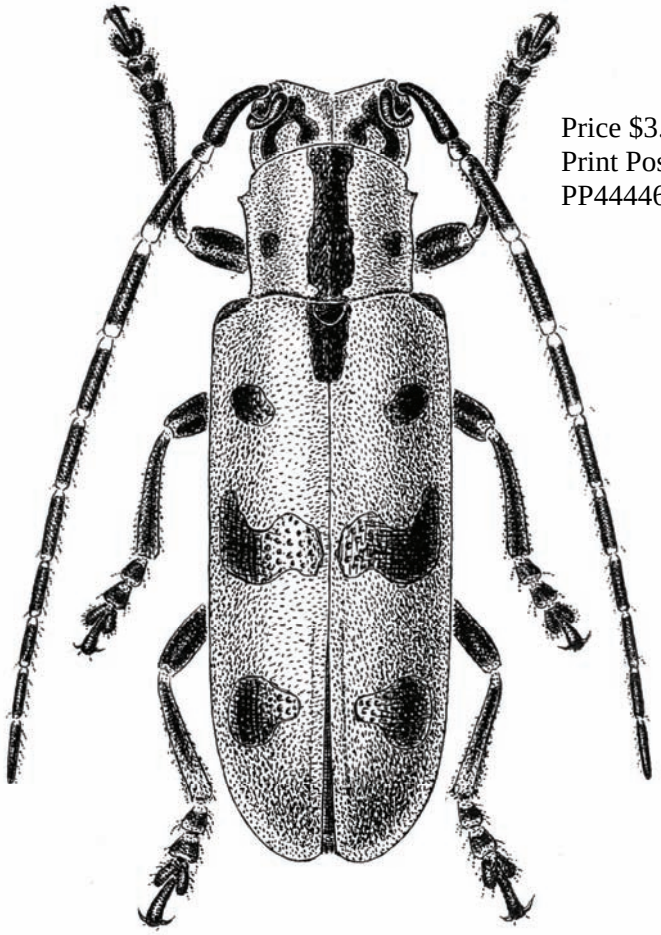
ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC

NEWS BULLETIN



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THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND

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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

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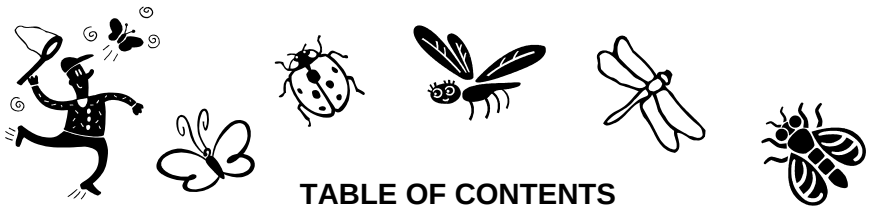

TABLE OF CONTENTS

Minutes of General Meeting	**2**
Main Business—*Presidential Address*	
Large Scale Biodiversity Surveys including Invertebrates: The Future for Taxonomy? *by Chris Lambkin*	**3**
Notice of Next Meeting	**8**
People & Projects	
Bunya Bug-catch	**9**
News from USDA Australian Biological Control Lab	**12**
Introducing the New President	**13**
News from DEEDI Entomology Collection	**14**
Review	
Identification Guide to Australian Odonata *by Sandy Pollock*	**15**
Notices	
ESQ Membership 2010	**15**
Ross Storey Memorial Issue Australian Entomologist	**16**
Australian Entomologist vol 36 pt 4 Contents	**17**
Student Award 2010	**18**
Nomination for Membership form	**20**

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.

Volume 38, Issue 1, March 2010

Minutes of General Meeting

Held in the Large Conference Room, CSIRO Entomology, Long Pocket Labs, 120 Meiers Road, Indooroopilly, on Monday, **Monday 8th March, 2010 at 12.00pm**

Attendance :
Members: Christine Lambkin, Richard Bull, Lyn Cook, Matt Purcell, Graham Forbes, Geoff Monteith, Geoff Thompson, Judy King, Noel Starick, Bradley Brown, Penny Mills, Gio Fichera, Gunter Maywald, Bill Palmer, Don Sands, Gary Fitt, Tim Heard, Nancy Shellhorn, Federica Turco, Felix Bianchi, Desley Tree, Shaun Winterton, David Merritt, Justin Bartlett.

Visitors: Karen Bell, Jean-Baptiste Pichancourt, Rieks Van Klinken.

Apologies: Anna Marcora, Mike Muller, Myron Zalucki, Ross Kendall, John Moss.

Minutes: The minutes of the last Annual General Meeting, were circulated in the News Bulletin Vol. 37 Issue 1 of March 2009.
Moved the minutes be accepted as a true record: Don Sands
Seconded: Geoff Monteith

Nominations for Membership:
The following nominations for Membership were received and approved by Council, and are now put before the meeting for election:
Mr Alberto Guanilo of Mundubbera Q4626.
Jeff & Joshua Barrie of New Beith Q4124
Dr Mike Rix of Perth WA6008

General Business:

Annual Reports and Financial Statements
The Society's Annual Reports, Financial Statements and independent auditor's report were published in News Bulletin Vol. 37 Issue 10. The responsible Council members briefly outlined the content of their report to the meeting:

President
Secretary
Treasurer
Bulletin Editor
Journal Business Manager

There were no questions from the floor concerning information in the reports.
The Chairman called for a member present to move the reports be accepted.
Moved: Geoff Thompson
Seconded: Noel Starick

Election of 2010 Council.

The following nominations had been received by Council at the February Council meeting and as there were no further nominations or vacancies to fill, the Chairman announced they were duly elected.

President	***Matt Purcell***
Senior Vice President	***Lyn Cook***
Junior Vice President	***Chris Lambkin***
Secretary	***Judy King***
Business Manager	***Geoff Monteith***
Treasurer	***Desley Tree***
News Bulletin Editor	***Justin Bartlett***
Councillor	***Richard Bull***
Councillor	***Geoff Thompson***
Councillor	***Federica Turco***

Outgoing Councillors were thanked for their contributions to the smooth running of the Society over the last year.

Susan Wright's resignation from the position of Permit Officer was announced and **Chris Lambkin** instated as the new Officer. The Chairman expressed gratitude for Susan's fantastic job organizing permits and chasing up reports from members for the last 15 years and on behalf of all members, thanked her sincerely for her efforts and dedication.

Student Award: A notice would be placed in the next Bulletin encouraging applicants for this award. Members were also asked to encourage any prospective student they knew or worked with to apply.

Bunya Mountains Bug Catch: Chris advised this had been an outstanding success with 17 people participating and 3 new ESQ members resulting from the outing. Although the weather was cool and misty, moths were outstanding, Coleoptera scarce and enjoyment high.

Incoming President:
Chris Lambkin introduced the incoming President, **Matt Purcell** .

Main Business

The Presidential Address from out-going Society President, Dr Christine Lambkin.
"Large Scale Biodiversity Surveys including Invertebrates. The Future for Taxonomy?"

Large Scale Biodiversity Surveys including Invertebrates: The Future for Taxonomy?

Chris Lambkin

Environmental assessments typically include plants and vertebrates and largely ignore the other 99% of biodiversity, the invertebrates. Those surveys that do include terrestrial invertebrates tend to comprise the same well-known target taxa; butterflies, dragonflies, ants, and beetles. This reduces the problems of identification and the amount of material to be dealt with. Data points for those well-known groups accumulate in databases and information from new surveys can be placed in context. Taxon specific statements can be made about endemicity, range extension, conservation importance, and use and significance as indicators.

Other invertebrate taxa not as well studied, so there are few data points in databases. For most invertebrate species we cannot use the data from a survey to answer questions about diversity, distribution, or endemicity unless there was sufficient sampling in each study to allow internal assessment and comparison. Therefore these invertebrate taxa are not generally included in surveys, an approach that exasperates and compounds the problem. This is a particularly short-sighted approach when we have taxonomic expertise to deal with the identification of an invertebrate group. We should take advantage of available taxonomists and provide funding to add invertebrate taxa from their areas of expertise to large scale biodiversity surveys. The resultant increase in distributional information and data points would allow us to assess biodiversity and environments across broader taxonomic and functional groups, as well as provide specimens for taxonomic studies. This approach, partly taken up by the new ABRS BushBlitz program, has obvious long-term advantages.

I examine the long-term advantage of including flies (Diptera) in key ecological processes as target taxa in biodiversity studies, relating it to my experience in large scale surveys and environmental assessments in Queensland.

Environmental Assessment: McFarlane Oil Shale Project

In 2007-8 the Queensland Museum Invertebrate Sections were contracted by BAAM (Biodiversity Assessment and Management) to complete an environmental assessment of a proposed mine site near Proserpine. Ten sites were chosen, both within the proposed mine site and in comparative surrounding habitats to gather baseline data on invertebrate biodiversity for both assessment and future monitoring. The target groups included the usual butterflies, dragonflies, ants, and beetles but also the spiders, snails, and six families of flies from important functional groups to examine the potential of this data.

Method:

- At each site the following comparative collection techniques were employed:
- 1 malaise trap x 10 days x 4 seasons
- 2 1L pitfalls x 3 months x 4 seasons
- Hand collect x 4+ days

- 9 month employment of Narelle Power (AQIS) to complete field work, sort target taxa, and curate (labelling, pinning, registration) specimens.
- Four curators determine and count species & morphospecies, complete analyses and reports

Outcomes:

- 23 000 **ant** specimens in 144 spp in 47 genera from 11 subfamilies
- 60 species of **butterflies**
- 140 specimens in 17 spp of **dragonflies** & 11 spp of **damselflies**
- 16 spp of **land snails** from 9 families
- 320 spp in 46 families of **spiders**
- 318 specimens of **flies** in 42 spp in 7 families with key ecological roles
- **Report including species level statements on:**
  - Site endemicity
  - Conservation importance
  - Use and significance as indicators

COST: $140,000+

IBISCA QLD was the third invertebrate biodiversity survey of an international collaborative program IBISCA (**I**nvestigations of **Bi**odiversity of **S**oil & **C**anopy **A**rthropods) held at Lamington National Park (in the Gold Coast Hinterland) in 2006-7. IBISCA QLD was organized by Roger Kitching of Griffith University (GU), with collaborators and funding provided by Queensland Museum (QM), Queensland Herbarium, and many others (see acknowledgements).

Method:

- Field work by GU and QM staff, volunteers
- Seven baseline methods used to survey 20 permanent research plots established at five elevations in subtropical rainforest across the altitudinal transect from 300 m to 1100m.
  - 20 Malaise traps x 10 days x 4 seasons–2006&7 - QM
  - 20 Flight Intercept traps x 10 days x 4 seasons - QM
  - 9 Pitfall traps @ 20 sites x 9 days x 3 seasons - GU
  - Bark Spraying 2 x 5 trees @ 20 sites x 4 seasons - QM
  - Leaf Litter – 2 x 1m2 @ 20 sites x 4 seasons - QM
  - Light Traps – canopy & ground @ 20 sites x 2 seasons - GU
  - Yellow Pans -3 @ 20 sites x 2 days x 2 seasons - GU
- Sorting and count to order by volunteers, staff and students at GU & QM
- Sorting and count to family by volunteers and QM staff at QM
- Curation (labelling, pinning, registration) by QM staff
- Experts determine and count species & morphospecies, complete analyses and paper

Amount of Material. This project provides a rarely acquired indication of the amount of material collected in surveys that include invertebrates as ALL the material collected in IBISCA QLD using the seven baseline methods was sorted to Order and counted.

Collecting Method Comparison. Few biodiversity studies that include invertebrates employ the number of baseline methods that were used in IBISCA QLD, in a scientific comparative manner. When the total numbers of specimens of Orders collected across four seasons by all baseline methods are compared to the numbers collected in the Malaise traps, the Malaise traps collect 54% of the material and show a bias for collecting flies. While flies comprise 66% of all the material collected, 82% of the Malaise catch are flies.

	All	Malaise
Heteroptera	1943	736
Thysanoptera	559	71
Coleoptera	34121	5147
Diptera	183844	123199
Ants	5152	1286
Other	25233	16093
Araneae	5016	743
Acari	7916	253
Amphipoda	394	1
Orthoptera	92	14
Phasmatodea	8	3
Pseudoscorpions	32	7
Ephemeroptera	1	
Homoptera	884	411
Isopoda	951	3
Isoptera	3	
Lepidoptera	893	479
Neuroptera	75	30
Odonata	3	
Oligochaeta	1	
Opiliones	42	4
Psocoptera	454	181
Scelionid	3	
Siphonaptera	2	
Blattodea	32	7
Chilopoda	25	
Collembola	8689	1502
Copepoda	1	
Dermaptera	27	2
Diplopoda	95	2
Diplura	198	
Embioptera	3	
Symphyta	6	
Trichoptera	2	2
TOTAL	**276700**	**149876**

Family level Sorting of Diptera. A total of 118,771 specimens from 46 families of Diptera from IBISCA QLD were sorted to Lower Diptera, Lower Brachyceran and schizophoran families, counted, and databased from Malaise traps from October 2006, January and July 2007, pitfall trap, flight intercept from October 2006, sweep net, beating, and yellow pan samples by Noel Starick, Mark Schutze, Anna Marcora, Narelle Power, Federica Turco, Sarah Boulter, and myself using the CD: On the Fly (Hamilton et al., 2006) and a set of identification sheets incorporating images taken by Noel. We examined family level assemblages of flies collected in Malaise traps across three seasons.

- 93% of dipteran family abundance was made up of Lower Diptera or Phoridae.
- Numbers of flies collected from most families decreased as elevation increased, but Sciadoceridae, Calliphoridae, Clusiidae, Ephydridae, Heleosciomyzidae, Lauxaniidae & Muscidae were most abundant at the highest elevation.
- Statistically significant differences were seen between family assemblages separated by at least 600m in altitude. In summer, many families are most abundant at the upper elevations. During winter, some families are most abundant at lower altitudes. Empididae, Phoridae, Chloropidae, Drosophilidae, and Sphaeroceridae appear to be able to survive at lower altitudes in winter, and become more abundant at higher cooler altitudes in summer.

Morphospecies level sorting of Diptera. 3688 specimens from 26 fly families were sorted, counted, and identified as 268 morphospecies by the ' IBISCA QLD Diptera Group' for Therevidae, Bombyliidae (Lambkin); Dolichopodidae, Hybotidae, Empididae (Dan Bickel Australian Museum, (AM)); Drosophilidae (Shane McEvey AM); Pipunculidae (Jeff Skevington Canadian National Collection of Insects, Ottawa, Canada), Tachinidae, Calliphoridae (Bryan Cantrell QM); Syrphidae (Susan Wright QM); and Malaise trapped Schizophora (Rohan Wilson Australian

National University)). 106 described species were recognised by these taxonomists.

Outcomes of IBISCA QLD:

- Baseline data – temporal, altitudinal, for many taxa
- Identified specimens from 26 families of flies
- Specimens of undescribed species for taxonomic work
- Use and significance of flies as indicators of climate change
- Ecological papers

COST (of whole project, not just Diptera): $500,000+ with $700,000+ inkind

To include the poorly studied invertebrates in biodiversity studies, if the taxonomic expertise is available and willing, we have to consider the real costs by including employment of staff to break the back of the sorting, and the considerable costs of curation and databasing. The amount of material collected is massive, therefore sorting needs to be targeted, and that requires a level of expertise in the sorter. Value can be added to biodiversity surveys by using comparative methods for data collection, allowing analysis of data and publication of results.

Family	#
Lower Diptera	82340
Asilidae	93
Bombyliidae	5
Dolichopodidae	1188
Empididae	1479
Hybotidae	7
Nemestrinidae	1
Rhagionidae	41
Stratiomyidae	390
Tabanidae	9
Therevidae	45
Phoridae	20181
Pipunculidae	35
Platypezidae	42
Sciadoceridae	4
Syrphidae	45
Tanypezidae	1
Agromyzidae	5
Anthomyidae	3
Asteiidae	1
Axiniidae	4
Calliphoridae	206
Chloropidae	969

Family	#
Clusiidae	64
Cryptochaetidae	2
Cypselosomatidae	2
Drosophilidae	901
Ephydridae	16
Heleomyzidae	198
Heleosciomyzidae	130
Lauxaniidae	188
Lonchaeidae	6
Micropezidae	22
Milichiidae	25
Muscidae	686
Neriidae	5
Neurochaetidae	3
Platystomatidae	11
Pyrgotidae	2
Sarcophagidae	11
Sepsidae	20
Sphaeroceridae	751
Tachinidae	251
Tanypezidae	7
Tephritidae	15
Teratomyzidae	41
TOTAL	**110451**

But this is identification not taxonomy! The Queensland Museum has been involved with other large scale invertebrate-based biodiversity surveys including Brisbane City, Peak Range, Redlands Shire, Capricornia Cays, and the Bush Blitz. Most biodiversity surveys take significant time and funds following the fieldwork, and require comprehensive identification skills. Those surveys mean the taxonomist is providing an identification service, not completing taxonomic work. No species are described! While these projects collect some material for taxonomic studies, they usually do not promote or fund taxonomy. One of the aims of the ABRS funded Bush Blitz is to promote taxonomic studies. Is piggy-backing species discovery onto a biodiversity survey cost effective?

The problems for taxonomists. In Australia only about 25% of our invertebrate taxa are described. Additionally many of the existing species remain incorrectly in European genera. The descriptions of many of our taxa are over 150 years old, not in English, and completed in obscure publications. Types of Australian species are often in European Museums or have been lost in conflicts, if they were even designated in the first place.

Taxonomic studies are problematic as they require accumulation of ALL collected material, access to and understanding of the literature, examination of types, and uninterrupted time to see patterns of variation, determine species differences, and write descriptions. Unfortunately species do not understand reserve, council, state or country boundaries, so specimens must be examined across their entire distribution.

The taxonomist's role is further complicated by requiring the descriptions of new species to be placed into an existing world-wide classification, needing an understanding of the characters delineating large numbers of species, genera, tribes, and even families. Where there are problems with the existing classification, many years of work will be needed not just to describe new species but to redescribe existing species concepts, revise and describe genera, or even higher taxa. Thus taxonomists tend to infrequently publish large works covering many species in the few journals that will take such studies. And therefore taxonomists have suffered hugely through the current valuation of their work and ranking of their performance based on the short-term impact factor rather than the cited half life of their scientific publications (Boero, 2010).

If classifications are based on systematic techniques supported by examination of morphological features or molecular data, acquisition of that understanding requires even more time and effort, slowing down the rate of description. Thus taxonomists tend to specialise on the taxonomy of only a few families in only one Order of organisms. Other staff, if available, can speed up taxonomic work by illustrating, photographing, mapping, databasing, and sequencing specimens. 'Quick taxonomy' should only refer to the description of only one or two species with limited distribution when the group has recently been revised and the new species can be placed in context into an updated classification.

So how do we promote taxonomy?
While we should reward those who collect, identify, and curate survey material this is not promoting the description of new species or classifications. We must properly fund the distribution of collected and sorted specimens to experts around world; museum visits; systematic morphological and molecular studies; long-term taxonomic revisionary studies; especially through jobs for taxonomists. Moreover we must push for a review of the valuation and ranking of scientific performance to be based on long-term values such as cited half life not the current short-term impact factor as so eloquently expressed by Ferdinando Boero (2010). Yes, ABRS needs more financial resources, but in this era of biodiversity the majority of funds must be

applied to taxonomy not biodiversity studies through rewards for species descriptions not for identification services. We should stop working for *Arachis hypogaea*!

Acknowledgements

I wish to acknowledge the IBISCA QLD partners Griffith University, Qld Herbarium, SEQ Catchments, National Parks Association of Qld , Global Canopy Programme (Uni. Oxford), Qld Government (National and International Research Alliances Program, Department of State Development & Smart State), NRM Qld, Aust. Department of Environment, Heritage and Arts. I wish to sincerely thank Sarah Boulter (Griffith Uni, IBISCA); John Stanisic (BAAM); Dan Bickel & Shane McEvey (AM), Rohan Wilson (ANU), Jeff Skevington (CNIC); and Queensland Museum staff (Bryan Cantrell, Susan Wright, Narelle Power, Noel Starick, Mark Schutze, Federica Turco, Geoff Thompson) for all their willing help, broad knowledge, and enthusiasm in the field, laboratory, and office.

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BOERO, F. 2010. The study of species in the era of biodiversity: A tale of stupidity. *Diversity* 2: 115-126.

HAMILTON, J., D. YEATES, A. HASTINGS, D. COLLESS, D. McALPINE, D. BICKEL, G. DANIELS, M. SCHNEIDER, P. CRANSTON and S. MARSHALL. 2006. *On The Fly: The Interactive Atlas and Key to Australia Fly Families.* Australian Biological Resources Study, Canberra & Centre for Biological Information Technology, St. Lucia.

Matt thanked Chris for her interesting and informative address and for her tireless input to the Society for the last year as President.

The meeting was closed at 12.50pm.

Notice of Next Meeting

Monday 12th April, 2010, 12pm

"Landscape Scale Pest Management in Vegetable Crops"

Dr Nancy Schellhorn
CSIRO Long Pocket

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

ALL WELCOME
(please sign in at reception before meeting)

BUNYA BUG-CATCH

Christine Lambkin and Bryan Cantrell

The 17th Bug-Catch was held at the Bunya Mountains National Park, organised in conjunction with Kelvin Quinn, Ranger-in-Charge, from Friday 26 to Sunday 28, February 2010. We had a good turn-out with a total of 17 members and visitors collecting insects over the weekend including Bryan Cantrell, Peter Hendry, Chris Lambkin, John Moss, Noel Starick, and Fede Turco from Brisbane; Wes Jenkinson from Beaudesert; Joshua and Jeff Barrie from New Beith near Jimboomba; Paul Priebbenow, Zara Ludgate and Jason Hall from Toowoomba; Alberto Guanilo from Mundubbera; and entomologists Peter Gillespie, Holger Loecker, Chris Bloomfield, and Cecilia Lawler from Orange NSW.

This Bunya Bug-Catch had a different focus. On the weekend of 21-22 March 1987, the ESQ conducted an excursion to the Bunya Mountains NP, in a precursor to the current Bug-Catch activities. Following discussions with the local Ranger-in-charge at Dandabah, ESQ members donated specimens and two display cases for the QPWS Information Centre at Dandabah. Bryan Cantrell and the late Neil Gough were the instigators of this initiative, which has proven to be a popular display with the visiting public. Over the last twenty years some specimens have faded and others ravaged by pest insects, so that the display needed updating. As the QPWS Information Centre is undergoing an upgrade, the QPWS Rangers were keen to have us collect over the February weekend in order to not only supply a list of insects seen and collected, but to include new specimens in the display.

We booked the Burton's Well camping area for the Bug-Catch, and most camped there for the weekend. The Orange NSW DPI stayed in cabins near Mt Mowbullan. Burton's Well Campground is a large, well-grassed open area surrounded by forest with a number of ancient grasstrees scattered through the camping area, about 8.5km north-west of the QPWS Information Centre at Dandabah.

The QPWS Rangers, Kelvin Quinn and Eugene Craddock, visited the Campground often to check how we were faring and were interested in our activities. On the Friday afternoon, Eugene brought a group of Murri Rangers to learn about insects, and Chris showed them how to set invertebrate pitfalls and identify insects to Order using the online CSIRO Key to Invertebrates.

Unfortunately the weather wasn't the best with intermittent showers and rain and strong winds, low cloud and mist from dusk till about 9am. Fortunately there were sunny breaks when we and the insects warmed up and became more active, appreciating the magnificent views. Hand collecting concentrated on Mt Kiangarow near the Burton's Well camping area. Other areas sampled, mostly with sweep nets, included grasslands, eucalypt forest, rainforest and vine scrubs at Mt Mowbullan, Ensor Rd behind the Presbyterian Camp, Paradise Falls track, Cherry Plains to Westcott track, and the Pine Gorge track. Numbers of butterflies, some flies, a few carabid and passalid beetles, bush cockroaches, and one mountain katydid were collected. Geoff Monteith and Fede had set up four Malaise traps some weeks before, between Burton's Well and Dandabah. Fede reset these and set another two, while collecting leaf litter and bark spraying. Some bark beetles (Zopheridae) were captured. The Bunyas lived up to their


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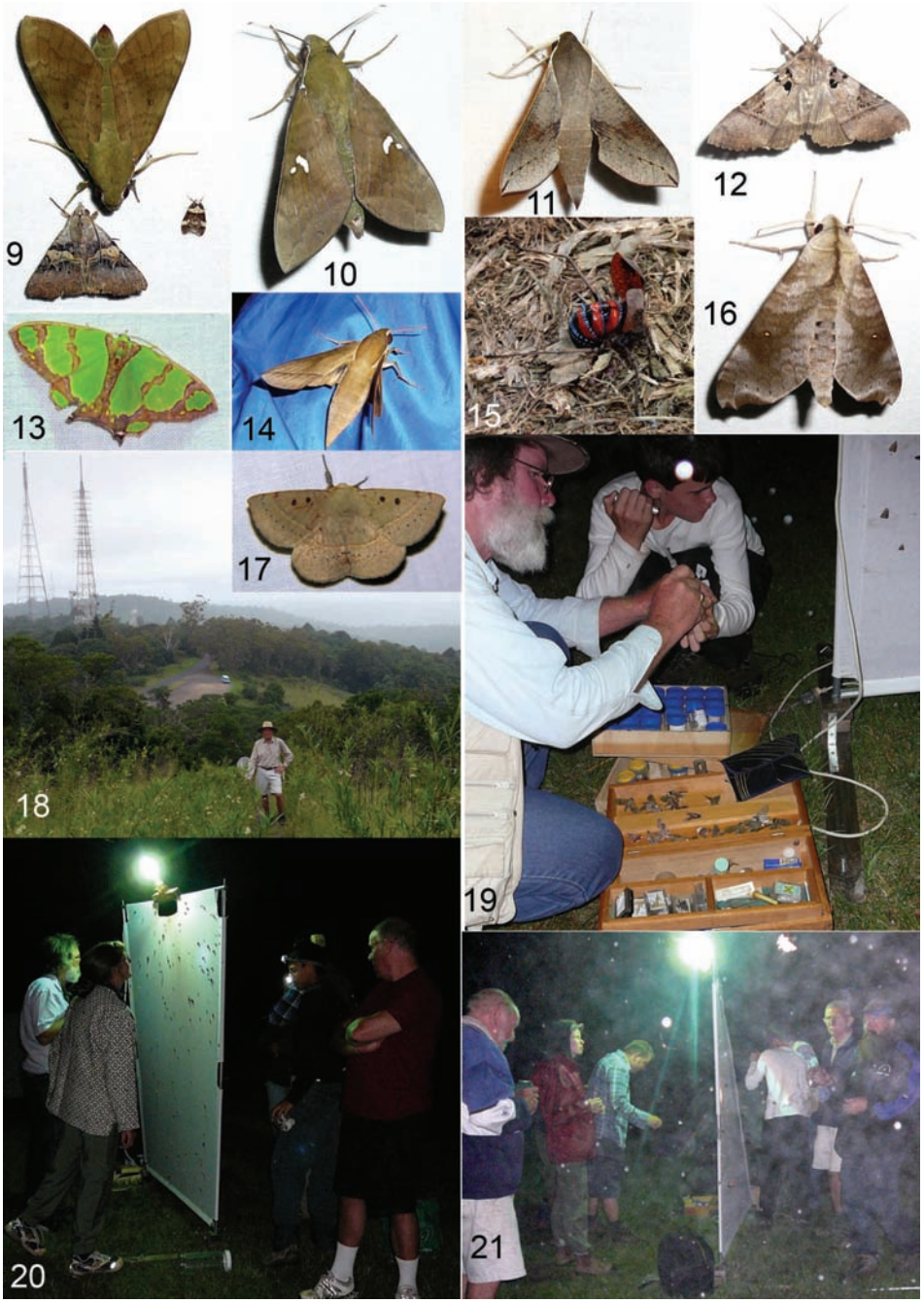
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reputation and many of us were collected by the local ticks that tended to go for the neck!

We ran two light sheets on Friday and Saturday nights at Burton's Well. Peter Hendry's sheet was very successful and well attended by excited entomologists, especially Saturday night possibly because of the dense mist. Large numbers of moths including nine different species of Hawk Moth (Sphingidae), Anthelids, Arctiids, Geometrids, and Noctuids were collected from the sheet, but few flies, and even fewer beetles. Many thanks to Peter Hendry for helping identify some moths on the light sheet from images.

Noel and Chris retrieved the ESQ insect display from the QPWS Information Centre and it is currently in the freezer at the QM. Bryan, Noel and Chris will work on the drawers, replacing deteriorated material with specimens collected over the weekend that members have set and prepared for the display.

News from USDA Australian Biological Control Laboratory

Dr. Ted Center from the USDA ARS Invasive Plant Research Laboratory visited ABCL in March. Ted participated in interviews for recruitment of a new Research Scientist with the USDA Team. While in Brisbane he also took the opportunity to inspect research on potential biological control agents for *Melaleuca quinquenervia*, *Lygodium microphyllum* and *Cyathea cooperi*. A gall-forming scale insect on *Melaleuca*, *"Sphaerococcus" ferrugineus*, was shipped to quarantine facilities in Florida for further evaluation. The team has a new target, the Asian Citrus Psyllid, *Diaphorina citri*, which vectors the citrus greening disease in many countries throughout the world including the US. Exploration for parasites is being planned for China, India and Nepal.

Figures (previous page). **1** & **2**. Display cases retrieved from the QPWS Information Centre. **3**. Chris Lambkin shows the Murri Rangers setting of pitfall traps for invertebrates. **4**. Rangers Kelvin and Eugene talk to Chris about insects. **5**. Grasstrees in the mist early morning at Burton's Well campground. **6**. Bunya Pines from base of Mt Mowbullan. **7**. Discussing Lepidoptera: John Moss, Zara Ludgate, Alberto Guanilo, Paul Priebbenow, Joshua and Jeff Barrie, and Wes Jenkinson. **8**. Sunshine from the summit of Mt Kiangarow. **9**. Sphingidae: *Nephele subvaria* (Walker) female & Noctuidae: *Avatha discolor* (Fabricius). **10**. *Nephele subvaria* male. **11**. Scrofa Hawk Moth. Sphingidae: *Hippotion scrofa* (Boisduval); **12**. Fruit-piercing Moth. Noctuidae: *Serrodes campana* Guenée. **13**. Geometridae: *Agathia prasinaspis* Meyrick, Female; **14**. Sphingidae: *Theretra inornata* (Walker), male. **15**. Female Mountain Katydid, *Acripeza reticulata* displaying. **16**. Sphingidae: *Acosmeryx miskini* (Murray). **17**. Anthelidae: *Anthela acuta* (Walker). **18**. Bryan Cantrell amongst the milkweed on Mt Mowbullan. **19**. Peter Hendry injecting moths, aided by Joshua Barrie. **20**. The light sheet on Friday night, watched by Peter Hendry, Cecilia Lawler, Alberto Guanilo, Peter Gillespie, and others. **21**. Saturday night's light sheet in the mist, with Noel Starick, Zara Ludgate, Wes Jenkinson, Joshua Barrie, Bryan Cantrell, Jeff Barrie, and various moths. Photos 1-5, 7, 15, Noel Starick; 17 Peter Hendry; Remainder Chris Lambkin.

Introducing the New President: Matthew Purcell

Matthew Purcell is a scientist at CSIRO Entomology, Long Pocket Laboratories in Brisbane. He is currently Director of the USDA ARS Australian Biological Control Laboratory (ABCL) at Indooroopilly, a facility run through a cooperative agreement with the United States Department of Agriculture, Agricultural Research Service. He was Treasurer of the Entomological Society of Queensland from 2005-2008 before becoming Senior Vice President in 2009.

Matthew first started as a technician with CSIRO over 25 years ago working on the biological control of Water Hyacinth Project with Tony Wright. Since then Matthew's research experience in the biological control of weeds spans exploration, pre-release evaluation and post-release experimentation. In exploration he has evaluated the modes of attack by herbivores on weeds, and has successfully selected agents that are effective in controlling *Melaleuca quinquenervia* and *Hydrilla verticillata*, Australian plants that are serious weeds in Florida. Matthew conducted studies on the biology, life history and host-specificity of these insects and after detailed evaluation; several have been approved for release in Florida in the United States. He has overcome complex problems in rearing and testing these insects to ensure continued research on high priority candidates for biological control.

The most significant accomplishment Matthew Purcell has made is the pre-release evaluations of the three biological control agents successfully established on *M. quinquenervia* in Florida; the melaleuca leaf weevil, *Oxyops vitiosa*, the melaleuca psyllid, *Boreioglycaspis melaleucae*, and the melaleuca stem-galling midge, *Lophodiplosis trifida*. The control of *M. quinquenervia* in Florida is a great success where the densities of stands have been dramatically reduced and flowering has been decreased by almost 95%. Matthew also evaluated the hydrilla stem-boring weevil on *H. verticillata*, *Bagous hydrillae*, which was released in Florida in 1989. In post-release studies, Matthew designed experiments investigating the complex relationships between water hyacinth, *Eichhornia crassipes* and *Neochetina* spp. weevils. The outcomes of these studies could result in improved release strategies for biological control of water hyacinth.

From 1997-1999, Matthew managed the USDA-ARS ABCL in Brisbane in the temporary absence of the USDA ARS Laboratory Director. During this period he Supervised all research and staff, monitored finances and facilities, and liaised with ARS personnel in the US. After the departure of the ARS scientist John Goolsby in 2004, he once again became the Acting Director and in 2009 was officially recognised as the Director. Since 2004, Matthew has successfully managed existing projects and the labs have initiated new research on Downey Rose Myrtle, *Rhodomyrtus tomentosa*, the tree fern *Cyathea cooperi* and the Asian Citrus Psyllid, *D. citri*. He travels regularly to countries in Asia exploring for biological control agents.

News from DEEDI Entomology Collection

The first stage of preparations for the shift to the new Boggo Road facility are underway with specimens from the old timber cabinets being transferred to new draws and stored ready for the move. Volunteers have been putting in long hours and are doing a great job. The picture below shows new draws packed and stacked ready for storage in the foreground, and the remaining old timber cabinets in the background.

REVIEW

Identification Guide to the Australian Odonata (2009). By G. Theischinger and I. Endersby.

Department of Environment, Climate Change and Water NSW.

Continuing interest in the Australian Odonata, particularly by those involved in outdoor digital photography, or in studies of river health and condition has provided the impetus for this new guide, a successor to The Complete Field Guide to Dragonflies of Australia by Theischinger and Hawking (2006).

Australian dragonflies are well known from a taxonomic viewpoint. However, their ecology is very much less studied than those from the northern hemisphere. One of the problems in conducting further ecological work has been the lack of keys to species, esp. in the tropics and subtropics, where most of the Australian species occur. This guide ties together previous keys, and presents them, together with information on larval and adult features, into a spread-out and easy-to-use format. At 290 pages, it is a substantial body of work, and provides much new information to those interested in odonates in Australia.

The central feature of this guide is the revised and well laid-out keys to suborders and families, using illustrated examples of the features described in couplets. These keys have been updated to lead to adult species identification for all known Australian taxa, a significant improvement from previous publications. Larval keys to species have also been made, where characters to describe them exist. A useful set of distribution maps (derived from reliable identifications of adult specimens) help decide potential species from larvae alone.

The guide gives an overview of the latest systematics of the Australian odonates, as well as a current checklist. A detailed reference list is also provided.

A chapter detailing seven species of conservation concern, provides an invaluable summary of current issues of dragonfly conservation within Australia. These make fascinating reading, since several of these species have had very chequered taxonomic and collection histories.

Given current conflicts in all Australian states over water management and use, this guide reminds us of an unmistakeable and popular invertebrate group totally dependent on the provision of suitable aquatic habitats. It is a "must-have" for anyone studying aquatic invertebrates in Australia, and vital for those involved in collection of adult dragonflies. The authors are to be thanked for their considerable efforts in making this possible.

It is available for free download courtesy of the DECCW website:

http://www.environment.nsw.gov.au/resources/publications/09730AustOdonata.pdf

Alexander (Sandy) Pollock

NOTICE

Membership 2010

Thank you to the members who have already paid their subscriptions for 2010 – currently approximately 50%. Please keep them coming in! When members do send in their payment please remember to retain the **bottom** section of the form (not the top), to keep for your records; this is the only form of receipt for subscription payments.

Desley Tree
(Honorary Treasurer)

Ross Storey Memorial Issue of *AUSTRALIAN ENTOMOLOGIST*

Ross in 1972 soon after arriving in Australia

The latest issue of *The Australian Entomologist*, is a special Memorial Issue dedicated to the memory of entomologist and coleopterist, Ross Storey, who died in Cairns in 2008. Born and educated in Canada, Ross came to Australia in 1971 and worked initially at University of Queensland before joining the Department of Primary Industries lab at Mareeba, north Queensland, in 1976 working there as resident taxonomist until his death. He was a passionate coleopterist and made a major contribution to collecting and studying the fauna of the north, particularly the dung beetles. He had very wide interests both inside and outside entomology and was active in many aspects of community life in Mareeba. Ross was also extremely gregarious and had a wide circle of entomological friends in Australia and overseas.

The special issue runs to 100 pages on good quality paper with full colour. It is not only the largest issue we have ever produced, but also the first to have perfect binding instead of just saddle stapling. It contains 11 papers (see Contents Page opposite), two of them are illustrated biographies of Ross himself, and the remaining nine are papers on Australian Coleoptera dedicated to Ross. There are also lists of the species which Ross himself described and of the more than 50 species named in his honour.

I have a small stock of extra copies of this special issue, and we also have an electronic PDF of the whole issue which is available on CD disc or as an 18MB downloadable PDF from a file-sharing site. Friends of Ross, or beetle enthusiasts, may like one of these as a memento of one of the memorable characters of Australian entomology. Prices are as follows: Hardcopy printed book, Australia $15 posted, Overseas $20 posted; CD disc, Australia $8 posted, Overseas $10 posted; Downloadable PDF, $6, the address of the file-sharing site will be provided on receipt of payment (all prices in Australian dollars).

If you wish to purchase one of these items please EITHER send your order, address and payment (payble to "Australian Entomologist") by mail to the address below and I will supply the item with a receipt, OR send your request by email to the address below and I will send back a receipted invoice with provision for making a credit card or cheque payment.

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Business Manager
Australian Entomologist
P.O.Box 537, INDOOROOPILLY.
QLD. 4068
geoff.monteith@bigpond.com

Ross at a gathering of entomologists in Kuranda in 2007

THE AUSTRALIAN
Entomologist

R.I. STOREY MEMORIAL ISSUE
Volume 36, Part 4, 29 January 2010

CONTENTS

ALLSOPP, P.G.
Two new species of *Anoplognathus* Leach (Coleoptera: Scarabaeidae: Rutelinae) from Queensland. 213

BAEHR, M.
Two new species of the genus *Lioptera* Chaudoir (Coleoptera: Carabidae: Lebiinae) from the Papuan and southern Oriental Regions. 171

BARTLETT, J.S.
A new species of bicoloured *Eleale* Newman (Coleoptera: Cleridae) from the Northern Territory. 183

CURLETTI, G.
A new species of *Agrilus* Curtis (Coleptera: Buprestidae) from Eastern Australia. 167

FAY, H.
Ross Storey – much more than a coleopterist. 161

HASENPUSCH, J.W. AND MOESENEDER, C.H.
Storeyus, a new genus and *Storeyus pseudodipterus*, a new species of Cetoniinae (Coleoptera: Scarabaeidae) from Australia, with a redescription of *Lenosoma* Kraatz. 221

HOUSTON, T.F., ZHANG, J. AND HANICH, B.P.
Diet of the flightless trogid beetle *Omorgus rotundulus* (Haaf) (Coleoptera: Trogidae) in the Little Sandy Desert of Western Australia. 207

MATTHEWS, E.G. AND MONTEITH, G.B.
Monteithium storeyi, a new species of Adeliini (Coleoptera: Tenebrionidae) from the Wet Tropics of Queensland, Australia. 201

MONTEITH, G.B.
Ross Ian Storey – a coleopterist cut short. 153

REID, C.A.M. AND BEATSON, M.
The genus *Atysa* Baly in Australia (Coleoptera: Chrysomelidae: Galerucinae). 189

WEIR, T.A. AND MONTEITH, G.B. 235
Lepanus storeyi, a new species of dung beetle (Coleoptera: Scarabaeidae: Scarabaeinae) from southeast Queensland.

LIST OF INSECT TAXA DEDICATED TO ROSS STOREY 170, 242

Entomological Society of Queensland 2010
$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 2009 or 2010 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 16th April 2010.

Student Award Sponsors:

Tropical Fruit Fly Research Group, Griffith University

Entomological Society of Queensland
2010 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 your thesis/report with a signed and completed entry form to:
Christine Lambkin
President of the Entomological Society of Queensland
Queensland Museum
PO Box 3300,
South Brisbane, QLD 4101
Fax: 07 38461226

Entomological Society of Queensland
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Indooroopilly
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Name ______________________________________ Date ____________

Amount paid $_________________ for year/s ______________

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		
JUN—Tuesday 15th		
AUG—Monday 9th		
SEP—Monday 13th		
OCT—Monday 11th		
NOV—Monday 8th		
DEC—Monday 13th		

SOCIETY SUBSCRIPTION RATES

GENERAL:	Person who has full membership privileges	**$30pa**
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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.

THE *AUSTRALIAN ENTOMOLOGIST* SUBCRIPTION 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

NEXT MEETING

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

Main Business

Landscape Scale Pest Management in Vegetable Crops

Dr Nancy Schellhorn (CSIRO)

VISITORS WELCOME
(please sign in at reception before meeting)

NEXT NEWS BULLETIN

Volume 38, Issue 2 (April 2010)
due early May

CONTRIBUTIONS WELCOME

DEADLINE - Thursday 22th April
Send your news/stories/notices to the editor
(justin.bartlett@deedi.qld.gov.au)