

Surprise discovery of two new—and very loud—frog species

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Slender Bleating Tree Frog. Credit: H.B. Hines.

Scientists from the University of Newcastle, Australian Museum, South

Australian Museum, and Queensland National Parks and Wildlife have found and described two new, very loud frog species from eastern Australia: the Slender Bleating Tree Frog, *Litoria balatus*, and Screaming Tree Frog, *Litoria quiritatus*.

Published today in *Zootaxa*, the newly described Slender Bleating Tree Frog is present in Queensland, while the Screaming Tree Frog occurs from around Taree in NSW to just over the border in Victoria.

Scientifically described with the help of citizen scientists and their recordings through the Australian Museum's FrogID app, the new frog species were once thought to be one species, the Bleating Tree Frog, *Litoria dentata*.

Australian Museum herpetologist and lead scientist on the groundbreaking FrogID project, Dr. Jodi Rowley, said that the Bleating Tree Frog is well known to residents along the east coast of Australia for its extremely loud, piercing, almost painful call.

"These noisy frog bachelors are super loud when they are trying to woo their mates," Rowley said.

The scientists analyzed many calls submitted to the FrogID project from across Queensland and NSW to differentiate between the calls.

"Our examination revealed that their calls differ slightly in how long, how high-pitched and how rapid-fire they are. The Slender Bleating Tree Frog has the shortest, most rapid-fire and highest pitched calls," Rowley explained.

Chief Research Scientist of Evolutionary Biology, South Australian Museum, Professor Steven Donnellan said that genetic work was the first clue that there are actually three species.

"Although similar in appearance, and in their piercing calls, the frogs are genetically very different. I'm still amazed that it's taken us so long to discover that the loudest frog in Australia is not one but three species," Professor Donnellan said.

"How many more undescribed species in the 'quiet achiever' category are awaiting their scientific debut?"

The three species vary subtly in appearance. The Slender Bleating Tree Frog, as its name suggests, is slender in appearance, and has a white line extending down its side, and males have a distinctly black vocal sac.

The Screaming Tree Frog isn't nearly as slender, doesn't have the white line extending down its side, and males have a bright yellow vocal sac. In the [breeding season](#), the entire body of males of the Screaming Tree Frog also tend to turn a lemon yellow.

The Robust Bleating Tree Frog is most similar in appearance to the Screaming Tree Frog, but males have a brownish vocal sac that turns a dull yellow or yellowish brown when fully inflated.

Professor Michael Mahony of the University of Newcastle's School of Environmental and Life Sciences—who over his long career has developed a cryopreservation method, the first genome bank for Australian frogs—said the three closely-related species are relatively common and widespread.

"They are also all at least somewhat tolerant of modified environments, being recorded as part of the FrogID project relatively often in backyards and paddocks, as well as more natural habitats," Professor Mahony said.

Dr. Rowley noted that these new frog species brings the total number of

native frog species known from Australia to 246, including the recently recognized Gurrumul's Toadlet and the Wollumbin Pouched Frog.

"The research and help from our citizen scientists highlights the valuable contribution that everyone can make to better understand and conserve our [frogs](#)," Rowley said.

More information: J. J. L. ROWLEY et al, Two new frog species from the *Litoria rubella* species group from eastern Australia, *Zootaxa* (2021). [DOI: 10.11646/zootaxa.5071.1.1](https://doi.org/10.11646/zootaxa.5071.1.1)

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