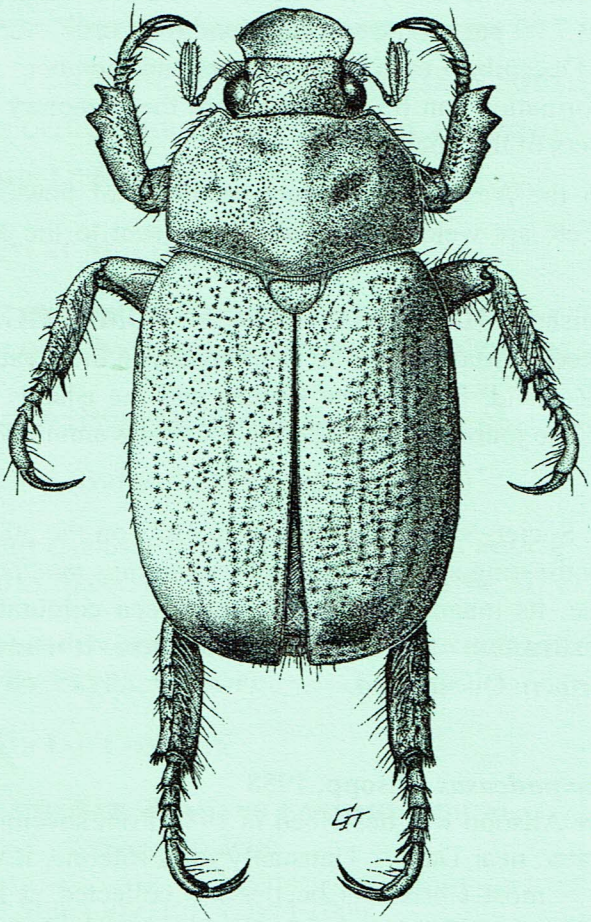
ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC

NEWS BULLETIN



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The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC.**, since its inception in 1923, has promoted 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.

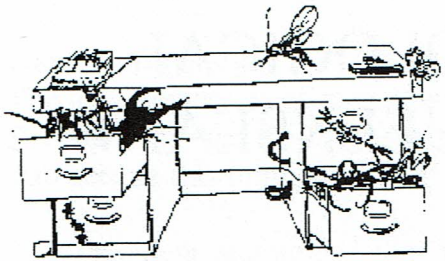
Contributions to the *News Bulletin* such as items of news, trip reports, announcements, etc are welcome and should be sent to the *News Bulletin* Editor.

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.

COVER: ***Wambo puticasus* Allsopp, 1988**

Wambo puticasus Allsopp was described in 1988 from specimens collected at Lake Broadwater, near Dalby. Unusually for a ruteline, it was collected in a pitfall trap – most Christmas beetles are collected at light or from feeding trees. The specific name reflects this, whilst the generic name honours the shire in which it was collected. Geoff Thompson did the drawing, the original of which is a prized possession of Peter Allsopp.



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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 13 June 2006, at 7pm. Chaired by Peter Allsopp

Attendance:
Peter Allsopp, Sassan Asgari, Richard Bull, Murdoch De Baar, Rod Eastwood, Graham Forbes, Klaus Gottschaldt, Mark Hunting, Ross Kendall, Gunter Maywald, Geoff Monteith, John Moss, Mike Muller, Andrew Ridley, Don Sands, Michael Sands, Margaret Schneider, Natalie Spiller, Kyran Staunton.

Visitors:
Michelle Baker, Peter Hendry, Andrew McCormack, Louise Papacek, Michelle Rafter.

Apologies:
Bronwen Cribb, Frank Jordan, Peter Mackey, John Nielsen, Matthew Purcell.

Don Sands presented a short outline of the recently deceased Dr. Ian Common's life and entomological career. The membership present then stood in silence for one minute in tribute to this great entomologist and person.

Minutes:
The minutes of the April General Meeting were circulated in the News Bulletin Vol. 34 Issue 3. It was moved by Sassan Asgari, seconded by Andrew Ridley, that the minutes be accepted without amendment.

Nominations: No nominations of new members have been received.

General Business:
The new Society website is now up and running on www.esq.org.au. The President thanked Sassan Asgari for the large amount of effort he has put into getting this running.

The President announced that the student prize this year was won by Michelle Rafter for her 4th year project. Michelle will be presenting a talk about this project later in the meeting.

Main Business:
This was a "Notes and Exhibits" meeting, and the presentations tonight were:

Michelle Rafter (Student prize winner):
"Sexual communication and host use in South African citrus thrips, a generalist herbivore that has invaded Australia"

Ross Kendall and John Moss
"Interesting albinistic and melanistic aberrations of *Eurema* and *Catopsila* (Lepidoptera: Pieridae and Coliadinae) butterfly species"

Geoff Monteith
"New northern insects in Brisbane... a taste of global warming?"

Mike Muller
"The southern expansion of the pest biting midge *Culicoides ornatus* to Brisbane"

Peter Allsopp
"The ZooBank proposal"

As there was no further business, the Chair closed the meeting.

MAIN BUSINESS:

Sexual communication and host use in South African citrus thrips (*Scirtothrips aurantii*), a generalist herbivore that has invaded Australia.

Michelle Rafter
Student Award Presentation for the Entomological Society 2006

South African citrus thrips (*Scirtothrips aurantii*) is indigenous to Africa, where it is considered to be highly polyphagous (Figure 1A and B). The species has been reported from at least 70 host species and is a major economic pest of mango and citrus. Thrips feeding stunts the growth of shoots and causes superficial scarring to fruits, which is commercially unacceptable. In 2002, *S. aurantii* was discovered in Australia for the first time. Although the discovery was alarming to Queensland's primary industries, *S. aurantii* has not infested citrus or displayed any of the polyphagous tendencies reported from its original distribution. The insects have remained on plants of a single host genus *Bryophyllum*, but primarily on *B. delagoense*, which is the third most invasive weed species in Queensland (Figure 1C and D). *Brophyllum delagoense* is of Madagascan origin and is a member of the succulent family Crassulaceae.

Host-plant choice tests conducted on the Australian thrips show that they are likely to remain exclusively on *B. delagoense* and perhaps occasionally on flushing leaves of mango. On mango, in the laboratory, they do oviposit, but only on flushing leaves. However, survival of the nymphs and resulting adults is virtually zero.

Because *S. aurantii* is currently host specific to *B. delagoense* in south east Queensland, the impact of thrips infestations on this invasive weed was also investigated. It was found that *S. aurantii* causes significant damage to *B. delagoense*, to the point of reducing reproduction output significantly (Figure 1F). Damage to the plantlets reduces vegetative reproduction while feeding damage from heavy infestations can prevent flowering.

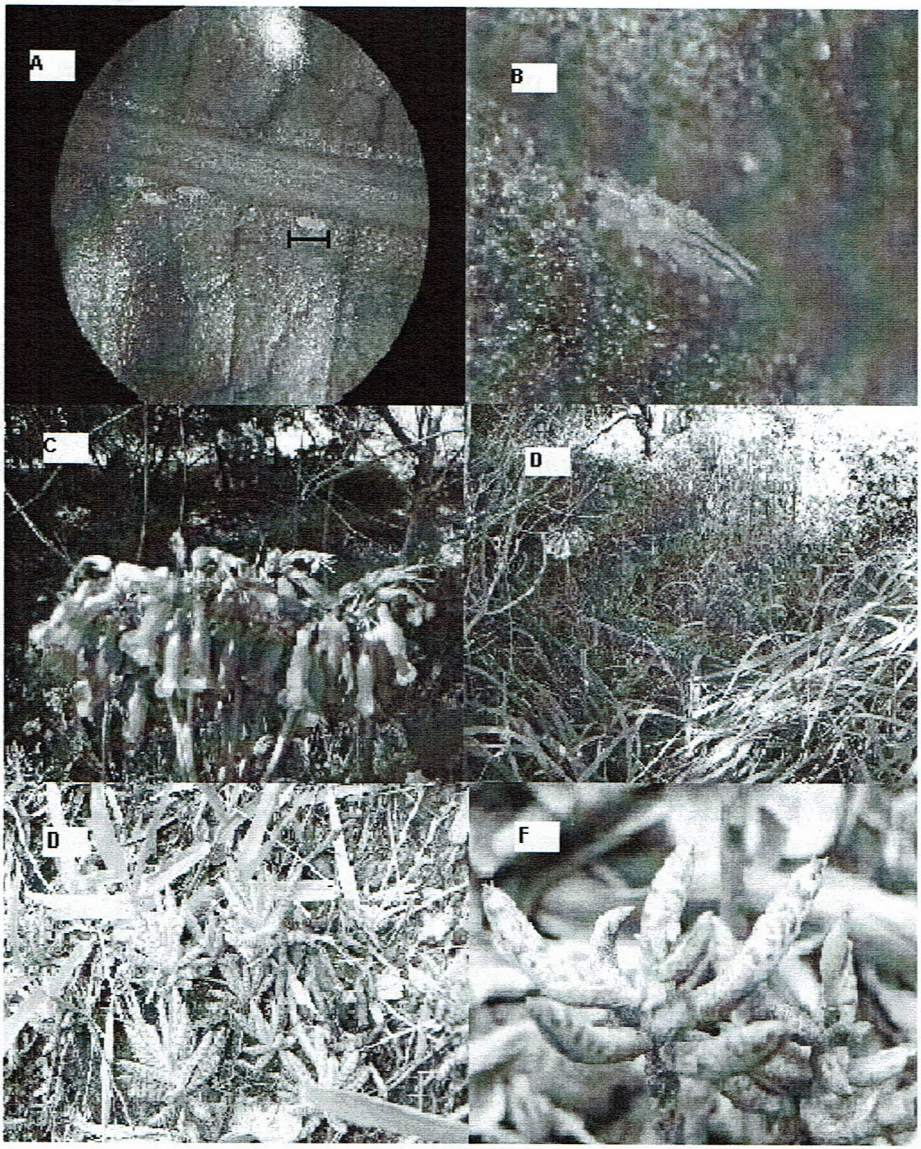


Figure 1. South African citrus thrips (*Scirtothrips aurantii*) and its host plants.

A. First and second instar nymphs on red flushing leaves of mango. Scale = 1 mm

B. Adult female *Scirtothrips aurantii* (2 mm).

C. Flowering *Bryophyllum delagoense* at the Noosa study site.

D. The Noosa study site. *Scirtothrips aurantii* is not present here and mother-of-millions (*Bryophyllum delagoense*), the primary host plant in Australia, is undamaged.

E. Healthy uninfested *Bryophyllum delagoense* at the Noosa study site.

F. Infested *Bryophyllum delagoense* at the Toowong study site.

Complex arrays of lipids in the cuticle have been identified for comparison to South African populations in future species studies. They include hydrocarbons, wax esters, triglycerides and aldehydes in males; females are similar, but without aldehydes. Behavioural experiments confirmed that these lipids play a major role in close up sexual interactions.

The experimental evidence indicates that *S. aurantii* in Australia is restricted to *B. delagoense* as a host, with little potential to attack mango and no potential to attack citrus. This implies that the *S. aurantii* material that originally entered Australia represents a small subset of the diversity covered by the taxon '*Scirtothrips aurantii*'. This is not to imply that it is host restricted because a limited part of a greater gene pool was introduced, but that a host-specific cryptic species seems, on the evidence available, to be involved. The resulting damage caused by *S. aurantii* to *B. delagoense* suggests it would be a good biological-control agent against this weed, although further widespread sampling on the population consequences of this herbivory needs to be conducted. If *S. aurantii* had not invaded Australia, it would never have been considered for biocontrol of *B. delagoense,* as the anticipated non-target effects would have been too devastating to citrus, mango and other plants considered to be potential *S. aurantii* hosts.

NOTICE FOR NEXT MEETING

Monday 14th August 2006 at 7pm
Room 388, Goddard Building
University of Queensland, St Lucia

"Passalid beetles and the zoo in their luggage"
by Owen Seeman

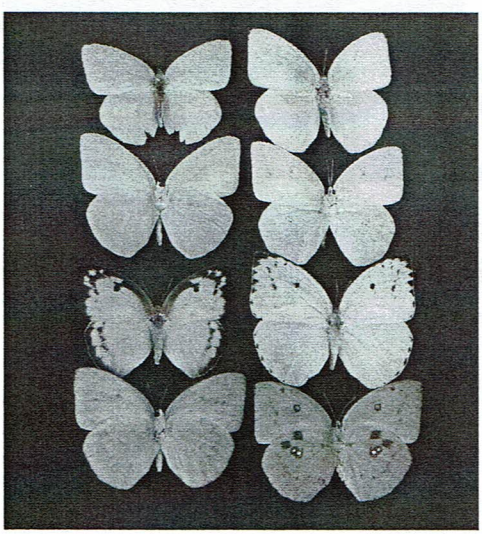
Interesting variations in pierid butterfly adult morphology

John Moss and Ross Kendall

Phenotypic variation in butterflies includes individual, geographic, seasonal and sexual (especially with respect to mimicry). This talk involves considerations of both individual and seasonal variation in two genera of pierid butterflies.

Seasonal polyphenism appears to come about as a result of temperature changes, day-length variation and possibly rainfall. High temperatures and especially long photoperiods result in 'summer', wet season or paler forms and lower temperatures/ short photoperiods the converse, i.e. 'winter', dry season or darker forms.

The terms "albinistic" and "melanistic" have been used to describe these environmental effects, but care needs to be taken not to confuse this with the genetically determined and/or spontaneously mutated true albinos and melanos which are uncommon. However, we present tonight a case of apparent true albinism in the butterfly *Catopsilia pomona* (Fabricius, 1775) and striking melanism in the butterfly *Eurema hecabe* (Linnaeus, 1758).



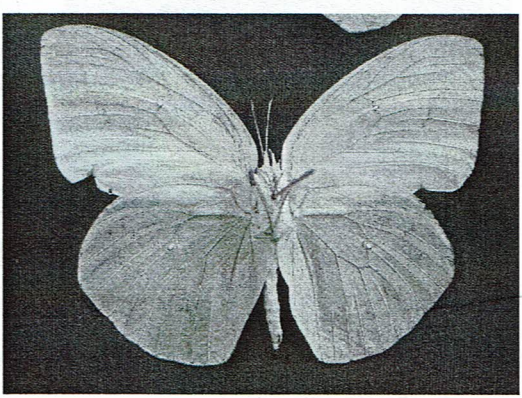
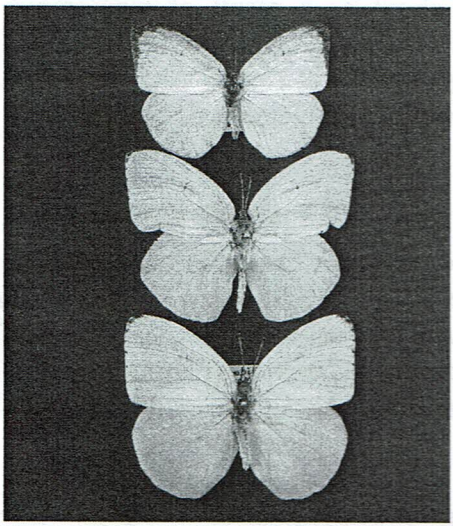


Figure 1 and 2 (Left to right): Normal seasonal variation in both males and females of *Catopsilia Pomona*; extreme albinistic male individual.

Figures 1 and 2 show the normal seasonal variation in both males and females of *Catopsilia pomona* compared to an extreme albinistic male individual, which appeared spontaneously in Ross' flight cage, containing a population of originally wild caught individuals (early in April 2006). April is usually the seasonal 'shoulder' for this butterfly, and both 'summer' and 'winter' normal forms were in evidence. Figure 3 compares this aberration with normal males of *C. pyranthe* and *C. gorgophone*.



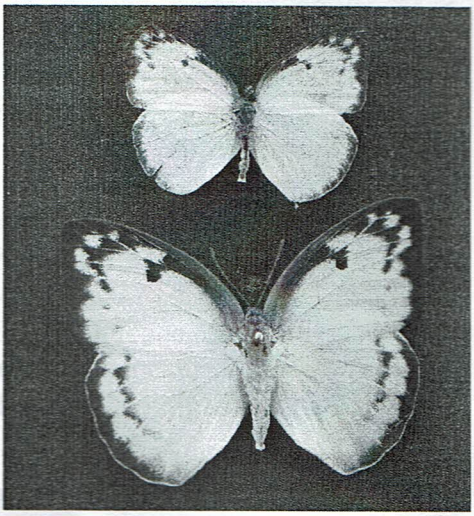


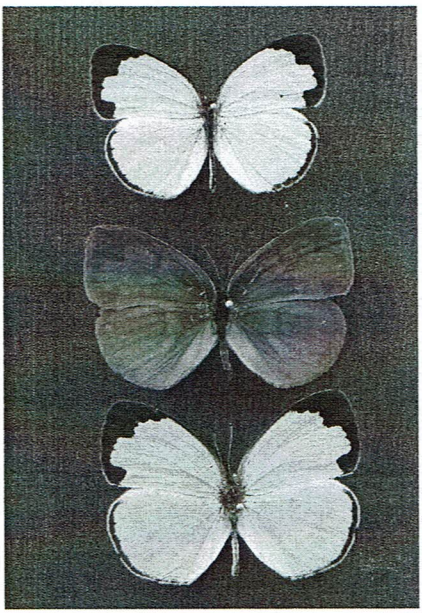
Figure 3 and 4 (left to right): Comparison of aberration with normal males of *C. pyranths, C. pomona and C. gorgophone;* stunted female 'summer' form of *C. pomona*.

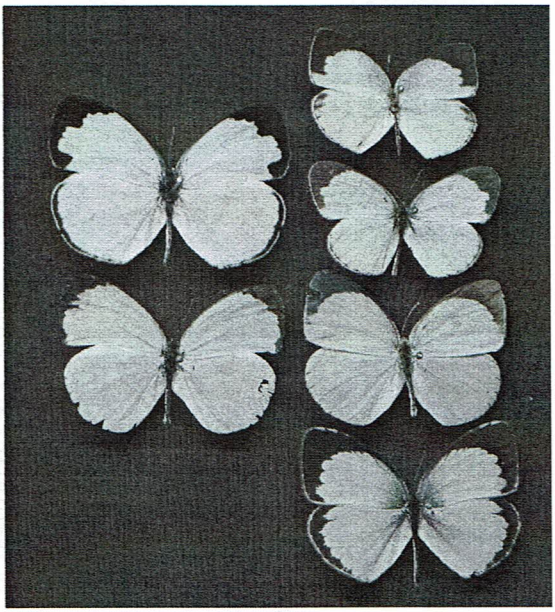
Similar seasonal variations in *C. gorgophone* have been found with males and females , including the pale female form '*hinda*'. *C. pyranthe* has also displayed seasonal variation.

Figure 4 shows a stunted female 'summer' form of *C. pomona* compared to a normal-sized female.

Figures 5 shows a female melanistic aberration of *E. hecabe,* with normal male and female 'summer' and 'winter' forms. This aberrant specimen appeared in a population progeny of originally wild-caught specimens in Ross' flight cage at the end of April this year (2006). It lead to our colleague, Murdoch de Baar remarking "Surely you're not flying an exotic species?" on

first sighting the specimen!



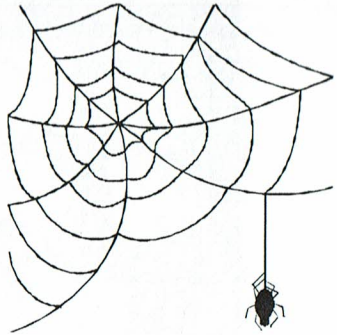


Figures 5 and 6 (left to right): *E. hacabe* melanistic aberration; pattern variation of *E. hacabe*.

Figure 6 shows an extreme pattern variation male of *E. hecabe* collected near Mt. Cotton in the Redland Shire on 9th October 1994. The upper left specimen is a normal patterned E. Hacabe, the lower left specimen is a variant patterned *E. hacabe*. The absence of yellow colour indentations into the black forewing margin is unusual. A comparison is made with the normal form male (collected concurrently) as well as the sympatric species *E. smilax, E. herla, E. brigitta* and *E. laeta sana* (shown on the right of Figure 6).

Figure 7 shows normal *E. hecabe*, the Mt. Cotton variation, *E. hecabe* subspecies *hopsoni* from Formosa I (Taiwan) and *E. blanda* from Torres Strait. It will be noted that this variation and the *hopsoni* subspecies are indistinguishable. Yata (1995) recognised 18 subspecies of *E. hecabe*, but Braby (2000) states that "Many of the previously recognised subspecies apparently form a north-south cline from Japan to Australia". Thus Braby only recognises one subspecies *E. h. hecabe* in the Australian subregion.

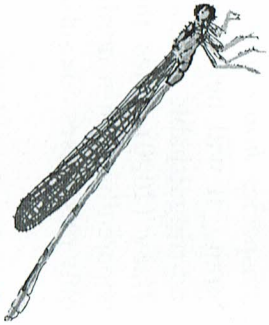
Bug Catch 2006



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 three days of collecting at Double Island Point, Great Sandy National Park. Enjoy conducting a preliminary inventory of the invertebrates of the area, and just getting together for a fun and informative weekend. Limited accommodation provided at the lighthouse cottages.



Where : Double Island Point (4WD access only)

When : Friday 20 October to Sunday 22 October 2006

Meals : BYO food (gas cookers provided)

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 22 September 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:.....

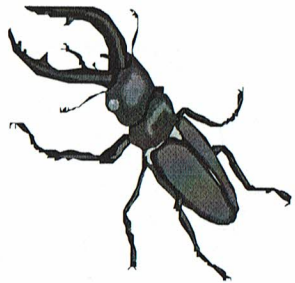
Email:.....

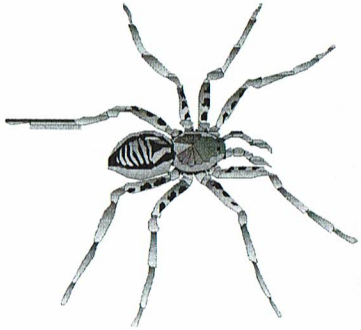
I will attend (please tick):

☐ Friday 20 October 2006

☐ Saturday 21 October 2006

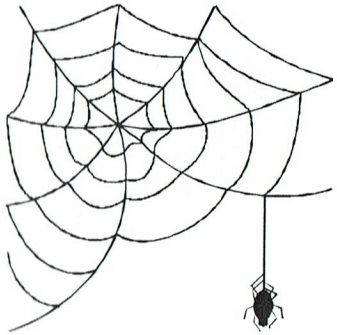
☐ Sunday 22 October 2006



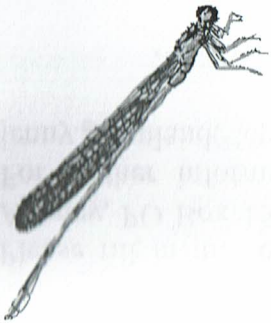


Bug Catch 2006

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 to a flora/fauna survey at Bringalilly State Forest (near Inglewood) . Enjoy conducting a preliminary inventory of the invertebrates of the area, and just getting together with other researchers. Accommodation (limited beds), good kitchens and shower block facilities provided at the DNRMW Robert Wicks Research Station (between Inglewood and Millmerran), or tents/vans can be set up on the grounds.



Where : Bringalilly State Forest

When : Monday 23 October through to Tuesday 31 October 2006

Meals : BYO food

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 22 September 2006. For further information contact Jenny Greenland on phone 3247 3299 or 0402 952 875 or email jenny.greenland@epa.qld.gov.au

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Registration

Name:.....

Address:.....

Contact Phone number:.....

Email:.....

I will attend the following dates:

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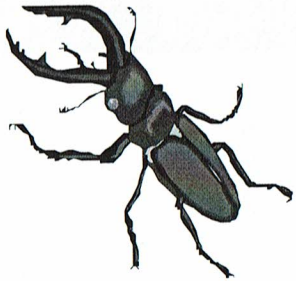


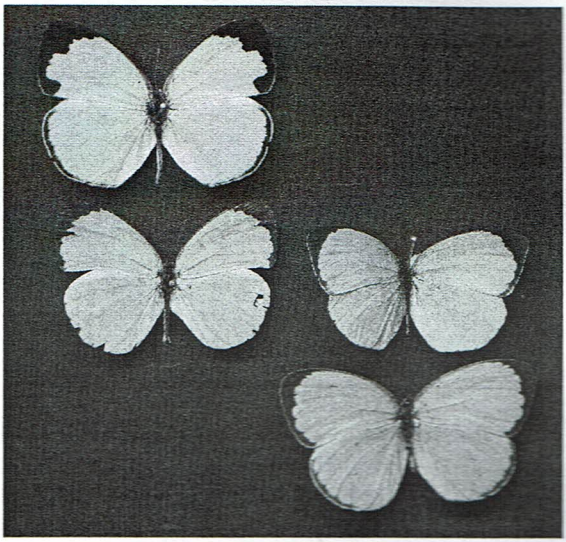


Figure 7: Comparisons of colour patterns in *Eurema* species (top left - normal form; bottom left - pattern variation in *E. hacabe*; top right – *E. hacabe hopsoni* from Formosa Island; bottom right - *E. blanda* from Torres Strait Islands).

Two 'good' species of Australian *Eurema*, namely *E. sana* and *E. laeta lineate*, originally considered to be distinct species, were found to be seasonal variations [confirmed by breeding experiments by Jones *et al* (1985)].

Postscript: It would be interesting to do U.V. light reflectance photography with these variant *Eurema* species to ascertain if the pattern, in the individuals exhibiting extreme variation, is different from that in the normal.

References:

Braby, M.F. (2000): Butterflies of Australia, their Identification, Biology and Distribution. CSIRO Publishing.

Jones, R.E., Rienks, J. and Wilson, L. (1985): Seasonally and environmentally induced polyphenism in *Eurema laeta lineate* (Lepidoptera: Pieridae). *J. Aust. Ent. Soc.* **24**: 161-167.

Yata, O. (1995): A revision of the Old World species of the genus *Eurema* Hubner (Lepidoptera: Pieridae). *Bull. Kitakyushu Mus. Nat. Hist.* **14**: 1-54, pls 1-35.

The southern expansion of the pest biting midge *Culicoides ornatus* to Brisbane.

In October 2004, unusual activity by biting midges was detected in the western suburbs of Brisbane. Investigation identified the serious pest *Culicoides ornatus* at a number of sites on two small tidal tributaries of the Brisbane River. These included Corinda and Rocklea, associated with Oxley Creek, and Fig Tree Pocket, associated with Cubberla Creek. Soon after, activity was also apparent on two sections of the Brisbane River bank at Yeronga and Fig Tree Pocket. There was a burst of activity at all these sites in the spring and in the following autumn. *C. ornatus* is the main human pest species in northern Australia, occurring around the coast from Port Hedland to Southeast Queensland. Up to this time, the southern limit of this species was thought to be around Tin Can Bay, 210 km north of Brisbane. It breeds in tidal mud associated with mangroves.

In October 2005, *C. ornatus* again was very active at the same western suburb sites. However, at the same time it was reported as a severe pest around Norman Creek, a tidal creek in the inner eastern suburbs of Brisbane just 2.5 km from the CBD. Once again, there appeared to be spring and autumn peaks in activity. This species is morphologically very similar to *C. longior*, a minor and infrequent pest already occurring in the area, and requires careful separation. Anecdotal evidence from long-time residents of all these areas confirms that this activity has only been noticed in the past one or two years.

Control options for *C. ornatus* are extremely limited. There are no products openly registered in Australia for control of biting midge larvae, which in any case are well protected in their mud substrate that is in a marine habitat. Broad-scale application of fogs or ULV mists is unlikely to be effective or acceptable in the peridomestic situations encountered. At this stage, the best option appears to be a barrier treatment of the residual insecticide bifenthrin to foliage and fixtures in affected premises. Already the midge is causing community disruption and alarm in the areas where it has appeared. Currently there are no explanations for this sudden expansion of distribution, and it is not known whether *C. ornatus* will persist in this new area or retreat or even continue its spread.

Mike Muller, Medical Entomologist
Brisbane City Council, Vegetation and Pest Services.

ZOOBANK - An open-access, mandatory registration system for zoological taxonomy

Peter Allsopp

Members were made aware of the ZooBank proposal being considered by the International Commission of Zoological Nomenclature.

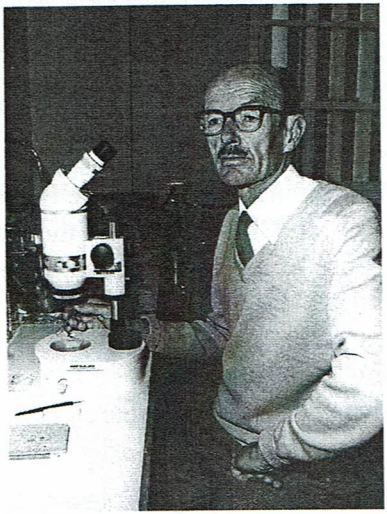
Taxonomic publications can be widely dispersed, there are > 1100 entomological journals, many of which are extremely difficult to access. *Zoological Record* has been the best resource to answer that need, but does not solve the access problem and does not guarantee that nomenclatural acts meet the requirements of the *Code.*

The proposal being put forward would see a partnership between *Zoological Record* as the primary data collector and ICZN as the independent archiver of the database. It will pertain to all nomenclatural acts, eg new names, suppression of a name, replacement names, fixation of a spelling of a name, emendation of a name, fixation of a type species, and designation of a lectotype or neotype. The proposed system would not act as an assessment or judgement of the taxonomic 'merit' of published work, but mandatory registration is seen as the only way to achieve complete coverage.

The proposed protocol would see authors prior to or after publication, logging on and filling in a form. ZooBank would check the details and inform the author if the name or act meets the *Code's* provisions – it would provide a unique identifier number to be published with the description or in a subsequent paper. After publication, the author would upload a facsimile or submit a copy for verification and archiving. The name would then be registered and become available under the *Code.* There is also provision for uploading a copy of the paper, providing copyright issues can be resolved.

The proposal is outlined in *Bulletin of Zoological Nomenclature* 62(4):210-220 (Polaszek *et al.* 2005) and comments can be sent to http://list.afriherp.org/maian/listinfo/zoobank-list.

TRIBUTE TO DR IAN COMMON



Dr Ian Francis Bell Common (Photo: J. Green, CSIRO)

Dear colleagues,
It is with great sadness that we have to let you know that Dr Ian Common died in his sleep early this morning (3 June), just a few days before his 89th birthday. He had been professionally active until recently, going on regular collecting trips with his wife Jill.

Ian was one of the most outstanding lepidopterists of our time, not only single-handedly laying the foundation for our understanding of the vast and diverse Australian fauna, but producing seminal studies of worldwide relevance each time he monographed a group. His early research made major contributions towards resolving the taxonomy of many important Lepidoptera pests in Australia . His 1954 paper on the biology of the bogong moth is a classic study on insect migration, elucidating an iconic Australian phenomenon. Some of Ian's most remarkable contributions include the study of the primitive family Lophocoronidae, and the families Anthelidae and Carthaeidae. However, his primary research contributions were concerned with the Tortricinae and Oecophorinae. Based on revisions of Australian groups, Ian made very significant contributions to tortricine systematics and phylogeny relevant well beyond Australia . His single most outstanding achievement is the complete overview of the genera of the Australian Oecophorinae, with some 5000 species in 250 genera the largest family group

of Australian Lepidoptera. This three-volume work gives access to one of the largest Australian radiations. Ian's broad and scholarly knowledge of Lepidoptera systematics was summarised in the chapters in *The Insects of Australia* and his 1975 review of the evolution and classification of the Lepidoptera, texts which have inspired lepidopterists around the world.

Ian has always shared his vast knowledge most generously with colleagues as well as with serious amateur naturalists. From the two small Jacaranda pocket guides on Australian moths and butterflies to the comprehensive volumes *Butterflies of Australia* and *Moths of Australia*, he produced extensive contributions which served as textbooks for systematists and as 'bibles' for enthusiasts. Both volumes reflect Ian's unrivalled knowledge of Australian moth biology. Unlike many of us, Ian managed to put on paper a remarkable proportion of his knowledge in scholarly research publications and of his rich field experience in books, much of it written after retirement.

Although Ian achieved international fame for his work on the higher classification and his revisionary studies, in addition to all this he built up the outstanding Lepidoptera holdings in the ANIC. The collection with its extremely high standard of preservation and curatorial practice is a testimony to Ian's dedication and industry. Together with colleagues, in particular Murray Upton and Ted Edwards, he undertook a large number of major field expeditions and continued his tireless efforts in collecting after his retirement until shortly before his death. The arrival at the ANIC of moths collected by Ian always had the feel of opening Christmas parcels.

Ian's status as one of the foremost lepidoperists was acknowledged with numerous honours. He won the Royal Zoological Society of New South Wales' Whitley Medal in 1991 for 'Moths of Australia' for the 'best book on the natural history of Australian animals'. In 1996 he was awarded the Karl Jordan Medal by the Lepidopterists' Society, and in 2001 he was made an Officer of the Order of Australia.

Ian will be missed not only as an exceptional scientist but also as a wonderful colleague and friend. Anybody who has worked with him will remember his quiet but wicked sense of humour, and in his close collaborators this generous, thoughtful scholar inspired the loyalty of a family. His wife Jill's unstinting support throughout his career was a major factor in making all his achievements possible.

Welcome to the Australian and New Zealand Entomological Societies' Conference

Biosecurity—Caring for the Environment and Agriculture

INVITATION

On behalf of the organising committee, we extend a warm invitation to you to attend a joint conference of the Australian and New Zealand Entomological Societies to be held in Adelaide, South Australia from September 24 – 27th 2006. The conference will bring together approximately 150 researchers (scientists and students) from a broad range of interests to discuss the latest research in entomology. The conference has the theme of "Biosecurity – Caring for the Environment and Agriculture" and part of the scientific program will be devoted to this area. However, intending delegates are encouraged to submit papers/posters on their own areas of expertise and interest as the overall program will be designed to cover a much broader range of topics than just this theme.

All intending delegates are encouraged to submit an "Expression of Interest Form" from our website (www.aesnzconference2006.com) as soon as possible to assist the organising committee in the early stages of the conference planning.

THE VENUE

The conference will be held on the North Terrace Campus of the University of Adelaide that houses most of its teaching and research facilities. Set in the cultural heart of the city on the northern edge of the city centre, the North Terrace Campus offers excellence in its educational and social facilities. Established in 1874, the North Terrace Campus is home to the schools of Physics & Chemistry and Molecular & Biological Sciences; as well as part of Earth & Environmental Sciences. The School of Agriculture and Wine is located on the Waite Research Precinct in the suburbs of Adelaide about 8 kms from the city centre. SARDI, the Australian Wine Institute and CSIRO are also co-located on this Precinct.

For more information on registration, sponsors and contacts, visit our website www.aesnzconference2006.com or contact Sally Brown Conference Connections, by mail: PO Box 108 KENMORE 4969; Email: sally.brown@uq.net.au; phone: 07 3201 2808; or fax: 07 3201 2809.

THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND INC.

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IMPORTANT NOTICE

The official address for the Entomological Society of Queensland and *Australian Entomologist* and to which all communications should be addressed is:

PO Box 537, Indooroopilly 4068, Qld.

Back cover gives contact details of individual council members.

NOTICE OF NEXT MEETING

The next meeting of the Society will be held at 7pm on Monday, 14th August in Room 388, GODDARD Building, University of Qld. The main business will be a talk by Owen Seeman entitiled 'Passalid beetles and the zoo in their luggage'. 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

DIARY DATES 2006

Meetings held usually every 2nd Monday of the Month

July	**No meeting**	
14 Aug	Owen Seeman	Passalid beetles and the zoo in their luggage
11 Sep	Chris Burwell	Insects and Fungi
09 Oct	Steve Francis	Army Malaria Institute
13 Nov	Scott O'Neill	

HONORARY LIFE MEMBERS OF THE SOCIETY

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M.J. Harslett R.P. Kleinschmidt E.J. Reye