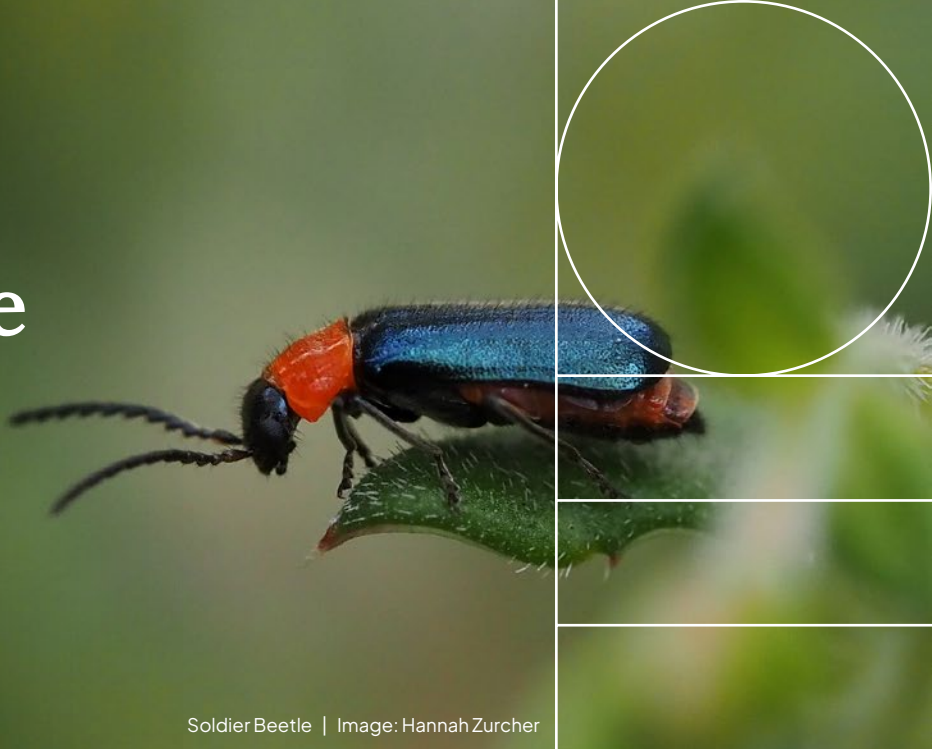
Biodiversity Council

Introducing the invertebrates Factsheet

December 2022



Soldier Beetle | Image: Hannah Zurcher

The invertebrates make up 98% of animal species on earth, they include the bees, butterflies, spiders, crabs, worms, snails, octopus, corals, jellyfish, seastars, and all their relatives. An extraordinary number and diversity can be found in Australia: around 320,000 invertebrate species call our country home, most of which are found nowhere else.

Invertebrates are found nearly everywhere, from the ocean to the desert, from deep inside caves to the very tops of tree canopies. They also come in a whole range of body shapes – long and thin, small and round, stocky and powerful, or long-legged and graceful. Invertebrates can have no legs or over a thousand; they can be 0.1 millimetres in length or over 13 metres long. Some fly, some burrow, some crawl, some swim, some hop, some hitchhike. These animals are beautiful, fascinating, endearing, and often strange.

Velvet Worm | Image: Tanya Latty

What do they do?

Invertebrates are the drivers of the natural world and perform crucial tasks for keeping it, and so us, healthy. Invertebrate decompose dead things to release nutrients back into soil, they disperse seeds and spores and pollinate plants, they purify water, create habitat, and they are food for other animals, for each other, and even for us. But their roles extend far further than this: they also serve as regulators that keep food webs in balance by acting as herbivores, predators, and parasites.

From bees, beetles, and bogong moths, to oysters, coral and shellfish, invertebrates have huge economic, and cultural importance to Australia. They make up over half of Australia's biodiversity and are worth billions of dollars to society and the economy because they underpin many Australian industries and provide critical services through pollination, decomposition, filtration, reef-building, and more.

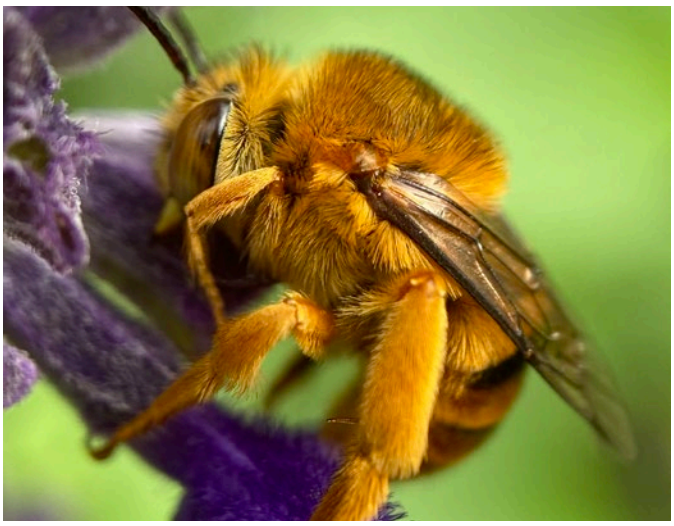
Weevil | Image: Tanya Latty

Wasp | Image: Kate Umbers

How are they doing?

The simple answer is we don't really know. The reasons for this are complex. A long-term undervaluing of the importance of invertebrates and of their individual worth as animals, especially in comparison to that of vertebrates like mammals and birds, has led to a legacy of poor resourcing. This, coupled with the massive diversity of invertebrates, has resulted in huge knowledge gaps. And with only one third of Australia's 320,000 invertebrate species having been formally named, for most species, we have almost no information on how they are doing, the threats that affect them, or what we need to do to make sure they're protected.

What we do know is that Australian invertebrates are vulnerable to the same threats that face the rest of the world's biodiversity: habitat loss, climate change, invasive species, and pollution are just some examples. We also know that many invertebrate species are likely to be at very high risk of extinction because they rely on a single plant or animal species to survive, or they are only found in one small area that could be impacted by a single fire event, for example. The true number of threatened invertebrate species in Australia is likely to be 100 times that currently listed. The bottom line is we know that it is likely that species will go extinct, and are going extinct, before we even know of their existence.



Teddy Bear Bee | Image: Tanya Latty

Why should we care?

Why should we care if invertebrate numbers decline or if we lose invertebrate species? Firstly, human-driven extinction and biodiversity loss matters just as much for a cascade funnel-web spider as it does for a pig-footed bandicoot or a Tasmanian tiger. Secondly, the extinction of invertebrate species is likely to have a strongly detrimental impact on nature, and by humanity, because of the diverse roles they perform in sustaining life. Whilst this importance is clear in a broad sense, for most invertebrates we don't know the exact role a species plays in its ecosystem, how it interacts with other species, or how its loss might send ripples out to the rest of the natural world.

What can we do?

There are many things we can all do to help conserve Australia's invertebrates. At the local level, we can stop or reduce pesticide use in our gardens, especially broad spectrum pesticides. We can plant gardens, even small ones that provide food and habitat for invertebrates. At a national level, we can get involved with initiatives like Invertebrates Australia that are working to help understand what is happening to these crucial animals and how we might best protect them.

READ MORE

https://invertebratesaustralia.org

zebra snail | Image: Kate Umbers

Story by Jess Marsh, Invertebrates Australia and Murdoch University, and Perry Beasely-Hall, Invertebrates Australia

INVERTEBRATES AUSTRALIA

Murdoch University

Biodiversity Council

The Biodiversity Council has been established to connect Australian communities and decision-makers with knowledge and solutions to protect our unique biodiversity. It is founded by 11 universities including its host the University of Melbourne, with support from The Ian Potter Foundation, The Ross Trust, Trawalla Foundation, The Rendere Trust, Isaacson Davis Foundation, Coniston Charitable Trust and Angela Whitbread.