

The vines are drying: Scientist delivers fire warning for Australia

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Dr Andy Marshall Pic credit: Ruben Mwakisoma. Credit: University of York

A University of York scientist working to preserve forests has warned that vines that once protected vegetation from fire may now be drying into fuel.

Dr. Andy Marshall, lead investigator in a collaborative, five-year Forest

Restoration and Climate Experiment (FoRCE) study, says woody vines—called lianas—could become a [fire hazard](#) when dried by hot weather.

The study has implications for Australia's forests and ecology following the recent devastating bush fires.

Fuel for fires

"Lianas growing extensively over the top of trees actually protect forests from fire, but if they're not properly managed, dried lianas can act as fuel for fires," said Dr. Marshall, who holds joint positions at the University of the Sunshine Coast (USC) in Australia and the University of York.

"Increasing [fire](#) resulting from [climate change](#) is likely to worsen this effect because some forests will likely become too dry for lianas, leaving dried out vegetation behind for fires to spread—even up into the [forest](#) canopy.

"This is unusual for rainforest areas, but in preparation for our long-term experiments, we are hearing accounts of recent incidences of this in north Queensland, which is of great concern for forest managers.

"Forests are also vital for our planet—so when vines are stopping them from growing or contributing to fuel loads, we need to take notice."

Tree felling

They are focussing on assessing whether lianas help or hinder the recovery of forests after damage caused by tree felling or cyclones.

Dr. Marshall is well-known internationally for keeping a careful eye on threatened forests, with his research leading to the discovery of two new tree species and a chameleon species.

His most recent tree species discovery took place while on a survey expedition in the Eastern Arc Mountains of Tanzania.

"The purpose of being in that location was to survey the [environmental factors](#) that influence the amount of carbon that forests can store," Dr. Marshall said.

"We noticed this tree, which was huge, 20 metres tall, and similar to other [trees](#) in the area but the point of difference was the flowers on the particular tree."

"We managed to get a branch down and have the flowers assessed and found it was new to science.

"We are working in incredibly remote places to establish research sites, so in a way, these types of finds are almost to be expected, but we definitely don't go out searching for them.

"If forests don't have rare and threatened species, then they have less diversity which means they're less healthy, and that will have lasting impacts on the Earth. Our FoRCE research is working to get one step ahead of that."

Provided by University of York

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