

# First action plan in 25 years aims to save Australia's snakes and lizards from extinction

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*Morelia oenpelliensis*. Credit: Stewart Macdonald.

The status of Australian snakes and lizards has deteriorated significantly over the past two decades, with the number of species assessed as threatened nearly doubling from 1993 to 2017.

Now, a team of scientists, led by Monash University researchers, has developed a roadmap to stop the decline with a comprehensive plan titled *The Action Plan for Australian Lizards and Snakes 2017*, published by CSIRO Publishing. It represents the consensus of 44 experts in the conservation of Australia's reptiles.

"More than 96% of Australia's 1020 species of [lizards](#) and snakes are found nowhere else in the world," said Action Plan lead contributor Associate Professor David Chapple, from the Monash University School of Biological Sciences.

"Australia is a global hotspot of reptile diversity, hosting around 10% of the world's [snake](#) and lizard species.

"Yet their conservation status has not been assessed for more than 25 years. During this time we have seen the first documented extinction of an Australian reptile species, with a further two now considered Extinct in the Wild."

The number of threatened species has doubled, up from 32 to 68 from 1993 to 2017.

Associate Professor Chapple said the number of described species had increased by 38% over the past 25 years, with many more yet to be described, or discovered.

Squamate reptiles (lizards and snakes) are one of the most diverse terrestrial vertebrate groups in Australia. They are iconic, and play a pivotal role in most Australian ecosystems.

Action Plan contributor Dr. Reid Tingley, also from the Monash School of Biological Sciences, said the biggest conservation challenge to the Australian lizards and snakes was a lack of knowledge—of the number

of species that actually occurred in Australia, of the threats facing each species, of their population size and trends, and of their conservation status.

"This lack of knowledge is not simply an academic imperfection, but also reflects that Australian society as a whole has limited awareness of the distinctiveness and wonder of Australia's snakes and lizards, of their threats and of the decline of many species."

"This Action Plan, which is supported by the International Union for the Conservation of Nature (IUCN), highlights that the leading threats to Australian lizards and snakes are [habitat loss](#), invasive plants and animals, altered fire regimes, climate change, and illegal collecting," Dr. Tingley said.

"It will provide conservationists and resource managers with the most up-to-date evaluations of the conservation status and management needs of the 807 species of lizards and 213 species of snakes currently recorded from Australia."

The plan was developed through workshops in Perth and Melbourne involving a large group of reptile biologists and threatened species specialists, undertaking the first comprehensive assessment of all Australian lizard and snake species.

Worryingly, the Action Plan highlighted that fewer than half (41%) of the species now listed as threatened by the IUCN are currently listed as threatened under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act). Any lag in listing these species under Federal environmental legislation could hinder the development of coordinated conservation and recovery actions.

Contributing author Professor John Woinarski, from Charles Darwin

University, said: "only ten of the current EPBC Act listed snake and lizard species have had recovery plans, and most of these plans have now lapsed."

"There is very little direct monitoring of threatened lizard and snake species in Australia, meaning much key information required for conservation status assessment, particularly of [population size](#) and its trends, still remains unknown or poorly known," he said.

Fellow Action Plan contributor Dr. Nicola Mitchell from the University of Western Australia said knowing which species of lizards and snakes were under threat of decline and loss was the first, critical step towards their conservation.

"Effective conservation requires funding for management, monitoring and research, and prevention of further damaging actions such as land clearing," she said. "Simply by producing an accurate list of the threat status of our reptile fauna we've made major progress toward ensuring funding gets to where it is most needed."

The Action Plan makes several key recommendations including:

- targeted taxonomic research to describe the substantial number of known, but undescribed species;
- targeted research and monitoring of poorly known (Data Deficient) and threatened species;
- and rapid translation of the IUCN assessments into EPBC Act listings.

The Plan calls for a substantial increase in funding to develop coordinated, conservation and recovery actions to improve the outlook for Australian lizard and snakes. It recommends national assessments of the Australian lizard and snake fauna be conducted every ten years to

monitor the effectiveness of these recovery actions.

CSIRO Books Publishing Director Briana Melideo said The Action Plan for Australian Lizards and Snakes 2017 was a critically important, timely and comprehensive assessment of the [conservation](#) status of Australian squamates.

"We are delighted to have published this significant book, and know that it will increase both knowledge and awareness, while also helping to inform decisions to better manage and protect these [species](#)," she said.

Provided by Monash University

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