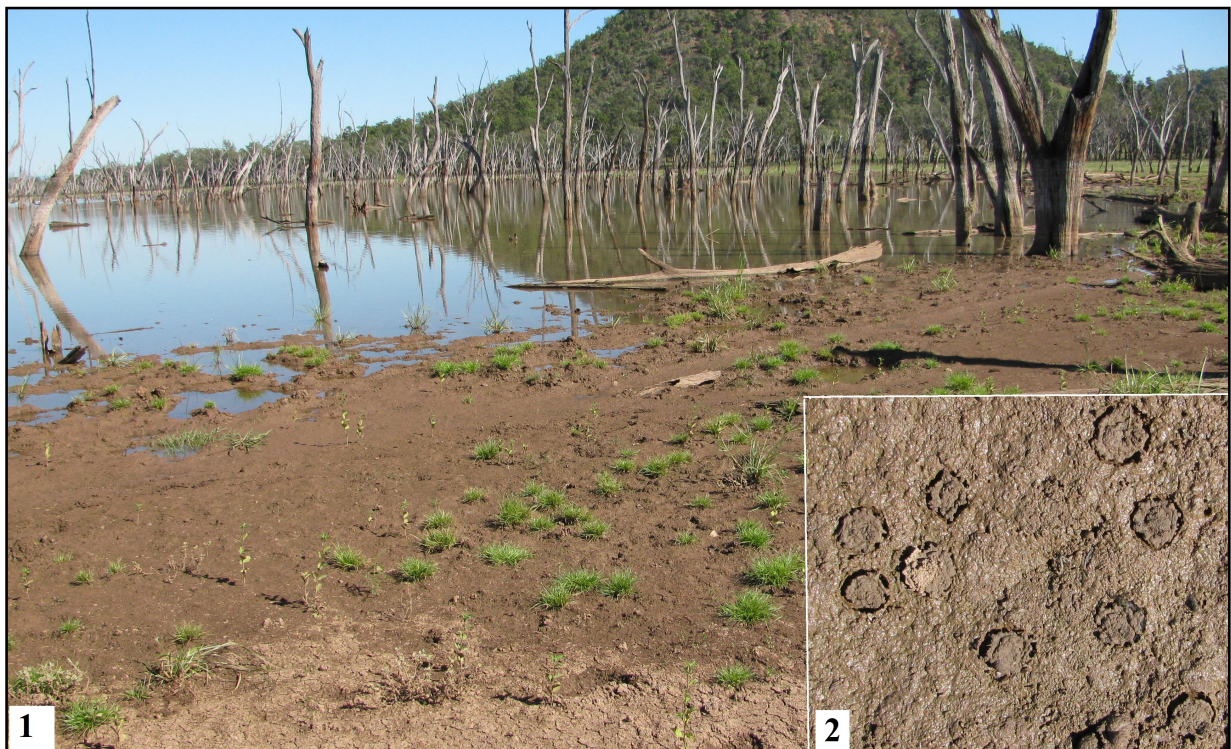


Figure 1. The muddy shore of Lake Nuga Nuga in inland Queensland.

Figure 2. Circular, conical capsules being excised from the wet mud surface by heterocerid larvae.

Photos: G. Monteith

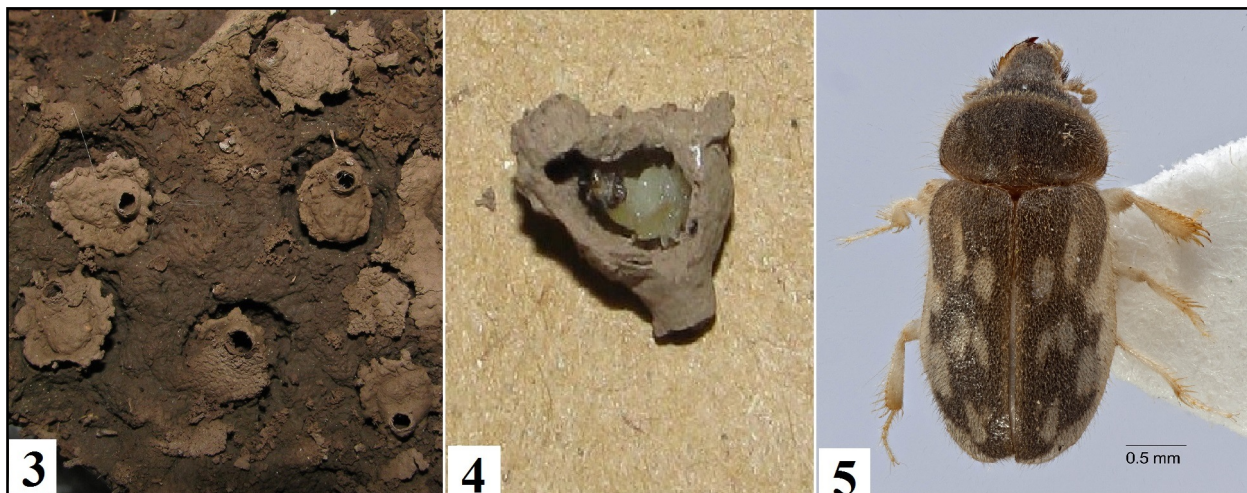


Figure 3. Hard, dried capsules with open emergence holes.

Figure 4. Longitudinal section of a dried capsule showing the internal oval chamber and a heterocerid pupa. Photos: G. Monteith.

Figure 5. An adult of *Heterocerus flindersi* Photo: Geoff Thompson, QM.

pushed open after the adult had exited. The species was *Heterocerus flindersi* Blackburn (5), the most widespread and common Australian species.

Both adults and larvae were very abundant, burrowing and feeding through the mud surrounding the capsules. Live mature larvae were brought to Brisbane and seen to make the mud capsules by first cutting out the conical furrow which separates the body of the capsule from the surrounding mud and then hollowing out the chamber within the capsule. The semi-closed exit hole to the surface is formed by the larva before it pupates. The function of the capsules seems to be to protect the pupa from the threat of being sealed within the rapidly drying mud. The conical capsules dry selectively and thus are separated and protected from the burrowing activity of other beetles in the surrounding wet mud, yet have a pre-formed “escape hatch” for the eventual adult to exit from the final rock-hard dried capsule.



Light sheet at Paluma with JCU students' Biodiversity fieldtrip. Oct2014
Photos:
K.Ebert

Some moths from Paluma

Kathy Ebert, UQ tutor



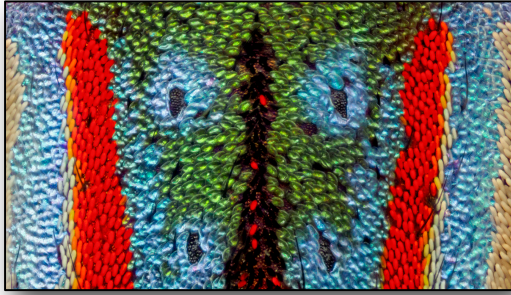
Geometridae, Ennominae



Noctuidae, Catocolinae



Crambidae



Deep focus photography of Peacock Spiders for Maria Fernanda Cardoso

Geoff Thompson and Andy Wang, Queensland Museum

Members may remember the artist Maria Fernanda Cardoso, who was kind enough to address the society in November 2012. Geoff Thompson has worked with her on a couple of past projects, notably, her “Museum of Copulatory Organs” at the 2012 Sydney Biennale and at a Museum of Contemporary Art “Artbar” in Sydney, July 2013. (<http://www.mca.com.au/artbar-pages/2013/#MariaFernandaCardoso>). He has also advised her on focus stacking techniques for another floral photography project.

Through the work of Jürgen Otto and others, peacock spider internet videos and shared photographs have become a worldwide hit (See: <https://www.youtube.com/user/Peacockspiderman>). In May, 2014, it was announced that Maria Fernanda Cardoso had won an Australian Council Established Artist Fellowship to video and photograph peacock spiders.

After engaging spider collectors, and collecting herself, she amassed a suite of live spider species, mostly from the Sydney area. She then engaged macro-cinematographer Peter Nearhos to take high quality video of mating displays before engaging me, as a Queensland Museum consultant, to take high quality deep-focus images of freshly killed and arranged specimens.

Maria Fernanda initially wanted us to use our Hasselblad H4D-200MS camera in 6-shot, 200-megapixel mode, so she could print large images. Sadly, even with borrowed extra extension tubes, the spiders proved far too small for any available Hasselblad lens. We

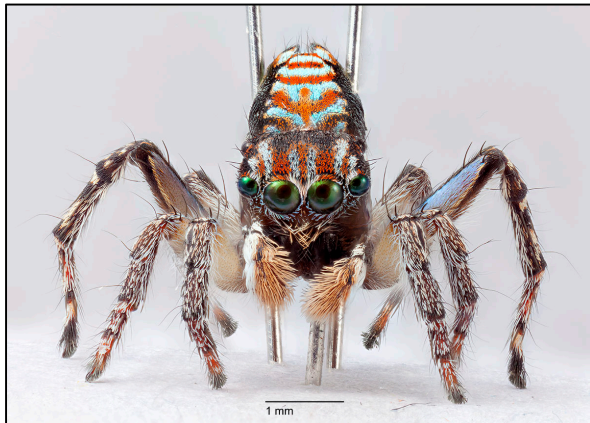
therefore used our Visionary Digital BK-Plus Lab system, with Canon 7D and 5D MkII Cameras. The 7D is 18 megapixels and the 5D is 20 megapixels. Both cameras can achieve the high magnifications needed; the 5D MkII with a Canon MP-E 65mm 1:2.8 1-5x, which can be boosted further when combined with a 1.4X tele-converter and extra extension tube, the 7D when used with an Infinity Optics K2



Four focus-stacked images of sections of a spread abdomen of *Maratus volans* taken with a 5X Nikon microscope objective on the Visionary Digital BK-Plus imaging system.



Merged 40 megapixel image produced with Photoshop CS6 from the above images.



We have produced paired images of males with spreadable abdominal flaps; a 20 megapixel image of the whole spider with the abdomen raised to be visible and a merged larger megapixel image of the spread abdomen.

Paired images of a male *Maratus plumosus* with abdomen flaps at rest (left) and spread (right).

Long Distance Microscope and a Nikon Plan Fluor 5X microscope objective.

Andy Wang did most of the arranging of specimens and pinning them in place with steels. He was also able to spread the tight abdominal flaps that in life are only spread during mating displays.

When considering Maria Fernanda's desire for big printed images, Geoff Thompson hit on the idea to use the 7D with the 5X Nikon microscope objective, focus stack sections of the abdomen and then merge them with Photoshop. He'd used the Photomerge function in Photoshop before to merge four 200 megapixel images of a large piece of lace but never on focus-stacked images before. The function works best with subjects with a lot of fine detail and these spiders certainly have that.

Using the 5X microscope, each stack is generally processed from between 30 and 70 source images, taken in even steps from top to bottom of focus. Zerene Stacker software is used to focus stack, i.e. take the sharp pixels out of them all and combine them into one sharp image. This produces a single, sharp 18-megapixel image. Geoff tried taking 4 focus-

stacked close-up images of the spread abdomen of *Maratus volans*. He then used Photoshop CS6 to merge them into a 40-megapixel image. To do this first open the files in Photoshop.



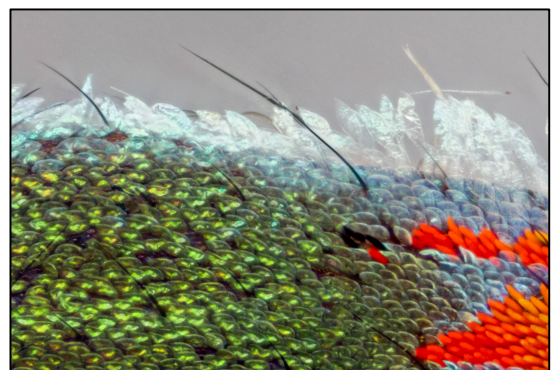
Then choose "File"+
"Automate"+
"Photo-merge". In the dialog box choose "Add Open Files" and either "Collage" or "Auto" depending on the images. Then click "OK" and the program

will do the rest. If there are errors using "Collage" close that panorama without saving and try again in "Auto" mode. The resultant image may need cropping and other editing before it is flattened and saved.

All images in this article are copyright Maria Fernanda Cardoso and are used with her kind permission.



We have also photographed associated females. Female *Maratus plumosus*



Details from the above merged image.

A newly described & published beetle in the Trogidae

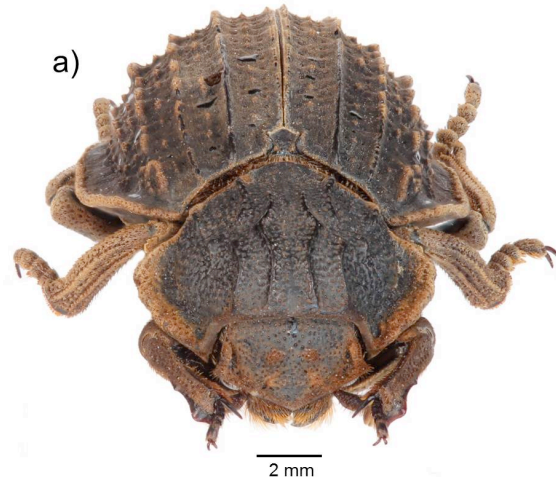
Julianne Farrell

During studies of necrophagous insect succession in pig carcasses that were used as surrogates for human corpses, Trogidae were found to be fairly common at the carcasses at a field site at Meringandan, north west of Toowoomba. They exhibit a remarkable feeding specialisation; adults and larvae of all known species are considered specialist keratin-feeders and able to digest keratin. Human corpses, because of their relatively hairless condition compared with most other animal carcasses, do not usually attract the same numbers of these beetles as do bird and other mammal remains. However, five *Omorgus* species (Trogidae) were frequent and abundant visitors to the carcasses at Meringandan.

One new species was collected by Julianne Farrell, flagged by Geoff Monteith as undescribed, then identified and described by Werner Strümpher at the University of Pretoria, South Africa. This new species has been named *Omorgus bachorum*.

Publication details are:

Strümpher, W.P, **Farrell, J.F**, Scholtz, C. H. (2014). Trogidae Macleay 1819 (Coleoptera: Scarabaeoidea) in forensic entomology. *Australian Journal of Entomology*, **53**: 368-372.



Images by Werner Strümpher



Assassin Bugs wanted: **ALIVE!**

I am conducting a project at the Institute of Molecular Biosciences/ University of Queensland looking at assassin bugs and hoping people might donate any LIVE assassins they see for a small reward. There are many assassin bugs in Brisbane suburbs and backyards, so if you happen to see one simply pop it in a jar and leave it with IMB reception for **Andy Walker** – or give me a call or text on **0419712754** and I will come and collect it! The rewards scheme is thus: a live assassin bug (nymph or adult, any species) will get you a bottle of red or white wine (or something equivalent for teetotallers and young contestants). Thanks!

--Andy Walker

Clustering insects during a heatwave

Archie Nahman (age 8)



On a dry, windy 42 degree day at Miva, I found huge groups of all sorts of insects sheltering at the base of a bopple nut and a gum tree, avoiding the sun and wind. The

most common insects were soldier beetles, red-shouldered leaf beetles and braconid wasps. The red-shouldered leaf beetles were also inside the house. They weren't attacking each other (except maybe the assassin bugs!).



Insect identification (with some help from Dad, Owen Seeman!)

Coleoptera: Cantharidae,

Chrysomelidae, Coccinellidae; **Diptera:** Asilidae, Muscidae, Sarcophagidae, Tachinidae

Hymenoptera: Apidae, Braconidae, Chrysididae, Ichneumonidae, Vespidae, **Hemiptera:**

Flatidae, Reduviidae, **Lepidoptera:** Lycaenidae.

Introducing a new member: Garry Sankowsky

My wife and myself started Australia's first Butterfly Farm on Mt Tamborine in the seventies - we moved to north Queensland in 1982 to set up breeding butterflies to supply pupae to butterfly farms in the UK. This went well till export regulations put a stop to it. I had always been interested in butterfly host plants and had collected a large number of them. As nobody was growing rainforest plants here I decided to set up a nursery supplying tubes of rainforest plants to other nurseries.

When the Kuranda Butterfly Sanctuary was setting up I worked for them for a couple of years but had had my fill of tourists at Tamborine so after it opened I went to work for Yuruga Nursery where I worked for 12 years till I retired in 2003.

My interests now are photography, rainforest plants, butterflies and host plants. Early this year New Holland Publishers contacted me about doing a butterfly book for their "Green Guide" series. I sent this off to them about a month ago and they have now talked me into doing one on Garden Wildlife. We have planted about 11,000 north Australian (mainly rainforest) plants on our 5 acre block at Tolga and have host plants for most of the northern species. See more on our website:

<http://www.rainforestmagic.com.au>



Red Lacewing. Photo: G.Sankowsky



Queensland Entomology News



Six new insect motif coins issued by the Australian Mint

A series of six spectacular new design one dollar coins featuring insects and dated 2014 have been issued as collector items by the Australian Mint and are available on-line at <https://eshop.ramint.gov.au/product-category.aspx?KWD=bright%20bugs> . Prices are \$15 per coin plus postage. This is partly to coincide with the 50th anniversary of the Australian Entomological Society. Using new technology the main insect image is presented in full colour on the normal brass background. One shows the famous Queensland stag beetle, *Phalacrognathus muelleri*, which is the symbol of the Entomological Society of Queensland. The others show the ulysses butterfly (*Papilio ulysses*), a bulldog ant (*Myrmecia* sp.), the sheep blowfly (*Lucilia cuprina*), the Leichhardt grasshopper (*Petasida leichhardti*) and a ruby wasp (*Stilbum* sp.). Another three coins with coloured insects will be issued in 2015 in a series of 26 alphabet coins showing Australian fauna. The A-coin shows ants, the V-coin show three versions of the variable ladybird beetle and the X-coin shows the xenica butterfly. These can be viewed at <https://eshop.ramint.gov.au/2015-1-Colour-Uncirculated-A-Coin/310462.aspx> and are also priced at \$15 each.

Spot the Errors... There are two entomological anomalies in the backgrounds to the insect designs. Can you pick them in the images above? The answers are on page 168.



Lycid team from Czech Republic visits Queensland

A group of taxonomists working on the beetle family Lycidae visited Queensland for a month in November-December. The leader was Dr Ladislav Bocak from Palacky University in the city of Olomouc in the Czech Republic. He runs an important DNA lab at his University which recently hosted Australian (and ex-Brisbane) beetle DNA specialist, Nicole Gunter, for a year long post doc. Traveling with Lada were his two PhD students, Michael Masek and Katerina Sklenarova. All three work with the Lycidae and Lada was busy getting background on the Australian fauna because he is writing the account of the family for the forthcoming volumes of "Australian Coleoptera" being coordinated by Adam Slipinski and John Lawrence. In Australia, the team was trying to get good representation of Australian taxa for DNA sequencing and was also hunting for larvae in litter and decaying wood in the hope that DNA might allow them to correlate larvae with adults. They were also keen to see the uniquely Australian spectacle of large numbers of these orange and black aposematic beetles, especially those with rostrate mouthparts, feeding on blossoms in Australian heaths.

They worked along the Border Ranges from Springbrook to Cunningham's Gap for the first fortnight, meeting up for two days at Lamington with Hermes Escalona from ANIC Canberra and Geoff Monteith from the Queensland Museum. Then they then headed north for a week to Eungella and Conway Range in central Queensland, calling in to see John Lawrence at Gympie on the way. Returning to Brisbane, they spent a day at the Queensland Museum to see the extensive North Queensland collections and then flew home on 17 December.

--Geoff Monteith



Collecting at Lamington are (L to R) Michael Masek, Katerina Sklenarova and Dr Ladislav Bocak from Czech Republic.
Photo: G.Monteith

Peter Doherty Science Education Partnership Award 2014

Dr Christine Lambkin (Curator Entomology, Queensland Museum) accepted her Peter Doherty Award on behalf of the Queensland Museum and Sciencentre presented by Mr Seath Holswich MP, Assistant Minister for Natural Resources and Mines and Member for Pine Rivers and Queensland Chief Scientist Dr Geoff Garrett on the 5th November at Customs House for the work that she and Noel Starick (QM Volunteer Entomology) have completed on the QM Backyard Explorer Program.



The Peter Doherty Awards for Excellence in Science and Science Education, which commenced in 2004, recognise students, teachers, support officers, schools, volunteers, mentors and organisations that have made outstanding and innovative contributions to science and science education in Queensland.



*Wishing everyone a
peaceful and happy
holiday season!*

--the Editor



Grand Opening of Daintree Rainforest Observatory



More than 15 years ago James Cook University arranged to have a proper building crane installed in the Daintree rainforest 140km north of Cairns. It is now called the Daintree Rainforest Observatory (DRO). The location is at Thompson's Creek, just south of PK's Backpackers Village. The site originally had accommodation for a resident manager, crane operator and for a few visiting researchers.

Recently, resurgence in interest in rainforest research has prompted the university to renew the site and accommodation for over 50 students and researchers now exists. It is an inviting place now with kitchens and ablution areas that leave little to be desired. The entire area is very eco-friendly.

The Grand Opening of Daintree Rainforest Observatory occurred on 20 November 2014 with the Member for Leichhardt, the Hon Warren Entsch MP and the JCU Vice-Chancellor Professor Sandra Harding in attendance. A member of the local indigenous community, the Eastern Kuku Yalanji, provided a "welcome to country".

The site has an air-conditioned laboratory outfitted with 50 microscopes and plenty of bench space. A power plant provides electricity but hand-phone access and internet facilities are unreliable.

A year or so ago, Dr David Tng and Dr David Rentz were asked to provide representative plant and insect collections. These are stored in the research laboratory and are available for reference by all visitors.

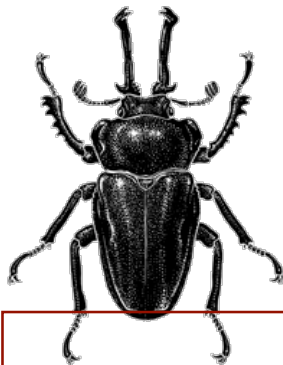
The plant collection is largely complete but the insect collection will continue to grow because collecting in the past 18 months or so has been very spotty due to the drought. A photographic record of many of the insects at Daintree Rainforest Observatory can be seen at <https://www.flickr.com/photos/naturenoises/>. Just proceed to the "Albums" and select "Rainforest Crane Project". More than 600 high-definition photos of insects at the site are there for reference and use by students and JCU staff in teaching and research. Photos of Daintree Rainforest Observatory insects are being added continually.

The Manager of the DRO site is Mr Peter Byrnes and he can be contacted at peter.byrnes1@jcu.edu.au for information on access and accommodation at DRO.

--David Rentz

To read more about the grand opening see:

<http://www.cairnspost.com.au/lifestyle/james-cook-university-opens-multimillion-dollar-daintree-rainforest-observatory-at-cape-tribulation/story-fnpqqh7k-1227130325859>



Announcements and Notices

Ent Soc of Qld Collecting Permit Reapplications Required

Our Queensland Parks and Wildlife Service (QPWS), Department of Environment and Heritage Protection (DEHP) Scientific Purpose Permit (WITK10612112 and TWB/03B/2012) expires in mid-January 2015 and the reapplication was submitted with the report in mid-December 2014 with a list of over 268 protected areas requested.

All financial members who wish to be endorsed on the new permit and who had submitted reports for 2014 **are asked to reapply** by completing and signing the on-line application form on the ESQ website at http://www.esq.org.au/pdf/esq_collecting_permit.pdf and sending it to the Permit Officer, Chris Lambkin at Christine.lambkin@qm.qld.gov.au. Endorsed permits will hopefully be sent out in January.

Be aware that Chris will be on leave for all of February and March 2015, and no endorsed permits will be sent out during that time.
--Christine Lambkin

Did you find the errors? (from p164)

On the stag beetle coin the two fighting males shown in the background are the common European species, *Lucanus cervus*. Its mandibles curve downwards, whereas the mandibles of *Phalacrognathus* curve upwards. On the bulldog ant coin, the ant immediately below the main ant image is adopting the often-illustrated threat posture of the green tree ant (*Oecophylla smaragdina*), with circular abdomen flexed over its back. Bulldog ants never do this.
--G.M.

A Message from the President *Changes to the Constitution*

It became apparent that our constitution needed a bit of an update. Council appointed a committee: Federica Turco, Peter Allsopp, (who masterminded the present constitution in 2006), and myself, to suggest appropriate changes. We have done so while trying to retain the intent of the present document and to minimise change. Those changes were supported at the Council meeting in December and are now being circulated to the membership so that they can be voted on at next March's AGM. The changes are indicated in "track changes" of a pdf document included with your bulletin this month.

Most of the changes were of a minor nature. More substantive changes include;

1. Indicating, after legal advice, the correct name of the Society and its legal position as a body corporate under *The Religious Educational and Charitable Institutions Acts, 1861 to 1977* (Qld)
2. Allowing Council to approve memberships but with an appeal mechanism.
3. Renaming the Junior Vice-President as the Past President
4. Setting minimum numbers of meetings (Council, general, and Journal Publication) to be called during year without being too prescriptive.
5. Requiring two thirds, rather than three fourths, majority for any future constitutional change
6. Some changes to tidy up membership termination.

Please advise me if you have issues with these changes so that we can expedite passage through the AGM.

--Bill Palmer

Entomological Society of Queensland

Office Bearer Nomination Form 2015

I nominate (name) _____

For the position of (tick one):

☐

President

☐

Senior Vice President

☐

Secretary

☐

Treasurer

☐

News Bulletin Editor

☐

Business Manager

☐

Councillor

on the council of the Entomological Society of
Queensland.

Nominated by

(Signature)

Seconded by

(Signature)

I accept the
nomination

(Signature)

Return completed and signed form to:

Honorary Secretary

Kathy Ebert

PO Box 537

Indooroopilly, QLD 4068

or by email

k.ebert@uq.edu.au

Please return form by 20 Jan 2015

Entomological Society of Queensland

\$500 Student Award 2015

This is an award by the Society to encourage entomological research. Honours, Diploma and 4th year Degree students who received their qualification from any Queensland tertiary education institution in 2014 or 2015 may submit their entomology-based thesis or report for consideration.

Entrants need not be Society members.

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.

These reports can be directed to the society's Senior Vice President at the address listed on the entry form. However, please note, 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 Federica Turco at federica.turco@qm.qld.gov.au

Closing date for submissions is Friday, April 10th, 2015.

2015 Student Award Entry Form

Also available at <http://www.esq.org.au/awards.html>

Name: _____

Title of thesis or report: _____

Degree: _____ Supervisor: _____

Date of Examiners report or grading: _____

Return address for thesis/report (if applicable): _____

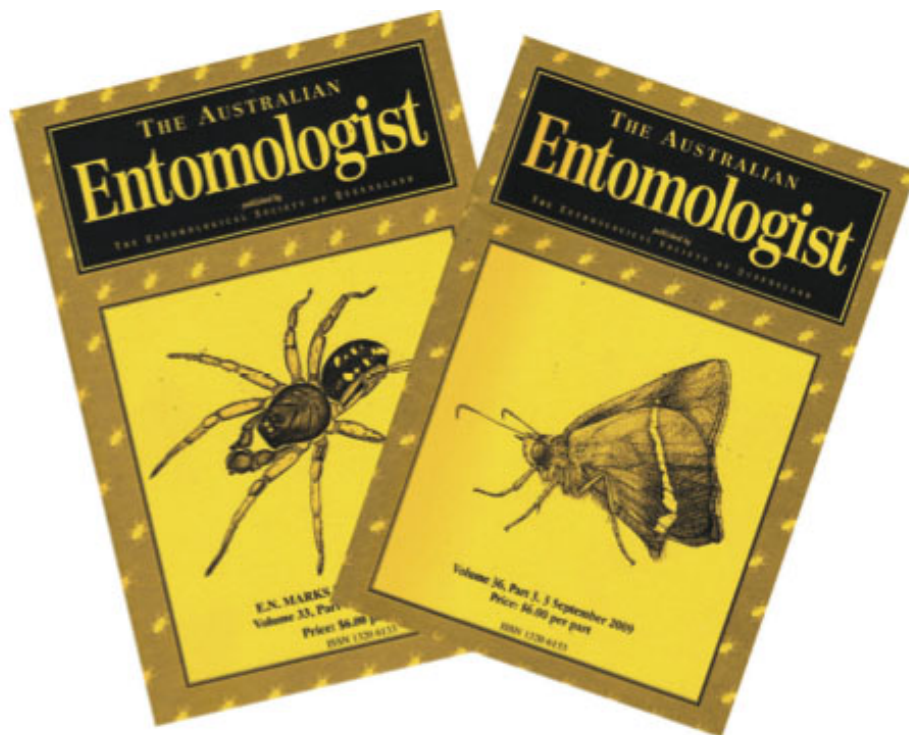
Signature: _____

Date: _____

Send in thesis/report with a signed and completed entry form to: Federica Turco, (email: federica.turco@qm.qld.gov.au), OR Senior Vice President, The Entomological Society of Queensland, PO Box 537, Indooroopilly Qld 4068 Australia

THE AUSTRALIAN Entomologist

A quarterly, full-colour magazine of original research on insects of Australia and the southwest Pacific



AN INVITATION TO SUBSCRIBE

This journal was commenced in Sydney in 1974 by Max Moulds and is now published by the Entomological Society of Queensland. It is one of the leading outlets for research on native insects in Australia and adjacent areas. It publishes much new information on Australian butterflies with more than 200 papers since inception. It is printed in full colour on quality paper, while the cover features work by Australia's top insect artists.

Annual subscription for individuals is \$33 in Australia, \$40 in Asia/Pacific and \$45 elsewhere. To subscribe send name and address with cheque or money order (payable to *Australian Entomologist*), to Business Manager, Box 537, Indooroopilly, Qld. 4068. To pay by credit card, send email to geoff.monteith@bigpond.com and an email invoice will be sent to you, or use the subscription form at http://www.esq.org.au/pdf/esq_subscription2014.pdf. Ask for a free inspection copy or enquire about our back issue sale at 75c/ copy for pre-2004 issues.

Meetings & conferences

19th Annual NZ Phylogenomics Meeting

February 1–6,
2015

Coronation Hall,
Otago Peninsula,
Portobello, NEW ZEALAND

<http://www.math.canterbury.ac.nz/bio/events/portobello2015/>



2015 Society of Systematic Biology conference

June 26–30, 2015

Guaruja, BRAZIL

<http://systbio.org/> (currently
no information about conference on website)



8th International IPM symposium

March 23–26, 2015

Salt Lake City,
Utah, USA

<http://www.ipmcenters.org/ipmsymposium15/>



Society for Molecular Biology and Evolution

July 12–16, 2015,

Hofburg Palace, Vienna,
AUSTRIA

<http://smbe2015.at/>



Central European Meeting of the International Union for the Study of Social Insects

March 26–29 2015

Schloss Schney

“Castle”, Litchenfels,
GERMANY

<https://www.bayceer.uni-bayreuth.de/iussi2015/>



15th Congress of the European Society for Evolutionary Biology (ESEB)

August 10–14, 2015

University of Lausanne,
Lausanne,
SWITZERLAND

<http://www3.unil.ch/wpmu/eseb2015/>



XII International Symposium on Neuropterology

May 12–15, 2015

Mexico City, Mexico

[http://](http://neuropterology.unam.mx)

neuropterology.unam.mx



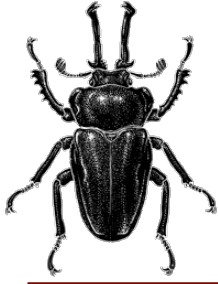
XXV International Congress of Entomology: Entomology Without Borders

September 25–30, 2016

Orlando, Florida, USA

<http://ice2016orlando.org/>





Diary Dates for 2014

Meetings held on the second Tuesday
of the respective month

MARCH 11	Dr Simon Lawson	AGM and Presidential Address
APRIL 8	Mr Mike Barnett	<i>Butterfly species and habitats in Africa</i>
MAY 13	Mr Dan Papacek	<i>Confessions of a Commercial Entomologist</i>
JUNE 10	Notes and Exhibits	Student Award Presentation/ Notes & Exhibits
AUGUST 12	Mr John McKeown	<i>The Entomologist gets the trout!</i>
SEPTEMBER 9	Dr Peter James	<i>Soft lights, black sheets and in-vitro breeding of Buffalo Flies</i>
OCTOBER 14	Dr Diana Leemon & the Beetle Buster Team	<i>A Slimy Solution for a Bad Bee-Hiving Beetle</i>
NOVEMBER 11	Dr Jeff Skevington	<i>Natural History and Systematics of Flower Flies (Diptera: Syrphidae)</i>
DECEMBER 9	Notes & Exhibits	Notes and Exhibits/Christmas BBQ

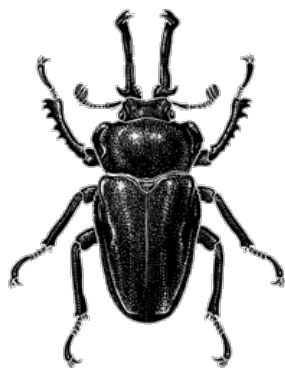
SOCIETY SUBSCRIPTION RATES

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	Student membership conveys full membership privileges at a reduced rate. Students and others at the discretion of the Society Council.	\$18pa

THE AUSTRALIAN ENTOMOLOGIST SUBSCRIPTION RATES

AUSTRALIA	Individuals/Institutions	AU\$33pa/AU\$37pa
ASIA/PACIFIC	Individuals/Institutions	AU\$40pa/AU\$45pa
ELSEWHERE	Individuals/Institutions	AU\$45pa/AU\$50pa

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



Entomological Society of Queensland



NOTICE OF NEXT MEETING

Tuesday 10th March 2015, 1:00 pm

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Annual General Meeting

Business will include:

Presentation of Annual Reports for the year 2014

Ratification of Revised Constitution

Election of Officers for 2015

Presidential Address by retiring President, Dr Bill Palmer

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

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

ALL WELCOME!

NEXT NEWS BULLETIN

Volume 42, Issue 10 (Jan/Feb 2015)

CONTRIBUTIONS WELCOME

DEADLINE - Friday, January 16th, 2015.

Send your news/stories/notices to the editor at: k.ebert@uq.edu.au