

# Invasive Plants: Identification & Management



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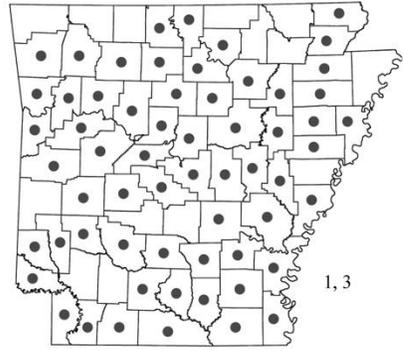
# The Flora of Arkansas

<b>3,124 TAXA OF VASCULAR PLANTS</b> (species, subspecies, varieties, & hybrids)
<b>2,363 NATIVE (76%)</b>
1724 secure (S4-S5)
622 conservation concern (S1-S3)
17 endemic to Arkansas
<b>11 NATIVE IN PARTS OF AR</b>
<b>750 NON-NATIVE (24%)</b>
162 invasive in natural communities

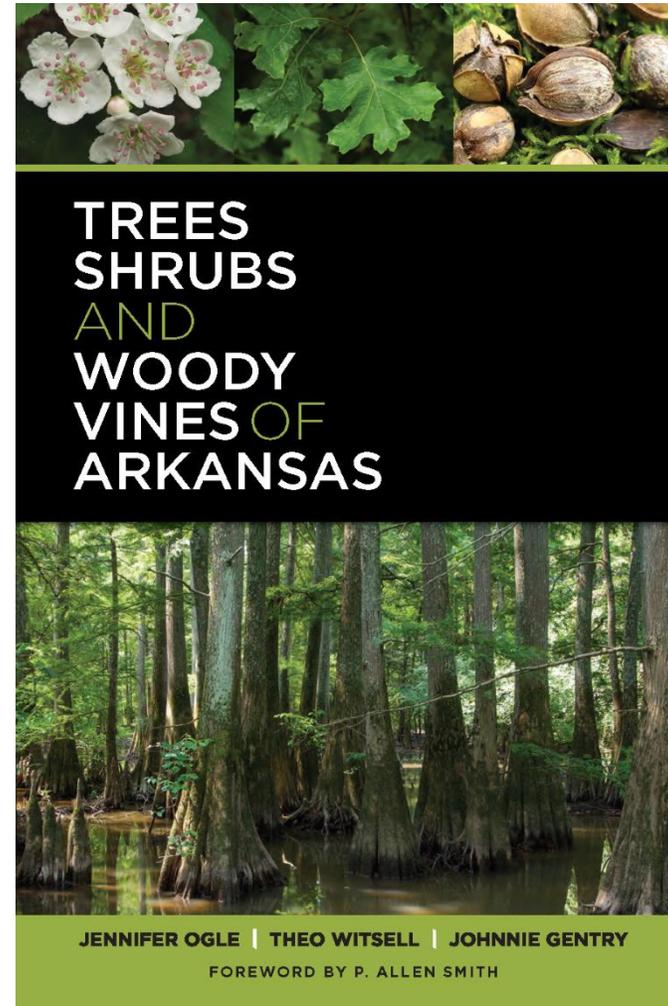
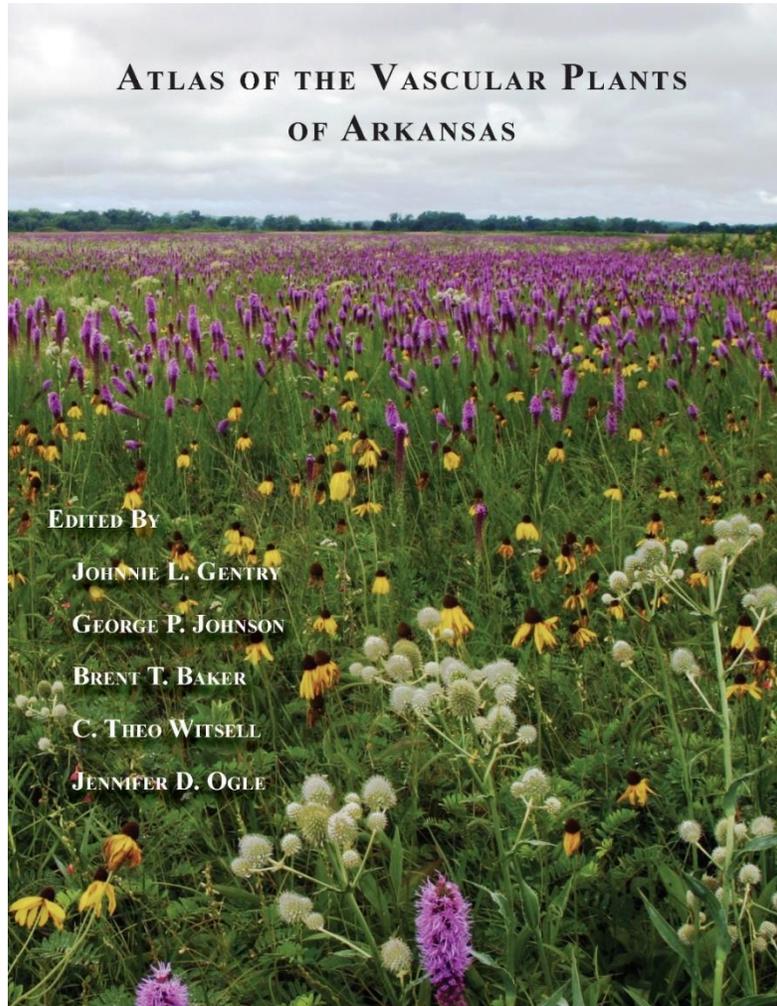


Reference: Witsell, T., V.L. McDaniel, B.T. Baker, D.M. Zollner, G.L. De Jong, S.L. Hooks. 2024.  
Coefficients of conservatism for the vascular flora of Arkansas. *Phytoneuron* 46:1–99.

# Map Sources



2013



2020



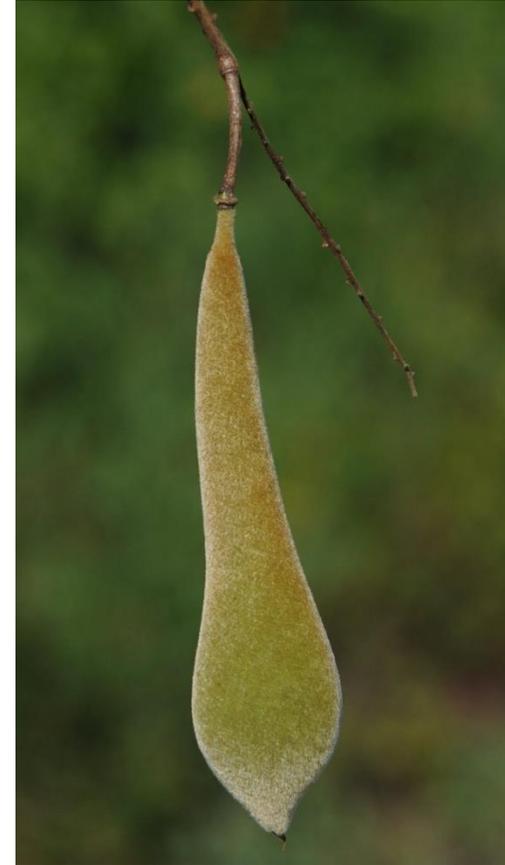
# Chinese wisteria (*Wisteria sinensis*)

Flowers April-July

Habitat: disturbed areas,  
roadsides, old homesites

## Japanese wisteria (*Wisteria floribunda*)

- Known from 3 counties in AR
- Longer racemes
- More leaflets





# American wisteria (*Wisteria frutescens*)



Flowers Apr-May

Habitat: swamps, bottomlands, streambanks,  
less commonly in uplands



## tree-of-heaven, stink tree *Ailanthus altissima*

Deciduous medium-sized tree to 65 ft (20 m), forming colonies by root suckers

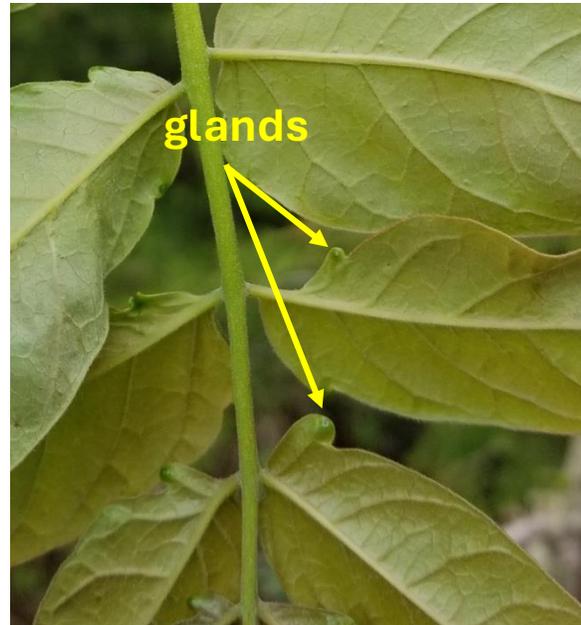
**Bark** smooth or slightly fissured

**Leaves** alternate, pinnately compound, deciduous; 30" long with 11-41 leaflets; tips long-pointed, margins mostly entire, with 1-few teeth near base of each leaflet, the tooth bearing a small, round gland

**Flowers** Apr-May; imperfect, plants dioecious (male and female flowers on separate individuals); greenish-yellow with 5 petals; in large clusters at tips of branches

**Fruit** Sep-Oct; winged, twisted, yellow to bright red when young, turning tan at maturity

**QUICK ID:** All plant parts foul-smelling; bark smooth or slightly fissured; leaflet margins entire except for 1-few teeth at base, each tooth bearing a small, round gland



**tree-of-heaven**  
*(Ailanthus altissima)*



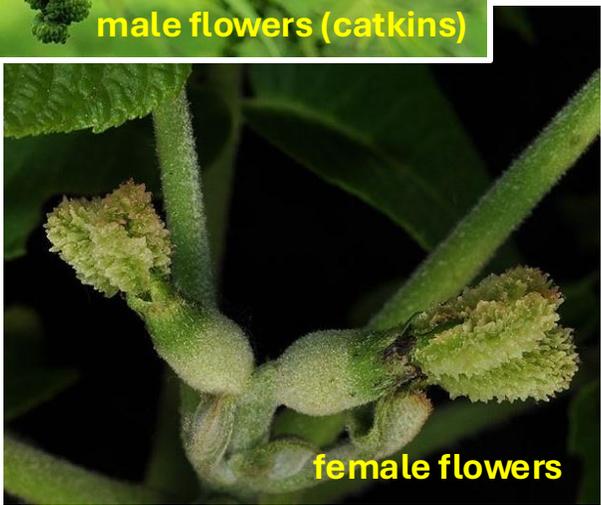
**black walnut**  
*(Juglans nigra)*



**tree-of-heaven**  
*(Ailanthus altissima)*



**black walnut**  
*(Juglans nigra)*



**tree-of-heaven**  
*(Ailanthus altissima)*



**smooth sumac**  
*(Rhus glabra)*



**tree-of-heaven**  
*(Ailanthus altissima)*



**winged sumac**  
*(Rhus copallinum)*





## Chinese privet *Ligustrum sinense*

Semi-evergreen or deciduous large, usually multi-stemmed shrub or small tree to 30 ft (9 m), sprouting from roots, forming dense thickets

**Bark** gray to greenish gray, smooth

**Leaves** opposite, simple, 2–4 cm long, 1–2 cm wide; apex obtuse to acute, margins entire; upper surface shiny, dark green, lower surface lighter green, hairy on midvein

**Flowers** May-Jun; perfect, small, white with 4 petals, fragrant, in terminal panicles

**Fruit** Sep-Nov; round to ovate, dull bluish-black

**QUICK ID:** **Opposite, semi-evergreen to deciduous leaves, margins entire, apex obtuse to acute; smooth bark**



## 5 additional species of privet (*Ligustrum*) occur outside of cultivation in Arkansas

All are non-native and considered invasive, but none has become as widespread or ecologically damaging as **Chinese privet (*L. sinense*)**



*L. obtusifolium*  
(border privet)



*L. quihoui*  
(Quihoui privet)



*L. lucidum*  
(glossy privet)



*L. japonicum*  
(wax-leaf privet)



*L. vulgare*  
(European privet)

# Invasive Privet: Native Look-alikes

Native shrubs and small trees with opposite, simple leaves and clusters of small white flowers



Dogwoods (*Cornus*) have prominent leaf veins with **arcuate venation** – they arch strongly toward the leaf tip. Right: Flowering dogwood (*C. florida*) has **bark with small, blocky plates**



Black haw (*Viburnum prunifolium*), top right, and rusty black haw (*V. rufidulum*) have **finely serrate leaf margins, and both species have bark with small, blocky plates**



## Japanese honeysuckle *Lonicera japonica*

Semi-evergreen woody vine with pubescent stems, twining, climbing or trailing to 16 ft (5 m); spreads along the ground, forming dense mats

**Leaves** opposite, simple, 3–8 cm long, 1.5–4 cm wide; tips round to pointed, margins entire; young leaves often lobed; upper surface bright to dark green, lower surface paler and hairy on midvein and margin

**Flowers** Apr-Jun; white (turning yellow with age), upper lip 4-lobed, lower lip recurved; fragrant; paired in axils of leaves

**Fruit** Oct-Nov; round, shiny, black

**QUICK ID:** hairy, twining vine; leaves opposite, semi-evergreen, margins entire; inflorescences axillary, flowers in 2s at base of each leaf, 4 white or yellow flowers or black fruits per node



## Non-native Honeysuckles



**Inflorescences axillary**, with two flowers per leaf axil (4 per node)

All leaves **distinct, unfused**



Stems and leaves **pubescent**



Mature fruits **black**

## Native Honeysuckles



**Inflorescences terminal**, in 1-4 whorls of 6 flowers

Uppermost pair of leaves **connate-perfoliate**



Stems and leaves **glabrous**



Mature fruits **orange or red**



## Callery pear *Pyrus calleryana*

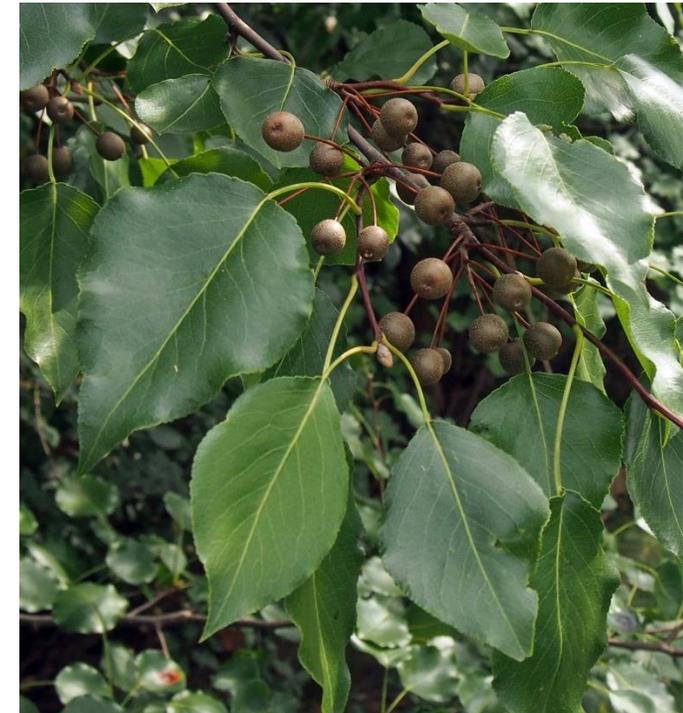
Deciduous medium-sized tree to 50 ft (15 m), with a short, single trunk and strongly ascending to vertical branches; pyramidal to oval in outline; thorn-like shoots often present

**Leaves** alternate, simple, leathery, upper surface shiny; widely ovate in shape; 4–8 cm long, 3.5–6 cm wide; tips long-pointed; margin wavy, finely toothed

**Flowers** Feb-May, before leaf-out (also fall); 5 white overlapping petals with rounded tips, 20 stamens shorter than petals, bright pink anthers, ovary inferior; in large, terminal clusters

**Fruit** Aug-Sep; round, hard, light to dark brown with pale spots, 1.5 cm wide; calyx persistent in fruit, located at base

**QUICK ID:** shape oval or pyramidal; leaves leathery, shiny, ovate; flowers foul-smelling, stamens shorter than petals, petals overlapping; fruits small, hard, calyx persistent in fruit; thorn-like shoots often present



## Invasive Callery Pear: Native Look-alikes

AR has several native, early spring flowering trees & large shrubs with white, 5-petaled flowers!



Serviceberry (*Amelanchier arborea*)

**Petals long, strap-shaped, not overlapping near base; fruits small, fleshy, bright red; leaves dull, elliptic shape, cordate base**



7 species of native plums (*Prunus* spp.)

**Stamens longer than petals; petals not overlapping; ovary superior; often with 1+ glands on petiole near base of leaf blade**



2 species of native crabapples (*Malus* spp.)

**New petals pink, turning white; flowers aromatic; at least some leaves lobed; branches horizontal**

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# multiflora rose

## *Rosa multiflora*



Deciduous shrub or vine to 8 ft  
stems arching, trailing, or clim  
curved, paired at leaf nodes; p  
dense, prickly thickets

**Leaves** alternate, pinnately co  
7-9 leaflets; stipules fused to l  
most of their length, the margin  
(soft-bristled or fringed)

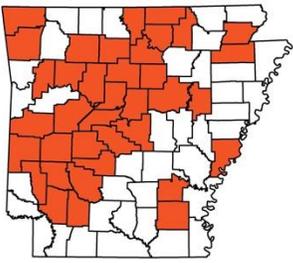
**Flowers** Apr-May; fragrant; 2-2  
with 5 white petals; panicle ter  
5-30 flowers

**Fruit** Jun-Sep; small, round, or  
to red

**QUICK ID:** Dense, prickly shrub or vine; 7-9  
pinnately compound leaflets; stipules  
fringed, inflorescence of 5-30 white flowers

stipule margins are **entire** in native roses (left),  
**fimbriate** in non-native roses (right)





## autumn-olive *Elaeagnus umbellata*

Deciduous large multi-stemmed shrub to 15 ft (4.5 m)

**Leaves** alternate, simple, upper surface bright green to grayish green, sparsely silvery-white scaly when young; lower surface densely covered with silvery-white scales

**Flowers** Mar-Apr; perfect, small, calyx funnel-shaped with 4 lobes, white to yellow & covered with silvery scales

**Fruit** Jul-Aug; drupe nearly round, 8-9 mm orange to red & covered with silvery scales

**QUICK ID: large shrub; stems, lower surface of leaves, and fruits covered in silvery scales**



Thorny-olive (*E. pungens*): evergreen thorny shrub, leaves leathery, lower surface silvery-white with rusty-brown scales; flowers in fall; not as common



# mimosa

## *Albizia julibrissin*

Deciduous small tree to 50 ft (15 m), often multi-trunked, with spreading branches

**Bark** smooth, mottled gray, with many small lenticels

**Leaves** alternate, large, bipinnately compound, feathery in appearance; primary leaf segments 8–30, each segment with up to 30 pairs of leaflets

**Flowers** in flat-topped to rounded, terminal racemes of 15-30, stamens many, showy, bright pink toward the tip

**Fruit** oblong, flat, brownish tan at maturity, 20 cm long, 2 cm wide

**QUICK ID:** large, bipinnately compound leaves with a feather appearance; showy pink flowers in tight clusters; bark smooth





# princess tree

## *Paulownia tomentosa*

Deciduous, medium-sized tree to 50 ft (15 m), with stout, spreading branches and a rounded crown

**Bark** gray to grayish brown, smooth when young, shallowly furrowed with age

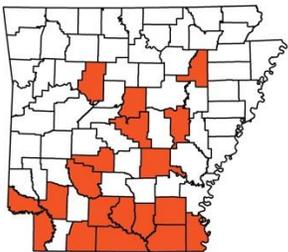
**Leaves** deciduous, opposite, simple, very large, 12-30 cm as wide but can reach 70 cm long/wide on saplings and sprouts; widely ovate to nearly orbicular, apex acuminate, margin entire

**Flowers** Apr-May; perfect, large, calyx densely rusty-pubescent, pale violet, the inner throat with purple spots & yellow stamens

**Fruit** Sep-Oct; capsule ovoid, beaked, 3-4 cm long, light tan

**QUICK ID:** smooth bark; large, opposite leaves; showy purple flowers; showy, large, tan fruits





# Chinese tallow-tree

## *Triadica sebifera*

Deciduous small tree to 40 ft (12 m), with a spreading, rounded crown; fast-growing with weak branches; clear, poisonous sap

**Bark** Brownish gray, shallowly fissured, the ridges flattened.

**Leaves** alternate, simple, 3–7 cm long and nearly as wide, shape rounded-rhombic, apex long-acuminate, base widely cuneate; margin entire; upper surface shiny dark green, lower surface paler; petiole to 6 cm long

**Flowers** Apr-Aug; small, yellowish, male and female flowers borne together in a 20 cm long, drooping, raceme-like inflorescence

**Fruit** Aug–Dec; schizocarp 3-lobed, black at maturity, 8–12 mm wide, opening to expose 3 large, white seeds with a soft, waxy coating

**QUICK ID:** leaves with a rounded diamond shape and a long, tapered apex; seeds in groups of 3 with a soft, white coating





# Chinaberry

## *Melia azedarach*

Deciduous small tree to 40 ft (12 m), with a spreading, rounded crown

**Leaves** alternate, bipinnately compound, 30-60 cm long, 15-30 cm wide, with many leaflets; leaflets coarsely toothed

**Flowers** May-Jun; showy, fragrant, 2 cm wide, petals 5, pinkish lavender to violet

**Fruit** Sep-Oct; drupe round, yellow to yellowish brown, about 1 cm wide; hanging on tree through winter; foul-smelling at maturity and highly toxic if ingested

**QUICK ID:** bipinnately compound leaves, leaflets with serrate margins; round, yellow, foul-smelling fruit hanging on tree all winter



# Prescribed Fire: an appropriate management tool for many types of invasives

Some caveats and considerations:

**Promoted by fire or grow quickly after fire:**

bush clovers (*Lespedeza* spp.), cogongrass (*Imperata cylindrica*), Japanese climbing fern (*Lygodium japonicum*), others

**Won't carry fire if a major component of the ground cover:**

purple winter-creeper (*Euonymus fortunei*), periwinkles (*Vinca* spp.), others

**Increase fire intensity:**

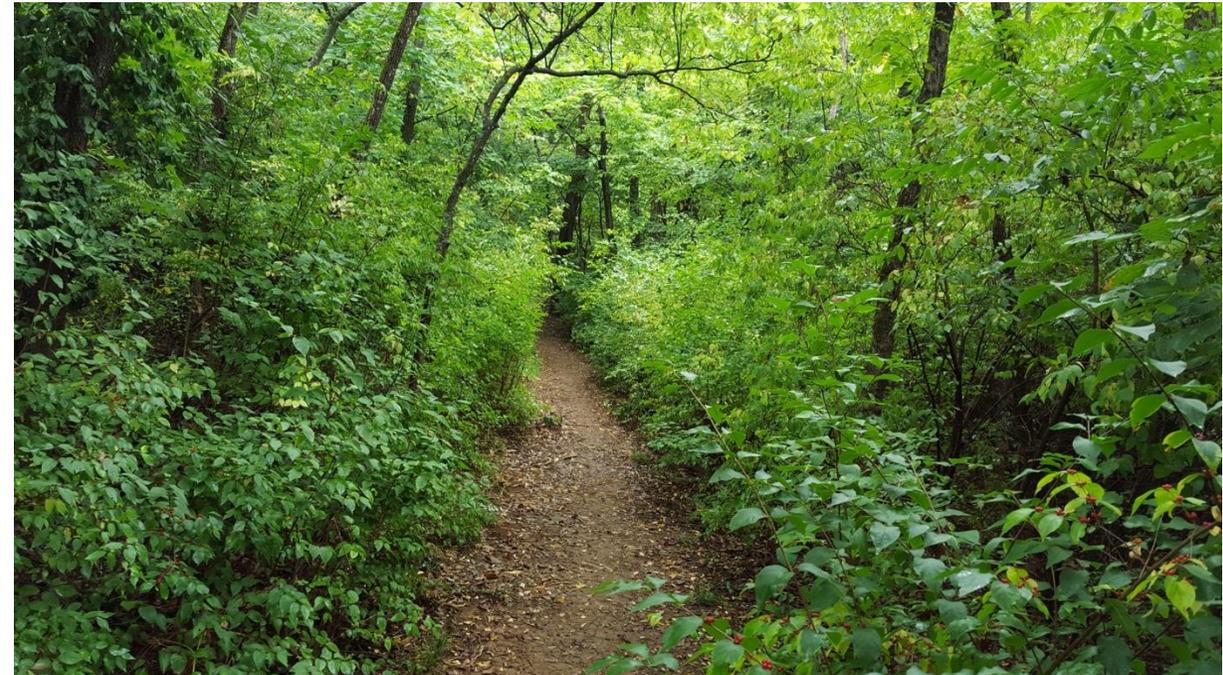
cogongrass; potentially any invasive present in dense stands

**Create “ladder fires” that increase crown fire potential:**

kudzu (*Pueraria montana* var. *lobata*), Japanese climbing fern, other climbing woody vines

**Produce toxic gases when burned:**

tree-of-heaven (*Ailanthus altissima*), Chinaberry tree (*Triadica sebifera*), poison hemlock (*Conium maculatum*), others



# Herbicide Use: Ground Rules

- ALWAYS read the herbicide label regarding Personal Protective Equipment (PPE), correct application rates, and effectiveness of the chemical on specific species and/or plant groups (grass, broadleaf, woody)
- Obtain necessary licenses for restricted-use herbicides
- If applying near water, use herbicides that allow aquatic applications



# Chemical Control of Woody Plants

## Cut Stump Method

- Glyphosate (41% active ingredient), undiluted or mixed with water to a 50% solution; or Triclopyr (variable active ingredient), variable dilution, is also commonly used
- Herbicide solution is applied directly to the stump within a few minutes after the plant is cut
- May be most effective during dormant season; avoid early spring (heavy spring sap flow)
- Cut stem close to ground, 1-2” high; on smaller stems, most effective to cover the entire cut surface; on large stumps, only treat the outer 2” or so; on multi-stemmed plants, cut and treat every stem



**More info:**

**[Cut Stump Herbicide Treatments for Woody Plant Control](#)**  
**(Alabama A&M & Auburn Universities Extension)**

# Chemical Control of Woody Plants

## Hack-and-squirt Method

- Same herbicide recommendations as cut stump, but also can be species-specific
- Make evenly-spaced frill cuts around the stem with a hatchet at a 45° angle
- Cut rate: typically 1 cut per inch of diameter, with a minimum of 2 cuts
- May be most effective during dormant season; avoid early spring (heavy spring sap flow) and times of severe drought
- Do not treat when trees are solidly frozen; when hard freezes are forecasted to occur at night following application, add RV antifreeze (propylene glycol) to the spray solution according to label directions



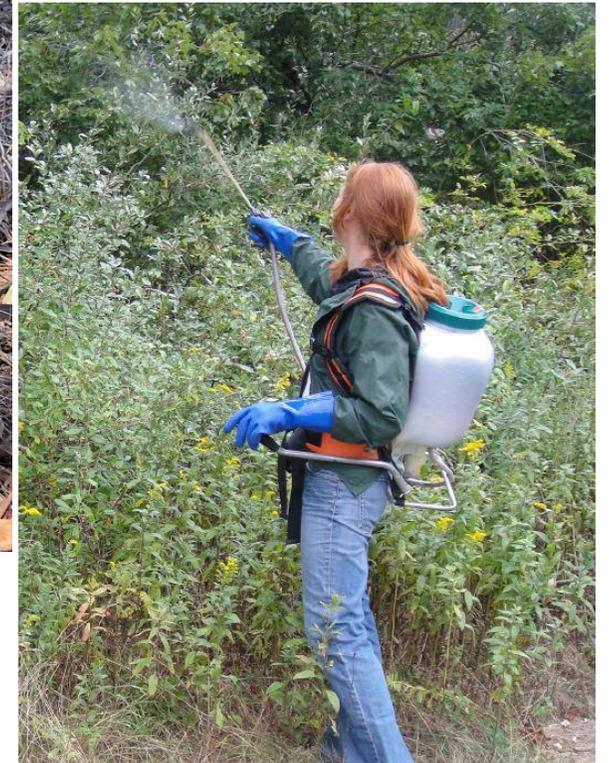
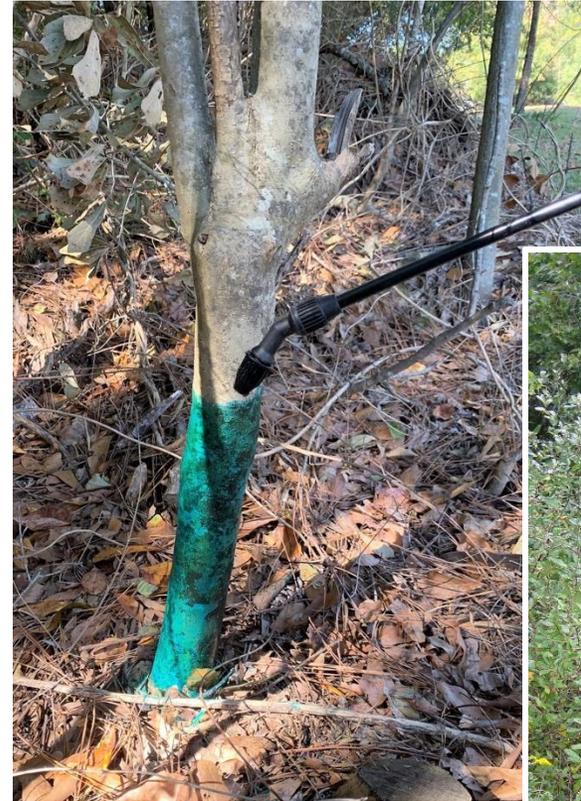
# Chemical Control of Woody Plants

## Basal Bark Method

- Involves spraying herbicide in a basal oil or diesel fuel solution around the lower 12-16 inches of each trunk

## Foliar Spray Method

- Backpack sprayer or boom attachment on tractor to spray over the top of actively growing plants
- Use with care to avoid hitting non-target, sensitive species
- Apply just until leaves are wet, not dripping
- Apply as you are moving away from, not toward, the area being treated
- Do not spray on windy days – drift can occur at wind speeds above 8 mph
- Keep an eye on the weather – don't apply if rain is forecasted within 12 hours



# Mechanical Control of Woody Plants

## Mulching

- An expensive but fast and effective for heavy infestations of woody plants
- Mulch can be raked and removed (if budget allows) or left to break down over a year or so
- Must follow up with herbicide work for resprouts

## Hand Pulling

- small scale; not practical for heavy infestations or for large woody plants
- Pullerbear, Extractigator (shown), Weed Wrench tools can help remove somewhat large shrubs by roots



# A few commonly used herbicides

## NON-SELECTIVE

Glyphosate (RoundUp®); other non-selective herbicides are available, but they aren't as user-friendly

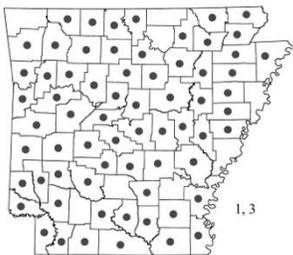
## BROADLEAF SPECIFIC

Triclopyr (Garlon®, Remedy®) is used the most for herbaceous and woodies

## GRASS SPECIFIC, GRASS SELECTIVE

Clethodim (Section 2EC®) and Sulfosulfuron (Outrider®) are **grass specific**

Imazapic (Plateau®) is **grass selective** - it targets non-native grasses and won't harm native grasses; BUT IT WILL KILL NATIVE SEDGES, so use with great care



# sericea lespedeza *Lespedeza cuneata*

Warm season perennial herbaceous legume with multiple erect stems, 3-6 feet tall

**Leaves** alternate, trifoliately compound (3 leaflets), leaflets to 2.5 cm long. The lower leaves have leaf stalks, but the upper leaves have little or no stalks. The leaflets are much longer than wide, tapering to the base, and wider above the middle, narrowing abruptly to a small sharp point.

**Flowers** Jul-Oct; 6-10 mm long and in clusters of mostly 2-3 in upper leaf axils. The petals are cream colored or yellowish with purple or pink markings.

**Fruit** Its myriads of seeds are borne in small oval pods that are up to 1/8 inch wide.

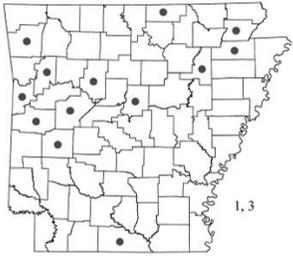
**QUICK ID:** erect herbaceous legume with trifoliate leaves, the venation fishbone-like; flowers cream colored to yellowish with purplish markings

**Prescribed fire can increase density**

Native look-alikes: perhaps other Lespedezas, such as slender bush-clover (*L. virginica*) when not in flower



Photos clockwise from top right: Eric Hunt, Jennifer Ogle, Theo Witsell, Aidan Campos, Jennifer Ogle



# bicolor lespedeza

## *Lespedeza bicolor*



3-10 ft (1-3 m) tall, herbaceous perennial or semi-woody subshrub with ascending to arching, many-branched stems

**Leaves** alternate, trifoliately compound (3 leaflets), leaflets 2-5 cm long, 1-3 cm wide; lower surface lighter green than upper surface

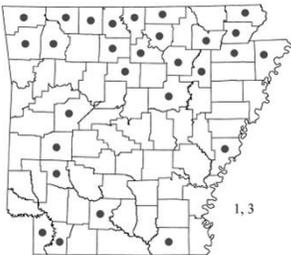
**Flowers** Jun-Sep; racemes of 5-15 pealike flowers, petals rosy purple at least in center, but can be various shades of pink or even white

**Fruit** Aug-Mar; legume 6-8 mm long, widely elliptic with a pointed tip

**QUICK ID:** large, sprawling shrub or herb with 3 leaflets and typically bright pink flowers; lower leaf surface light green; fruit nearly round with a pointed tip

**Prescribed fire can increase density**





## noddling thistle *Carduus nutans*

6.5 ft tall spiny herbaceous biennial with spiny-winged stems, usually highly branched

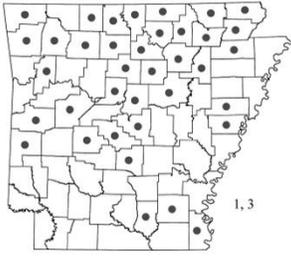
**Leaves** 1<sup>st</sup> year, a basal rosette of deeply lobed leaves, with a prominent nearly white center vein; 2<sup>nd</sup> year, flowering stalk produces similar leaves; both sides of the leaves are of similar colors

**Flower** Jun-Oct; in dense, mostly solitary heads that nod at branch tips. Base of head has numerous wide, spine-tipped bracts that curve outward

**Seeds** golden to brown, 4–5 mm; pappus bristles 13–25 mm, single stranded

**QUICK ID:** Very spiny overall, spiny-winged stems, solitary heads that nod when in flower, heads with wide, sharp bracts that curve outward, seeds with single-stranded bristles





# bull thistle

## *Cirsium vulgare*

6.5 ft tall (usually shorter) spiny herbaceous biennial, the stems lacking spiny wings, usually highly branched

**Leaves** 1<sup>st</sup> year, a basal rosette toothed to deeply lobed leaves; 2<sup>nd</sup> year, flowering stalk produces similar leaves; both sides of the leaves are of similar colors

**Flowers** Jun–Sep; in dense, mostly solitary, erect heads that are erect at branch tips; base of head has numerous slender, spine-tipped bracts that curve outward

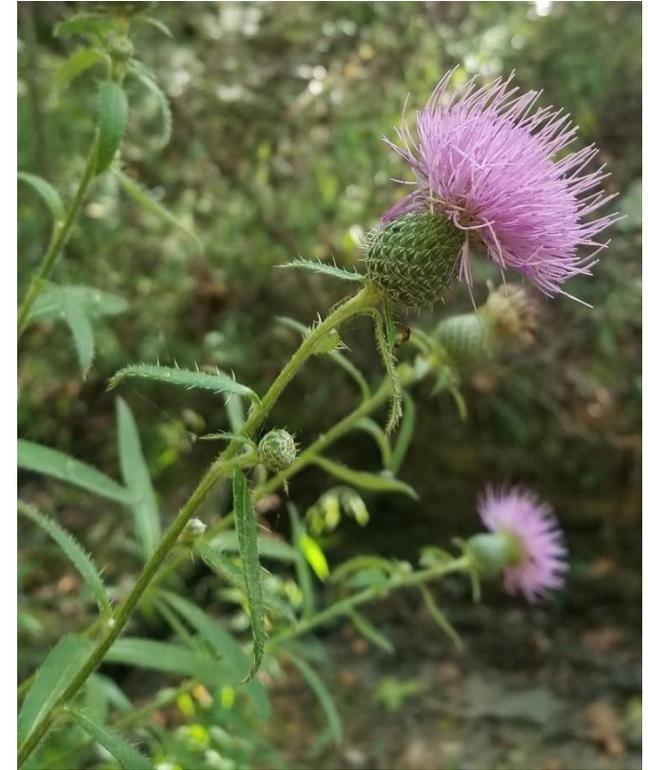
**Seeds** light-brown with darker streaks, 3–4.5 mm, pappus bristles 20-30 mm long, feathery (plumose)

**QUICK ID:** Very spiny overall, stems spiny-winged, solitary heads erect, vase-shaped, heads with slender, sharp bracts that curve outward, seeds with feathery bristles



# The true thistles, *Cirsium*: distinguishing natives from non-natives

Arkansas has 7 native and 2 non-native true thistles  
Natives provide important food/habitat for insects and birds

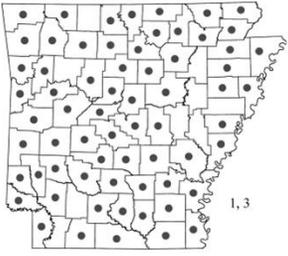


Most of AR natives have leaf undersides strongly whitened due to a thick covering of white hairs (vs. hairless or gray-haired on non-natives)

AR's natives lack spiny wings on stem; bracts at base of heads are tightly appressed (like fish scales); most are less spiny overall than AR's non-natives, EXCEPT....

**yellow thistle, big-spine thistle  
(*Cirsium horridulum*) – NATIVE!**





# beefsteak plant

## *Perilla frutescens*

Erect and branching herbaceous annual with an unpleasant, pungent odor, to 3 ft (1 m) tall

Stems square (4-angled), hairy, purple or green; dried stalks persist long into winter

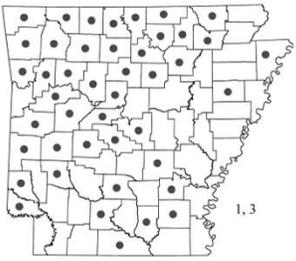
Leaves opposite on long petioles, 3-15 cm long, purple or green on both sides, shape broadly ovate to orbicular, margins coarsely toothed; veins on upper surface slightly raised, more pronounced on lower surface

Flowers in erect, terminal spike-like racemes, with 2 white or light purple flowers at each node

Fruit 4 small nutlets

**QUICK ID: pungent-smelling, green to purple-leaved annual with square stems and nearly round leaves; flowers usually light purple**





# ox-eye daisy

## *Leucanthemum vulgare*

Herbaceous perennial to 3 ft (1 m) tall, with 1-40 flowering stems

**Basal leaves** spatulate (spatula-shaped), margin lobed or irregularly toothed

**Stem leaves** 2.5-10 cm long, shape oblanceolate, spatulate, lanceolate, or linear, margin irregularly toothed, becoming smaller toward the top of stem

**Flowers** (Mar-Nov) arranged in a capitulum (head) 5 cm wide, with many yellow disc flowers and 20-30 white ray flowers

**Fruit** up to 200 seeds per head, each 2 mm long

**QUICK ID:** 3 ft tall typical-looking daisy (white ray flowers, yellow disc flowers) producing many stems, the leaves toothed or lobed and spatula-shaped leaves



# Management: Broadleaf Plants

## MECHANICAL & CULTURAL

**Pulling:** effective on small infestations; hand pulling or with small digging tools; time after a rain for easiest pulling

**Mowing:** timed to prevent seed production (in most cases); may eventually exhaust seed bank

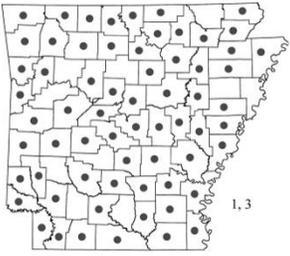
Biennials (a.k.a. monocarpic plants) can live 1-several years as rosettes, but die soon after flowering & setting seed; dig rosettes to kill non-flowering plants, or cut/mow flowering plants near base and plants will die without reproducing

**Prescribed Fire:** case-by-case; some broadleaf plants are stimulated by fire, and most will resprout and/or new plants will germinate from the seed bank once the area is opened; spot fires can be used to kill small patches or individual plants

## CHEMICAL

**Herbicide:** foliar spray with a broadleaf specific herbicide or non-selective depending on density of infestation and time of year





# Johnson Grass

## *Sorghum halepense*

Rhizomatous, warm-season perennial grass to 8 ft (2.4 m) tall, growing in dense clumps or nearly solid stands; rhizome cuttings form new plants; spreads rapidly

**Stem** rounded, pink to rusty red near the base

**Leaves** hairless, to 60 cm long, midvein prominent, white; lacking auricles; ligules 3-4 mm long, membranous, often toothed at tip

**Flowers** Jun-Nov; in a large, loose, hairy purplish panicle; spikelets in pairs or threes, each with a conspicuous awn

**Seeds** reddish-brown, 3 mm long

**QUICK ID:** large clumps of tall plants, leaves hairless, stems rounded at base, prominent white midvein, panicles large, loose, purplish



# Invasive Johnson Grass: Native Look-alikes

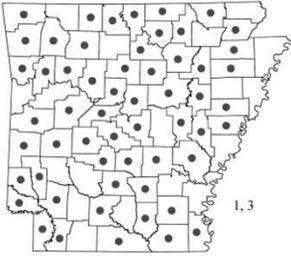


Silver plume grass (*Erianthus alopecuroides*) also has a prominent white midvein, but the long silky hairs on the upper surface of its leaves where they meet the stem distinguish it from Johnson grass, which is hairless.

# Invasive Johnson Grass: Native Look-alikes



Eastern gamagrass (*Tripsacum dactyloides*) has a prominent white midvein, but the stems are flattened at the base; Johnson grass stems are rounded at the base



## tall fescue *Lolium arundinaceum*

Rhizomatous, evergreen, cool-season grass to 6 ft (1.8 m) tall, with short, creeping rootstocks, in heavy clumps with erect stems, forming dense, solid stands

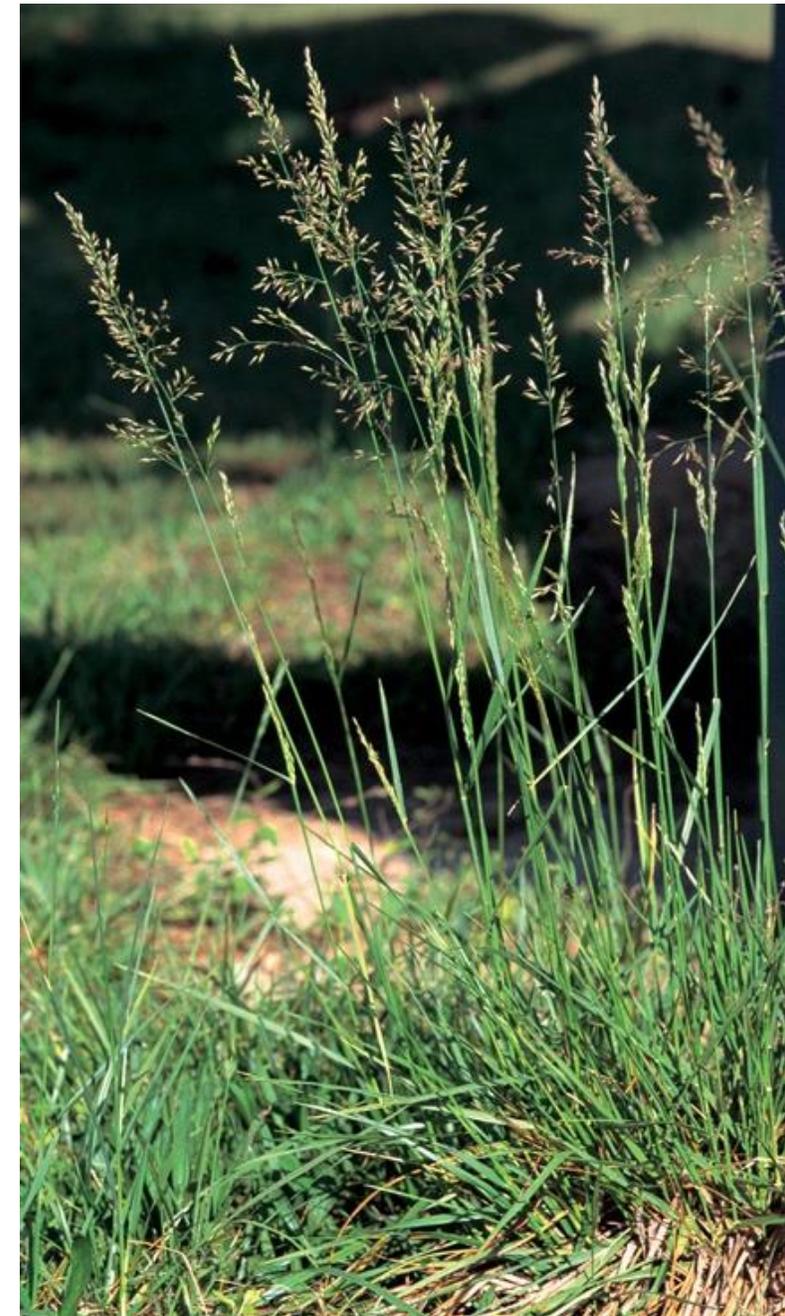
**Stem** unbranched, hairless, & 1-3 swollen, light green nodes near the base

**Leaves** dark green, mostly basal, flat, 10-45 cm long, 3-8 mm wide; smooth or rough, midvein not apparent; auricle yellow-green to whitish and flared, ligule tiny, white

**Flowers** Mar-Jul, sometimes into Oct; in loosely branched, terminal panicles 10-30 cm long, erect or nodding at tips, narrow then spreading in spring, then narrow in summer; spikelets hairless

**Seeds** 3-5 mm long, usually tipped with a short hair

**QUICK ID:** green in late winter; long rounded stems with lower swollen nodes and whitish-flared collars at the base of leaves



# Management: Grasses

Control methods for invasive grasses are variable; cool season grasses (C3) & warm season grasses (C4) grasses are handled differently

**Mowing:** can be effective at slowing spread if timed to prevent seed production

**Tilling:** can help break down clumps; another tool to use in conjunction with fire (in some cases) and herbicide

**Tall fescue (cool-season grass):** late winter burn, followed by a foliar application of a grass-specific herbicide such as Clethodim when grass reaches 6-7 inches tall

**Johnson grass (warm-season grass):** repeated mowing coupled with grass-specific herbicide applications; Johnson grass is developing glyphosate resistance





## A Management Guide for Invasive Plants in Southern Forests

SLIGHTLY REVISED NOVEMBER 2015

James H. Miller, Steven T. Manning, and Stephen F. Enloe

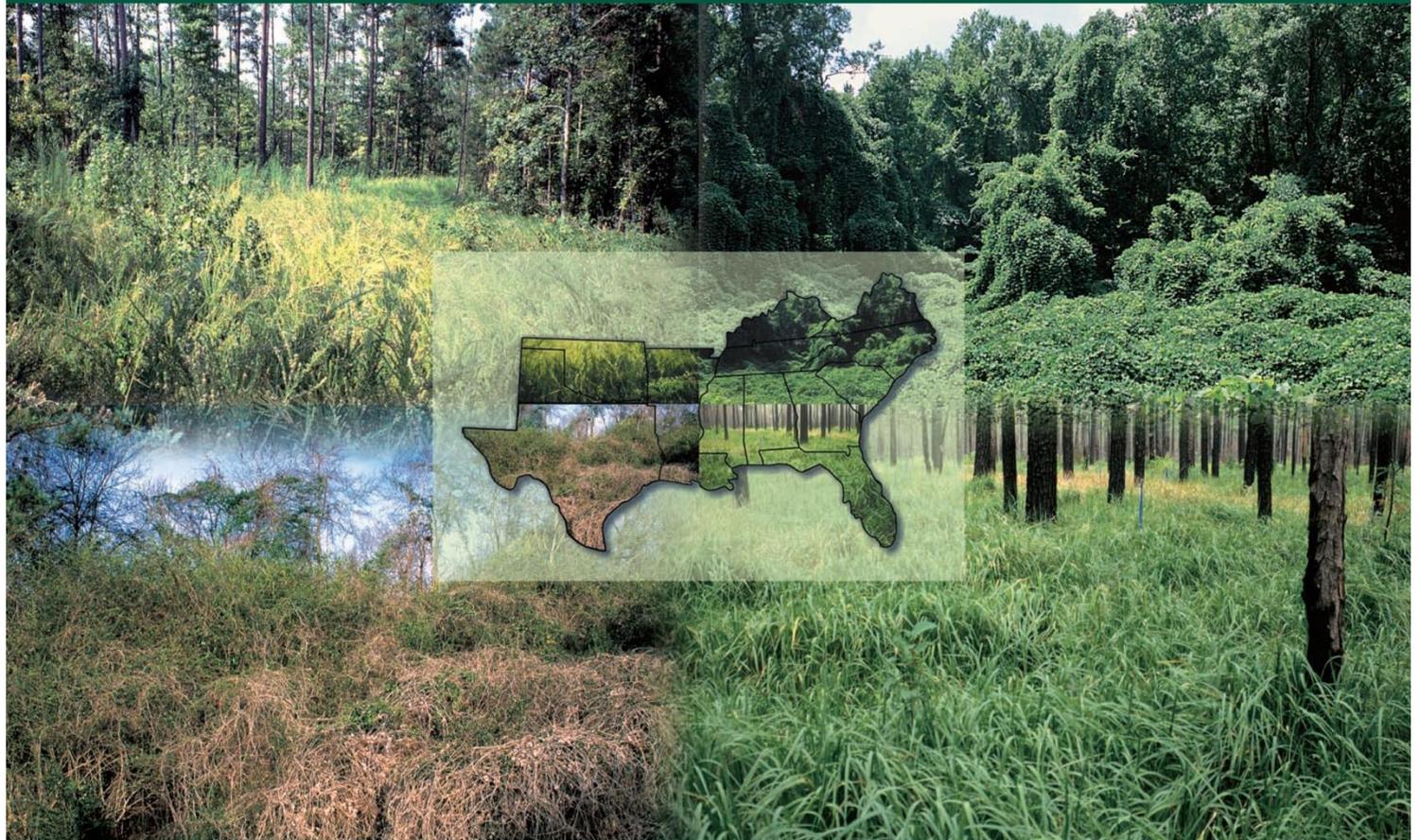


United States Department of Agriculture • Forest Service • Southern Research Station  
General Technical Report SRS-131

[PDF](#)

# Nonnative Invasive Plants of Southern Forests

A Field Guide for Identification and Control

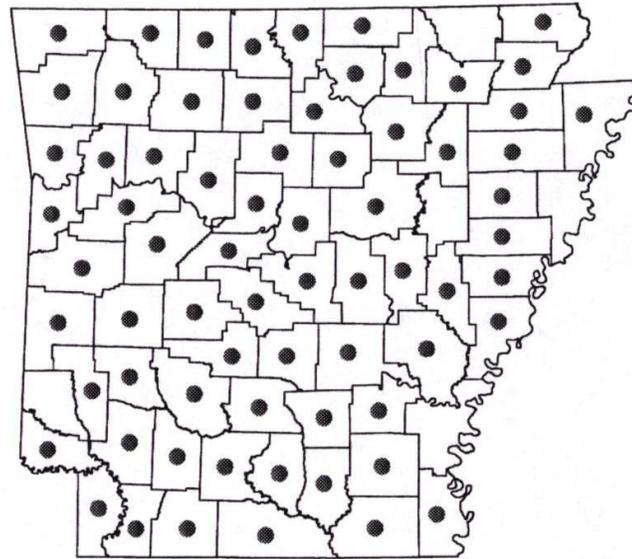
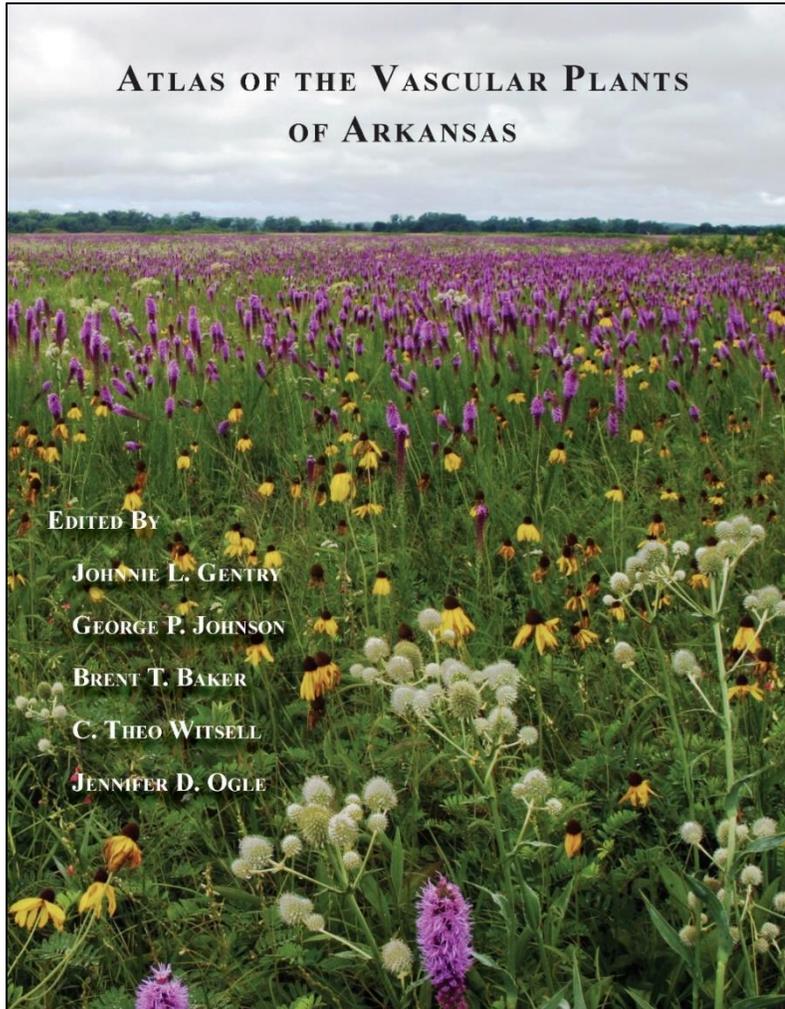


United States Department of Agriculture  
Forest Service  
Southern Research Station  
General Technical Report SRS-62

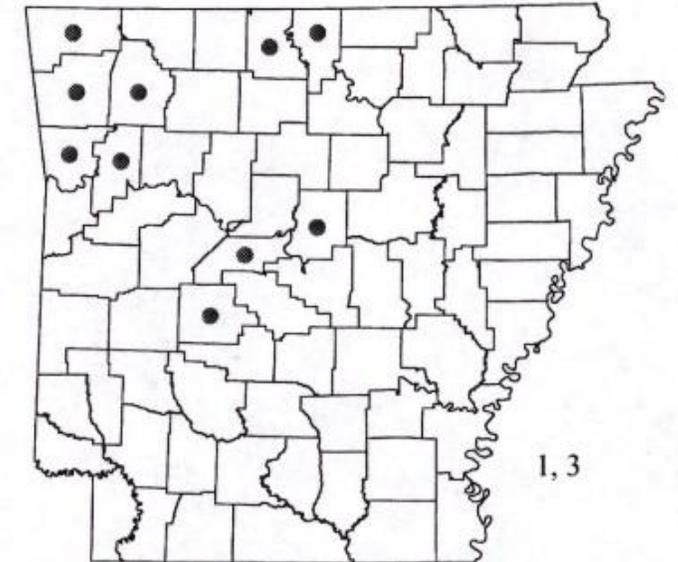
James H. Miller

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# Atlas of the Vascular Plants of Arkansas (2013)



NYSSACEAE  
*Nyssa sylvatica* Marshall  
black-gum



CAPRIFOLIACEAE  
*Lonicera maackii* (Rupr.) Maxim.  
Amur honeysuckle, bush honeysuckle

1, 3

[PDF](#)

# MORE INFORMATION & RESOURCES

[Invasive Plant Atlas](#) - collaborative project between the National Park Service and the University of Georgia Center for Invasive Species and Ecosystem Health

[Missouri Department of Conservation](#) – good source for identification and control of regional invasives

[Native Thistles: A Conservation Practitioner's Guide](#) – excellent guide by Xerces Society

[Alabama A&M & Auburn Universities Extension](#) – a wealth of information on invasive plants and control methods

Neighboring states with Invasive Plant Councils:  
[Missouri](#), [Oklahoma](#), [Tennessee](#), [Texas](#)



Arkansas native wild hyacinth (*Camassia scilloides*) growing at Baker Prairie Natural Area in Harrison, Boone County.