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Whitehead Broom Biology and Management

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UNIVERSITY OF FLORIDA

Outline

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- Whitehead broom identification
- Biology
- Background
- Experiments
- Future directions

Identification

- Whitehead broom/shrubby false buttonweed/larra flower
 - *Spermacoce verticillata*
 - *Borreria verticillata* (synonym)
- Stems:
 - Square 1st year
 - Rounded 2nd year
- Leaves:
 - Opposite to whorled
 - Pointed at both ends
 - Linear to lanceolate
- Inflorescence:
 - Glomerules in terminal or lateral positions
 - Stem continues to grow through center of inflorescence






Biology, Range, Ecology

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- Fine-stemmed and scrambling; 2.5 to 3 ft in height
 - Branching forked or in 3s
 - May root at the nodes
- Native to Central and South America as well as Africa; naturalized in FL
- Moist acid and alkaline soils
- Roadsides, construction sites, pastures, row crops
- Flowers nearly year round in PR and FL
- 49% germination of seed at harvest



Similar Species

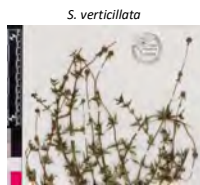
• 8 other species

- *S. densiflora* ^{a,nn}
- *S. glabra* ^{p,n}
- *S. keyensis* ^{a,n}
- *S. latifolia* ^{p,nn}
- *S. neoterminalis* ^{p,n*}
- *S. prostrata* ^{a/p,n}
- *S. remota* ^{a/p,n}
- *S. tetraquetra* ^{a,n}



S. verticillata vs. *S. neoterminalis*


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History

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- Likely introduced in the late 1940s/early 1950s
- Mole cricket biocontrol program
 - Larra bicolor*
 - Nectar sources
 - Partridge pea (*Chamaecrista fasciculata*; native)
 - White head broom



Other Nectar Sources


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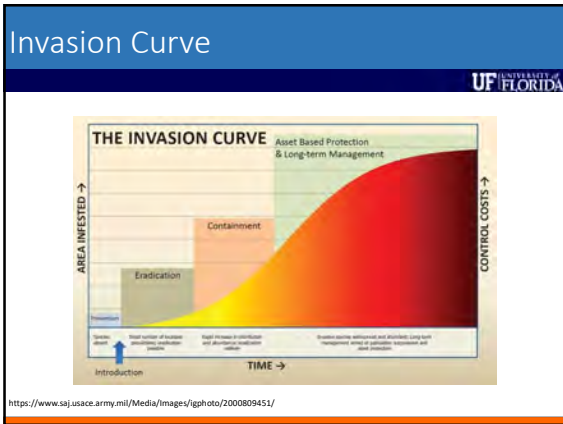
Common name	Latin name	Status	# of FL Counties
Devil's walkingstick	<i>Aralia spinosa</i>	Native	34
Blue mistflower	<i>Conoclinium coelestinum</i>	Native	65
Tall elephantfoot	<i>Elephantopus elatus</i>	Native	62
Scorpiontail	<i>Heliotropium angiospermum</i>	Native	17
Seaside heliotrope	<i>Heliotropium curassavicum</i>	Non-native	21
Sweet alyssum	<i>Lobularia maritima</i>	Non-native	3
White sweetclover	<i>Melilotus albus</i>	Non-native	51
Scarlet passionflower	<i>Passiflora miniata</i>	Non-native	2
Brazilian pusley	<i>Richardia brasiliensis</i>	Non-native	60
Pinebarren goldenrod	<i>Solidago fistulosa</i>	Native	60

History

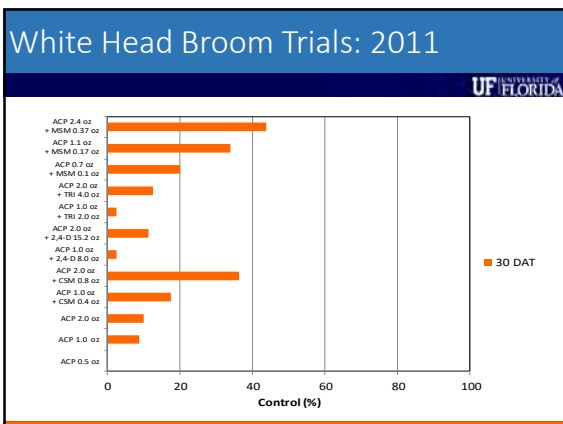
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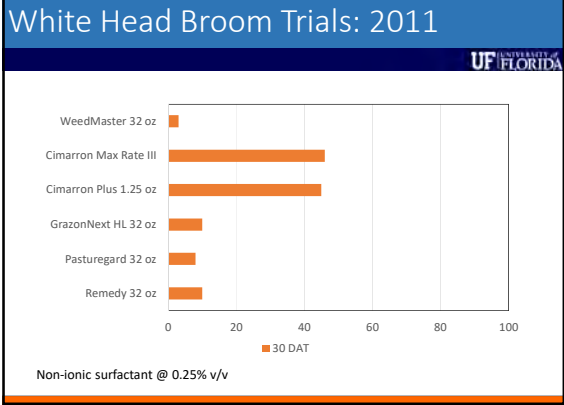
- Intentional plantings of white head broom throughout the state
- Calls about control increased dramatically in 2010
- Added to the FLEPPC Category II plant list in 2015

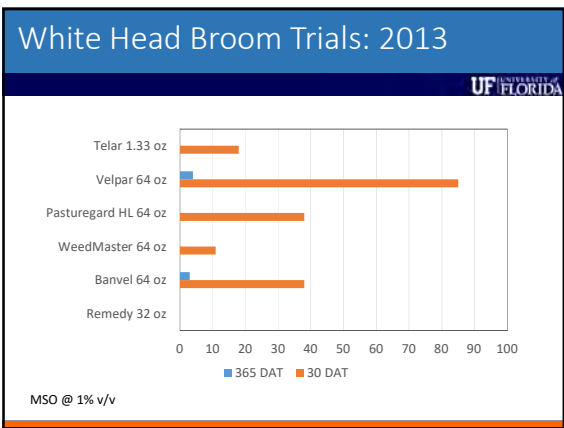


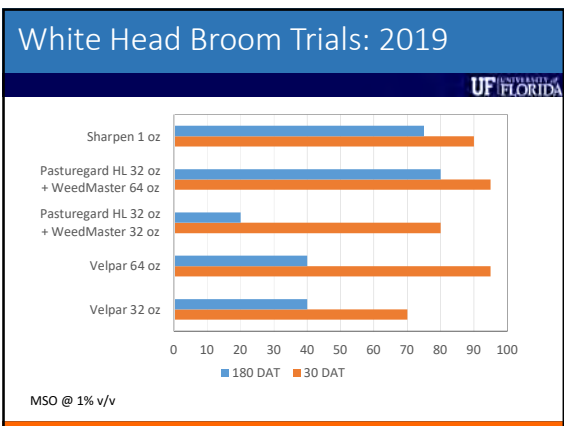


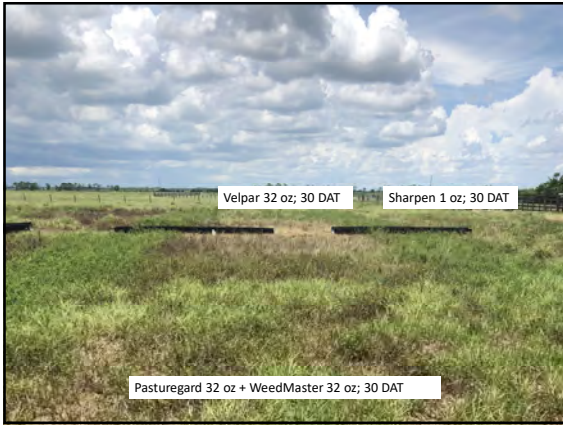


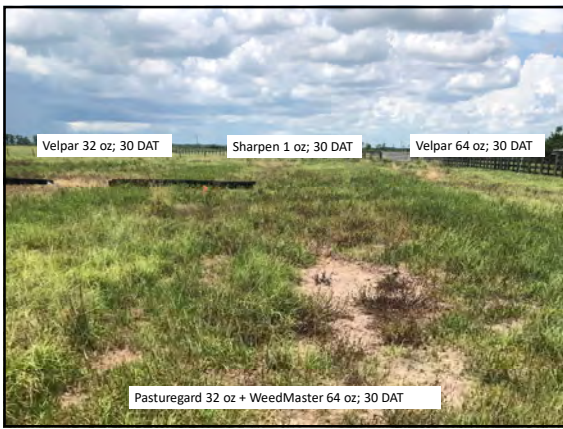


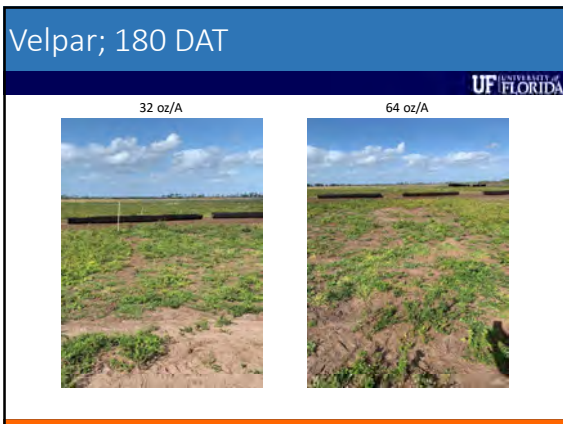


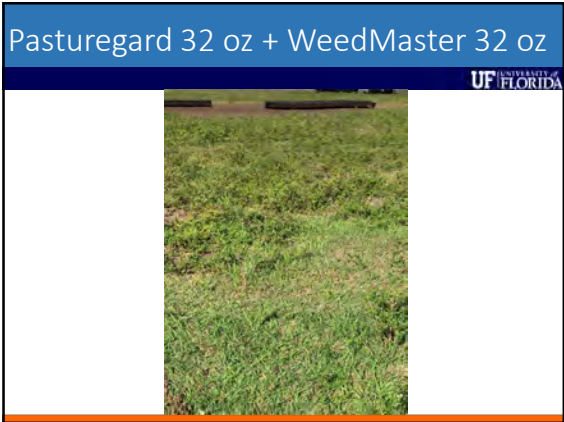
















Research Continues.....



- Sharpen
 - Additional rates
 - Bahiagrass tolerance
- Additional herbicides
 - Flumioxazin
- Is mowing prior to treatment beneficial?
- How does growth stage affect herbicide activity?
- Basic biological parameters

Credits



- Plant identification and Larra wasp pictures:
 - USF Plant Atlas
 - UF/IFAS Entomology and Nematology Department
 - UF Herbarium
- Cooperators:
 - David Shirley, Venus
 - McQueen Ranch, Punta Gorda
 - Barry and Val Lewis, Okeechobee

Webinar Schedule



- February 11 – Dr. Joao Vendramini
“Additives and inoculants to improve warm-season grass silage quality”
- March 10 – Dr. Maria Silveira
“Utilization of biosolids in forage production systems in Florida”
- April 14 – Chris Prevatt
“Searching for the bottom of the cattle price cycle”
