ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC

NEWS BULLETIN

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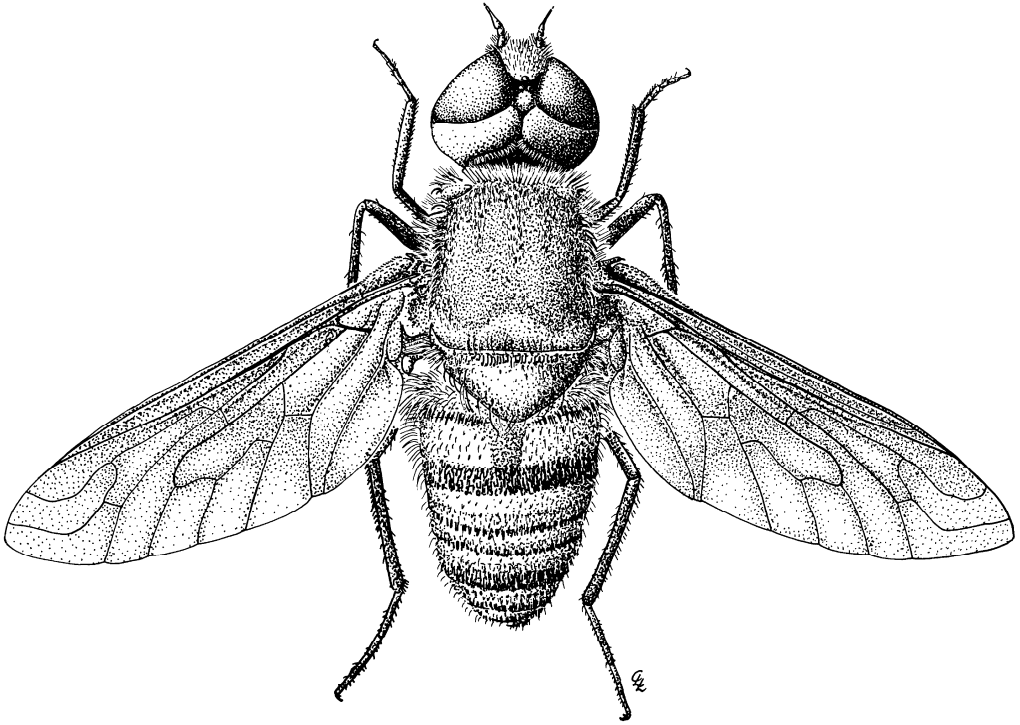

Volume 37, Issue 1, March 2009

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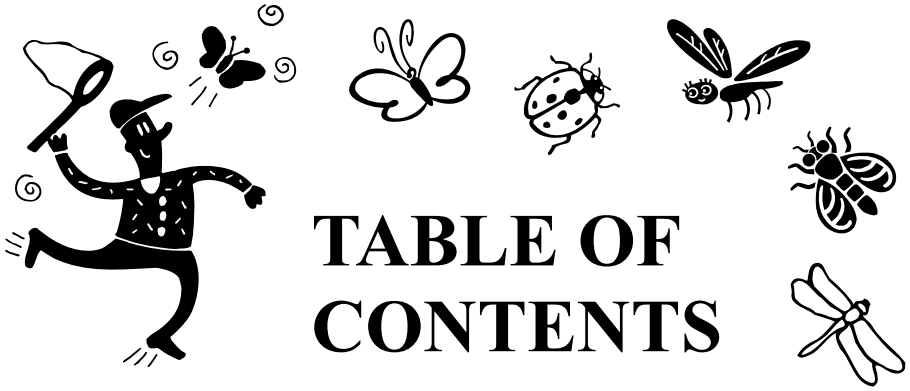
The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC.**, since its inception in 1923, has striven to promote the development of pure and applied entomological research in Australia, particularly in Queensland. Membership is open to anyone interested in Entomology. The Society promotes liaison among entomologists 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.

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. Its magnificent purple and green colouration makes it one of the most attractive of all Australia Coleoptera. It is restricted to the rainforests of northern Queensland.

COVER: Habitus of ***Atrichochira commoni*** Lambkin & Yeates 2003 by Chris Lambkin. Invertebrate Systematics 17:p854.



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The Entomological Society of Queensland Annual General Meeting 2009

Held in the Large Conference Room, CSIRO Entomology, Long Pocket Labs, 120 Meiers Road, Indooroopilly, on March 9, 2009, 12.00 midday.

Attendance: Gio Fichera, Richard Bull, Gunter Maywald, Shaun Winterton, Lyn Cook, Gary Fitt, Mike Furlong, John Lawrence, Ross Kendall, Don Sands, Graham Forbes, Desley Tree, Geoff Monteith, Chris Lambkin, Noel Starick, Judy King, Matthew Purcell, Justin Bartlett, Regis Goebel, Peter Allsopp, Mike Muller, Felix Biachi, Sarah Corcoran, Penelope Mills, Graham Forbes, Chris Neale, Tim Heard, Helen Nahrung, Fedrica Turco, Susan Wright, Bill Palmer

Visitors: Martin Shivas, Brendon Murphy, Emily Burgess, Nate Hardy

Apologies: Stacey McLean, Chris Burwell, John Moss, Myron Zalucki

Minutes: The minutes of the last Annual General Meeting, were circulated in the News Bulletin Vol. 36, Issue 1 of March 2008.
Moved the minutes be accepted as a true record: Geoff Monteith.
Seconded: Chris Lambkin.

Nominations and Elections:
The following nomination were received and approved by Council, and are now put before the meeting for election:
Mr Ian McMillan of Imbil
Mr Michael Jefferies of Stanthorpe
Dr Helen Smith & Graham Milledge of Hornsby
Mr Sandy Pollock of Kenmore, Brisbane
Mr Bjorn Fjellstad of Surfers Paradise
Prof Gerry Cassis of Sydney
Dr Regis Goebel of Indooroopilly, Brisbane

In accordance with Society rules, the nominations were presented to members for election by a show of hands. *Carried unanimously*.

General Business

Annual Reports and Financial Statements
The Society's Annual Reports and Financial Statements were published in News Bulletin Vol. 36, Issue 10. The responsible Council members (President, Secretary, Treasurer, Bulletin Editor and Journal Business Manager) each briefly outlined the content of their respective reports.
There were no questions relating to the statements.
Don Sands moved the reports be accepted, seconded by Helen Nahrung.

The outgoing President thanked the Council members for their contributions during the year.

Election of 2008 Council.

The following nominations were received prior to the meeting:

President	Chris Lambkin
Senior Vice President	Matt Purcell
Secretary	Richard Bull
Treasurer	Desley Tree
Editor, News Bulletin	Justin Bartlett
Business Manager - Australian Entomologist	Geoff Monteith
Councillor	Anna Marcora
Councillor	Noel Starick
Councillor	Geoff Thompson

As no other nominations had been received, the Chairman called for a show of hands in favour of the nominees being accepted. All were in favour.

Mike Furlong the out-going President introduced the in-coming President, Christine Lambkin to Chair the Presidential Address.

Main Business

The Presidential Address from out-going Society President, Mike Furlong.
"*Diamondback moth: Management and ecology in North Korea?*"

Diamondback moth: ecology and management in North Korea

Mike Furlong, School of Biological Sciences, University of Queensland, St Lucia 4072.

The diamondback moth, *Plutella xylostella* (L.) (Lepidoptera: Yponomeutidae) (Figure 1), originated in Europe and is the most serious pest of *Brassica* crops worldwide. In Queensland, the pest is attacked by few native parasitoids and two European species, the larval-pupal parasitoid *Diadegma semiclausum* Hellén (Hymenoptera: Ichneumonidae) and the pupal parasitoid *Diadromus collaris* Gravenhorst (Hymenoptera: Ichneumonidae), were introduced from New Zealand in 1947 where they had previously been established as part of a classical biological control program (Furlong and Zalucki 2007). When broad spectrum insecticides are used to control *P. xylostella* natural enemy complexes are destroyed and the pest population resurges. In a three year collaborative study, the impact of farm management practice on the abundance *P. xylostella* and the function of its natural enemy complexes were investigated in the Lockyer valley, southeast Queensland (Furlong *et al.* 2004a). Integrated pest management (IPM) strategies, which eliminated the use of broad spectrum insecticides and conserved natural enemies, were designed. IPM strategies reduced pest populations, maintained or improved crop yields and reduced insecticide inputs when compared with conventional management approaches. These strategies also significantly increased the impact of natural enemies on pest populations and large scale field experiments demonstrated that the impact of generalist predators on pest populations was often significantly higher than the impact of the introduced parasitoids (Furlong *et al.* 2004b; Figure 2).

In North Korea (Democratic People's Republic of Korea, DPRK) *Brassica* crops, account for over half the total vegetable production of 200,000 ha. Since the mid 1990s, DPRK has faced a critical shortfall in national food production. Declining soil fertility, a series of extreme weather events and lack of access to essential fertilizers following the collapse of the Soviet Union culminated in a series of devastating famines in the mid-late 1990s. Increased food aid from China and South Korea and better harvests between 2002 and 2005 have improved the situation but food security in the country remains in a perilous state. Vegetable crops are cultivated on mixed farms located around the main urban centres, where more than half of the population resides. A significant proportion of the *Brassica* vegetable crop is processed to form the basis of the important winter staple food "Kimchi"; demand for fresh and preserved *Brassica* products currently far exceeds supply.

Figure 1: a) Diamondback moth larvae destroy a cabbage plant. b) An adult female diamondback moth

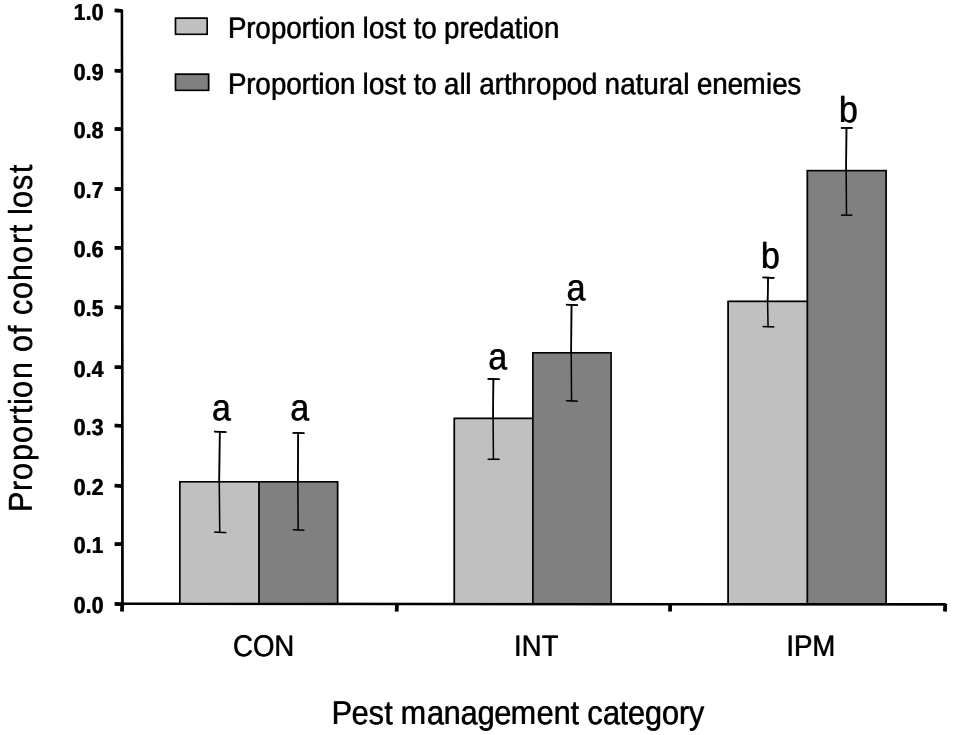

Figure 2: The impact of natural enemies of *P. xylostella* populations under conventional (CON), intermediate (INT) and integrated pest management (IPM) strategies in the Lockyer valley, south-east Queensland, same coloured columns marked with a different letter are significantly different ($P<0.05$)

Brassica crops are attacked by a complex of insects in DPRK and the two major pest species, *P. xylostella* and *Pieris rapae* L. (Lepidoptera: Pieridae) represent the principal constraints to production. On co-operative farms pests are managed by scheduled application of broad spectrum insecticides and there is no attempt to conserve or utilize endemic natural enemies. The natural enemy complexes attacking *P. xylostella* and *P. rapae* in summer cabbage crops on three co-operative farms in the south west of DPRK were studied between 2003 and 2006. The hymenopteran parasitoids *Cotesia vestalis* Haliday (=*plutellae* Kurdjumov) (Braconidae), *Oomyzus sokolowskii* Kurdjumov (Eulophidae) and *Diadromus collaris* Gravenhorst (Ichneumonidae) attacked *P. xylostella* while *Cotesia glomeratus* L. (Braconidae), *Cotesia rubecula* Marshall (Braconidae) and *Pteromalus puparum* L. (Pteromalidae) and an unidentified species of *Exorista* (Diptera: Tachinidae) attacked *P. rapae*. The generalist epigeal predatory fauna was dominated by Lycosidae (most abundant species: *Lycosa t-insignata*) and Carabidae (most abundant species: *Chlaenius naeviger* Morawitz, *C. pallipes* Gebler, *Calathus helensis* Schaller) (Furlong et al. 2008a). Larval and pupal parasitism rates of both *P. xylostella* and *P. rapae* increased during the early summer months but natural enemy exclusion experiments showed that generalist predators were the most important natural enemy guild attacking *P. xylostella* populations in the agro-

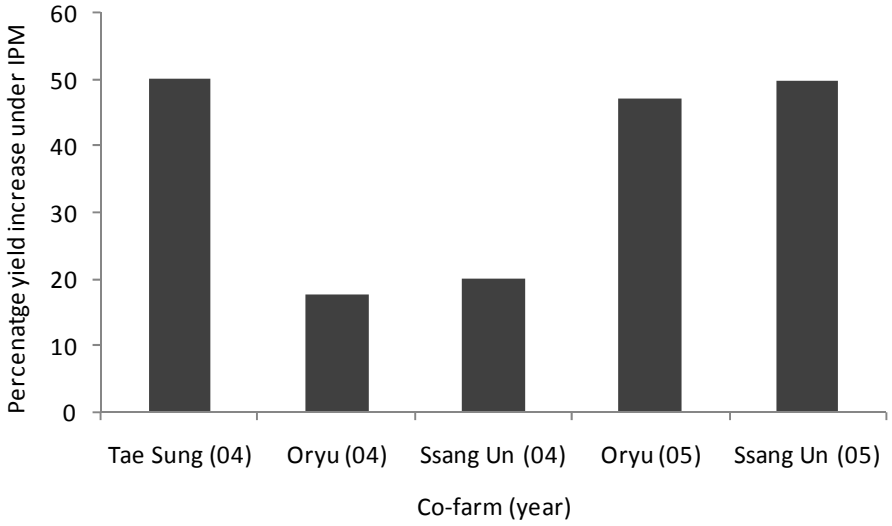

Figure 3: Percentage mean yield increase in crops managed by IPM compared with crops managed by co-farm standard practice in 2004 and 2005

ecosystem. Field experiments compared current pest management practice with pest threshold based interventions using commercial formulations of *Bacillus thuringiensis* var. *aizawai* (Bt) sourced from China. The Bt-natural enemy strategy significantly increased crop yields (Figure 3) and the impact of both parasitoid and predator natural enemies on pest populations (Figure 4). However, even under the threshold based *Bt* regimes, natural enemy impact on pest populations remained low (Furlong et al. 2008a). Ongoing work is developing appropriate sampling plans (Hamilton *et al.* 2009) and investigating the scale of the appropriate management unit to maximise the impact of natural enemies on pest populations on co-operative farms in DPRK (Furlong *et al.* 2008b).

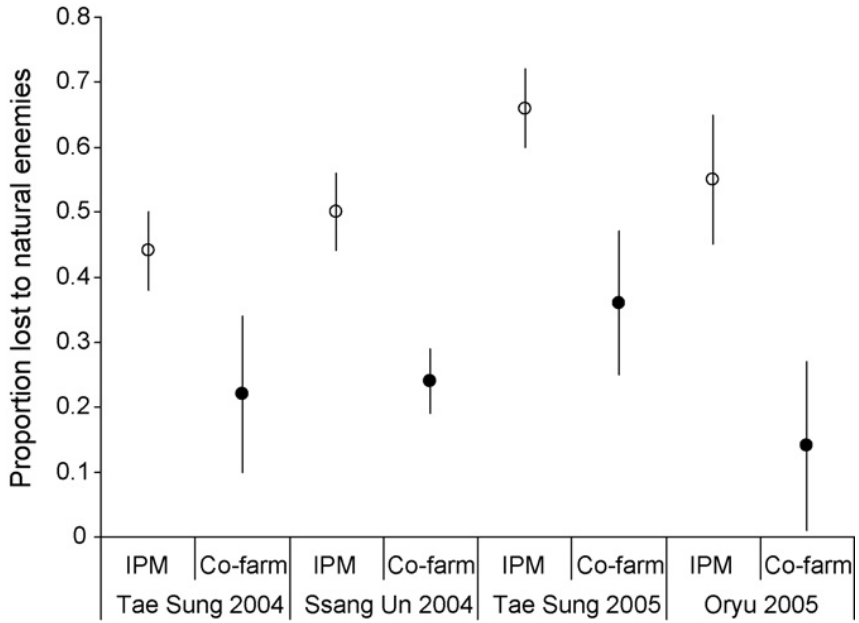

Figure 4: The impact of the complex of endemic natural enemies on *P. xylsotella* populations managed co-farm standard practice or IPM on co-farms in 2004 and 2005.

Acknowledgements: The work in Australia and DPRK was funded by Australian Centre for International Agricultural Research grants CS2/1998/089 and HORT/2002/062 respectively.

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Matt Purcell proposed a vote of thanks for Mike's presentation.

CORRECTIONS

ESQ News Bulletin Volume 36, Issue 9, December 2008: Caption, on the lower photo on page 230, has the following corrections - it should be Harry Wharton (as it is on the photo on page 231) not Harry Standfast and Krystal is Krystal MacKenzie. Also, Tony Postle has identified "Bruce?" in the photo on page 231 as Bruce Pyke.

ESQ News Bulletin Volume 36, Issue 10, Jan/Feb 2009: The following was omitted from the Annual Report – *The Australian Entomologist* Business Manager (Geoff Monteith) attended 8 Council Meetings.

Notice of Next Meeting

Entomological Society of Queensland

TUESDAY 14th April, 2009 12pm

'Mealybug Classification and Endosymbiosis'

Nate Hardy
(QDPI&F)

CSIRO Long Pocket Laboratories
Large Conference Room

People & Projects

The 2009 FRESHWATER NATIONAL PARK BUG-CATCH – Saturday 14 March

This was the Society's fifteenth Bug-Catch trip and was organized by Geoff Monteith and Chris Lambkin in conjunction with Jenny Greenland from the Environmental Protection Authority. As the Insect Science (2nd-year introductory entomology course) at UQ is not offered in first semester, no university undergraduates attended.

Freshwater National Park (27°10′26″S 152°58′55″E) is 34 km north of Brisbane, west of Redcliffe, near Deception Bay, within Caboolture Shire and covers an area of only 0.94 km². The park's vegetation is remnant open sclerophyll woodland. Little Burpengary Creek rises in the north end of the park. Though very small, and surrounded by development, roads and a highway, the park is rich with wildlife. Despite the dire predictions and remnant cyclones, the weather favoured our Bug-Catch, with only occasional brief showers, and a warm, very humid day.

Nine society members and seven visitors including Mieke Burger, Cathy Ebert, Jenny Greenland, Wes Jenkinson, Chris Lambkin, Gunter Maywald, David and Judy Merritt, Geoff Monteith; Aki, Tan, and Yuki Nakamura; Robert Raven, Owen and Archie Seeman, Noel Starick, and Federica Turco collected during the day for six hours in a unexpectedly good environment with many habitats including open forest dominated by large scribbly gums, an open area dominated by low grasstrees, dense *Casuarina* stands, and small swampy areas surrounded by dense, tall, flowering *Melaleuca* forest. Geoff and Fede visited the area five days earlier to set up Malaise traps, a flight intercept trap, and dung/mushroom baited traps.

On the Bug-Catch day, diverse collecting methods were used such as sweep netting, beating, baited pitfall traps, bark spraying, Malaise traps, and hand searching. Mieke, a past UQ Parasitology Honours student, joined the group to learn about collection of blood sucking insects for future work on the vectors of trypanosomes in Australia, and quickly gathered together a large collection of tabanids and mosquitoes. Aki was surprised to collect over 10 species of **ants** in a short period of time. Geoff collected three species of **dung beetles** in his baited traps (*Onthophagus dandalu, O. dunningi, O. tweedensis*), but also found a female *O. dunningi*, which had burrowed in the stem of a large mushroom to collect gill material for stocking its underground nest. **Butterflies** seen or collected by Don, Wes, Chris and Noel included the Common Crow *Euploea core,* Evening Brown *Melanitis leda,* Lemon Migrant *Catopsilia pomona,* Yellow Migrant *Catopsilia gorgophone,* Scarlet Jezabel *Delias argenthona,* Lesser Wanderer *Danaus petilia,* Monarch butterfly *Danaus plexippus*, Orchard Swallowtail *Papilio aegeus,* Varied Eggfly *Hypolimnas bolina,* Meadow Argus *Junonia villida,* Large Grass-yellow *Eurema hecabe,* Halyzia Skipper *Mesodina halyzia,* Yellow-spotted Blue *Candalides xanthospilos,* Small Dusky-blue *Candalides erinus* and Orange-tipped Pea-blue *Everes lacturnus.*

Jenny was fascinated by the attribution of 'scribbles' on the bark of the scribbly gums (*Eucalyptus racemosa*) to the larva of a very small moth as discovered by Tom Greaves in the mid-1930s. Adult moths sent to England were described by Meyrick as a new genus and species, *Ogmograptis scribula* (Lepidoptera: Bucculatricidae). In 2005, Max Day, CSIRO Entomology Emeritus Fellow, discovered larvae and pupae of a new species on Canberra scribbly gums, enabling the first description of the life cycle of a **scribbly gum moth.** Marianne Horak and Ted Edwards have identified four species of moth and two types of scribbles from the Canberra scribbly gum, *Eucalyptus rossii*. Scribbles have now been found on over 20 species of eucalypts that support more than six species of *Ogmograptis* with at least five distinct scribble patterns. I wonder how many species are causing the scribbles on our local scribbly gums?

Chris Lambkin and Geoff Monteith

Figures 1-8: 1) Geoff shows Jenny the 'scribbles' on a large scribbly gum (*Eucalyptus signata*). 2) Closeup of the'scribbles' caused by the *Ogmograptis* caterpillar. 3) Wes with his latest skipper catch. 4) Noel lines up a dragonfly. 5) Aki searching for ants. 6) Fede busy bark spraying a bloodwood. 7) Geoff, large mushroom and resident dung beetle, *Onthophagus dunningi*. 8) Most of the Bug-Catch crew: Don, Aki, Dave, Kathy, Geoff, Mieke, Wes, Gunter, Fede, Chris, Noel, Archie, Owen, and Jenny. Photographs 1-2 by Noel Starick, 3-7 by Chris Lambkin, 8 by Tan Nakamura.

Figures 9-11: 9) 2009 Queensland Entomological Society Council: Desley Tree, Richard Bull, Chris Lambkin, Geoff Monteith, Anna Marcora, Noel Starick, Justin Bartlett, Matt Purcel, Mike Furlong and Geoff Thompson. Photograph by Graham Forbes. 10-11) The huge dragonfly, *Anax gibbosulus*, collected by Don Sands. Photographs by Jeff Wright, Queensland Museum.

A specimen of the Green Emperor, *Anax gibbosulus* (Odonata: Aeshnidae) from Brisbane's western suburbs

Don Sands and Chris Burwell

Over the last 6 months the dragonfly fauna seems to have changed in Brisbane's western suburbs with not-so-familiar species appearing near Gold Creek Dam and along Moggill Creek. In September 2008, Don observed a very large dragonfly that appeared similar in size to a Coastal Petaltail, *Petalura littorea* (south-east Queensland's largest dragonfly), but he was unable to catch the specimen to check its identification.

Subsequently in January and February 2009, about 0.5 km from Moggill Creek, a few other similar specimens were seen near a small dam but attempts to capture them were unsuccessful. On 15 March 2009 at dawn, a large dragonfly was seen resting on a live stem of *Lomandra hysterix* growing above the same dam and was easily captured by hand. It was a cold morning; the large blue and green-bodied dragonfly was covered in dew, was easily collected and delivered to the Queensland Museum for identification. It proved to be a female Green Emperor, *Anax gibbosulus*, a species more typically found in northern Australia (Watson 1974, Watson *et al.* 1991) and recorded as far south as Rockhampton (Fraser 1960) probably based on a specimen in the ANIC from Nankin Creek, Rockhampton collected by C. Vallis in October 1956.

In mid-February 2006 on a Qld Entomological Society/Qld National Parks Bug-Catch event to Cooloola National Park, Barry Kenway captured a single female of *A. gibbosulus* about 1.3 km NNW of Elanda Point (Kenway 2006, specimen in the Queensland Musuem). This was apparently the first record of the species from south-east Queensland. Consequently *A. gibbosulus* was featured in a field guide to the dragonflies of south-east Queensland (Nattrass 2006) and recorded from south-east Queensland in the most recent guide to Australian dragonflies (Theischinger & Hawking 2006). Subsequently, in addition to the Moggill Creek specimen noted here there has been a spate of additional captures and observations of the species in south-east Queensland (Sandy Pollock and Ric Natrass pers. comm., CJB pers. obs.).

The dam near which the current specimen was captured is small (ca 50 m diameter) and shallow and most exotic weeds surrounding it have been replaced

by *Lomandra* spp., *Leersia hexandra* and edged with *Carex appressa*. Since these plants have increased in density the fauna in and around the dam has changed. Dragonflies in particular have increased in species diversity and Don is convinced that the native vegetation is responsible for attracting these species to the area, and perhaps prompting them to breed.

Keep your eyes peeled for the Green Emperor or any other unusual dragonflies and damselflies in south-east Queensland. The Green Emperor is a very large, robust dragonfly that rapidly flies above the water surface. Specimens are around 85-95 mm in length with a wingspan of about 110-125 mm. The thorax is mostly green (fig. 11), as is the base of the abdomen which is marked with bright blue (fig. 10). Most of the abdomen is dark-coloured with a series of pale yellowish spots. The wings are mostly clear, often with a large yellowish-brown patch on each hindwing (fig. 10) and occasionally the forewings. The top of the frons, in front of the eyes, is pale-coloured with a black T-shaped marking (fig. 10). Only the Coastal Petaltail, *Petalura littorea* and the Southern Giant Darner, *Austrophlebia costalis* are comparable in size, but are mostly brown or brownish-black. Two other common, large, aeshnid dragonflies that are often seen flying over lakes and ponds, Blue-spotted Hawker, *Adversaeschna brevistyla* and the Australian Emperor, *Hemianax papuensis* (length about 75-70 mm, wingspan about 85-105 mm) are smaller than the Green Emperor.

Acknowledgements
We would like to thank Geoff Monteith for couriering the live specimen to the Queensland Museum and Jeff and Susan Wright for the photographs.

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Introducing the New President

Christine Lambkin

I am a Curator of Entomology at the Queensland Museum (QM), South Bank, Brisbane, and responsible for the Queensland collection of Diptera (flies), Coleoptera (beetles), Orthoptera (grasshoppers), Hemiptera (bugs), Phasmatodea (stick insects), and a number of smaller insect orders.

Even as a child, I was interested in insects. My first interaction with the Entomological Society of Queensland (ESQ) came at the age of 13, when I won the society's Entomology prize at the Science Teachers Association of Queensland (STAQ) Science Contest for my collection and display on 'Insects in my Backyard', and was presented my prize by a very young, redheaded Ian Galloway. I joined the ESQ as an associate member late in 1970. Alan Genninges and I won both the society's Entomology prize and the major Courier Mail prize at the STAQ Science Contest in 1971 for a joint project that produced an antivenene in mice for the Black House Spider, and I described that work at the ESQ December Notes and Exhibits meeting later that year.

Inevitably I included 11 Entomology subjects in my undergraduate courses at University of Queensland (UQ), while funded on a teaching scholarship. Following a Dip. Ed at UQ in 1976, I taught Chemistry, Biology, and Mathematics at private schools in Sydney and Brisbane for seven years. I became a professional artist, selling and exhibiting botanical and entomological art in galleries in Brisbane while raising four children.

Following an exhibition with Queensland Wildlife Artists at the Queensland Museum, I was employed part-time in 1992 to complete scientific illustrations of spiders by Val Davies for nearly 10 years. During this period I also worked for Dick Drew and Dave Hancock producing illustrations of fruit flies, and completed the illustrations and layouts for the first Good Bug Book. After four years of night study, I acquired a Certificate of Visual Arts & Design (Graphic Design) from Queensland College of Art, gaining experience in computer enhanced imaging. This led to a position with David Yeates at UQ completing illustrations and digital maps for his QEII Fellowship work on beeflies (Diptera: Bombyliidae). Val's interest and Dave's expertise in phylogenetics, and my mathematics background combined, until I was completing cladistic analyses and co-authoring papers with Val. I started a Post-Grad Diploma in 1996 with Dave that was upgraded to Honours, six months in. My Honours and PhD studies were monographic revisions of beeflies that included phylogenetic analyses of combined morphological and molecular data of the Australian fauna to determine species and generic limits, resulting in one Asian genus synonymised, a new African genus described, and 73 new species described for Australia in eleven genera, eight of them new.

During a Postdoctoral Fellowship at CSIRO Entomology Canberra, I began taxonomic and phylogenetic studies of the stiletto fly (Therevidae) genus *Ectinorhynchus* for the American National Science Foundation (NSF), Partnerships Enhancing Expertise in Taxonomy Therevid PEET project. I used supertree construction to produce the first overall phylogenetic hypothesis for the Family Therevidae. In collaboration with Brian Wiegmann (Univ. North Carolina), I am investigating the use of Bayesian analyses to estimate the divergence times of radiations in the Australian stiletto flies. I am also developing with ABRS an on-line Australian Faunal Directory of Australian Therevidae.

I was employed at the QM in 2006 to co-ordinate the databasing of IBISCA Qld, an international collaboration between Griffith University, the QM, the Queensland Herbarium, the Queensland NPWS and SEQ Catchments quantifying changes in biodiversity along an altitudinal gradient in Lamington National Park. Together with Noel Starick, I completed the baseline Malaise trapping for IBISCA Qld over four seasons in 2006 and 2007. The Malaise trap material alone has produced over 150,000 flies, which we are still sorting to Family and beyond.

I am also working on the large international initiative, FLYTREE, in the American NSF Assembling the Tree of Life (ATOL) program. I am one of a team of world experts in dipteran morphology developing the first comprehensive morphological character set and matrix for all fly families in the Order Diptera. The flies are one of the most diverse groups of animals, including many pollinators, disease vectors, and agricultural pests. However, the evolutionary relationships of Diptera remain largely unknown. A comprehensive phylogeny for all Diptera will provide a valuable framework for testing evolutionary hypotheses critical in comparative studies of dipteran development, behaviour, genomics, and neurobiology and provide a major organizing framework for research in the astounding diversity of flies.

From this, it would appear that I spend most of my time in front of the computer. Far from it! Since 1996, I would estimate that 30% of my time is spent in the field, using Malaise traps and hand netting on hill-tops when I get the chance. I have completed biodiversity surveys and environmental assessments in every state of Australia, except Tasmania. The arid and semi-arid regions remain my favourite, leading to the recent development of an educational program: Backyard Explorer (available free on the QM website) aimed at Grades 6-10 examining their habitat, collecting and identifying insects, and comparing their results on-line through Queensland Education websites. While the program has been taken up by schools across Queensland, I have taken on the task of talking to students and teachers across south-west Queensland, while completing biodiversity surveys in National Reserves and on sustainably managed properties.

News from the (former) Department of Primary Industries and Fisheries

It seems the former DPI&F has been reduced to the status of Agency(?) within the newly formed Department of Employment, Economic Development and Innovation (DEEDI).

Nate Hardy has been constructing Lucid identification keys to the genera of soft scales (Coccidae) and armoured scales (Diaspididae) of Australia and is busy rebuilding the ScaleNet website. Additionally, Nate has been assisting **Shaun Winterton** with his research into Neuroptera phylogenetics.

Two Primary Industries & Fisheries Insect Collection staff members, **Desley Tree** and **Justin Bartlett**, are now on the home stretch of their Masters degrees (through the University of Queensland).

Desley, under the supervision of Gimme Walter, has been researching the biodiversity of leaf-litter and bark-dwelling thrips of Brisbane Forest Park. Her project consists of three surveys: the first compares the diversity of leaf-litter thrips in dry sclerophyll forest, wet sclerophyll forest and rainforest; the second survey looks at the diversity of thrips associated with leaf-litter and bark of living trees on the two dominant tree genera in the dry sclerophyll forest, *Acacia* and *Eucalyptus*; the third, again, looks the diversity of thrips associated with leaf-litter and bark of living trees, but of those from flaky bark (grey gum) and deep crevice bark (ironbark) *Eucalyptus* species. Desley says Geoff Monteith's invaluable advice on bark spraying has lead to many new genera of thrips being collected and several new records for Australia.

With Shaun Winterton as supervisor, **Justin** is taxonomically revising the genera of Cleridae (Coleoptera) in Australia using Lucid Builder software to generate natural language descriptions for each genus and also to generate a dichotomous identification key. From this work an interactive Lucid matrix key to the genera of Australian Cleridae will be produced at a later date. Justin also travelled to Western Australia late March to study Cleridae held in the insect collections of the Western Australian Museum and Department of Agriculture and Food.

Desley Tree would like to remind permit holders to carry a copy of their current permit with them while collecting, after having been questioned on two occasions by Brisbane Forest Park Rangers while collecting leaf-litter samples near the entrance of Centre Road. One of the Rangers took time to read every page of Desley's permit and recorded her name and permit number. This is a reminder that Park Rangers are serious about enforcing regulations relating to collecting in parks and forests and that it is a serious offence to be doing so without the appropriate permit.

Society members can apply to collect in Queensland State Forests and National Parks by contacting Susan Wright, the society's Permit Info Officer (contact details on back cover).

News from the School of Biological Sciences (BIOL), The University of Queensland.

David Merritt continued his studies of glow-worm biorhythms in a field trip to Tasmania in January. He spent three weeks in the deep south visiting Mystery Creek Cave just about every day. The most exciting discovery was that cave glow-worms synchronise to each others' lights. Experiments involved exposing populations to artificial light (a 12 V LED lamp and timer) and using time-lapse photography to determine the changes in their rhythms. He also set up a UV light trap in the cave to see if the flight times of the prey items (mainly chironomids) coincided with the peak glowing times. The most exciting part was experiencing a cave flood when an expensive datalogger took a swim. Two new Honours students have begun projects with Dave this year. **Lisa Rigby** and **Robyn Willis** are both working on aspects of glow-worm biology.

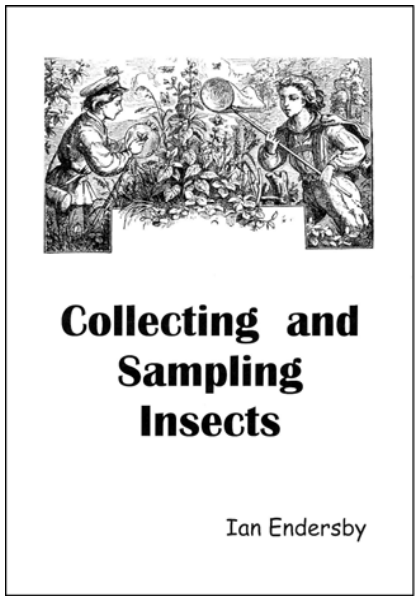
Mike Furlong attended the *Third International Symposium on Biological Control of Arthropods,* Christchurch, New Zealand February 9- February 13 where he organised and convened a session "Capacity building through action learning in region wide biological control" and gave two presentations, "Institutional capacity building in applied entomology through collaborative research in Democratic People's Republic of Korea" and "Combining ecological and molecular methods to investigate predation of a lepidopteron pest complex of *Brassica* crops".

Lyn Cook and Honours student **Penny Mills** have been out and about searching for specimens of *Apiomorpha minor* for Penny's project. Although colleagues in the southern states have had some success, Queensland specimens had been elusive until February, when a tree toppled by one of the recent storms revealed several galls of both females and males in its crown. **Paul Lin** recently undertook field work in Taiwan, where he found several coccids relevant to his PhD study. He is now off to the USA to obtain dried museum specimens to supplement his field work. **Penny Gullan** and **Pete Cranston** visited UQ, QUT and QDPI&F in late February/early March. Pete took the opportunity to catch one of the Reds games at Suncorp, while Penny G taught Penny M the finer details of slide-mounting scale insects.

Gunter Maywald is taking time out of his busy PhD schedule each week to tutor third year entomology students.

New Publications from the Entomological Society of Victoria

Our sister Society in Victoria has produced two recent publications which will be of interest to our members:



Collecting and Sampling Insects 28 pp, illustrated. By Ian Endersby. This little booklet fulfills a need in Australia for an introductory guide to surveying insects and handling the resulting specimens. It illustrates all the common "tools of trade" for the field entomologist and describes the way they should be used. These include hand nets, pooters, beating sheets, malaise traps, intercept traps, light traps, pitfall traps and many aquatic methods. The discussion includes comparison of quantitative versus qualitative methodologies. The need for accurate labelling and careful preparation of preserved specimens is covered. The booklet would be ideal for student project use, both at highschool and early University levels. Normally priced at $10 the booklet is offered at a discount rate to our Society members of $8 plus $2 postage.

Moths of Victoria. Part 1. Silk Moths and Allies: Bombycoidea. By Peter Marriott. This is the first publication emanating from the Victorian Society's grand plan to illustrate all the species of moths from the state of Victoria. It gives colour images of adults of all species of the families Lasiocampidae, Anthelidae, Eupterotidae, Bombycidae, Saturniidae and Sphingidae, together with pictures of quite a range of eggs, larvae and pupae. It comes with an accompanying CD that provides many extra images as well as lots of complementary information. This is priced at a very reasonable $12 plus $3 postage.

Send orders with payment to the ESV Treasurer, Ian Endersby, at 56 Looker Road, Montmorency, Vic 3094. Ian's email for further information is vicmoth@entsocvic.org.au

Entomological Society of Queensland 2009 $250 Student Award

This is an award by the Society to encourage entomological research. Entries are judged by a panel of 3 entomologists appointed by the President of the Society. The winner will be announced at the May General Meeting and is then invited to present a summary of their research at the June Notes and Exhibits meeting of the Society.

Honours, Diploma and 4th year Degree students who received their qualification from any Queensland tertiary education institution in 2008 or 2009 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 Christine Lambkin at christine.lambkin@qm.qld.gov.au

Closing date for submissions is Friday 17th April 2009.

Student Award Sponsors:

Tropical Fruit Fly Research Group, Griffith University

Entomological Society of Queensland
2009 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 in thesis/report with a signed and completed entry form to:
Christine Lambkin
Senior Vice President of the Entomological Society of Queensland
Queensland Museum
PO Box 3300,
South Brisbane, QLD 4101
Fax: 07 38461226

THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC.

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Yours sincerely,

Desley Tree (Treasurer)

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Return to: Treasurer, Entomological Society of Queensland
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DIARY DATES 2009

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

Monday March 9th	Dr Mike Furlong (UQ)	AGM & Presidential Address
Tuesday April 14th	Nate Hardy (QDPI)	Mealybug Classification …..
Monday May 11th	Mary Whitehouse (CSIRO Narrabri)	
Tuesday June 9th	Student Award and Notes & Exhibits	
Monday August 10th	Perkins Memorial Lecture: Professor Gerry Cassis (UNSW) and BBQ	
Monday September 14th	Trevor Lambkin (QDPI)	
Monday October 12th	Chris Burwell (QM)	
Monday November 9th	Myron Zalucki (UQ)	
Monday December 14th	Notes & Exhibits and BBQ	

IMPORTANT NOTICE

The official address for the Entomological Society of Queensland and *Australian Entomologist* and to which all communications should be addressed is: **PO Box 537, Indooroopilly QLD 4068.**

Sustaining associate of the News Bulletin:

TROPICAL FRUIT FLY RESEARCH GROUP, GRIFFITH UNIVERSITY

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STUDENT:	Students and others at the discretion of the Society Council	**$18pa**

Student membership conveys full membership privileges at a reduced rate.
See subscription form on opposite page for details.

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ELSEWHERE:	Individuals	**A$35pa**
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NOTICE OF NEXT MEETING

The next meeting of the Society will be held at **12:00 pm** on **TUESDAY**, **14th April 2009** in the **Large Conference Room**, **CSIRO Long Pocket Laboratories**, 120 Meiers Rd Indooroopilly. The main business will be an address by **Nate Hardy (QDPI&F)** titled '*Mealybug Classification & Endosymbiosis'*.

VISITORS ARE WELCOME
(Please sign in at CSIRO reception before attending the meeting)

HONORARY LIFE MEMBERS OF THE SOCIETY

R.A.I. Drew	D.L. Hancock	M.J. Harslett
D.S. Kettle	D.P.A. Sands	R.P. Kleinschmidt