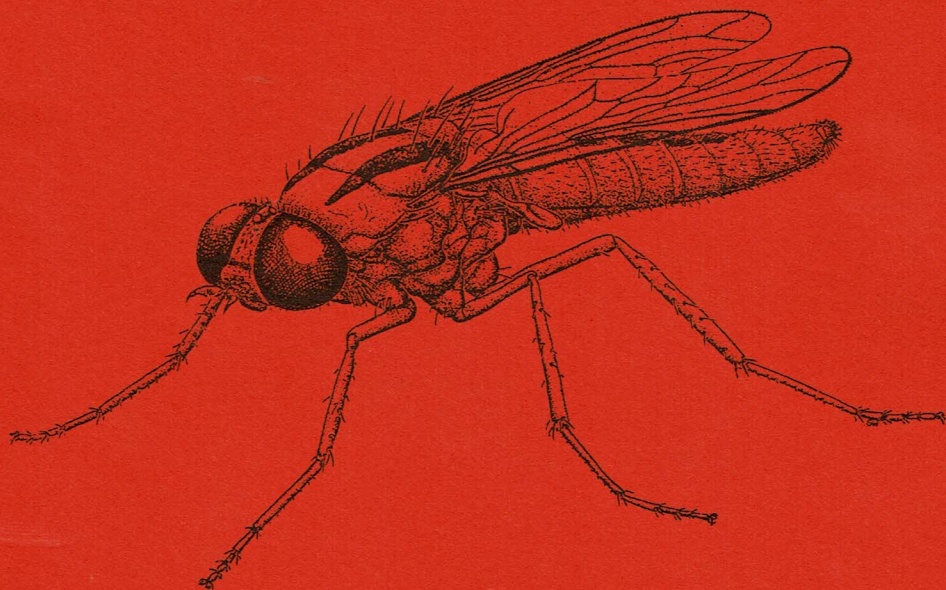




ENTOMOLOGICAL SOCIETY OF QUEENSLAND NEWS BULLETIN



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Volume 25, Issue 6, September 1997

The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND**, since its inception in 1923, has striven to promote the development of pure and applied entomological research in Australia and 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 in the Entomology Department, The University of Queensland at 6.30 pm on the second Monday of each month (March to June, August to December each year). Visitors and prospective members are welcome. Membership information can be obtained from the Honorary Secretary or other office bearers.

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 of the Australian region, including New Zealand, Papua New Guinea and 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 metallic purple and green colouration make it one of the most attractive of all Australian Coleoptera. It is restricted to the rainforests of northern Queensland.

COVER: A stiletto fly belonging to an undescribed genus and species of Therevidae (Diptera: Asiloidea) drawn by Shaun Winterton. Shaun and David Yeates are currently working on the systematics on this family, which is extremely diverse in the woodland and semi-arid habitats of Australia.

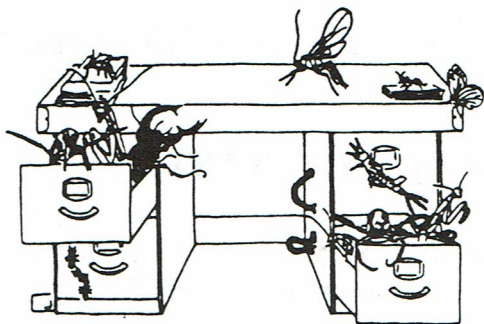


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The issue of this document does **NOT** constitute formal publication for the purposes of the "International Code of Zoological Nomenclature 3rd edition 1985". Authors alone are responsible for the views expressed.



THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND

GENERAL MEETING

Minutes of the General Meeting of the Entomological Society of Queensland Inc. held in Room 323, Hartley Teakle Building, University of Queensland, on 8 September 1997, at 6.30pm. Chaired by D. Yeates.

Attendance: L. Barton Browne, C. Burwell, T. Clarke, G. Daniels, S. Evans, E. Exley, S. Frances, G. Gordh, J. Grigg, C. King, J. King, C. Lambkin, A. Loch, P. Mackey, E.N. Marks, S. McGrath, A. McLennan, D. Merritt, G. Monteith, S. Monteith, J. Moss, L. Muir, H. Nahrung, C. Palmer, H. Proctor, D. Rentz, C. Rodriguez, B. Russell, M. Schneider, O. Seeman, J. Skivington, H. Wallace, A. Wilson, D. Yeates, M. Zalucki.

Visitors: G. Azam, A. Cook, H. Peneer Jerusalem, M. Peneer Jerusalem, K. Latimer, D. Liu, M. Osman, M. Paterson, N. Perkins, N. Power, O. Schmidt, S. Schmidt, C. Thomsen, S. Winterton, H. Xuexiang, S. Yeates, A. Zwick.

Apologies: J. Christensen, J. Lamy, E. Reye, G. Shaw, T. Withers, R. Wylie.

Minutes: The Minutes of the last General Meeting were circulated in News Bulletin Vol. 25, Issue 5. There were several corrections: the Meeting was held in Room 323, not 402; the Minutes of the previous General Meeting were circulated in News Bulletin Vol. 25, Issue 4, not Issue 3; the Visitors and Apologies lists were incorrect. The correct lists are:

Visitors: S. Bunn, K. Gerlach, S. Winterton, A. Zwick.

Apologies: G. Daniels, M. Schneider, J. King.

It was moved H. Nahrung, seconded C. Burwell, that the Minutes be accepted with these amendments.

Elections:

The following nominations were received at the last General Meeting and circulated in News Bulletin Vol.25, Issue 5.

Dr George Hangay
80 Gondola Road
Narrabeen NSW 2101

Nominated by L. Muir
Seconded by M. Moulds

Mr Eric Chitra
1 Kirralee Drive
Robina Island Q 4226

Nominated by D. Merritt
Seconded by E. Reye

Dr Tomonari Watanabe
CTPM/CSIRO
Meiers Road
Indooroopilly Q 4068

Nominated by P. Room
Seconded by T. Heard

The nominees were elected by a show of hands.

General Business:

On behalf of the Society, the President congratulated Geoff Monteith who has been awarded the 1997 Australian Natural History Medallion. Geoff will be presented with the Medallion in November at the Field Naturalists Club of Victoria in Melbourne.

Main Business:

THE 1997 PERKINS MEMORIAL LECTURE

"THE WORLD'S MOST UNUSUAL GRYLLACRIDID - AND OTHER REASONS TO VISIT QUEENSLAND"

by

David Rentz

CSIRO Division of Entomology, Canberra

Queensland to an Australian entomologist is like Mexico or the New World tropics to a North American entomologist. Shortly after joining the Division of Entomology in 1977 I had the opportunity to travel to Queensland to

attempt to collect specimens of the notorious Cooloola Monster. True to reputation, the Queensland fauna provided many surprises which continue to whet my taxonomic appetite to this day. Few discoveries are as bizarre as the one I report below.

It is estimated that the gryllacridid fauna of Australia comprises more than 200 species (Rentz & John 1990). [It probably should be noted that I am considering gryllacridids in the narrow sense, that is, *not* including the raphidophorids or the stenopelmatids and their relatives]. Until relatively recently this group has received little acclaim in the entomological literature. There were few biological or ecological observations of note and the majority of those were in passing and not considered worthy of record in themselves. Almost all literature references prior to 1983 are of a taxonomic nature. Australia appears to be the centre of distribution of the Gryllacrididae with more species per unit area than any other place in the world. Recent studies suggest the family occurs primarily in the Southern Hemisphere with only a few scattered representatives known north of the Equator.

In Australia, gryllacridids occur everywhere from sea level to the highest mountain peaks and from latitudes as far south as southern Tasmania (*ca.* 43°29'S.) to the northernmost border at Cape York, Queensland (10°41'S.). Species range in size from approximately 7 mm in to those of more than 150 mm long. Apterous, mesopterous and fully-winged species are known. Gryllacridids are characterised by extraordinary biological, ecological and morphological characteristics. All known species are nocturnal.

Most, if not all, gryllacridids produce silk in strands from their mouthparts. They seem to be able to do this from the earliest of instars, but some species do not spin silk as adults. They use the silk in a variety of ways such as forming enclosures in which they reside or reinforcing burrows with silk which may be capped and virtually "hermetically sealed" to afford protection from the elements (Morton & Rentz, 1983). A full range of feeding types have been identified with carnivorous, herbivorous, florivorous and graminivorous species as well as opportunists having been thus far documented. All instars and adults can produce sound by a femoral-

abdominal stridulatory apparatus in which the pegs and ridges have some taxonomic value (Rentz & John 1990). This seems to serve a wholly defensive function since the sounds are emitted when the crickets are threatened and they have no known way of hearing the sounds they produce. They do communicate acoustically by "foot stomping" and abdominal drumming. Both sexes, depending upon the species, produce vibrations before and during courtship.

Gryllacridids may be unique in the insect world in possessing individually recognisable pheromones allowing a cricket to return to its own burrow, distinct from one of its conspecifics, after a night of foraging away from its burrow (Lockwood & Rentz 1996).

I report on the almost unbelievable complexity of the male genitalia of a species I am ascribing to *Pterapotrechus* Karny. This species illustrates the diversity of male genitalia in gryllacridids. The dorsal margin of the tenth tergite bears an elongate, forked, hood-like structure. The apex of the abdomen bears hooks, flanges and teeth. But the most spectacular modification is in the subgenital plate. This plate is unusually elongate, so much so that it recurves upon itself and juvenile males appear to be females having the typically recurved ovipositor. Still even more spectacular is the presence of an antenna-like "hair" emanating from the tip of the subgenital plate. This species with its unusual morphology and possible function is discussed in detail.

References

- Lockwood, J. Rentz, D. C. F., 1996. Nest construction and recognition in a gryllacridid: the discovery of pheromonally mediated autorecognition in an insect. *Australian Journal of Zoology*, 44: 129-141.
- Morton, S. R., Rentz, D. C. F., 1983. Ecology and taxonomy of fossorial, granivorous gryllacridids (Orthoptera: Gryllacrididae) from central Australia. *Australian Journal of Zoology*, 31: 557-579.

Rentz, D. C. F., John, B. 1990 Studies in Australian Gryllacrididae: Taxonomy, Biology, Ecology and Cytology. *Invertebrate Taxonomy*, 3:1053-1210.

The Vote of Thanks was given by G. Monteith.

The President thanked the Society's Sustaining Associates for their financial support of the Perkins memorial Lecture:

Arrest-A-Pest

Rhone-Poulenc Rural Australia, represented at the Lecture by Alan Cook.

Ciba-Geigy Australia

CRC for Tropical Pest Management

There being no further business, the President closed the meeting.

NOTICE OF FUTURE MEETINGS

13 October: John Rogers and David Holdom, "White grubs and peanuts: a marriage made in heaven"

10 November: tba



PEOPLE AND PROJECTS



NEWS FROM QDNR

Alan Fletcher Research Station, Sherwood.

Royce Holtcamp of NSW Agriculture, Tamworth, and Rod Ensby and Phil Stephenson of NSW Agriculture, Grafton, will pay a visit AFRS in late September to look at potential lantana biological control agents for rearing and release in NSW, as part of a collaborative project between the two states.



NEWS FROM DPI MAREEBA

Simon G Rove, originally from the UK has started work on a PhD based at the CRC-TREM and James Cook University in Cairns. Simon's research will look at the changes in the saproxylic invertebrate community of decaying logs at various sites in Northern Queensland. He will try to focus on any changes in this community that can be attributed to human activity, including logging, at each site. Simon is no stranger to tropical forests having several years experience in forestry conservation in Uganda and Indonesia..

Bruno Pinese visited Weipa as part of a survey and control program for the last quarantine insect invader to jump the line, spiralling whitefly. Spiralling whitefly had been recorded and studied in Torres Strait Islands for several months before reaching the mainland, a classical infestation pattern in Queensland.



NEWS FROM THE DEPARTMENT
OF ENTOMOLOGY
The University of Queensland

Two travel awards have been approved for next year. Volker Hartenstein, a *Drosophila* developmental biologist, will be here with intention of labelling neural progenitors in embryos. Tim Paine will return to the department, where he will focus on *Phoracantha*, a cerambycid beetle that attacks eucalyptus. Tim will pay particular attention to the parasites and predators of this beetle.

Hugh Dingle has arrived will remain in the department until August next year. His interest lies in animal migration research in the arid environment of Australia.

Jeff and Angela Skevington, Shaun Winterton, Chris Lambkin, Andreas Zwick, and Hugh and Jeri Dingle spent a week collecting out Birdsville way. Some time was spent collecting at Goyder's Lagoon at Koonchera Dune; at 20km in length, this is Australia's largest dune. Pipunculidae were collected, Bombyliidae (but not Exoprosopa), and a few Therevidae. Hugh and Jeff saw LOTS of birds.



NEWS FROM THE CRC FOR TROPICAL PEST MANAGEMENT

Steve Adkins from UQ Agriculture and Dr K Dhileepan from DNR at Charters Towers are attending and addressing an International Conference on parthenium management at Dharwad, Karnataka, India in October, and then going on to talk to Indian scientists and institutions regarding a potential ACIAR project on control and management of parthenium in India and Australia.

Congratulations to Rachel McFadyen, who has been appointed Adjunct Reader at the Department of Entomology UQ for three years.

Jennifer Marohasy has had a paper on host-testing methods for biocontrol agents accepted by *Biocontrol News and Information*; the article will be published early next year.

The Centre is again offering vacation scholarships over the 1997/98 University holidays. The projects run for 10 weeks, and will address pest management topics in strawberries, bananas, vegetables, and tomatoes. The scholarships are open to second or third year students enrolled in an appropriate degree. For more information, contact Cathy Simpson or Erica Davis (phone 3365 1851, fax 3365 1855, email cathy@ctpm.uq.edu.au or erica@ctpm.uq.edu.au).

Please Note:

Honorary Secretary, Lynda Muir, has a new phone number:

(07) 3289 2757

International Request

Pierre BOVET
2 Chemin des Conches
COMINO
17190 ST GEORGES D'OLERON
FRANCE

26 Juliet 97

Dear Sirs,

The Australian Embassy in France gave me your address.

I am seeking for insects traders or insects hunters, importants or not, to buy butterflies and coleopters for me and friends.

I should be very happy if it was possible for you to give me some names and addresses.

Thank you very much in advance.

Your faithfully.

Pierre BOVET
Dr Veterinary - retired - now fond of entomology.

Bons souvenirs de France!

ENTOMOLOGICAL SOCIETY OF QUEENSLAND


1998

\$250 Student Award

Who: Honours, diploma, or fourth-year undergraduate students in any Queensland tertiary institution.

What: A thesis or report on an entomologically related topic examined during 1996 or 1997.

When: **Applications close 4 March 1998.**

Send thesis/report and completed entry form to  The Secretary, Entomological Society of Queensland, c/- Entomology Dept., The University of Queensland, Brisbane Q 4072.

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

Entrants need not be Society members.

If the standard of entries is too low an award may not be given.

Student Award sponsors

- ★ Arrest-A-Pest Pty. Ltd.
- ★ Rhone-Poulenc Rural Australia Pty. Ltd.
- ★ Ciba-Geigy Australia Ltd.
- ★ CRC for Tropical Pest Management.

Enquires should be directed to the President, David Yeates

 07 3365 2217 or any Office Bearer of the Society.

ENTOMOLOGICAL SOCIETY OF QUEENSLAND
1998 Student Award
Entry Form

Name:

Title of thesis/report:

Institution:

Degree:

Supervisor:

Date of examiners report/grading:

Address for return of thesis/report:

Signature

Date

Applications close **4 March 1998.**

Send thesis/report and completed entry form to:

☛ The Secretary, Entomological Society of Queensland,
c/- Entomology Dept., The University of Queensland, Brisbane Q 4072.

SOCIETY SUBSCRIPTION RATES

- ORDINARY:** Persons resident within the municipality of Brisbane - \$23pa (\$20 if paid by AGM).
- COUNTRY:** Persons resident elsewhere - \$21 pa (\$18 if paid by AGM).
- JOINT:** Couples in either of the above categories who share a copy of the *News Bulletin*, but each otherwise have full membership privileges.
Ordinary - \$30 pa (\$27 if paid by AGM).
Country - \$27 pa (\$24 if paid by AGM).
- ASSOCIATE:** Students and others at the discretion of the Society Council - \$15 pa (\$12 if paid by AGM). Associate Membership conveys full membership privileges except the right to vote on the conduct of affairs of the Society, to hold office and to nominate new members.

THE AUSTRALIAN ENTOMOLOGIST SUBSCRIPTION RATES

- AUSTRALIA:** Individuals A\$16 pa Institutions A\$20 pa
- ELSEWHERE:** Individuals A\$20 pa Institutions A\$22 pa

Subscriptions should be sent to the Business Manager, *The Australian Entomologist*.

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Ciba-Geigy Australia Pty Ltd
CRC for Tropical Pest Management
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NOTICE OF NEXT MEETING

The next meeting of the Society will be held at 6.30 pm on **Monday 13 October** in Room 323, Hartley Teakle Building, UQ. The main business will be: **John Rogers and David Holdom**, 'White grubs and peanuts: a marriage made in heaven'. Refreshments will be served before the meeting at 6.00 pm in the Tea Room (510).

VISITORS ARE WELCOME