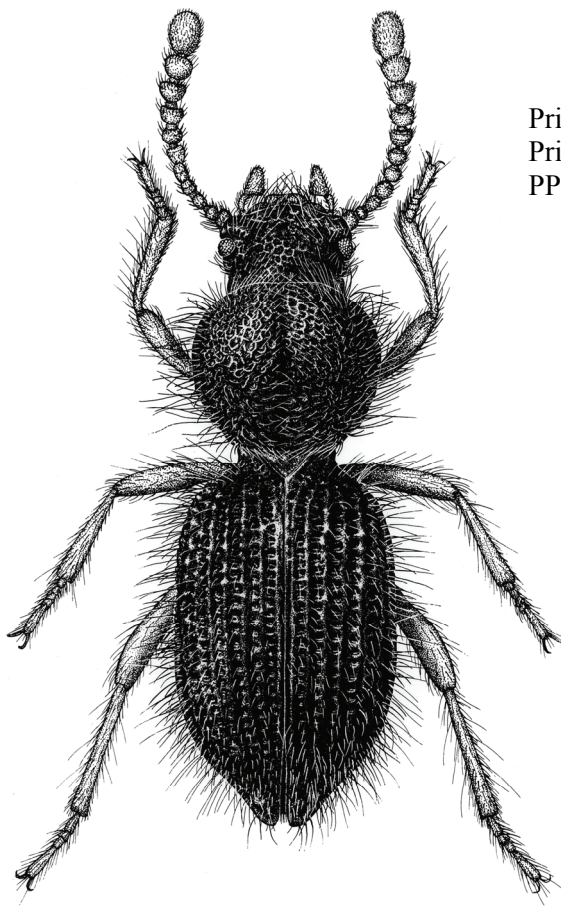


ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC

NEWS BULLETIN



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THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND

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Front Cover Illustration: *Apocryphodes thompsoni* Matthews, 1998 (Tenebrionidae; Adeliini). This specimen is a paratype illustrated by Geoff Thompson for the original description; collected from leaf litter in 1984 on one of Geoff Monteith's North Queensland field trips by Val Davies, Geoff Thompson and Julie Gallon, at Gayundah Creek on Hinchinbrook Island.

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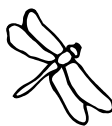


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The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC.**, since its inception in 1923, has striven to promote the development of pure and applied entomological research in Australia, particularly in Queensland. The Society promotes liaison among entomologists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

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

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

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

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

Minutes of General Meeting

Held in the Library, – ground floor, Eco-sciences Precinct, Boggo Rd, Dutton Park, Monday, May 14 at 1.00pm.

Chair: Geoff Thompson.

Attendance: Stephen Cameron, Lyn Cook, Michael Day, Kathy Ebert, Gio Fichera, Alexandra Glauert, Tim Heard, David Holdom, Ross Kendall, Ian Knight, Trevor Lambkin, Judy King, Simon Lawson, Lance Maddock, Gunter Maywald, Penny Mills, Geoff Monteith, John Moss, Mike Muller, Bill Palmer, Brenton Peters, Don Sands, Mark Schutze, Desley Tree, Peter Twine, Federica Turco.

Visitors: Solomon Balagawi, Kunjithapatham Dhileepan, Ian Ferrier, Greg Harper, Tony Pople, Martin Shivas.

Apologies: Justin Bartlett, Bradley Brown, Richard Bull, Graham Forbes, Austin McLennan, Chris Moeseneder, Matthew Purcell, Morris McKee, Helen Schwencke, Alisha Steward.

Minutes: The minutes of the last General Meeting were circulated in News Bulletin Vol. 40, Issue 2, April 2012.

Moved that the minutes be accepted as a true record: Don Sands.

Seconded: Simon Lawson.

Carried unanimously.

Nominations for Membership:

None.

General Business:

1. The President announced that Nicholas Appleton, a student at UQ, was the winner of the 2012 Student Award, for his thesis titled “The Genomic Response to Natural and Sexual Selection during Adaptation to a Novel Environment”. Both judges commented on the high quality of the entries.

2. Change of meeting day: The President has received several positive replies to the suggested change, and no negative comments. There were no objections at the meeting. Therefore the August meeting will be held on Tuesday, August 14th, and all subsequent meetings will be held on the second Tuesday of the month. The venue is unchanged.

3. Announcement of the 6th International Symposium on the Biology and Ecology of Gall Inducing Arthropods and related Endophytes’. To be held 4 – 8 August 2013 at O’Reilly’s Rainforest Retreat, Queensland; a flyer will be included in the Bulletin.

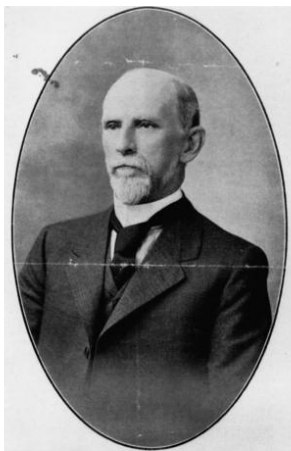
Main Business

Weed biocontrol — where to now?

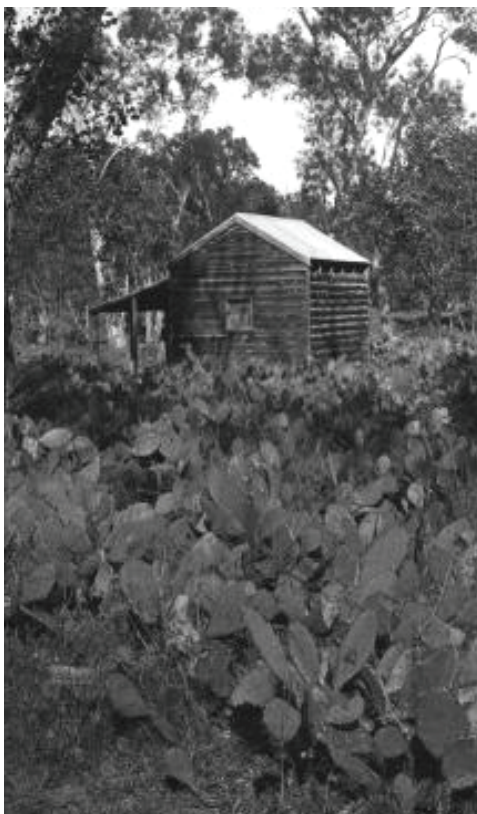
Dr Bill Palmer, DAFF Qld

Biological control is probably as old as the hills. The Chinese are said to have practised it for millennia. In the more recent times one of the earliest examples was the movement of Brazilian cochineal insects from elsewhere in India from the 1860s for prickly pear control in southern India and later Sri Lanka (Harley and Forno, 1992). What we now call classical biological control (obtaining host specific agents from the target’s native range for introduction by limited releases into the exotic range where the target is a pest) received a considerable boost when C. V. Riley sent Albert Koebele to Australia in 1888 to find agents for the cottony cushion scale then devastating the Californian citrus industry (DeBach, 1974). The ensuing outstanding success prompted economic entomologists and stakeholders in countries like the USA and Australia to look for other targets.

Australia’s weed biocontrol effort began when the ‘Prickly Pair’ (Henry Tryon and Harvey Johnston) toured the New World in 1912 for possible agents to control the prickly pear (Johnston and Tryon, 1914).



Left to Right: Henry Tryon & Harvey Johnston (the 'prickly pair') and Albert Koebele.



Left: Site near Chinchilla infested with Prickly Pear. **Right:** Same site after release of cactoblastis moth.

By then ‘the green octopus’, as the pear was called, was spreading ominously over 20 million hectares and would reach a rate of 0.5 million ha per year. The prickly pear project became an outstanding success a decade later when *Cactoblastis cactorum* (Berg) was successfully released (Dodd, 1940). The Queensland farming community has never forgotten this success of nearly a century ago and this is a major reason why biological control has been so well supported in this state.

Two years later, in 1914, Australia also started importing the insects found by Albert Koebele (yes the same) in Mexico on behalf of Hawaii (Perkins and Swezey, 1924) for lantana. Despite several projects over the years, this plant has proved to be a most difficult target and we will soon be releasing our 31st agent for it, the lantana bud mite *Aceria lantanae* (Cook).

Over the years, other successes have followed. Skeleton weed, then one of Australia’s most serious weeds, was successfully controlled in the 1970s. The project was significant for being the first approved importation of a pathogen, being a rare success in a cropping situation, and contributing very significantly to the CSIRO Division of Entomology’s returns on investment in agricultural research (Marsden et al., 1980). In the 1980s the salvinia project graced the front cover of *Nature* (Room et al., 1981) as a spectacular success. Aquatic weeds projects have since been very successful elements in Australia’s aid to developing countries.

Two summary documents (Page and Lacey, 2006; Julien et al., 2012) have recently been published; perhaps coinciding with the retirement of several significant scientists. *Biological Control of Weeds in Australia* (Julien et al., 2012) is hot off the press and will become one of the definitive texts for the discipline. Some 73 weeds or weed groups are presented in individual chapters and the science behind projects is presented in good detail. Fourteen programs were

regarded as very successful and these were against a range of plant forms and ecological situations. Interestingly, given more than 240 agents have been released in Australia over the century, there have been very few problems with non-target attack.

In 2005, the former CRC for Australian Weed Management commissioned a study to evaluate the economic benefits flowing from Australia’s biocontrol efforts. The study (Page and Lacey, 2006) indicated that the 36 projects which had been sufficiently completed by 2005 had produced an overall \$23 of benefit for every \$1 dollar of research funding. Very successful projects (economically) included prickly pear (312:1), annual ragweed (103:1), rubber vine (109:1), skeleton weed (112:1), Paterson’s curse (52:1), water weeds (28:1) and *Harrisia cactus* (24:1).

In Queensland, which has had a very strong presence in the discipline, both the Alan Fletcher Research Station and CSIRO Long Pocket closed at the end of 2010 and their staff transferred to the new Ecosciences Precinct. Both teams now share facilities and infrastructure which has been considerably upgraded from the old laboratories. The quarantine facility, a most essential component, has been upgraded to QC3 standard and is now suitable for pathogen work as well as arthropods. State-of-the-art features include the Actini liquid waste sterilizer using heat transfer technology, a fumigation chamber, double glazing of glass houses a complete HEPA filtration system and the fact that it is built on the rooftop. Supporting infrastructure includes both air-conditioned and evaporatively-cooled glass houses (rooftop), shade houses (rooftop) and controlled environment rooms both inside and external to the quarantine.

The new quarantine facility at the ESP was quickly approved by AQIS in late 2010 and is now functioning well. There are presently 16 exotic arthropod species housed in the facility but we have not yet imported a pathogen. Work is in full swing and space is



Quarantine facilities old and new: Alan Fletcher RS, Sherwood (top left), CSIRO Long Pocket, Indooroopilly (top right), Ecosciences Precinct QC3, Dutton Park (bottom left) and Centre for BioAgriscience QC3, Bundoora, Victoria (bottom right).

at a premium. Three species have been approved for release since the move: *Plectonycha correntina* Lacordaire (Chrysomelidae) for Madeira vine (Biosecurity Australia, 2010), *Hylaeogena jureceki* (Obenberger) (Buprestidae) for cat's claw creeper, and *Aceria lantanae* (Eriophyiidae) for lantana. A fourth, CSIRO's *Eueupithecia cisplatensis* Prout (Geometridae) for Parkinsonia, is being reviewed in Canberra (Department of Agriculture Fisheries and Forestry Biosecurity, 2012) but release is anticipated.

Elsewhere, a similar exercise is underway in Victoria where the Centre for AgriBio-science, a public private partnership between Victorian Department of Primary Industries and Latrobe University, is being

built on the Bundoora Campus in Melbourne. In time these two facilities in Queensland and Victoria will probably lead Australia's weed biocontrol effort.

Classical biocontrol and certainly weed biocontrol faces several challenges for the future. Although the importance of weeds and the economic benefits from biocontrol have been amply demonstrated, long term funding is becoming more problematic. Recently 13 new Weeds of National Significance were announced without any commensurate additional funding to support research activities. Sourcing potential agents in native ranges is also becoming difficult with fewer resources to run overseas field stations, more concern for workplace safety for staff, and now possible

issues of compensation under the Nagoya Protocol for biological material obtained from foreign countries (Cock, 2010; Cock et al., 2010; van Lenteren et al., 2011). It is also becoming a more protracted process to obtain the permissions to release suitable agents. Weed biocontrol in Australia has indeed come to the end of an era with the retirement of so many scientists, the change to new facilities and issues with funding and regulatory processes. Quite different challenges and very interesting times lie ahead!

References

- BIOSECURITY AUSTRALIA. 2010. *Final risk analysis report for the release of Plectonycha correntina for the biological control of Anredera cordifolia (Madeira vine)*. Biosecurity Australia Canberra.
- COCK, M. 2010. Biopiracy rules should not block biological control. *Nature* **467**: 369-369.
- COCK, M.J.W. et al. 2010. Do new Access and Benefit Sharing procedures under the Convention on Biological Diversity threaten the future of biological control? *Biocontrol* **55**: 199-218.
- DeBACH, P. 1974. *Biological control by natural enemies*. Cambridge University Press, New York.
- DEPARTMENT OF AGRICULTURE, FISHERIES & FORESTRY BIOSECURITY. 2012. *Draft risk analysis report for the release of Eueupithecia cisplatensis for the biological control of Parkinsonia (Parkinsonia aculeata)*. Department of Agriculture, Fisheries and Forestry, Canberra.
- DODD, A.P. 1940. *The biological campaign against the prickly-pear*. Commonwealth Prickly Pear Board, Brisbane, Australia.
- HARLEY, K.L.S. & FORNO, I.W. 1992. *Biological control of weeds a handbook for practitioners and students*. Inkata Press, Melbourne, Australia.
- JOHNTON, T.H. & TRYON, H. 1914. *Report of the prickly-pear travelling commission*. Brisbane.
- JULIEN, M., McFADYEN, R. & CULLEN, J. 2012. *Biological Control of Weeds in Australia*. CSIRO Publishing, Melbourne.
- MARSDEN, J.S. PARHAM, G.E., RIDSDILL SMITH, T.J. & JOHNSTON, B.G. 1980. *Returns on Australian Agricultural Research: The Joint Industries Assistance Commission - CSIRO benefit-cost study of the CSIRO Division of Entomology*. CSIRO, Melbourne.
- PAGE, A.R. & LACEY, K.L. 2006. *Economic impact assessment of Australian weed biological control*. CRC for Australian Weed Management, Adelaide.
- PERKINS, R.C.L. & SWEZEY, O.H. 1924. The introduction into Hawaii of insects that attack lantana. *Bulletin of the Experiment Station of the Hawaiian Sugar Planter's Association* **16**: 1-83.
- ROOM, P.M., HARLEY, K.L.S., FORNO, I.W. & SANDS, D.P.A. 1981. Successful biological control of the floating weed *Salvinia*. *Nature* **294**: 78-80.
- VAN LENTEREN, J.C., COCK, M.J.W., BRODEUR, J., BARRATT, B.I.P., BIGLER, F., BOLCKMANS, K., HAAS, F., MASON, P.G. & PARRA, J.R.P. 2011. Will the Convention on Biological Diversity put an end to biological control? *Revista Brasileira De Entomologia* **55**: 1-5.

Vote of Thanks: Tim Heard

Any other business:

1. The next meeting will be Notes and Exhibits and a Presentation by the Student Award Winner, on Tuesday, June 12. Please contact Geoff Thompson if you would like to contribute. The meeting will be back in the conference room
2. Don Sands announced that the International Symposium on the Biological Control of Arthropods will be held in Chile, 4-8 March, 2013.

The meeting closed at 2.05pm

NOTICE OF NEXT MEETING

Tuesday 12th June 2012, 1pm

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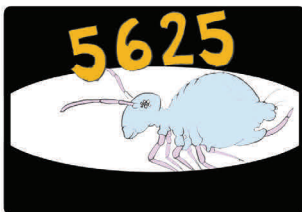
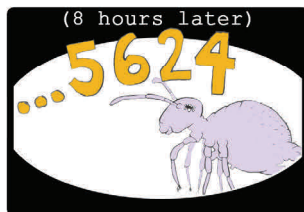
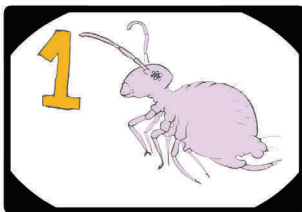
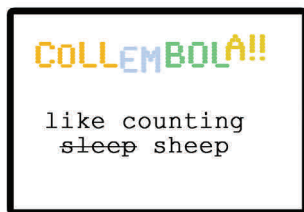
NOTES & EXHIBITS & STUDENT AWARD PRESENTATION

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

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

ALL WELCOME



Michelle Baker, is a Research Assistant with Dustwatch Australia (Griffith University) and designs insect-themed stationary—see www.etsy.com (search for Mad Weevil).

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www.esq.org.au



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DIARY DATES 2011

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

MAR—Monday 12th	Lyn Cook	AGM and President's Address
APR—Tuesday 10th	Stephen Cameron	Insect Evolutionary Genomics
MAY—Monday 14th	Bill Palmer	Weed biocontrol. Where to now?
JUN—Tuesday 12th	Notes & Exhibits / Student Award Presentation	
AUG—Monday 13th	Ross Wylie	Qld's fire ant war—who's winning?
SEP—Monday 10th		
OCT—Monday 8th		
NOV—Monday 12th		
DEC—Monday 10th		

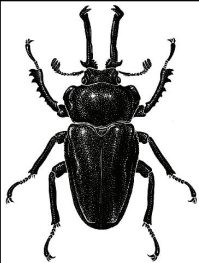
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THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND



NOTICE OF NEXT MEETING

Tuesday 12th June 2012, 1pm

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NOTES & EXHIBITS & STUDENT AWARD PRESENTATION

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Seminar Room 1
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More venue details available at
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ALL WELCOME

NEXT NEWS BULLETIN

Volume 40, Issue 4 (June/July 2012)
due early August

CONTRIBUTIONS WELCOME

DEADLINE - Thursday July 26th, 2012

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