

New toad species found in Cape

Silent toad from peninsula is now a separate species and three new species in the genus have been described.

KAREN WATKINS

They thought it had a wide breeding area, occurring on top of high peaks, from the mountains at Riviersonderend through the Kleinriviers, Du Toitskloof and the plateau on Table Mountain.

Rose's mountain toadlet (*Capensibufo rosei*), named after herpetologist and naturalist Walter Rose (1884 to 1964) was thought to be one species. All this changed in February when three new species were described in this group.

What makes this frog unusual is that two of the new species are the only ones in southern Africa that do not call. The reason – they lack eardrums and are most likely mute.

Professor Krystal Tolley, South African National Biodiversity Institute, says this is not the only challenge. The frog is small, the size of a R2 coin, it's cryptically coloured and lives in open fynbos. Most significant is that it's unable to call to attract a mate.

Lakeside herpetologist Marius Burger explained how the toadlets go about the business of mating, saying that instead of calling, male toads have a mass assemblage in small, shallow pools around full moon at the end of August.

"Females join them and then it's like a massive orgy as they quietly climb over each other and do their thing," he says.

Scientists have studied the toadlets since 2008 when Professor Tolley and John Measey of the centre for invasion biology at Stellenbosch University searched for these toads at historic breeding sites. They had no joy except for one place in the Silvermine nature reserve and another in 2010 in the Cape of Good Hope Nature Reserve. They were delighted as there were no historic records of these toadlets in these areas.

However, they and other conservationists and scientists, were concerned that Rose's mountain toadlet could become extinct. They say that over half of frog species are in decline, that amphibians as a group are more threatened than any other vertebrate class, with about one third being Red Listed.

This is where UCT student Francois Becker stepped in. He set out to search for the frog. But how could he do this, it has no call?

Mr Becker says he used a technique called capture-mark-recapture. Once he found a toad, he would inject it with a dye beneath the skin on its legs, a different colour each day for several days.

He then calculated how many animals there were. At the three breeding sites, there were only about 3 000 toads - "Which means they're under considerable threat of extinction," he says, adding that they are so rare that their location is a highly guarded secret.

Only two species of mountain toadlets were known: Rose's moun-



■ Rose's mountain toadlet (*Capensibufo rosei*) is one of two new species in southern Africa that does not call.



■ Female toadlet surrounded by eggs in a shallow breeding puddle.



■ Dye is injected beneath the skin, a different colour each day for several days.

tain toadlet and Tradouw Mountain Toadlets (*C. tradouwi*) and despite many people having looked at them for many years, no major differences have been noted. This all changed with recent DNA tests showing that what used to be called Rose's Mountain toadlet, was actually four different species. These were officially described in February this year:

- Deception Peak Mountain Toadlet (*C. deceptus*)
- Landdroskop Mountain Toadlet (*C. magistratus*)
- Moonlight mountain toadlet (*C. celenophos*)

"While the new species are very exciting, this means that the species still called Rose's Mountain Toadlet, is only found on the Cape Peninsula (around Table Mountain) and nowhere else," said Mr Becker.

But why go to so much trouble for a frog? "Frogs are an important species indicator of the health of our environment as their skins are very sensitive, and can indicate when water quality is poor. The frogs will become sick or even die when water is polluted. In turn, when water quality is poor it will affect us too, and this is especially relevant given the current situation where water has become a scarce resource," says Professor Tolley.

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