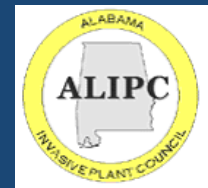
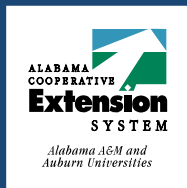


Invasive Plants on the Horizon

... may be closer than you think

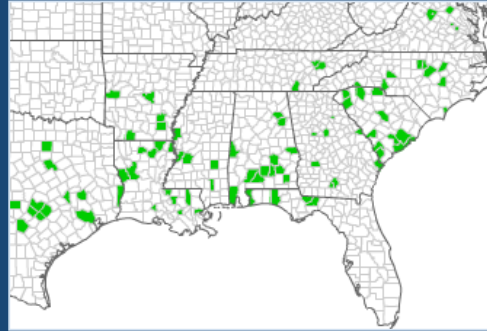
Nancy Loewenstein

School of Forestry and Wildlife Sciences



Chinese parasoltree (*Firmiana simplex*)

Category 2

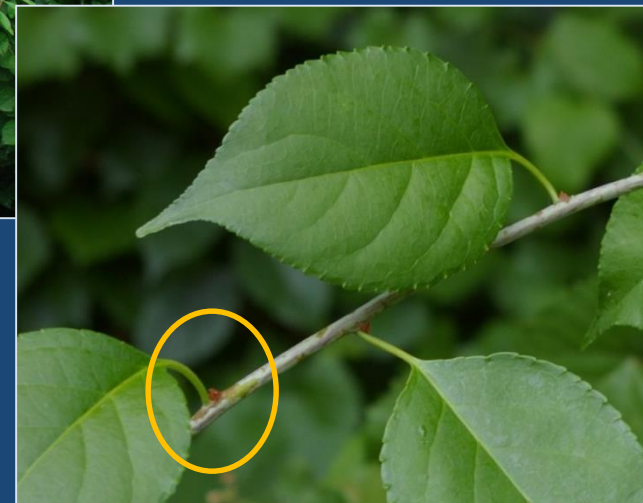
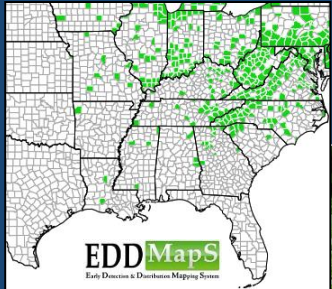




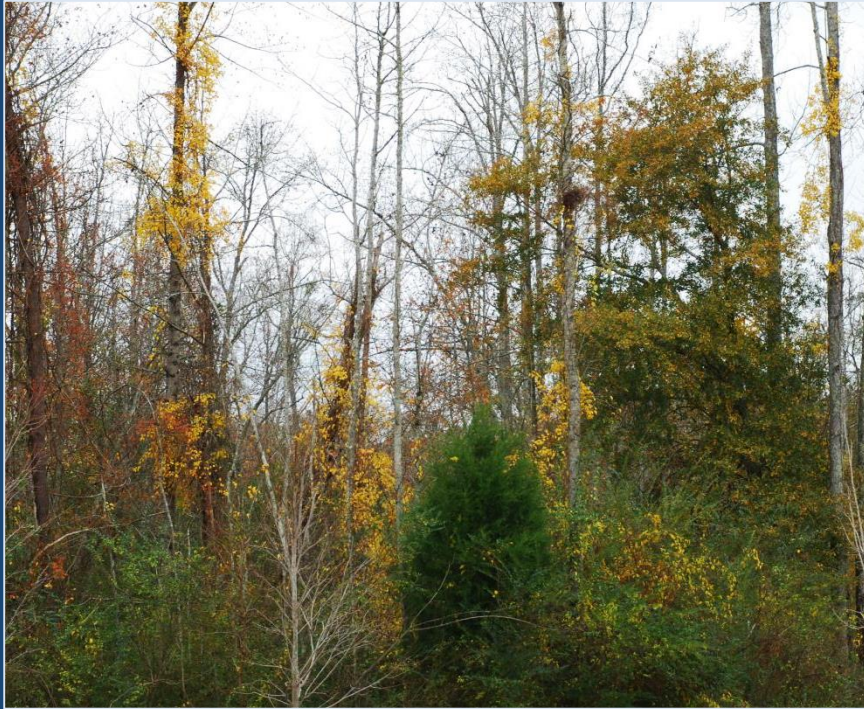
... how it came to be called parasol tree

Oriental bittersweet (*Celastrus orbiculatus*)

Category 2



Oriental bittersweet

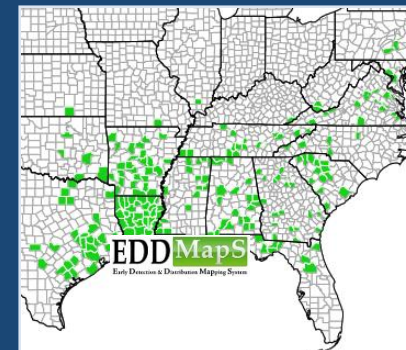


fall color – yellow leaves, red fruit



plants are usually dioecious ... separate male and female plants

trifoliolate orange (*Citrus trifoliata* *syn. Poncirus trifoliata*)



white flowers with five petals



Stephen Enloe, Auburn University



fruit ... small oranges with big seeds



UGA1539103



trifoliolate leaves

Flattened green stems with wicked thorns

UGA1391363



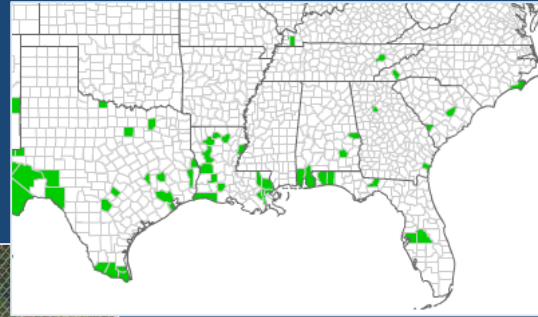
dense growth

5379606

pampas grass

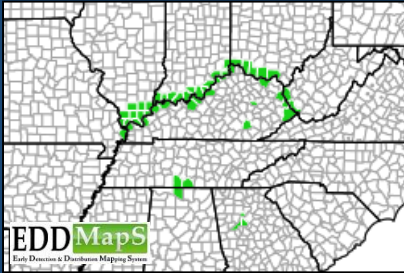
(*Cortaderia selloana*)

Category 2



Japanese chaff flower (*Achyranthes japonica*)

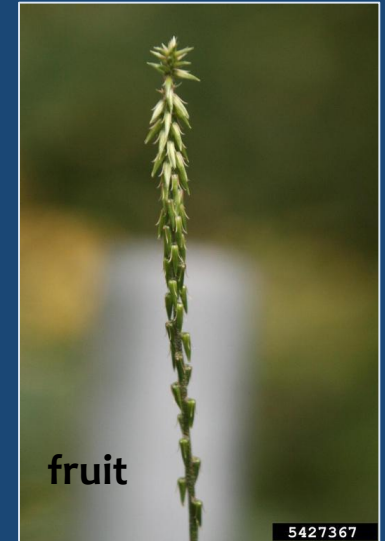
Watch list A



blooms late
summer
through early
fall



flowers –
no petals



fruit



Leaves opposite with
entire margins

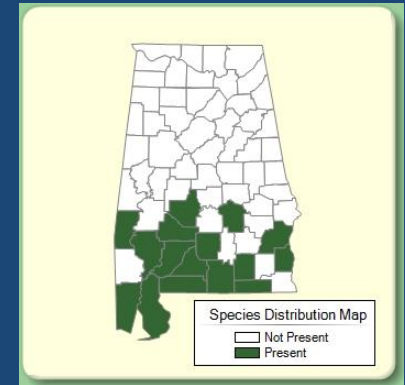


seed dispersal!

tropical bush mint (*Hyptis mutabilis*)

Watch list A

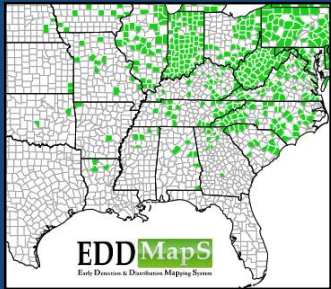
mint family – stems square



leaves opposite, serrate margin,
unpleasant odor when crushed

Japanese knotweed (*Reynoutria japonica*) (syn. *Polygonum cuspidatum*; *Fallopia japonica*)

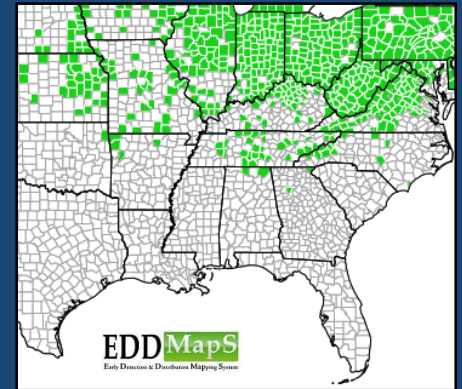
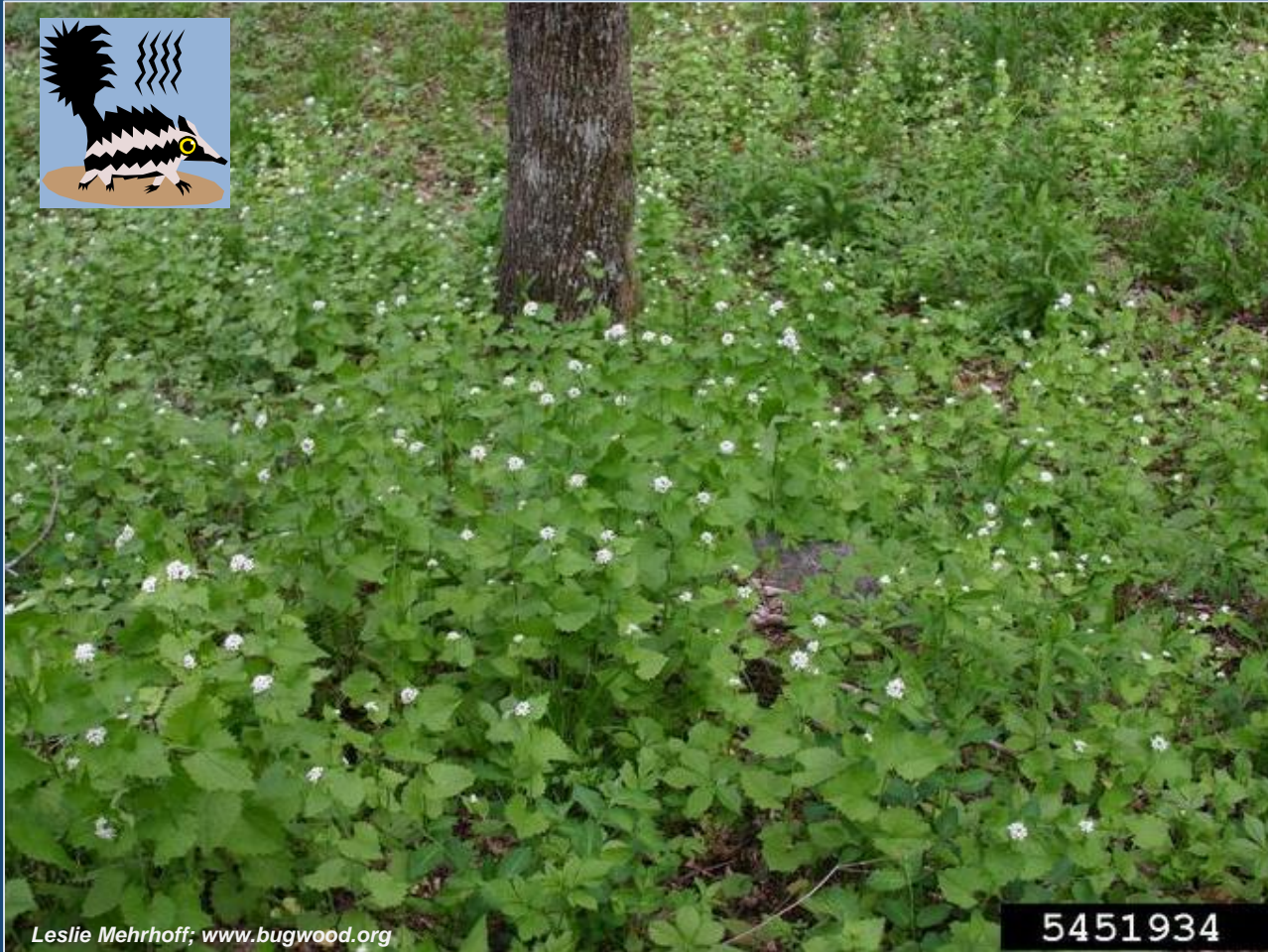
Watch list A



distinctive leaf shape, white flowers, winged seeds, hollow stems

garlic mustard (*Alliaria petiolata*)

Watch list B



cool season biennial ... garlic odor when crushed

basal rosette the first year ... leaves kidney shaped with coarsely toothed margins.

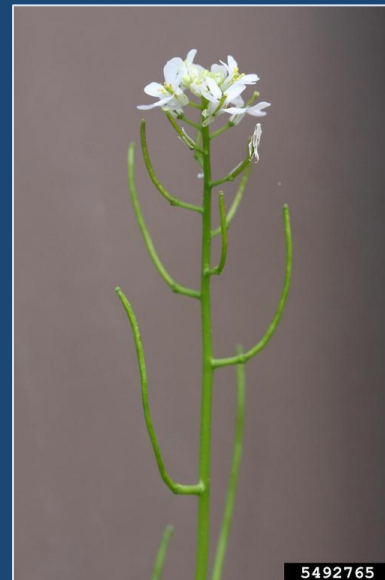
garlic mustard



Second year ... stems elongate and flowers are produced. Leaves more triangular.



flowers - 4 white petals



fruit – narrow green pods, turn tan then explode, dispersing seed

Chinese elm, lacebark elm (*Ulmus parvifolia*)

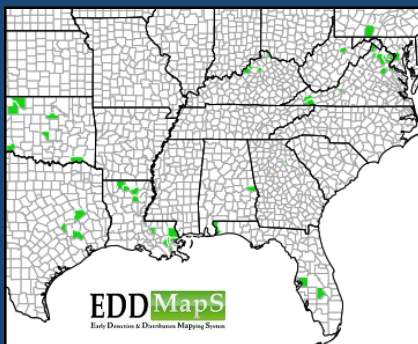
Watch list B



distinctive bark

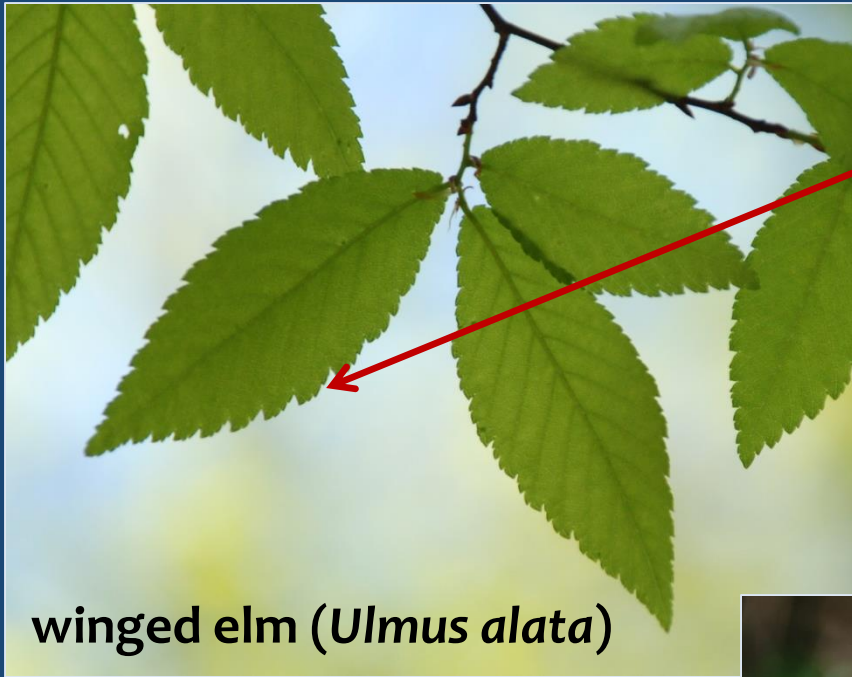


flowers and
fruits in the
fall



serrate margin,
base may be
slightly unequal

no corky ridges on
stems



doubly serrate margin

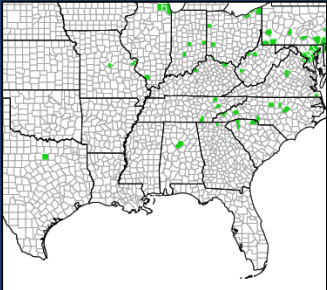
winged elm (*Ulmus alata*)

singly serrate margin



Chinese elm

fig buttercup, lesser celandine (*Ficaria verna*)



leaves are dark shiny green, kidney- to heart-shaped, rubbery



Showy flowers, typically eight petals

Under the radar?

Ficaria verna quietly naturalizing in the Southeast

By Jane K. Marlow, Jeffery L. Beacham, and William C. Strayer
Photos by Jane K. Marlow at Lake Conestee Nature Park in Greenville, SC; unless indicated otherwise

Fig buttercup is not well-known in the Southeast. More accurately, most people have never even heard of it.

A few minutes on the internet reveals that fig buttercup — aka lesser celandine (*Ficaria verna*, formerly *Ranunculus ficaria*) is a perennial with origins in Europe and northern Africa; that it has been cultivated in the US for over 150 years; that Wordsworth wrote poems praising it; that it is available in the nursery trade; and that it is reported to be invasive in ten states and the District of Columbia, and is on the noxious weed list in Connecticut and Massachusetts.

In April 2013 it was discovered in Greenville County, SC. After having met the plant, we feel that it is vital to make the Southeast's invasive plants community aware that it is HERE (not just in the Northeast), and that it poses a very serious threat.

An article documenting its discovery in Asheville, NC, in 2011 first brought the plant to our attention:

"Fig buttercup is a vigorously growing herbaceous plant that completes its growth cycle during winter and spring... its emergence before most native species gives it a great competitive advantage. Once established, it spreads rapidly, forming a solid green blanket... which native plants are unable to penetrate... The plant makes numerous tubers and bulbils, each of which can grow into a new plant once separated from the parent plant. These are spread by animals, well-meaning human weed pullers and water events. Because of its short growth cycle [Dec.-May] there is a limited window of opportunity for controlling it..." (Cote 2011).

Two years later we would have the opportunity to see it for ourselves, when a hiker spotted a patch of unfamiliar bright yellow flowers in Lake Conestee Nature Park, and, on April 4, 2013, was curious enough to ask about them.

Most North American floristic treatments have not emphasized sub-specific differences, but a recent review of herbarium collections has confirmed that all five currently recognized subspecies are present in the United States (Post et al. 2009). The one we found is *Ficaria verna* subsp. *verna* (Waskley 2012).



Once established, *Ficaria verna* forms a solid green blanket which excludes all other vegetation.



Fig buttercup's flowers are yellow with a slightly darker center, typically with 8 petals.

On April 9th, the newly discovered plants were in full bloom. Flowers are a buttery yellow with a slightly darker center, typically with 8 petals but sometimes more (Sweatengen 2010).

The Plant Conservation Alliance states, "When in full bloom, large infestations of lesser celandine appear as a green carpet with yellow dots, spread across the forest floor" (Sweatengen 2010). These mono-cultural "carpets" may cover several acres. By way of comparison, ours were "scatter rugs" — some loosely strung together in furrows channelled by the adjacent Beechy River. The Beechy flows

fig buttercup



Plants form dense infestations and then die back after flowering (short life cycle).

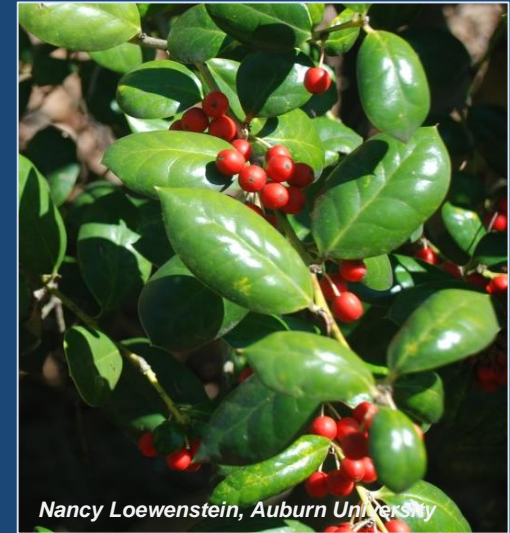


tubers and bulbil* produce new plants

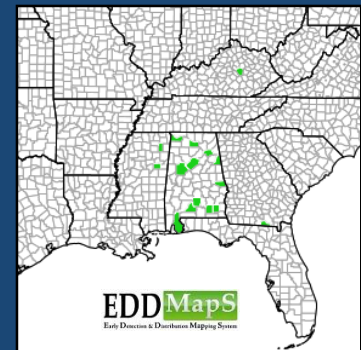


* not all subspecies produce bulbils

Chinese holly (*Ilex cornuta*)



There are many cultivars ... spines are lacking in some.



glossy, leathery, evergreen leaves ... terminal spine points down, next two point up like horns (scientific name 'cornuta' means horn)

We need your help!!

**Please report sightings of
“species on the horizon”**

!!

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Invasive Species Mapping Made Easy!



EDDMapS, started in 2005, is now providing a picture of the distribution of invasive species across the U.S. and Canada

- ✓ Fast and easy to use - no knowledge of GIS required
- ✓ Web-based mapping of invasive species distribution to help fill gaps and identify "leading edge" ranges
- ✓ Facilitates Early Detection and Rapid Response implementation with online data entry forms, e-mail alerts and network of expert verifiers
- ✓ One Database for both local and national data
- ✓ Data can be searched, queried and downloaded in a variety of formats
- ✓ Cooperates with and aggregates data from other invasive species mapping projects
- ✓ Custom/hosted applications can be quickly and inexpensively developed

Who's Using It?

- ✓ Southeast Exotic Pest Plant Council
- ✓ Alaska Exotic Plant Information Clearinghouse
- ✓ Missouri River Watershed Coalition
- ✓ Biological Control Agents of Weeds
- ✓ Florida Invasive Species Partnership
- ✓ Invaders of Texas
- ✓ Mid-Atlantic Invasive Plant Council
- ✓ Appalachian Trail Conservancy
- ✓ EDDMapS Alberta - Alberta Invasive Plants Council
- ✓ National Wildlife Refuge Early Detection Network for New England
- ✓ Outsmart Invasive Species
- ✓ Invasive Plant Atlas of New England
- ✓ What's Invasive - Coming Soon

Statistics

1,947,176 County Reports
1,081,095 Point Reports
2,433 Species / 11,930 Users



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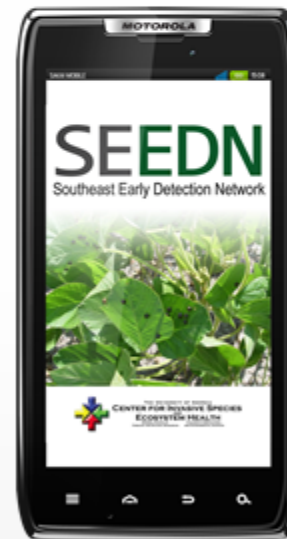
Educational Resources

Southeast Early Detection Network

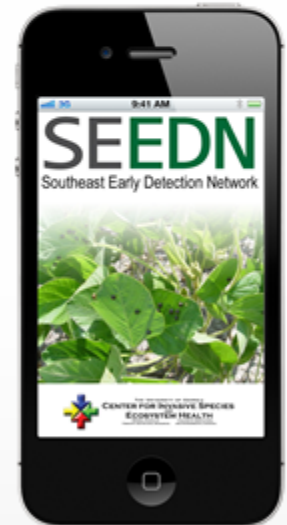
Submit invasive species observations directly with your iPhone from the field.

Features:

- ✓ GPS automatically captures your current location
- ✓ Submit an image of your sighting to add validity to your report
- ✓ Online reporting
- ✓ Offline reporting: reports saved on your phone to upload when you have network connectivity
- ✓ Species ID Guides include images and information on the worst non-native invasive plants, insects and plant pathogens in the Southeastern United States
- ✓ Provides real-time point distribution maps centered on your current location
- ✓ Invasive species resources



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