



INVERTEBRATES AUSTRALIA



ANNUAL REPORT 2022

• INVESTIGATE • INFORM • INSPIRE •



INVERTEBRATES AUSTRALIA



ABOUT INVERTEBRATES AUSTRALIA

Our mission is to conduct, promote, and support the science and conservation of Australian invertebrates. Invertebrates Australia was founded in September 2021 by three scientists, catalysed by the extreme extent and severity of the 2019/2020 megafires.

By creating a group that can represent all invertebrates we are making a big positive impact on ecological and economic outcomes in biodiversity management.

We are doing this by facilitating, conducting and promoting scientific research and conservation activities; engaging our extensive network of experts; and partnering with existing scientific societies and environmental charities.



INVERTEBRATES AUSTRALIA

BOARD OF DIRECTORS



MELISSA CUTLER



DR ROB BURDOCK



KATE PEARCE



PROF PAULINE ROSS



INVERTEBRATES AUSTRALIA

CHAIR'S REPORT

It is a pleasure to provide this input into Invertebrates Australia's inaugural Annual Report.

Since registration, IA has been on a steep and positive trajectory to establish rigorous governance mechanisms including the creation of an independent Board of Directors and Board Charters, Terms of Reference and Policies which codify behaviours, establish and define roles and delegations. Five out of a maximum nine Board members have been appointed since June 2022 with an expectation of at least another three board members to be recruited shortly. The Board members selected provide necessary networks, governance and experience across business management, strategy, risk management, finance, audit, partnerships as well as having technical expertise across science, conservation and research.

Two sub-Committees of the Board have been established to provide additional oversight to priority focus areas including Finance, Audit and Risk Management (Chaired by Rob Burdock) and Partnerships, Communications and Fundraising (Chaired by Pauline Ross). Committee Chairs have appointed members from within and external to the Board to ensure appropriate skills and networks are available. I would like to thank those Committees and their members for their tireless efforts to improve governance in areas where it is most needed.

An independent and international Science Advisory Committee has been appointed. Meeting quarterly this Committee provides technical subject matter expertise and science advisory input to the Board and IA, thereby allowing the organisation to withhold a rigorous and science-led process.

I am looking forward to the first Board offsite early in the new year where we will run an intensive strategy and planning session to better define IA's value proposition in the market and focus on the areas IA can have most impact and success.

On behalf of the Board, I would like to acknowledge the success of the IA team, including the leadership of founder and Managing Director Kate Umbers. Kate and her team have worked tirelessly to transform a dream into a reality which informs the inclusive and visionary culture of the organisation. Thanks also go to the selfless acts of commitment from IA founders Dr Jess Marsh and Dr Isabel Hyman who stepped off the Board this year to instead provide leadership from within IA where their efforts are most needed. Finally, I would like to thank Ms Lauren Davidson for her administrative support behind the scenes.

Invertebrates Australia has some challenges ahead as we seek to move beyond establishment phase into a financially sustainable charity with longevity and impact at scale. However, we have the skills and dedication at our fingertips and I'm feeling positive about our future.

Melissa Cutler, Chairperson



MANAGING DIRECTOR'S REPORT

Dear Members,

What a delight to deliver our first Annual Report!

On October 7th 2021, Jess Marsh, Tanya Latty and myself founded Invertebrates Australia and in our first year we created the organisation from the ground up. We have built a board, an operations team, and a programs team and we are delivering projects already. It has been a big year!

We have structured our operations around three pillars: Investigate, Inform, and Inspire all of which are overseen by our Programs Manager and Deputy Managing Director Jess Marsh.

Investigate is led by Megan Head supported by Payal Bal and Isabel Hyman. This theme is where our science led activities to understand and conserve Australian Invertebrates occur and is brought to life by projects such as inverTraits, two NSW Saving our Species funded projects and a consultancy project for Manly Dam.

Inform is led by Perry Beasley-Hall with a focus on awareness raising and advocacy. Through this lens we have delivered a submission to the Senate Enquiry into Biodiversity Extinctions, and, through a project funded by WWF Australia, assessed the conservation status of Australian invertebrates.

Inspire is led by Tanya Latty supported by Bruno Buzatto and Hauke Koch. During the reporting period we have focused on efforts to engage with the community leveraging charismatic invertebrate species which hold a special place within Australian sentiment. An example of this is the Christmas Beetle Count project as our flagship citizen science project in relationship with the Australian Museum, Minibeast, and She's Got Legs.

In order to support organisational sustainability and longevity, a number of critical support roles have been appointed throughout the year. In fundraising and communications Emma Patterson has recently joined us and brings a wealth of skill and knowledge in marketing, fundraising and graphic design. In analytics, Fonti Kar is creating and delivering analyses and visualisations that capture the big picture of invertebrates and their conservation in Australia. In accounting and finance, Audrey Leong has brought knowledge of accounting combined with experience in the charity sector and is invaluable. Through all this, Birgit Maher and Lauren Davidson have kept the activities running smoothly for the whole team and have solved problems along the way with great skill.



INVERTEBRATES AUSTRALIA

We are an inclusive and open group and we take diversity, equity and inclusion seriously. Our successful fully virtual operations have only been possible with sustained discipline in establishing values, behaviours, and agreement on the way we work all of which contribute to the strong culture of the organisation. We are looking forward to our first in-person retreat in the new year and an opportunity for the Board and staff to work through strategy in depth.

We have had great success in securing grant funding and attracted substantial pro bono support from professionals in science and the charity sectors. Our challenge into the future will be diversifying revenue streams to achieve long term organisational financial sustainability.

I am grateful for all the support I have been given as Managing Director including from my fellow founders Jess Marsh and Tanya Latty, to everyone else who jumped in early and hung on. Thanks to Jo Kirker for taking me on as a 'CEO mentee' and to Scott Black (Xerces Society) and Deb Attard Porthughes (formerly of the Australian Wildlife Conservancy), and Micaela Jemison (Wilderness Society) for being our 'go to' people in the early stages of figuring out what form this beast should take. Thanks to Alex Toyne and Vicky Dodds for generously giving time to explain to me how things like GST, superannuation and fundraising work. Thanks to Perry Beasley-Hall and Erinn Fagan-Jeffries for establishing our online presence. The energy of the board and the board committees, the science advisory committee, the programs teams have been infectious, thanks to all for putting in lots of time and energy in bringing the programs to life and to our support roles for staying on top of the business side with style and grace.

Thanks finally to the many great people working exclusively on our projects - Jane Ogilvie, Junn Foon, Hannah Smart, Maddie Fink, Rachel Brown, Caitlyn Forster, Joseph McCormick and Hannah Zurcher, as well as the folks at ALA and AusTraits - we are so grateful to you all for coming to work with us to make this organisation run and ultimately deliver outcomes for Australian invertebrates.

Dr Kate Umbers, Managing Director



PROGRAMS MANAGER'S REPORT

Dear Members,

We have come a long way since starting just over 12 months ago, and it is exhilarating to look back on those early days and see just what we have achieved. Our Programs Team is growing and evolving rapidly, with all members united by a passion for invertebrates and a deep underlying belief in what we are collectively doing, and why. The calibre of the team we have formed is testimony to that belief.

The Team encompasses IA's areas of operational activity, with the three core Inspire, Investigate, and Inform streams each working independently, as well as collaboratively, to deliver outcomes for IA. Through leading citizen science projects and outward facing research, Inspire aims to better enable people to engage with invertebrates, to take notice, to question, to collect meaningful data, and to learn. Investigate is IA's research stream, coordinating and directing research, asking all the exciting questions, and exploring the very best ways to get the answers. Inform acts as a strong voice for invertebrates in the public sphere, with work ranging from leading threatened species assessments to responding to changes that might impact invertebrates in Australia.

Our projects are the building blocks from which each of the three core programs are formed. In this past year, we have demonstrated strength in being able to attract and secure funding in order to conduct high class research. Our achievements in these projects, our ability to continue to grow them, and our ability and desire to attract and create further new and exciting opportunities promises a similarly exhilarating future for IA. I am looking forward to the ride.

Dr Jess Marsh, Programs Manager



INVERTEBRATES AUSTRALIA

INSPIRE PROGRAM

Program Leader: A/Prof Tanya Latty

Program Team Members: Dr Bruno Buzatto, Dr Hauke Koch

Summary of activities

The Inspire program aims to increase public engagement with invertebrate conservation through community science initiatives and public education. This year we initiated two key projects: the Christmas Beetle Count and the Baby Beetles project. Both projects are expected to be annual projects that will run long term.

Christmas Beetle Count Project

Project leader: A/Prof Tanya Latty

Project collaborators: University of Sydney, Chris Reid Australian Museum.

Project description: Christmas beetles are a group of iconic Australian insects strongly associated with summer vacation and the Christmas season. Millions of these large, colourful beetles used to emerge in December and January in urban and wild areas and it was very common to find Christmas beetles around well-lit front porches of homes across the country. The number of Christmas beetles that emerge each year appears to have been declining over the last few decades with lots of media headlines asking “Where have all the Christmas beetles gone?”. There are, however, currently no formal monitoring projects. Given their tremendous cultural significance, Christmas beetles are an ideal group for a community science project.

Project update: The iNaturalist project has 378 members and contains 2,000+ observations. A webinar is planned for 16 November, hosted by The University of Sydney who will be marketing the project to their Alumni network. Media interactions are planned starting mid-November.

Project finances: The project currently has no funding and no expenditures



INVERTEBRATES AUSTRALIA

Backyard Baby Beetles Project

Project leader: A/Prof Tanya Latty

Project collaborators: Willoughby city council

Project description: There are over 2000 species of scarab beetle in Australia including some of our most interesting and magnificent species like the Christmas beetles, the rhinoceros beetles, dung beetles and fiddler beetles. The larvae of many scarabs live in soil and rotting wood and are frequently encountered by gardeners who are often unsure whether the larvae are pests. Unfortunately, it is extremely difficult to tell species apart when they are larvae. The aims of this project are to collect and identify curl grubs from private and community gardens around Sydney. These will be identified, so that we can provide better information to gardeners to raise awareness in the community about backyard beetles.

Project update: An article for The Conversation has been written about beetle larvae in gardens. It should be published in the next few weeks. Larvae drop off locations have been arranged with councils and community gardens. Educational materials are being developed (CESAR Australia has provided some identification materials)

Project finances: This project has no funding and no expenditures.



Brown-winged Christmas beetle, *Anoplognathus bunnipennis*, image: Caitlin Henderson



INVERTEBRATES AUSTRALIA

INFORM PROGRAM

Program Leader: Dr Perry Beasley Hall

Program Team Members: positions are currently open

Summary of activities

Our *Inform* program spearheaded a letter to the Hon Tanya Plibersek, Minister for the Environment introducing our organisation and offering our assistance with the current review of the Environment Protection and Biodiversity Conservation Act 1999 (see below).

Inform also provided a submission to the Senate Enquiry into Australia's Biodiversity Crisis which gained some media attention. Inform has begun work on nominating the misuse of pesticides as a Key Threatening Process. The program lead is also developing a reference document on the current state of biodiversity offset schemes in Australia for the November meeting of IA's Scientific Advisory Committee. Finally, the Inform Conservation Assessments project is currently preparing conservation assessments for up to 30 fire-affected invertebrates for the Australian Government's Environment Protection and Biodiversity Conservation Act (EPBC Act) 1999, following Australia's 2019-2020 megafires.



After the 2020 bushfires on Kangaroo Island. Image: Jess Marsh



INVERTEBRATES AUSTRALIA

Conservation Assessments of Fire-impacted Invertebrates Project

Project leader: Dr Jess Marsh

Project officer: Hannah Zurcher

Project collaborators: WWF Australia, Department of Climate Change, Environment, Energy and Water

Project description: The 2019-20 megafires in eastern and southern Australia had a profound impact on Australia's biodiversity, resulting in heavy population losses, such that many species previously considered secure are now at risk of extinction. A key action needed for the recovery of the most fire-affected species is assessing their conservation status. This project will submit expert nominations for assessments of between 15-30 fire-impacted invertebrate species under the EPBC Act. This work will substantially increase the number of invertebrate species listed as threatened, which will have conservation benefits. We will support these listings through media releases to raise awareness of the plight of many invertebrate species and the importance that they are protected.

Project update: The project started at the beginning of October 2022. It is progressing well and is on course to meet milestones, with draft assessments of four of the 15-30 species complete, and one draft in progress.

Project funding: \$48,000, WWF Australia, \$2 000 expended in wages.



The Kangaroo Island Assassin Spider (*Zephyrarchaea austini*) with a meal, listed as Critically Endangered under the EPBC Act. Image: Jess Marsh



INVERTEBRATES AUSTRALIA

INVESTIGATE PROGRAM

Program Leader: Dr Megan Head

Program Team Members: Dr Isabel Hyman, Dr Payal Bal

Summary of activities

The Investigate program has provided support and facilitation for each of the projects under its umbrella. The projects within this program are varied, from on-ground research in the Orchid Pollinator Project, the Lord Howe Island Snails Project, and the Manly Dam Invertebrates Survey Project, to desk-based collation and analyses of data for the InverTraits Project. The deliverables of each of these projects will have outcomes for invertebrates, and the role of Investigate in supporting their delivery has been an important one. In addition to forming a research base, Investigate has been sourcing funding opportunities and identifying research directions, in order to continue to grow and target the program and its scope, and to maximise the potential outcomes for invertebrates in Australia.

InverTraits Project

Project leader: Dr Jess Marsh

Project officers: Dr Payal Bal, Dr Jane Olgilvie, Hannah Smart, Junn Kitt Foon, Maddie Fink, Dr Kate Umers, Dr Isabel Hyman

Project collaborators: Australian Research Data Commons (ARDC), Atlas of Living Australia (ALA), AusTraits, EcoCommons, UNSW Australia, Australian National University.

Project description: The aim of the InverTraits project is to build an open access, enduring and living database of ecological and life history traits for Australian invertebrate species. In this first part of the project we will develop workflows and modelling to incorporate analyses of traits with consideration of fire characteristics, landscape variables and other threats to estimate and predict susceptibility of species to fire. Such information will enable rapid identification of the species most imperilled by future large-scale fire events, and to guide management of the most at risk taxa.

Project update: This ambitious, highly collaborative, and multi-organisational project is progressing well and is meeting targets. Traits data have been collated for several thousand invertebrate species, we have developed a standardised terminology and workflow for data extraction, and database construction is near finalisation. Work on the susceptibility framework and analyses is in progress and findings will be tested using real world data next month. This project has met all milestones and will be complete in June 2023.

Project funding: Awarded \$450 000 by ARDC in July 2022, \$93 000 expended between July 2022 and October 2022.



INVERTEBRATES AUSTRALIA

Lord Howe Island Snails Project

Project leader: Dr Isabel Hyman

Project summary and progress: *Pseudocharopa ledgbirdi* is a small, rock-dwelling terrestrial snail endemic to the southern mountains of Lord Howe Island, where it was once found from the lower slopes to both mountain summits. It has declined dramatically in abundance since 1981, and its range has contracted significantly. We are collecting baseline data on distribution and conservation genetics of this species to inform better conservation management. This project commenced in June 2022. Our first field trip is taking place in November 2022. The initial trip was originally going to result in a major collection of samples, leading to the first DNA extractions and round one of population genetics studies. However, instead we now propose to first test the effectiveness and potential impact of our DNA sampling methods. This trip will take place in conjunction with DPE / AM survey of the Critically Endangered snails and costs will be split between the two projects.

Project budget: We were awarded \$120 000 with \$5 257 expended

Orchid Pollinators Project

Project leader: A/Prof Tanya Latty

Project collaborators: University of Sydney

Project description: Invertebrates Australia was invited by the NSW Government's "Saving our Species" program to deliver on this project which aims to collect pollinator data for three critically endangered orchids - *Genoplesium insigne*, *Thelymitra adorata*, and *Corunastylis sp var Charmhaven* - which are found in the Hunter Central Coast region of NSW. Within the Central coast region, the majority of these plants are found on unsecure tenure. To remediate this Saving our Species are considering translocating orchids to conservation reserves. To assess whether this is a viable option first they need to find out more about the ecology of the orchid species and particularly about their pollinators. Saving our Species are especially interested in identifying and describing the pollinators of the three orchids, documenting the behavior of pollinators in relation to flowering period of each orchid, and assessing the nutritional characteristics of the nectar of each orchid species. The data collected will be used by "Saving our Species" to inform translocation plans for these orchids and ensure reproductive capacity is maintained at translocation sites.

Project update: This is year 1 of a 3 year project. In line with our milestones we have established site locations for all three species and are currently collecting data for a pollination study of the *Genoplesium insigne* the first species to flower in early spring. Data collection is on track to begin for the other two species *Thelymitra adorata* and *Corunastylis sp var Charmhaven* as soon as they start to flower (likely late spring and early summer respectively).

Project budget: We were awarded \$82, 735 for this project all funds are unspent.



INVERTEBRATES AUSTRALIA

Manly Dam Invertebrates Survey Project

Project leader: A/Prof Tanya Latty

Project collaborators: University of Sydney

Project description: We were contracted by Friends of Manly Dam to conduct an invertebrate survey. We are surveying the invertebrates of Manly Dam with special emphasis on native bees, hoverflies, jumping spiders and Christmas beetles.

Project update: This project was delayed due to rainy weather although 2 sampling visits have occurred thus far. The project will wrap up in December, following two more visits in November.

Project funding: We were awarded \$4,900 for this project with \$405 expended



Hoverfly visiting a flower with some hitchhikers. Image: Tanya Latty



INVERTEBRATES AUSTRALIA

FINANCIAL REPORT

Revenue

Revenue during the year for Invertebrates Australia was \$28,585 primarily derived via grant funding from government and organisations. Grants were received in the year from Australian Research Data Commons \$297,000 for the InverTraits program, NSW Department of Planning and Environment \$223,009 for the Lord Howe Island Snails and Orchid Pollinators programs respectively. Grant revenue is recognised as contractual obligations are met, using expenditure incurred as an indicator of those obligations being performed.

Expenses

Expenses for Invertebrates Australia were \$51,057. Payroll costs were 62% of total expenses and program related. Administration costs made up 19% of total expenses which covered legal, finance and human resources. Operating expenses were 13% of total expenditure and included costs for insurance, Information Technology (IT) and marketing.

Result

The result for Invertebrates Australia in its first year of operation was a deficit of \$22,473, adjusted for unspent grants received in advance. The deficit has also arisen due to one-off establishment costs during the year. The cash position of the organisation at 30 Jun 2022 was healthy and will provide a stable basis for operations in the coming year.



Zebra snails in a temperate Australian rockpool, image: Kate Umbers



INVERTEBRATES AUSTRALIA



CONTACT US

contact@invertsau.org

www.invertebratesaustralia.org



THANK YOU

Image credits

Cover Page - Tanya Latty

Back Page - Kate Umbers

• INVESTIGATE • INFORM • INSPIRE •