

Interim Report:
Florida Cooperative Agricultural Pest Survey for
Mile-A-Minute, *Mikania micrantha* Kunth, in Miami-Dade Co.

Andrew Derksen and Wayne Dixon
Florida Cooperative Agricultural Survey Program
28 December 2009

INTRODUCTION: *Mikania micrantha* Kunth (Fig. 1), mile-a-minute, is a fast growing vine on both the Federal and Florida state noxious weed lists (USDA-APHIS-PPQ 2006; FDACS-DPI 2006). It thrives in warm and humid environments, and has been observed to grow almost half a meter per week under optimal conditions. While native to Central and South America, its global range expanded to cover Southeast Asia and the Pacific during the 1940s when it was used as camouflage for airfields. As a rapidly growing climbing vine, it can smother and overwhelm other small plants and even large trees. Left uncontrolled, it can cover abandoned disturbed areas in only a few months, and then spill over into agricultural areas. It has been documented as a pest in banana, cacao, cocoanut, oil palm, rubber and rice plantations (Waterhouse and Mitchell 1998). Mile-a-minute is one of the top one hundred global invasive pests.

Mikania micrantha is a perennial vine with flowers present approximately two weeks late in the calendar year (Zhang *et al.* 2004). Seeds are dispersed by wind a month after bloom, but the plant can also reproduce vegetatively, with roots emerging at each stem node.

It can be difficult for specialists to identify and, upon casual examination, may be confused with *Mikania scandens* (L.) Willd., a close relative and native Florida plant. The heart-shaped leaves of *Mikania micrantha* are in opposite pairs along the main stem, with small, dense clusters of white flowers (Csurhes and Edwards 1998). It grows in disturbed areas, will exhibit rampant growth and has pale green or yellow-green leaves to further distinguish it from two other *Mikania* spp. On the other hand, *Mikania scandens* will be found growing mostly in moist natural areas; will exhibit restrained growth and has medium green leaves and pinkish flowers. The second native species, *Mikania cordifolia*, should not present identification problems due to its hairy leaves and large flower head (Dr. Richard Weaver, personal communication).

Populations of the weed were reported in the Redlands area of Homestead, Florida on 23 November 2009 by Keith Bradley of the Institute for Regional Conservation. Identification confirmations were made shortly thereafter by FDACS and USDA taxonomists.

METHODS: Beginning on 30 November 2009, CAPS and DPI personnel visited the four sites observed by Mr. Bradley to reconfirm his findings and to familiarize themselves with the plant in the field. Survey teams moved the initial detection area using major roads as transect lines. The teams drove on the roads or shoulders at ten to twenty-five miles per hour while looking for the presence of the distinctive white clusters of *Mikania* spp. blooms. When suspicious flowers were observed, the surveyors

examined leaf and floral characteristics and compared to high-resolution photographs of confirmed plant material. GPS coordinates were recorded for each suspect site. A plant sample for each suspect plant population was sent to Dr. Richard Weaver, FDACS-DPI botanist, for identification (Fig. 2).

As seen within the shaded blue area of Fig. 3, this survey area ran from US-1 on the far east side to SW 217th avenue on west side, and from SW 300th St on the southern edge to SW 216th St on the northern edge. Roads surveyed included: 157th Ave, 167th Ave, 177th Ave, 187th Ave, 202nd Ave, 217th Ave.; 200th St, 216th St, 232 St, 248th St, 256th St, 272nd St, 280th St, 288th St, 296th St and 304th St.

An additional survey conducted the week of 28 December 2009 will expand this area to include major roads outside of the initial survey, approaching natural areas on the east and west sides, and going as far north as SW 168th St and as far south as SW 344th St.

RESULTS: The weed was observed to be in full flower during the week of 30 November 2009. It was easy to see along the roadside from slow-moving vehicles. Twelve sites were confirmed as positive for *M. micrantha* (Fig. 3) (five additional samples pending identification). It was observed in sunny places with full sunlight as well as climbing ornamentals and fences along the roadside.

On 10 December 2009, a DPI Plant Inspector reported that a population she had identified earlier in the month was no longer in flower, and by 21 December 2009 some sites observed earlier by CAPS personnel were no longer in flower. However, one Plant Inspector reported that one site he had identified was still in bloom as late as 24 December 2009. Due to these observations, further surveys may have to be conducted along the roadside on foot.

REFERENCES:

- Csurhes, S. and Edwards, R. 1998.** Potential environmental weeds in Australia: Candidate species for preventative control. Canberra, Australia. Biodiversity Group, Environment Australia. 208 p.
- Florida Department of Agriculture and Consumer Services, Division of Plant Industry. 2006.** Rule 5B-57.007. Introduction or release of plant pests, noxious weeds, arthropods, and biological control agents. Noxious weed list. <https://www.flrules.org/gateway/readFile.asp?sid=0&tid=3023798&type=1&file=5B-57.007.doc>, viewed on 12/28/2009
- United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine. 2006.** Federal noxious weed list. USDA Animal and Plant Health Inspection Service. Washington, DC. 2 p. http://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/weedlist2006.pdf, viewed 12/28/2009.
- Waterhouse, B.M. and Mitchell, A.A. 1998.** Northern Australian Quarantine Service, Weeds Target List. Australia Quarantine and Inspection Service. Canberra.

Northern Australian Quarantine Strategy. 2nd edition. Miscellaneous Publication No. 6/98. 110 p.
Zhang, L.Y., W.H. Ye, H.L. Cao, and H.L. Feng. 2004. *Mikania micrantha* HBK in China - an overview. Weed Research 44: 42-49.



Fig. 1. A population of *Mikania micrantha* found in the Redlands agricultural production area.



Fig. 2. Lou Lodyga (FDACS-DPI/Region III Administrator), Grigorio Pena (Costa Farms LLC) and Stephen Biedler (FDACS-DPI/Plant Inspector) examine a population of *Mikania micrantha* found along the roadside.

Fig. 3. General boundaries of the November and December 2009 surveys for *Mikania micrantha* in the Redlands agricultural production area. Surveys conducted the week of 30 November – 4 December 2009 are shaded in blue. The expanded survey area to be explored the week of 28-31 December 2009 is outlined in dark blue.

