## INVASIVE PLANT FACTSHEET Wild taro (*Colocasia esculenta* (L.) Schott)

<u>Problems</u>: Forms dense stands of vegetation along shorelines that inhibit the growth of desirable native plant species and interrupts the ecology of the native landscape utilized by local fauna for food and habitat. Stands can also detach from the shore and inhibit recreational uses in waterbodies and worsen flood events.

Regulations: No federal or MS regulations prohibiting movement of this plant.

<u>Description</u>: Wild taro is a perennial plant that is often confused with Elephant's ear or arrowhead. Wild taro has downward pointed, arrowhead shaped leaves  $\leq 2$  ft. long that are supported by tall petioles ( $\leq 5$  ft.). Taro reproduces vegetatively by tubers, corms, and root suckers, and it also reproduces sexually by seed. Mature plants form a dense stand along shorelines and in shallow water.

<u>Dispersal</u>: Wild taro is native to tropical regions of Asia where it was cultivated as a food crop. The plant was intentionally spread to Pacific islands for cultivation. It has been naturalized in North and Central America and some European islands after being an intentional agricultural crop. It is now considered invasive in many of the states in the southeastern U.S. as well as in several countries in Central America. Wild taro can reproduce via the seeds and vegetative fragmentation and has invaded all areas of Mississippi.

<u>Control Strategies</u>: <u>Physical</u> – physical control methods are unlikely to work as the plant can survive a range of environmental conditions. <u>Mechanical</u> - mechanical removal of plants can be effective but is labor intensive and could produce vegetative fragments that may spread the plant. <u>Biological</u> - there are a few insects known to feed on wild taro but none that have been approved for use as biocontrol agents. <u>Chemical</u> - the herbicides 2,4-D, triclopyr, and glyphosate are effective control methods for wild taro; however, repeated applications every six-week are needed to ensure that the below-ground biomass is completely killed (Table 1).

<u>Acknowledgements</u>: This project was funded by the Mississippi Aquatic Invasive Species Council through the Mississippi Department of Environmental Quality from a grant provided by the U.S. Fish and Wildlife Service.

## References

Atkins EO and PS Williamson. 2008. Comparison of four techniques to control elephant ear. Journal of Aquatic Plant Management 46:158-162.

Cozad LA, N Harms, AD Russell, M De Souza, and R Diaz. 2018. Is wild taro a suitable target for classical biological control in the United States? Journal of Aquatic Plant Management 56:1-12.

Nelson LS, Getsinger KD. 2000. Herbicide Evaluation for Control of Wild Taro. Journal of Aquatic Plant Management 38:70–72.

Turnage, G. 2019. A Brief Introduction to Factors Affecting Water Quality, Aquatic Weed Control, Herbicide Labels, & Mixing Calculations. Mississippi State University, Geosystems Research Institute Report #5084. Pp. 22.

## Tables and Figures

Table 1. Chemical control strategies for wild taro; the first row for each herbicide is the amount of formulated product needed for commercial applications (100-gal solution), the second row is the amount of product needed for private landowners (25-gal of solution; typical ATV sprayer size); all rates are in imperial units (see Turnage 2019 for instructions on calculating ac-ft; and to gain a greater understanding of how aquatic plant management and aquatic ecosystem processes affect each other); herbicide will move to a constant concentration in the waterbody after application.

HERBICIDE*,†	SPOT RATE	BROADCAST RATE	SURFACTANT	NOTES
2,4-D	1.0%	1 gal/ac	1 gal/ac	Re-apply every
		1 qt	1 qt.	6 wks.
Triclopyr	1.0%	1 gal/ac	1 gal/ac	Re-apply every
		1 qt	1 qt.	6 wks.
Glyphosate	1.0%	1 gal/ac	1 gal/ac	Re-apply every
		1 qt	1 qt.	6 wks.

\*2,4-D rates are based on a 3.8 lb./gal formulation, triclopyr rates are based on a 3.0 lb./gal formulation and glyphosate rates are based on a 5.4 lb./gal formulation; see Turnage (2019) regarding herbicide labels and formulation determination.

<sup>†</sup>This table is meant to be an aid in mixing herbicide solutions; it is not meant to be used as a replacement for herbicide label recommendations.



Figure 1. Image of wild taro infestation (left) and individual plant. Image credit: L – C. Bargeron (Univ. GA; www.bugwood.org); R – DJ Moorhead (Univ. GA; www.bugwood.org).

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