

DNA may hold the clue to protecting endangered species

November 15 2019



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A new method for analyzing DNA collected from waterways which can help identify endangered bird species has been developed with the help of researchers from The University of Western Australia.

The DNA analysis method developed also with researchers from Charles Darwin University and the Northern Territory's Department of Environment and Natural Resources provides a new way of understanding the distribution of endangered [birds](#) by analyzing DNA collected in the waterways where they drink.

The research, which will be published in *Endangered Species Research Journal*, offers new possibilities to support [conservation efforts](#) and increase understanding of birds that are scarce and otherwise hard to capture data on.

The team developed a probe to locate DNA in [water samples](#) of the critically endangered Gouldian Finch (*Erythrura gouldiae*), a rainbow-colored grassfinch endemic to the savanna woodlands of northern Australia.

UWA Professor Simon Jarman from the School of Biological Sciences said the researchers thought it would be hard to detect bird DNA in tropical conditions where the rate of DNA breakdown was high.

"We were also sampling from pools where the water was not flowing and there was a lot of sediment and algal and [bacterial growth](#)," Professor Jarman said.

"However we were really pleased to get reliable bird detections from our methods showing DNA can be used to detect many species from the poles to the equator."

Professor Jarman said the Gouldian Finch was a beautiful and iconic species that was endangered due to habitat loss from being hunted extensively.

"The DNA method will help to map where the finches are currently

found with great accuracy, which will help persuade people to conserve the areas where they live," he said.

The test was trialed in aviaries at the Territory Wildlife Park before [field trials](#) at the Yinberrie Hills near Katherine. Scientists from the NT Department of Environment and Natural Resources and Indigenous Jawoyn Rangers have been monitoring Gouldian finches at the Yinberrie Hills since 1996, so there was data to validate the DNA results.

A more comprehensive field trial, where protocols for sampling, storage and the DNA test will be refined, is currently underway.

Provided by University of Western Australia

Citation: DNA may hold the clue to protecting endangered species (2019, November 15)
retrieved 9 April 2024 from <https://phys.org/news/2019-11-dna-clue-endangered-species.html>

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