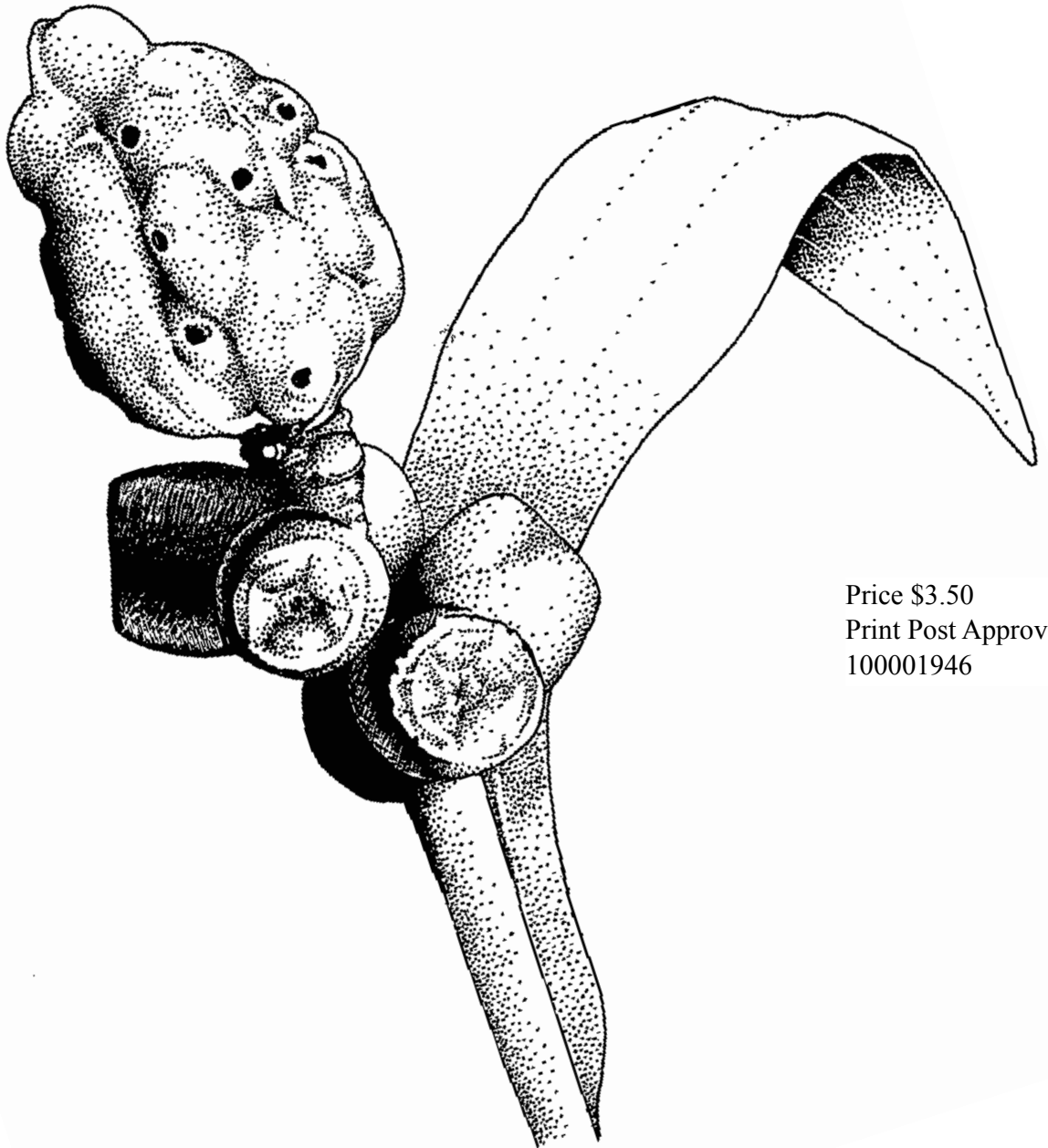


Entomological Society of Queensland

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Entomological Society of Queensland

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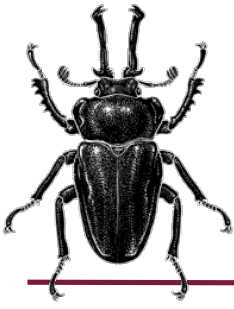
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Front Cover Illustration: This beautiful illustration is by Andrew Moore when he was employed with the Australian Biological Control Laboratory at Townsville, James Cook University. The Fergusoninidae gall fly, *Fergusonina turneri*, forms galls on the broad-leaved paperbark tree *Melaleuca quinquenervia* in a symbiotic relationship with *Fergusobia quinquenerviae* nematodes. The galls, located at the top of the stem, show adult fly exit holes. Although this insect was highly specific, it failed to establish after being released in Florida as a biological control agent.

ISSN 1037-2989



Entomological Society of Queensland

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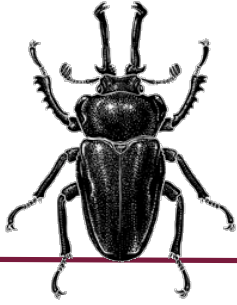
The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND**, since its inception in 1923, has striven to promote the development of pure and applied entomological research in Australia, particularly in Queensland. The Society promotes liaison among entomologists through regular meetings and the distribution of a *News 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. Emblem illustration by Sybil Curtis.

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, October 11th, 2016

Held in the Seminar Room, Ecosciences Precinct,
Boggo Rd, Dutton Park.

Meeting open: 1:04pm

Attendance (23): Lui Lawrence-Rangger, Claudia Schipp, Penny Mills, Geoff Monteith, Kathy Ebert, Giovanni Fichera, Andrew Hayes, Owen Seeman, Jacinta McMahan, Francesca Strutt, Shannon Close, Caitlin Johns, David Holdom, Don Sands, Susan House, Julianne Farrell, Des Foley, Lance Maddock, Nadine Baldwin, Brenton Peters, Bradley Brown, Luke Bennett, Mark Schutze.

Visitors (5): Richard Dylan Corner, Ngor Hoan, Lachlan Jones, Lille Gill, Andrew Dickson.

Apologies: Cate Paull, Tim Heard, Ross Kendall, Morris Cabell McKee

Minutes: The minutes of the last meeting were circulated in News Bulletin 44[6] September 2016. Moved the minutes be accepted as a true record:
Geoff Monteith
Seconded: Kathy Ebert
Carried: all

Nominations for membership approved by council:

General:

Kate Umbers
Sam Mitchel-Whittington

Students:

Jeremy Wilson
Campbell Ray
Patrick Green
Patrick Fahey
Kempsey Ledger

Students (cont'd):

Harriet Clark
Callum LeLay
Jane McKellar
James Booth

General Business:

The ESQ Council has approved the Small Grants Scheme, a new competitive initiative that will commence in 2017, providing up to \$2000 from ESQ Funds to support entomological research. Applications will be due by 31 March 2017 for funding to be allocated by the middle of the same year. Full details will be posted on the ESQ website and made available in the next ESQ News Bulletin!

Main Business:

Presentation by Madaline Healy on “Barefoot entomology – working as an entomologist in Laos”. Vote of thanks for Madaline’s presentation was provided by Andrew Hayes.

Next meeting: The next meeting will be on the 8th of November, presented by Dr Romina Rader on “*Understanding the mechanisms underlying effective crop pollination services*”.

Meeting closed: 1:50pm



UQ students enjoy a day of insect collecting at Gold Creek Reservoir.

At our next meeting...

"Understanding the mechanisms underlying effective crop pollination services"

*presented by Dr Romina Rader
School of Environmental and Rural Science
University of New England
Armidale, NSW*

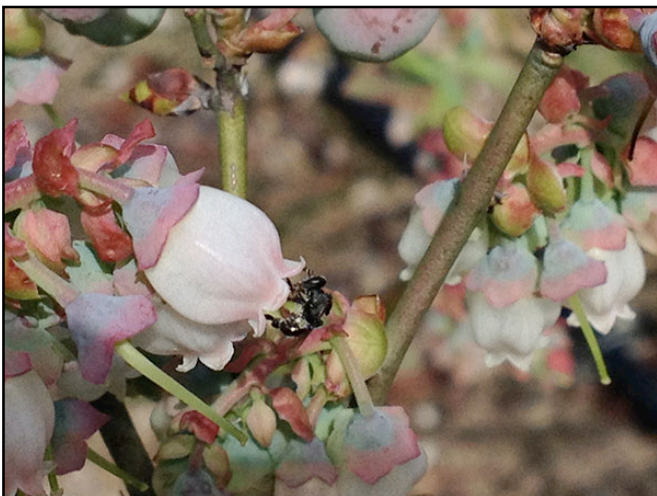


Worldwide, insect pollinators significantly contribute to biodiversity and the provision of ecosystem services within agricultural systems. While it is clear that the yield and quality of global food crops benefit to varying degrees from animal pollination, we still know little about the specific mechanisms by which different pollinators impact production. In this presentation, I will discuss some of the current work we are doing in this field, new developments in methods and how these can help us better understand the interactions between crops and crop pollinators.

About our speaker...

Romina Rader is a Lecturer in Community Ecology at the University of New England in Armidale, NSW. Her current research focuses on crop pollination by unmanaged insects, plant–animal interactions, the impacts of land-use change on biodiversity and the provision of ecosystem services by biodiversity in agricultural systems.

**Tuesday, November 8th at 1pm, Seminar Room at EcoSciences, afternoon tea following.
All welcome!**



Stingless bee on blueberry



European blowfly

Feature article

Barefoot entomology - working as an entomologist in Laos

presented by Madaline Healey

*University of Sunshine Coast
Australian Centre for International Agriculture Research*



Laos relies heavily on agriculture for domestic use, export and trade and subsistence living.

Agriculture employs over 70% of the workforce, with approximately 33% actively engaged in agricultural production. Many of the country's poorest people live in rural areas, most of whom are subsistence farmers.

Agriculture is seen as a key target area to assist with lifting people out of poverty, particularly as it is very common for vegetable growers to routinely lose between 20 and 50% of their yields due to pest pressure. With the Laos government working towards a goal to meet the World Trade Organisation's requirements for exports to the ASEAN economic community and international markets, vegetable production intensification will see increased plant pest pressure and significant on-farm losses. This will be a major challenge for the majority subsistence and smallholder growers as little crop health capacity exists to support farmers.



Madaline working with farmers in Savannakhet.

The Laos government acknowledges that there is a significant shortage of technical staff in the rural offices to accurately diagnose insect pests and then work on the ground with farmers to implement a response in the form of control strategies or development of integrated pest management programs (IPM). In a collaborative approach, the Ministry of Agriculture has engaged with provincial governments, the Crawford Fund and with the DFAT Australian Volunteers program to develop the skills of staff in the Provincial Agriculture and Forestry Offices (PAFO) of Champasak and Savannakhet. The program builds capacity of local counterparts in the areas of entomology, focusing on crop protection, biosecurity and food safety in the horticultural sector by engaging early career scientists as volunteers in short-term in country placements.

ລຳດັບ: ຄໍລິອອບຕິຣາ Coleoptera

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Identification cards were developed to help local farmers.



Teaching local farmers to identify insects.

The role of volunteers is to increase the knowledge of vegetable pests of local staff, and further develop an understanding of the principals of integrated pest management. This is achieved by combining hands on participatory learning in the laboratory, classroom and field, which allows for context-specific training to take place during field surveys, collection curation and the development of pest checklists. This also includes working alongside local growers to develop

gained the skills and confidence to conduct diagnostics and deliver crop health advice to local vegetable growers. As a result, they aim to see continued reduction of on-farm crop loss through better management and advice at the farm gate, and they expect to see further rural economic development of the smallholder farm sector. The team at PAFO continues to work toward improved capacity so that Laos can engage with and meet international agricultural export standards. Not only

by increasing national income generated through horticultural exports but also by providing further food security from a



and apply sustainable and cost effective integrated pest management strategies on farm.

Through attendance at train-the-trainer workshops, farmer field days and regular on-farm visits, the program is having an impact with improved IPM strategies observed on-farm. Some growers are producing seedlings in raised home nurseries, practicing on-farm hygiene by removing weeds and crop residues, all of which reduces on-farm crop loss through decreased pest incidence. The PAFO staff have

local to a regional level. This is a long-term commitment to capacity building in insect pest management in the horticulture sector in Laos, contributing to rural economic development of the smallholder farm sector by increasing crop protection capacity and decreasing on-farm crop loss.

Opportunities for entomology volunteers in Laos...

There are some great assignments being advertised in Plant Health in southern Laos again – plant pathology, entomology and horticulture. I was a volunteer in Pakse, where the Entomologist position would be based, and I had a close friend based in Savannakhet, just 6 hours north of there, where the pathologist and horticulturalist would be based. We both loved these cities – a little more remote, but loads more Lao culture and relatively easy to live in. These assignments have been planned carefully, to fill real needs with good counterparts, and have the support of the Crawford Fund, which includes opportunities for grants to get the work done as well as a fabulous e-mentoring network for professional and personal support. Also, I know most of the people you would be working with and they are great!

My time in Laos changed my life for the better, and I encourage you to get involved. If you want to discuss things on a more in-depth level please feel free to contact myself, or Lester, at the below contact details.

I highly encourage anyone with an interest to apply – it's an incredible opportunity and one you won't regret.

--Kylie Ireland, CSIRO

1. **Diagnostic Plant Pathologist**
2. **Horticulturalist Advisor**
3. **Entomologist Trainer**

Duration: 12 Months

Location: Laos

More Info: <http://bit.ly/2aNGJ0c>

A bit about Laos...

Laos is a poor, landlocked, and mountainous country in Southeast Asia. Agriculture, mostly subsistence farming, dominates the economy. Most people live in the valleys of the Mekong River and its tributaries, where rice can be grown on fertile floodplains. Soon after independence from France in 1953, the country fell into turmoil; in 1975 the communist Pathet Lao seized power with help from North Vietnam. Many fled the regime, and the U.S. resettled some 250,000 Lao refugees. One of the few remaining communist states, the economy is hampered by poor roads, no railroad, and limited access to electricity.

ECONOMY

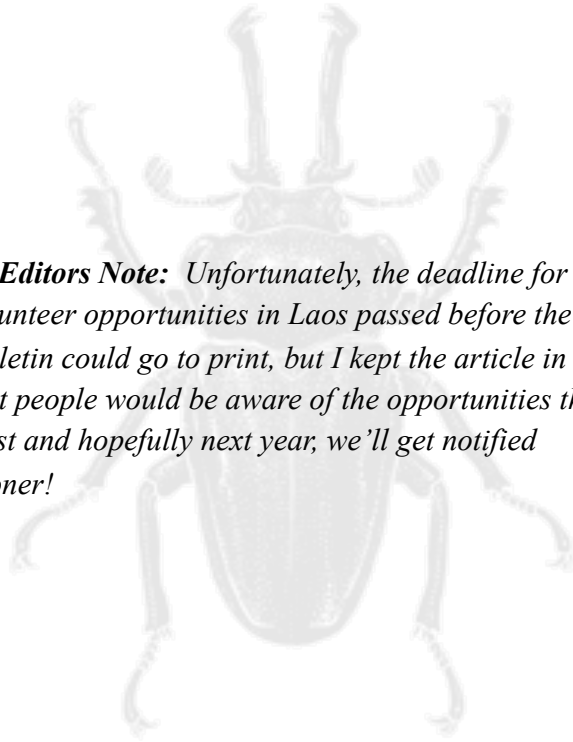
Industry: Tin and gypsum mining, timber, electric power, agricultural processing

Agriculture: Sweet potatoes, vegetables, corn, coffee; water buffalo

Exports: Wood products, garments, electricity, coffee, tin

–Text From *National Geographic Atlas of the World, Eighth Edition*

<http://travel.nationalgeographic.com.au/travel/countries/laos-facts/>



**** Editors Note:** Unfortunately, the deadline for the volunteer opportunities in Laos passed before the bulletin could go to print, but I kept the article in so that people would be aware of the opportunities that exist and hopefully next year, we'll get notified sooner!

A Report on the XXV International Congress of Entomology

-- Penny Mills
University of Queensland

The largest gathering of entomologists to date took place from September 25-30 in Orlando, Florida for the 25th

International Congress of Entomology.

The theme of the congress was "*Entomology Without Borders*".

There were 6,682 delegates from 102 countries that attended the congress, and 5, 396 presentations throughout the week. It was a massive conference, with some days having about 50 concurrent sessions.

The conference was officially opened on the Sunday evening by the co-chairs Alvin Simmons (Fig. 1) and Walter Leal. Several additional welcome speeches followed, including from the President of the Entomological Society of America, May Berenbaum, and the ICE Chairman Hari Sharma. The opening keynote speaker was Nobel Laureate Peter Agre (John Hopkins School of Medicine), who won his Nobel prize for his discovery of aquaporin channels. However, his research has now lead him to research malaria, and how the disease can be treated and controlled, particularly in underprivileged areas of the world.

There were nine other keynote speakers during the mornings of the conference, including Dr. Carolina Barillas Mury (National Institute of Infectious Diseases) who spoke about her work on the mosquito immune system and the *Plasmodium* parasites; Dr. Jacqueline Beggs (University of Auckland) who talked about her research on the biological control and population modelling of the introduced *Vespula* wasps; Dr. James Carey

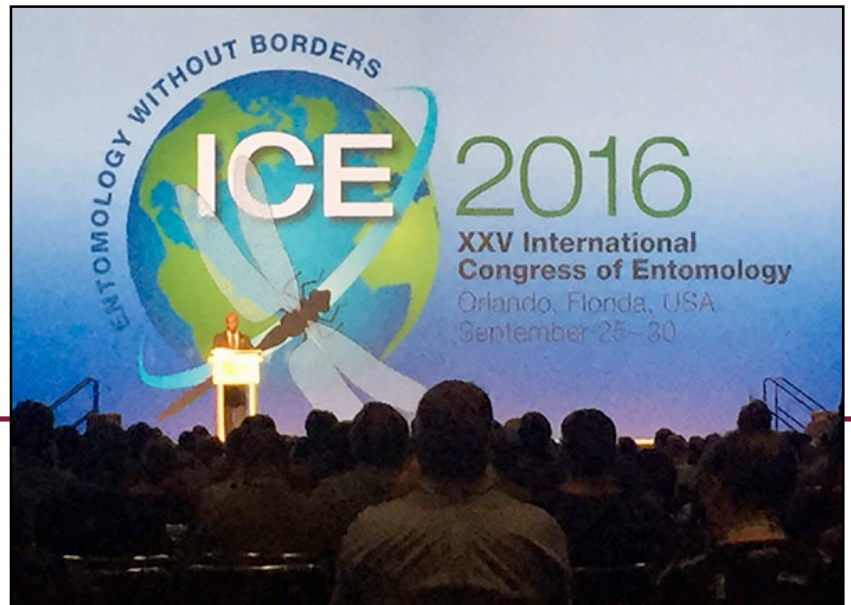


Fig. 1. Co-chair Alvin Simmons opening the XXV International Congress of Entomology in Orlando, Florida.

(University of California) who talked about lifespan limits to ageing in insects (biodemography); Nobel Laureate Dr. Jules Hoffman (Strasbourg University Institute for Advanced Study) who was awarded his Nobel prize for his discoveries on innate immunity; Dr. Jennifer Fewell (Arizona State University), who talked about social evolution in insects; Dr. José Roberto Postali Parra (ESQALQ-University of Sao Paulo) whose talk was on using *Trichogramma* for integrated pest management; Dr. Baldwyn Torto (International Centre of Insect Physiology and Ecology) who focuses on the conservation of honey bee diversity, food security and the improvement of management tools against vector-borne diseases transmitted by arthropods in Africa; Dr. John Pickett (Rothamsted Research) whose research is involved in the manipulation and exploitation of insect behaviours; and Dr. Fred Gould (North Carolina State University) spoke about the prospect of genetically engineered pests protecting biodiversity, crop production and health.

Unfortunately, delegates could not attend all the presentations given by the keynote speakers because on most days two were scheduled at the same time.

There was so many symposia sessions and paper-based oral presentations that the problem was

prioritising what talks and sessions to go to. The official congress app was extremely useful in this respect, allowing delegates to select talks to organise their timetable each day. Maps were also conveniently included in the app to help attendees to find their way to rooms in the maze that was the Orange County Convention Centre.

Sometimes it would take 10–15 min to walk from one room to another if you wanted to change sessions, which meant sacrificing some talks to listen to other ones. Also, there was only fifteen minutes allocated for the morning and afternoon tea & coffee breaks, which made it difficult to socialise when many delegates were grabbing a cup before strolling off to catch the start of the next session.

The exhibition hall included stalls about all things insects, from pest management companies promoting their products, American university groups selling insect-themed t-shirts and jewellery, modern technologies to help advance research, and stalls selling insect-themed gifts, clothing, collecting and processing gear, pinned insect displays and live arthropods to purchase (including scorpions and tarantulas).



Fig. 2. The first Australian-based team to compete at the Global Linnaean Games. Penny Mills (UQ), Justin Cappadonna (UQ), Dylan McFarlane (UQ) and Caitlyn Perry (University of Melbourne).

Student Activities

There were a number of student events held during the conference. There was a student mixer, where students could socialise over food and drinks, compete against one another in jumbo-sized games such as Connect4 and Jenga, or dance and party throughout the night at Club 39 at the Rosen Hotel.

There were two Linnaean Games competitions held during the conference. The first competition was of the ESA Linnaean Games competition where university teams (four students per team) representing the different entomological branches of America compete against one another in a team trivia competition. Two teams face off against one another and are awarded 10 points for a correct answer, but are deducted five points if they buzz in early and answer a question incorrectly. If a question is answered correctly, a bonus question is asked. The questions can be anything arthropod-based, from what insects Shakespeare refers to in a particular verse, to what is the name of the aquatic family of true bugs that carry their eggs on their abdomen. The winners of the ESA Linnaean Games was from the University of California, Davis.

The first ever Global Linnaean Games were also run at the congress. Last year during the AES conference in Cairns, the student director Gurion Ang organised a Linnaean Games style trivia competition that students at the conference could compete in individually. The individual scores of the students were tallied to pick a team of students that would go on and represent Australia at the Global Linnaean Games. Unfortunately, early this year the plan to send a team over fell through. However, a couple of days before the ICE conference, I noticed a facebook post by the Games organising asking if any international

students were interested in signing up and participating. I responded, and found out that no international teams had officially registered for the event. I started social networking, contacting some Australian students directly, and running into students during the first few days of the conference and asking if they wanted to form an Australian team. Justin Cappadonna (UQ), Caitlyn Perry (University of Melbourne), myself (UQ) (three of the original team members) and Dylan McFarlane (UQ) formed the first ever Australian-based team that competed at the Global Linnaean Games (Fig. 2).

Originally the competition was going to be similar to the ESA Linnaean Games, however, due to no international team registering to begin with, the first round was more a pub-style trivia where all the teams competed and had to answer 25 questions. The top two teams from the first round were then going to compete in the more traditional ESA Linnaean Games style form of the competition in the final.

Justin suggested our team name of "Down Under Dogs" after a few other suggestions that were shot down. We were underprepared (the three of us from the original team had stopped/hadn't started studying before the team fell through earlier in the year), and it seemed unfair that some of the teams were the college teams from the ESA Linnaean Games, but we had a go. We all provided answers to some of the questions, and although we didn't proceed to the final, it was a fun experience, and I was proud that Australia did manage to provide a team to the first ever Global Linnaean Games.



Fig. 3. Cockroach races being held at the Insect Expo during the congress.

It was disappointing though that during the student awards session for the ESA Linnaean Games, there was no mention of the Global Linnaean Games competition that had also taken place.

Also student debating teams competed against one another debating three separate topics:

- What would be the single best policy for improving health of *Apis mellifera* if adopted worldwide? (Mid-Grass Prairie Regional Team (WINNER) vs. University of Delaware).
- What is the single best strategy for decreasing dengue fever virus (breakbone fever) incidence worldwide? (North Carolina State University (WINNER) vs. Purdue University).
- Scenario: You are presenting a grant to an international agency to support control measures for an invasive insect species. Pick a species and explain to this agency why this is the most important issue they should be focusing on. The other debate team is competing for the same funding, but for a different invasive species (*Varroa* mites vs rice brown planthopper). (International Centre of Insect Physiology and Ecology (ICIPE) vs. Auburn University (WINNER))

Due to visa difficulties, only one member of the ICIPE team from Africa was able to travel to America. After noticing a tweet asking for help from the Australian students, I opted to fill-in and assist with the debate, even though my knowledge of *Varroa* mites and their affects on colony collapse in European honey bees was basic. However, I met a few more people and it was fun to be a part of a student debating team.

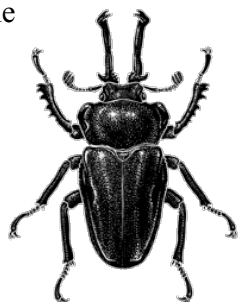
The overall winning team of the student debates was the team from North Carolina State University.

Insect Expo

An insect expo was set up during the conference, and included activities that children (and delegates) could participate in. Some of these activities included cockroach races (Fig. 3), painting with maggots (spreading out some paint on a piece of paper, dropping some maggots onto the paint and then letting them wriggle through the paint to form colourful tracks), an insect-tasting stall (I sampled several of the insect food variety on offer, such as sugar-coated mealworms, bran and insect mix, insects and M&Ms, and garlic and parmesan mealworms), live insect and non-insect arthropods on display, and cases of pinned and preserved insects representing much of the insect diversity (though no scale insects to speak of). It was a worthwhile event to attend, and hopefully it encourages some of the younger generation to take up an arthropod-driven career.

Although there were some difficulties due to the sheer number of entomologists, it was a worthwhile experience, with some fascinating talks about the advances and discoveries in entomology, and many additional activities which kept the delegates busy throughout the week.

The XXVI ICE will be held in 2020 in Helsinki, Finland.



Nearly November !?!

December Notes & Exhibits!!

Some of our most interesting and varied meetings are our 'notes and exhibits' meetings held every June and December. The December meeting is now approaching - think about something YOU could share!

Nominations for 2017 Council

The end of the year is nearly upon us! It's time to start thinking about nominations for 2017 council members. Are you interested in getting more involved in the Society? Nomination forms will be available next month on the website and in the bulletin. Like to know more about what council does and what it involves? Contact Mark Schutze, ESQ secretary at m.schutze@qut.edu.au

Membership Renewal 2017

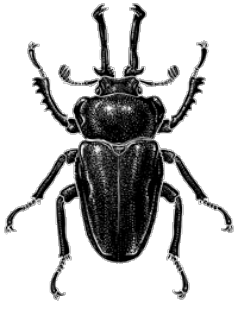
Membership renewals are due at the end of the year. Renewal forms are available on the website.

Student Awards for 2017

Are you finishing up your Honours degree this year or did you finish earlier this year? Is your project entomology related? The student awards for 2017 will be open in November. Deadline is April 2017. Details will be in the bulletin and on the website.

New ESQ Small Grants Scheme starting in 2017

The new society small grant scheme will be available next year. Have you got a project idea? Applications due in March.



Entomology News

from Queensland and beyond...



Whitley Award to *Insects of South-eastern Australia: an Ecological and Behavioural Guide*

ESQ member Roger Farrow recently received a Whitley Award commendation for the best book in the category of “Illustrated Guide” for his book “Insects of southeastern Australia: an ecological and behavioural guide”. Roger’s field guide uses host plants and behavioural attributes as the starting point for identifying insects. Roger is pictured below with Briana Melideo, editor of CSIRO Publishing, who helped make it all possible.

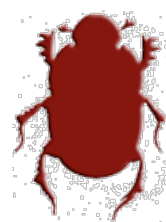


Briana Melideo, CSIRO Publishing editor with Roger Farrow at Whitley Awards night.



Keep up to date on the progress of the Bribie Island Butterfly House at their new website

Ray and Delphine Archer have been busy building and preparing for the opening of the new Bribie Island Butterfly House at 156 First Ave, Bongaree, scheduled to be open in summer 2016. For a preview of their butterfly plant nursery, information about their butterfly rearing and other programs or volunteering, you can visit their new website at www.bribieislandbutterflyhouse.org



Visit of French dung beetle ecologist

Emeritus Professor Jean-Pierre Lumaret has had a distinguished career at Paul-Valéry University in the important French science centre of Montpellier, where his research has been devoted almost entirely to dung beetles, especially their role in dung removal and their contribution to pasture health. He has had a particular interest in the toxic effects of certain veterinary chemicals on dung beetles and the potential this has to reduce their good work in both agricultural and natural ecosystems.



Left to right: Jean-Pierre Lumaret, Greg Sullivan, Geoff Monteith and Kathy Ebert thinking of dung beetles (what else!) in the bush at Gold Creek (Photo: Roselyne Lumaret).

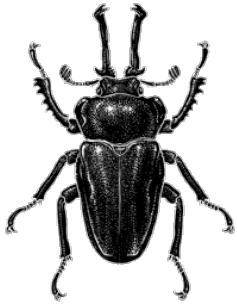
During the initial CSIRO campaign to introduce exotic dung beetles to Australia in 1969-1987 CSIRO maintained a small unit in Montpellier where they collaborated closely with Professor Lumaret on assessment of dung beetles from the Mediterranean climate zone for introduction to southern Australia which shares the same wet winter/dry summer climate. He has also been a close adviser for the recent CSIRO program (2013-16) to introduce two additional species (*Onthophagus vacca* and *Bubas bubalus*), both of which are Mediterranean climate species.

Jean-Pierre has been touring Australia with his wife Roselyne during September-October on a Frederick McMaster Fellowship to assess and advise on (a) the success of past dung beetle introductions and the need for further introductions, (b) the relevance of

further investment in the redistribution of dung beetles already introduced into Australia and (c) how best to evaluate/monitor economic, social and environmental benefits of historical and future dung beetle research to justify further investments.

Jean-Pierre visited Brisbane during the second week of October and met up with Greg Sullivan from UQ School of Geography, Planning and Environmental Management, who is close to the end of a PhD project on the ecology of dung beetles and energy flows associated with water buffalo dung in the Kizilirmak Delta Wetland in Samsun Province, Turkey. Jean-Pierre has been one of the advisers in that project

and they have produced some joint publications as it has developed. They both met up with Brisbane dung beetle researchers Geoff Monteith and Kathy Ebert and all four enjoyed a morning in the bush out at Gold Creek setting up traps for the coming student excursion (see photo). In one of those happy coincidences it turned out that 30 years ago Geoff had sent to Jean-Pierre larvae of the *Cephalodesmius* dung beetles which Kathy is studying for her PhD project and he wrote a 1983 paper on them with Renaud Paulian (1913-2003) who was one of the leading European scarab workers of the time. Sometimes it's a small world in dung beetle research!



Enthusiastic UQ students enjoy insect collecting at Gold Creek Reservoir

--Kathy Ebert
UQ Insect Science tutor

The UQ Insect Science class enjoyed a beautiful day out at the Gold Creek Reservoir on Saturday, October 8th, learning about insect collecting. We were very fortunate to be able to use the Moggill Creek Catchment Group's cottage as a hub for the day's activities. Twenty-three students, 5 visitors and 5 ESQ members joined course coordinator, David Merritt and myself to watch trapping demonstrations and have a go at collecting insects in the area all around the reservoir.

The morning started with trapping demonstrations. Marisa Stone from Griffith University demonstrated how to set up a canopy flight intercept trap using a bow and arrow and some fishing line. Students discovered that using a bow and arrow isn't as easy as it sounds! Having to negotiate branches and tangled lines were just some of the challenges Marisa talked about. Christine Lambkin from the Queensland Museum explained the workings of a



Students gather around at the cottage to hear about the plans for the day. Photo: Noel Starick.



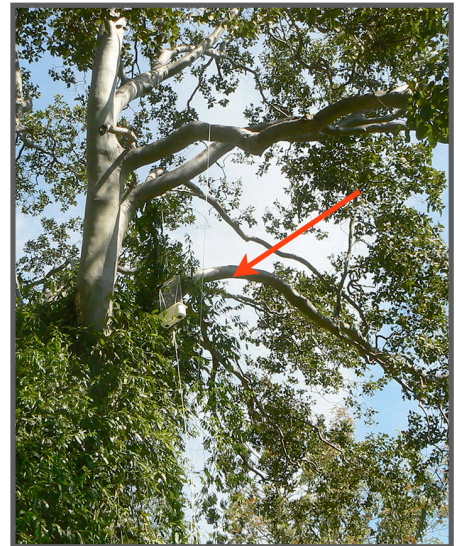
Chris Lambkin shows UQ student, Jane McKellar, how to look for thrips. Photo: Noel Starick.

Malaise trap with the students. I showed the students baited flight intercept traps and pitfall traps, both of which contained numerous dung beetles! The mushroom-baited traps had attracted the mushroom feeding *Onthophagus dunningi* while the dung-baited traps attracted an abundance of *Onthophagus bornemisszai*.

The afternoon was a busy time of collecting as the students worked hard trying to find 15 orders for their collections. The creek was a lovely spot to explore on the warm afternoon. Students found caddisfly larvae, mayfly nymphs and damselfly nymphs amongst the rocks. There was a swarm of adult mayflies as well. Several students managed to catch Chequered Swallowtail butterflies and Caper Whites.

ESQ members, Jason Mate and Perry Bennion joined us for the day. Jason found an interesting pollen and nectar feeding katydid (*Zaprochilinae*) to show the students.

Microscopes were set up on the verandah for students to use to sort through specimens. Leaf litter funnels yielded the usual assortment of litter dwellers plus an interesting beetle in the Rhipiphoridae. The



Marisa Stone from Griffith University explains the challenges of setting up a canopy flight intercept trap (left). The canopy trap set up in the tree (right). the red arrow points to the canopy trap.

Rhipidioides sp. was a male with reduced elytra and fancy antennae. The females of this species are wingless and the larvae are endoparasites of cockroaches.

The evening was warm and still: perfect for light trapping. Students were excited to collect Plecoptera, Megaloptera and Trichoptera at the light trap along with numerous moths and little brown



UQ student, Ting Xuan Li looks through the Malaise trap samples. Photo: Noel Starick



In the vine thicket, Kathy shows students the baited pitfall traps for catching dung beetles (left) and Christine explains the Malaise trap. Photos: Noel Starick and Kathy Ebert.



ESQ member, Perry Bennion looks for interesting ants.
Photo: Noel Starick.



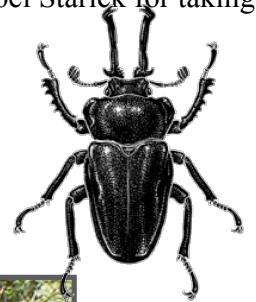
Flight intercept traps in the vine thicket at Gold Creek.
Photo: Noel Starick



Angelique and Kempsey sweep the long grass hoping to find some different insect Orders. Photo: K. Ebert

hemipterans (Cydniidae).

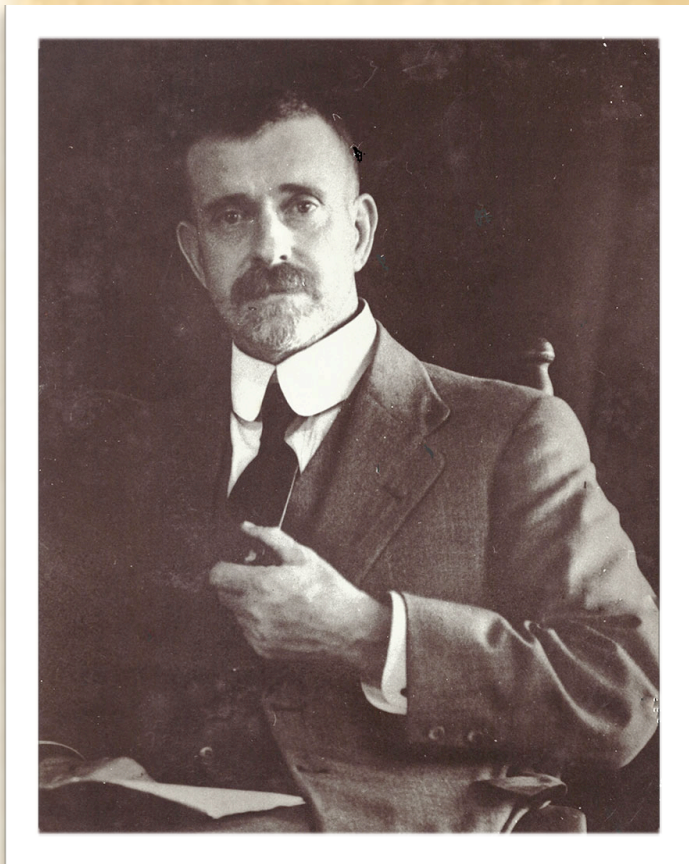
Everyone seemed to have a great day and we had lots of positive feedback from the students. In fact, several signed up to join the society! Thanks so much to all who came and made it a very successful day. And a special thanks to Noel Starick for taking heaps of photos to share!



Patrick searches for aquatic insects in the creek. Photo: K. Ebert

The History Corner...

Henry HACKER (1876-1973)

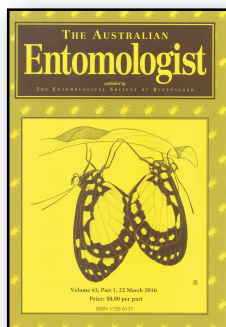


Born Walthamstow, Essex, England, son of surgical instrument maker. Early experience at British Museum. Arrived in Australia in late 1890s and went gold prospecting and insect collecting in WA, SA and NQ, often travelling long distances by bicycle. Supplied Coleoptera to many Australian taxonomists. Fought in Boer War 1900-1901. Farmed on Mulgrave River in NQ 1909-10 and was neighbour to butterfly collector, Conrad Kelsall. Sold 6000 Coleoptera to Berlin Museum in 1910. Appointed insect curator at Queensland Museum in 1911. Magnificent collector with great knowledge of habits and life histories. Built the QM research collections and made links with taxonomists around the world. Developed QM's public displays of insects. Skilled insect photographer. Published mainly on Hemiptera and Hymenoptera. Joined many of Perkins' UQ field trips. Seconded in 1929 to the Dept. of Agric. and Stock insect collection and served there until retirement in 1943, working 1-2 days per week at QM. Kept bees at his Herston home and became

apiary inspector at time of foul brood outbreak in 1931. At retirement, he sold his extensive collection of Hemiptera to American hemipterist, Carl Drake, whose collection went to the Smithsonian. Hacker was a founding member of Entomological Society of Queensland in 1923, serving on the first Council for 11 years, President in 1934 and Honorary Life Member from 1943.

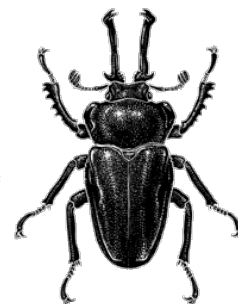
Biographies: Marks, E.N. 1973. *News Bulletin Entomological Society of Queensland* **100**: 13-16; Marks, E.N. & Dahms, E.C. 1974. *Memoirs of the Queensland Museum* **17**: 191-194; Monteith, G.B. & Mather, P. 1986. pp. 172-197 in *A time for a museum. The history of the Queensland Museum 1862-1986*. Queensland Museum, Brisbane.

AN INVITATION TO SUBSCRIBE



"The Australian Entomologist": A quarterly scientific journal devoted to entomology of the Australian-Pacific Region. 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. For subscription forms and Price list for 2017 see:

<http://www.esq.org.au/publications.html>



SOME SPRINGBROOK INSECTS



Phyllocharis cyanicornis (COLEOPTERA: Chrysomelidae)

Phyllocharis cyanicornis (COLEOPTERA: Chrysomelidae). Both adults and larvae of this striking leaf beetle feed on the foliage of native species of *Clerodendron* and occasionally on cultivated *Clerodendron* in gardens. Since they are more attractive than the flowers of the plant it would be a shame to deny them a nibble.

Last January, noted British insect photographer and phasmid expert Paul Brock, spent a week at Springbrook Plateau collecting and photographing insects. He has given us permission to use some of his pictures to show ESQ members some of the beautiful and interesting species they might encounter there on our BugCatch trip on the weekend of 19-20 November this year. Geoff Monteith has identified and captioned the photographs. Details about the excursion are given on the announcement page of this News Bulletin.



Trichosternus perater (COLEOPTERA: Carabidae)

Trichosternus perater (COLEOPTERA: Carabidae). This impressive ground beetle excavates burrows under the edges of stones and roots at Springbrook and hunts by ambushing other insects passing the burrow entrance. It lays large eggs in mud capsules and the

hatchling larvae live for a period in the burrow with the adult. Three are visible.



Aproidea balyi (COLEOPTERA: Chrysomelidae)

Aproidea balyi (COLEOPTERA: Chrysomelidae). Adults of this unusual leaf beetle resemble small green grasshoppers. Larvae feed on leaves of the twining lily *Eustrephus latifolius* and resemble small green caterpillars with an attenuate tail. The pupae hang from the larval skin and resemble the buds of the host plant.

Gminatus wallengreni (HEMIPTERA: Reduviidae). Many assassin bugs have bright colours to warn potential predators of their painful biting ability. They inject into the attacker for defence the same corrosive salivary fluids they inject into their prey turning their innards into the equivalent of a malted milk, ready to be sucked up.



Tambourina kelsalli (HEMIPTERA: Coreidae)

Tambourina kelsalli (HEMIPTERA: Coreidae). The males of this rare species have flared black and white flanges on the hind legs. It is restricted to SEQ and northern NSW and occurs in rainforests. It is one of the few Australian coreids for which we don't know the food plant.



Gminatus wallengreni (HEMIPTERA: Reduviidae)

Glyptoaptera montana (HEMIPTERA: Aradidae). Wingless aradids are rarely noticed because their camouflage is so perfect where they rest on the damp undersides of fallen wood in the dim rainforest. Camouflage is needed because during their long feeding periods on fungal juices they have their extremely elongate stylets pushed deep into the wood, locking them in position.



Glyptoaptera montana (HEMIPTERA: Aradidae)

Valanga irregularis (ORTHOPTERA: Acrididae). This is the largest short-horned grasshopper in Australia. It feeds on many broadleaf shrubs and is sometimes a minor pest in citrus orchards. It has a number of genetic colour morphs and this striking individual displays one of the less common forms. Most are uniform khaki all over.



Valanga irregularis (ORTHOPTERA: Acrididae)

Papilio aegaeus (LEPIDOPTERA: Papilionidae). Larvae of the Orchard Swallowtail feed on aromatic plants in the Rutaceae. They have their own aromatic defences. When disturbed they evert two bright pink tentacles from their head (the osmeteria) and these give off a strong odour.



Papilio aegaeus (LEPIDOPTERA: Papilionidae)



Lumirioxa araucariae (DIPTERA: Tephritidae)

Lumirioxa araucariae (DIPTERA: Tephritidae). Tephritid fruit flies are best known as fruit pests but some of the lesser known native species feed on sap flows. This striking, picture-winged species comes to the thick, sticky, milky flows of sap which come from injured hoop pines. This male is resting on the sap and wagging its wings alternately in a courtship display.

Candovia granulosa (PHASMATODEA: Diapheromeridae).



Candovia granulosa (PHASMATODEA: Diapheromeridae). *Candovia* includes rather plain looking phasmids without wings in either sex and three different species were found at Springbrook. This is *Candovia granulosa* with the smaller male in cop with the female on tree fern foliage at night.

Telostylinus lineolatus (DIPTERA: Neriidae). These alert, long-legged flies with the strange shaped head breed in decaying vegetation and groups of them display in territorial and courtship dances on rotting mulch and fruit on the rainforest floor at Springbrook.



Telostylinus lineolatus (DIPTERA: Neriidae)



Diphlebia coerulescens (ODONATA: Amphipterygidae). The damselflies of this family include some of the largest and most beautiful damsels in Australia. They are never found far from water and like to flaunt their colours on sunny perches near the water.



Speiredonia spectans (LEPIDOPTERA: Noctuidae). Known as the Granny's Cloak Moth because of the habit of roosting in groups for winter in dark cupboards, this moth has spectacular eye spots on its forewings. They normally roost in caves and hollow trees in nature.



Chauliognathus imperialis (COLEOPTERA: Cantharidae). Soldier beetles have toxic body fluids which they advertise by striking colour patterns. They feed on nectar of flowering shrubs and some other insects gain protection by mimicking their warning colouration.

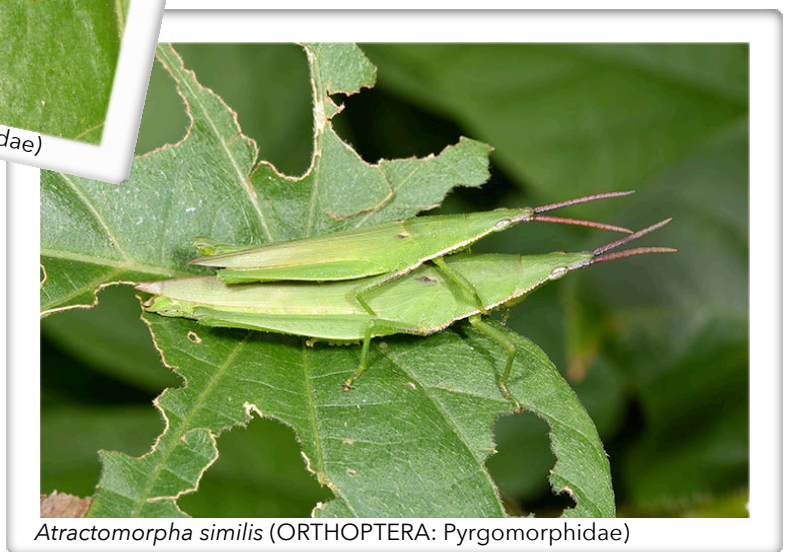
Cuspicona forticornis (HEMIPTERA: Pentatomidae)

Cuspicona forticornis (HEMIPTERA: Pentatomidae). This little shield bug with red-tipped spines on its prothorax feeds on the furry fruits of the introduced wild tobacco plants (*Solanum mauritianum*) along the rainforest edges at Springbrook.

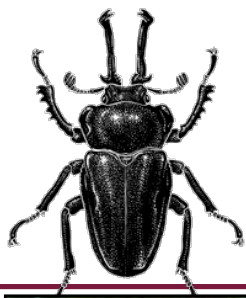


Chauliognathus imperialis (COLEOPTERA: Cantharidae)

Atractomorpha similis (ORTHOPTERA: Pyrgomorphidae). These streamlined little grasshoppers belong to a different family from most short-horned grasshoppers. It is characterised by a longitudinal split in the anterior projection of the head. They occur around the forest margins and feed on dicotyledons rather than grasses.



Atractomorpha similis (ORTHOPTERA: Pyrgomorphidae)



Announcements and Notices



Coming up: Springbrook Bug Catch weekend: 19-20 November!

The next ESQ BugCatch will be on the weekend of November 19-20 to the Springbrook Plateau. Springbrook is a high wet tableland lying between Lamington and the Gold Coast and is about a 90-minute drive from Brisbane. We will be guests of the Australian Rainforest Conservation Society (ARCS) and our basecamp will be on their extensive wilderness property called 'Ankida' which has several hundred hectares of rainforest with running creeks and waterfalls. We will have the use of a vacant house with showers, kitchen and lots of good camping areas right beside. Mains power is available at several spots for running light traps. Kathy Ebert and Geoff Monteith will be leading the camp with the help of Aila Keto and Keith Scott of the ARCS. Kathy and Geoff will also be running a dung beetle survey with participation from local residents; ESQ members are welcome to help.

Things to know:

- 🐞 participants staying overnight need to bring their own camping gear
- 🐞 we have access to showers and toilets in the house
- 🐞 participants can come for Friday and Saturday nights (and Sunday probably) if they wish.. or just for a day
- 🐞 there will be a group sausage sizzle and salad type meal on Saturday night which we will organise. If you wish to take part, let us know when you register. We will collect up a donation on the night to help cover costs.
- 🐞 electricity is available from two different locations to run MV lights
- 🐞 there will be a community dung beetle survey in addition and members are welcome to help with dung beetle trapping if they wish
- 🐞 Please contact Kathy Ebert if you are planning to attend so that we have an idea of who is coming and so that we can send you detailed information at k.ebert@uq.edu.au - Thanks!

Meetings & conferences



Phylogenetic Symposium 2016

18-20 November 2016

Leipzig University, Leipzig, GERMANY

<https://conference.uni-leipzig.de/phylosym2016>



Australian Entomological Society and Entomological Society of New Zealand 47th AGM and Scientific Conference

27-30 November 2016

Melbourne, AUSTRALIA

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

Gordon Research Conference SPECIATION 2017

February 19–24, 2017

Renaissance Tuscany Il Ciocco Lucca (Barga), ITALY

<https://www.grc.org/programs.aspx?id=16903>

3rd FAO-IAEA International Conference on area-wide management of insect pests: Integrating the sterile insect and related nuclear and other techniques

May 22–26, 2017

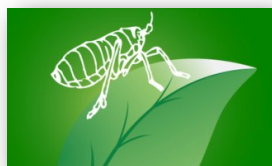
Vienna, AUSTRIA

3rd Hemipteran-Plant Interactions Symposium

June 4–8, 2017

Madrid, SPAIN

<http://www.hpis2017.csic.es/>



The 5th International Forum for Surveillance and Control of Mosquitoes and Mosquito-borne Diseases

May 22-26, 2017

Nanjing, Jiangsu Province, China.

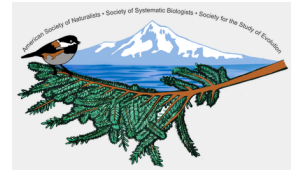
www.asiansvmc.org or www.mosquitoforum.net

EVOLUTION 2017 Joint Congress between the American Society of Naturalists (ASN), The Society of Systematic Biologists (SSB) and the Society for the Study of Evolution (SSE)

23-27 June 2017

Portland, OR

<http://www.evolutionmeetings.org/future-meetings-2017.html>



3rd BioSyst.EU meeting

August 15–18, 2017

University of Gothenburg, SWEDEN

<http://www.conferencemanager.se/BiosystEU2017/>



16th Congress of the European Society for Evolutionary Biology

20-25 August 2017

Groningen, the Netherlands

<http://www.eseb2017.nl/>

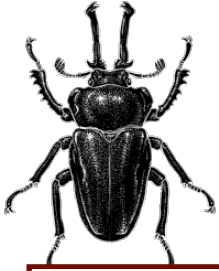


IV International Congress on Invertebrate Morphology (ICIM4)

18-23 August 2017

Moscow State University, Moscow, RUSSIA

<http://www.icim4.com/>



Diary Dates for 2016

Meetings held on the second Tuesday
of the respective month

MARCH 8	Federica Turco	AGM and Presidential Address: “ <i>Not only darkling beetles: a professional and personal journey among Tenebrionoidea beetles</i> ”
APRIL 12	Nigel Stork	“ <i>How many species are there on Earth</i> ”
MAY 10	Michelle Gleeson	“ <i>Little Bug-ers: educating and inspiring the next generation of budding entomologists</i> ”
JUNE 14	Notes and Exhibits	Student Award Presentation/ Notes & Exhibits
AUGUST 9	Julianne Farrell	“ <i>Processionary caterpillars: their ecology and relationship to equine foal deaths</i> ”
SEPTEMBER 13	Kumaran Nagalingam	“ <i>Functional role of male lures of Bactrocera fruit flies: potential to maximise their use in pest management</i> ”
OCTOBER 11	Madaline Healey	“ <i>Barefoot entomology – working as an entomologist in Laos</i> ”, <i>ACIAR Biocontrol in the Mekong</i>
NOVEMBER 8	Romina Rader	“ <i>Understanding the mechanisms underlying effective crop pollination services</i> ”
DECEMBER 13	Notes & Exhibits	Notes and Exhibits/Christmas Afternoon Tea

SOCIETY SUBSCRIPTION RATES

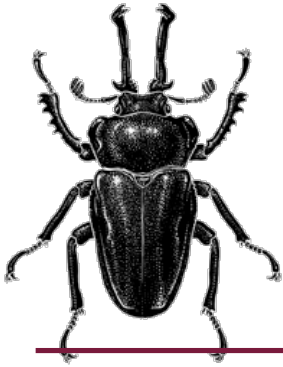
GENERAL	Person who has full membership privileges	\$30pa
JOINT	Residents in the same household who share a copy of the <i>News Bulletin</i> , but each otherwise have full membership privileges.	\$36pa
STUDENT	Student membership conveys full membership privileges at a reduced rate. Students and others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

ESQ membership subscriptions should be sent to the Treasurer, PO Box 537, Indooroopilly, QLD 4068
<http://www.esq.org.au/membership.html>

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<http://www.esq.org.au/publications.html>



Entomological Society of Queensland



Notice of next meeting:

Tuesday, November 8th, 2016, 1:00 pm



Dr Romina Rader

from University of New England

will present

*Understanding the mechanisms underlying
effective crop pollination services*

All welcome! Join us for tea and coffee following the meeting.

Ground floor Seminar Room, Ecosciences Precinct, Boggo Road, DUTTON PARK

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

Next News Bulletin:

Volume 44, Issue 8 (November 2016)

CONTRIBUTIONS WELCOME

Deadline Thursday, November 23rd, 2016.

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