



Mikania micrantha Kunth:

Identification and Survey, 2009 - 2012

2012 Andrew Derksen DPI-CAPS

A growing menace?



- Asteraceae
- Genus *Mikania*:
 - Herbaceous or semi-woody perennial
 - Weedy vine
 - Hard to ID when compared to native species

Why it matters

- One of the top three invasive weeds worldwide
- Federal and state listed pest
- Competes for access to light
- Secretes allelopathic compounds inhibiting plant growth





Habitat

- Organic nutrients, air and soil humidity high
- When in flower
 - Easier to observe
 - Late in winter
 - May be temperature dependent
- Thrives in disturbed areas
 - Fence lines
 - Roadsides
 - Abandoned property

Description: leaf

- Leaves are opposite
- Heart-shaped
- Serrate edges
- 4-13cm in length
- 2-9cm in width
- Petiole of each leaf is 2-8cm long
- Hairless





Description: flower

- Glabrous inflorescence
- Greenish-white
- 4 per cluster
- 3-5 mm long
- Floral structure is most obvious part

Description: seed

- Pappus persistent, one row of 32-38 ivory to light amber finely barbed bristles 2-3 mm long
- Style base inconspicuous
- Apex horizontal, blackish-brown, granular
- Embryo linear; endosperm absent



Means of dispersal

- Seeds act like a parachute, allowing ease of dispersal by the wind
- Hooks allow movement by birds and mammals
- Produces roots at nodes, resulting in dense patches that are difficult to remove



Homestead, Florida

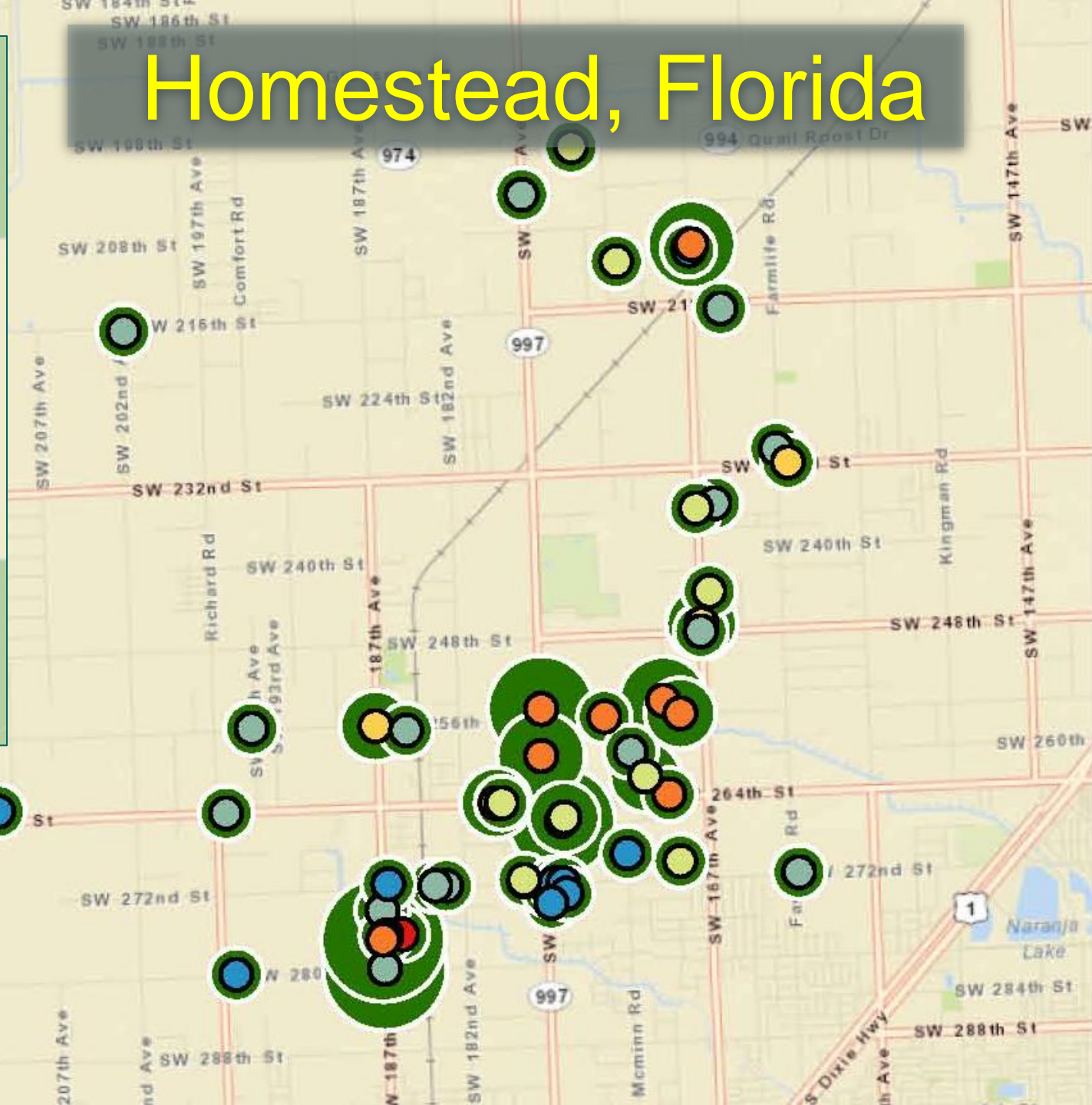
Mikania micrantha Locations

Cover Class

- 1: 5% Coverage
- 2: 25% Coverage
- 3: 50% Coverage
- 4: 75% Coverage
- 5: 95% Coverage
- 6: 100% Coverage

Radius (ft.)

- 1 - 60
- 61 - 300
- 301 - 1000
- 1001 - 5000
- 5001 - 10000



Mikania cordifolia

Photo by Shirley Denton

Native *Mikania cordifolia*



Native *Mikania scandens*



Andrew Derksen, 2009

Andrew Derksen, DPI-CAPS 2010

Mikania: floral characters

scandens



micrantha



Mikania: nodal characters

scandens



micrantha



Initial Detection

- Nov. '08: suspicious weed spotted in Homestead area, but not submitted for identification
- Nov. 23rd, '09: suspicious weed submitted to DPI for confirmation

Florida Response

Late 2009:

- Survey conducted by DPI and CAPS to obtain additional samples and delimit area
- Plant Inspection begins surveying nurseries and institutes quarantine actions
- Weed in full flower



Florida Response



Early 2010:

- FDACS and USDA begin manual suppression efforts
- Weed in full seed

Florida Response



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Late 2010:

- Plant Inspection continues survey of quarantined sites
- Abandoned nurseries determined to be significant source

Florida Response

Early 2011:

- ECISMA surveys
 - Additional personnel
 - Natural areas
- Begin herbicide treatment

Late 2011:

- Repeat!



2011 Observations

- Persists in spite of management efforts
- Anecdotal evidence suggests that it is no longer the most prominent weed in treated areas
- Has not spread as fast as initially expected
- Limited experiments suggest seed viability is low
- Abandoned nurseries remain source reservoirs for new seed

Obstacles to Overcome in 2012

- Jurisdiction
 - Some issues resolved by ECISMA for County and State parks, easements, waterways
- Still need access to private properties
 - Abandoned properties
- Funding for
 - Herbicide
 - Research

Florida Response: IFAS



- Dr. Overholt:
 - Maintains list of putative biocontrols
- Dr. Sellers:
 - Tests efficacy of herbicides

IFAS: Insect herbivores



- 4 species of leaf miners
- Mites

IFAS: Diseases

- *Septoria mikania-micranthae*
- *Cercospora mikaniicola*



How you can help

- Survey your grounds for this destructive vine, focusing on fence lines and disturbed areas
- Overnight pressed botany samples to:

Dr. Patti Anderson
Division of Plant Industry
1911 SW 34th Street
Gainesville, Florida 32608

- Call the DPI hotline to report suspicious locations: 1-888-397-1517

How you can help

- Contact your local extension office for herbicide recommendations
- If you decide to physically remove the vine, place in plastic bags for destruction by commercially licensed trash haulers or bury the rouged plants on site





Questions?



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