

New species of psychedelic mushroom believed to live in Kakadu National Park

ABC Rural / By Matt Brann

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Kakadu's unknown magic mushroom is thought to resemble *Psilocybe brunneocystidiata*, discovered in PNG in the 1970s. (Supplied: Guzman and Horak (1979), published in *Sydowia*.)

Soil samples taken from Kakadu and Litchfield National Parks in the Northern Territory have revealed traces of what scientists believe is a new species of psychedelic mushroom.

The discovery was made by Alistair McTaggart, a fungal genetics researcher at University of Queensland, who is leading a project to curate Australia's [first legal collection of native "magic" mushrooms](#).

"I was researching the distribution of another magic mushroom called gold tops, and found DNA sequences of this unknown fungi," Dr McTaggart said.

"This mushroom was discovered from DNA sequences in the soil and we can be very confident that it would produce psilocybin, a naturally occurring psychedelic compound."

Key points:

- A new species of psychedelic mushroom has been identified in the Northern Territory
- Researchers are putting together Australia's first legal collection of magic mushrooms
- Could magic mushroom research lead to better animal welfare outcomes for Australia's livestock sector?



Dr Alistair McTaggart is creating Australia's first collection of native magic mushrooms. (Supplied: Queensland Alliance for Agriculture and Food Innovation)

Dr McTaggart said it was hard to know what the mushroom would look like, but he felt "Kakadu's magic mushroom" could look like *Psilocybe brunneocystidiata*, a species discovered in the 1970s in rainforests in Papua New Guinea.

"I would love to get my hands on one, or for anyone to get their hands on one, so we can make a spore-print and then preserve its biodiversity in a herbarium."

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It is estimated there are 20 to 30 species of magic mushrooms in Australia. (Supplied: Caine Barlow)

Big future for ancient mushrooms

It is estimated there are up to 30 species of magic mushrooms in Australia, some of which are native, and some of which have been introduced.

Dr McTaggart said it was exciting to see Australian-led research into these mushrooms to potentially combat illnesses such as PTSD, major depressive disorders, addiction and eating disorders.

"I think this area [mushrooms] has so much momentum and there are industries starting to emerge, be it mushrooms for meat alternatives, medicines, bio-materials ... it's all moving really fast."



Scientists believe there is a new species of magic mushroom in Kakadu National Park. (Facebook: Kakadu Air)

He said a lot of research around psilocybin was focused on benefits for humans, but he felt its potential use in agriculture and especially animal welfare benefits was "under-explored".

"Psilocybin has use in [treating] anxiety in humans, we don't understand the effects of psilocybin on animals very well, but I think of slaughterhouses and what this could mean for the meat [processing] industry.

"I think it's a future area of research that's really fascinating," he told ABC Rural.