SANBI Team Member: Ntombifuthi Shabalala
Supervisors: tbc (a university supervisor based in KZN), Mlungele Nsikani
Location: KwaZulu-Natal
Level of project: Masters
Working title: Progress towards eradication of *Hydrocleys nymphoides* in South Africa

Background

Hydrocleys nymphoides, commonly known as water poppy, is an aquatic plant that is rooted in the sediment, with leaves supported by long stolons that appear floating on the water surface. *Hydrocleys nymphoides* is characterised by fleshy, rounded to heart-shaped leaves, and cup-shaped yellow flowers with a reddish-brown centre. *Hydrocleys nymphoides* poses several threats to the functioning of dams and wetlands. Although it can reproduce sexually, vegetative reproduction is the main dispersal pathway, whereby stolons and broken stem fragments can develop into a new plant. These fragments are spread by water, machinery, boats or people into new water systems. This gives the species the ability to multiply quickly and out-compete indigenous aquatic flora. Under favourable conditions, *H. nymphoides* has the potential to completely cover the water surface and prevent the penetration of light for photosynthetic process, impacting negatively on indigenous aquatic plants.

Hydrocleys nymphoides is currently listed as Category 1a on the Alien & Invasive Species Regulations of the National Environmental Management: Biodiversity Act. Therefore, the species requires compulsory control with a view towards eradication. As such, efforts to eradicate *H. nymphoides* in South Africa predominantly using manual and mechanical methods have been on-going since 2012. This study seeks to document progress towards eradication of *H. nymphoides* in South Africa and assess whether eradication is still a viable option. Furthermore, the study will determine the extent of *H. nymphoides* distribution in South Africa and effectiveness of current and potential management techniques and evaluate the risk and impacts of the species.

This is a project suitable for students interested in invasion biology.

Key contacts

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Further Reading

Hickley KI, Kaplan H, Van Wyk E, Renteria JL, Boatwright JS (2017) Invasive potential and management of *Melaleuca hypericifolia* (Myrtaceae) in South Africa. South African Journal of Botany 108: 110–116.

Nxumalo MM, Lalla R, Renteria JL, Martin G. (2016). *Hydrocleys nymphoides* (Humb. & Bonpl. ex Willd.) Buchenau: first record of naturalisation in South Africa, BioInvasions Records 5 (1): 1–6