



Iris pseudacorus in Jackson County, Florida

A Case Study in the Early Detection and Prevention of Potential Invasives

by Robert L. Farley, Planning and Landscape Architect, PBS&J

In the fall of 2004 during routine inspection of storm water facilities, Chris Connor, Maintenance Engineer for the Marianna Area of District 3, Florida Department of Transportation (DOT), discovered a dense growth of a large plant encroaching into the basins of two retention ponds. Since capacity of the retention system is compromised by such growth, Mr. Connor requested the assistance of the District Landscape Manager (DLM), Willson McBurney, to identify and recommend treatment for the infestation. Bob Farley, representative of the DLM, visited the site along Hwy 231 near Campbellton in Jackson County, Florida, and the plant was identified as *Iris pseudacorus*, Yellow flag iris. Specimen samples were collected and submitted to the Godfrey Herbarium at Florida State University for verification.



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Investigation into the origins of the infestation revealed that the plants had been installed in the landscape portion of a roadway project for Hwy 231 in the spring of 2003. Plans prepared by the landscape architect of record specified *Iris brevicaulis* to be planted, listing the common name as "Louisiana iris." *Iris pseudacorus* is routinely misidentified as Louisiana iris in the horticultural trade so the mistaken installation resulted, without detection, until the plants had become established. Since the storm water facilities were equipped with

outfall weirs, it was feared the non-native iris would escape into a downstream watershed and infest the Chipola River Basin and, eventually, the Apalachicola River.

Research into the potential for harm revealed that *Iris pseudacorus* is listed by the Plant Conservation Alliance as an invasive plant affecting natural areas in the U.S., citing documentation of major infestations in twelve states. Review of the Element Stewardship Abstract published by The Nature Conservancy's Wildland Invasive Species Team (<http://tncweeds.ucdavis.edu/esadocs.html>) also described sites in Oregon, Connecticut, and Texas with dense monocultures of Yellow flag iris. As feared, it was also noted from the Abstract that downstream propagation with high seed germination rates is likely because the seeds are buoyant and can remain so for seven months, causing dispersal by water over long distances.

It was decided that control of the infestation was best performed with an integrated management approach, combining both mechanical removal of the rhizome mat and application of an aquatic herbicide. In the spring of 2005, the ponds were drained and maintenance crews from the DOT hand dug as much of the mat as possible. The plants were removed from the site, dried and subsequently burned. This method of disposal was determined to be the most effective in preventing continued infestations. The ponds were monitored,



and when plants were observed resprouting from rhizome fragments, a herbicide application was scheduled. A 1.5% solution of a glyphosate based aquatic herbicide with surfactant was applied approximately one month later. Monitoring the effectiveness of the herbicide is ongoing to determine the need for follow-up applications.

Although *Iris pseudacorus* does not currently appear on the FLEPPC list of exotic invasives, it was determined by the DOT that the potential for future environmental damage was considerable, and that initiating control methods in the earliest

stages of infestation was the best chance for successful management. The Department intends to use this experience to alert maintenance engineers across the state to the value of early detection and treatment of potential invasive species.

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More information on *Iris pseudacorus* may be found at: <http://plants.ifas.ufl.edu/seagrant/irispse2.html>



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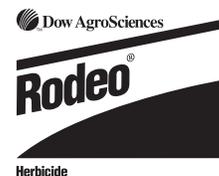
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