

Ficaria verna (Fig Buttercup) – An Emerging Weed in the Southeastern U.S.

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Weed Risk Assessment, APHIS-PPQ



Weed Risk Assessment

- Compiled in April 2015, reviewed in May 2015
- Joint effort between APHIS-PPQ and NCDA&CS
- Utilized the Weed Risk Assessment tool developed and validated by APHIS-PPQ (Koop et al. 2011)



Photo by Spencer Johnson, Invasive Plant Control, Inc.

Description

- AKA - lesser celandine, fig buttercup
- Spring ephemeral, perennial
- Heart-shaped leaves, basal rosette, yellow flowers.
- Colonizes riparian areas
- Wide native distribution (Africa, Europe, UK)



Photo by Sylvan Kaufman

Description

- Strong ability to establish beyond native range
- Shade tolerant
- Allelopathic
- Emerges before other native plants
- Pollinators visit *Ficaria* before other native plants




Reproduction

- Five subspecies, all present in the U.S.
- Sexual/vegetative reproduction
- Self-compatible
- Tubers, bulbils, seeds and small plants can move downstream.



Photo by Sylvan Kaufman


Distribution and Regulation


- Has been present in the U.S. since 1867 – introduced as an ornamental plant.
 - Naturalized in 26 states, as well as several provinces in Canada.
 - Well established in the Northeastern U.S., but reports from SC indicate that this plant is expanding.
 - *F. verna* is banned, prohibited or a state noxious weed in Connecticut, Massachusetts, Oregon and Washington.
 - Seven horticultural varieties are available in the U.S.
- 

Availability - Nursery Industry

Plant Delights Nursery, Inc.
at Juniper Level Botanic Garden

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Brazen Hussy Lesser Celandine (1)
Collarette Lesser Celandine (1)
Orange You Cute Lesser Celandine (1)
Celandine (1)



Zones:
4a (3)
4b (3)
5a (3)
5b (3)
6a (3)
6b (3)
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Bloom Time:
[Spring](#) (2)
[Winter](#) (2)

Origin:
[Southeast Europe](#) (1)
[Southern Europe](#) (2)

Leaf Color:
[Black](#) (1)
[Green](#) (3)

Results 1 - 3 of 3 for: "celandine"

Items per page: 48 Sort by: Relevance Grid View / List View  

		
Ranunculus ficaria 'Brazen Hussy' Zone: 4a to 9b Height: 4" Culture: Sun to Light Shade Origin: Southern Europe Pot Size: 2.5" pot (7.9 fl. oz/233 ml) \$13.00 More Info	Ranunculus ficaria 'Collarette' Zone: 4a to 9b Height: 4" Culture: Sun to Light Shade Origin: Southern Europe Pot Size: 2.5" pot (7.9 fl. oz/233 ml) \$13.00 More Info	Ranunculus ficaria 'Orange You Cute' Zone: 4a to 9b Height: 4" Culture: Sun to Light Shade Origin: Southeast Europe Pot Size: 2.5" pot (7.9 fl. oz/233 ml) \$13.00 More Info

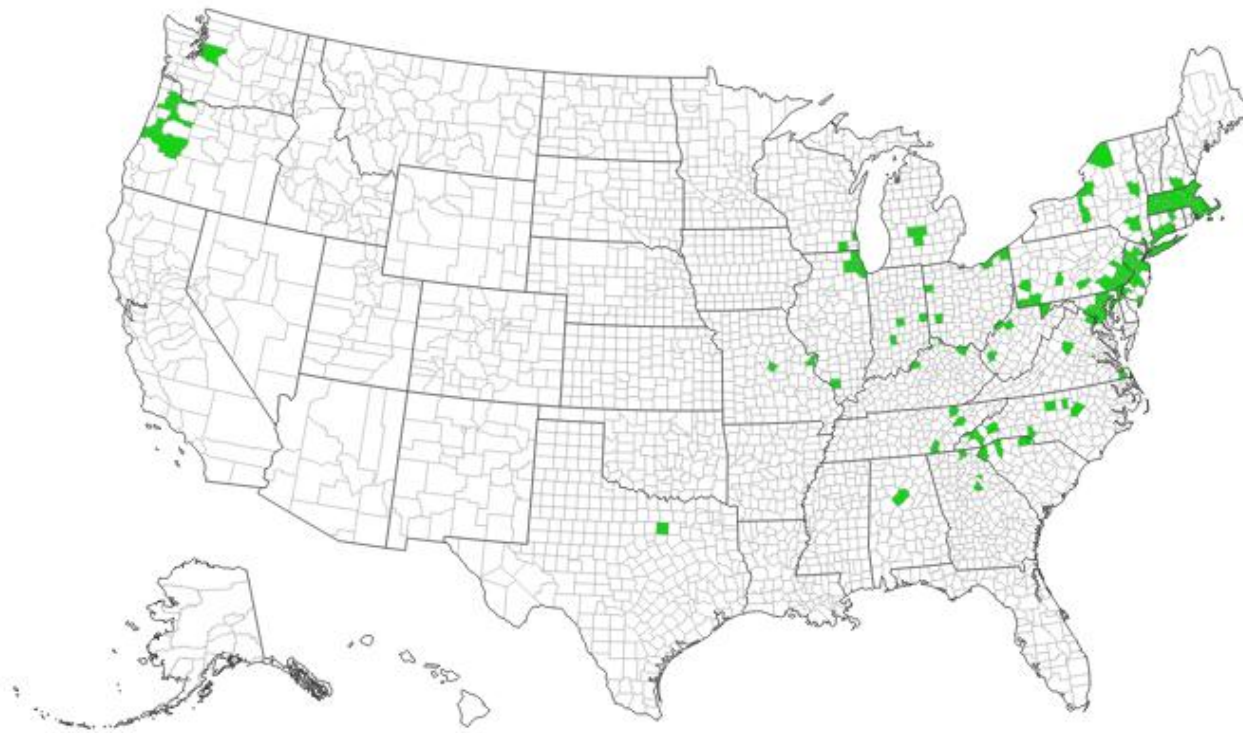
Nationwide Distribution

lesser celandine, fig buttercup
Ficaria verna Huds.

USDA PLANTS Symbol:RAFI
Invasive Plant Atlas

States **Counties** Points GIS

XLS KML GPX Shapefile
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Legend
No Data
Species Reported

Presence in NC

- First documented in April 2005 in Wake County, NC.
- Now reported in Buncombe, Chatham, Durham, Guilford, Mecklenburg, Orange and Swain counties.
- Infestations in Sandy Creek Park as well as another in Battle Park have been discovered, and volunteers are trying to eradicate the plant in those natural areas.

NC Distribution

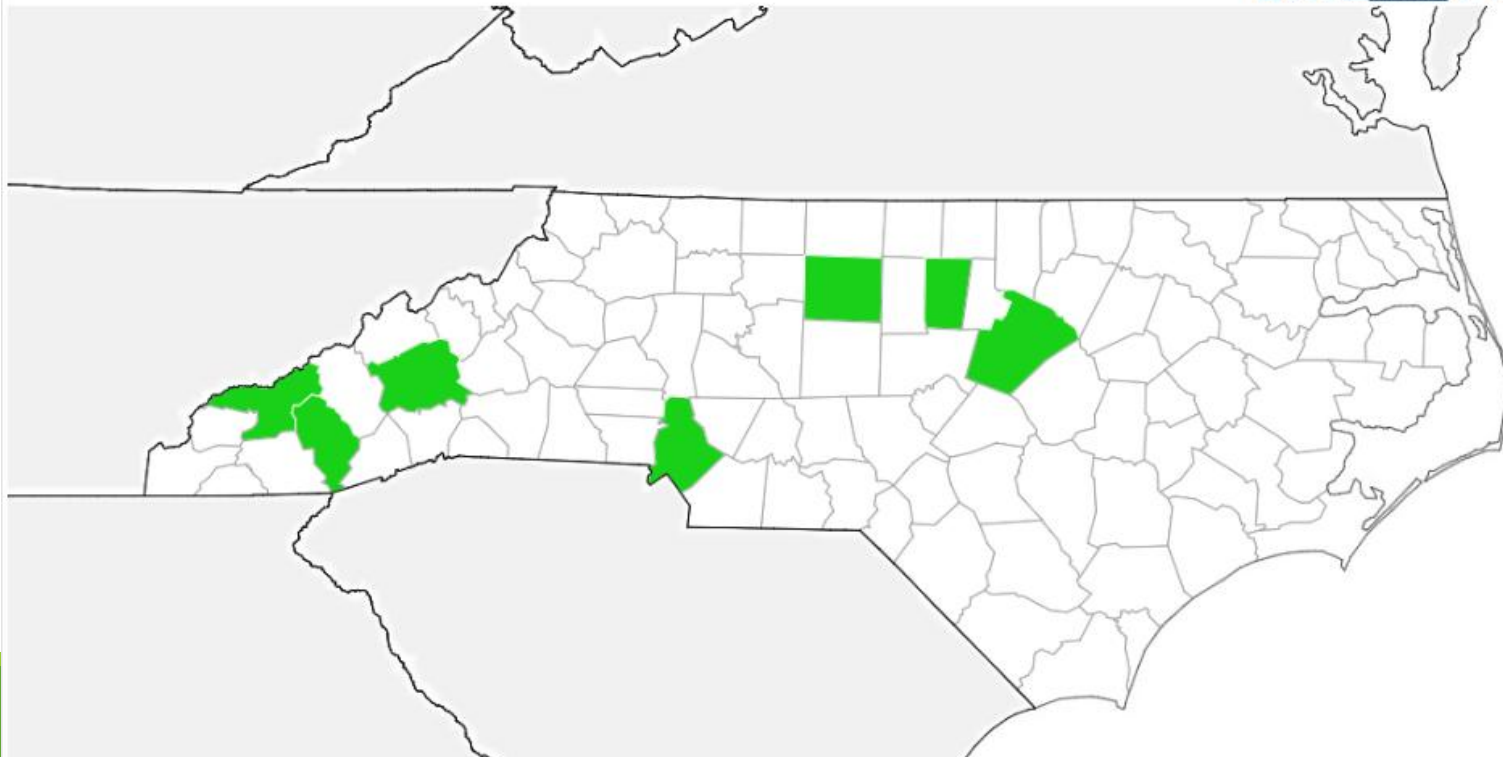
lesser celandine, fig buttercup
Ficaria verna Huds.

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NC Cases – Chowan County



- Discovered at the County Extension Office in Edenton, NC
- Intentionally planted in a constructed wetland at the office
- Often planted mistakenly for *Caltha palustris*

Photo by Bridget Lassiter

NC Cases – NC Arboretum



- Discovered at the NC Arboretum in Asheville, NC
- Reported by the Clemson University Nursery Specialist

Photo by Sarah White, Clemson University

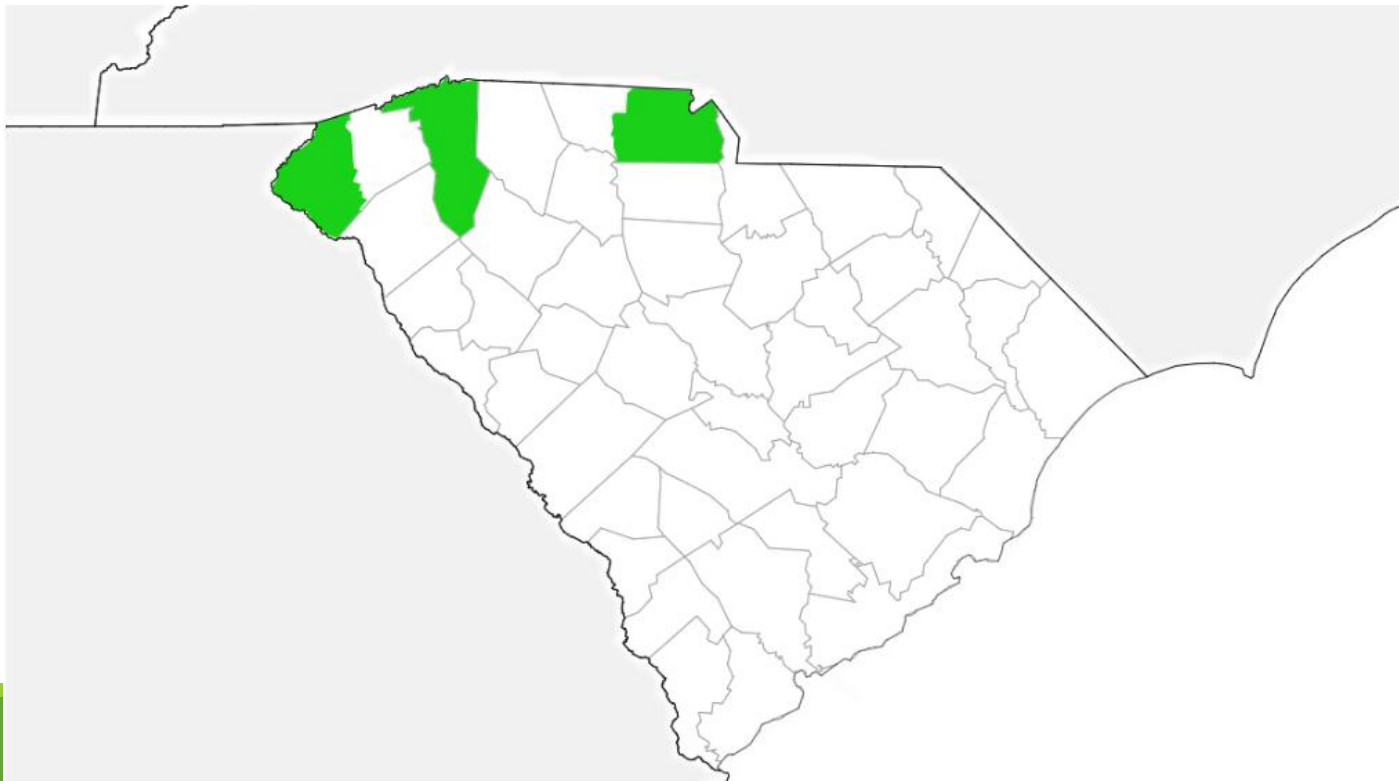
SC Distribution

lesser celandine, fig buttercup
Ficaria verna Huds.

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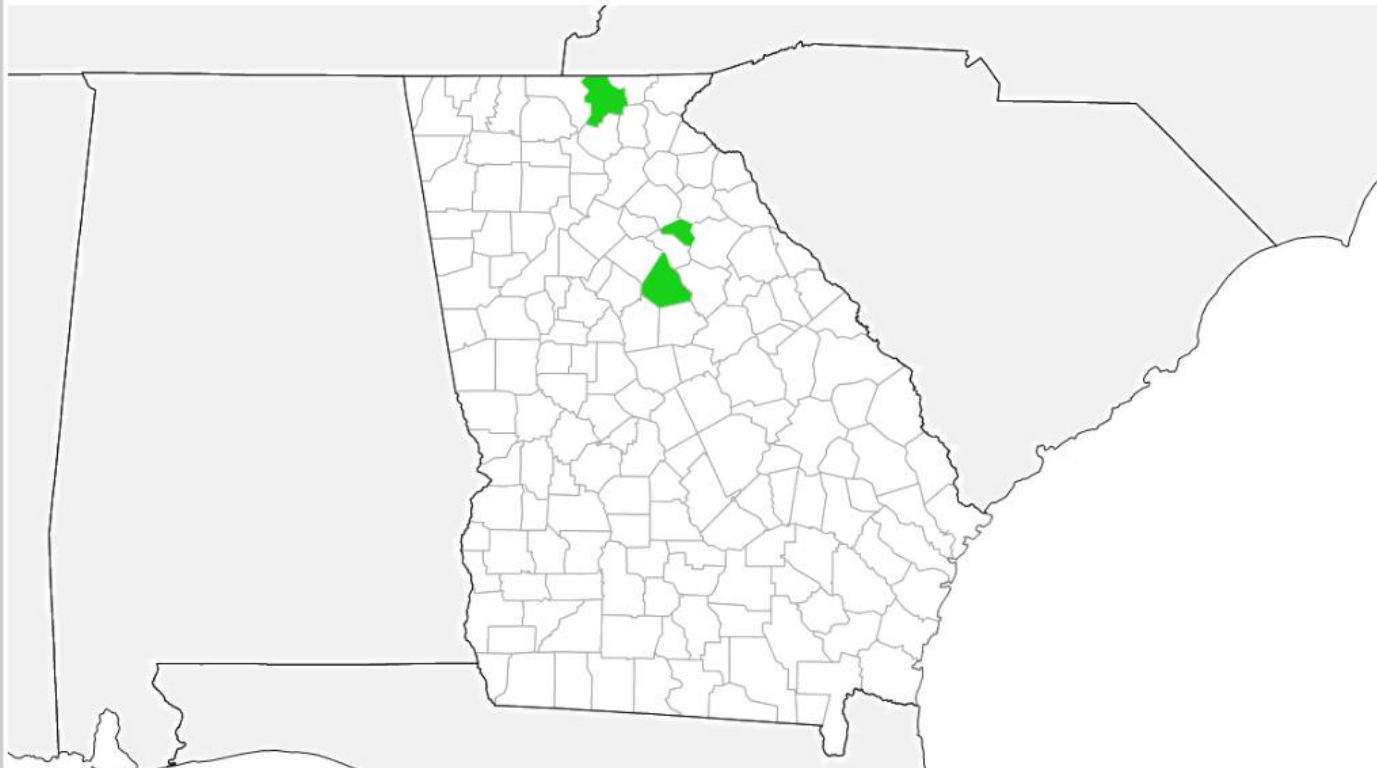
GA Distribution

lesser celandine, fig buttercup
Ficaria verna Huds.

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Impact Potential

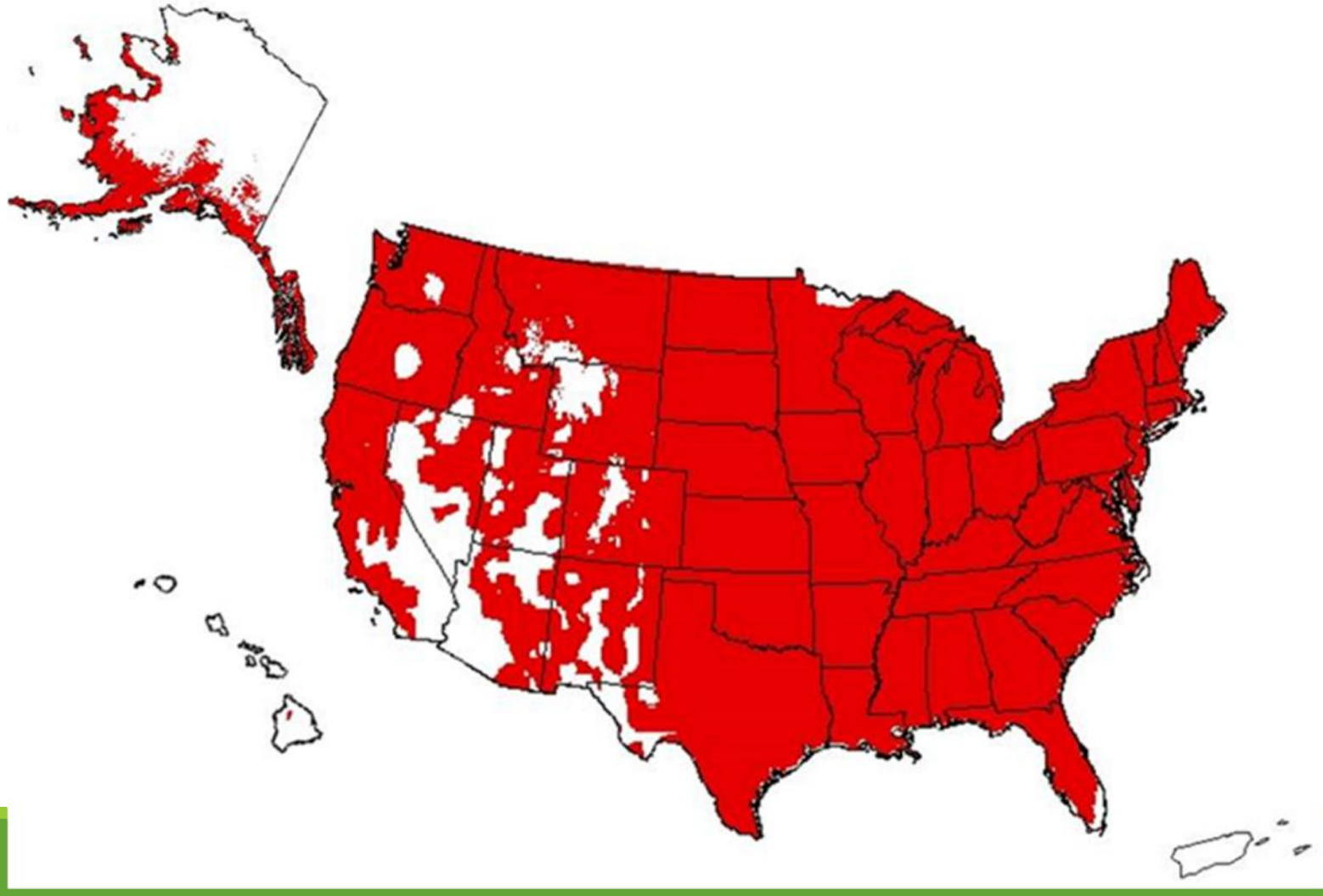
- A weed of natural and man-made systems
- Forms dense mats that exclude native species
- Alters the structure of the understory



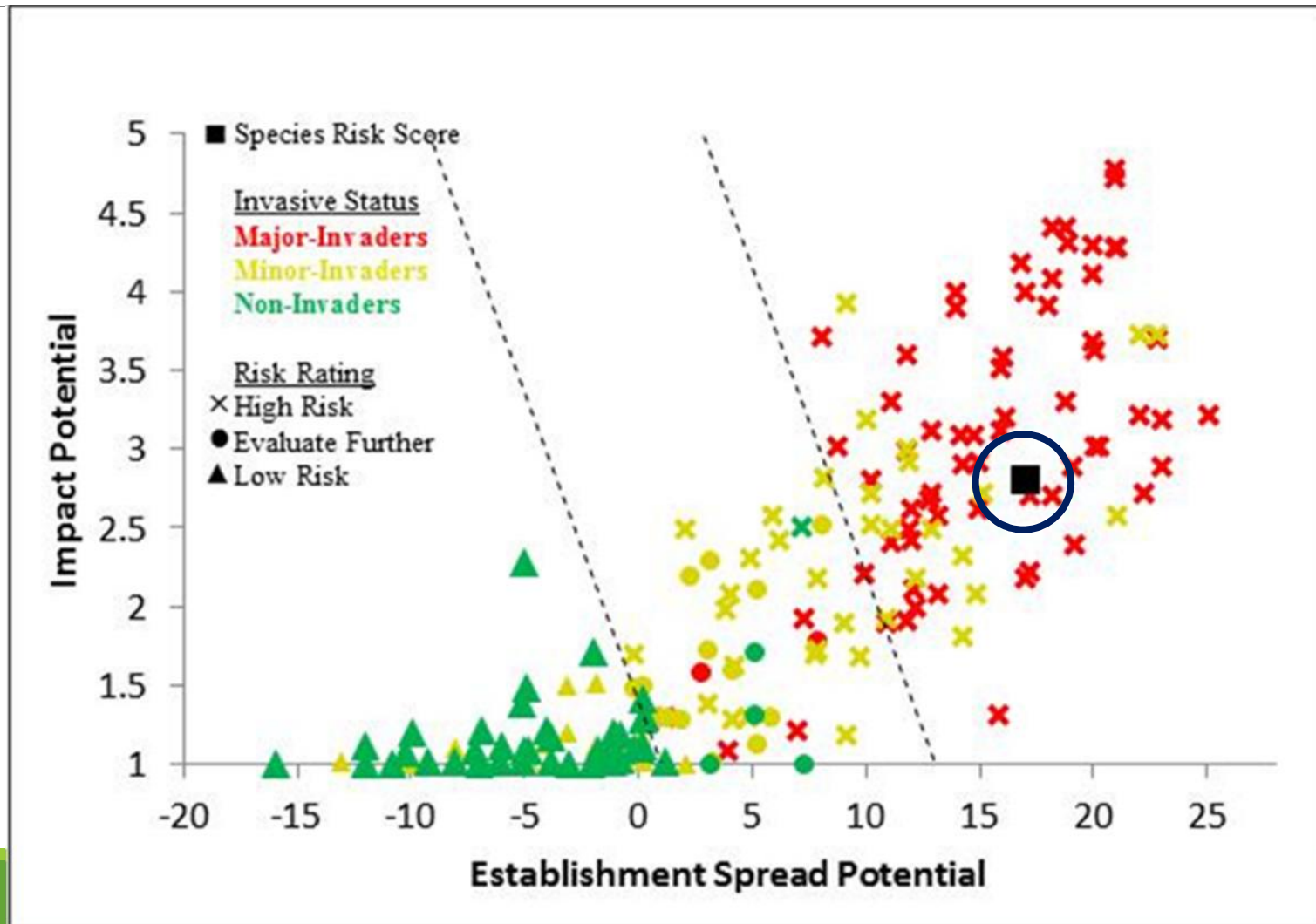
Geographic Potential

- Based on 3 climactic variables, an estimated 79% of the U.S. is suitable for establishment of *F. verna*
 - Likely overestimated since other environmental variables (soil and habitat type) may limit areas in which the species is likely to establish
 - Our calculations are based upon the distribution of this plant elsewhere.
- 

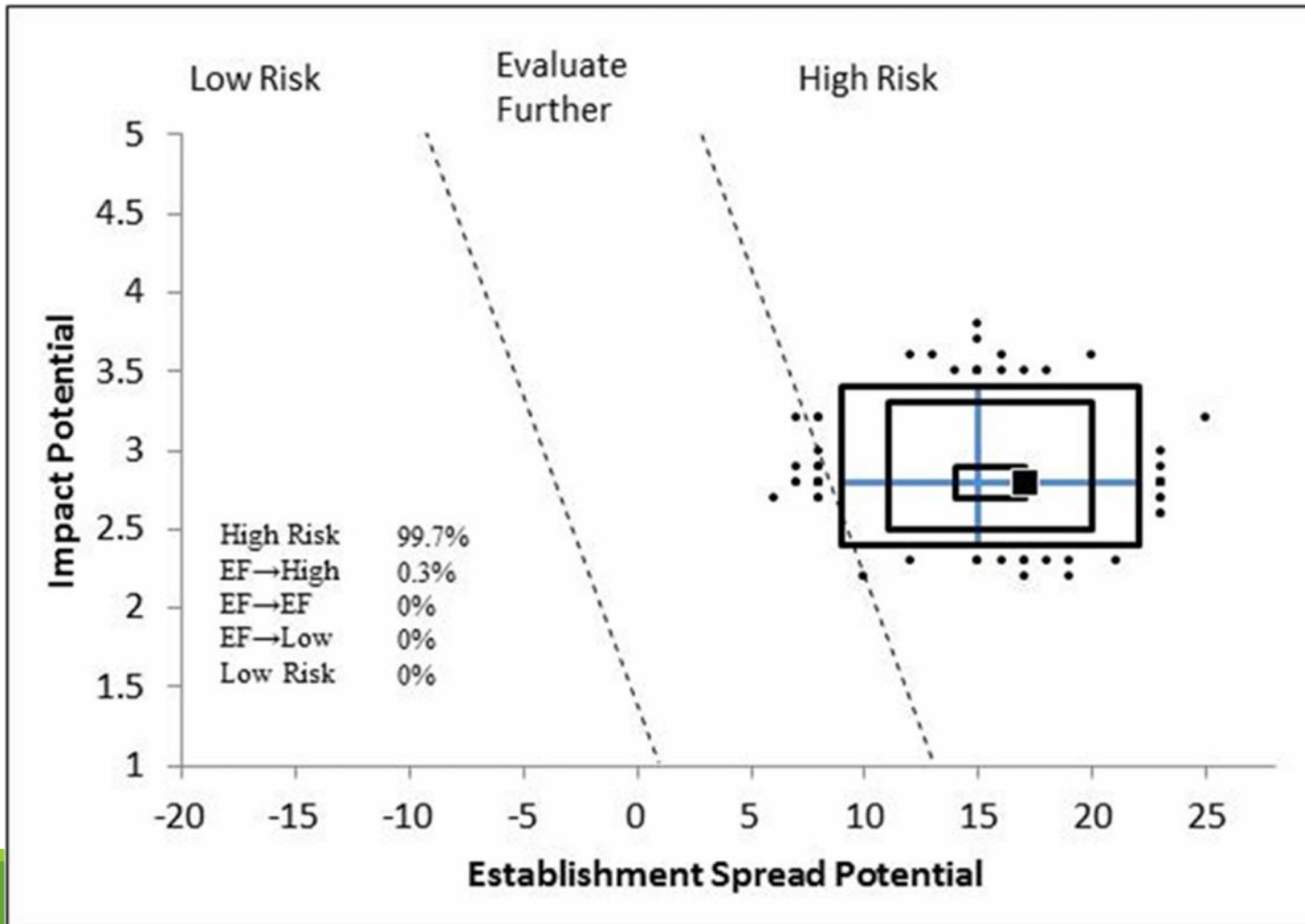
Predicted Distribution




F. Verna risk score



Uncertainty Results



Results

- The result of the weed risk assessment for *Ficaria verna* is High Risk, and our uncertainty simulation indicates that our conclusion is statistically robust
 - *F. verna* has already proven to be a significant invader that readily spreads in moist sites and outcompetes plants
 - This species is still spreading into new areas and regions of the U.S.
 - This species should be of particular concern to natural resource managers of bottomland or other moist sites because *F. verna* can form extensive monocultures that cover several acres
- 

Final WRA – Available to Public



- Plant Health**
- Program Overview
- Pests and Diseases
- Import into the U.S.
- Export from the U.S.
- International
- Manuals

Noxious Weeds Program Risk Assessments

Last Modified: Apr 2, 2015



PPQ conducts weed risk assessments (WRA) as part of its process for safeguarding U.S. agriculture and natural resources from weeds and invasive plants. A weed risk assessment is a science-based evaluation of the potential of a plant species to establish, spread, and cause harm in the United States. PPQ may initiate an assessment for any number of reasons, including: evaluation of commodity import requests, detection of a new weed in the United States, and petitions for listing from stakeholders.

Below is a list of all of the available WRAs that PPQ has conducted. They are provided for interested stakeholders and may be useful in setting local policies or informing resource managers. While most of the risk assessments were prepared by PPQ using the current weed risk assessment process (Guidelines Coming Soon), others were prepared using an older process (prior to 2010). We continue to provide these for interested stakeholders. Below, species are listed alphabetically by their scientific name. If a species has a common name, it is provided. New entries to this website are also indicated. Listings may be associated with one or two designations, noted below, that describe their current regulatory status.

- **FNW** – The species is currently regulated as a Federal Noxious Weed. For a complete list of all species regulated as Federal Noxious Weeds, see the [FNW program home page](#).
- **NAPPRA** – The species is currently Not Authorized (import) Pending Pest Risk Analysis. For a complete list of all pest plant species listed under this category see the [NAPPRA web page](#).

Reference Files


- [APHIS-PPQ Weed Risk Assessment Guidelines \(PDF – 1.3 MB\)](#)
- [Summary of WRA results \(except old formats\): \(MS Excel - 6.8 MB or PDF - 26 Kb\)](#)

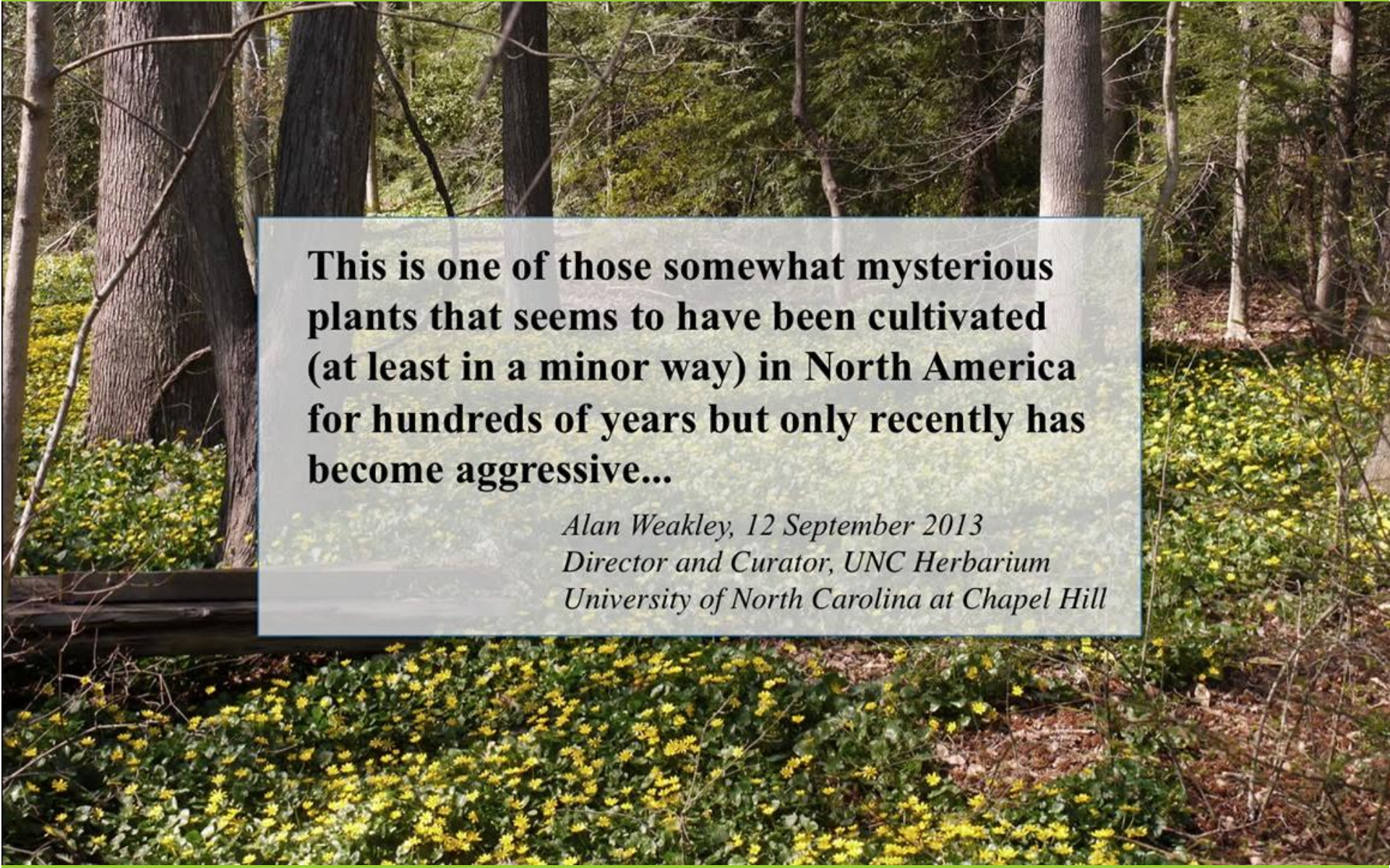
Weed Risk Assessments

- [List of Available Weed Risk Assessments](#)
(click to expand or collapse table)

Scientific Name	Common Name	PDF (Kb)	FNW	NAPPRA	Date Posted (YYYY-MM-DD)
<i>Acacia nilotica</i>	Thorny acacia	92	FNW		2014-06-06
<i>Acalypha australis</i>	Asian copperleaf	279			2014-06-06
<i>Acanthospermum hispidum</i>	Bristly starbur	420			2014-01-31

Questions, Comments & Concerns

- Should we encourage state and/or federal listing on the Noxious Weed List?
 - Have you seen this plant in your area?
 - Is this plant available in nurseries in your area?
- 



This is one of those somewhat mysterious plants that seems to have been cultivated (at least in a minor way) in North America for hundreds of years but only recently has become aggressive...

*Alan Weakley, 12 September 2013
Director and Curator, UNC Herbarium
University of North Carolina at Chapel Hill*