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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 in the Goddard Building, University of Queensland at 7.00 pm on the second Monday of each month (March to June, August to December) each year. 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.


This moth has no common name, but is our largest and showiest Lymantriid moth with a wingspan of 6 cm in the males and 8cm in the females. Males and females are similar in markings with the forewings being white with black to reddish brown fasciate markings. The hind wings are a buff to umber colour with a prominent discal spot. The moth is broadly distributed in the rainforests of south-east Queensland to southern NSW and the males are commonly attracted to light. Females are rarely attracted. Like most Australian Lymantriids almost nothing is known of its lifecycle. The larval food plant is unknown but Common in his “Moths of Australia” records that cocoons have been found under loose bark on rainforest trees.
# TABLE OF CONTENTS

**Minutes of Annual General Meeting**  
149

**Notice of Next Meeting**  
150

**Main Business**  
- Traditional Stingless bee keeping (meliponiculture) in Mexico by Tim Heard  
  151
- Bug catch 2006  
  155
- The sex life of aristolochias and the implications for butterfly conservation by Don Sands  
  157

**People and Projects**  
- A remarkable record of *Pelopidas agna dingo* Evans from Tasmania by Ian Knight  
  158
- The Specious Voyage: Sheridan Kennedy  
  159

**Nominations for the ESQ Student Award 2006**  
161

**Membership Subscription Form 2006**  
163

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The issue of this document does **NOT** constitute a formal publication for the purposes of the "International Code of Zoological Nomenclature 4th edition, 1999". 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 388, Goddard Building, The University of Queensland, on 12 December 2005, at 7:00 pm. Chaired by Peter Mackey.

Attendance:
Peter Allsopp, Richard Bull, Bronwen Cribb, Michael Day, Rod Eastwood, Elizabeth Exley, Graham Forbes, K. Gottschaldt, Tim Heard, Ross Kendall, Geoff Monteith, John Moss, Helen Nahrung, Matthew Purcell, Sarah Russell, Don Sands, Elly Scheermeyer, Margaret Schneider, Owen Seeman, Susan Wright.

Visitors: Robyn Jackson, Kevin Jackson.


Minutes: The minutes of the November General Meeting were circulated in the News Bulletin Vol. 33 Issue 7. It was moved by Margaret Schneider, seconded by Richard Bull, that the minutes be accepted without amendment.

Nominations:
The following nominations of new members have been received:

Dr. Shane McEvey  Dr. David Britton
Dr. David Marshall  Ms. Kathy Hill
Mr. Kevin Jackson  Mr. Peter Gillespie
Elections:
No nominations were received at the last meeting.

General Business:
This was a Notes and Exhibits meeting and the main business of the meeting consisted of the following short presentations:

Peter Mackey “Lucy Evelyn Cheesman - An extraordinary Entomologist”
Don Sands “The sex life of aristolochias & some implications for butterfly conservation”
Tim Heard “Traditional stingless beekeeping in Mexico”
Margaret Schneider “Entomology Teaching Program at the University of Queensland 2005”

Vote of Thanks:
The President thanked the speakers for their presentations. As there was no further business, the Chair closed the meeting at 8:34 pm.

Notice for next meeting………

13th March, 7pm, Room 388, Goddard Building, Uni. of Qld

Annual General Meeting with Presidential Address from Peter Mackey
MAIN BUSINESS:

Traditional Stingless bee keeping (meliponicultura) in Mexico
Tim Heard
CSIRO Entomology

I recently had the privilege of visiting a community of indigenous stingless beekeepers in Puebla state of Mexico. There are two centres of traditional meliponicultura in Mexico. On the Yucatan Peninsula, Mayan speaking Indians keep the large Melipona beechei colonies in hollow logs. Although this practice was thriving and well developed at the time of the Spanish conquest, it is almost extinct today. It was the second centre, in Puebla state where I visited recently. The náhuatl speaking Indians in this community have kept the small sized Scaptotrigona mexicana continuously since before the conquest and it thrives today.

The principle livelihood of the community is coffee growing. They are strongly organised into a cooperative called Tosepan Titataniske based around the town of Cuetzalán, Puebla State. The older members in particular have had limited opportunities for formal education. However, they work together extremely well to improve their positions. They have built an education centre with the latest facilities. The cooperative buys coffee at a guaranteed price from their members. They have helped the growers to develop organic coffee production. They have built a demonstration centre showing an eco-friendly house built of local materials. The have recently built a set of 25 superbly designed cabins to house tourists and hope to develop eco-tourism. They also grow fruits and allspice, the seed of a large tree. They are diversifying into macadamias, flowers, mushrooms, and producing stingless bee honey. Tosepan Titataniske means United we Prevail, an apt name. The cooperative has 5000 members. The plantations are diverse and sustainable production systems, with shade trees of the timber tree, cedro rosa, (Cedrela odorata), and a leguminous green manure crop called Flemingia macrophylla grown among the coffee. They are moving more and more towards organic systems, with no agrochemical used. The most
important pest, the coffee borer, is controlled with *Beauvaria* fungal pathogen and traps baited with coffee residues. The yields are high, the quality is high and they earn a premium for producing an organic product. Given the current low world price of coffee, they are proactive to maintaining their livelihood.

The vision of this cooperative is astounding. Although most members are not rich in money or formal education, they have built lives and livelihoods that are based on cooperation, sustainability and independence. The do not rely in government assistance but have taken their own future in their hands. Government assistance usually comes with an expectation of votes at the next election. Instead they do it themselves or where they lack the skills, they employ professionals, such as agronomists, architects, economists to help them. The professionals I met, such as agronomists Alvaro and Maria, were themselves inspired by the vision of the cooperative and became infected by their enthusiasm, commitment and energy.

I visited Tosepan with Carlos Vergara, a professor at the Universidad de las Americas Puebla. Carlos is Colombian but did his PhD on Africanised bees in Mexico. He did undergrad research work on oviposition in *Tetragonisca angustula* in Columbia. A current project of Carlos’ is to help a Guadalajara group to develop rearing of a native *Bombus ephippiatus* to use for tomato pollination in greenhouses. He is helping Tosepan with stingless bee keeping. Carlos also works on pollination ecology and is conducting studies on coffee pollination.

The traditional stingless beekeeping in this area of Mexico is an ancient and fascinating. They house the hives in two fired clay pots. The top pot is inverted on top of the bottom. The size of the pots is about 200 by 200 mm. Mud is used to seal the gap between the pots except for a small entrance. The hives are placed on stands, usually against houses. This method has been in use since pre-Columbian times. A reasonable estimate of the origin of this technique is 1000 years ago. The species kept is *Scaptotrigona mexicana* They are larger than our local *Trigona carbonaria*, perhaps 5 mm long. They build an entrance tube about 50 mm long. They build their comb in horizontal layers. They have a lemon
scent. They are probably less aggressive than *T. carbonaria* but display similar biting behaviour on soft skin. Males are often seen in close groups grasping the outside of the pots. These can be distinguished by a vestigial corbicula.

![Image of clay pots](image)

Figure 1: *Scaptotrigona mexicana* in clay pots.

There are approximately 500 beekeepers in the area with an average of 100 hives each. About 100 are members of the cooperative. Last year the cooperative bought 4 tonnes of honey from members. They collect all the honey only once per year in April and May. They call the honey *miel virgen*, virgin honey. They have many traditional practices associated with keeping the bees. For example, honey is only removed at full moon. A hive is valued at 200 pesos (AU$23). Honey price is low; I bought 250 g for 30 pesos (AU $3.50).

They have serious problems with a phorid fly that attacks the hives. It starts with the pollen but eventually destroys the hives. They burn resin to repel the fly when opening hives. They do not have problems with fighting between hives. There are examples with 200 hives against the wall of a small house with no fighting.

Carlos is currently working with Tosepan trialling a more modern wooden hive design. The design is very similar to Australian honey hives, except a
little smaller and with loose fitting lids and bases. Agronomist Alvaro is helping Javier. He learnt the hive design from a group keeping the same species in Chapala, southern Mexico. An EcoSur research station there, led by Remy Vandame, works on stingless bees.

I was not convinced that the wooden designs were an improvement on the traditional ones. Primarily, the wooden hives are more expensive, two clay pots cost only 40 pesos, about AU$5 and are hence very appropriate technology for poor farmers. These pots work well and therefore why change them? Timber may have some superior properties and may be tested, but I suspect that the clay pots are very well suited to local conditions. The altitude (900 m asl) means that the weather can be quite cold here and these pots may be good insulators. These pots have very few openings and are probably superior in excluding phorid flies. The clay pot hives are an important part of the cultural diversity, they are only used in a relatively small area of Puebla and Veracruz. A disadvantage of the hives is the difficulty in extracting honey. Honey is extracted by opening the hives and scooping the comb out of the top hive, removing the pollen comb and squeezing out the honey from the honey comb.

Carlos has contracted the food lab at the UDLA to do analysis of the honey. One of the problems is that the honey has high levels of *E. coli* and *S. aureus*. More hygienic extraction techniques should be developed for commercial production. There are also opportunities for increasing and improving honey production.

I gave a presentation on stingless bee keeping in Australia. This was part of a monthly meeting of meliponicultoras in the cooperative. A total of 62 attended the meeting, approximately 2/3 women. Many had walked there on foot and were barefooted. I prepared my talk in Spanish to avoid the need for an interpreter but one was needed anyway to translate into Náhuatl. I emphasized the importance of properly valuing such a rare and special product.

My visit coincided with a visit by three Japanese organic coffee growers. By chance, they had recently become interested in marketing stingless bee honey in Japan. The Japanese held a meeting with the growers after my talk. I also heard that another Japanese company that specializes in rare honeys, has an interest in the cooperative.
Bug Catch 2006

The other 99% in our Protected Areas .... What are we preserving?

The Environmental Protection Agency and Queensland Parks and Wildlife Service would like to extend an invitation to the Entomological Society members for a weekend of collecting in the Cooloola section of the Great Sandy National Park and surrounds. Enjoy conducting a preliminary inventory of the invertebrates of the area, a BBQ (BYO meat) and PowerPoint presentations on Saturday night at Jenni Nichol’s property, and just getting together for a fun and informative weekend.

Where: Cooloola section of the Great Sandy National Park.

When: arriving Friday afternoon 17 February 2006 and departing Monday 20 February 2006

Meals: BYO food

Accommodation: Camping at Elanda Point. QPWS has a house available, but you need your own bedding if you wish to use it, otherwise set up your tent in the grounds.
Please fill in the registration form below and forward onto Jenny Greenland, Environmental Protection Agency, PO Box 15155, City East, Queensland 4002. Closing date for registration is 6 February 2006. For further information contact Jenny Greenland on phone 3247 3299 or 0402 952 875 or email jenny.greenland@epa.qld.gov.au

Registration

Name: ........................................................................................................

Address: ....................................................................................................

Contact Phone number: ..............................................................................

Email: ...........................................................................................................

I will attend (please tick):

☐ Friday Night 17 February 2006

☐ Saturday 18 February 2006

☐ Sunday 19 February 2006

☐ Monday morning 20 February 2006
The “sex life” of aristolochias and the implications for butterfly conservation

Don Sands

The flowers of all or most aristolochias are pollinated by certain midges including species of the genus *Forcipomyia* spp. The nature of the attractants in the flowers is not known but the compounds attract mostly male midges and they are undoubtedly the principal pollinating agents for the flowers. Characteristically the hairs on the aristolochia flowers prevent the midges from escape from the floral tube until at least a day has passed after which the hairs collapse, allowing the midges to escape and carry their pollen load with them. Over the last 10 years flowers of the aristolochias from southeastern Queensland have been opened and the trapped midges examined. The exotic weed *Aristolochia elegans*, a native of from South America, appears to attract more than one species of midge as also does an un-named, low growing native *Aristolochia* sp. occurring (“Mt Coot-tha”) from the New South Wales border (above 600m) to Mary River. Similarly flowers of *A. pubera* occurring from Mount Larcom to Cape York contain more than one species of midge.

To date the flowers of *Pararistolochia praevenosa* examined from between the NSW / Qld border and Kin Kin Creek contained very similar midges, probably only one species of *Forcipomyia* sp.. Similarly flowers of *P. laheyana* from the Border Ranges appeared to contain only one species of *Forcipomyia* sp., possibly different to that in the flowers of *P. praevenosa*. However, when midges were examined from flowers of *P. laheyana* grown in a garden near Brisbane at least two species of midge were thought to be present.

I suspect that the *Pararistolochia* species may each have one midge species responsible for pollinating the vines in their native habitats. The flowers may produce kairomones that “lock-in” on the attraction of males to the pheromones of female midges. Males are tricked into expecting to find a female in the flowers but instead become dusted in pollen! Such pollinating systems are known in orchids that attract wasps and in other plants. Kairomones are quite likely the attractants for the *Forcipomyia* spp. and as specific pollinators of the flowers of *Pararistolochia* spp.
Several papilionid butterflies in Australia are dependent on indigenous aristolochias as food plants for their larvae. A loss of specific pollinators for the vines might affect seed set, recruitment of seedlings and ultimately, the abundance of the Aristolochia vines. If midges pollinating P. praevenosa are detrimentally affected by weeds or other disturbance of their breeding habitats, the number of flowers setting seed are likely to decline.

The Richmond birdwing butterfly, Ornithoptera richmondia (Gray) and its lowland food plant P. praevenosa are both contracting in their distributions. Failure of seed set on their food plants may indicate that a decline in abundance of the pollinating midges is one important factor affecting the vine, and the butterfly and its overall conservation.

*****************************************************************************

People and Projects

A remarkable record of Pelopidas agna dingo Evans from Tasmania

Ian Knight

On the 8th of November 2001, I went on a collecting trip to a site 10kms east of the Cradle Mountain turn-off in the Northern Tasmanian Highlands, called “Post Office Tree”, in search of Argyynnina hobartia montana L.E. & R. Couchman.

As always happens, the clouds rolled up just as I arrived and it became bitterly cold with very little sun. Nothing daunted, I commenced searching in an area about 100 meters in from the car park and eventually saw a female of montana settled on a low bush with its wings open trying to get warm. I swept the butterfly into the net but on decanting it into the killing bottle, a second butterfly dropped in as well.

Imagine my surprise on closer examination, to find that I had captured a Pelopidas agna dingo Evans which must have been settled unseen on the same bush. The nearest recorded locality for this skipper is in Northern N.S. W.
I sent the set specimen to Cliff Meyer in Canberra to confirm my identification. How on earth did this skipper get to Cradle Mountain? The only solution we could reach was that it was trapped in the boot of a car from Queensland. The visitor probably stopped off at “Post Office Tree” for a coffee break on his way to Cradle Mountain thus releasing the skipper into the area from the car boot.

What are the odds against the only known active collector in Tasmania visiting this specific site on the right date to capture this lone specimen without even seeing it on the bush! The mind boggles.

******************************************************************************

The Specious Voyages: Sheridan Kennedy

Images: Feathered Dandyfly (Avicula phantasis), Sheridan Kennedy.

Until 19 March 2006

Where: Space 4, Museum of Brisbane
       City Hall, King George Square
       (between Ann and Adelaide Streets)
       Open every day between 10am and 5pm

Admission: Free
Acclaimed Australian jeweler Sheridan Kennedy charts a fantastic voyage with here contemporary images and artifacts.

*The Specious Voyages* is a collection of jewellery, objects and images, presented as an *Amuseum*. This simulated museum re-constructs the narrative of the fantastic journey. Paralleling the voyages of discovery of 18th century explorers, the viewer makes his or her way through the installation of artifacts: instrumentation for navigation and measurement; maps required for the journey; specimens collected, reconstituted in the laboratory and presented in artificial reconstructions of their environment.


*From the Artist*

The *Specious* project brings together many themes that have travelled through my work over the past 12 years. They include 'navigational' objects, body maps and botanical inspired jewellery. With this new collection of work I hope to contribute to the current dialogue between science and art, offering a decorative viewpoint that reintroduces the poetic into science, using the scientific system to critique the system rather than re-enforce its absolutes.

Sometimes inspiration is as simple as an object glimpsed on the street that appears to be what it actually is not, setting in motion a train of new ideas.

And then there are the qualities of certain materials which lead me on little journeys of exploration: feathers suggest the forms of insects, rough-cut gemstones contain miniature worlds. The starting point for many collections is a single phrase or sentence, which when combined with the materials begins to tell its own tale".
ENTOMOLOGICAL SOCIETY OF QUEENSLAND 2006
$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 at any Queensland tertiary education may submit their thesis or report on an entomologically related topic examined during 2004 or 2005 for the judging of this award.

Entries need not be Society members.

These reports should be directed to the Society’s Secretary, PO Box 537 Indooroopilly 4068 Brisbane Qld. Closing date for submissions is late April 2006.

Student Award Sponsors:
Tropical Fruit Fly Research Group, Griffith University
Pest Management Research, Department of Natural Resources and Mining
ENTOMOLOGICAL SOCIETY OF QLD
2006 STUDENT AWARD
ENTRY FORM

Name: .................................................................

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Degree: ............................................................

Supervisor: ...........................................................

Date of Examiners report or grading: ..........................

Return address for thesis/report: ..............................

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Signature: ....................................................... Date:.................................

Send in thesis / report and entry form to:
The Secretary, Entomological Society of Queensland
PO Box 537, Indooroopilly 4068, Brisbane Qld.
Dear Member

Your subscription for 2006 is now due. If you haven’t already paid, please mail or fax your payment to the address supplied

Yours sincerely
Matthew Purcell (Hon. Treasurer)

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PO Box 537 Indooroopilly 4068 Brisbane QLD.
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COUNTRY: Persons resident elsewhere $29pa
JOINT: Couples in either of the above two categories who share a copy of the News Bulletin, but each otherwise have full membership privileges. $36pa
ASSOCIATE: Students and others at the discretion of the Society Council $18pa

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

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IMPORTANT NOTICE

The official address for the Society and Australian Entomologist to which all communications should be addressed will be:

**PO Box 537 Indooroopilly 4068 Brisbane Qld.**

See inside of back cover for individual council member contact details.

NOTICE OF NEXT MEETING

The next meeting of the Society will be held at 7pm on Monday 13th of March in Room 388, GODDARD Building, University of Qld. The main business will be the **Annual General Meeting & Presidential Address from Peter Mackey**. Refreshments will be served before the meeting at 6:30pm in the tea room, Level 2 of the Goddard Building (to the right of the main stairs), with a gold coin donation required. No donation is required to attend the talk alone.

VISITORS ARE WELCOME

HONORARY LIFE MEMBERS OF THE SOCIETY

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R.F. Harslett  D.S. Kettle
R.P. Kleinschmidt  E.J. Reye