

WATER AND THE ENVIRONMENT

Global award for South Africa's 'frog lady'

Tony Carnie

Much like canaries in a coal mine, frogs are an early warning system when it comes to the health of aquatic environments. When they start to die or disappear, you can bet it spells bad news for the country's rivers, wetlands and freshwater areas. Report by Tony Carnie.



All forms of life need water to survive, but frogs and other amphibians are especially dependent on living spaces with healthy freshwater supplies. Dr Jeanne Tarrant – one of six global winners of the 2020 Whitley Fund for Nature awards – explains that while frogs have rudimentary lungs, they breathe primarily through their skin.

And without water to moisten their thin and highly permeable skin, most frog species would be unable to breathe in oxygen or expel carbon dioxide. The breeding cycle of amphibians is also closely tied to water. For example, their soft, jelly-like eggs have to remain moist, and most species will lay their eggs in or close to freshwater. When they hatch, the young tadpoles will spend

their first part of their lives in water.

As a result, we should be paying more serious attention to the future of amphibians, says Tarrant, considering that 41% of all amphibian species are at risk of extinction globally, making them one of the most threatened group of animals on the planet.

Tarrant, head of the Endangered Wildlife Trust's threatened amphibian programme, was one of six conservationists who was honoured in April by the UK-based Whitley Fund for Nature. The award comes with £40 000 in funding to support her quest to protect South Africa's threatened amphibians.



Dr Jeanne Tarrant, winner of the 2020 Whitley Fund for Nature award, has been honoured internationally for her work to conserve South Africa's threatened amphibians.

Tarrant, a graduate of Rhodes and North West universities, says almost two-thirds of the country's 135 frog species are found nowhere else in the world.

One especially threatened species, Pickersgill's Reed Frog, is endemic to the KwaZulu-Natal coast, where rapid expansion of sugar farms and other development has reduced the remaining kingdom of this species to a land area of only 144 km². To turn that around, Tarrant and other amphibian experts initiated a captive breeding programme at the Johannesburg Zoo to turbo-boost their dwindling numbers, along with several projects to protect their remaining living spaces. (For more information about this programme, read 'Collaborative conservation effort to save one of SA's smallest frogs' in the Water Wheel March/April 2014 (<https://bit.ly/382H5gv>).

Supported by the Whitley Fund for Nature, Tarrant's team will produce a 10-year conservation and research strategy for South African frogs. They aim to protect 20 000 ha of amphibian habitat conserving eight species. "While South Africa has excellent environmental legislation, illegal developments continue to destroy frog habitats. Our aim is to not only improve appreciation of frogs through research and education, but use our slippery friends as flagships for the wider conservation of vital freshwater and terrestrial areas that are under the increasing threat of humans," explains Tarrant.

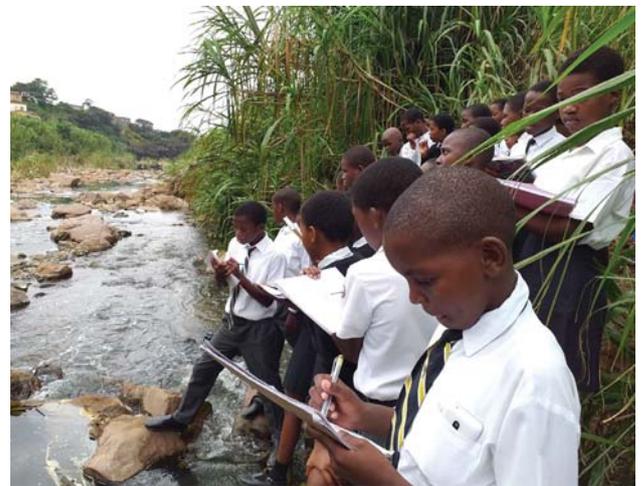
"The fact that almost half of amphibians are experiencing declines should be a massive wake-up call to humanity that all is not right with our planet – most people, however, are unaware that amphibians are even in trouble."

Edward Whitley, Founder of the Whitley Fund for Nature, said: "Jeanne is an inspiring leader who tirelessly advocates for amphibians – an often overlooked group. We hope that this award will allow her to spread her important message far and wide, and bring about real change for amphibians and their habitat through science, policy, and community education."

Tarrant ranks habitat loss as the single biggest threat to amphibians, followed by water pollution. The use of frogs in the pet trade or laboratory experiments is also an emerging threat. In some African cultures, frogs have been associated with witchcraft, often making them feared by locals.

Tarrant says her educational work aims to dispel such myths and to raise awareness and appreciation of the important role frogs play in the health of the environment and ecosystem. Tarrant, who grew up on her parent's farm in Underberg in the Southern Drakensberg, has been exposed to frogs since she was a young girl, but they only hopped into her professional life in around 2006 when she enrolled at North West University for her Masters degree, followed by her PhD and Post-Doctoral studies.

While normally presented to winners by charity Patron HRH The Princess Royal at an annual Ceremony in London, the 2020 Whitley Awards ceremony has been postponed due to the Covid-19 pandemic. The winners will receive their funding now, and there are plans to invite them to a ceremony and related events in London later this year should circumstances allow.



Tarrant's outreach and awareness work has involved hundreds of children from across the country.



Named after the herpetologist, Martin Pickersgill, who discovered the species in Mount Edgecombe in 1978, the tiny Pickersgill's Reed Frog is one of the country's rarest amphibians.