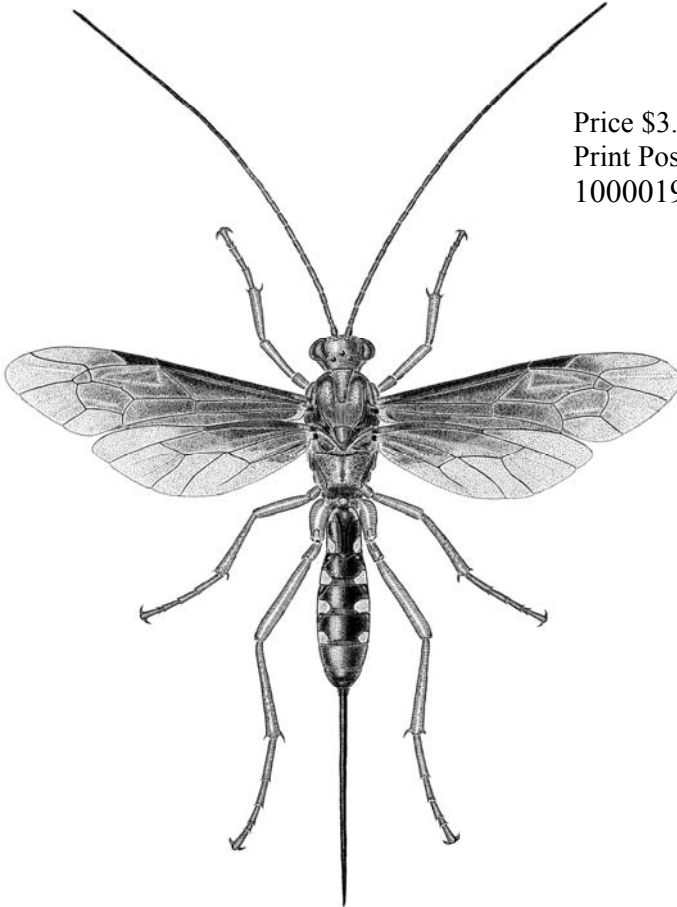




ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC NEWS BULLETIN

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Front Cover Illustration: Ink illustration by William Manley of a female *Lissopimpla excelsa* (Costa, 1864) (Hymenoptera: Ichneumonidae: Pimplinae), a parasitic wasp (image copyright Qld Department of Agriculture, Fisheries & Forestry).

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

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The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC.**, since its inception in 1923, has striven to promote the development of pure and applied entomological research in Australia, particularly in Queensland. The Society promotes liaison among entomologists through regular meetings and the distribution of a *News Bulletin* to members. Meetings are announced in the *News Bulletin*, and are normally held on the second 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.

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.



The Entomological Society of Queensland

Minutes for December General Meeting

Held in the Seminar Room, Ecosciences Precinct, Boggo Rd, Dutton Park, Tuesday, December 10th at 5:00pm.

Attendance: *Members:* Bradley Brown, Stephen Cameron, Lyn Cook, Kathy Ebert, Tim Heard, Chris Lambkin, Kevin Lambkin, Penny Mills, Geoff Monteith, Helen Nahrung, Bill Palmer, Brenton Peters, Matthew Purcell, Don Sands, Owen Seeman, Federica Turco, Peter Twine, Susan Wright, Richard Zietek.

Visitors: Archie Nahman, Harry Nahman, Alberto Venchi, Giorgio Venturieri.

Apologies: Julianne Farrell, Judy King, Morris McKee, Robert Raven, Noel Starick

Minutes: The November Minutes were circulated in News Bulletin Vol. 41(8). Moved the minutes be accepted as a true record: Simon Lawson. Seconded: Geoff Thompson. Carried: Unanimously.

Nominations for membership:

A nomination for membership was approved by Council to begin January 2014.

Ms. Leanne Nelson, Bardon, QLD, nominated Diana Leemon, seconded Peter James. Carried unanimously.

General Business:

1. Membership fees due the first of January; notices have gone out.
2. Reminder to Collecting Permit holders: Please send your reports to Christine Lambkin as soon as possible and no later than December 15th so that she has time to compile the report before the deadline.
3. The News Bulletin deadline has been moved up to Friday the 13th to get to the printers before Christmas break.

4. Nominations for Office bearers for 2014 are now open. See information elsewhere in this Bulletin..

Main Business:

Five interesting “Notes and Exhibits” were presented . First was Christine Lambkin speaking on “Mass emergence of a moth lacewing”, followed by Geoff Monteith presenting “Feeding and mating in an unusual shield bug” and “Larvae and pupae of the large rhinoceros beetle, *Haploscapanes australicus*”. Dave Walter presented “Moths of Canada”, Giorgio Venturieri, a visiting scholar from Brazil, spoke about “Domesticating Native Stingless Bees”, and finally, Geoff Thompson spoke on “Correcting chromatic aberration in digital images”. Their reports follow on p.142.

Next meeting: Our next meeting will be the Annual General Meeting on Tuesday, March 11th at 1pm. See details on back cover of this Bulletin.

Meeting closed at 6:10pm and members gathered for a Xmas breakup BBQ organised by Bradley Brown and Matt Purcell.

WANT TO JOIN THE SOCIETY?

Visit our website at <http://www.esq.org.au/> where you will find nomination forms and full details of fees and addresses. There are also forms for existing members to use to pay their subscriptions. Coming meetings and excursions are listed. Procedures for publishing in our journal, *Australian Entomologist*, are explained with a full Guide to Authors plus forms for taking out a subscription to the journal.



MASS AGGREGATIONS OF MOTH LACEWINGS (NEUROPTERA: ITHONIDAE)

Christine Lambkin & Noel Starick
Queensland Museum

Members of the curious neuropteran family Ithonidae are known as “moth lacewings” because of their chunky, hairy body and densely hairy wings which fold down alongside the body. There are currently ten genera worldwide: three in Australia, six in the Americas and one from SE Asia. Their subterranean larvae look like scarab grubs, and are now thought to feed on bark and roots to extract either sap or decaying liquid material. This contrasts with most other neuropteran larvae which are predators. They are usually considered rare insects, but there have been sporadic sightings of them in large swarms, including one from Cunninghams Gap in November 1958 by the late American bee taxonomist Charles Michener during a sabbatical year spent at UQ Entomology Department. The giant jar of them he collected was an object of worship by students who were awarded bonus points for such rarities in their assessment collections. We describe here sightings

made recently of *Megalithone tillyardi* Riek (Fig. 1), Australia’s largest species and the same one seen by Michener. It is currently known from SE Queensland down to eastern Victoria. We followed up a report of mass aggregations of this moth lacewing, every year for the last 16 years, at a property at Grapetree, near Crows Nest. Insects began appearing on 27 September this year, and we observed *Megalithone tillyardi* in large numbers in two locations on 11 October. Videos, photographs, and specimens were taken at and just after dawn, when numbers in the aggregations were reported to be highest. There were thousands of insects scurrying audibly across leaf litter in a part of the roadside verge approximately 10 m wide and 20 m long with *Pinus* overstory (Fig. 2). A large number of mating pairs were observed, and collected. Many insects were flying at dawn. Videos and samples were shown at the ESQ meeting.



Fig. 1 Aggregating *Megalithone tillyardi*, mostly males. **Fig. 2** The roadside verge collection site near Grapetree at sunrise. Photos Noel Starick.



FEEDING AND MATING IN AN UNUSUAL TESSARATOMID SHIELD BUG

By Geoff Monteith
Queensland Museum

Populations of the rare and unusual shield bug, *Peltocopta crassiventris* (Bergroth) (Tessaratomidae) have been discovered in recent years at Tallebudgera Valley and Dundowran, always on its only known food plant, *Mallotus discolor* (Euphorbiaceae). Observations have revealed that the highly modified females brood egg batches and then carry living nymphs on their specialised concave abdomen for the first two instars (Monteith 2006, 2011).

A female carrying young from Dundowran was transplanted to a young host tree in my St Lucia garden two years ago and these have established into a vigorous colony. The flattened, almost transparent, second instar nymphs overwinter on the leaf

undersides where they are almost invisible. They start to feed in early November and grow rapidly to adults within a couple of weeks.

Whereas most other Tessaratomidae (e.g. the Bronze Orange Bug, *Musgraveia sulciventris*) are stem or terminal shoot feeders, *Peltocopta* nymphs and adults feed exclusively on the proximal part of the midrib of well-developed subterminal leaves. The feeding position is always on the underside of the leaf where the bugs, especially the females, remain sedentarily for several days on one leaf causing brown callus damage to the midrib which is visible on the dorsal and ventral sides of the leaf (Fig. 1).

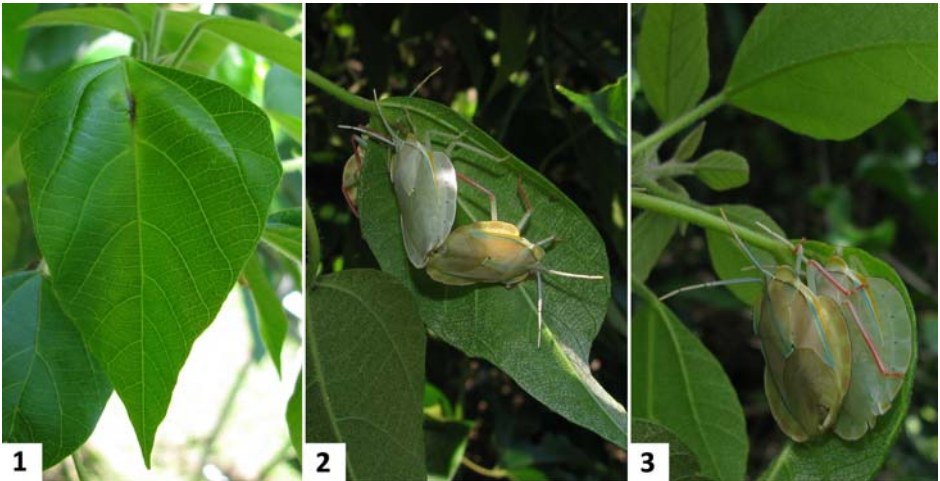


Fig. 1 Upperside of *Mallotus discolor* leaf showing necrotic damage to the midrib cause by *Peltocopta* feeding on underside. **Fig. 2** Pair mating on leaf underside while female continues to feed on midrib and second male lurks on upperside. **Fig. 3** Male mate-guarding a feeding female between bouts of copulation.

The brightly coloured males move about constantly searching for females. Females continue to feed during copulation. Copulation continues for several days with bouts of elevated end-to-end connection (Fig. 2) being alternated with mate-guarding by the males (Fig. 3) which rest on the female's back and defend her from other males by wing-buzzing.

References

MONTEITH, G.B. 2006. Maternal care in Australian oncomerine shield bugs (Insecta, Heteroptera, Tessaratomidae). In Rabitsch, W. (Ed.) *Hug the bug – for the love of true bugs*. Festschrift zum 70. Geburtstag von Ernst Heiss. *Denisia* 19: 1135-1152.

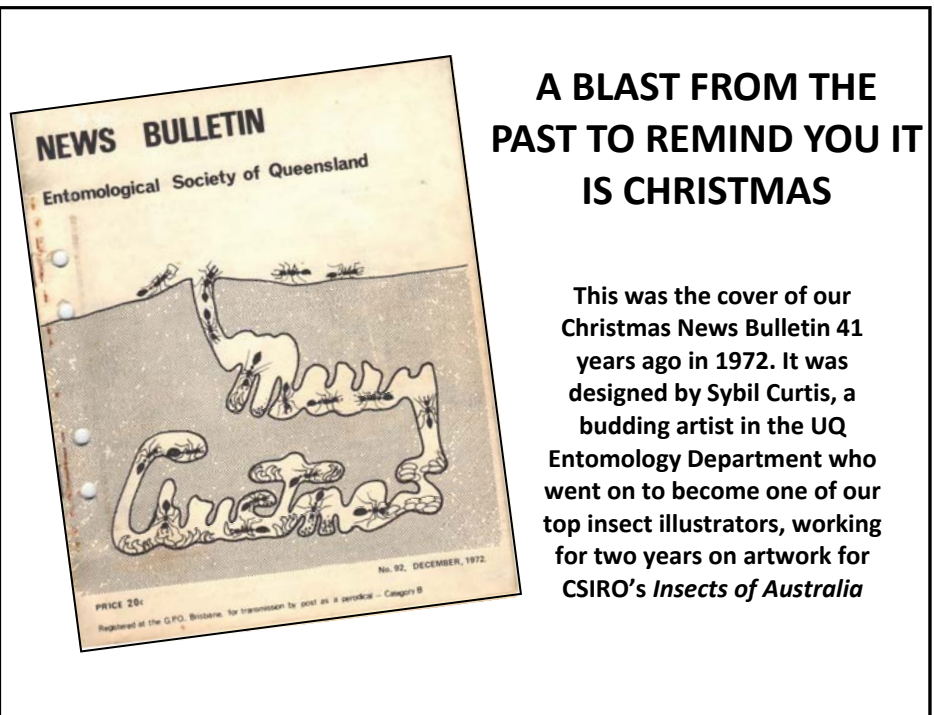
MONTEITH, G.B. 2011. Maternal care, food plants and distribution of Australian Oncomerinae (Hemiptera: Heteroptera: Tessaratomidae). *Australian Entomologist* 38(1): 37-48.

MESSAGE FROM THE TREASURER

Membership subscriptions for 2014 are due at the beginning of January. Your subscription notice was sent out last month by email or by enclosure with your hardcopy News Bulletin. There has been a pleasing response and we thank members who pay promptly. If you are unsure of your subscription status then please contact me by post or email.

We have lost contact with a few members. Please let me know if you have recently changed your postal or email contact details. Best wishes for the New Year.

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A BLAST FROM THE PAST TO REMIND YOU IT IS CHRISTMAS

This was the cover of our Christmas News Bulletin 41 years ago in 1972. It was designed by Sybil Curtis, a budding artist in the UQ Entomology Department who went on to become one of our top insect illustrators, working for two years on artwork for CSIRO's *Insects of Australia*

LARVAE AND PUPAE OF THE LARGE DYNASTINE, *HAPLOSCAPANES AUSTRALICUS*.

By Geoff Monteith
Queensland Museum

There are two very large rhinoceros beetles in SE Queensland. One is the very common *Xylotrupes ulysses* in which the male has a single bifurcate horn on both head and pronotum. Its large larvae are regularly found in old compost heaps in Brisbane and the adults sometimes form impressive, stridulating aggregations on poinciana trees in mid-summer. They also frequently come to house lights. The other is the much rarer *Haploscapanes australicus* (Fig. 1) in which the males have two widely separated, straight horns on the pronotum and a single, flattened, curved horn on the head.



Fig. 1 A male of *Haploscapanes australicus*



Fig. 2 Pupa of *H. australicus* removed from its cell.

It is rarely seen and almost never comes to lights. In July this year, herpetologist Steve Wilson brought me about 20 very large scarab larvae from a pile of rotten wood debris at the base of a large, newly-fallen dead tree near Kogan on the western Darling Downs. By early November they began to make pupal cells in the substrate and a couple of weeks later most had pupated into fine reddish brown pupae (Fig. 2). The presence of a pair of well-separated horns on the pronotum shows that they are undoubtedly *H. australicus* and this indicates that this species breeds in rotten wood in tree centres, rather than in compost-like situations. Richard Zietek, who was at the meeting, confirmed that they are this species and says he has bred them for several years in wood-rot substrates. He noted that they do not emerge from pupae for several months and this can be expected about March next year.



MOTHS AND MOTHING IN ALBERTA, CANADA

By Dave Walter
University of the Sunshine Coast

For the last 10 years I lived in the Canadian Province of Alberta, in and about its capital, Edmonton, about 53° North Latitude. Alberta shares some similarities with Queensland: mountains (Rockies), grasslands (Great Plains), and as one goes north both roads and people become increasingly sparse. But Alberta is only about one third the area of Queensland and is very young in the biodiversity sense: until 9-10,000 years ago glaciers up to 2 km thick had extirpated almost all life. Winters are long (7-8 months of snow) and cold (often reaching -40 C); summers are short, wet and cool. Much of the Province is covered in muskeg, boreal forest and wetlands. Then there are the mozzies and blackflies!

The biodiversity of Alberta is impressive (I described 17 new mite species while there) and before I left, I decided to learn at least one non-acarine group. Why I chose moths (>2,200 species) is a long story, but the short of it is because they were tractable. Alberta has amazing resources that support amateur interest in moths. These include a recent open-access checklist (Pohl et al. 2010), exemplary text (Powell & Opler 2009), and interactive museum (Strickland). More importantly, several excellent websites are full of images of reliably identified moths in their natural poses (see references below).



Fig. 1 Polyphemus Moth *Antheraea polyphemus* (Cramer, 1776) (Saturniidae).



Fig. 2 Black-rimmed Prominent *Pheosia rimosa* Packard, 1864 (Notodontidae). **Fig. 3** Virgin Tiger Moth *Grammia virgo* (Linnaeus, 1758) (Erebidae).

Most important, however, is *The Guild of Alberta Lepidopterists* - a mix of amateur, semi-professional and professional lepidopterists who willingly share time and expertise with novices. Felix Sperling and his current and former students at the University of Alberta form the core, but other specialists from around Canada contribute. The recent emergence of *National Moth Week* has further raised the level of enthusiasm and the 'Alta Lepers' have become fully engaged (see *Moth Night*). As for me, having moved permanently to Australia, I am eagerly awaiting my first Australian mothing adventure.

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Moth Night. Adrian Thyse. <http://bugs.adrianthyse.com/2013/12/moth-night/>

National Moth Week <http://nationalmothweek.org/>

North American Moth Photographers Group mothphotographersgroup.msstate.edu/MainMenu.shtml

The Alberta Lepidopterists' Guild <http://www.biology.ualberta.ca/uasm/alg/>

ENTOMOLOGY VOLUNTEER OPPORTUNITY

There is an Australian Business Volunteer (ABV) (<http://www.abv.org.au/volunteer/volunteer-with-us/>) opportunity opening up for an entomologist to spend two months in Savannakhet, Laos, from around May 2014. These placements are directed at more mature, experienced volunteers. The ABV program helps to cover accommodation and transport costs while in country, pre- and post-departure training, flights, health insurance and a modest daily living allowance. If you, or anyone you know is interested, please contact Simon Lawson at the below email address and he will put you in touch with the people involved on the ground in the program. (simon.lawson@daff.qld.gov.au)



AN AUSTRALIAN SABBATICAL ON STINGLESS BEES

By Giorgio Venturieri
EMBRAPA, Belem, Brazil

Giorgio Venturieri is a researcher with EMBRAPA, Brazil's national agricultural research agency. He is visiting Australia for 12 month sabbatical leave to work with Tim Heard of CSIRO. His research interests centre round stingless bees, their culture, biology and use for crop pollination.

In Brazil, Giorgio is based at Belem near the mouth of the mighty Amazon. Although a large proportion of the world's fresh water flows past his city each day, he still practises water saving measures when washing the dishes! As well as water, the Amazon is mega rich in stingless bee diversity. Stingless bees have evolved into a

dazzling array of sizes, shapes, colours, and behaviours. For example, one species has reverted to carnivory and scavenges carrion rather than collecting pollen! In villages and rural areas of Brazil stingless bees are often maintained for honey production in groups of colonies in specially made shelters known as "meliponarios" (Fig 1). The name derives from the genus name *Melipona*.

Australia's diversity is less spectacular with only about a dozen species rather than the hundreds in South America. Nevertheless Australia is moving towards utilizing their species for crop pollination and honey



1



2



3

Fig. 1 A 'meliponario', or group of stingless bee colonies kept by a village in Brazil. **Fig. 2** Stingless bee visiting a strawberry flower. **Fig. 3** Measuring internal temperature of a stingless bee colony .

production (Fig. 2). Giorgio is contributing to this research with a number of studies including: crop fidelity of pollen collection, use of mini-colonies and thermal relations.

Tim and Giorgio moved hives of two species into orchards of five subtropical crop species: macadamia, lychee, avocado, blueberry and strawberry. They determined the absolute numbers of bees foraging on the target crop relative to other plant species within their range. In addition Giorgio is developing a methodology of keeping

very small groups of bees alive in an incubator. This provides a methodology for bee biologists to test various biological aspects, like the survival of adult workers at different temperatures, the life span affected by different sources of food, food preferences, and time for virgin queens to reach sexual maturity. In addition, Giorgio is examining the internal temperature of hives of stingless bees (Fig. 3) and how close these temperatures are to the limit of survival of adults tested inside the incubator. The results of these studies will help the fast growing stingless bee industry in Australia.



CORRECTING CHROMATIC ABERRATION IN DIGITAL PHOTOGRAPHS

By Geoff Thompson
Queensland Museum

Chromatic aberration is the result of light dispersion, caused by the fact that the refractive index of glass differs with wavelength. The purple and green fringing it causes can be a serious problem in insect photography, particularly at high magnifications (Fig.1.).

Adobe Lightroom allows the photographer to correct for this aberration and make other adjustments, then save the settings as a preset and apply them rapidly to a large group of images. This is particularly useful in dealing with multiple source images when focus stacking. Lightroom is a relatively inexpensive program designed for photographers. Roy Larimer had set up our Visionary Digital systems to use Lightroom 3 as the first depository for camera raw photographs taken on the system. They are then adjusted and have metadata added before exporting as 16-bit tiffs for faster focus stacking. Lightroom versions 4 and 5 also offer a new defringing tool which results in significantly better images.

To make a preset, go into "Develop" on a single photo, on the right hand side first click on a neutral grey with the top eyedropper to correct colour balance. I've taken to photographing a small square of neutral grey card under the same lighting conditions as the insect and that gives the best result. Make other adjustments as desired. Then go to "Lens Corrections", then "Color". Firstly tick "Remove Chromatic

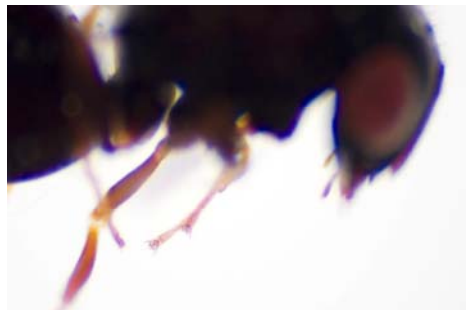


Fig. 1 Bad purple fringing chromatic aberration. Detail from a single-shot image taken with a K2 CF3 lens.

Aberration". This is a basic function to remove some edge colour aberrations. In Lightroom 4 and 5 there is also a "Defringe" tool which will apply throughout the image. You can use the eyedropper to sample the offending colour and/or adjust using the sliders on the amount and colour range of the defringe.

Once happy with all adjustments for a particular setup, go to the left hand side panel and click on the "+" besides "Presets" to save the settings as a new preset. Then go back to the "Library" tab in the "Grid" view

and apply that preset to the whole set of source images, using the "Saved Preset" down arrow under "Quick Develop" at the top of the right hand panel. After this, export them as tiffs for focus stacking.

The results using the colour aberration corrections have been a big improvement, particularly when using the microscope objectives on the Canon 7D K2 setup. It has meant being able to get good results with the 10x objective (Fig.2.) where before the 5x was the maximum practical magnification (Fig 3).

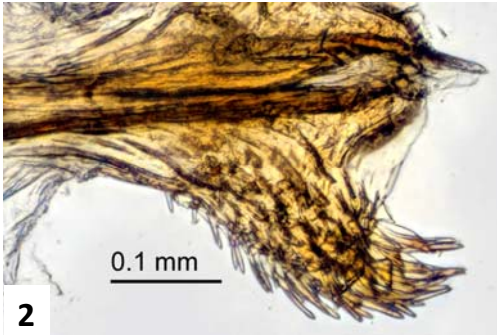
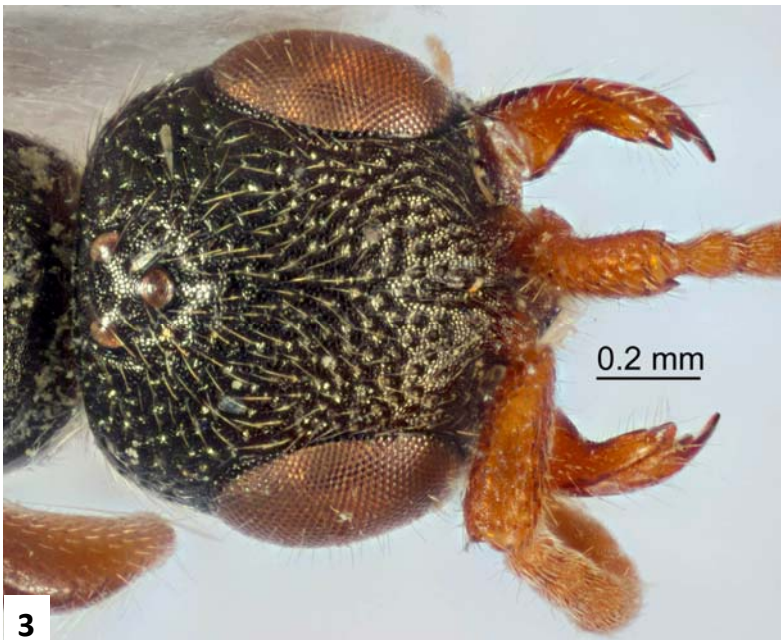


Fig.2 Detail of therevid aedeagus taken with a 10x microscope objective with Lightroom colour aberration corrections.

Fig. 3 Detail of head of a bethylid wasp taken with a 5x microscope objective and with Lightroom corrections.





REPORT ON SYSTEMATICS WITHOUT BORDERS CONFERENCE UNIVERSITY OF SYDNEY, DECEMBER 1 – 6, 2013

By Penny Mills
University of Queensland

‘Systematics without Borders’ was the title given to a recent conference which brought together the Society of Australian Systematic Biologists (SASB), the Australasian Systematic Botany Society (ASBS) and the Invertebrate Biodiversity and Conservation Group (IBC).

This was only the third time in almost twenty years that SASB and ASBS had organised a joint conference for the two societies, even though a number of delegates belong to both societies.

The conference was held in the New Law Building Annexe at University of Sydney and the organising committee consisted of: Nerida Wilson, Shane Ahyong, Dan Faith, Frank Koehler, Andrew Mitchell, Chris Reid (all from the Australian Museum), Peter Weston, Nathalie Nagalingum, Pauline Markwell, Alan Millar (all Royal Botanic Gardens), Murray Henwood (University of Sydney) and Karen Wilson (National Herbarium of NSW). A number of students and postdocs also assisted the committee during the conference.

Sadly, Elizabeth Brown from the National Herbarium of New South Wales had also been a member of the organising committee, but stood down due to illness. She passed away two weeks before the conference was due to start.

About 200 delegates attended, mostly from Australia, but there were also a number from New Zealand, and a few came from further afield including from Papua New Guinea, the Philippines, Chile and Nigeria (Fig. 1).

The first day of the conference was the welcome reception which allowed delegates to socialise before the conference was officially opened. The conference proper began on Monday, December 2, with a ‘Welcome to Country’ by indigenous representative Clarence Slockee, followed by a ‘Welcome to Conference’ from U. Sydney Professors Trevor Hambley and Robyn Overall.

There were many presentations across three days and talks of interest for entomologists could be found in a number of different symposia including: Human Dimensions, DNA Barcoding, Mind the Gap: Next Gen, ABRS Symposium, Plant-animal Interactions, Phylogeography, and Invertebrates Systematics.

The three keynote speakers (who kicked-off the conference each morning) were: Prof. Craig Moritz (ANU) who talked about genomic perspectives on species discovery, with a focus on several groups of Australian lizards (but applicable to a broader audience), Emeritus Prof. Phil Garnock-Jones (Victoria Univ of Wellington, who was presented with the Nancy Burbidge Medal from ASBS) who presented on sex and the land plant life cycle, concentrating on bryophytes (particularly on mosses), and Dr. Lyn Cook (UQ, Fig. 2) who looked at the assembly of the Australian insect fauna through the Cenozoic using a molecular phylogenetics approach, and whether the presence of lineages was due to dispersal or vicariance (or indeterminate).



Fig. 1 Conference delegates at the University of Sydney campus.

There were also a number of entomology-related posters at the conference with a systematic theme running through them.

At the end of the conference, student awards from ASBS and SASB/IBC were presented for the best ‘plant/fungi’ and ‘animal’ poster, and six other students received awards for their outstanding presentations, including next-generation sequencing to gauge a better phylogenetic estimate of the mollusc tree, investigating the likelihood of co-phylogenetic reconstructions and mountain-top fungal endophytes of the Wet Tropics.

Several optional field trips were offered to delegates before and after the official conference, however, due to extenuating circumstances, only the trip to Royal National Park (about 30 km south of The University of Sydney) went ahead on the Thursday, December 5.

ASBS will hold their next conference at Massey University, New Zealand in 2014, whereas SASB will once again hold a joint conference with IBC in Perth on 30th Nov. – 4th Dec, 2015.



Fig. 2 Keynote speaker, Lyn Cook, from UQ.

MULTIPLE PUBLISHING AWARDS TO QUEENSLAND ENTOMOLOGIST, DR ALBERT G. ORR

Gilbert Whitley (1903-1975) was an eminent ichthyologist at the Australian Museum and a noted historian and bibliophile. After his death, the Royal Zoological Society of NSW established a series of annual awards for 'outstanding publications containing significant information on Australasian fauna'. These have been awarded annually since 1979, these days at a gala evening each October at the Australian Museum. They are now indisputably the ultimate recognition for quality natural history publications in Australia. The awards consist of Certificates of Commendation for about ten sub-categories and a grand medallion, the Whitley Medal (Fig. 2), for the book deemed the overall best for the year.

We are pleased to report that two Whitley Medals were awarded this year to Dr

Albert (Bert) Orr (Caloundra, Qld) and Dr Vincent Kalkman (Holland), as co-authors of the beautiful *Field Guide to the Damselflies of New Guinea*. For Bert this follows on from an award of a Whitley Certificate of Commendation in the Natural History category in 2011 for the magnificent illustrated volume, *The Butterflies of Australia*, co-authored with Roger Kitching. He is shown working on a plate for this volume in Fig 1. It has more than 160 plates and over 1000 individual colour figures. His first book, *A Guide to the Dragonflies of Borneo* (2003), of which he was sole author and illustrator, was honoured by an award by the Worldwide Dragonfly Association in 2005 for 'outstanding achievements and contributions to science of odonatology'. He received a cash prize and was flown to Pontevedra, Spain to make a presentation to the WDA Conference that year.



Fig. 1 Albert (Bert) Orr working on illustrations for *The Butterflies of Australia* at his home in Caloundra.

Bert Orr has published two other books, *Dragonflies of Peninsular Malaysia and Singapore* (2005), of which he was sole author / illustrator, and *The Metalwing Demoiselles of the Eastern Tropics. Their Identification and Biology* (2007), with Matti Hämäläinen as junior author. All his books are shown in Fig 2 and are cited in full at the end of this article. The books all exhibit a strong scientific/taxonomic content

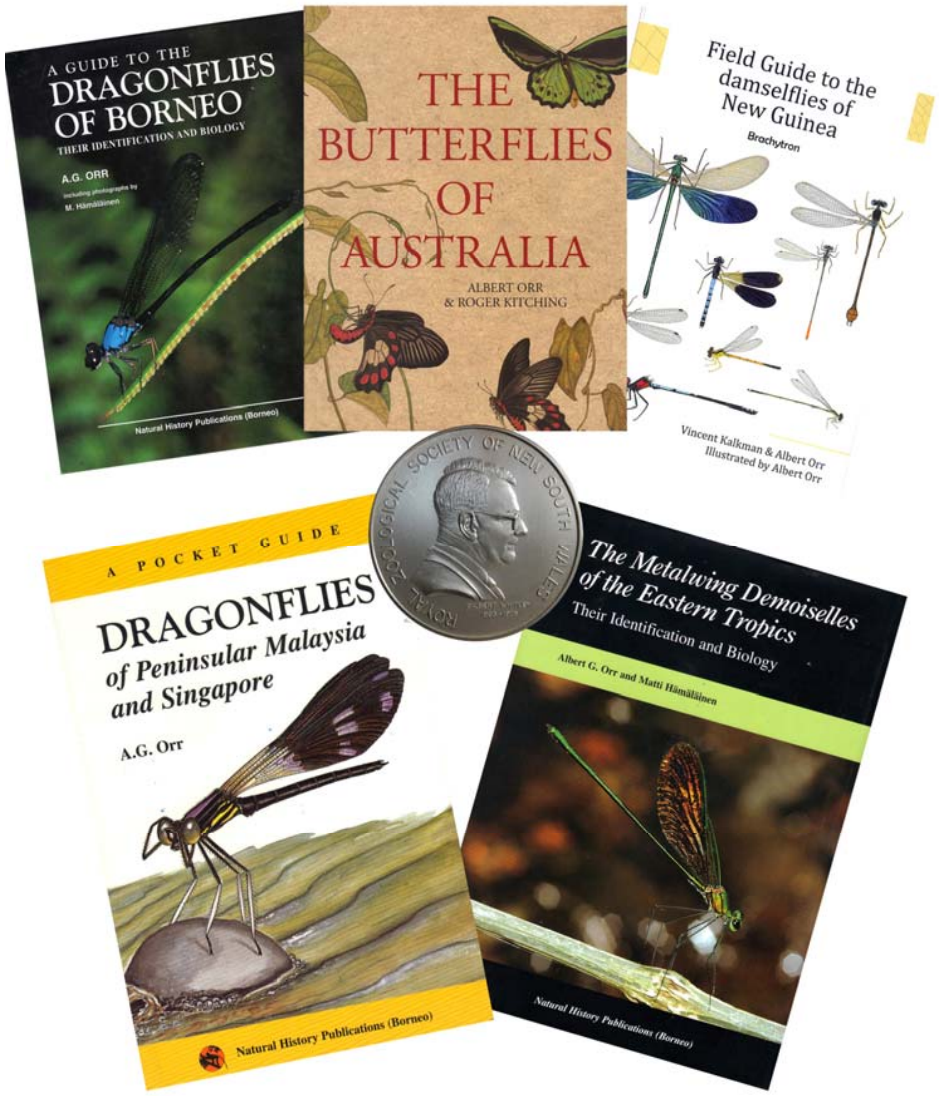


Fig. 2 Covers of Bert's five books to date. The top three have won awards. The Whitley Medal, won by *Field Guide to Damselflies of New Guinea*, is the centrepiece.

coupled with tremendously detailed and insightful field observations, plus an artistic ability that has the power to perfectly capture a living insect in its behavioural and

environmental context in relatively rapid brushstrokes (or penstrokes, depending on the medium). Lastly, his sheer output of illustrative work is quite humbling to ordinary mortals.



3



4



5



6

Figs. 3-6 Borneo days. **3.** Bert (R) with Finnish collaborator, Matti Hämäläinen. **4.** Weak in the knees after netting a male of the fabulous Rajah Brookes Birdwing, *Trogonoptera brookiana*. Alfred Wallace suffered similar symptoms (Photo Mike Parsons). **5.** In the field with his student, Princess Maha Chakri Sirindhorn, one of the Thai royal family (Photo courtesy the Princess). **6.** Beside a jungle stream. Bert describes himself as a 'sit and wait predator' for whom the behavioural observation is as important as the specimen.

Bert was born in 1953 and lives today in Caloundra, close to his earliest origins on a dairy farm near Maleny, where some of his first memories are of riding on the front of his father's saddle, sometimes catching glimpses of that iconic view of the Glasshouse Mountains which graces so many calendars and which Bert has used as the background to his Richmond Birdwings on p.133 of *Butterflies of Australia*. Gaining a boyhood interest in butterflies in 1965 he progressed to a BSc in entomology from the UQ Entomology Department in 1974 and around this period he had a couple of adventurous trips to Papua New Guinea. In 1988 he received a PhD from Griffith University for work on mating systems in butterflies, particularly the role of the sphragis or 'chastity belt' in species such as the Clearwing Swallowtail, *Cressida cressida*. This is when his perceptive observational skills came to the fore.

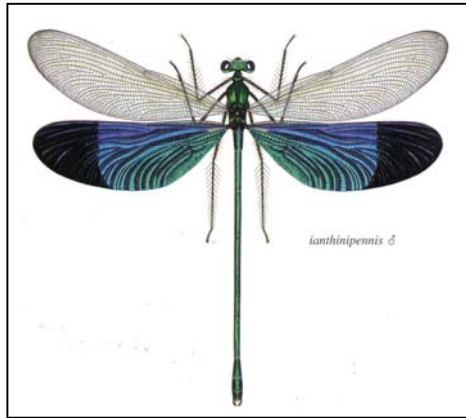


Fig. 7 The metalwing damselfly, *Neurobasis ianthinipennis*

In 1990 he commenced six years lecturing in ecology at the Universiti Brunei Darussalam, in the independent state of Brunei on the north coast of Borneo (Figs 3-6). His interest in dragonflies, long nurtured since undergraduate days, came to the fore here and was encouraged by the spectacular fauna and the wealth of tropical streams, large and small. It was also a period when he started to make contact with European odonatologists, particularly those connected to the museum in Leiden which contains major dragonfly collections from the "Far East". One of these was the Fin,

Matti Hämäläinen (Fig 3), who took early retirement as a stored product entomologist to study and photograph dragonflies; Bert and he collaborated closely on two of the books, with Matti's photographs complementing Bert's paintings.

Bert's first book project began on his return to Australia, and was greatly encouraged by publisher C.L. Chan's firm, Natural History Publications (Borneo), based in the adjacent state of Sabah, which has been a boon to quality natural history publication

in the region. This was *Dragonflies of Borneo* which featured 25 plates of Bert's paintings as well as many photographs by himself and others. Its success caused C.L. Chan to encourage a complementary handbook on the rest of geographic Malaysia, viz *Dragonflies of Peninsula Malaysia and Singapore*. In its compact 132 pages it illustrates 98% of the region's 233 species,

entirely by watercolour and line artwork, much of it sourced from study visits by Bert to the British Museum. This was soon followed by a treatise, also published by NHP(B), on perhaps the most beautiful dragonflies on earth – the so-called Metalwings (*Neurobasis* and *Matronoides*). Bert's illustrative ability rose to the challenge of depicting these gorgeous, yet frustratingly iridescent, insects (Fig. 7).

His fourth book, *Butterflies of Australia*, coauthored with Roger Kitching, is entirely illustrated in colour paintings, more than 1000 individual pictures. In it Bert has

ARACHNOLOGY VISITORS AT THE QUEENSLAND MUSEUM



As well as our much appreciated Barbara Baehr, Queensland Museum Arachnology has been blessed with three spidery visitors. Renan Castro Santana (left front) is from the central Brazilian state of Goiás where he has taught spider ecology and behaviour at the State University of Goiás and the University of Caldas Novas. He has been working as volunteer and on staff since November 2012 when his ability to learn and deal with new software and taxonomic concepts placed him on a steep learning curve. He is now the lead researcher on our Australian tarantula taxonomy project. Renan accompanied Robert Raven (right front), Andrew Amey and Barbara Baehr on their recent field trip to Cape York Peninsula.

Igor Armiaich (left rear) is a visiting researcher doing an MSc with Efrat Gavish Regev (and Robert Raven) from Tel Aviv University, Israel, on a Israel Taxonomy Initiative grant. Igor, originally from the

Ukraine, is working with Robert on the taxonomy of Racing Stripe Spiders (family Miturgidae) for 3 months.

Konstantin Bock (right rear) is from Germany and is doing an Internship on mygalomorph spider taxonomy with Robert for 6 months. He has been powering through identifications of accession specimens from UQ and the former DPI and helping work up papers on new species of *Euoplos*, diplurids and *Xamiatus*.

Barbara Baehr, after celebrating description of her 600th new spider species during the Leichhardt Bicentenary of which she was the subject editor of the special QM Memoirs volume, has joined Bush Blitz expedition to Mt Kosiousko and then continues her well-earned break in Newcastle.

Robert Raven
Arachnology, Queensland Museum

SEASON'S GREETINGS FROM THE PRESIDENT



As 2013 winds down, I hope you will agree that it has been a busy and successful year for the Society, with some highlights being: the new ESQ web presence, the very high standards of excellence in our Student Award applicants, well-attended general meetings, which included a great talk by Ken Walker for the Perkins Memorial, another very successful Bug Catch, and some bumper editions of the Journal and Newsletter. My sincere thanks go to all who have been instrumental in making this

happen, and especially to our tireless Council members working away behind the scenes.

I wish all our ESQ members a very Merry Christmas and a Happy and Prosperous 2014, and I hope to catch up with many of you again in the New Year.

All the best for happy and safe holidays!

Simon Lawson
PRESIDENT

NOMINATIONS FOR 2014 OFFICE BEARERS

Members are invited to use the form opposite to nominate office bearers for the Entomological Society of Queensland Inc. for 2014. Signed forms should be posted or emailed to the Secretary:

**Mail: Honorary Secretary,
Entomological Society of Qld
PO Box 537
Indooroopilly QLD 4068**

Email: k.ebert@uq.edu.au

Please return forms before the 28th of January, 2014. A list of nominations received will be circulated in issue 10 of the News Bulletin, and an election held at the Annual General Meeting in March 2014. In the absence of a nomination for any particular office, the President may receive

nominations at the AGM. Positions to be filled are:

Senior Vice President
Honorary Secretary
Honorary Treasurer
News Bulletin Editor
Councillor (3 positions)
Business Manager (Australian
Entomologist)

The Entomological Society of Qld functions effectively because members play an active part in the Society. All members are encouraged to nominate for positions on the Council. Please contact the Secretary or one of the existing Council members listed on the cover of the News Bulletin or on the website if you have queries.

OFFICE BEARER NOMINATION FORM 2014
Entomological Society of Queensland Inc.

I nominate (name)

- For the position of (tick one):
- Senior Vice President
 - Secretary
 - Treasurer
 - News Bulletin Editor
 - Business Manager
 - Councillor

on the Council of the Entomological Society of Queensland Inc.

Nominated by
(Signature)

Seconded by
(Signature)

I accept the nomination
(Nominee's Signature)

Return completed, signed form to:

Honorary Secretary
Kathy Ebert,
P.O.Box 537,
Indooroopilly, Qld., 4068

or by email k.ebert@uq.edu.au

by **January 28, 2014.**

Entomological Society of Queensland 2014

\$500 Student Award

This is an award by the Society to encourage entomological research. Entries are judged by a panel of three entomologists appointed by the president of the Society. The winner will be announced at the May 13 General Meeting and is then invited to present a summary of their research at the June 10 Notes and Exhibits meeting of the Society.

Honours, Diploma and 4th year Degree students who received their qualification from any Queensland tertiary education institution in 2013 or 2014 may submit their entomology-based thesis or report for consideration.

Entrants need not be Society members.

These reports can be directed to the Society's senior Vice-president at the address listed on the entry form. However, please note that a hard copy of your thesis/report does not need to be submitted, and the submission of a PDF version is encouraged. This should be emailed together with a signed copy of the completed entry form to Bill Palmer at bill.palmer@daff.qld.gov.au

Closing date for submissions is Friday 11th April 2014

Entomological Society of Queensland

2014 Student Award Entry Form

Name

Title of thesis or report

Degree

Supervisor

Date of Examiners report or grading

Return address for thesis/report (if applicable)

Signature_____ Date_____

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

by email : bill.palmer@daff.qld.gov.au

or by mail: Bill Palmer

Level 3C West

Ecosciences Precinct

GPO Box 267

BRISBANE. Q. 4001.

DUNG BEETLES (HELP) SAVE THE WORLD FROM GLOBAL WARMING

Cattle are notorious emitters of greenhouse gases from apertures at BOTH ends of the body. The copious dung they deposit also emits greenhouse gases, partly as methane, which is generated by anaerobic conditions in the centre of dung pats, and partly as carbon dioxide. Methane has a much more potent warming effect than does carbon dioxide. Recent research in Finland has shown that the aerating effect of burrowing activities of dung beetles inside cow pats reduces the proportion of methane being emitted in favour of the less harmful carbon dioxide. Their open access paper is cited below.

PENTTILÄ A, SLADE EM, SIMOJOKI A, RIUTTA T, MINKKINEN K, & ROSLIN T. (2013) Quantifying Beetle-Mediated Effects on Gas Fluxes from Dung Pats. *PLoS ONE* 8(8): e71454. doi:10.1371/journal.pone.0071454

IN DEATH THEY WERE NOT PARTED

Chinese insect palaeontologists have announced the discovery of the oldest example of insects fossilised in copulation. The male and female specimens of a new species of frog-hopper (Homoptera: Cercopidae) were discovered in 165 million year old Middle Jurassic beds in north-eastern China. Appropriately, the title of their paper starts with “Forever love..” and they continue the theme by making the two conjoined insects the holotype and allotype of a new species called *Anthoscytine perpetua*. They include illustrations of the fossil, as well as an excellent colour reconstruction of the insects as they would have appeared in life...doing the deed, as it were! Their paper, which is available for open access, is:

SHU LI, CHUNGKUN SHIH, CHEN WANG, HONG PANG, DONG REN. 2013. Forever Love: The Hitherto Earliest Record of Copulating Insects from the Middle Jurassic of China. *PLoS ONE*, 2013; 8 (11): e78188 DOI: 10.1371/journal.pone.0078188



We are a company dealing with export of fresh fruit and vegetables to New Zealand and Asia. I am looking for the services of an

entomologist in the Brisbane area for the identification of insects at various stages of their life cycle specifically for the diverse varieties of fruit flies known in Queensland. Please advise if you can recommend a suitable person / company. I thank you very much for your time.

Leigh Pershouse
Logistics Co-ordinator
leigh@harrowsmiths.com.au
Ph 07 38925703

DIARY DATES 2013

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

MAR—Tuesday 12th	Geoff Thompson	AGM and President's Address
APR—Tuesday 9th	Michael Ramsden	<i>Sirex</i> wood wasps in Queensland
MAY—Tuesday 14th	Dr Mike Furlong	Plant responses to herbivory: complex interactions between parasitoids, predators and prey
JUN—Tuesday 11th	Notes & Exhibits / Student Award Presentation	
AUG—Tuesday 13th	Dr. Doland Nichols	Bell Miner associated dieback of eucalypt forests
SEP—Tuesday 10th	Dr. Ken Walker	Perkins Memorial Lecture "My Digital Evolution and its Consequences"
OCT—Tuesday 8th	Prof. Mandyam V. Srinivasan	More than a honey machine: vision and navigation in honeybees and applications to robotics
NOV—Tuesday 12th	Prof. Helen Wallace	Promiscuous plants and strange bee behaviour: reproduction in Australian plants
DEC—Tuesday 10th	Notes & Exhibits and Xmas BBQ	

SOCIETY SUBSCRIPTION RATES

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

Student membership conveys full membership privileges at a reduced rate.

THE AUSTRALIAN ENTOMOLOGIST SUBSCRIPTION RATES

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

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



THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND



NOTICE OF NEXT MEETING

Tuesday 11th March 2014, 1.00 pm

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Annual General Meeting

Business will include:

Presentation of Annual Reports for the year 2013
Election of Officers for 2014

Presidential Address by retiring President Dr Simon Lawson

~

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

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

ALL WELCOME

NEXT NEWS BULLETIN

Volume 41, Issue 10 (February 2014)

CONTRIBUTIONS WELCOME

DEADLINE - Wednesday February 7, 2014

Send your news/stories/notices to
geoff.monteith@bigpond.com