

European newts invade Australia

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Smooth newts (*Lissotriton vulgaris*). Credit: Museum Victoria

Once confined behind pet shop windows, the smooth newt (*Lissotriton vulgaris*) – a 'controlled pest animal' in Victoria – has made a new home in Melbourne's peri urban fringe.

Newts are aquatic amphibians that occur almost exclusively in the northern hemisphere, but in the scientific journal *Biological Invasions*, scientists from the ARC Centre of Excellence for Environmental Decisions (CEED) and the Victorian Department of Environment and Primary Industries (DEPI) have documented the first instance of a [newt](#) species establishing in the wild in Australia.

"Some of the sites where we have detected newts are quite far apart, so

we suspect that the species has spread considerably, and has established itself in more areas than our study has revealed," says Dr Reid Tingley of CEED and The University of Melbourne.

"The smooth newt was available in the pet trade for decades before the Victorian government declared it a 'controlled pest animal' in 1997," says Dr Tingley. "This invasion therefore likely originated from the release or escape of captive animals."

Dr Tingley says as this is the first newt species found in the wild in Australia, the researchers cannot yet say how widely the species will spread or what sort of impact it will have on native wildlife.

"However, based on where they live in Europe, we suspect they're capable of persisting and reproducing in many areas of southern Australia," says Dr Tingley.



Smooth newts (*Lissotriton vulgaris*). Credit: Museum Victoria

"In Europe, smooth newts live in woodlands, meadows, and a range of disturbed habitats, and so they can easily adapt to many different types of environments. Knowing that the climate of south-eastern Australia is similar to the species' native range adds to the concern."

The smooth newt preys on invertebrates, crustaceans, and the eggs and hatchlings of frogs and fish – and scientists fear it may prey upon, and compete for food with, a wide range of Australian freshwater species.

Closely related species to the smooth newt also carry chytrid fungus – a pathogen that has caused widespread decline in Australian frogs, the

researchers say.

Department of Environment and Primary Industries (DEPI) Principal Officer, Invasive Animals, Andrew Woolnough says preliminary testing showed that the newts possessed very low levels of a toxin not naturally found in the Australian environment.

"However, DEPI believes these levels do not pose a significant threat to other wildlife," Dr Woolnough says.

Dr Tingley points out that the next step is to find out exactly how far the newts have spread. "This is crucial as it'll determine what we should do – we may be able to eradicate them if they're in small numbers, but if they've spread quite far, we may have to focus on limiting them to their current extent."

"It's cheaper and more effective to act quickly, rather than waiting to see what their impact will be."

The study also highlights the importance of stringent pre-border biosecurity, notes Dr Tingley. "Smooth newts have been present in Australia for quite some time, but stopping non-native species from getting into the country in the first place is even more cost-effective than trying to deal with them after they have been introduced."

Anyone who suspects they have found an invasive pest animal can call the DEPI Customer Service Centre on 136 186.

The study "European newts establish in Australia, marking the arrival of a new amphibian order" by Reid Tingley, Andrew R. Weeks, Adam S. Smart, Anthony R. van Rooyen, Andrew P. Woolnough, and Michael A. McCarthy was published in *Biological Invasions*.

More information: "European newts establish in Australia, marking the arrival of a new amphibian order." Reid Tingley, Andrew R. Weeks, Adam S. Smart, Anthony R. van Rooyen, Andrew P. Woolnough, Michael A. McCarthy. *Biological Invasions*, May 2014.

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