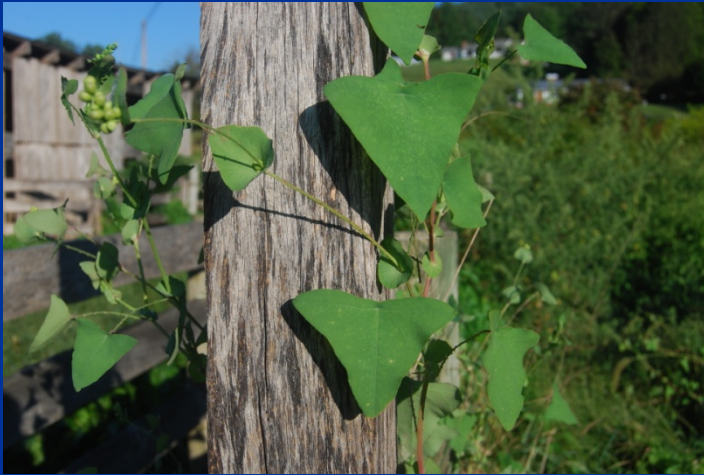


Forewarned is Forearmed!

*Strategies for Development of EDRR Capacity in N.C.*

# Weed Alert!!



Rick Iverson

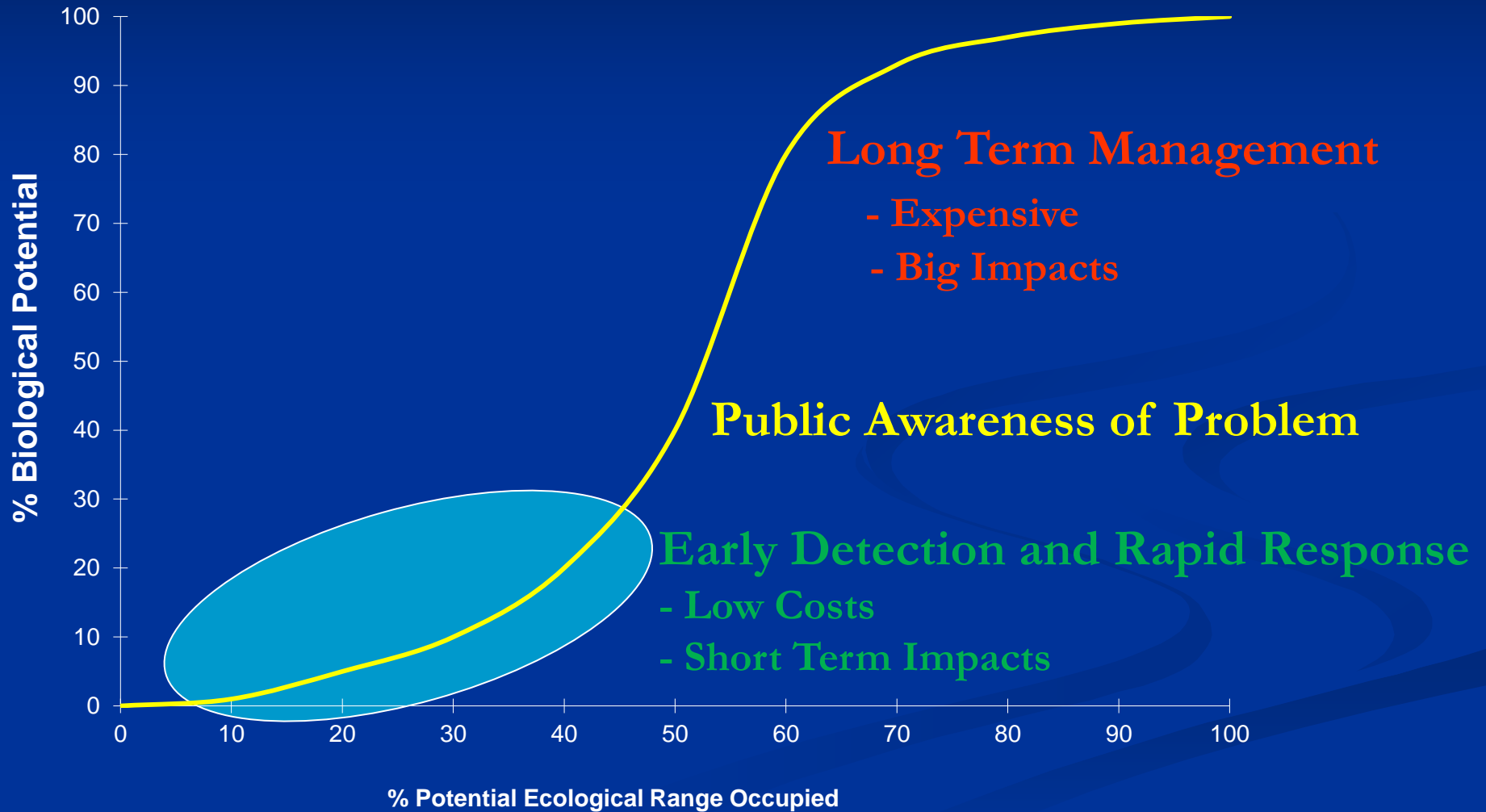
NC Dept. Agriculture & Consumer Services

NC Exotic Pest Plant Council

# Presentation Overview

- EDRR rationale and objectives
- Assumptions/characteristics of the target list
- Weed target classification
- Description of weed targets by category that are of potential importance to NC woodlands

# Rationale for EDRR



# Ultimate Objectives of EDRR

- Extend our capability to locate infestations of target species
- Prevent the establishment of target species not present
- Eradicate those infestations where it is possible to do so
- Contain and prevent the spread for those infestations where eradication is not feasible.

# The EDRR Weed Targets

- Intended to provide priorities for training
- Not all-inclusive nor of equal importance to ALL stakeholders
- Regulated species obviously listed due to their importance & fact state law prohibits sale, distribution and movement
- May not be present in NC and could cause harm
- Currently established in NC but are targeted for either *eradication* OR *containment & management*

**Species Descriptions**  
**NC Exotic Pest Plant Council**

**[www.nceppc.weebly.com](http://www.nceppc.weebly.com)**

**Select : NC Early Detection Rapid  
Response Species**

# EDRR Target Weed Categories

- Not *currently* present in NC
- Present and targeted for:
  - Eradication
  - Containment and Management

Each category contains a sub-category that identifies a target as either a regulated or non-regulated weed. (6 possible categories)

# EDRR Category Examples

<p>Presence &amp; Action</p> <p>Regulatory Status</p>	<p>Not Present (Early Detection)</p>	<p>Present (Detect &amp; Eradicate)</p>	<p>Present (Detect &amp; Contain)</p>
<p>Regulated</p>	<p>cogongrass</p> 	<p>Giant Hogweed</p> 	 <p>Mile-a-minute vine</p>
<p>Not Regulated</p>	 <p>Wavyleaf basket grass</p>	<p>Dependent on land mgrs goals.</p>	<p>Garlic mustard</p> 



# EDRR Targets

## Not present in NC - Regulated

- Cogongrass (*Imperata cylindrica*)
- British yellowhead (*Inula britannica*)
- Goatsrue (*Galega officinalis*)
- Japanese dodder (*Cuscuta japonica*)\*
- Caulerpa – Marine algae (*Caulerpa taxifolia*)
- Old World Climbing Fern (*Lygodium microphyllum*)



Scientific Name: *Imperata Cylindrica*

Common Name: Cogongrass

■ **Origin**

- Asia

■ **Introduction**

- Forage/Contaminant as packing material
- AL, FL
- Inhabits all continents of the world

■ **Impact**

- Wildfires and **ecosystem function**



**Broomsedge**



Scientific Name: *Cuscuta japonica*

Common Name: Japanese Dodder

■ **EDRR Category**

- Not present – Regulated

■ **Origin**

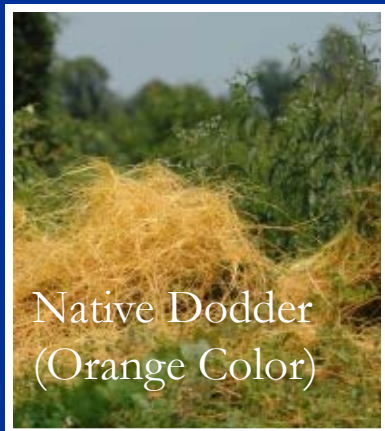
- Asia

■ **Introduction**

- Medicinal Herb; Contaminant

■ **Impact**

- Parasitizes Crops and **Native Plants**



Native Dodder  
(Orange Color)



Scientific Name: *Lygodium microphyllum*

Common Name: Old World Climbing Fern

■ **EDRR Category**

- Not Present - Regulated

■ **Origin**

- Africa, Australia, Southeast Asia

■ **Introduction and Spread**

- Florida, 1960s; Ornamental

■ **Impacts**

- Smothers Veg, **palm habitat**



# Not Present - Not Regulated

- Wavyleaf basketgrass (*Oplismenus hirtellus* subspecies *undulatifolius*)



- Native to Europe and Asia
- Introduction unknown
- Outcompetes native vegetation

# Present

## Regulated - Eradicate

- Giant hogweed (*Heracleum mantegazzianum*)\*
- Witchweed (*Striga asiatica*)
- Benghal dayflower (*Commelina benghalensis*)
- Giant salvinia (*Salvinia molesta*)\*
- Beach vitex (*Vitex rotundifolia*)
- Purple loosestrife (*Lythrum salicaria*)\*
- Small & Branched broomrapes (*Orobanche minor* & *Orobanche ramosa*)
- Tropical soda apple (*Solanum viarum*)\*
- Floating hearts *Nymphoides* (*cristata*, *peltata*, *indica*)\*



Scientific Name: *Heracleum mantegazzianum*

Common Name: Giant Hogweed

■ **Origin**

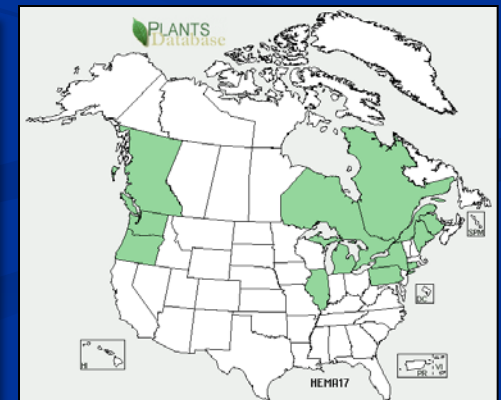
- Eastern Europe

■ **Introduction**

- Ornamental Plant

■ **Impact**

- Aggressive Competitor
- Dermal sensitizer



Scientific Name: *Salvinia molesta*

Common Name: Giant Salvinia

## ■ EDRR Categories

- Present? - Regulated

## ■ Native Range

- Brazil and Argentina

## ■ Introduction and Spread

- Novelty Aquarium and Water Garden Plant; Contaminant

## ■ Impacts

- Forms Thick Mats **on Surface of Water**





Scientific Name: *Lythrum salicaria*

Common Name: Purple Loosestrife

■ EDRR Category

- Present - Regulated

■ Native Range

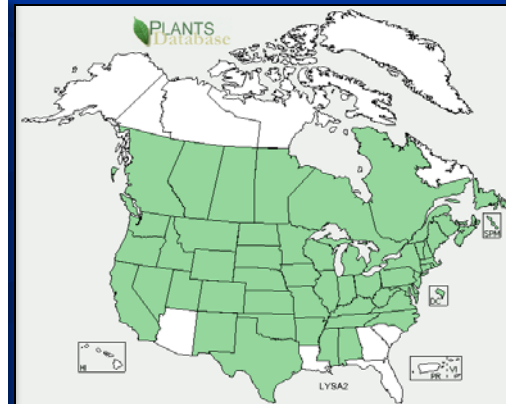
- Europe, Asia

■ Introduction and Spread

- Ornamental Plant

■ Impacts

- Outcompetes **Wetland Plants**



Scientific Name: *Solanum viarum*

Common Name: Tropical Soda Apple

■ EDRR Categories

- Present - Regulated

■ Native Range

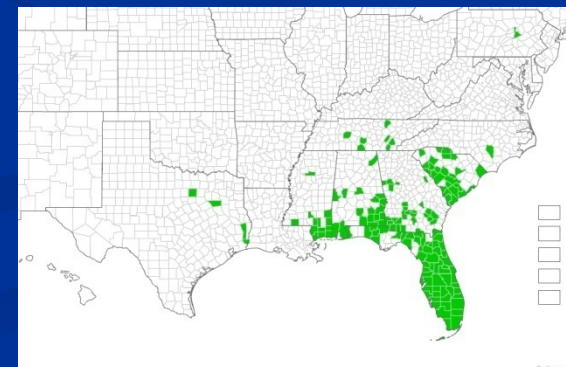
- Argentina, Brazil, Paraguay

■ Introduction and Spread

- Cattle, Manure, Hay, Seed, Sod

■ Impacts

- Forms Impenetrable Thickets; **Crowds out Forage Grasses and Native Plants**



# Scientific Name: *Nymphoides cristata*

## Common Name: Crested Floating Heart

### ■ EDRR Category

- Present - Regulated

### ■ Origin

- Asia

### ■ Introduction

- Water Garden Trade

### ■ Impact

- Crowds out Native Plants in still water



Water Snowflake  
(*N. indica*)



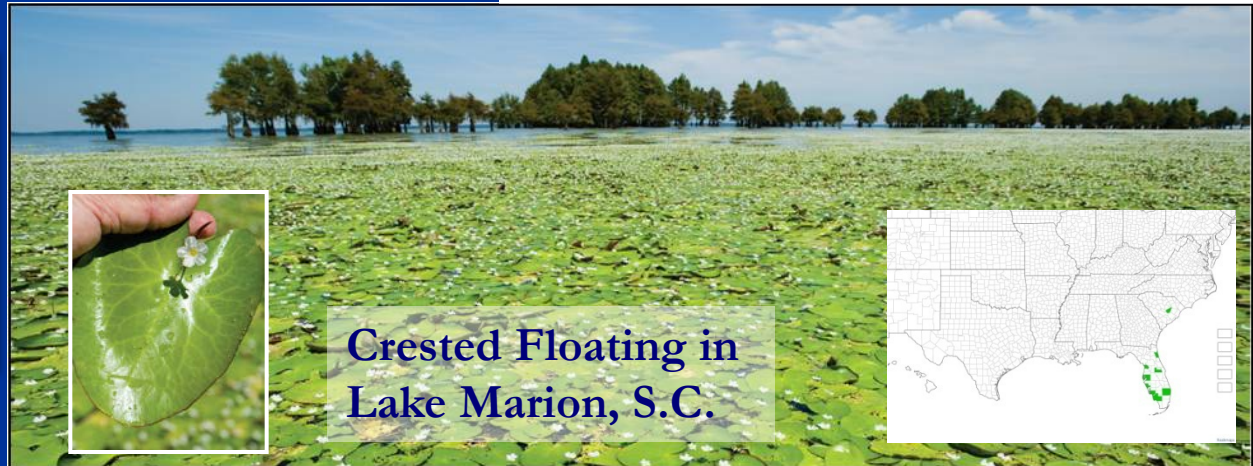
Leaf Underside  
Rough

Big Floating  
Heart  
(*N. Aquatica*)

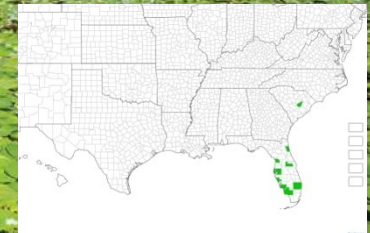


Leaf Underside  
Smooth

Little Floating  
Heart (*N. cordata*)



Crested Floating in  
Lake Marion, S.C.



# Present

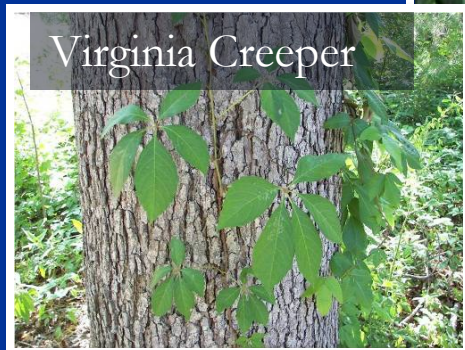
## Regulated - Contain

- Bushkiller (*Cayratia japonica*) 3 counties\*
- Canada thistle (*Cirsium arvense*) 6 counties\*
- Hydrilla (*Hydrilla verticillata*) Fed. Noxious Weed
- Itchgrass (*Rottboellia cochinchinensis*) Fed. Noxious Weed
- Puncturevine (*Tribulus terrestris*) 1 county\*
- Oriental bittersweet (*Celastrus orbiculatus*)\*
- Mile-a-minute vine (*Persicaria perfoliata*)\*

Scientific Name: *Cayratia japonica*

Common Name: Bushkiller

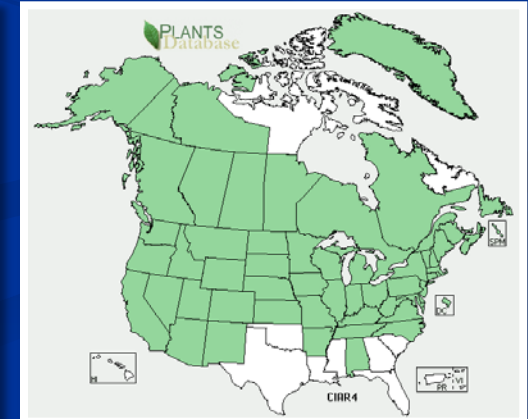
- EDRR Categories
  - Present – Regulated (contain)
- Native Range
  - SE Asia, Australia
- Introduction and Spread
  - Ornamental
- Impacts
  - Smothers other Vegetation



# Scientific Name: *Cirsium arvense*

## Common Name: Canada Thistle

- EDRR Categories
  - Present – Regulated (contain)
- Native Range
  - Europe and Asia
- Introduction and Spread
  - Seed and Hay Contaminant, and Machinery, and Vehicles
- Impacts
  - Serious **Crop Weed**, roadside vector?



Scientific Name: *Tribulus terrestris*

Common Name: Puncturevine

■ EDRR Categories

- Present – Regulated (contain)

■ Native Range

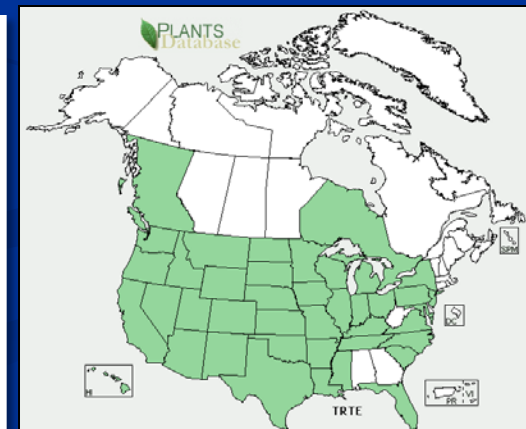
- Southern Europe, Asia

■ Introduction

- Seed Contaminant; Equipment, Machinery, Vehicles

■ Impacts

- Serious **Crop Weed**; Dangerous to Animals



# Scientific Name: *Celastrus orbiculatus*

## Common Name: Oriental Bittersweet

### ■ EDRR Categories

- Present – Regulated (contain)

### ■ Native Range

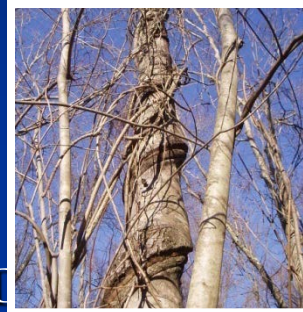
- East Asia

### ■ Introduction and Spread

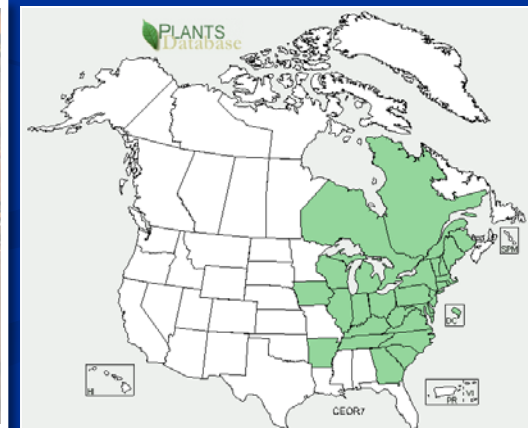
- Ornamental Vine; Wreaths, D

### ■ Impacts

- Smothers other Vegetation



Globular Berry  
With Red Arils





# Scientific Name: *Persicaria perfoliata*

## Common Name: Mile-a-minute Vine

### ■ EDRR Categories

- Present – Regulated (contain)

### ■ Native Range

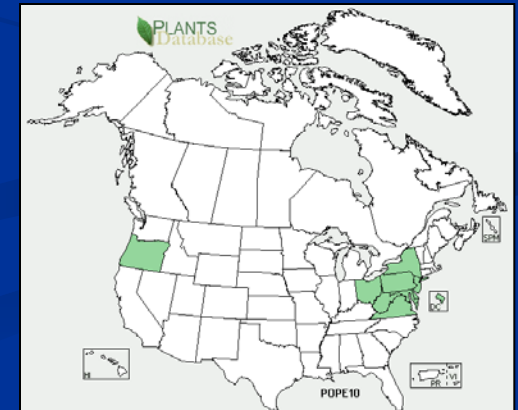
- Eastern Asia; Philippines

### ■ Introduction and Spread

- PA, 1930s; Contaminant of Holly Seeds from Japan, spread by seed, self-pollinating

### ■ Impacts

- Smothers Vegetation



# Present

## Not Regulated - Contain

- Deeprooted sedge (*Cyperus enterianus*)
- Chinese tallow (*Triadica sebifera*)



- Garlic mustard (*Alliaria petiolata*)



# Scientific Name: *Cyperus entriarianus*

## Common Name: Deeprooted Sedge

### ■ EDRR Categories

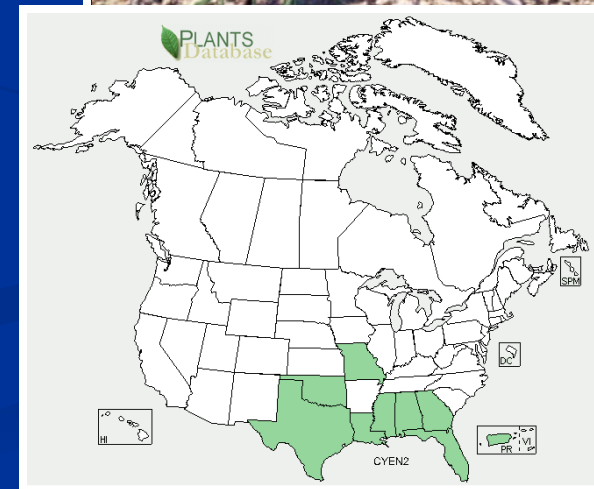
- Present? – Not regulated (contain)
- South America

### ■ Introduction and Spread

- Contaminant; Construction, Agriculture, Roadside Mowing

### ■ Impacts

- Serious Invader of **Coastal Plain Wetlands, Croplands, Forests**



Scientific Name: *Alliaria petiolata*

Common Name: Garlic Mustard

## ■ EDRR Categories

- Present – Not regulated (contain)

## ■ Native Range

- Europe

## ■ Introduction and Spread

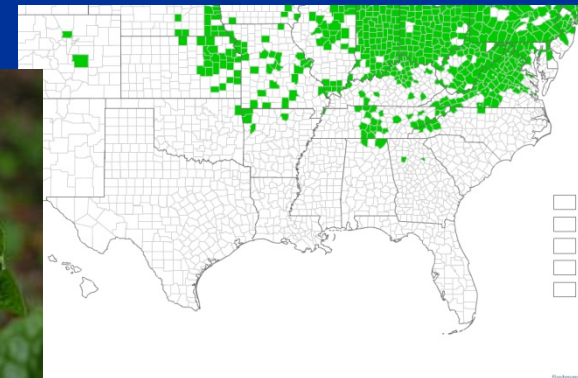
- Cooking; Garlic Flavored Herb

## ■ Impacts

- Forms Dense Stands in **Woodlands**.  
A number of sites in the mountains.



First Year  
Rosettes



# Scientific Name: *Triadica sebifera*

## Common Name: Chinese Tallow

### ■ EDRR Categories

- Present – Not regulated (contain)

### ■ Native Range

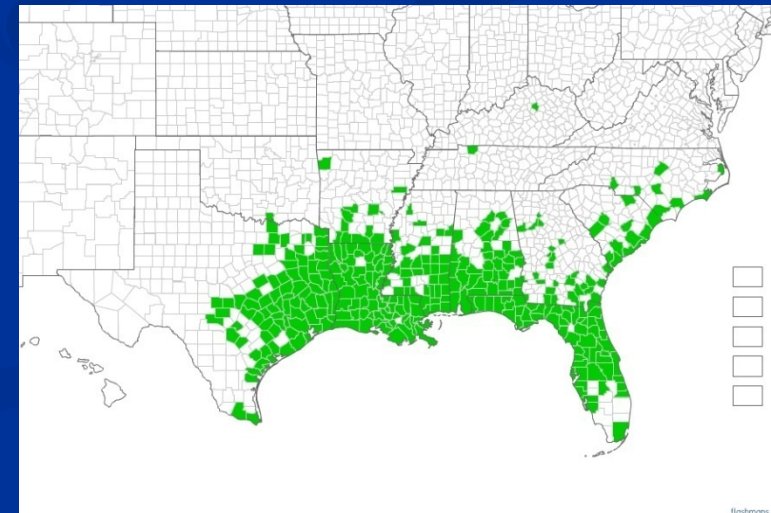
- Asia

### ■ Introduction and Spread

- S.C. – 1776; Seed Oil Production, Ornamental

### ■ Impacts

- Invades **Undisturbed Forests and Natural Areas**; likes wet areas, alters soil chemistry



**Species Descriptions**  
**NC Exotic Pest Plant Council**

**[www.nceppc.weebly.com](http://www.nceppc.weebly.com)**

**Select : NC Early Detection Rapid  
Response Species**

# Reporting Suspect Species

NCDA&CS: 1-800-206-Weed or email:  
[newpest@ncagr.gov](mailto:newpest@ncagr.gov)

## Information needed:

Location (GPS coordinates, address, description)

Contact information for landowner , if known

Digital pictures – flowers, leaves ,stem, fruit

**DO NOT MOVE REGULATED SPECIES**

Dedicated inspector looking for noxious weeds in hay

