

Implementation of a rapid response biosecurity program to eradicate plume poppy

COUNCIL NAME

Midcoast Council

WEB ADDRESS

midcoast.nsw.gov.au

SIZE

10,053 square
kilometres

POPULATION

93,836

Overview

MidCoast Council is leading an identification, eradication and education program in response to the detection of Plume Poppy. While a novel weed species to NSW, it is recorded as being highly invasive in disturbed areas of tropical and subtropical regions. Collaboration with local community groups, landholders and National Parks and Wildlife Services has been key to Council's rapid response.

Background

As illustrated by the Generalised Invasion Curve, early detection and rapid response programs are necessary for the timely and cost-effective eradication of new invasive species.

A specimen of the potentially invasive Plume Poppy (*Bocconia frutescens*) was detected in January 2021 near Taree on the mid-north coast of NSW. The incursion appears to be the result of seed bank dispersed from a horticultural plant that has germinated after a significant bushfire disturbance in 2019.

It has been recorded as being a highly invasive weed of disturbed areas in tropical and subtropical regions throughout the world, notably in Hawaii.

It was subsequently detected in peri-urban rural residential land, as well as adjacent high-value conservation assets including National Park and Council bushland reserve. The undertaking of a weed risk assessment in the Hunter Region for *B. frutescens* highlighted the level of control for the species as 'eradicate'.

The project involved cooperation with local community landholders, National Parks and Wildlife Services and volunteer groups working on Council land. It was undertaken within the existing budget of the NSW Weed Action Program and MidCoast Council partnership. It is ongoing until eradication can be determined.

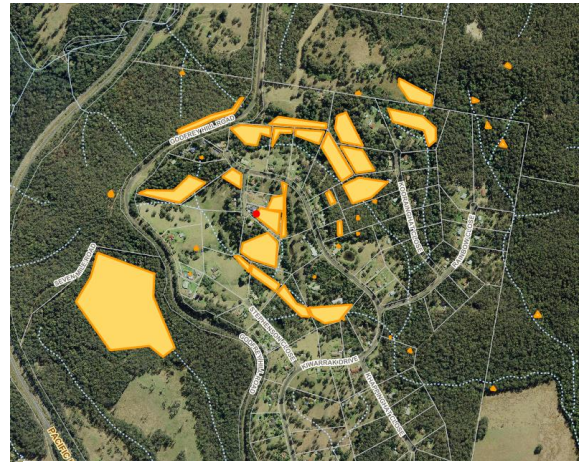
Implementation

Plume poppy was first identified in January 2021 after a specimen was presented by a local resident at a post-bushfire Landcare workshop. Photographs of the plant were sent to MidCoast Council for identification.

Council's Weed Biosecurity Team made an initial, informal assessment as *B. frutescens*, a species not known to be present in NSW. Given the plant's limited local distribution and the ensuing discovery of further plants along nearby roadsides, a rapid response program was proposed.

Weed Biosecurity Officers conducted numerous roadside inspections to monitor spread in the Kiwarra Estate, south-east of Taree, NSW. A preliminary control program was undertaken but further roadside inspections found more occurrences of plume poppy, growing vigorously and in flower, presumably as a result of favourable climatic conditions.

Once official confirmation of the genus *Bocconia* was received from the National Herbarium of NSW, a Weed Risk Assessment was conducted resulting in an outcome of eradication.



Poppy Plume detection map of Kiwarra estate

A tenure neutral inspection program commenced in the local area to determine the extent of incursions. A biennial inspection program, prior to flowering and fruiting times, will continue to be conducted until it is deemed eradicated from the Mid North Coast.

The responsibility for controlling infestations is being shared between Council and affected landholders. Education and engagement opportunities with stakeholders has occurred throughout the project and is on going.

The long viability period of seed and the possible existence of a significant seedbank in some areas will require monitoring over a period of several years before eradication is deemed successful.

Outcomes

To date, 2 inspection passes have been undertaken. The first pass covered 69 properties, over 460 hectares of land, identifying and treating more than 500 plants, plus harvest and destruction of over 50 kg of fruiting material. Plume poppy was identified on 34 of the 69 properties inspected, primarily concentrated around drainage lines.

One property owner informed the biosecurity team that a plant around 6m high had been previously cut down that appears to have been cultivated as an ornamental specimen by a previous owner. The plant was re-treated with herbicide, along with a significant infestation of juvenile plants in garden beds on the property.

The second pass of inspections saw the program expand, with the addition of 21 properties totalling more than 680 hectares, locating and treating in excess of 100 plants. Fruiting material was not observed, and this outcome highlighted the success of the biennial inspections prior to flowering.

Key Learnings

The plume poppy incursion is the result of dispersal of seed into the ash-bed following the November 2019 bushfires, given that there is no recorded occurrence of plume poppy in disturbed areas such as roadsides prior to 2021. It is possible that plants had

previously germinated and not reported due to sparse distribution, remote locations and lack of knowledge.

The project has demonstrated how effective stakeholder collaboration and shared responsibility are essential to effective weed management programs. Other factors facilitating the successful progress include:

- Early detection of the infestation while still contained to a relatively small geographic area and at low densities
- Conclusion of the disturbance event that triggered the infestation; significant competition from desirable species
- Excellent community engagement and enthusiasm for control.

Challenges were largely associated with the novel nature of the incursion and a lack of knowledge regarding the target species, including:

- Time from germination to fruiting has not been determined
- Germination conditions are largely unknown
- Specific dispersal mechanisms, including dispersal species, are not yet known
- Length of seedbank viability is unknown
- Herbicide efficacy has not been conclusively determined

The eradication attempt illustrates the in-practice principles of early intervention in the invasion process, and the efficacy of early-detection rapid-response strategies. The approach is transferable to other council areas in NSW as well as other states of Australia.



Contact

Name: Terry Inkson
Position: Strategic Weeds Biosecurity Officer
Phone: 0428463065
Email: terry.inkson@midcoast.nsw.gov.au

This project was the 2022 winner of the Invasive Species Management Award at the LGNSW Excellence in the Environment Awards