

Meat-eating plants stay the same on dining habits

March 11 2015, by Vicky Manley



Carnivorous plant species *Utricularia volubilis* collected from Cape Le Grand National Park, Esperance. Credit: Allen Lowrie

The manner in which a local carnivorous plant known as bladderworts (*Utricularia volubilis*) captures their meal does not influence the type of trapped algae and prey they consume, which is a method different to some other members of the *Utricularia* family, research has found.

Recent research by Polish scientists, involving WA carnivorous plant expert Allen Lowrie, examined algae and prey composition in both wild and cultivated aquatic *U. volubilis*.

"I wanted to assess whether the construction of the trap door and trigger mechanism is important in determining the composition of captured prey by comparing with previously recorded data of some other *Utricularia* species," Jagiellonian University expert Magdalene Lukaszek says.

The study follows on from Ms Lukaszek's previous research on the relationship of algae and [carnivorous plants](#) in *Utricularia reflexa*.

"I chose to focus on Australia's *U. volubilis* for my Master's thesis to determine the composition of trapped organisms in plants from both their natural environment and those cultivated in the Botanic Garden at Jagiellonian University," Ms Lukaszek says.

Utricularia are commonly referred to as bladderworts due to their bladder-like traps and botanists have recorded a wide variety of trapping mechanisms across the 200 plus species.

"*U. volubilis* has a different trap construction to some other *Utricularia* species as it doesn't have trigger bristles so I wanted to observe if this influenced the composition of captured prey," Ms Lukaszek says.



U. volubilis habitat - Cape Le Grand, Esperance. Credit: Allen Lowrie

Allen Lowrie sourced the wild Australian *U. volubilis* from wetlands near Cape Le Grand National Park near Esperance.

"Andreas Fleischmann and I collected the plants from their natural aquatic environment near Cape Le Grand and Dr Fleischmann later took them to Europe for further research," Mr Lowrie says.

Ms Lukaszek says the lab work involved dissecting the bladders and analysing the contents under a light microscope and then counting and recording the material.

The traps from the natural site in WA contained predominantly diatoms, mainly of the genus *Frustulia*.

Young traps from the [botanic garden](#) also contained mainly diatoms, xanthophytes and green algae, and the older cultivated traps, cyanobacteria.

The research found [algae](#) represented the dominant group of organisms found in the wild and cultivated [traps](#) and this was comparable to recorded data from some other *Utricularia* species.

"The study indicates that the trap construction of aquatic *U. volubilis* has minor influence in determining trapped organisms or phytotelmata," Ms Lukaszek says.

Provided by Science Network WA

Citation: Meat-eating plants stay the same on dining habits (2015, March 11) retrieved 25 April 2024 from <https://phys.org/news/2015-03-meat-eating-dining-habits.html>

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