



June 2026

Issue

No. 646

CIRCULAR OF THE ENTOMOLOGICAL SOCIETY OF NEW SOUTH WALES Inc

Hello Members,

This edition includes the Minutes of the society meeting held on 24 June 2025 together with P&L documents for calendar year 2025. The 73rd Annual General Meeting of the society was held via video call on 24 June 2026.

In the February Tarsus we posted a call-out from Eleanor Drinkwater from Western Sydney University asking for assistance with their bogong moth study. Recently I came across a very interesting online article [Of Moths and Marsupials](#) published by Biographic (A North American online newsletter) detailing the relationship between bogong moths and the mountain pygmy possum in the Australian high country – well worth a read and a watch.

Our online lecture series organised by Nigel Andrew continues on 17 July with James Cook from Western Sydney University speaking on “**Harnessing native insect pollinators for glasshouse strawberry production**”. See details later. Members are reminded that past seminar topics are available on the society website (under [Publications](#)).

Once again, we can ensure that each edition of Tarsus is of maximum interest to members if we have members contributing articles or simple observations and photos.

Kind Regards

Garry Webb

Circular editor

Next Online Seminar Series (17 July 11am)

Seminar title: Harnessing native insect pollinators for glasshouse strawberry production

Horticultural crops are increasingly grown in polytunnels or glasshouses, which partly or fully exclude wild pollinators. However, in many crops, pollination is key to good fruit quality, so glasshouse pollination must be actively managed. Honeybees, the usual suspects, are a poor option in glasshouses, so we have been testing native bees and flies as managed pollinators of glasshouse strawberries at the National Vegetable Protected Cropping Centre in Richmond, NSW. We used a series of controlled experiments where individual flowers were allocated to one of three main treatments: 1) open (insect) pollination, 2) hand pollination, 3) no pollination (bagged control). In some cases, we also compared outcomes from controlled numbers of insect visits per flower. Overall, we found that two stingless bee species, a hoverfly and a blow fly all increased fruit size and quality substantially in comparison with controls, despite interesting behavioural differences. In addition, there is a general difference in approach when using stingless bees or flies. The flies can be purchased as pupae and applied to the crop as a one-off “treatment”, whereas hive bees are valuable perennial livestock whose health also needs to be managed. Notably, stingless bee colonies decreased in weight and activity within a few weeks when kept in a strawberry monoculture, but we were able to maintain or increase colony weight and activity by providing additional (non-crop) floral resources.

Speaker

James Cook is a Professor in Entomology at the Hawkesbury Institute for the Environment at Western Sydney University. He has lived in the UK, Kenya and Australia and has a lifelong passion for natural history. His major academic interest is in the wide range of interactions between plants and insect pollinators. Currently, his research team focuses on insect pollinators and the services that they provide to both horticultural crops and wild plants, with a particular emphasis on the role of native bees and flies in orchards and protected cropping.

Minutes of the 72nd Annual General Meeting

of The Entomological Society of New South Wales inc. page 1 of 3;

Hosted online via zoom by Prof Nigel Andrew Southern Cross University Lismore on 24th June 2025

Opened: 6:00 pm

Attendance: Nigel Andrew (Host & President), Dinah Hales (AES Rep), Robin Parsons (Treasurer), Stephen Fellenberg (Councillor), Robin Gunning (Journal Editor), Barbara May Councillor), Bernie Dominiak ((Councillor), Graeme Smith (Web Mngr), Mark Stevens (Vice Pres) and members; William Arnold, David Flumm, Duong Nguyen and Nicholas Farr.

Non-member/visitor: None.

All members present or represented were financial and the quorum met.

Apologies: Khalid Ahmad, Garry Webb, Mary-Lynne Taylor, Murray Fletcher, Thomas Hedde (Prof. Andrew verbally advised of Thomas's move to SA and termination of Ent Soc membership & Council duties).

Minutes of the 71st AGM of 2024: were presented for acceptance as a true record by Robin Parsons and the motion was accepted by all in attendance as a true record of proceedings. Motion carried to accept incomplete version pending full version (subsequently) completed, verified by attendees, and certified by the President on the 18 July 2025.

71st Report of the Council for Hon. Secretary; Treasurer on behalf of the Secretary advised that; Westpac Bank Administration/ Signatories details were updated at the Rockdale branch on the 28 March 2025 by Robin and Khalid. For further details please refer to other reports.

71st Report of Hon. Treasurer/Public Officer; Cash book Reconciliation and near completion of reports was advised at the meeting with Copies of Cash Book Reconciliation and Financial Statements and /membership statistics for year ended 31 December 2024 subsequently submitted to President and Council attendees for approval which was given via email on 30 June 2025. The Total Society Funds at 31 December 2024 was \$22,990.16 with \$12,000.00 held in a term deposit.

Supply of G&AE volume 52 to Private Subscribers is pending.

71st Report of AES Representative – Dinah Hales: Presented her January 2025 Myrmecia report for the Australian Entomological Society (AES). Nigel was prompted to advise that the TTP for 2025 would be based on applicants' Honours Thesis or similar document/project.

71st Reports from Editors/Business Manager: Editor verbally reported G&AE volume 53 is open with only two papers entered so far. Circular Editor (not present) has commented that more contributions from members are needed. Business Manager not present but Treasurer reported that accounting/invoice/receipts functions for Private Subscribers to volume 51 have been completed with work for volume 52 (2024) pending with Treasurer.

Page 1 of 3

Election of the Council for 2025: (NB: No written nominations received)

NB: Prof Nigel Andrew took on the role of interim President between August 2024 and this AGM in June 2025, following the passing of the incumbent (2024) President Mr Bob Ryan.

POSITION	NOMINEE	NOMINATED by	SECONDED by
Hon. President	Prof. Nigel Andrew	Dinah	Robin P
Hon. Vice President	Dr. Mark Stevens	Nigel	Robin P
Hon. Secretary	Khalid Ahmad	Robin P	Nigel
Hon. Treasurer	Robin Parsons	Stephen	Graeme
Hon. Business Manager	Left Vacant - Role Review pending	Robin P	All
Hon. (Journal) Editor	Dr Robin Gunning	Robin P	Stephen
Hon. Public Officer	Robin Parsons	Barbara	Stephen
Hon. Circular Editor	Garry Webb	Robin	Nigel
Hon. Councillors (x4)	Bernie Dominiak	Robin P	Nigel
	Barbara May	Robin P	Nigel
	Stephen Fellenberg	Robin P	Nigel
	4 th -Vacant	None	N/A
Website Manager	Dr Graeme Smith	Robin P	All
Representative for Australian Entomological Society (Myrmecia)	Dr Dinah Hales	Robin P	All

Westpac Bank Operating Rules; Retention/Addition/Removal of & Rule changes for; Administrators & Signatories as per separate detailed and endorsed Certificate for submission to Westpac Bank, post AGM.

Council approved: Retention of Mr Robin Parsons and Mr Khalid Ahmad, as Administrators & Signatories for all three Society accounts; and Rule changes as per Westpac Bank- Certificate of Administrators & Signatories for The Entomological Society of New South Wales Inc. (NB: The results of this motion are to be included in the minutes and published in Tarsus But the separate certificate is not to be placed in Tarsus, and issued to the Bank.

A Certificate (prepared by the Treasurer) is usually signed by the incoming President & Treasurer, post AGM and sent to the Bank; however, as the arrangements above were completed by Ent Soc NSW and provided to and certified by the Bank on 28 March 2025 (copy presented to Council and retained by Treasurer, Ent Soc NSW) no further certificate has been prepared for this AGM.

A Reviewing certificate for the Bank should be prepared Post 73rd AGM in 2026.

General Business:

- **The Annual Dinner for 2025:** Members to be consulted (by Robin P.) and venue at The Epping Club to be referred to Mary-Lynne Taylor for advice, booking & details.
- **Show and Tell:** Foam produced by Orchid Beetles (Dinah); members could be 'Co-Opted into roles; Consider outsourcing Council duties to "Member Jungle" (Robin P); Fire Ant Baiting -Toowoomba (Nigel); New drawings required-NB Copyright; Web site on-line application needs review to reduce workload; Quiz questions required (Dinah). Stephen now in Guyra and has encouraged two new membership applications.
- **Next AGM (73rd):** tentative for Wed, 11 March 2026 6:45 pm. Treasurer/Secretary to initiate.

Closed: 7:18pm NB: Council's General Meeting postponed, Treasurer noting that current Council items requiring attention would be attended to via email by Councillors and /or sub-committee members, as required.

This document assembled on 09 June 2026 from R Parsons' AGM notes;

by Robin Parsons; Treasurer Signed as a True and valid Record:  ; _19_/_06_/_2026_

Verified as a True and Accurate Record by,

Prof Nigel Andrew, Hon. President: _____/_____/_____

Page 3 of 3

ENTOMOLOGICAL SOCIETY of NSW INC

CASH BOOK & LIABILITY DISSECTIONS FOR PREVIOUS YEAR END 2024 & CURRENT YEAR ENDING 31 Dec 2025

PRIOR YEAR ENDED 31 DECEMBER 2024		CURRENT YEAR ENDED 31 DECEMBER 2025	
Cash book balance: General Fund	9142.78	Cash book balance: General Fund	7288.61
: Publication Fund	1847.38	: Publication Fund	1295.22
:Term deposit	12000.00	:Term deposit	12000.00
: PAYPAL Account	0.00	: PAYPAL Account	0.00
Cash (sub total) (22990.16)	0.00	Cash (sub total) (20583.83)	0.00
Plus Non cash Assets: Journal Stock 100% deprec'n / Recovery @0.20 to vol47 + Pro-rata Depreciated Vols 48 to 52	2780.00	Plus Non cash Assets: Journal Stock 100% deprec'n / Recovery @0.20 to vol48 + Pro-rata Depreciated Vols 49 to 53	1720.00
: Member Subscription arrears receivable at 31/12/2024	465.00	: Member Subscription arrears receivable at 31/12/2025	1210.00
: Accounts Receivable Journal vol52=170.00/Royalties arrears 2024= 120.94	290.94	: Accounts Receivable Journal vol52=530.00/Royalties arrears 2025=198.43	728.43
: Advances (floats) to be recovered	0.00	: Advances (floats) to be recovered	0.00
Less Liabilities: Member Subscriptions paid in Advance (>2025)	0.00	Less Liabilities: Member Subscriptions in advance (>2025)	0.00
: Unpresented cheques (0) +Contras/expenses prior year/paid this year (0)	0.00	: Unpresented cheques (0)+Contras/expenses prior year/paid this year(0) +Unidentified payer; Subs Concessional 2025 (-20.00)	-20.00
Formula Count	26526.10	Formula Count	24222.26
Accumulated Funds balance at 31 December 2024	26526.10	Accumulated Funds balance at 31 December 2025	24222.26

Verification of Variation

Funds current year end 2025 \$24222.26

Less Funds balance prior year end 2024 \$26526.10

= 12 month variation to Dec 2025 **-\$2303.84**

Cash Balance current year end 2025 \$20583.83

Less Cash Balance prior year end 2024 \$22990.16

12 month variation to Dec 2025 **-\$2406.33**

Prepared and certified by: Mr Robin Parsons, 19 June 2026

Hon. Treasurer;



Examined & verified by Council: sgnd/dated;

Name(s) Prof. Nigel Andrew

Title: Hon. President

THE ENTOMOLOGICAL SOCIETY OF NSW INC

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31 DECEMBER 2025

GENERAL FUND (& PAYPAL Account) – INCOME

Subscriptions pd 2025 (+Tarsus advert fee \$240+PayPal cr prior fee 2.06)	2,225.00	
Plus Subs pd in advance of 2025 in prior year	00.00	
Less Subs paid in advance of 2026*	00.00	
Subscriptions Receivable @ YE2025 (1,220 – 10.00 overpayments cf to 2026)	1,210.00	
Less previous year Subs Receivable arrears	-465.00	
Bank interest (Term Deposit int only)	530.36	
Donations /Misc: Unidentified payee Subs 13/05/25	-20.00	3,480.36
- PAYMENTS		
TTP Prizes 2024 (paid Feb 2025)	-1,250.00	
Public Liability & Accident Insurance 28 Jun 2025 to 28 Jun 2026	-1,248.07	
Website hosting-Aptley- 2025	-158.40	
Website Domain renewal Aptley-2024 to 2025 (Paid in 2024) or Upgrades (nil)	0.00	
Transfers to Publication Fund (Nil) or Term Dep Apr24 (12K)	0.00	
DFT Incorporation Annual lodgement fee 2025	-57.00	
Stationary & Postage;(NIL) or Copyright Charges (1,894.00)	-1,894.00	
PAYPAL Account Receipt & Transfer fees	-2.06	
Misc- other	0.00	-4,609.53
Result for 2025		-1,129.17

PUBLICATION FUND - INCOME

Journal Income Received-royalties 443.85+Page Charges Nil+Priv Subs Nil	443.85	
Jnl Accts Receivable; Informit Royalties 2025 198.43+Priv Subvol51-52 530.00	728.43	
Less Journal Income Accounts Receivable Credited prior year 2024	-290.94	
Bank Interest	0.00	
Members' payment (G/F) to Publication Fund; None made.	0.00	
Closing Journal Stock 31 Dec 2025 (20%pa deprec'n + Recovery @0.20 to vol48)	1,720.00	
Advances to be Recovered	0.00	2,601.34
LESS: PF Expenses = Costs of Journal		
Opening Journal Stock 01 Jan 2025	-2,780.00	
Postage & Stationary Vol 52+53 pending	-300.00	
Editorial Software; Adobe AcrobatPro Licence to Oct 2024 not being claimed.	-0.00	
Printing Costs (Arrowprint) Journal Vol 52 published December 2024	-696.01	
Advances o/s	-0.00	-3,776.01
Result for 2025		-1,174.67

BALANCE SHEET AS AT 31 DECEMBER 2025

ACCUMULATED FUNDS: Balance to 31 December 2024		26,526.10
Results for the year 2025	General Fund	-1,129.17
	Publication Fund	-1,174.67
	Term Deposit	0.00
Balance to 31 December 2025		24,222.26
REPRESENTED BY: Cash at Bank	General Fund/PayPal	7,288.61
	Publication Fund	1,295.22
	Term Deposit	12,000.00
Journal Stock-Committee's valuation		1,720.00
Debtors; Members Subscription arrears to 2025		1,210.00
Accounts Receivable (Journal Payment arrears)		728.43
Advances to be recovered		0.00
Less CURRENT LIABILITIES Members Subscriptions in advance (>2025)*		0.00
Unidentified sub payer (1), Contras/expenses Prior year/paid this yr (0)		-20.00
Total Assets at 31 December 2025		24,222.26
Prepared & reconciled by Mr Robin Parsons; Hon. Treasurer 17 June 2026; sgn 		

New Entomological Research

(**Right Click** on the titles (or **CTRL Right Click**) to see the full articles)

[Australia has already spent over \\$100 million dealing with Varroa mite. Here's what we can do next](#)

The honeybee mite, *Varroa destructor*, finally breached Australia's biosecurity defences four years ago, and is here to stay. Even more concerning, our standard treatments – such as specialised pesticides – are already failing. What does this mean for Australians, and what can we do about it? Roughly the size of a pinhead, the parasitic mite is regarded as the most destructive pest of honeybees worldwide. It feeds on bees, weakening colonies and causing their collapse. For decades, Australia was the only continent free of the mite. That changed in 2022, when Varroa was detected in sentinel hives at the Port of Newcastle, New South Wales. An ambitious eradication campaign was launched, but abandoned by 2023. Today, Varroa is established across much of Australia's eastern and southern states. The focus has shifted from eradication to management, and we now face a new threat – treatment-resistant mites.

[Most bees are solitary and don't live in hives. Climate change risks them starving](#)

When we think of bees, we often think of flowers. The more flowers the better, right? Well, not exactly. Like us, bees need to consume specific nutrients in suitable amounts and combinations. So, the mere presence of flowers doesn't necessarily mean the bees are getting nutritionally adequate food. This matters because climate change is altering both the quantity and nutritional composition of pollen and nectar. At the same time, what nutrition the bees need is likely shifting, too. This creates rapidly moving goalposts – it's increasingly difficult for bees to find and consume the right nutrients they need to reproduce, develop and survive. In our new paper published in Current Opinion in Insect Science, we argue these changes are unlikely to affect all bees equally. Currently, most of what we know about bee nutrition comes from highly social species such as honeybees or bumblebees. Yet most bees, including many native Australian species, are solitary or communal (group living but with no queens and workers). They might experience the nutritional landscape and nutritional stress in very different ways. Understanding these differences is crucial for predicting which bees are most vulnerable under climate change.

[World's Largest Island Rodent Eradication Sparks Remarkable Invertebrate Comeback](#)

The biggest winners from Lord Howe Island's ambitious rodent eradication program may be some of its smallest residents. A new study has revealed a surge in insects and other invertebrates after invasive rats and mice were removed from the island, offering a rare glimpse into how ecosystems respond when a long-standing predator is eliminated. The research, led jointly by the NSW Department of Climate Change, Energy, the Environment and Water and University of Sydney PhD candidate Maxim Adams, investigated changes in invertebrate communities following the eradication of black rats and house mice in 2019. Researchers found that overall invertebrate abundance increased

Scientists Discovered a Fly That Sheds Its Wings and Sacrifices Its Sight

After establishing themselves on a host, deer keds appear to redirect resources away from maintaining highly sensitive vision. Scientists believe this may help conserve energy for functions that become more important once the flies stop flying and begin living as parasites. Dr. Roger Santer from the Department of Life Sciences at Aberystwyth University, who led the study, said: "Vision plays a vital role in animal behavior, but it is also energetically expensive. Evolution favors sensory systems that are efficiently matched to an animal's way of life. Some blood-feeding flies rely heavily on vision, while others live permanently on hosts and have little need for it. Deer keds are especially interesting because they switch between these two lifestyles."

Butterflies That Eat Pollen May Hold Clues to Extreme Longevity

Evolution is all over the place in terms of lifespans, which range from the duration of a quick phone call to animals that may be older than recorded history. Mayflies live for just 5 minutes; Greenland sharks are older than most countries; glass sponges may predate widespread agriculture, and amputated bits of sea cucumber (yes, the animal that 'rents' its anus as an apartment for fish) appear to remain active indefinitely. Now, researchers have just revealed an incredible variation in the lifespans of closely related butterflies, including a species that lives 25 times longer than others of its kin.

Scientists Reveal Why Mosquitoes Bite Some People More Than Others

Ever felt like mosquitoes bite you while ignoring everyone else? Scientists are now making progress in deciphering the complex chemical cocktail that makes particular people more enticing to these disease-spreading bloodsuckers. "It's not a misconception – mosquitoes are attracted to some people more than others," Frederic Simard of France's Institute of Research for Development told AFP. "But we are not all magnets all the time," the medical entomologist added. A range of sensory cues can cause mosquitoes to pick one human over another – mainly the smell and heat our bodies give off, and the carbon dioxide we exhale.

I don't want to kill the spiders, ants and other bugs in my house. What should I do instead?

We've all been there: just as you're about to fall asleep, you notice a huntsman spider on the ceiling. Or you walk into your kitchen and find a long trail of ants snaking into your pantry. Given there are an estimated 10 quintillion individual insects alive on Earth at any one time, it's no surprise they sometimes find their way into our homes. In fact, the average Australian shares their home with around 100 different insect and spider species. But the reality is most of these tiny housemates won't hurt us, and you really don't need to kill them. In fact, many perform helpful jobs such as catching flies and mosquitoes, or tidying up crumbs. So, what can you do instead?

Scientists Finally Discover How Venus Flytraps Snap Shut So Fast

To succeed in a hunt, a predator often needs to be faster than its prey. Plants are not known for their speed. Even so, one plant has evolved a snappy survival strategy that lets it feast on insects and arachnids that, by most measures, should be safe from its clutches.

We're talking, of course, about the famous Venus flytrap ([*Dionaea muscipula*](#)) – a plant that lures prey into a leafy trap, then snaps shut around the unfortunate victim, holding it fast while the plant digests at its leisure. Scientists have long puzzled over the mechanism that allows this plant to move faster than plants should be able to. Now, a team of researchers led by physicist Jeongeun Ryu of the French National Center of Scientific Research (CNRS) say they have identified the trigger.

Scientists Identify The World's Biggest Known Scorpion, The Size of a Dog

If you were wandering around Earth's floodplains 415 million years ago, you wouldn't have come across any other mammals – but you would have had to be wary of a giant scorpion measuring more than a meter (3.3 feet) in length. After an extensive new fossil study, researchers in the UK have confirmed the identity of *Praearcturus gigas*, which may be the largest known scorpion in history. Fossils of the arthropod were first discovered in 1870 in the UK, but there's been a debate ever since about exactly what kind of creature it was. With the help of a variety of advanced imaging techniques, the researchers say the debate is now settled. Besides confirming that we've got a huge scorpion here, the research teaches us more about the early history of life on land, back when it was covered with small plants and fungi, and when animals first began emerging from the oceans.

Scientists Discover Strange New Spider Species That Disguises Itself as a Fungus

Scientists have discovered a new spider species in Ecuador's Amazon rainforest that uses an unprecedented form of mimicry. Deep in Ecuador's Amazon rainforest, researchers encountered what appeared to be an ordinary mushroom clinging to the underside of a leaf. On closer inspection, however, the strange growth revealed itself to be something far more unexpected: a previously unknown species of spider. The discovery has unveiled a form of mimicry never before documented in spiders. An international team of scientists, including researchers from the Leibniz Institute for the Analysis of Biodiversity Change (LIB), found the new species and published their findings in the journal *Zootaxa*. The study provides a rare glimpse into the evolution of deception in nature and highlights how many of the Amazon's species remain undiscovered.

Ever seen a cave cricket? Australia now has three new species of these spindly, spider-like creatures

When you picture a cave, you probably think of an environment devoid of life. But for most caves on Earth, this couldn't be further from the truth. Caves are remarkably good at supporting life. Underground air temperature and humidity levels are usually consistent. For vulnerable species unable to tolerate fluctuations above ground, caves are a haven. This is why ecologists think of caves as evolutionary time capsules. They preserve troglodfauna – small animals living mostly or entirely within caves – that might have otherwise died out during ancient climate change events. Australian caves are home to many such species, ranging from blind fishes, to blind eels, and even blind wasps. Perhaps the weirdest are cave crickets. Cave crickets are spindly, spider-like insects very different to your average backyard cricket. They can't chirp and are flightless. Because they can't travel long distances, all of Australia's species are endemic – that is, they're found nowhere else. When the pioneering entomologist Aola Richards retired in the 1980s, it was thought Australia only harboured 23 cave cricket species and knowledge of these creatures languished. But in our recent research, we found three new species – with more to come.

One was named to honour Richards, and another uses Gundungurra language in a first for Western scientific naming.

Wasp Colonies Explode Into Violence After Losing Their Queen

The loss of a queen triggers intense battles for power among female wasps, disrupting the colony's social structure. Surprisingly, other wasps avoid the fighting and keep the colony functioning by taking care of its most important daily tasks. What happens when a queen suddenly disappears from a wasp colony? According to new research led by University College London (UCL), the answer is far from orderly. Instead of a smooth transition of power, the loss of a queen can trigger fierce competition, widespread conflict, and the breakdown of normal social relationships. Yet despite the turmoil, colonies often continue functioning thanks to a group of wasps that quietly take on extra work behind the scenes. The findings were published in the journal *Animal Behaviour*.

This Plant Summons Wasps When Under Attack, And We Finally Know How

If your carefully tended crop of beans ever comes under attack from caterpillars, you should know it's not totally helpless. In fact, a cavalry of caterpillar-munching wasps may already be on their way. Bean plants have a remarkable ability to summon wasps from thin air when caterpillars attack, and now, scientists have figured out exactly how they do it. Humans have cultivated the common bean plant species, *Phaseolus vulgaris*, to give us much-loved varieties such as kidney beans, black beans, pinto beans, navy beans, and more. If you've grown beans in your garden or kept them in your pantry, odds are, they were a variety of *P. vulgaris*.

Scientists Stunned by Hybrid California Bees That Beat Deadly Mites

California scientists discovered hybrid honeybees that may naturally repel one of the deadliest parasites threatening pollinators. Southern California is home to an unusual type of honeybee that may help researchers better understand how to protect struggling pollinators. Across the United States, commercial honeybee colonies are collapsing under pressure from deadly parasites, but this locally adapted hybrid bee population appears far better at surviving the threat. Beekeepers in the U.S. reported losing up to 62% of their managed honeybee colonies in 2025, a trend that could have major consequences for agriculture and food production. Several factors are contributing to the losses, including pesticides, climate stress, shrinking habitats, and parasites. Among the most dangerous is the Varroa mite.

Scientists Warn Many Insects May Not Survive a Warming World

A sweeping study of tropical insects found that many species may struggle to survive rising global temperatures. Scientists warn that heat stress could threaten vast numbers of insects in regions like the Amazon, potentially disrupting entire ecosystems. "Current evaluations of the heat tolerance of insects such as moths, flies, and beetles paint a differentiated – and at the same time alarming – picture," says study author Dr. Kim Holzmann, a researcher at the Chair of Animal Ecology and Tropical Biology at Julius-Maximilians-Universität Würzburg (JMU). The new research found that insects do not automatically adjust to hotter environments as temperatures rise. "While species at higher

altitudes can increase their heat tolerance, at least in the short term, many lowland species largely lack this ability,” Holzmann explains.

[This Is What Makes You Irresistible to Mosquitoes](#)

Mosquitoes aren’t chasing each other—they’re all drawn to the same invisible signals that lead straight to you. After observing hundreds of mosquitoes circling a human subject and analyzing roughly 20 million data points, researchers from Georgia Tech and the Massachusetts Institute of Technology developed a mathematical model that predicts how female mosquitoes locate and approach people to feed. This work provides the first detailed visualization of mosquito flight behavior and offers measurable insights that could improve trapping and control methods. Mosquitoes are more than just a nuisance. They spread diseases such as malaria, yellow fever, and Zika, which together lead to more than 700,000 deaths each year. The team also created an [interactive public website](#) that allows users to explore mosquito movement and behavior.

[Honeybees may be helping spread tree-killing myrtle rust](#)

We know introduced honeybees as the ever-busy helpers of our gardens, farms and orchards. In pollinating crops and fertilising fruit, they support more than a third of the food we eat and are worth billions of dollars to New Zealand’s economy. But they could also be unwittingly helping one of the worst natural threats facing Aotearoa’s native forests: myrtle rust. By collecting spores as food, then carrying them from plant to plant, honeybees may be under-appreciated vectors of this recently-arrived fungal disease. Our recently published research adds further weight to this idea, challenging the assumption that myrtle rust spreads mainly by wind alone.

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<u>SOCIETY POSTAL ADDRESS</u>	<u>MEMBERSHIP FEES 2022</u>
C/- ENTOMOLOGY DEPARTMENT	ORDINARY MEMBERS \$50 (\$45 if paid by next AGM)
THE AUSTRALIAN MUSEUM	COMPANY ASSOCIATES \$60
1 WILLIAM STREET	STUDENT MEMBERS \$25 (\$20 if paid by next AGM)
SYDNEY NSW 2010	CORPORATE MEMBERS \$150

OFFICERS (elected AGM 2025)

HON PRESIDENT	Professor Nigel Andrew
HON VICE PRESIDENT	Dr Mark Stevens
HON SECRETARY	Mr Khalid Ahmad
HON TREASURER	Mr Robin Parsons
HON EDITOR	Dr Robin Gunning
HON BUSINESS MANAGER	Vacant
HON CIRCULAR EDITOR(s)	Mr Garry Webb
COUNCILLORS	Dr Bernie Dominiak
	Mr Stephen Fellenberg
	Mrs Barbara May
	Vacant

Non-council positions

AUSTRALIAN ENTOMOLOGICAL SOCIETY CORRESPONDENT	Dr Dinah Hales
PUBLIC OFFICER	Mr Robin Parsons
WEB PAGE MANAGER	Dr Graeme Smith

GENERAL and APPLIED ENTOMOLOGY (G&AE)

**Page charges are not levied on contributions to the Journal
where at least one author is a member of the Society
Preprints of all papers will be made available to members on the website
ahead of the printed version
(at the moment excluding taxonomic papers)**

Please send any manuscripts to Robin Gunning (rgunning@bigpond.com)
as soon as possible

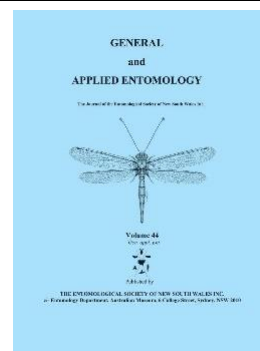
Articles, from volumes 23 & 27 to 53 are freely available from the
Society's website. Members can access new preprint articles from Volume 54.

(www.entsocnsw.org.au)

All articles from volumes 10 to 52 as well as the most recent complete issue (Volume 53) can
also be purchased on-line from Informit for just a few dollars each at

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Volumes 28 on-wards (1997 to vols > 5 years old) at \$15 each **plus** postage. Volumes **under**
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