Long-term project sows the seed for a rare daisy's future

MCMC has cracked some of the Plains Yam Daisy's 'lifecycle code', expanded its Merri Creek populations and prepared the way for others to follow. MCMC's four year project investigating the vulnerable Plains Yam Daisy, *Microseris scapigera*'s lifecycle in its grassland habitat was funded by the Victorian Government's Communities for Nature Program.

The inconspicuous Plains Yam Daisy is unfamiliar, even to those working in its native grassland habitat. The plant's rarity and confusion with its better known cousin, the 'common' Yam Daisy or 'Murnong' has kept this plant relatively hidden until now. The Plains Yam Daisy's lifecycle in the wild is poorly documented despite the significance of Yam Daisies as a staple food plant for aboriginal people in southern Australia.

The Plains Yam Daisy is a master of disguise! In its wet grassland environment its leaves seem to impersonate those of several of its tough and toxic neighbours and the plant adapts its appearance and growth patterns to suit different conditions. The Victorian National Parks Association NatureWatch program and Friends of Merri Creek helped MCMC train and coordinate volunteers to search and monitor remnant plants at Kalkallo Common Grassland. MCMC staff also searched three other sites where the species had been previously observed. We rediscovered the species at two of these sites, mapping the population and recording details on the habitat. Approximately 200 plants were mapped at Kalkallo, 50 plants at a second site and 10 plants at a third site. However the total area occupied by these plants is less than three hectares at the three widely separated locations. No plants were found at the fourth site despite intensive repeated searches. We suspect the extended drought conditions of the early 2000s may have led to local extinction.

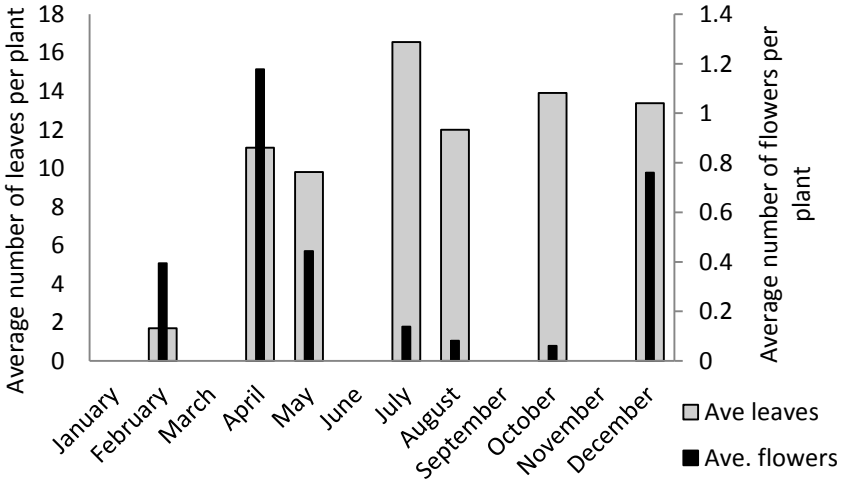
Our findings on habitat and the growth of Plains Yam Daisy helped refine our search strategies, improve management, and increase the population through direct sowing and natural regeneration.

We learnt that on the Merri Creek:

- plants go dormant during late summer dry periods and regrow rapidly following fires and autumn rains;
- flowers and seed are mainly produced in autumn with a second flowering peak in early summer;
- plants are generally short lived in cultivation but appear to have an indefinite lifespan in the wild; and
- seedlings germinate rapidly following autumn rains when they are vulnerable to slugs and trampling by kangaroos but that copper tape barriers and chicken wire cages are an effective protection.

Nearly 200 sturdy plants have survived from last years' sowing, many at Ngarri-djarrang in Reservoir – where a new population has been established. This project has also funded five ecological burns at Kalkallo and weed control around remnant plants, improving the habitat for this species and the whole Grassland ecosystem. We are writing up our notes for publication so this work can help other workers conserving similar species across Australia.

Photo: Escape! Seed heads stretch above a kangaroo exclusion cage from healthy Plains Yam Daisy sown in 2015.



The chart shows an example of data gathered by volunteers: the average number of leaves and flowers observed on Plains Yam Daisy plants in different months at Kalkallo. Nearly 100 plants were painstakingly monitored.