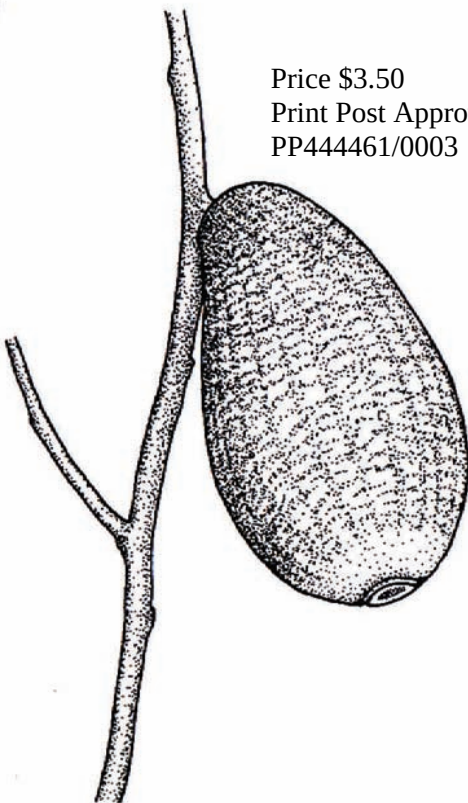
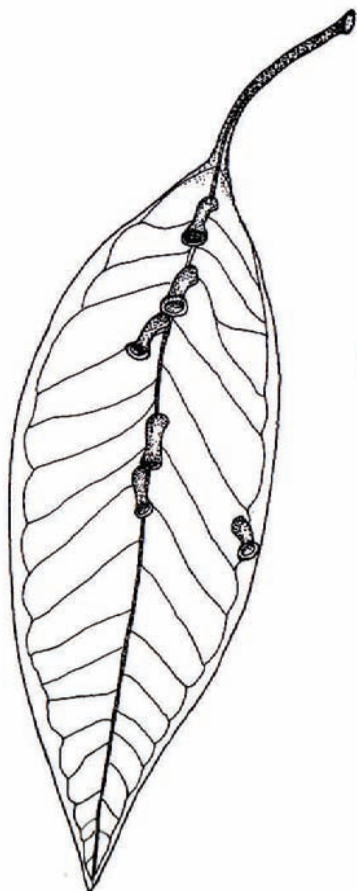




ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC

NEWS BULLETIN



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THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND

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Front cover illustration: Galls induced by the scale insect *Apiomorpha conica* (Eriococcidae) on *Eucalyptus obliqua*. Top: tubular galls on leaves induced by males. Bottom: gall induced by female on stem. Original drawing by Penny Gullan.

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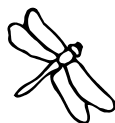


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The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC.**, since its inception in 1923, has striven to promote the development of pure and applied entomological research in Australia, particularly in Queensland. The Society promotes liaison among entomologists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

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

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

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

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

Minutes of General Meeting

Held in Meeting Room (Seminar Room 1—ground floor) Ecosciences Precinct, Boggo Rd, Dutton Park, Monday, September 12, 2011 at 1 pm.

Chair: Geoff Thompson.

Attendance: Justin Bartlett, Bronwen Cribb, Alexandra Glauert, Manon Griffiths, Andrew Hayes, Ross Kendall, Judy King, Simon Lawson, Diana Leemon, Lance Maddock, Gunter Maywald, Penny Mills, Geoff Monteith, Helen Nahrung, Geoff Thompson, Federica Turco, Edward White.

Visitors: Lynne Griffin, Liam Haverty, Janet McDonald, Aidan Mischke, Steven Rice, Kathy Thomson.

Apologies: Lyn Cook, Ross Kendall, Chris Lambkin, Chris Moeseneder, Matthew Purcell, Desley Tree.

Minutes: The minutes of the last General Meeting were circulated in News Bulletin Vol. 39, Issue 5, August 2011.

Moved that the minutes be accepted as a true record: Judy King

Seconded: Alexandra Glauert
Carried unanimously.

Business arising
None.

Nominations for Membership:

The following nominations for general membership were received and approved by Council, and are put forward for election:

Dr Andrew Hayes, nominated by Desley Tree, seconded by Simon Lawson.

Professor David Emery, nominated by Lindsay Popple, seconded by Judy King.

Elected unanimously.

General Business:

1. Reminder to collecting permit holders that reports must be sent to Chris Lambkin by the end of September.

2. Bug Catch on October 8 at the Brisbane Koala Bushlands. Details in the August News Bulletin.

Main Business

Smelling the forests for the trees: semiochemicals for forest pest management

a presentation by

Andrew Hayes, Helen Nahrung, Manon Griffiths & Simon Lawson (DEEDI Forest Health)

Vote of Thanks: Judy King.

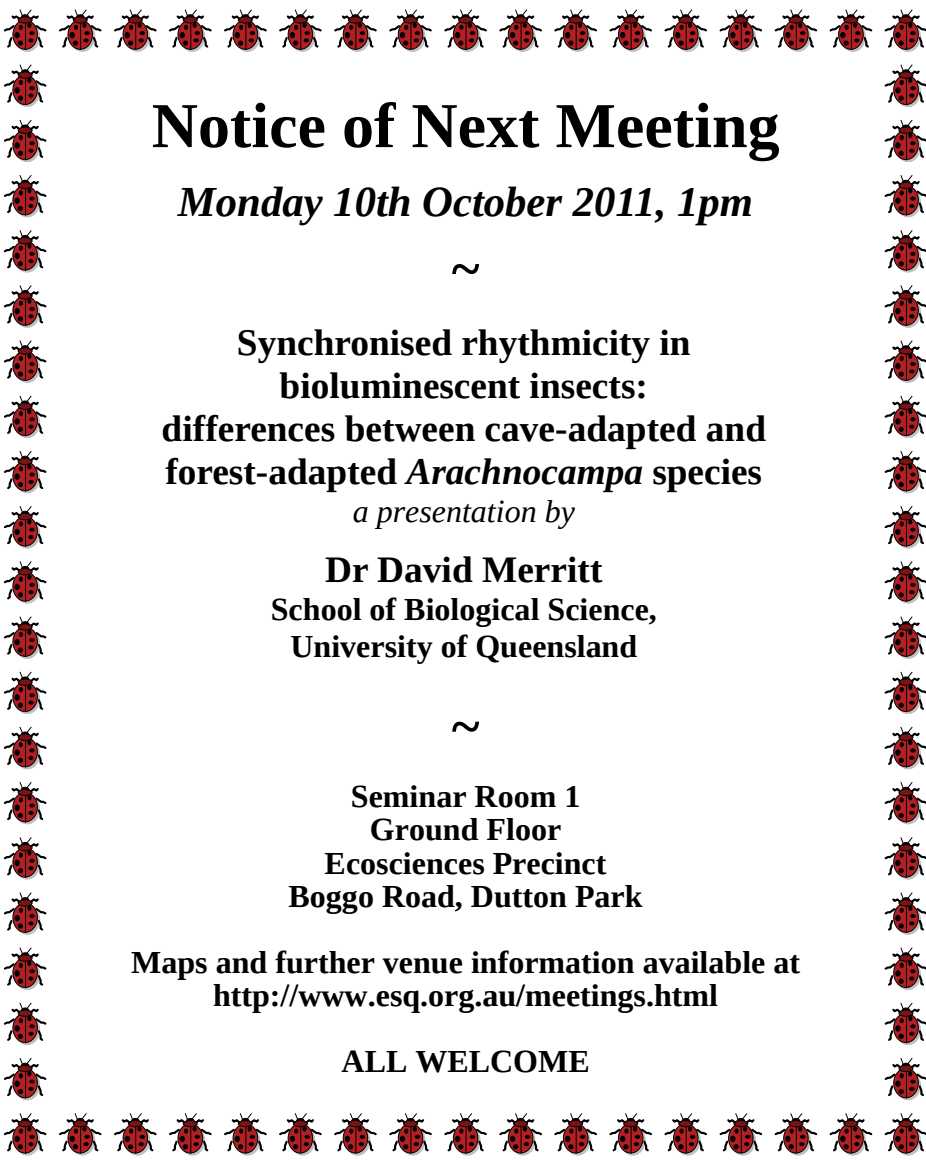
Any other business:

1. Reminder that the next meeting will be on Monday, October 10, at 12pm, and the November meeting will be The Perkins Memorial Lecture. The meeting will begin at 5pm and will be followed by a barbeque.

2. Bronwen Cribb suggested that members should be reminded by email, where possible, that their subscriptions are late. Emails are usually responded to more quickly than a paper reminder.

The Chair closed the meeting at 2.05pm

Editor's note: A transcript of the presentation by the DEEDI Forest Health team was not available for inclusion in the present issue of the News Bulletin. This will be included in the next issue—39(7).



Notice of Next Meeting

Monday 10th October 2011, 1pm

~

**Synchronised rhythmicity in
bioluminescent insects:
differences between cave-adapted and
forest-adapted *Arachnocampa* species**

a presentation by

**Dr David Merritt
School of Biological Science,
University of Queensland**

~

**Seminar Room 1
Ground Floor
Ecosciences Precinct
Boggo Road, Dutton Park**

**Maps and further venue information available at
<http://www.esq.org.au/meetings.html>**

ALL WELCOME

NOTICE

Perkins Memorial Lecture

Monday 14th November 2011



Frederick Athol Perkins (1897-1976)

This biennial lecture celebrates the memory of Frederick Athol Perkins, a founder of the Entomological Society of Queensland, first lecturer in entomology at the University of Queensland (1926), and first Head of the Department of Entomology (1952). Athol Perkins influenced entomology in Queensland for half a century in a way that no other entomologist has yet emulated.

THIS YEARS LECTURE:

Can teaching engender enthusiasm for Entomology?

by

Drs. Penny Gullan and Peter Cranston

Abstract: F.A. Perkins is remembered for his passionate love and enthusiasm for all things entomological, with his influence in Queensland spanning 50 years. The sum of our combined experience in entomology now exceeds that of Perkins, and we will consider how much 'love and enthusiasm' for insects contributes to modern teaching of the subject. We take examples from teaching in the UK, Australia and a decade in California, and authorship of the principal textbook in the field (*The Insects: an Outline of Entomology*), now in its 4th edition.

WHERE?

The usual meeting place — Ecosciences Precinct, Dutton Park

The late afternoon lecture will be followed by a BBQ

Further details to come in the next News Bulletin and online

<http://www.esq.org.au/Perkins%20memorial.html>



New technology for National Red Imported Fire Ant Program

Wednesday, 14th September was an exciting and historical day for the National Red Imported Fire Ant Program, as the highly anticipated aerial remote sensing cameras arrived from the USA. The cameras are a world first advanced technology in fire ant detection and can pinpoint fire ant nests from 500 feet in the air. The cameras will scan the ground using a combination of thermal, near-infrared and high definition imaging and combine it with cutting-edge programming developed in Australia. Fire ant nests are significantly hotter than the surrounding area, so they can be detected by the sophisticated thermal camera technology. The data will be downloaded to a computer overnight and ground crews will be dispatched to confirm and destroy suspected fire ant nests using precise GPS coordinates. A single helicopter can check 750 hectares in just one day, proving a more cost effective and efficient tool than detection on foot. Currently there are 118,000 hectares in the fire ant restricted area with around 560 known infested hectares.

Minister for Agriculture, Food and Regional Economies Tim Mulherin said Biosecurity Queensland has invested \$1.2 million on this highly-sophisticated aerial camera technology imported from the USA. This technology will give us the opportunity to find and destroy colonies before they spread and provides an invaluable tool in the fight to eradicate fire ants from the Greater Brisbane area.

Fire ants are small, ranging in size from 2mm-6mm, coppery brown in colour with a darker abdomen and deliver a painful sting that forms a blister which can take weeks to heal.

If anyone finds a nest which is suspect, they should report it to Biosecurity Queensland on 13 25 23 or visit www.biosecurity.qld.gov.au.

Alexandra Glauertd
Biosecurity Queensland
alexandra.glauertd@deedi.qld.gov.au

Gone 'fishing' in Queensland

Graeme Smith

I have long had an interest in silverfish, since discovering a new Nicoletiidae living in a cave at Bungonia, NSW during my student days. After uni I worked in the agro-chemical industry, with my interest in silverfish ticking along in the background. I did manage to revise the Australian Nicoletiidae and had started to expand my knowledge into the inquiline Atelurins and the free-living Lepismatids. After 30+ years in industry I decided to take advantage of a redundancy (when the R&D function was re-located to India) to pursue my decades long interest in silverfish.

The 2011 Australian Speleological Federation Conference was to be held at Chillagoe, North Queensland and decided to take a long drive from Sydney, collecting along the way. One of the impediments to silverfish taxonomy is the lack of good series of specimens in museum collections. This is not a reflection of their scarcity but more of the lack of interest in the group among collectors, after all a collection of specimens in tubes of alcohol is no where near as impressive as a drawer of pinned beetles or butterflies. Silverfish are well camouflaged and can be very fast moving. Unless focussed on silverfish, most collectors would just see

a flash of movement when they disturb them. They are also fairly fragile so attempts to catch them often result in damaged specimens. To make it even more frustrating, silverfish do not have a defined "final" adult stage but continue to moult after reaching sexual maturity; larger adults can be somewhat different to smaller adults in terms of the degree of chaetotaxy (rather than its form) and the development of secondary sexual characters, usually only seen in the males. I aim to collect about 10 larger undamaged specimens at each collecting event to ensure adequate material. I also try to photograph them before they go into alcohol to preserve the image of an attractive animal before it becomes a brown thing in a bottle.

The technique I use for collecting adequate numbers relies on the inability of silverfish to climb smooth surfaces. I carry a small trowel and a plastic lunch box. I either hold the box under bark to be disturbed, pick up rocks and hold them over the box or, after seeing a flash of suspicious movement into the litter, scoop up the litter/soil and put it into the box for sorting. I photograph them in the lunch box. I still don't have a good technique for catching them in shallow litter on rocks or very hard soil where the trowel can't dig in. I usually try to follow them until they stop running then dab them with a paint brush dipped in alcohol. My first priority here is to catch enough specimens but once I have enough I will try to photograph them sitting on the rock when they stop running however this often sends them running again before I get a good shot.

I contacted Christine Lambkin to get advice on the best way of obtaining a collecting permit and then contacted Jacqui Brock and Michelle Nissen of DERM. I was due to leave on the trip in several weeks so I was concerned I hadn't allowed enough time to process the application. However the help I had from the DERM staff was fantastic and I had my permit within 7 days! The rangers in the various national parks were also very co-operative and interested in my findings.

I set off in early April with high hopes (almost 400 vials with me) but soon began to realise the recent wet seasons were working against me. Silverfish, especially the Lepismatidae, thrive in dry conditions. At least two species have been shown to be able to absorb water from subsaturated atmospheres (down to 65% RH) through their anus. They can survive in very dry deserts, as long as they can access the early morning ground level humidity. This year the grass was so thick throughout much of southern central Queensland that I couldn't even find much litter on the ground. The soil under fallen logs etc was moist, with cockroaches and isopods in places where silverfish would be expected in drier times.

It wasn't until I got to Longreach that I found my first "Queensland" silverfish. These were living in the woodchip/leaf litter at the base of trees in a council park where I was having lunch. I was delighted but a bit suspicious that I'd found them in a man made situation. My suspicions were confirmed when I was able to examine them under a microscope to find that they were *Ctenolepisma rothschildi*, a well known traveller probably originating in Africa, but now widely distributed throughout the tropics. They had been recorded in New Guinea but I have not seen any record of the species in Australia.

Next stop was Bladenburg National Park near Winton where conditions are much drier, especially on elevated ridges. Here my collecting efforts began to yield results including a species of *Heterolepisma* (Figs 1 & 2) and the first collection of the enigmatic genus *Anisolepisma* (Fig 3 & 4) outside of Western Australia. As I travelled further north I began to find more and more, which partly reflected the changing environment (less grassy woodland, more dry rocky scrubby country) but probably also an improvement in my understanding of where these animals find drier microhabitats. Although I'd repeatedly read of silverfish being collected under bark, I'd never managed to find them, however after several



Figures 1-2. 1) *Heterolepisma* sp. common in leaf litter and widespread from The Lynd to Chil-lagoe and almost to Mareeba; 2) *Heterolepisma* ?*stilivarians* under bark at Carnarvon Gorge NP.



Figures 3-4. 3) *Anisolepisma* sp. Bladenburg NP in very dry leaf litter; 4) habitat.



Figures 5-7: 5) *Acrotelsella* sp underside of limestone rocks at Chillagoe; 6) *Acrotelsella* sp. from leaf litter Magnetic Island and near Mt Garnet.; 8) Jumping bristletail (Order Archaeognatha) in daylight chambers of caves at Chillagoe.



Figure 8. *Australiatelura* sp. with ants near Capella.

large *Acrotelsella* (Figs 5 & 6) surprisingly fell into my collecting lunch box from under Eucalypt bark at White Mountains N.P. I began to have more success, finding a species of *Heterolepisma* under the layers of paperbark in a somewhat swampy river bank, and a large species of *Heterolepisma* (possibly *stilarians* first described from Western Australia) in the multiple layers of old shed bark trapped at the edges of scar tissue on smooth barked Eucalypts. I have

since found another species of *Heterolepisma* in a similar microhabitat near Sydney- so they do occur under bark- I was just looking under the wrong sort of bark.

I did not have any success finding soil or cave dwelling Nicoletiids. The cave from which a juvenile had been collected at Chillagoe in 1989, was full to the roof with water this season and at Undara the levels of carbon dioxide were too high to access



Figures 9-10. 9) *Pseudogastrotheus* sp. with ants at Mt Garnet, but free-living in a lava tube at Undara;.10) Undescribed genus with termites at Blackdown Tableland N.P.

the deeper parts of Bayliss Cave, the type locality of *Metrinura subtropica*. However, I was astonished to find a large population of the normally inquiline genus *Pseudogastrotheus* roaming over the floor or Barkers Cave at Undara. There must have been over 30 per m² on average and they covered several metres of the muddy floor. An occasional ant was observed but easily outnumbered by the silverfish. CO₂ levels were uncomfortably high so we didn't have the chance to linger very long. I found, what I believe to be the same species, with ants in Pinwill Cave at Undara and with ants in soil in forest near Mt Garnet. I also found a population of jumping bristletails (Order Archaeognatha; Fig 7) living in the daylight chambers of caves at Chillagoe and, while not silverfish, they look a bit like them to most people and their jumping escape mechanism adds a whole new challenge to collecting.

At other locations Atelurids were scarcer and, as usual, I was not able to collect decent numbers of specimens. I collected one specimen of *Australiatelura* (Fig 8) in soil/litter with ants near Capella, three specimens of *Pseudogastrotheus* (Fig 9) under stones with ants at Blackdown Tablelands N.P. and another single specimen of an undescribed genus with termites at the same park (Fig 10).

Overall I managed to collect about 60 tubes of silverfish including 18 different morphospecies of Lepismatidae and 4 Atelurids. On many occasions more than one species was collected at the same site. From a personal point of view, I certainly learned a lot more about the habitats where silverfish can be found and now have so many more species to describe. Silverfish really are quite common in Australia and I'm sure I will continue to find new and interesting species wherever I look. Hopefully I can make some progress over the next few years in documenting our interesting and diverse fauna.

Insects in Public Art in Brisbane

We've found another item for our irregular series on insect images being used for public art installations in Brisbane. Southeden Street runs along the western edge of one of Sandgate's beautiful lagoons, the big one known as Dowse Lagoon. Those lagoons are great breeding grounds for dragonflies and they can be seen flicking back and forth above the lily pads as you drive past. The art work consists of about 30 stout, flat-sided wooden posts, stained dark brown, each about 800 mm high, driven into the ground in a close spaced row about a metre off the edge of the bitumen on the lagoon side of the Southeden Street. Each has a single pale blue metal dragonfly set into its flat surface (fig 1) facing on-coming traffic. The dragonflies are identical on each postbut, owing along the series of posts, the position of each dragonfly has been placed at a slightly different position (Fig 2) so that, as you drive by, the multiple images you see out of the corner of your eye blur into a moving image of the dragonfly swooping and looping over the surface, just as its nearby real-life models are doing 50 metres away. It's a novel idea and it works quite well, though I'm not sure how many distracted drivers have come to grief! The species it depicts is undoubtedly the common powder blue libellid, *Orthetrum caledonicum*. I haven't been able to find the name of the artist who created the work. There doesn't seem to be an explanatory plaque at the site and the work is not listed on the Brisbane City Council's database of public art in Brisbane. If a reader knows who the artist is, let me know and we will record it in the next issue.

Geoff Monteith
Queensland Museum



Reminder to users of the Entomological Society of Queensland QPWS collecting permits

Christine Lambkin, Permit Officer

Please note that you are required to follow all conditions as stated on the permit. The permit and membership of the ESQ may be revoked if conditions are not followed. In particular note that:

- you are required to submit a return of operations within 30 days after the end of each 12 month period the permits are in force. **For the current permit this means 30th September.**
- specimens may not be given, sold or traded (but a member who is endorsed on the permit may collect specimens on behalf of another member provided that they are also endorsed);
- wildlife habitat must not be damaged, environmental impact must be kept to a minimum;
- this permit does not give you the right to enter any land, you must get prior permission from the agency responsible for administration of the land;
- where possible, collecting activities should be effected away from public view;
- a copy of any resulting report / activities from this research should be provided to the EPA office at which the permit was issued;
- you must carry a copy of the permit endorsed by the permit holder (C.Lambkin) and with your name and residential address.
- you must carry a form of identification that displays a coloured photograph such as a Queensland drivers licence.

Complete and return the attached application form to:

Chris Lambkin
Entomology
Queensland Museum
PO Box 3300
South Brisbane Qld 4101
Ph 07 3840 7704
Fax 07 3846 1226
Email: christine.lambkin@qm.qld.gov.au

Signed applications sent by fax or as PDF are preferred.

Application Form for use of The Entomological Society of Queensland Collecting Permits

Name: _____

Residential Address: _____

Postal Address (if different from above):

Phone number: _____

Fax number: _____

Email address: _____

Project outline: (list species for protected species permit)

Parks/Areas you wish to visit: _____

Which permit will you be requiring? (please tick)

National Parks _____

State Forests: _____

Declaration:

I agree that in using the permit I will read all conditions and procedures relating to these permits and will abide by them.

Signed : _____ Date: _____

Entomological Society of Queensland Nomination for Membership Form

www.esq.org.au



Title_____ First name_____

Surname _____

Email _____

Address_____

_____postcode_____Date_____

Nominated by _____

Seconded by _____

☐ General membership **\$30 AUD**

☐ Joint membership **\$36 AUD**

☐ Student membership **\$18 AUD**

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☐ in hard copy by mail

☐ Cheque/Money Order enclosed

or Please charge my : ☐ Bankcard ☐ Visa ☐ Mastercard



Name on Card _____

Expiry Date _____ Signature _____

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

Please retain the receipt below for your records

Entomological Society of Queensland—Receipt for payment of membership fees

Name _____ Date _____

Amount paid \$_____ for year/s _____

DIARY DATES 2011

Meetings held 2nd Monday of the month (or Tuesday if Monday is a public holiday)

MAR—Monday 14th	Matt Purcell	AGM and President's Address
APR—Monday 11th	Dr Diana Leeman	Small hive beetle, a recently established scourge of apiaries
MAY—Monday 9th	Dr Tim Heard (CSIRO)	Australian native stingless bees
JUN—Tuesday 14th	Notes and Exhibits & Student Award Presentation	
AUG—Monday 8th	Gunter Maywald	Shaking the eucalypt leaf beetle tree: some highs & lows
SEP—Monday 12th	DEEDI Forest Health	Semiochemicals for forest pest management
OCT—Monday 10th	Dr David Merritt (UQ)	Synchronised rhythmicity in bioluminescent insects
NOV—Monday 14th	Drs Gullan & Cranston	Perkins Memorial Lecture
DEC—Monday 12th	Notes & Exhibits	

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

Student membership conveys full membership privileges at a reduced rate.

THE AUSTRALIAN ENTOMOLOGIST SUBSCRIPTION RATES

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	Institutions	AU\$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

Monday 10th October 2011, 1pm

~

**Synchronised rhythmicity in bioluminescent insects:
differences between cave-adapted and
forest-adapted *Arachnocampa* species**

a presentation by

Dr David Merritt

School of Biological Science, University of Queensland

~

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 39, Issue 7 (October 2011)
due early November

CONTRIBUTIONS WELCOME

DEADLINE - Thursday 27th October

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