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Dinah Hales has provided an interesting article on “Entomology in unusual places”. It just goes to show that things of entomological interest may be just under our noses.

Bernie Dominiak provided a snapshot of Robert Ryans bibliography from Google Scholar. He tells me he badgered Bob to put together a Google Scholar profile for some time prior to his passing. Bob did indeed compile what he remembered of his publications over the years. In researching his work and validating the list we realised that a few things were missing from this bibliography. So, after much searching, the list has been expanded. It may still not be complete, particularly in the early days of his career. I guess we can blame Bob for this edition of Tarsus being delayed!

It's not often that entomologists get recognised for their work, other than by other entomologists. However, in the recent round of Australia day honours Dr Lawrence Mound was awarded an AO (Officer of the Order of Australia) for distinguished service to scientific research into the identification and biology of plant feeding insects. Congratulations.

We encourage all members to consider that the society, Tarsus and the journal GAE rely heavily on the contributions of members. We need your input to not only populate the society endeavours but to also encourage others to contribute and become members.

Kind Regards

Garry Webb

Thomas Heddle

Circular editors

Entomology in Unexpected Places

Dinah Hales

On three outings in the last week, I came on entomological content in unexpected contexts. We went to the Art Gallery of NSW to see the Magritte exhibition. On the way out, we ducked into the major gallery housing classical Australian works. That's the one on your right as you come in. A little way along the wall on your left, you may see a small screen playing a scene of a forest with balletic dancing figures representing insects, mainly butterflies. Into this happy scene comes a man in a checked tweed suit, carrying a butterfly net, stereotypical amateur entomologist of the time. Needless to say, he catches and pins a butterfly (not, I hasten to say, one of the dancing figures). I leave to your imagination what the sequel is. The film is one of a group of three, produced in 1906 by the Pathé company in Paris. The films were shot in black and white and hand-coloured, frame by frame, by a group of painters who were mainly women. I can't find a link to this on the Gallery's website, so you will have to see it yourself.

When you've watched the film, look behind you in to a glass display case and you'll see two pieces representing cicadas, a vase and a carved wooden box. The box was designed as a handkerchief box, and is square, with a deeply carved top showing four cicadas surrounded by gumleaves. It was carved by Gertrude King in about 1914. There's a picture at <https://www.artgallery.nsw.gov.au/collection/works/?q=cicada+box> but to see it properly you need to look from above. The cicada vase is a squat shape in black with a ring of cicadas, this time with their wings open. It was painted by **Delia Cadden** in about 1917 and you can see at <https://www.artgallery.nsw.gov.au/collection/works/2197/>. There are two other cicada vases, one a fine tall Art Nouveau example by Edith Bell-Brown painted in 1914. See it at <https://www.artgallery.nsw.gov.au/collection/works/2201/>. The other is another squat black vase painted by Harry Lindeman in 1922. I find this one less attractive - it does not present the cicadas as cicadas, but more in the angular Art Deco style. And the cicadas' legs come out of their abdomens. See <https://www.artgallery.nsw.gov.au/collection/works/2189/>. The latter two vases are not on display at present.

Then on Saturday we went to a concert in St James's Church, King Street. I found myself sitting under a memorial tablet to Sir Alexander Macleay. He's the one whose collection was the original basis of the Macleay Museum, now part of the Chau Chuk Wing Museum at University of Sydney. All three entomological Macleays (Alexander, William Sharp, William John) have memorials in St James's. I didn't run about looking for them all, or take photos, but I found a photo of Alexander's memorial on line - look for **Alexander Macleay: Facts for Kids**. In looking for the photo I came on an extensive history of the Macleays in the Linnean Society journal by J. J. Fletcher. And a 47 page presidential address, likewise by J.J. Fletcher. The Macleays are an example of entomology running in families, but Murray Fletcher assured me he is not related to J.J. Fletcher.

The third occurrence was in the library of UTS. This was a pre-arranged event, celebrating champion embroiderer Vita Cochran from Aotearoa New Zealand, who has been embellishing the surfaces of chairs, cubicles and ceilings with beautiful embroidered moths.

Free tickets, free food and drinks and a moth search in the darkened reaches of the library. There are 24 embroidered moths altogether but I think I only found about half of them. My granddaughters (one of them already interested in moths) had been there before but were still keen for the moth hunt and the paper moth-making activity.



The green one is from Aotearoa New Zealand, and is known as the pepetuna (*Aenetus virescens*). It has a wing span of 15 cm, does not feed as an adult and in fact has no mouth. The grey moth is the Australian *Speiredonia spectans*, identified from the embroidered specimen by an Australian Museum entomologist! And the brightly coloured collection of paper moths results from the efforts of the public, young and old. The moths are a permanent feature of the library on floors 7, 8, 9 of UTS Building 2 on Broadway and you can visit and do your own search. Better when there aren't too many students leaning on the moths. What wonderful skills and a brilliant creative idea, with the support of the University. Vita mentioned the many positive responses she'd had from students while installing the moths.

Photos are by DFH and the images of embroidered moths are reproduced with permission from Vita Cochran. Identifications are as they appear in the printed handout.

As a postscript, the virtual reality experience associated with the Macchu Picchu exhibition at the Australian Museum includes occasional unlikely-looking butterflies.

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New Entomological Research

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

[‘Recipe for a national disaster’: Big problem could spread across Australia](#)

A notorious pest which could cause up to six deaths per year and spark a “national disaster” has spread across state borders from Queensland to New South Wales, prompting urgent calls from experts. Red important fire ants, an aggressive invasive species, were detected in northern NSW this month after travelling in turf delivered from Southeast Queensland. The ants were reported by a landscaping contractor installing pallets of turf at a private property in Clunes, near Byron Bay, on Thursday, November 13. The NSW Department of Primary Industries said the site would be treated to ensure that the area is free from ants, while the turf supplier and landscape contractor have been served individual biosecurity directions to stop the movement of lawn materials. The National Fire Ant Eradication Program (NFAEP) – which aims to eradicate the pest from Australia by 2032 – and the Queensland-based lawn turf supplier are further investigating why the ants were detected despite appropriate documentation being supplied that certified the turf was treated before transport. Fire ants, derived initially from South America, have been found at every capital city port in Australia, except Tasmania. They currently infest about 830,000 hectares in Southeast Queensland, close to the NSW border.

[Ants Hold Grudges: New Study Reveals Insects Learn From Negative Experiences](#)

Ants are capable of learning from experience, as demonstrated by a team of evolutionary biologists from the [University of Freiburg](#). The research was led by Dr. Volker Nehring, a research associate in the Evolutionary Biology and Animal Ecology group, alongside doctoral student Mélanie Bey. In the study, ants were repeatedly exposed to competitors from different nests. The ants remembered these interactions and adjusted their behavior accordingly. When they encountered ants from a nest previously associated with aggression, they responded with increased aggression. In contrast, ants that had only met passive individuals from another nest showed less aggressive behavior. These findings highlight ants’ ability to adapt their responses based on past experiences. The study was published in the journal *Current Biology*.

[Mozzies may be carrying Japanese encephalitis this summer. Here’s what to know if you’re spending time outdoors](#)

A Victorian man is reportedly in a critical condition in hospital after contracting Japanese encephalitis from a mosquito bite. This news comes after both Victoria and New South Wales issued public health alerts in recent weeks warning about the virus. So what is Japanese encephalitis, and how can you protect yourself and your family if you live, work or are holidaying in mosquito-prone regions this summer? Relative to other parts of the world, Australia has traditionally been very low risk for potentially life-threatening mosquito-borne diseases. There’s no widespread dengue, yellow fever or malaria. But there are still many viruses that local mosquitoes can spread. About 5,000 cases of mosquito-borne disease are reported in Australia each year. The vast majority of these are due to Ross River virus. The disease this virus causes is not fatal, though it can be severely debilitating.

[How Zika Virus Turns Brain Proteins Into Hidden Weapons](#)

The mosquito-borne Zika virus is infamous for causing microcephaly, a birth defect where abnormal brain development leads to an unusually small head. A recent study published today (January 13) in *mBio* reveals that Zika exploits a host protein called ANKLE2 — critical for brain development — to enhance its own reproduction. Unlike most related viruses, Zika can cross the placenta, leading to potentially devastating effects during pregnancy.

“It’s a case of Zika being in the wrong place at the wrong time,” explained Priya Shah, associate professor in the departments of Microbiology and Molecular Genetics and of Chemical Engineering at the University of California, Davis and senior author on the paper.

[Warning to Aussies over garden threat in 'plague proportions': 'Millions of them'](#)

A tiny beetle is causing a massive problem throughout one Aussie state, destroying thriving orchards and gardens in a matter of hours and leaving residents heartbroken.

The monolepta beetle, also known as the red-shouldered leaf beetle, is moving in “plague proportions” down the NSW Central Coast, Hunter Valley and Sydney regions, invading backyards as far south as Camden in Sydney’s south-west. Horticulturalist Tim Pickles, who owns Tim’s Garden Centre in Campbelltown, told Yahoo News he’d never seen them before in his 40 years in the area. “They’re in plague proportions, you can’t believe how many there are. There’s thousands, as soon as you bump them they all fly into the air and then they settle again and start eating again,” he said.

[From acidic arrows to social shields: exploring the complex venoms of Formicine ants](#)

In a recent comprehensive review, “Acid Reign: Formicine Ants and their Venoms,” Lukas Koch, Timo Niedermeyer and Simon Tragust assemble an extensive body of research to spotlight a surprisingly intricate and versatile weapon: the formicine ant’s venom. Long recognized for their potent sprays of formic acid, formicine ants stand apart from other ant subfamilies with their ability to forego stinging, instead relying on a specialized acidopore for chemical defense. This review delves deeply into the chemistry, morphology, and ecological importance of formicine venoms. Although these venoms have captured scientific curiosity for centuries, dating back to the earliest isolation of formic acid in the 17th century, many questions remain. How do these ants biosynthesize and store corrosive formic acid safely within their own bodies? And how do these volatile secretions, often considered simple defensive toxins, come to serve an array of sophisticated roles, including sanitation, communication, and even countering the toxins of rival species (Fig. 1)

[13 animals named after celebrities, from pop royalty to kings](#)

Somewhere between 15,000 and 18,000 new species of plants and animals are discovered every year, and consequently, need to be named. Although many are bestowed very mundane and descriptive names, others are given more flashy monikers. Scientists often turn to their favourite icons from popular culture, or else ones that relate to some interesting aspect of the species - its colour, pattern, or behaviour. As well as being fun, there are some very good reasons for doing this. It can be a very effective way of bringing much-needed attention to endangered or threatened species, the media coverage bringing awareness to their plight. Here is a list of some of the more interesting and humorous examples.

[The caterpillars that can kill you](#)

When you think of venomous animals, caterpillars probably aren't the first thing that comes to mind. Snakes, of course. Scorpions and spiders, too. But caterpillars? Yes, indeed. The world turns out to be home to hundreds — perhaps thousands — of species of venomous caterpillars, and at least a few of them pack a punch toxic enough to kill or permanently injure a person. That alone is reason for scientists to study them. But caterpillars also contain a potential windfall of medically useful compounds within their toxic secretions. “Will we get to the stage where we'll be taking things from their venoms that are useful? Definitely,” says Andrew Walker, an evolutionary biologist and biochemist at the University of Queensland, Australia. “But there's a lot of foundational work to do first.”

[While you sleep, these insects are working hard on the night shift to keep our environment healthy](#)

As night falls over Australia's forests, grasslands and backyards, the hidden world of nocturnal insects stirs to life. In many ecosystems, overall insect activity actually peaks at night, especially in warmer regions of the world. These nighttime creatures play essential roles in ecosystems, providing services such as pollination, waste decomposition, and pest control. Here are some of the remarkable insects that come out after dark – and why they matter.

[Aussie property owners called to action over 'world's worst' invasive threat](#)

Authorities are calling on property owners impacted by a concerning invasive species spreading across Australia to do the right thing amid concerns that a program to stop the spread has been put in jeopardy by those refusing treatments. Residents who live in fire ant hotspots along specific areas in southeast Queensland can be visited up to six times in two years to get eradication treatment on their properties, but those carrying out the work have recently reported they have been threatened and "intimidated". The Invasive Species Council (ISC) believes there has been misinformation spreading about the treatment, sparking fear that it impacts public health and the health of their pets. However, the treatment — which involves a bait that renders the queens infertile — has been approved by the Australian Pesticides and Veterinary Medicines Authority (APVMA) and has the least impact on wildlife and the environment. Disinformation about the treatment has been branded "dangerous". "Fire ant treatments are scientifically proven to be non-toxic to humans, animals, including cats and dogs, and the environment when used as directed," ISC Advocacy Manager Reece Pianta said.

[Conspiracy groups link to anti fire ant eradication campaign](#)

A right-wing conspiracy group pressuring councils to change fluoridation water treatment policies is using its network to spread claims that threaten the effectiveness of the fire ant eradication program. The group MyPlace has taken interest in views by campaigner Trevor Hold, who criticises how s-methoprene and pyriproxyfen insecticides were being used in “an irresponsible and excessive distribution” that risked the health of people and animals. While environment management advocates fear some residents in exclusion zones were refusing access to their properties, undermining the program, Mr Hold said they deserved alternative options. Mr Hold moderates a Facebook group of 6000 members protesting the program, and while not a member has spoken at localised MyPlace meetings and had concerns published in the group's latest monthly newsletter. His six-month campaign aims to “attack the science.

[Could Fire Ants Be Linked to This Mysterious Eye Condition in Dogs and Cats?](#)

A new study identifies Florida spot keratopathy (FSK) as a stable, benign eye condition in pets and suggests a possible link to little fire ant exposure. Analyzing 100 cases, it also highlights previously unrecognized signs of eye irritation. A recent study from the Koret School of Veterinary Medicine at Hebrew University provides new insights into Florida spot keratopathy (FSK), an eye condition affecting both dogs and cats. Led by Dr. Oren Pe'er and published in *Veterinary Ophthalmology*, the research examined 100 cases diagnosed between 2021 and 2024. FSK is marked by the appearance of round, white spots on the cornea, the transparent front part of the eye. These spots do not take up fluorescein dye, a diagnostic tool used to detect corneal damage. While the lesions typically remain stable over time, they may cause temporary irritation in some cases.

[Tiny splendid peacock spiders have the fastest known jump among their kin](#)

Jumping spiders – one of the largest spider families – get their name from the extraordinary jumps they make to hunt prey, to navigate and also to evade predators. Male jumping spiders also jump to escape from cannibalistic females and competing males. So they are under tremendous pressure to jump efficiently and rapidly. We studied the jumping abilities of miniature male and female Australian peacock spiders. We found that the males – incredibly light creatures, weighing just 2 milligrams – have the highest acceleration among any known jumping spider. Our study is the first to explore and identify differences in how male and female jumping spiders undertake their impressive jumps. It's now published in the *Journal of Experimental Biology*.

[How a Tiny Insect Outsmarts Antarctica's Brutal Cold](#)

Most people picture penguins when they think of Antarctic wildlife, but the continent is also home to a remarkable insect — the Antarctic midge (*Belgica antarctica*). This flightless midge is the only known insect native to Antarctica, surviving one of the harshest climates on Earth. Scientists believe its ability to withstand extreme cold could offer valuable insights into fields like cryopreservation. However, much about this tiny survivor remains a mystery. An international research team, led by Osaka Metropolitan University, has recently uncovered one of these mysteries. Professor Shin G. Goto and Dr. Mizuki Yoshida, who conducted the research as a graduate student and is now a postdoctoral researcher at Ohio State University, discovered how the midge adapts to the seasons throughout its two-year life cycle. Their findings show that it employs two different dormancy strategies: quiescence in its first year and obligate diapause in its second.

[Aussie gardener defeats 'major pest' and lawn killer: 'Crawling with them'](#)

Australia is home to thousands of invasive species, many of which thrive here in incredible numbers after being imported from the northern hemisphere. While many of these threats arrived shortly after European colonisation, some invaded as recently as the 2020s. Such was the case for the fall armyworm, which is now regarded as one of the nation's most destructive agricultural pests. It thrives in Australia due to its strong migratory ability — with moths capable of travelling hundreds of kilometres on prevailing winds — and its ability to feed on a wide range of crops and weeds, giving it a continuous food supply. This week a Western Australian gardener from Perth shared her experience removing fall armyworm from her yard. She said her lawn "died" in just a "few days" after the pests arrived, but she didn't notice because she had been working late.

[A Tiny Brain Tweak Sparks Rapid Evolution in Butterfly Romance](#)

A small neural change can significantly influence male butterflies' mating preferences, driving rapid behavioral evolution, according to a study by Nicholas VanKuren, Nathan Buerkle, and colleagues at the University of Chicago. Their findings, published today (March 11) in *PLOS Biology*, provide new insights into the sensory and genetic mechanisms behind butterfly mate selection. *Heliconius* butterflies are known for their strikingly diverse wing patterns and colors, which serve as a warning to predators. Since wing coloration is crucial for survival, male butterflies have evolved a preference for females with matching wing colors. However, the sensory and neurological processes shaping these preferences have remained largely unclear.

[Where Have All the Butterflies Gone? "Shocking" Nationwide Decline Sparks Alarm](#)

Butterfly populations in the U.S. declined by 22% from 2000 to 2020, with 13 times as many species declining as increasing. Butterflies are disappearing in the United States. All kinds of them. With a speed scientists call alarming, and they are sounding an alarm. A sweeping new study published in *Science* tallies butterfly data from more than 76,000 surveys across the continental United States for the first time. The results: between 2000 and 2020, total butterfly abundance declined by 22% across the 554 species counted. In other words, for every five butterflies in the contiguous U.S. in the year 2000, only four remained in 2020. "Action must be taken," said Elise Zipkin, a Red Cedar Distinguished Professor of quantitative ecology at Michigan State University and a co-author of the paper. "To lose 22 percent of butterflies across the continental U.S. in just two decades is distressing and shows a clear need for broad-scale conservation interventions."

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