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NATIONAL INSTITUTE OF
ENTOMOLOGY

16 SYDNEY STREET,
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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 9

September 2026

FROM THE CHAIRMAN



undergoing curation. We have
featured the collection in this
issue.
Enjoy.

Greetings everyone.

As we continue to settle into our
new building, we have been
approached by several local
members of the public wishing
to volunteer their services to the
Institute.

Already, with their assistance,
our research library is taking
shape nicely and will soon be
ready for cataloguing in order to
make a full searching ability
available to users and students.

We have also had several book
donations from Mrs. Pat Yates
and we thank her support and
contributions. (more on this
later).

Also, an important and signifi-
cant Lepidoptera Collection from
the estate of Mr. Raymond John
Bell has also been donated to
the Institute and is currently



Part of the recently acquired R.J.Bell
Lepidoptera Collection undergoing
sorting and temporary storage.



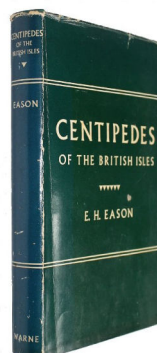
More material from the R.J Bell Lepidop-
tera Collection being sorted.

Dr Bert Candusio

Book Donation

In August, the National Institute
of Entomology received several
important book donations from
Mrs. Pat Yates of Central Victo-
ria.

These important works were
part of her late husband library
and include several titles that
are long since out of print and
very difficult to obtain. Centi-
pedes of the British Isles is but
one example.



Other significant works include a
near complete set of the Inter-
national Journal of Odonatology
(Dragonflies and Damselflies)
and a copy of The Cerambycid
Beetles (Longhorn Beetles) of
Australia published by the
C.S.I.R.O.

We thank Pat for this kind and
important donation to the Insti-
tute.

Major Lepidoptera Collection Donated to Institute

In August this year, the Institute was contacted by Ms Angela Carroll and Mrs. Sheryl Carroll regarding the possibility of finding a permanent home for their late uncle Raymond John Bell's Collection of Victorian Butterflies.

This valuable collection was amassed by Raymond over many years and specimens from the northern outer fringe of Melbourne includes areas such as Eltham, Greensborough, Whittlesea and Heathcote Junction to name a few.

Raymond was also a keen collector of British butterflies and would exchange Australian specimens for examples from the British Isles.

He was also in contact with collectors and breeders from tropical locations around the world where he acquired many examples of Morpho Butterflies to add to his collection.

After the initial inspection of the collection by Dr Bert Candusio of the institute, the collection was carefully loaded into the Institute Van and slowly transported back

to the institute for a more thorough assessment. Due to the fact that the collection was stored in non entomological wooden containers and other boxes, there was a real risk of potential damage by Museum Beetle (*Anthrenus verbasci*).

After some discussion, it was decided to immediately translocate the entire collection into student store boxes for temporary storage.

At the same time, the collections was fumigated with Camphor and both specimens and labels were moved into



Part of the R.J. Bell Collection of Victorian Butterflies

Cont...

the storage cases one specimen at a time.

We are fortunate to have the assistance of Mr. Noah Filippone who is currently undertaking a 12 month internship to assist the Institute in this task.

Once the entire collection has been relocated, it will be incorporated into the Central Victorian Regional Invertebrate Collection and databased.



Raymond John Bell

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!

Visit them at [Australian Entomological Supplies](http://AustralianEntomologicalSupplies.com.au)

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Male redback spider's dramatic death somersault

Researchers have spotted a genetic source for the bizarre sexual cannibalism behavior of the redback spider.

Male spiders, which somersault onto their partners' mouths to be eaten while mating, appear to inherit this trait via sex chromosomes.

Female spiders eat their male partners while they mate, and males appear to encourage this behavior, with their final act being a dramatic somersault onto the female's jaws.

A new study, published in *Biology Letters*, has pointed to a genetic source for this behavior.



Male redbacks are less than half the size of their female counterparts, and don't produce venom.

Beekeepers in 'crisis'

Beekeepers in South Australia are pleading for increased access to organic treatments for varroa mite.

The small, red mite is known as the "world's worst" honey bee parasite and was first discovered in SA in September 2025.

Mites feed and reproduce on honey bee larvae and pupae, leading to malformations.

The call from beekeepers comes after a commercial almond grower in SA, who remains anonymous, reportedly forked out more than \$2.3

million to have 7,500 healthy beehives transported from Western Australia to help pollinate crops.

Beekeeper Ian Cass manages 400 hives of his own at Loxton in the state's Riverland region. Mr. Cass said he made and mixed his own organic treatments to avoid the cost of repeating the treatments becoming prohibitive.

"We can make it for a fraction of the price of what we've got to buy it for," he said. Mr. Cass said beekeepers were only sanctioned to use organic

treatments, even homemade batches, once a year.

And while organic treatments were a more drastic, and potentially dangerous, option compared to the synthetic alternative, Mr. Cass said the varroa mite crisis necessitated an overhaul to the current regulations.



Ian Cass has been a beekeeper for eight years after previously working as a dryland farmer. (ABC Riverland: Jackson Byrne)

Hazard Detection For Edible Insects

This week, the International Atomic Energy Agency announced a new coordinated research project (CRP) to improve understanding of the safety of edible insects and other novel foods and to use nuclear and related technologies to assess risks.

Edible insects have established markets in some countries. According to the IAEA, more than 2,000 edible insect species are known worldwide, and roughly 30 percent of the world's population already

consume insects regularly. They are a sustainable protein source that convert feed efficiently and have a relatively light environmental footprint, and they can be used for both human consumption and animal feed.

Some associated hazards are known. For example, insects can absorb toxins or agricultural chemicals from their surroundings and can support the growth of microbes if not properly produced, processed, and stored.

Threats can vary by species, and the overall picture remains incomplete, particularly for hazards that have not yet been identified or that may interact with one another.

This IAEA research project aims to develop a more thorough understanding of the risks associated with novel foods and to develop nuclear, isotopic, and complementary techniques for hazard detection to ensure that these foods are safe, trusted, and suitable for consumption.



A dish prepared with fried cicadas. (Photo: Zhao Liu/iStock)

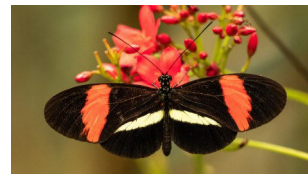
An Ageless Butterfly

Scientists have discovered that Heliconius butterflies have evolved an extraordinary lifespan, living several times longer than closely related species. Even more surprising, some show little sign of physical decline as they age. Their unusual pollen-feeding lifestyle may play a role, but the research suggests deeper evolutionary changes are also helping them stay healthy for longer.

A group of tropical butterflies may have evolved an extraordinary way to stay healthy for longer by slowing the aging process itself, according to a University of Bristol-led study published June 16 in *Nature Communications*. Most butterflies live only a few weeks as adults. In contrast, the study found that some Heliconius species survive about three times longer than their closest relatives on average, with certain individuals living for nearly a year. One of the most striking examples involved *Heliconius hewitsoni*, which reached a maximum lifespan of 348 days.

A closely related species, *Dione juno*, survived only 14 days, creating a 25-fold difference in maximum lifespan.

The results suggest that Heliconius butterflies have evolved a distinctive lifespan-extending strategy that could offer new clues about how aging slows down in nature. Working with scientists at the Smithsonian Tropical Research Institute in Panama, the research team uncovered another surprising finding. At least one species, *Heliconius hecale*, appeared to show little or no measurable physical decline as it aged.



Some tropical Heliconius butterflies have evolved a remarkable way to stay young, allowing them to live far longer than most butterflies. Researchers found that certain species can survive nearly a year—up to 25 times longer than some close relatives—and appear to age much more slowly.
Credit: Shutterstock

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 Op-

tions or call the Institute on 03 7038 9452.

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C.V.R.I.C Specimen Spotlight

C.V.R.I.C Specimen:00089

HYMENOPTERA / Formicidae / Dolichoderinae

***Iridomyrmex purpureus* (Smith, 1858)**

**Collection Date: 20 Mar 1991
M.Palmer / Red Hill Mine Survey / Heathcote. VIC**

This species forms large pebble mounds with multiple nest holes. Wherever it occurs, *I. purpureus* is extremely pugnacious, and workers will pour out of entrance holes to attack any person or other creature that disturbs their nest. Workers forage on the ground and will also ascend trees in search of nectar and honeydew.

In *Iridomyrmex purpureus*, most new colonies are founded by single queens, following the nuptial flight in the spring month of October.

Sixty-five of 72 newly founded nests excavated near Canberra contained a single queen, six contained two queens, and one contained three queens.



Current Courses

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@entoinsitute.org

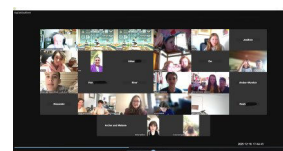
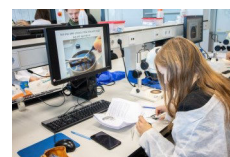
COURSES DATES

[Introduction to Entomology: October 19th 2026.](#)

[National Bug Club Term 3: Every Tuesday 5:30 - 6:00 Pm.](#)

[Insect Morphology Module 1: October 2026.](#)

[Insect Morphology Module 2: November 2026.](#)



Book Review—Termites of the Canberra Region

J.A.L Watsons book *Termites of the Canberra Region* was first published by the C.S.I.R.O in 1988 and is still relevant today.

This soft cover book is a great introduction into the fascinating world of the termite and it describes both habitats and behavior of the main termite families as well as descriptions of the various species known to inhabit the Canberra region.

The book also covers the various methods of termite control and even though the book is long

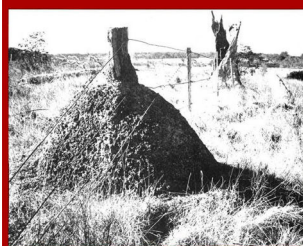
out of print, it would be a useful resource for pest controllers looking at several methods to control these important pests.

The book is also illustrated with amusing and comical illustrations that make for an enjoyable read while you soak up interesting and valuable information within the books pages.

All in all, this is a great addition to any library and well worth the hunt for a used copy.

Termites in the Canberra Region

JAL Watson



2026 National Insect Expo Gearing Up

The 2026 National Insect Expo is only a few weeks away and exhibitor registrations have now closed.

This year, we have several new and exciting exhibitors from interstate including Macquarie University of New South Wales that will be putting on an exhibit dealing with the entomological research projects.

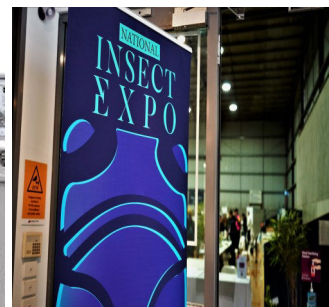
They will also have on hand several high quality microscopes for kids and adults to really get up close to our amazing insect subjects.

Also appearing this year will be the amazing team from STEM Electron Microscopy Group that will be setting up this incredible instrument for kids to actually use to take SEM images up to 800,000X normal size!!.

As well as the scientific activities at the expo, the artistic side of entomology will also be well represented in the form of several renown insect artists putting on displays of their work with actual demonstrations in real time.



Hope to see you all there at the Buffalo Sports Stadium Woodend on October 2nd to the 4th from 10:00am to 5:00pm each day.



This years National Insect Expo promises to thrill visitors with these very sophisticated instruments not normally accessible to the general public.

Insects Struggle to Adapt to Climate Change

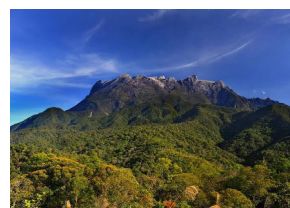
Reduced oxygen levels and air pressure at higher elevations may limit the ability of insects to move upslope to escape a warming climate, with potential consequences for the essential services they provide, like pollination. This is according to a new review of research in The British Ecological Society journal, Functional Ecology. Under a warming climate, many species are shifting their range to higher elevations to remain in suitable temperature zones. However, conditions at higher elevations such as thinner air

and less oxygen pose unique challenges to insects because of their size, lifecycle and way of breathing. To understand how moving to higher elevations could affect different insect species, researchers from the University of Montana reviewed research on the physiological effects of hypoxia (low oxygen levels) and hypobaria (low pressure) on insects.

They found that flying insects particularly struggle at higher elevations because the thinner air means they need to gener-

ate more lift and expend more energy flying, while reduced oxygen concentrations limit the ability of their breathing system to supply oxygen rapidly enough to the flight muscles.

Insects with active larval stages, like actively feeding caterpillars, also struggle because of their energy and oxygen demands. Insects with aquatic larval stages, like dragonflies, are already limited by the amount of oxygen in water, and this is exacerbated at higher elevations.



Some insects may not be able to adapt in time.

Rediscovering a 'lost' Species

A rare insect species, the Key's Matchstick Grasshopper, was thought to be extinct in Victoria but has now been rediscovered, giving hope for conserving its future. People usually go to cemeteries to visit or bury their dead but, in the name of research, we visited 25 cemeteries in Victoria, NSW and the ACT to try and find a tiny rare species of grasshopper thought to be extinct in Victoria.

The little wingless daisy-eating insect – Key's Matchstick Grasshopper – is presently under consideration for listing nationally as an endangered animal. It was once one of the most

abundant animals in south-eastern Australia but, last year, it was listed threatened for the first time in Victoria. The last recorded stronghold of Key's Matchstick Grasshopper included around 30 cemeteries in Victoria, NSW and the ACT. This was because these cemeteries provided tiny patches of remnant native grassland that had been protected from grazing.

Excitingly, our survey found, for the first time in 50 years, one small isolated population near the small country town of Omeo in Victoria - opening up the opportunity to help resurrect these endangered animals in the state.



Key's Matchstick Grasshopper, or *Keyacris scurra*

An Expo Exhibitor Story - Invertebrates Australia

Our Story

Invertebrates are an essential foundation for all life on earth, including our own. At odds with their undeniable importance, ubiquity, and staggering diversity, they are often neglected in conservation, with threatened species listings and environmental campaigns often biased towards birds, mammals and other species. One of the main drivers of this problem is a lack of public awareness of the importance of invertebrates to our lives and the threats that they face.

Invertebrates Australia (IA)

was founded in 2021 by three female scientists - Dr Kate Umbers, Dr Jess Marsh and A/ Professor Tanya Latty. All three founders are internationally renowned experts in the field of invertebrate conservation and possess a deep understanding of the threats to invertebrates and a determination to champion their cause.

Like so many good things, they started talking about forming a group that could advocate for Australian invertebrates as more of a dream than a plan. The main thing that characterized all of their conversations was shared excitement; at some level they were aware that a seed had been

shared excitement; at some level they were aware that a seed had been planted.

The event that turned this excitement into action was the catastrophic Australian megafires of 2019-2020. The event itself was alarming and the inability to quickly and adequately assess how the fires impacted invertebrates highlighted a huge void in our knowledge and a clear need for an invertebrate-focused conservation organization.



INVERTEBRATES AUSTRALIA



The Team at Invertebrates Australia helping to raise public awareness of the importance of invertebrate conservation.

Cont...

Program Overview

Invertebrates Australia has three pillars - investigate, inform, inspire - which capture our major themes of activity. Our programs, described below, cover our priority areas for invertebrate conservation actions.

What places should we prioritize to ensure we protect invertebrate biodiversity? We are identifying Centres of Endemism, Key Biodiversity Areas and Areas of Importance for Invertebrates using spatial mapping, traits data, and sur-

veys. This program allows us to provide critical information to end users about the places that we need to conserve to reverse global invertebrate decline, maintain invertebrate diversity and avoid invertebrate extinctions.

We are submitting conservation assessments for invertebrates that are at risk of extinction and ensuring that these species are included on threatened species lists at the international, federal and state levels. This program is essential for ensuring that invertebrates are part of the discussion when it comes to conserving biodiversi-

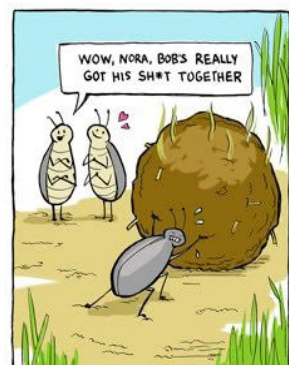
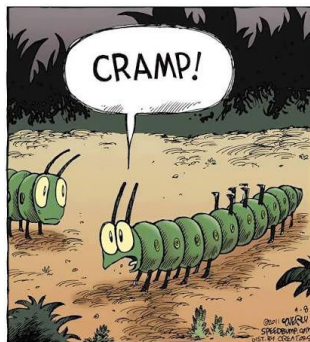
ty.

Invertebrates are all around us getting on with their important work of making ecosystems and agrisystems function. They therefore provide an excellent opportunity for people to connect with nature.



To get involved in the valuable work that Invertebrates Australia do, visit their website invertebratesaustralia.org

It's A Bugs Life..



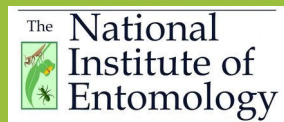
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NATIONAL INSTITUTE OF ENTOMOLOGY — CONSERVATION.RESEARCH.TRAINING.

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 [ad-min@entoinsitute.org](mailto:admin@entoinsitute.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.

Say goodbye to You-Tube videos. Here you get to directly interact with, as well as ask questions to your National Institute of Entomology Lecturer in real time.

Our C.S.I.R.O trained presenters will show you that there is no better or more effective way to learn a valuable entomological skill or acquiring an Entomological Course Certificate than by using the Institutes On-Line programs.

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

Want to have something

specific presented to you or your group? This is the place for all your Courses, Lecture and Demonstration requirements. Details on all courses are available on our [COURSES PAGE](#).

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

