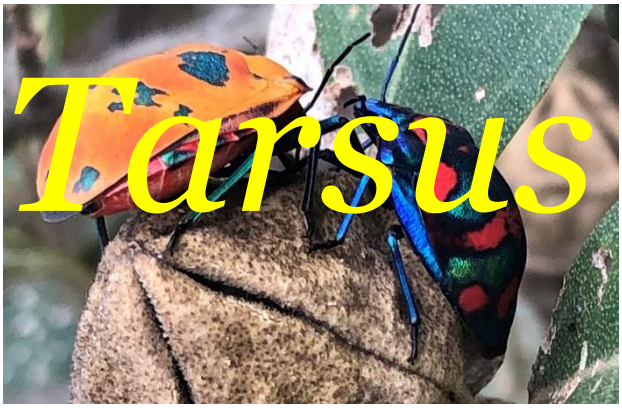

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CIRCULAR OF THE ENTOMOLOGICAL SOCIETY OF NEW SOUTH WALES Inc

Hello Members,

Unfortunately, the cupboard is a little bare again this edition. Remember, we survive on the enthusiasm of members providing input into Tarsus and General and Applied Entomology. We rely on members sharing their stories, entomological or otherwise.

This edition has some interesting hyperlinks to entomological stories on the net.

Kind Regards

Garry Webb

Circular editor

New Entomological Research

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

Scientists Are Finding New Species Faster Than Ever

Scientists are discovering new species faster than ever, revealing that Earth holds far more life than we once imagined. The accelerating pace of discovery suggests millions of species may still be waiting to be found. About three centuries ago, Swedish naturalist Carl Linnaeus launched an ambitious effort to identify and name all living organisms on Earth. He later became known as the father of modern taxonomy after creating the binomial naming system and formally describing more than 10,000 plant and animal species. Scientists have carried that work forward ever since, steadily expanding the known catalog of life on our planet. New findings from a University of Arizona-led study published in Science Advances show that this effort is now moving faster than ever. Researchers report that scientists are identifying more than 16,000 new species every year. There is no indication that this pace is slowing, and the study suggests that biodiversity within groups such as plants, fungi, arachnids, fishes and amphibians is far greater than previously assumed.

Aussie homeowner's 'living hell' bug invasion sparks fears

An Aussie homeowner has shared a wild video of a total bug takeover, leading others to wonder when it will be heading their way. A Reddit user based in Central New South Wales has taken to the forum this week, sharing a clip of the outside of their home. "Anyone else receive guests last night?" they asked. In the video, you can see thousands of small bugs flying around the user's porch – like mosquitoes to a bug zapper. Except, these little guys aren't mosquitoes at all. "It was hard to capture on video just how many there were … Bloody Rutherglen bugs. Might beat out the mozzie for 'Worst Bug'," they said. "Bad enough they swarm; they can also seemingly squeeze through any gap, are tough to kill, and like to bite. I hate them. The house is full of them. I'm stressed."

Worrying health warning ahead of summer

Aussies have been warned to take extra care this summer after two mosquito-borne viruses were detected in Victoria and NSW in the past week. Health experts issued a warning to residents in Victoria after Japanese encephalitis was detected in a mosquito trap in Horsham. This is the first recorded report of the mosquito-borne virus for the 2025-2026 season. "Anyone can be bitten by mosquitoes, but people living, working or spending time outdoors in northern Victoria – especially near rivers – may be at higher risk," Victorian chief health officer Caroline McElnay said. Since the first detection, the virus has been identified in NSW, with authorities confirming 60 local government areas were now considered higher risk of the potentially-deadly disease. Another mosquito-borne virus, Kunjin, was detected in Cowra in Western NSW on November 20 during a routine health check through a sentinel chicken blood sample.

Young Ants Beg For Death When Sick

Sick young ants release a smell to tell worker ants to destroy them to protect the colony from infection, scientists said Tuesday, adding that queens do not seem to commit this act of self-sacrifice. Many animals conceal illness for social reasons. For example, sick humans are known to risk infecting others so they can still go to the office – or the pub. Ant colonies, however, act as one "super-organism" which works to ensure the survival of all, similar to how infected cells in our bodies send out a "find-me and eat-me" signal, according to an Austria-led team of scientists. Ant nests are a "perfect place for a disease outbreak to occur because there are thousands of ants crawling over each other," Erika Dawson, a behavioural ecologist at the Institute of Science and Technology Austria and lead author of a new study, told AFP. When adult worker ants get an illness that could spread through the colony, they leave the nest to die alone.

NZ now has a narrow window to stop the Asian yellow-legged hornet

The first Asian yellow-legged hornets observed in Auckland in winter were two old and slow males. Many people were concerned and worried. Now, at the end of spring, what we've seen is a potential nightmare. Over recent weeks, the Ministry for Primary Industries (MPI) response team has discovered around two dozen spring queens and small nests across the suburb of Glenfield. Unless New Zealand rapidly scales up its search effort, we could soon be confronting an incursion far tougher and costlier to stamp out. Or worse, we could end up with this pest as a permanent resident. Overseas, nest densities can exceed 12 per square kilometre. These nests can produce as many as 500 new queens in autumn.
If our current incursion stemmed from a single nest that produced hundreds of queens, the two dozen queens and small nests detected this spring may be only a small fraction of what is actually out there. An incursion of such a scale would spell particular trouble for our honey bees, which can make up as much as 70% of this hornet's diet. In parts of Europe where the species has established itself, they have wiped out 30% to 80% of hives.

Nature's weirdest defenders: From blood-shooting lizards to slime-spewing fish

Nature isn't just red in tooth and claw – sometimes it's downright bizarre. Across the animal kingdom, evolution has equipped creatures with an astonishing armoury of unconventional, often outrageous defence strategies. Some wrap themselves in mucus sleeping bags, others weaponise their own skeletons or bodily fluids – and a few simply out-slime anything that dares take a bite.

$16,690 fine warning to Aussies caught 'obstructing' major battle against deadly threat

Queensland's war on invasive fire ants is ramping up — but some residents continue pushing back against officers entering their properties to carry out treatments.
Homeowners and tenants across Queensland are being reminded of the steep penalties in place for refusing access to their properties, as authorities work to contain the spread of one of the country's worst noxious pests — the fire ant. Fire ants are a major biosecurity threat that can decimate crops, kill livestock and cause potentially deadly allergic reactions

to Australians. But as crews drastically ramp up efforts to contain the notorious species, some have expressed outrage over the "forcible" access to their properties to lay baits. Across the state, division remains among the public between those calling for tougher action and others who cite what they believe as the harmful environmental impacts of treatment and privacy concerns. Last week, Yahoo reported on the issue as outspoken residents hit out online.

Bali tourists warned after Aussie traveller's painful discovery

A woman's run-in with a tiny beetle while on holiday has left her with painful rashes and blisters weeks later. Gabrielle Vanessa was travelling from Canggu to Nusa Dua, south Bali, on November 8 when she was noticed a red rash growing on her right thigh before she felt a "stabbing pain". While the pain subsided the next day, the Adelaide mother then noticed a series of large red blisters develop on the rash. Almost a fortnight later, Vanessa still has what she says "looks like burn patches" — on her legs. "I have patches of red and brown pigmentation appearing on different parts of my body and some spots are still spreading, so it's definitely not completely over yet," she told 7NEWS.com.au.

A Parasite Tricks Ants Into Killing Their Own Queen

While animal mothers are known to sometimes dispatch of their young, very few animals will kill their own mother: the care she gives is just too valuable. But it turns out some ants can be tricked into matricide, killing their own queen, and scientists have captured the chilling coup on video. This insurrection is orchestrated by an outsider ant – a parasitic queen from either the *Lasius orientalis* or *L. umbratus* species, who sneaks into a colony of *L. flavus* or *L. japonicus* ants before wreaking havoc. "Ants live in the world of odors," says corresponding author and behavioral ecologist Keizo Takasuka of Kyushu University in Japan. "Before infiltrating the nest, the parasitic queen stealthily acquires the colony's odor on her body from workers walking outside so that she is not recognized as the enemy."

Scientists Have Finally Figured Out Why Bee Colonies Overthrow Their Queens

New research reveals how viral infections in queen bees disturb colony stability and pinpoints a specific pheromone that may help preserve unity and productivity within hives. It may sound like the plot of a medieval drama: a once-powerful ruler, weakened by illness, is overthrown by her own followers. In honey bee colonies, however, such dramatic power shifts are real—and they happen frequently, carrying both benefits and risks for the bees and the ecosystems that rely on them. The process, known as supersedure, occurs when the thousands of worker bees in a colony detect that their queen is no longer laying enough eggs. In response, they work together to replace her with a younger, healthier queen. While this adaptation helps wild colonies survive, it can disrupt managed hives, creating pauses in egg-laying, smaller colony populations, and ultimately lower honey and pollination yields.

We Can Now Track Individual Monarch Butterflies. It's a Revelation.

For the first time, scientists are tracking the migration of monarch butterflies across much of North America, actively monitoring individual insects on journeys from as far away as Ontario all the way to their overwintering colonies in central Mexico. This long-sought achievement could provide crucial insights into the poorly understood life cycles of hundreds of species of butterflies, bees and other flying insects at a time when many are in steep decline. The breakthrough is the result of a tiny solar-powered radio tag that weighs just 60 milligrams and sells for $200. Researchers have tagged more than 400 monarchs this year and are now following their journeys on a cellphone app created by the New Jersey-based company that makes the tags, Cellular Tracking Technologies.

He chases her, impresses her with his dancing and then taps her body to assess her breeding condition.

Singing is well studied in fruit flies, where it's key to courtship. A male first catches a female's attention with pheromones, then chases her, sways his body and then taps her to assess her breeding condition. Singing is well studied in fruit flies, where it's key to courtship. A male first catches a female's attention with pheromones, then chases her, sways his body and then taps her to assess her breeding condition. A female will take her time appraising the male's vocal efforts, while he watches avidly for signs of approval, fine-tuning his song if needed. If she likes what she hears, she will pause near the male, leading him to grab her quickly with his forelegs.

El Niño Is Driving Insect Declines In Tropics

AsianScientist (Oct. 15, 2025) – Arthropods such as insects and spiders play a critical role in ecosystems. Though small in size, they carry out crucial ecosystem functions like decomposition and pollination, while serving as a food source for larger animals. However, global arthropod populations may be under threat. Studies have found evidence of arthropod biodiversity declining in temperate regions, though tropical regions remain understudied. In a recent study published in *Nature*, an international team of researchers have discovered the trend extends to the tropics as well. Led by ecologists from the School of Biological Sciences (SBS) from Hong Kong University (HKU), the researchers conducted a time-series analysis, drawing on data from previous studies in tropical rainforests across the Americas and Southeast Asia. The team combined data from nine tropical rainforest sites untouched by commercial human activity to model the changes in arthropod diversity over time.

I discovered a new Australian native bee, but there are still hundreds we need to identify

The female of the species has devil-like black horns, and a taste for extremely rare pollen. But until now, this Australian native bee has never been officially named or identified. My discovery of *Megachile (Hackeriapis) lucifer*, underscores the lack of knowledge and investment in Australia's unique native bees. Whilst considerable funding and attention has been focused on the introduced European honey bee, *Apis mellifera*, there are still

hundreds of native bees that are yet to be identified and named. This fascinating new megachile (or leaf cutter) bee was first discovered while on a surveying trip in the Bremer Ranges in the goldfields region of Western Australia in 2019. I was conducting surveys for pollinators – such as bees, other insects, flies and wasps – of a critically endangered plant called Bremer marianthus, or *Marianthus aquilonaris*, which is only known in this region.

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