PUBLISHED BY THE NATIONAL INSTITUTE OF ENTOMOLOGY

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NATIONAL INSTITUTE of ENTOMOLOGY NEWS



The National Institute of Entomology

The official newsletter of the National Institute of Entomology

Volume 2: Issue 11 November 2026

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FROM THE CHAIRMAN



Hello everyone.

Welcome to the final edition of the National Institute of Entomology Newsletter for 2026.

We still cant believe just how quickly this year went but some major milestones were achieved during this year and they deserve recognition.

First and foremost was the acquisition of the Kilmore Town Hall building as our permanent home for the institute.

After 6 years of searching, we finally succeeded in our search and things can only get bigger and better now that we're established.

The next important event was the successful delivery of the 2026 National Insect Expo.

We were worried that our workload was going to be too much with the relocation to the new building as well as all the required planning in order to make the expo one to remember.

With the dedicated team we have, all went well and went off without a glitch.

In other developments, the Institute was donated the huge and impressive butterfly collections of Raymond Bell (dec) by the Bell family.

Totaling close to 5000 or more specimens, this collection represents virtually every known species of Victorian Butterfly with a good possibility of new species to be found in the mix.

We are grateful to the Bell Family in trusting to the Institute the permanent and long term care of this valuable legacy thanks to Raymond Bell.

With the Holiday Season soon upon us, I and all the team of volunteers here at the Institute would like to wish you all a safe and happy Christmas and New Year and we will see you all again in 2027!!!

Merry Christmas to all.



Dr Bert Candusio

New Institute Research

The National Institute of Entomology has granted a permanent working lab space to Ms Jeni Kalowsky for her project on the native bee *Amegilla albiceps* and *Amyema* mistletoe associations.

Jeni will be working on the native Australian mistletoe species Amyema miquelii and looking at gathering habitat and ecological data with the assistance of a team of volunteers. What makes this study interesting is the fact that the study areas are located within the Mitchell Shire district around Broadford.

The fact that the Institute is close by will a great bonus for Jeni and her team.

All specimens collected during the project will be deposited with the Institute as a permanent record of collected species.



'You Belong with Me:' Taylor Swift has a new genus of bug named after her

You may have heard her songs, seen her videos, maybe even attended one of her concerts … but have you seen the new genus of Australian plant bugs named after Taylor Swift?

Scientists at the University of California, Riverside recently described a new genus of plant bugs, they've named Swiftiephylus, in honor of the Grammy-winning U.S. singer. The genus contains 12 new species of plant bugs. Four of the insects are named after Taylor Swift or her albums: Swiftiephylus taylorae, Swiftiephylus amator, swiftiephylus intrepidus, and Swiftiephylus poetorum. The first is a Latinized version of Taylor; the others are references to her albums "Lover," "Fearless" and "The Tortured Poets Department."

The authors write that the insects were named after Taylor Swift, "in recognition of her show-stopping talent, heart-wrenching lyrics, and the joy and comfort she has brought to many. The term 'Swifitie' refers to Swift's loving fanbase," the study notes.

Study author and "Swiftie" Sarah Schroeder said in a press release that she named the insects after Taylor Swift's appearance.

"Taylor Swift's iconic look is her blonde hair and red lips. These insects are pale yellow with accents of red throughout," Schroeder said. "In the paper I refer to them as blonde."



Banner image: *Of Swiftiephylus taylorae. Image courtesy of Sarah Schroeder/UC Riverside.*

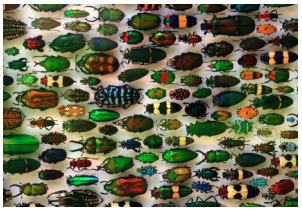
If we don't start counting insect populations, we won't know what we're losing

Insects are in steep decline from habitat loss, pesticides, invasive species, and a destabilizing climate, but it's also hard to quantify what happens after disturbances like the floods we've seen lately — unless we begin counting them, a new op-ed argues.

The scant research done on this has shown steep declines of up to 93% after flooding events, and this has a huge effect on everything that depends on insects, from plants to grazing animals.

"To measure what a flood takes from an insect community, you need to know what was there first," the author writes. "This is a solvable problem." A six-year study tracking insect communities across the Dalälven River floodplains in Sweden found the same pattern: nine of 18 insect taxa showed lower emergence during flood weeks, none showed higher, and the losses were never fully recovered between events. Each flood left the community a little poorer than before.

From South America, a 20-year data set from a subtropical floodplain tells the same story across every major insect order — dragonflies, mayflies, caddisflies, true bugs — a long, slow decline driven in part by hydrological instability.



Australian Entomological Supplies is a family-owned business that has been supplying entomologists, educators and enthusiasts alike with quality scientific equipment, supplies and books since 1962.

AES proudly manufactures some of the finest entomological equipment available worldwide, right here in Australia.

They are situated in the Northern Rivers of New South Wales, from where they can supply products throughout Australia and the rest of the world.

If you have any entomological equipment needs, they can most certainly meet your requirements!

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Ancient Insect Diets

A new research from Professor Lisa-Marie Shillito in our Archaeology Department is highlighting how insects have been part of human diets for thousands of years despite seeming unusual to many people.

The study explores how evidence of insect consumption could help reshape attitudes towards alternative protein sources. Evidence from archaeological sites across the world shows that insects have long provided an important source of food.

Researchers have identified insect remains in ancient preserved human waste, traces on cooking equipment and tools, and evidence of insect harvesting and storage.

In the United States, for example, archaeological discoveries reveal that people ate grasshoppers, beetles and other insects thousands of years ago.

Evidence from Australia also shows that moths were cooked and ground into food around 2,000 years ago.

Today, insects remain part of traditional diets in many parts of Africa, Asia and Latin America, including grasshoppers in Uganda and Mexico.

The research suggests that insects have been overlooked in some accounts of ancient diets, partly because their remains do not always survive as well as animal bones and pottery. Cultural attitudes have also influenced which foods are considered acceptable. In Western societies, insects are often associated with disgust, despite evidence of their long history as food.



Parasites Turn Insects and Rodents Into Zombies

Some parasites and fungi can alter the behavior of a living host in ways that benefit the parasite. They do not bring the dead back to life. Instead, they interfere with biological systems that control movement, motivation and decision-making.

The best-known example of a parasite changing its host's behavior is the "zombie ant" fungus , Ophiocordyceps, which helped inspire "The Last of Us."

The life cycle of the zombie ant fungus begins when fungal spores land on an ant. The spores stick to the ant's outer surface and eventually break through it, allowing the fungus to enter the body. Once inside, the fungus grows and spreads while the ant is still alive. The infection can develop over several weeks before the most dramatic changes in the ant's behavior begin. Eventually, the infected ant leaves the colony and begins wandering and climbing vegetation.

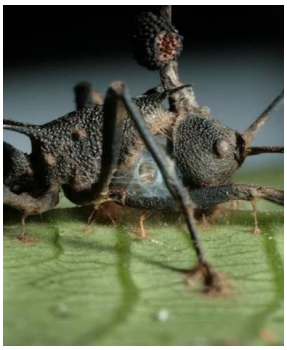
This behavior moves the ant away from its normal habitat and into a location that favors fungal reproduction and dispersal. Near the end of the infection, the ant bites tightly onto a leaf, twig or other plant surface and remains attached in what researchers call a death grip . After the ant dies, the fungus consumes the remaining tissues and produces a stalk from the ant's body. This structure releases spores that can fall on other ants below and begin the cycle again.

Cont...

How does the fungus make the ant do this? You might imagine fungal cells invading the ant's brain and taking control. Surprisingly, researchers examining infected ants before death found extensive fungal growth throughout the body and around muscle fibers , but not inside the brain. Fungal cells can form networks around the ant's muscles, suggesting that the ability to manipulate behavior may involve communication between the fungus and multiple host tissues rather than direct control of the brain.

The death grip provides an especially striking example of how the fungus can manipulate its host's muscles. The jaw muscles of infected ants are heavily colonized by the fungus , showing signs of extreme contraction. There are also signs that the fungus may be releasing molecules near these tissues. Yet motor neurons and connections between nerves and muscles can remain intact. Together, these findings suggest that the fungus may alter the machinery controlling muscle contraction rather than simply destroying it.

Scientists still do not know exactly what causes ants to undergo the entire sequence of wandering, climbing and biting. While researchers have identified fungal genes associated with proteins, toxins and other compounds that could affect chemical signaling in the host, many of these possible mechanisms have not yet been proved.



The cadaver of a zombie ant clings to a leaf in the tropical understory. Emerging from its head are spores of the parasitic fungus that killed it. Credit: David Hughes

Special Mini Exhibition in the Planning Stage

The National Institute of Entomology is currently planning and preparing for a Special Mini Exhibit at the RSL Memorial Hall situated next to the Institute.

This will be the first of perhaps 3 mini exhibitions throughout the year and will assist the Institute greatly in providing an extra funding opportunity that will spread our income sources over a longer period during the year.

The exhibit will be know as 'BUTTERFLIES OF VICTORIA - OUR FLYING TREASURES' and will feature the entire Bell Collection of Victorian butterflies covering all known Victorian Species of this particular group of insects.

Our secretary, Kylie McGenniskin has been working around the clock assessing, sorting and preparing the specimens for public display and what she has prepared is something truly wondrous.

This will be a fantastic opportunity for members of the public to visually see the local, regional and state wide biodiversity of butterflies that once existed and how this can be easily lost through habitat destruction and development.

Preparing for the exhibit will be relatively easy due to the venues next door location.

The exhibit is planned to run January 15 -16 - and 17 of 2027.







Some of the spectacular specimens to be put on show in early 2027

Support Needed For Our Go Fund Me

The National Institute of Entomology has begun a Go Fund Me campaign for essential equipment that will be required at the new facility once we settle in.

The new site, situated at 16 Sydney Street, Kilmore Victoria, will require up to 30 research grade microscopes for use by students undertaking specific in house courses with the Institute.

Although there are cheaper models that are manufactured in China, the optical quality of these instruments is not to the standard required.

The institute will be looking at acquiring used but good quality Olympus SZ40 or SZ 60 Models with trinocular configurations to allow the attachment of imaging instruments to be added at a later stage.

Please consider supporting this important fundraising effort for our future students.

https://gofund.me/376dd5d55





Two of the Models of the Olympus SZ40 that will be required for institute students. 30 of these units will be needed.

Institute Membership

Becoming a Member of the National Institute of Entomology offers several benefits such as:

1: Discounts to Members wishing to undertake our Courses and Training Programs.

2: Access to our facilities if you are wishing to work on your own Research or Study Project.

3: Members are offered the opportunity to serve on a variety of Organizing Committees and Sub Committees.

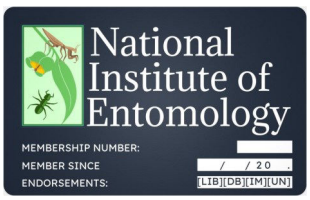
4: As a Member of the National Institute of Entomology, you receive our Monthly Newsletter keeping you updated on Institute News.

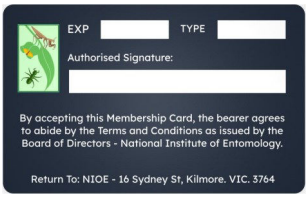
5: You are granted access to the Institutes extensive Forums covering Taxonomy/News/Job Vacancies and Volunteer Opportunities.

6: Discounted Members Tickets to the annual National Insect Expo.

To become a Member of the National Institute of Entomology, please visit our

Membership Page for further details and Membership Options or call the Institute on 03 7038 9452.





C.V.R.I.C Specimen Spotlight

C.V.R.I.C Specimen:00514

HYMENOPTERA / Formicidae

Camponotus suffusus (Smith, 1858)

Collection Date: 14 / 10 / 1995
Nicole de Bevel
Flora Hill. VIC

The Giant Golden Sugar Ant Canponotus suffuses is found throughout southern Australia including regions like the ACT and Victoria.

It is usually seen in Open Forested areas in dry sclerophyl forests and woodlands.

The queens are large measuring 16 to 20 mm with workers ranging from 8 to 14 mm in length.

The queens are claustral (queens do not feed or forage until the first workers are produced) and are very slow to develop in their early stages.

Workers forage many native plants for sugary nectars and also feed on smaller insects and other invertebrates.

Although they do not possess a sting, workers and especially the larger soldiers are able to bite with their powerful mandibles if threatened.



Current Courses – Change of Dates

Current courses listed here are now open for enrollments and include programs that range from Basic to Advanced Level Instruction and would suit students from early secondary to university level.

The National Bug Club is suitable for young students from 7 to 17 years of age.

The Institute recommends that students begin with our most popular entry level **INTRODUCTION TO ENTOMOLOGY COURSE (NIOE - 01C)** which allows the student to gain a good foundation of entomology in general and assists assists the student in progressing towards more advanced courses if he or she wishes. This fundamental course is run throughout the year.

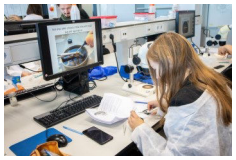
The Insect Morphology Modules one and two will introduce the student to the external morphology of the insect in general and will look at the variability, adaptability and functions of each feature.

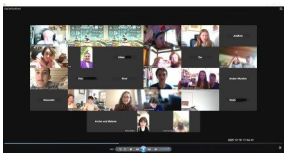
For further details regarding these courses, please contact the Institute on 03 7038 9452 or email us on admin@entoinstitute.org

COURSES DATES

Insect Morphology Module 1: November 18th 2026.

Insect Morphology Module 2: December 2nd 2026.





Book Review - Pests of Field Crops – F.C.W Jones and Margaret Jones

First published in 1964, this book still holds its place as a must have item for any entomological library.

Although the work covers British field crop pests, many of these have been introduced into Australia and this is what makes this book of great value.

With extensive illustrations as well as a vast amount of biological information regarding the habits and behavior of many described pests, this is a great source of information if you are looking at methods of potential pest control of a particular problem species.

There is also a comprehensive section describing chemical treatment and the pros and cons of its use in the control of a particular pest.

Several Black and White plates also illustrate the physical makeup of numerous pest groups which greatly assist in the identification of the problem species.

Although long out of print, this book often shows up in second hand book stores and on line and is well worth keeping a look out for.



Rare beetle that oozes substance from its knees when attacked rediscovered in Wales

A rare beetle has been rediscovered in Wales after nearly 60 years, conservationists have said. The short-necked oil beetle, driven to the brink of extinction in Britain due to habitat loss over the course of the 20th century, has been found at the Castlemartin range in Pembrokeshire, according to Natural Resources Wales.

The species' name comes from the adult beetles' stubby shape and ability to secrete an oily yellow-orange substance from their knee joints when alarmed.

The unusual creature relies on solitary bees and thick vegetation and flower coverage to survive.

Its larvae have hook-like feet to snag on to bees, and once in their nest, they feed on pollen until ready to emerge as adults, with a lifespan of about a year.

Only a handful of sites in the UK are suitable for the beetle, according to NRW, and only about one in 10,000 larvae make it to adulthood. It is classed as nationally rare.

The bug was rediscovered in Devon in 2006, and populations have since been found in the Hebrides and on Salisbury Plain.

The nature conservation charity Buglife reported the beetle was found at the Pembrokeshire site in 2020, but surveys carried out in 2022 and 2025 only found dead adults, raising concerns about the species' viability in the area. However, the 2026 survey discovered larvae distributed in such a way to suggest hatchlings from a larger batch of immature beetles had thrived.



The short-necked oil beetle was driven to the brink of extinction in Britain due to habitat loss over the course of the 20th century.

Giant millipede fossil found on UK beach by accident reveals 'world's biggest bug', weighing 50kg

It may have been "a complete fluke", but some United Kingdom scientists believe the discovery of a giant fossil at an English beach has unearthed the world's biggest-ever bug.

The fossilized partial remains of an extinct millipede — also known as *Arthropleura* — was detected when a block of sandstone was cleaved in two at Howick in Northumberland.

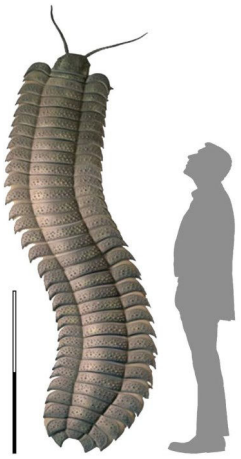
When the sandstone opened up, the exposed fossil revealed a millipede believed to have been around 2.5 metres long — more than 25 times longer than the average centipede.

It dates back to the Carboniferous Period, 326 million years ago, around 100 million years before dinosaurs inhabited the Earth.

The fossil, measuring 75cm, will go on display at Cambridge's Sedgwick Museum next year.

"It was a complete fluke of a discovery," Neil Davies, from the department of earth sciences at the University of Cambridge, told the ABC.

"We were visiting the beach to look at the general geology, and we saw a boulder had recently fallen from the cliff and split in two. "We found the fossil inside this crack, but the location is not known for fossils … our timing was lucky."



Impressive comparative size of Arthropleura armata, the up to 2.5 m long terrestrial millipede-like arthropod ; scale bar is 1 m.

New Institute Equipment On Its Way

The National Institute of Entomology is now awaiting the delivery of its next pair of entomological cabinets from Australian Entomological Supplies Pty Ltd.

This will bring the total number of specimen storage drawers held at the Institute to 90.

We have also ordered specimen Unit Trays in order to house groups of species with these cabinets.

We expect delivery of the Unit Trays in the next few days however, the cabinets require up to 8 weeks in order to be manufactured and sent to the Institute.

These items represent one of our more expensive annual purchases but are vital in order to curate and expand the Institute Collections.





Items vital to the Institute in order to assist in expansion of its collections

An Expo Exhibitor Story - Bardee

It's no secret that a lot of food goes to waste. However, sometimes it's hard to truly understand how much is thrown out. Let's break it down. Currently, we throw away around one-third (that is, 33%) of all the food we produce globally. According to the United Nations, that's approximately 1.3 billion tonnes of food. Every. Single. Year.

In Australia, according to the Australian Food and Agribusiness Growth Centre, we throw away around 7.6 million tonnes of food each year – a huge number for a country with

huge number for a country with a population of only 25 million. To put that into perspective, that's about 312kg per person per year. An average grocery trip for an Aussie would see them throwing out one in five bags! And what's worse? 70% of the food we discard is predicted to be perfectly edible.

We want to reshape the global food system, for the better. Bardee have built a world-class vertical farming system for black soldier flies

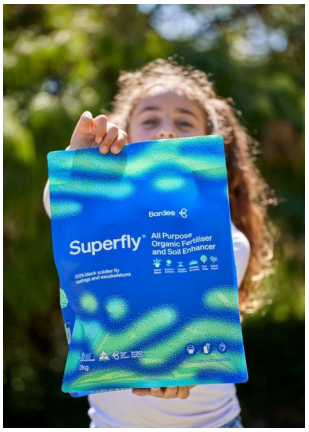
to not only consume the food waste, but turn it into something that helps other things grow, like fertilizer or tasty pet food. By turning it into something else, we create a circular economy that benefits people, animals and plants, as well as the environment. At Bardee, our solution is pet food, animal feed and fertilizer, but we know of lots of other amazing companies who are turning waste into resource.

Cont...

Well, to us they're pretty special but it's not magic, it's biology and the circle of life. Just like what Mufasa said, except our gazelles don't gallop, they soar.
Black soldier flies are brought to food waste which has been processed into a perfect feed for these insects to grow fast and healthy.
As the larvae grow, 3000x in size in just 7 days, they transform 100% of the organic matter- using no additional water!

As the larvae consume the food waste and grow, they create 'frass' which is a polite term for manure, or the more horticulturally appropriate turn of phrase 'castings', which is an all-natural, nutrient-rich fertilizer

The biomass from the mature larvae is separated from the frass and is either sold live, dehydrated, or processed into a meal to create protein for animal feed.





It's A Bugs Life..









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Members Committee Positions Now Open

The National Institute of Entomology is currently looking for interested members to serve on the Institutes Funding and Grants Committee.

The role of the Committee will be to apply for grants and funding in order to assist the Institute towards equipment acquisitions, purchase of entomological storage cabinets and other equipment or institute training and courses programs.

Members should contact the Institute on 03 7038 9452 if interested.



The Institute is supported by the kind generosity of members of the public by way of donations to the Institute. Such donations may be in the form of unwanted Scientific Equipment (microscopes, laboratory supplies etc), Entomological Reference Books, Audio Visual Equipment, Entomological Insect Collections or Monetary Donations.

These generous contributions assist the Institute in supporting our students and members of the public that are undergoing entomological studies and programs as well as supporting the Institutes Ongoing Research Work. If you are wanting to make a valued Donation towards our work, here is the link: Donations

If you would like to consider and discuss making another non monetary donation to the National Institute of Entomology, please feel free to contact us on admin@entoinstitute.org

Study Opportunities

The National Institute of Entomology provides specific On-Line Courses, Training Presentations, National Entomology Club, Demonstrations and Entomological Lectures that can cater for both the individual or a larger group of up to 50 students interested in gaining knowledge on various entomology based subjects.

Courses and Programs are offered throughout the year and include Certificate Courses in General Entomology, Applied Entomology, Insect Classification, Identification Courses, Entomological Collecting Techniques and much more.

See our COURSES PAGE for more details.

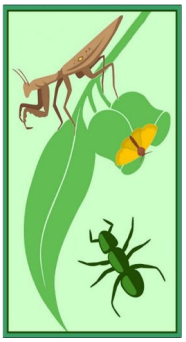
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From Specialist Courses, Identification of Insects, Preserving Specimens, Rearing Techniques....the subjects available to you are vast.

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The Institute uses Zoom, a popular conferencing application for both PC or Mobile devices. You can download Zoom here: ZOOM DOWNLOAD PAGE



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