

Mini choppers map rainforest weed invasions

Australia's rare rainforests, such as Queensland's iconic Daintree, could have an unexpected aerial ally in the battle against weeds – autonomous mini helicopters equipped with advanced imaging technology.



Credit: ©Stefan Hrabar/CSIRO

CSIRO recently completed trial flights near Cairns of two Project ResQu autonomous aerial vehicles to locate noxious weeds, including 'purple plague', *Miconia calvenscens*. The helicopters proved faster and more reliable than other methods used to map weeds in difficult terrain.

'*Miconia* is among the worst of a number of weeds that pose a significant threat to Australia's precious rainforest remnants,' says CSIRO Biosecurity Flagship Science Director, Dr Gary Fitt.

'Unless detected and eradicated early, they can cause irreversible damage to our native plant and animal populations.

'In the biosecurity space, effective surveillance is critical – we need to be able to detect incursions quickly and accurately.'

The helicopters were developed by robotics researchers at CSIRO in partnership with Biosecurity Queensland.

Robotics researcher Dr Torsten Merz says they are small enough to fit in the back of a van, are easy to use and operate under controlled conditions with failsafe mechanisms built-in.

Project ResQu is a 2-year, \$7M project led by the Australian Research Centre for Aerospace Automation (ARCAA) in collaboration with between the Queensland University of Technology (QUT), CSIRO, Boeing and Insitu Pacific. The project is supported by the Queensland State Government Department of Science, Information Technology, Innovation and the Arts.

Source: CSIRO

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