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Entomological Society of Queensland

Website: www.esq.org.au

Address: PO Box 537, Indooroopilly QLD 4068

President

Dr Federica Turco Ph: (07) 3840 7690 Fax: (07) 3846 1226

Email: federica.turco@gm.qld.gov.au

Vice President

Bradley Brown Ph: (07) 3833 5695

Email: <u>bradley.brown@csiro.au</u>

Past President

Dr Bill Palmer Ph: (07) 3255 4469

Email: bill.palmer@daf.qld.gov.au

Secretary

Dr Mark Schutze

Email: m.schutze@gut.edu.au

Treasurer

Dr Brenton Peters Ph: (07) 3376 4342

Email: petersbc@tpg.com.au

Councillors

Dr Nancy Schellhorn Ph: (07)3833 5710

Email: Nancy.Schellhorn@csiro.au

Dr Cate Paull

Email: cate.paull@csiro.au

Penny Mills

Ph: (07) 3365 1864

Email: <u>penelope.mills@uqconnect.edu.au</u>

News Bulletin Editor/Web Manager

Kathy Ebert

Email: k.ebert@uq.edu.au

Assistant News Bulletin Editor

Penny Mills

Email: penelope.mills@uqconnect.edu.au

Permit Information Officer

Dr Christine Lambkin Ph: (07) 3840 7699 Fax: (07) 3846 1226

Email: christine.lambkin@qm.qld.gov.au

Honorary Life Members

R.A.I. Drew D.L. Hancock R.P. Kleinschmidt C. Lambkin G. B. Monteith M. S. Moulds D.P.A. Sands

THE AUSTRALIAN ENTOMOLOGIST

Editor

Dr David Hancock Ph: (07) 4053 1574

Email: davidhancock50@bigpond.com

Assistant Editor

Mr Greg Daniels

Email: greg.daniels@gm.qld.gov.au

Business Manager/Assist. Editor

Dr Geoff Monteith Ph: (07) 3371 2621

Email: geoff.monteith@bigpond.com

Assist. Editor/Manuscript Coordinator

Dr Federica Turco Ph: (07) 3840 7690

Email: federica.turco@qm.qld.gov.au

Front Cover Illustration: Three species of recently revised *Enhypnon* beetles (Zopheridae). Clockwise from top left: *E. cordicollis* Turco & Ślipiński, *E. costatum* (Carter) and *E. laticeps* Carter. The genus is an Australian endemic with a hotspot of diversity in Tasmanian forests. These are small cryptic beetles inhabiting forest leaf litter and moss, where they conceal themselves by encrusting a thin layer of dirt over their bodies. The beautiful illustrations are by Sybil Curtis when she was employed as an artist by CSIRO.



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The **ENTOMOLOGICAL SOCIETY OF QUEENSLAND**, 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 Tuesday of each month (March to June, August to December). 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. Other common names include Rainbow, Golden and Magnificent Stag Beetle. 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.



Entomological Society of Queensland Minutes for General Meeting

Tuesday, September 8th, 2015

Held in the Seminar Room, Ecosciences Precinct, Boggo Rd, Dutton Park at 1pm

Attendance (38): Brogan Amos, Justin Bartlett, Bradley Brown, Gary Cochrane, Lyn Cook, K. Dhileepan, Kathy Ebert, Tony Ewart, Bjorn Fjellstad, Graham Forbes, Rosie Godwin, Andrew Hayes, Peter Hendry, Michael Jeffries, Caitlin Johns, Ross Kendall, Rob Lachlan, Christine Lambkin, Kevin Lambkin, Trevor A Lambkin, Fred McDonald, Cliff Meyer, Penny Mills, Geoff Monteith, Mona Moradi, John Moss, Max Moulds, Helen Nahrung, Bill Palmer, Robert Richardson, Brad Scholz, Mark Schutze, Noel Starick, Geoff Thompson, Jim Tuttle, Jason Wheatland, Tara Wheatland, Richard Zietek

Visitors (16): Dean Beasley, Ethan Briggs, Mark Evegaars, Ian Gilbert, Mark Hopkinson, John Huth, Wayne Jorgensen, Heather Kelly, Karin Koch, Lui Lawrence-Rangger, Tim Page, Samantha Robertson, Claudia Schipp, Brendan Trewin, Lex Turner, Elizabeth Williams

Apologies: Stephen Hey, Cabell McKee, Cate Paull, Brenton Peters, Nancy Schellhorn, Susan Wright, Meron Zalucki

Minutes: The minutes of the last meeting were circulated in News Bulletin 43[5] August 2015. *Moved the minutes be accepted as a true record:* Geoff Monteith *Seconded:* Rob Lachlan. *Carried:* all

Nominations for membership:

The following membership applications, approved by Council, were presented to the members:

1. Mizuki Uemura, St. Lucia, QLD. *Nominated by* Bronwen Cribb; *seconded:* Gurion Ang; *carried:* all.

General Business:

At council meeting today, we discussed the upcoming Australian Entomological Society Conference in Cairns and that the ESQ will have a promotional table, including banners. There will be a BugCatch weekend in mid-November to be held at Crohamhurst Reserve north of the Glasshouse Mtns; more information to follow in our next general meeting and in the News Bulletin. There will be an additional collection day held on the 10th October, organised by Kathy Ebert for UQ Entomology students, to which ESQ members are warmly invited to attend; this will be at Gold Creek Reserve (just west of Brisbane, past Brookfield) with more information to also follow in the News Bulletin.

Main Business:

Our guest speaker was Max Moulds, who drew a large crowd to listen to his talk on "Museum dungeons to mountain tops: 50 years of entomological adventures". Before Max's presentation, he and Christine Lambkin were presented certificates for Honorary Life Membership with the ESQ by Fede Turco and Bill Palmer. Geoff Monteith was called upon by Federica Turco to provide a vote of thanks to Max for his amazing account of his life's work collecting across the country.

Next meeting: Our next meeting will be Tuesday,

the 13th of October 2015, at 1pm, with Dr Mark Schutze presenting 'Tephritid taxonomy: new solutions for old problems'.

Meeting closed: 2:05 pm



Bactrocera dorsalis (Hendel) Photo:Wikimedia Commons

Honorary Life Membership Presentations





Past President, Bill Palmer, presents the Honorary Life Membership Certificate to Max Moulds (right).



President, Federica Turco, presents the Honorary Life Membership Certificate to Christine Lambkin (left).

At our next meeting...

Tephritid taxonomy: new solutions for old problems

presented by Dr Mark Schutze

While maintaining an interest of all forms and varieties of insect life, his recent work has been on the integrative taxonomic resolution of major pest tephritid fruit flies from the Oriental fruit fly (*Bactrocera dorsalis*) species complex. Due to considerable morphological and genetic similarity among them, some of these pests have challenged taxonomists, fruit fly workers, and biosecurity personnel for many years.

Mark's presentation, titled 'Tephritid taxonomy: new solutions for old problems', will be an overview of this research as placed within a broader historical context; a tale that stretches back to the 'father' of insect taxonomy himself, the great Johan Christian Fabricius."



Mark Schutze is a Research Fellow at the Queensland University of Technology, School of Earth, Environmental & Biological Sciences.

Museum dungeons to mountain tops: 50 years of entomological adventures

presented by Max Moulds

Looking back over my 50 years as an entomologist, most of it as an amateur and later as a professional, it is clear that a large proportion of that career had been spent on field work, often to remote localities. Accounts of some of the more interesting of these trips are recalled along with a little history.

First I would like to briefly mention two of my old projects, now successfully run by others. One is the Entomological Society of Queensland's journal, *The Australian Entomologist*, started by me 43 years ago as *Australian Entomological Magazine* and published by Australian Entomological Press which I set up (Fig. 1). It is perhaps unique among society journals, having started as a commercial venture then transferred to society ownership, rather than the trend these days of long standing society journals being taken over by commercial publishers. The other venture I started then sold way back in 1972 was Australian Entomological Supplies. Under the



Fig.1. Evolution of a journal. Left is an early issue of *Australian Entomological Magazine*. Right is the latest issue, now rebranded as *Australian Entomologist*. The convention of featuring the work of classical insect illustrators on the cover continues.



efficient management of Alan Frazer and his sons, this company is now celebrating its 53rd year. I was wondering how many small businesses in Australia survive so long and the accompanying graph compiled from Australian Bureau of Statistics data shows that just 3% reach 50 years (Fig. 2). It is very satisfying to me to see the success of these two enterprises that I relinquished so many years ago.

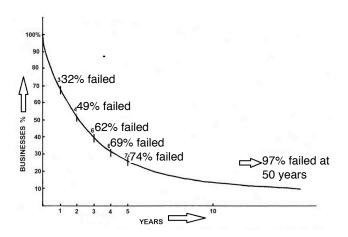


Fig. 2. The life of Australian small businesses. Only 3% have survived as long as Australian Entomological Supplies.

My earliest field trips were in pursuit of butterflies as a school boy in Sydney. But not long after leaving school on old classmate, Graeme Baker, who was later to become a plague locust entomologist, and I



Figs 3 & 4. Two famous gold prospectors' huts used by collectors at Iron Range, both now gone. Left, is Gordon's Hut, taken when Geoff Monteith was in sole residence in 1965. Light sheet and red generator are visible. Right, is Cook's Hut, taken in 1980 by Alan Walford-Huggins. It is probably built from remains of WW2 US Army radio station.

ventured to the jungles of Cape York Peninsula. In our youthful enthusiasm in pursuit of rare species we discovered that Ansett Airlines had commercial flights to Iron Range and Coen and, believing Cape York Peninsula was all rainforest, we had to go. We flew into Iron Range in January 1964, completely oblivious as to what we might face. Fortunately the airstrip manager kindly drove us out the few kilometers to the rainforest on the Claudie River where we set up camp in the then deserted Gordon's Hut (Fig. 3). Gordon was an old timer who was first to discover gold around the Claudie River in 1934 and had a substantial mine on the northern face of Lamond Hill, but it appears he may have passed on at the time of our arrival. A little way down the road from Gordon's Hut was a large charred area of what had been pristine rainforest obliterated only 6 months earlier by "Operation Blow Down", a joint Australian, American and British operation to simulate the effect of a nuclear explosion on tropical rainforest. The twisted remains of the steel tower which had held 50 tons of TNT was still there along with remains of monitoring stations about the size of 200 litre drums. The huge explosion was viewed from Lamond Hill where the remains of their logwalled observation bunker can still be found.

Following a week at Iron Range we flew to Coen where we discovered Cape York Peninsula was not all rainforest. Stuck there for a week we climbed the nearby mountains, one being Mount White. Unbeknownst to us we were the first to collect insects on this mountain that was to become an icon for entomologists, especially lepidopterists, and is now the type locality for several insects including two rare butterflies, *Acrodipsas hirtipes* Sands, 1980 and *A. melania* Sands, 1980 (Fig. 5).

I made many subsequent trips to Iron Range, often staying in what had become known as Cook's Hut (Fig. 4). This was probably a reconstruction from what remained of the old wireless station built by the US Army during WWII and named after its long time resident, Reg Cook, another gold prospector. In retirement Reg maintained the remains of the Army's bitumen road that ran from Portland Roads to the airstrip but which has long since reverted to gravel. Many biologists have resided in Cook's Hut over the years and the back of its door bore the graffiti-ed names of the royalty of Australian butterfly collectors. Sadly, having survived for some 60 years until the area was taken over by National Parks, the building has now gone without trace along with three historic mango trees in the vicinity

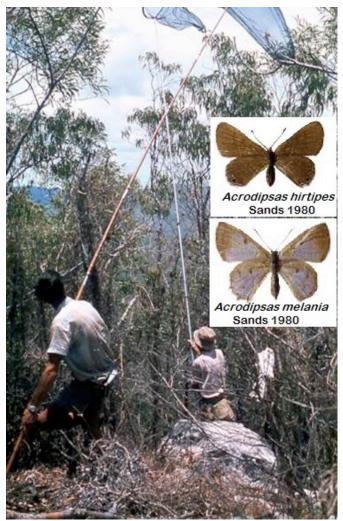


Fig. 5. Max Moulds (foreground) and John d'Apice swinging the long nets on the summit of Mt White. Many collectors later trudged up the stony, prickly slopes of this famous hill. Insets show two new butterflies taken there in numbers.

planted by early miners almost 100 years ago and cut down by National Parks in 2012.

On one trip in 1975, when we planned to stay for several months at Iron Range, we decided to take a caravan. This challenge, that seemed "a good idea at the time", involved negotiating many kilometres of sandy track that followed the then still working telegraph line (Fig. 6) and several unbridged streams including the Archer, Wenlock and Pascoe Rivers as well as the notorious track traversing the Claudie rainforest (Fig. 7).

Over the years I have spent many months studying insects at Iron Range. Two species are worth brief mention. The bagpipe cicada, *Lembeja paradoxa*, inhabits blady grass adjacent to the rainforest. The males sing at dusk and I recorded their song in 1973. Analyses of the song showed it to be a pure tone, where an artificially generated sine wave at the same frequency as the song matched perfectly (Fig. 8). This was previously unheard of in invertebrates. The other species was an antler fly in the bizarre tephritid genus *Phytalmia* that has just a single species in Australia but many in New Guinea. While laid up with a tropical ulcer I happened upon a group of these flies mating and laying eggs on a fallen tree trunk. They are remarkable for the males' fighting behaviour (Fig. 9) where the males defend territory





Figs 6 & 7. Cape York driving in the 1970s. Left, is the road north of Coen, still following the original Telegraph Line. Max at work. Right, shows getting a caravan through the Iron Range rainforest. Max contemplating work.

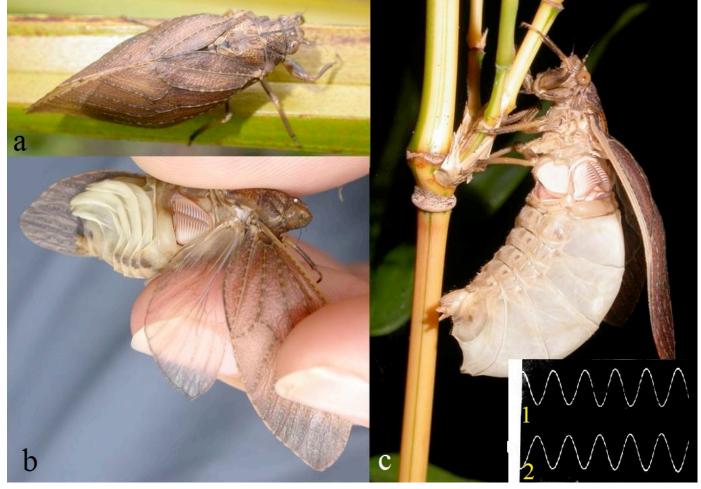


Fig. 8. The Iron Range cicada, *Lembeja paradoxa*. **(a)** Resting male. **(b)** Male with opened wings to show the collapsed abdomen at rest. **(c)** A calling male with inflated abdomen. Inset shows the sound wave generated by the call (1) compared to an artificially generated pure note (2) (from Moulds 1975).

on the bark surface suitable for the females to lay eggs. These observations, made by chance of circumstance, turned out to be the first account of antler fly behaviour.

Another adventurous trip was an attempt to canoe to the headwaters of the Jardine River in the far north of Cape York Peninsula. Although Queensland's largest perennial river, its upper reaches had never been explored and very little was known of the zoology of this remote area. So having organized a small party including ornithologist John Disney and botanist Tony Irvine, we launched our canoes on 10th October, 1978 at the point where the old telegraph track crossed the river. The Jardine flows with a strong current which makes progress slow and exhausting but we managed to travel over 80

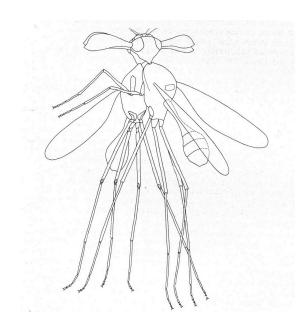


Fig. 9. A pair of males of the antlered fly, *Phytalmia mouldsi*, fighting to defend egg laying territory for females (from Moulds 1977).



Figs 10 & 11. Left, Max and Barbara collect dragonflies by canoe on the way up the Jardine in 1978. Right, Tony Irvine and Max prepare specimens at the final Jardine camp. Inset shows the tree climbing prize, the golden jezebel.

km upstream (Fig. 10) until it was impossible to go further because of shallow water and many fallen trees that spanned the stream. A base camp was established in a rainforest patch about 1 km below the junction of the McHenry River (Fig. 11). Large goannas, Varanus indicus, were particularly common here, and lacking fear of humans, were constantly present around the camp and even took to sunning themselves in the canoes. Here I collected golden jezebel butterflies, Delias aruna, from the top of an emergent tree by cutting foot holds up the trunk. I wonder what future explorers will make of them in years to come. In general, insects were not particularly abundant, being the dry season, but a large new cicada was taken, later to be described as Macrotristria vittata.

In more recent years I made several trips into the McIlwraith Range in search of the enigmatic cicada, *Neopsaltoda crassa* Distant, 1910. This cicada remained known only by the single type in the British Museum collected by 'Kelsall' and labelled simply 'N. Queensland'. I had been searching for this cicada for over 20 years and it seemed the only remaining place where it might occur was the McIlwraith, then inaccessible.

The McIlwraith Range is a wild area east of Coen that was popular with gold prospectors in the late 1800s and early 1900s, the main mine being at Leo

Creek high in the mountains. A bullock track just north of Coen once led to this remote mine but had long been abandoned and Leo Creek had become 'lost'. However, early in the 1970s a prospecting company re-opened the track and after almost 80 years the McIlwraith Range became once again accessible. Geoff and Sybil Monteith, John Donaldson and Murdoch De Baar were the first entomologists to take advantage of this new access in 1976 and found a rich insect fauna previously unknown. On Geoff's advice, I went to the McIlwraith in January 1988, following the then much deteriorated track and, much to my delight, found Neopsaltoda crassa (Fig. 12) in the dry vine scrub bordering the rainforest. But the McIlwraith was still much of a 'closed shop' requiring a Forestry permit for the McIlwraith itself together with permission from a private land holder plus a National Parks permit as one had to traverse those lands to reach the McIlwraith range. I had not bothered with the latter expecting to sneak through the few kilometres but unfortunately was seen by a stockman who reported our presence to the Coen police as suspect drug traffickers. Thus, the police followed our tracks along this nightmarish track for some hours only to discover this odd person, along with his wife and small child, collecting cicadas.

On a later trip when I reached the end of the track at Leo Creek, I found a beautiful turquoise blue form

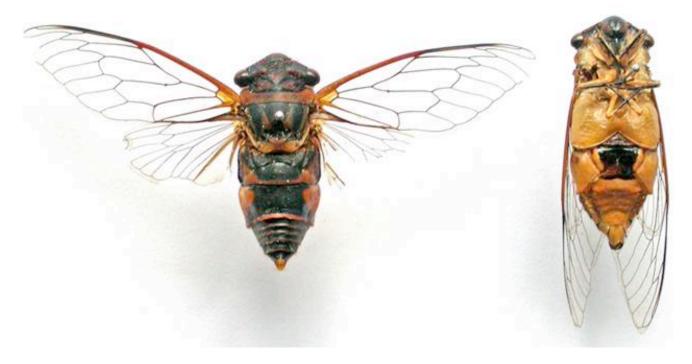


Fig. 12. Neopsaltoda crassa. The only previous specimen was probably taken by a visitor to the McIlwraith gold fields around 1900.

of the cicada, *Diceropyga subapicalis*, of which I collected a few specimens but sadly that was the last time I visited Leo Creek (Fig. 13). Those specimens, along with many other species taken in the McIlwraith, now will remain the only known specimens, perhaps for many years to come, since the track is now completely overgrown and the McIlwraith inaccessible once again.

But not all my field work was directed towards the rainforests of northern Queensland. The monsoonal north of Northern Territory and Western Australia were also extensively traveled along with the arid and semi-arid inland of Australia (Figs 14, 15, 16). Although I collected insects of most orders for interested colleagues, my primary target was always cicadas and over the years I have taken some 750 species from Australia of which less than 300 have been named so far, most being grassland or open woodland species.

One such trip was to Innamincka in the far northeast of South Australia in January 1976. This was one of those rare years of considerable desert rains in South Australia and insects were in abundance, especially at the light sheet that was so thick with

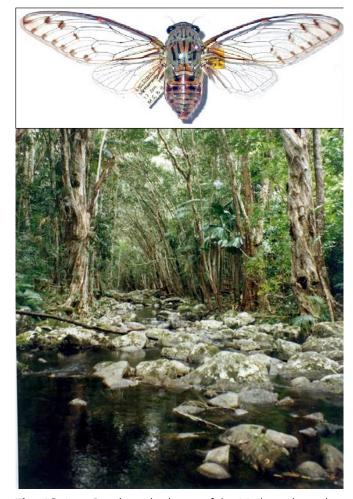
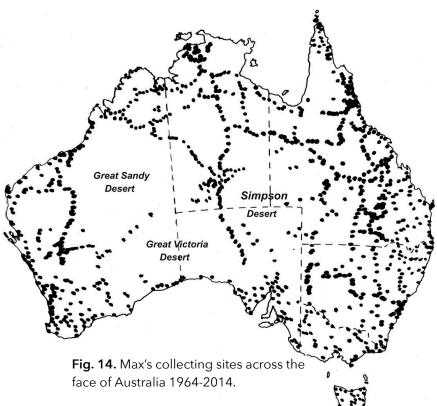


Fig. 13. Leo Creek, in the heart of the McIlwraith, and the turquoise form of *Diceropyga subapicalis* found there.

insects it became impossible to collect desired specimens. To get to Innamincka my wife and I had travelled north from the Flinders Ranges to Moolawatana Station where we found a modern road sign to our next destination, Mount Hopeless Station, but the road had long since been abandoned. Regardless we travelled on, following the subtle change in grass colour that marked the road until we reached Mount Hopeless, which wasn't so named without reason as it also had been long abandoned. Thereafter we reached a new road leading to the then recently discovered Moomba gas field where the road entered the Moomba gas compound and exited the other side, before continuing to Innamincka. Innamincka had been abandoned in 1951 when the Australian Inland Mission closed its hospital but now a new hotel

complex had been recently built to serve the



increasing population of oil and gas workers, although the population of the town was just 12.

Beyond the Australian mainland I seemed to have acquired a liking for islands. Two of the more



memorable are Christmas Island in the Indian Ocean, and New Ireland, north-east of the Papua New Guinea mainland. Christmas Island is a zoological paradise and, except for its isolation, is the kind of place I could happily live. I have only been there once, in November 1999. The primary purpose was to find the Christmas Island cockroach, Metanocticola christmasensis, which was achieved but of course I could not help but collect a nice series of the endemic Christmas Island cicada, Oxypleura calypso. Christmas Island is famous for its land crabs that, like other native animals on the island, have no fear of humans (Fig. 17). The large robber crabs (Birgus latro) are the largest land-living arthropods in the world and can live up to 60 years and one can pick them up without fear of losing an arm, unlike their Pacific island cousins that are quite aggressive.

Another adventurous island trip involved bicycling some 400 km around New Ireland in 2003. New Ireland is a long narrow island with a high central mountain range (Fig. 18). Its north-east coast has a well formed road built during WWII and is easily accessible by Papua New Guinea standards. However, the opposite south-west coast remains very remote and seldom visited by outsiders. Much of this coast lacks a road causing its isolation. It was impossible to obtain information on the status of the south-west coast before my wife and I left so we carried everything on our bicycles to be self sufficient, quite a load together with collecting gear. Crossing the central mountain range was incredibly arduous taking two long days to ascend but only two hours to descend. We did manage to complete the journey, as far as we know the only people to circumnavigate the island by bicycle. As it turned out the people of the south-west coast were extraordinarily friendly and the younger children had never seen white people. The children were particularly enthusiastic about helping collect



Fig. 17. Christmas Island in 1999. Both the famous red crabs (*Geocarcoidea natalis*) and the giant robber crabs (*Birgus latro*) are unafraid of man, including Max! The cicada, *Oxypleura calypso*, is endemic to this remote island.

specimens and it was thanks to them and some of the younger men that I got my only specimen of the endemic cicada, *Aceropyga novaeirelandica*.

In 1990 I left the amateur world and took the job of insect and spider collection manager at Australia's largest museum, the Australian Museum in Sydney, and remained there until retirement in 2003. The Entomology Department was at that time housed in an old warehouse in Yurong Street, around the corner from the main Museum complex. This was a demanding but fulfilling job and, as if I didn't have enough to occupy my time, at one stage I was also acting collections manager for the Malacology Department. There was considerable opportunity for developing and expanding the entomology collection and substantial new additions were made during this time by co-workers and myself.

It was also the start of the computer age and I instigated databasing of the collections. Before my retirement, plans were made to move the Entomology Department back to the main Museum, all be it into the deepest, darkest dungeons of the old building. Here was an opportunity to design a new



Fig. 18. Cycling for three weeks around the large PNG island of New Ireland (shaded red on the map) in 2003. The cicada is the New Ireland endemic, *Aceropyga novaeirelandica*.

entomology complex for which I took up the challenge and my architectural concept and detailed plans including a two level collection area, where the upper floor looked down onto laboratories below through a glass wall, were accepted without change by the government architect and eventually became a reality. But I retired prior to completion of the renovation and the move fell to my successor, Dave Britton. This period also gave me the opportunity to undertake an MSc at Macquarie University followed by a PhD at Sydney University. This work involved the higher classification of cicadas (Cicadoidea) at a time when the relatively new fields of cladistics and molecular taxonomy were opening up. In 1997, I

began collaboration with Professor Chris Simon at Connecticut University on cicada systematics, a partnership that continues to this day. This has lead to opportunities to be part of many projects including reviewing the origins and classification of the large tribe Cicadettini, and more recently reviewing the classification of the family on a global scale using the latest molecular techniques.

In December 2006 I moved from Sydney to Kuranda where I now live in the rainforest and can do exciting field work by walking outside and switching on the mercury vapour light in the middle of the wet season. I've had a long term interest in hawk moths and over the last few years have been

working closely with co-authors Jim Tuttle and David Lane on pulling all the ends together on a planned volume giving a complete overview of the Australian fauna (Fig. 19). It will be published by CSIRO Publishing as one of the Lepidoptera Monographs series and will include full life history photographs of almost all species.

So this is a small window into my entomological world, particularly of some of my field work. That is the kind of thing rarely gleaned from one's publications and rarely recorded so I am happy to have had the opportunity to share this with you today.



--M.S. Moulds

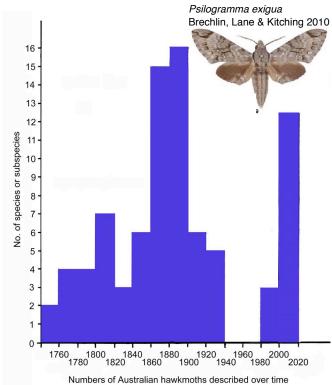


Fig. 19. New collecting and taxonomic re-interpretation have caused a great jump in number of species of Sphingidae recognised in Australia in recent times. One of the new species is shown.

The History Corner...



Mabel Theodore HOBLER (1871-1925)

She was born at Crescent Lagoon, near Rockhampton, daughter of George Barnard, who was an Englishborn naturalist and grazier. Grew up with three brothers in a family of enthusiastic naturalists who developed an extensive collection on their property, "Coomooboolaroo", near Duaringa. Married F. H. Hobler in 1891 and lived on stations he managed in central Queensland until they purchased their own property, "Kilrock", near Jandowae. Collected beetles and sent them to Queensland Museum and to South Australian Museum where A. M. Lea described the weevil Apion hoblerae. Following her husband's death in 1921, she moved to Brisbane until her death in 1925. Was active in the Queensland Naturalists' Club and published several articles on Coleoptera in the Queensland Naturalist.

Biography: Janetzki, H.,1997. Mabel Hobler pp. 24-25. *In* McKay, J.(ed.) *Brilliant careers: women collectors and illustrators in Queensland*. Queensland Museum, 80pp.



New Honorary Life Members

Dr Christine Lambkin



Honorary Member Nomination

Chris is currently Curator of Entomology at the Queensland Museum. Her main research interest is the systematics, evolution, taxonomy, and biodiversity of Diptera, specialising in combined molecular and morphological phylogenetic analyses and monographic revisions of beeflies (Bombyliidae) and stiletto flies (Therevidae). She is also very keen in collaborating on other taxonomic groups, other flies and beetles especially, leading to the publication of 44 scientific peer-reviewed papers, 30 popular publications, and one book chapter.

Education and achievements

Chris completed a BSc at the University of Queensland in 1975, with majors in Entomology and Chemistry, while on a teaching scholarship. A Diploma of Education followed in 1976, with majors in Secondary Teaching of Biology, Chemistry, and Mathematics. She then taught Chemistry, Biology, Science, and Mathematics in Sydney and Brisbane from 1977 to 1984.

Chris became a professional artist completing detailed botanical and entomological studies (1986-1995) and achieving a Certificate of Visual Arts & Design (Graphic Design), Queensland College of Art (Brisbane), in 1994. She worked as a scientific illustrator as well as phylogenetic analyst for Dr. Valerie Davies, Queensland Museum (1992-2001); as a scientific illustrator of Asian fruit-flies for Drs Richard Drew and David Hancock, QDPI Entomology Long Pocket (1993), and Roger Broadley QDPI Nambour and the Australasian Biological Control Inc.; she also worked as an illustrator with Dan Papacek, Richard Llewellyn, James Altman, Andy Ryland and Jamie Seymour for the Good Bug Book (1994).

Working as a scientific illustrator and Research Assistant for Dr David Yeates, Department of Entomology, UQ (1995-1996) led into Chris's BSc Honours studies achieving First Class (1996), and then into her PhD (1997–2001) working on the systematics of Bombyliidae.

Chris moved to Canberra in 2001 with a Postdoctoral Fellowship to work at CSIRO Entomology (2001-2005) where she was funded by the American National Science Foundation (NSF), under the Partnerships Enhancing Expertise in Taxonomy (PEET) project to study Therevid flies. She was also funded by the NSF project FLYTREE, a part of the program on Assembling the Tree of Life (AToL), as Research Scientist to work on the morphological phylogeny for all Flies (2003-2013). She travelled widely to overseas



Stiletto fly, Mt Glorious BugCatch 2014 (Therevidae: *Nanexila gracilis* (Mann, 1928) Photo: C. Lambkin

institutions and conferences during her CSIRO years.

Chris returned to Brisbane in 2006 to an appointment at the Queensland Museum as Curator

of Entomology, a position that she still holds. During these years at QM, she has led the development of the successful Queensland Museum Backyard Explorer (BE) program that guides community to assess whether efforts to improve local biodiversity are successful. The BE team (currently Chris and Noel Starick, QM Entomology volunteer and CSIRO Entomology retiree) have presented 144 free workshops so far in 55 localities in Queensland to more than 4400 students, teachers, and community members across the State. This outstanding effort has led to the recent conferment of the Peter Doherty Science Education Partnership Award 2014.

Chris's "ESQ life"

Chris has had a long involvement with Entomology and the ESQ. Her mother tells a story about the crickets that were taken to bed in matchboxes at the age of 4. Nonetheless, Chris's first interaction with the ESQ was in 1969 at age 14, when she (as



Chris explaining the workings of a Malaise trap to UQ students. BugCatch Koala Bushlands 2012. Photo: K.Ebert

Christine Howard) won the Junior Section ESQsponsored prize at the Science Teachers Association of Queensland (STAQ) Queensland Science Contest for her project on the insects collected from her backyard in Mt Gravatt in Grade 9 while at Mt Gravatt High. The book prizes (Jacaranda Pocket Guides: Riek's 'Insects of Australia' and Common's 'Australian Butterflies' and 'Australian Moths'), were presented by Sir Vincent Wigglesworth following his address to the ESQ "The Nature of Insect Metamorphosis". Chris joined the society in April 1971 at 16, and has been a continuous member since. In the same year she won the Senior Section ESQ prize at the STAQ Queensland Science Contest for her project with Alan Genninges on the Black House Spider, 'Research on the venom of the Spider, Ixeuticus robustus' (now Badumna insignis), in Grade 11 while at Boonah State High. Her prize of a copy of the recently released 'Insects of Australia' was presented by Merv Bengston following her Notes & Exhibits presentation. The project, which

included chromatography, LD50 studies, and the development of an antivenin (for mice), and even the injection of venom into Chris's mother, also managed to win the major Courier Mail prize.

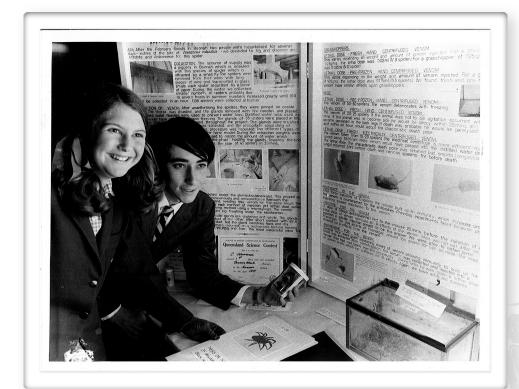
Chris was also the 1997 ESQ Student Award Winner for her Honours thesis, and in that occasion she gave a presentation to the Society titled 'Characters, Congruence, and Bee Flies (Diptera: Bombyliidae)'.

While completing her PhD studies between 1999 and 2001 at UQ Chris was an ESQ Councillor. Since returning to Brisbane from Canberra in 2006 she has been Junior Vice President (2007), President (2008), Senior Vice President (2009), Permit Officer (since 2010), ESQ representative for the Australian Entomological Society 'Myrmecia' bulletin (since April 2009) and BugCatch organiser (since 2007). In this last role, Chris has been organising ESQ excursions from 2007 to 2010 with Geoff Monteith and later with Kathy Ebert, for a

total of 14 events in several localities in the Greater Brisbane area.

In addition to these many and on-going activities that Chris is involved in or leading, she is also a very keen presenter for the Society. Over the years she has, in fact, given more than 24 talks, including the participation in many Notes & Exhibits events.

Nominated by
Federica Turco



Christine at 16, with Alan Genninges, when they won the Senior Section ESQ-sponsored prize at the Science Teachers Association of Queensland (STAQ) Queensland Science Contest.

Dr Max S. Moulds



Honorary Member Nomination

Born in Sydney in 1941, Max Moulds had a passionate interest in insects from boyhood, starting, as many children do, with an interest in butterflies. He trained as a teacher and taught primary school in Glen Innes, NSW from 1962-68. Recognising the lack of an Australian supplier where fellow collectors could get collecting gear, he founded Australian Entomological Supplies in 1962 and operated it as a mail-order business under his house, designing and building most of the butterfly nets and other gear himself. After quitting teaching in 1968, he moved back to Sydney and operated the business until 1972 when it passed to the present owners. Most insect nets used in Australia are designed by Max, and for those of us with an old one, he probably made it! To help amateurs he published many articles and booklets on collecting and preserving techniques.

Max collected widely in Australia and was the first serious collector into many remote parts of the tropics of Queensland, Northern Territory, Western Australia and Papua New Guinea. He was the first to spend wet season periods in Cape York Peninsula in the 1960-70s and led a famous canoeing/collecting trip 80km up the then uncharted Jardine River in 1978. Among his numerous discoveries was the extraordinary antlered fruit fly, *Phytalmia mouldsi* McAlpine & Scneider, 1978, with behaviour so bizarre that overseas scientists and film crews came to remote Iron Range to study it.

Wherever Max travelled he liaised closely with local amateur collectors and has done more than any other person to promote and encourage amateur entomologists in Australia. Recognising that a great impediment to amateur butterfly research was ignorance of the literature, he published a 239-page annotated bibliography of all Australian butterfly publications in 1977. This greatly facilitated butterfly research in Australia which saw an enormous flowering in years thereafter. In recognition of his contribution to amateur entomology, Max was awarded the Zoo Le Souëf Memorial Medal by the Victorian Entomological Society in 1985, giving an invited lecture on "Australian entomological research: the role of the amateur".

Max always believed that the end point of collecting was publishing of the results. He realised that the great network of enthusiastic amateur entomologists he encouraged had no professionally refereed journal available in Australia for publishing small papers. In 1972 he founded the *Australian Entomological Magazine* which he edited, printed and distributed for sixteen years from his home in Sydney. It gained an enthusiastic subscriber base of nearly 400 within a few years and published hundreds of small papers totaling 1550 pages in the next 16 years. In 1988, Max generously gifted the whole operation, including several thousand back

issues, to ESQ. This has become our flagship publication, now renamed and revamped as The Australian Entomologist, which earns us much prestige and allows us to service the needs of a subscriber-ship which is essentially a different group of entomologists from our normal membership. Max continues to publish regularly in the journal, often acts as referee and is always available for advice. He has recently passed on full copyright of the early issues he produced to ESQ so that we can digitise the entire back run of the journal and eventually earn income from them. Max's gifting of this journal to ESQ has added enormously to ESQ's prestige and scientific output. Max has been a member of ESQ for just over 50 years, and is also a member of every other insect society in Australia. Not having lived in southeast Queensland he has not had the opportunity to serve on Council, but has served on Council of the Entomological Society of New South Wales and the Linnean Society of New South Wales.

In 1990, having divested himself of his insect business interests, and at age 49, Max took his first employment in entomology as the Collection Manager of the largest insect collection in Australia outside the ANIC, viz. Sydney's Australian Museum. He undertook major reorganisation of that historic collection and also had opportunity to start serious research on Australian cicadas. He enrolled part-time at university and used his cicada work to earn an MSc from Macquarie University in 1995 and a PhD from Sydney University in 1999. His PhD introduced him to cutting-edge techniques of phylogenetic analysis and digital acoustics which propelled him to be a world leader in cicada research. This has included published collaborations with scientists from France, USA, Venezuela and invited field work in USA, Argentina and other countries.

Max retired in 2003 and moved to the Kuranda rainforest, needing four furniture van loads to

move his collection and enormous library (by far the largest private insect library in Australia) from Sydney. In Kuranda, his research has ramped up, with recent years being his most productive for publications. His life-total publications comprise an enviable 89 totalling 1644 pages, including two books one of which won the prestigious Whitley Medal. His early interest in butterflies (17 papers, 303 pages) and dragonflies (5 papers, 27 pages) has been supplanted by comprehensive work on cicadas (40 papers, 1064 pages) and a more recent interest in hawk moths (14 papers, 125 pages). At present he is putting finishing touches to his most ambitious work, a fully illustrated colour volume revising the ~85 hawk moths of Australia which will include full life histories from egg to pupa of every species. It is typical of the dedication of Max Moulds that, as I write these words, at age 74, he is driving his beat-up Toyota across Australia from Kuranda to Alice Springs in the hope that the desert rains will enable him to photograph larvae of one of the few rare species for which he does not have every stage already!

Max has been a force of nature in Australian entomology for almost sixty years, seamlessly transcending boundaries between amateur and professional entomology.

Nominated by





Queensland Entomology News

Dr John Kerr donates moth and butterfly collection to ANIC

Ted Edwards and Marianne Horak were in Brisbane recently to receive John Kerr's collection of moths and butterflies for lodgement in the ANIC Lepidoptera collection. Dr John Kerr is Emeritus Professor at the University of Queensland in Pathology and Adjunct Senior Principal Research Fellow at the Queensland Institute of Medical Research. His collection is one of the most comprehensive of Brisbane moth representatives.



John Kerr donates his moth collection to ANIC. L to R: Maureen Field (John's wife), Ted Edwards, John Kerr, Marianne Horak. Photo: Don Sands



While in Brisbane, Ted and Marianne did a bit of moth collecting with Don Sands at Smith's Scrub, Brookfield. Photo: Don Sands

UNESCO Award for Bernard and Loene Doube

Bernard Doube and his wife Loene received a UNESCO Adelaide Achievement Award from His Excellency the Honourable Hieu Van Le AO, Governor of South Australia, at a grand ceremony at Government House in Adelaide on 10 August. The award recognises the contribution their company Dung Beetle Solutions has made to sustainable agriculture and to public education about the benefits of encouraging dung beetles. They are well remembered in Queensland from the 1980s when Bernard worked with CSIRO Entomology at Rockhampton and Long Pocket in the introduction program for African dung beetles. We profiled Bernard's new book *Dung Down Under: Dung* Beetles for Australia in the March News Bulletin 43(1):16. You can see more about the work of Dung Beetle Solutions at

www.dungbeetlesolutions.com.au/



From left, Loene and Bernard Doube receive their UNESCO Award from the Governor of South Australia on August 10.



Announcements and Notices

Collecting opportunities

BugCatch 2015: 14-15 November

The Crohamhurst property was acquired in 2013 by Department of Environment and Heritage Protection as part of their koala habitat program and will become part of the Crohamhurst Forest Reserve. The property occupies just over 80 hectares and includes wooded and riparian areas, and open paddocks, and is located 15 km NW of Beerwah. The property was planted out with koala feed tree species last year. DHEP are hoping to gather baseline data on the area and have agreed to let us use the property on the weekend of 14-15 November for a BugCatch. The property has a house with 5 rooms setup as bedrooms (7 beds in total) and a granny flat. There are undercover areas and sheds which would support a number of people camping out. There is one shower and two toilets. There is a kitchen, BBQ and a fire pit (firewood provided). There are maintained tracks throughout the property however 4wds are recommended as clearance can be an issue.

More details will be forthcoming as they become available. Please contact Kathy Ebert to register your interest in this opportunity at k.ebert@uq.edu.au

UQ Insect Science Field trip: 10 October

Kathy Ebert is organising a field trip for the UQ Insect Science students to Gold Creek Reservoir at the end of Gold Creek Road in Brookfield on Saturday the 10th of October from 10am. We will be using the Moggill Creek Catchment Group's cottage on site as our base. The cottage has electricity, toilet & water.

We will start the day with introductory information and collecting demonstrations. After lunch, it will be free collecting time, and students are free to explore the area which has tracks through remnant vegetation including spotted gum, grey ironbark, narrow leaf ironbark (*E. crebra*) open forests, with open forest of brush box and tallowwood in gullies and exposed ridges as well as small areas with hoop pine vine forests, plus opportunities for aquatic collecting in the creek. At dusk, we will set up light traps.

While this event is separate from the BugCatch this year, ESQ members are welcomed and encouraged to join us to share your knowledge and expertise with these enthusiastic students.

If you are interested in attending, please contact Kathy Ebert at k.ebert@uq.edu.au
For more information about the area see: http://www.moggillcreek.org

South coast NSW BioBlitz is looking for someone to help survey invertebrates 4-5 Dec.

Atlas of Life in the Coastal Wilderness (ALCW) has organised three successful BioBlitzes in the south coast region of NSW. This year we will be planning a BioBlitz within the Wallagoot Catchment. The catchment is predominately forest or woodland with cleared land for agriculture. Wallagoot Lake itself is an ICOLL - with high vulnerability as it has the lowest opening frequency on the South coast. It has seagrass beds and small areas of saltmarsh. There are large areas protected in the Bournda National Park and Bournda Nature Reserve as well as Bega Local Aboriginal Land Council land and property in private ownership. There are several endangered ecological communities: River-flat Eucalypt Forest on Coastal Floodplains, Freshwater Wetlands on Coastal Floodplains, Bangalay Sand Forest, Swamp Oak Floodplain forest and Coastal Saltmarsh. One aspect that we feel is missing is invertebrate based surveys. If you are interested in helping out please contact:

Patrick Tegart at 0449162594 or pd.tegart@gmail.com



Diary Dates for 2015

Meetings held on the second Tuesday of the respective month

MARCH 10	Bill Palmer	AGM and Presidential Address: "Weed Biological Control in Queensland - Down Memory Lane"
APRIL 14	Geoff Monteith	"Australian Native Dung Beetles"
MAY 12	Penny Mills & Yen-Po (Paul) Lin	"The Apiomorpha minor species group (Hemiptera: Coccoidea: Eriococcidae)" AND "Cryptic diversity in the parthenogenetic pest, Parasaissetia nigra (Nietner, 1861) (Hemiptera: Coccidae) and its implications for biosecurity"
JUNE 9	Notes and Exhibits	Student Award Presentation/ Notes & Exhibits
AUGUST 11	Valerie Debuse	"Investigating the drivers of longicorn and cossid wood borers in subtropical plantations in Queensland and New South Wales"
SEPTEMBER 8	Max Moulds	"Museum dungeons to mountain tops: 50 years of entomological adventures"
OCTOBER 13	Mark Schutze	"Tephritid taxonomy: new solutions for old problems"
NOVEMBER 10	David Yeates	Perkins Memorial Lecture: "New phylogenomic perspectives on insect evolution from transcriptome sequencing"
DECEMBER 8	Notes & Exhibits	Notes and Exhibits/Christmas BBQ

SOCIETY SUBSCRIPTION RATES

GENERAL Person who has full membership privileges \$30pa

JOINT Residents in the same household who share \$36pa

a copy of the *News Bulletin*, but each otherwise have full membership privileges.

STUDENT Student membership conveys full \$18pa

membership privileges at a reduced rate. Students and others at the discretion of the

Society Council.

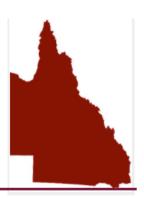
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Entomological Society of Queensland



NOTICE OF NEXT MEETING

Tuesday, October 13th, 2015, 1:00 pm

<u>_____</u>

Guest Speaker:

Dr Mark Schutze

Research Fellow at the Queensland University of Technology, School of Earth, Environmental & Biological Sciences

will present

Tephritid taxonomy: new solutions for old problems

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

More venue details available at http://www.esq.org.au/events.html

ALL WELCOME!

Next News Bulletin:

Volume 43, Issue 7 (October 2015)

CONTRIBUTIONS WELCOME

DEADLINE - Wednesday, October 21st, 2015.

Send your news/stories/notices to the editor at: k.ebert@uq.edu.au