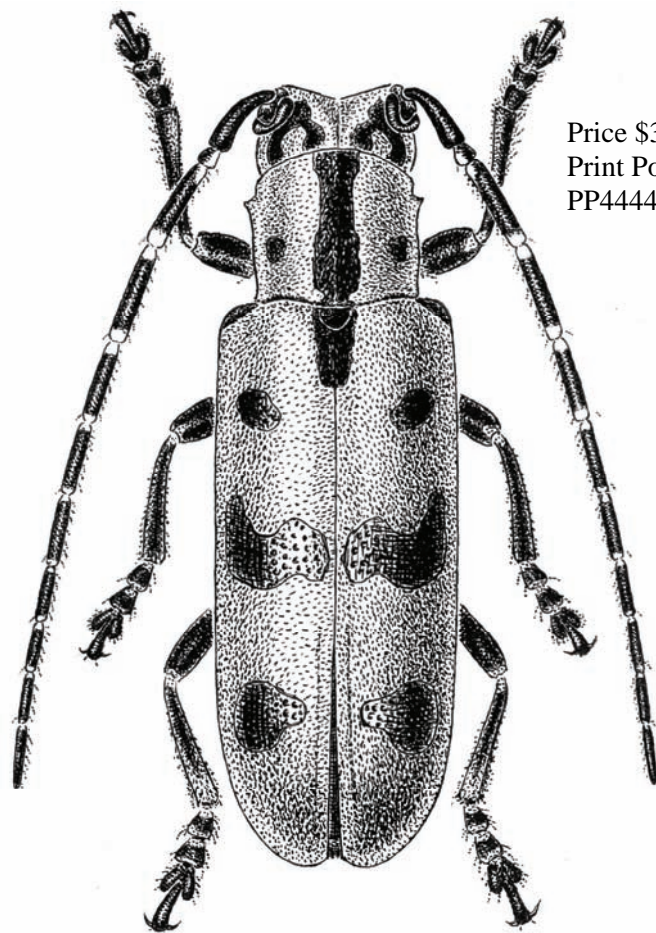




# ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC NEWS BULLETIN



Price \$3.50  
Print Post Approved  
PP444461/0003

Volume 38, Issue 2, April 2010

## THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND

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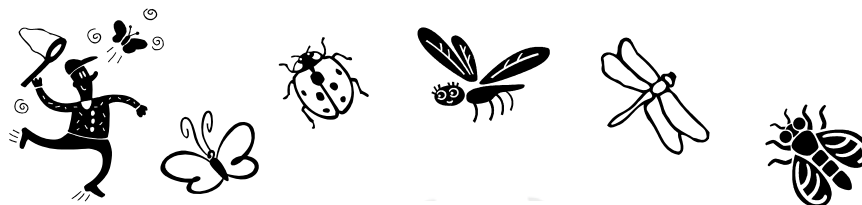
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**Front cover illustration:** Habitus of *Zygrita diva* Thomson (Coleoptera: Cerambycidae), the lucern crownborer—artist William Manley, scanned from original illustration ©Queensland Department of Employment, Economic Development and Innovation

ISSN 1037-2989



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

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## Editorial

I must offer my sincere apologies for the late issue of the March News Bulletin. I am presently in the process of adjusting to my new schedule of reduced work hours and increased fatherhood duties and I was just unable to manage my time efficiently. I'll do my best to ensure this does not happen again.

A transcript of Dr Schellhorn's presentation given at the last general meeting was not available to me at the time the Bulletin went to the printer. I hope to include this in the May issue.

Justin Bartlett, *News Bulletin Editor*

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## Minutes of General Meeting

Held in the Large Conference Room, CSIRO Entomology, Long Pocket Labs, 120 Meiers Road, Indooroopilly, on Monday, **Monday 12<sup>th</sup> April, 2010 at 12.00pm**

**Chairman:** Matt Purcell

**Attendance:** Felix Bianchi, Bradley Brown, Richard Bull, Murdoch De Baar, Gio Fichera, Tim Heard, Andrew Hulthen, Judy King, Chris Lambkin, Geoff Monteith, Helen Nahrung, Matt Purcell, Nancy Schellhorn, Geoff Thompson, Federica Turco.

**Visitors:** Karen Bell, Anne Bourne, Alejandro Costamagna, Simon Lawson, Rieks van Klinken,

**Apologies:** Justin Bartlett, Lyn Cook, Gary Fitt, Ross Kendall, Penny Mills, Desley Tree

**Minutes:** The minutes of the last General Meeting, were circulated in News Bulletin Vol. 38, Issue 1, March 2010.

*Moved the minutes be accepted as a true record:* Richard Bull

*Seconded:* Federica Turco

**Business arising:** Chris Lambkin reported that about 15 people had not submitted their permit holder's report for 2009, permit holders should submit a nil report if no activity. The next lot of permits will be going out soon, please let Chris know if you need any more parks added, as it is no longer a blanket permit.

### Nominations for Membership:

The following nominations for Membership were received and approved by Council, and are now put before the meeting for election:

Dr David Holdom, Chelmer, Qld.

Mr John Holt, Chermside South, Qld

Mr Steve Petrovich, Toowoomba.

Associate Professor Harley Rose, Ryde NSW.

Dr. J.R. Woodward, Mt Macedon Vic.

Nominees were accepted for membership.

### General Business:

1. The President apologised for the late arrival of the Bulletin due to production and printing problems.

## Main Business

The Main Business was a presentation by Dr Nancy Schellhorn entitled "Landscape Scale Pest Management in Vegetable Crops."


Tim Heard moved the vote of thanks to the speaker.

Chairman's closing statement:

The next General meeting will be the AGM held at this venue on Monday, May 10 at 12 noon. The speaker will be Dr Martin Chivas.

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**Editor's note:** Unfortunately, a transcript of Dr Schellhorn's presentation was not available for inclusion in the present issue of the Bulletin.



**Notice of Next Meeting**  
Monday 10th May, 2010, 12pm

**The biology of Brisbane's  
mangrove-breeding pest midge**  
*Culicoides ornatus* (Diptera: Ceratopogonidae)

**Dr Martin Shivas**  
**(Brisbane City Council)**

Large Conference Room  
CSIRO Long Pocket Laboratories  
120 Meiers Rd, Indooroopilly

**ALL WELCOME**  
(please sign in at reception before meeting)



### **Dung Beetle monitoring project starts in North Queensland**

Geoff Monteith, Queensland Museum

In January this year a new long-term project commenced on the Atherton Tableland in north Queensland to revegetate a former dairy farm which is presently part original rainforest and part grassy pasture. The property is called Thiaki Creek and is situated at 17.43°S X 145.51°E, some 19 km

south of Atherton. It is on red volcanic soil at around 950 m altitude and is quite close to Hypipamee National Park which includes the popular tourist drawcard, "The Crater". It is 180 hectares in size of which 70% is original rainforest in excellent condition, though some has been lightly logged in the past.

Thiaki Creek has been recently purchased from the original farming family by professional biologists Penny Van Oosterzee and Noel Preece. Penny and Noel have run successful environmental consultancy and eco-tourism operations for many years in the Northern Territory and they are making Thiaki Creek their new home base. In deciding to revegetate the pasture section of the property they have generously offered to allow the property to be the focus of a long term monitoring study to study the progress of the revegetation. They invited a group of researchers to make a proposal and these



have been successful in winning a major ARC Linkage Grant for the next 5 years. The research team is led by Dr Margie Mayfield and Dr Peter Erskine (U. Queensland), Dr Corey Bradshaw and Dr David Chittleborough (Adelaide U.), and Dr Mike Lawes (Charles Darwin U.), Dr Rosa Menendez-Martinez (Lancaster U.) and Dr Toby Gardner (Cambridge U.). Noel and Penny are research partners in the project while Terrain NRM Pty Ltd, Greening Australia, Stanwell Corporation and Biome5 are industry partners.

Dung beetles have been chosen as one of the target taxa for the long term monitoring of the site and Rosa Menendez is coordinating this aspect of the project. Rosa is an ecologist based at Lancaster University in the UK and has several current

projects in Europe using dung beetles as tools for global warming and altitudinal stratification studies. She collaborated with Geoff Monteith (Qld Museum) in the dung beetle transect study at Lamington NP as part of the 2007-08 IBISCA project. Geoff is also helping with the field work and beetle identification for the Thiaki Creek project. On the basis of existing dung beetle distribution data Geoff estimates that there could be around 50 native species and 10 introduced species active in the area.

Two Honours students at University of Queensland are using aspects of the Thiaki dung beetle project for their research projects. Tania Kenyon is looking at community structure in the beetles currently occupying the rainforest and pasture habitats. She is studying the relative roles in dung dispersal



**Fig 1.** (Left to right) Margaux Hein, Tania Kenyon and Geoff Monteith in the rainforest at Thiaki Creek.



**Fig 2.** One of the exclusion cages designed for Tania's study of community structure.

by species which bury it at the dung site compared to those which transport dung away by rolling or dragging for burial away from the central site. Rosa and Tania devised a series of cage enclosures which segregate the dung dispersal activities of these two groups of dung beetles, allowing biomass of the efforts of the two groups to be estimated. Tania is also assaying soil samples from the trap sites to help in these estimations. Margaux Hein is looking at biodiversity of dung beetles relative to patch size in the Thiaki area. There are two separate blocks of original rainforest of different size on the Thiaki property. These are being trapped and compared with similar samples from various other rainforest tracts on private and public land within about 15 km radius around Thiaki, including large "continuous" tracts in nearby National Parks. All sample sites employed a quadrat of 4 traps, two baited with macropod dung and two baited with mushroom. Use of mushroom baits is essential in Australia to sample the small but significant component of Australian dung beetles which use decayed mushroom as brood material.

Revegetation planting of the pasture block at Thiaki will not commence until spring of 2010. The first sampling of dung beetles, to gain baseline, pre-planting information, took place in January 2010 when Rosa, Tania, Margaux and Geoff spent two (very wet!) weeks of intensive trapping at Thiaki and surrounding areas. Trapping of that scale requires a large amount of macropod dung, and this was collected on many early-morning visits to Lone Pine Sanctuary, prior to the trip, to gather fresh, "laid-on-the-day" dung which was made into about 300 frozen baits taken by air to Cairns. We believe it may have been the first time that \$150 was paid by passengers for 15 kg excess baggage of frozen macropod dung! Almost 600 bulk trap samples of dung beetles were returned to Brisbane in two plastic crates by transport truck at the end of the exercise. These are currently being sorted and identified in Brisbane by Tania, Margaux and Geoff. Since individual samples have contained up to 300 beetles of 15 species, this is keeping us quite busy, but the eventual data will be exciting.



Read more on the Thiaki project at:  
[http://www.mayfieldplantecologylab.org/site/Thiaki\\_Project.html](http://www.mayfieldplantecologylab.org/site/Thiaki_Project.html) and  
<http://www.treat.net.au/publications/WnsJuly2009.html#thiaki>



**Fig 3.** One of the standard baited traps used in Margaux's patch surveys.



**Fig 4.** Rosa Menendez collecting dung from the compliant kangaroos at Lone Pine Sanctuary.



## News from School of Biological Sciences, UQ

**Bronwen Cribb** and a team of researchers from UQ, ANU, UNSW, SU, UWA and FU have been awarded an Australian Learning and Teaching Council grant to develop 'A national approach to education in advanced microscopic characterisation through integrated learning tools'. Their aim is to develop online tools to teach Australian students about topics such as light microscopy, scanning and transmission electron microscopy using virtual laboratories to develop operational skills. Entomologists need these skills and the project will complement "Entomology Curriculum Australia", under development by **Dave Merritt** (BIOL, UQ) and collaborators.

**Myron Zalucki** has been in Samoa and Fiji attending ACIAR project meetings, in Canberra sitting on the National Committee for Plant and Animal Sciences (an Academy of Science committee), and has also been involved in the GRDC-funded project on pest suppressive landscapes. Part of the latter project involves the use of traps to help understand the movement of insects between native vegetation and crops.

**Anthony Robinson**, previously of UWA, will be an Australian Youth Ambassador for Development for 12 months in Samoa. He will be helping out projects being undertaken by **Mike Furlong** that use IPM to help control diamondback moth and large cabbage moth in *Brassica* crops.

**Jonathon Robson** has started an Honours project with **Gimme Walter** on using IPM to enhance the development of the date palm industry, particularly in respect of armoured scale insects. **Michelle Rafter** (PhD candidate, Walter lab) has finished conducting mating trials of her "citrus" thrips and has been in South Africa collecting specimens for the molecular component of her project. Fortunately, she survived

close encounters with a leopard in a creek bed and a black mamba!

**Dave Merritt** was in New Zealand in February at a meeting for the Waitomo Cave Environment Advisory Group. He also spent time recording bioluminescence in the main cave. Soon after arriving back in Australia, he kicked off the first course (Insect Structure & Physiology) in the new national curriculum in entomology (Entomology Curriculum Australia, ECA, [www.entomology.edu.au](http://www.entomology.edu.au)).

**Lyn Cook** had a month-long trip to South America in February, attending the 4<sup>th</sup> international conference on southern hemisphere biology "Southern Connections" held in Bariloche, Argentina, and taking part in field work in Argentina and Chile. More recently, Lyn and PhD candidates **Penny Mills** and **Paul (Yen-Po) Lin** have been in Chania, Crete, attending and presenting at the International Symposium of Scale Insect Studies.

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## News from USDA ARS Australian Biological Control Laboratory

**Ted Center** from the USDA ARS labs in Fort Lauderdale Florida visited our lab in April to discuss research progress and assist with the recruitment of a new research scientist. **Matt Purcell** travelled to China in late April to collect parasites of the Asian Citrus Psyllid and to assist **Jeff Makinson** with collection of biological control agents of Downy Rose Myrtle (*Rhodomyrtus tomentosa*) in Hong Kong. All potential agents are being shipped directly to quarantine in the US. **Ryan Zonneveld**, **Bradley Brown** and **Anne Marie McKinnon** have been doing field surveys near Brisbane for biological control agents of the tree fern, *Cyathea cooperi*. Trap plants have been put in the ground at Mount Mee, a beautiful place to do some field work!

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## **DIARY DATES 2010**

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

MAR—Monday 8th	Dr Chris Lambkin (QM)	Presidential Address & AGM
APR—Monday 12th	Dr Nancy Schellhorn (CSIRO)	Landscape Scale Pest Management in Vegetable Crops
MAY—Monday 10th	Dr Martin Shivas (BCC)	Brisbane's mangrove-breeding pest midge <i>Culicoides ornatus</i>
JUN—Tuesday 15th		
AUG—Monday 9th		
SEP—Monday 13th		
OCT—Monday 11th		
NOV—Monday 8th		
DEC—Monday 13th		

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Student membership conveys full membership privileges at a reduced rate.

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# THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND



## NEXT MEETING

**12:00pm ~ Monday 10th May**  
Large Conference Room  
CSIRO Long Pocket laboratories  
120 Meiers Road Indooroopilly

Main Business

**The biology of Brisbane's  
mangrove-breeding pest midge**  
*Culicoides ornatus* (Diptera: Ceratopogonidae)

**Dr Martin Shivas (Brisbane City Council)**

## VISITORS WELCOME

(please sign in at reception before meeting)

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## NEXT NEWS BULLETIN

Volume 38, Issue 3 (May 2010)  
due early June

## CONTRIBUTIONS WELCOME

**DEADLINE - Thursday 27th May**  
Send your news/stories/notices to the editor  
( [justin.bartlett@deedi.qld.gov.au](mailto:justin.bartlett@deedi.qld.gov.au) )