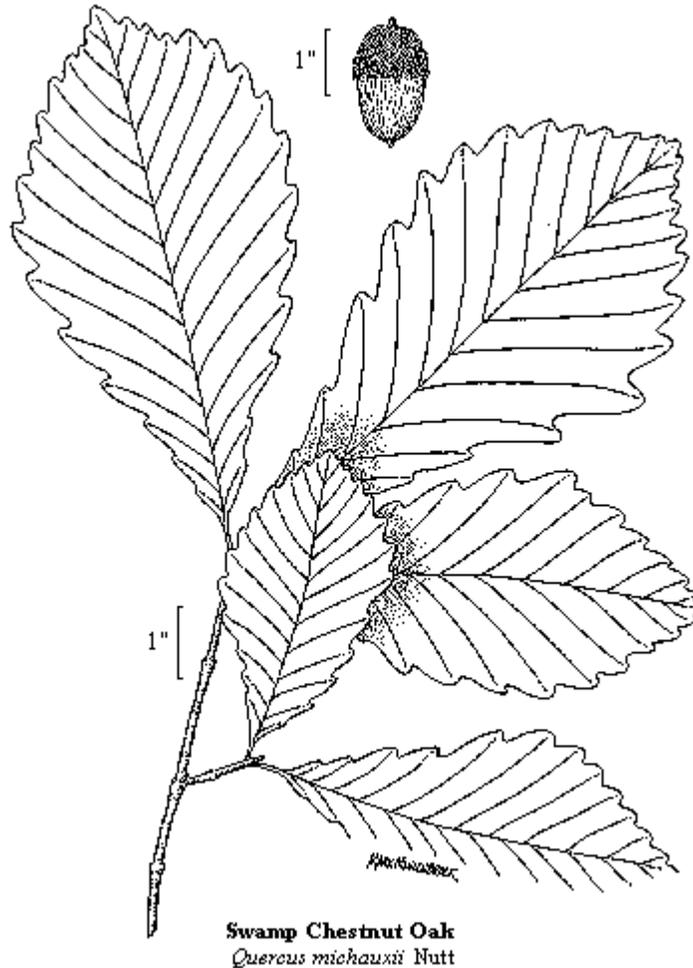


Southern Wetland Flora

Field Office Guide to Plant Species



USDA - Soil Conservation Service
South National Technical Center
Fort Worth, Texas

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Introduction

This Field guide was prepared by Biotic Consultants, Incorporated, of Carbondale, Illinois, under Contract #53-7482-9-65. All descriptions have been written by Robert H. Mohlenbrock. Mark Mohlenbrock prepared all of the illustrations. All maps were prepared by Trent Mohlenbrock. Robert H. Mohlenbrock took all the photos except the following: George Folkerts (*Dichromena colorata* distant view, *Sagittaria lancifolia*); L. Glasscock (*Schizachyrium scoparium*); Carl Hunter, collection of slides for *Wildflowers of Arkansas and Trees, Shrubs, and Vines of Arkansas*, published by the Ozark Society Foundation (*Asimina parviflora* flower, *Cardiospermum halicacabum*, *Carya myristiciformis*, *Cayaponia quinqueloba* flowers, *Cissus incisa* fruits, *Clematis crispa*, *Lindera melissaefolium* both, *Magnolia tripetala*, *Rhododendron canescens* flowers, *Rudbeckia maxima*, *Smilax smallii* fruits, *Ulmus crassifolia*, *Vaccinium elliottii* flowers, *Vitis rotundifolia* fruits); J. I. Jones (*Rubus hispidus*, *Sarracenia rubra* flowers); Walter S. Judd (*Gaylussacia baccata*, *Gaylussacia frondosa* both, *Lythrum lineare*, *Zenobia pulverulenta*); Doug Ladd (*Galiurn aparine*); Steve Orzell (*Drosera intermedia*, *Leucothoe axillaris*, *Lyonia lucida* flowers, *Sabatia gentianoides*); George Pyne (*Gordonia lasiantha* flower, *Lyonia mariana*, *Lysimachia quadrifolia*, *Magnolia fraseri* flowers, *Rhododendron viscosum*, *Sarracenia flava* flowers, *Sarracenia rubra* pitchers, *Scutellaria integrifolia* flower close-up); Milo Pyne (*Arnoglossum plantagineum* both, *Bacopa rotundifolia* flowers, *Cayaponia quinqueloba* fruit, *Cynanchum angustifolium* both, *Decumaria barbara*, *Gaylussacia dumosa* flowers, *Leucothoe racemosa* flower, *Lyonia ligustrina* flower, *Murdannia keisak*, *Persea borbonia* fruits, *Pinguicula lutea*, *Rhexia alifanus* flowers, *Sagittaria platyphylla* both, *Sparganium americanum* flower heads); L. Scott Ranger (*Krigia virginica*, *Magnolia fraseri* leaves, *Spiraea tomentosa*); Alfred Schotz (*Aletris aurea* flowers, *Sarracenia alata*); Ray Smith (*Arisaema dracontium* whole plant); Bill Summers (*Eryngium yuccifolium* whole plant, *Myosotis macrosperma*, *Solidago rugosa*, *Viola palens*, *Vitis riparia* leaves); anonymous photographers from the Soil Conservation Service (*Campsis radicans* distant view, *Catalpa bignonioides* distant view, *Itea virginica* distant view, *Panicum virgatum* distant view, *Peltandra virginica* whole plant, *Rhynchospora corniculata* whole plant). Beverly Mohlenbrock typed all the drafts of the manuscript and assisted with the photography. Angus Gholson, Jr. of Chattahoochee, Florida, provided expert assistance in the field. Typesetting was provided by Wendy Mohlenbrock of Aart-werk Graphic Design, Incorporated, of Tempe, Arizona, which also prepared the camera-ready copy for the entire guide. We are grateful to the Cram Map Company of Indianapolis for permission to use their base maps of the United States.

Southern Wetland Flora

Purpose of the Guide

The swampbuster provision of the Food Security Act of 1985 requires the Soil Conservation Service to make wetland/converted wetland determinations based on the presence of hydric soils and hydrophytic vegetation. This is necessary to assist the United States Department of Agriculture program agencies in determining producer eligibility for USDA program benefits. The material contained in this illustrated wetland guide will enable persons, regardless of their botanical background, to be able to identify the plants included in this guide.

Three hundred species of vascular plants were chosen for inclusion in this guide after consultation with the Ecological Science and Planning Staff of the Soil Conservation Service Southern Regional Technical Center in Fort Worth, Texas. A decision was made to exclude most species that are true aquatics that live in water, because they are obvious wetland species. Also excluded were those species that most people readily recognize, such as cattail.

Southern Wetland Flora

Organization and Use of the Guide

The presentation of each of the 300 species is included on two pages. The plants are arranged by groups. Within each group they are further arranged alphabetically by genus, and then alphabetically by species within each genus. The front of each page gives the common and scientific names of the plant, following the National List of Plant Species that Occur in Wetlands: Southeast (Region 2) prepared by the United States Fish and Wildlife Service in 1988. The scientific name consists of two Latin names. The first is called the genus name, the second is the species. After these two Latin names is one or more abbreviation(s) that stand for the name (or names) of the botanist(s) who first gave the plant its correct name. These abbreviated names are referred to as the authority. This is followed by a statement indicating the months of the year that the flower is in bloom. Under the category entitled Field Marks is the combination of characters that distinguishes the species from any others. The remainder of the front side of the page has a black-and-white illustration of the entire plant along with a close-up illustration of one of the parts of the plant.

On the back of each page is one or more colored photograph(s) of the species and a map showing the distribution of the species in the United States. The distribution map was compiled after consultation of all existing floras of the United States. The map gives only a general range of the species. A state which is completely covered by the pattern does not necessarily mean that the plant occurs in every county, although it might be expected in every county.

The remainder of the back page is devoted to a description of the plant, including characteristics of the habitat in which it is found, the growth form, stems, leaves, flowers (sepals, petals, stamens, pistils), fruits, and seeds. Useful or other features of the plant are included under Notes.

To use the guide, one identifies the plant to group, either with the key or from experience and prior knowledge, and then refers to the plant description. If the plant is not encountered in the descriptions, it is obviously not covered by this guide, and the investigator must consult other references.

Southern Wetland Flora

Illustrated Glossary of Floral Terms

Achene

A one-seeded, dry, indehiscent fruit with the seed coat not attached to the mature ovary wall.



Alternate

In reference to leaves: occurring at different levels successively on opposite sides of stem.



Annual

Living only for one year.

Anther

The pollen-producing part of a stamen.

Arcuate

Curved.

Auriculate

Bearing ear-shaped lobes.

Awn

A bristle-like process.

Bearded

With a tuft of hairs.

Berry

A fruit with the seeds surrounded only by fleshy material.

Biennial

Living for two years.

Bract

An accessory structure at the base of some flowers, usually appearing leaf-like.

Bracteole

A secondary bract.

Bractlet

A small bract.

Bristle

A stiff hair.

Calyx

All the sepals of a flower.

Capsule

A dry, dehiscent fruit splitting into 3 or more parts.



Cilia

Marginal hairs.

Ciliate

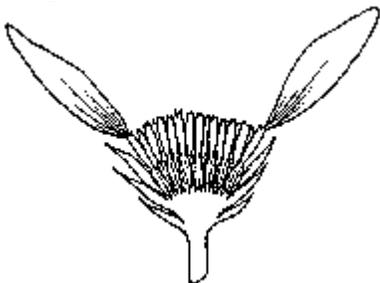
Bearing marginal hairs.

Clasping

Said of leaves that partially encircle the stem at the base.

Composite

Referring to an inflorescence that is made up of many tiny florets crowded together on a receptacle.



Compressed

Flattened.

Connate

Union of like parts.

Cordate

Heart-shaped.

Corm

An underground, tuber-like stem that stores food.

Corolla

All the petals of a flower.

Corymb

A type of flat-topped, branched inflorescence.

Crest

A small ridge.

Cyme

A type of inflorescence in which the central flowers open first.

Cymose

In the form of a cyme.

Deciduous

Falling off.

Dehiscent

Splitting at maturity.

Diaphragmed

Divided by partitions.

Disk

The central group of flowers in the head of the aster family; a fleshy growth that sometimes surrounds the ovary.

Drupe

A fruit with the seed surrounded by a hard, dry covering which, in turn, is surrounded by fleshy material.

Drupelet

A small drupe.

Ellipsoid

Referring to a solid object that is broadest at the middle, gradually tapering to both ends.

Elliptic

Broadest at the middle, gradually tapering to both ends.



Exfoliating

Stripping off.

Exserted

Projecting.

Fibrous

Referring to a cluster of slender roots, all with the same diameter.

Filament

The stalk of a stamen.

Fissured

Grooved.

Follicle

A dry, dehiscent fruit that splits along one side at maturity.



Furrowed

Grooved.

Glabrous

Smooth.

Glaucous

Having a bluish appearance.

Globose

Round.

Glume

A sterile scale found in grasses.

Hastate

Arrowhead-shaped, except that the basal lobes spread outward.

Hemispherical

Half-round.

Indehiscent

Not splitting open at maturity.

Inferior

Referring to the position of the ovary when it is below the point of attachment of the sepals and petals.



Inflorescence

A cluster of flowers.

Involute

Rolled up lengthwise.

Lanceolate

Lance-shaped; broadest near the base, gradually tapering to the narrower apex.



Lanceoloid

Referring to a solid object that is broadest near the base, gradually tapering to the narrower apex.

Latex

Milky sap.

Lemma

A fertile scale found in grasses.

Lenticel

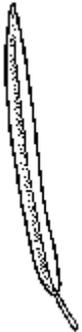
A small opening on a stem.

Ligule

A structure on the inside at the junction of the leaf blade and leaf sheath.

Linear

Elongated and uniform in width throughout.



Mucronate

With a short point sticking out the tip.

Node

That place on a stem where leaves and buds arise.

Nutlet

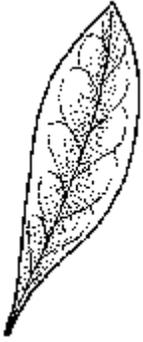
A small nut.

Obconic

Reverse cone-shaped.

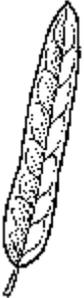
Oblanceolate

Reverse lance-shaped; broadest at the apex, gradually tapering to the narrower base.



Oblong

Broadest at the middle, and tapering to both ends, but broader than elliptic.



Oblongoid

Referring to a solid object that, in side view, is nearly the same width throughout.

Obovate

Broadly rounded at the apex, becoming narrowed below.



Obovoid

Referring to a solid object that is broadly rounded at the apex, becoming narrowed below.

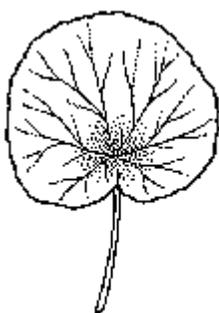
Opposite

In reference to leaves: forming a pair opposite each other on the stem.



Orbicular

Round.



Ovary

That part of the pistil that contains the ovules.

Ovate

Broadly rounded at the base, becoming narrowed above; broader than lanceolate.



Ovoid

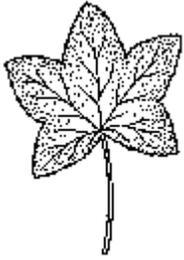
Referring to a solid object that is broadly rounded at the base, becoming narrowed above.

Ovule

Immature seed.

Palmate

Divided radiately, like the fingers of a hand.



Panicle

An arrangement of flowers consisting of several racemes.



Pappus

Tufts of hairs attached to achenes of the aster family.

Peduncle

The stalk of an inflorescence.

Peltate

Attached at the middle.

Pendulous

Drooping.

Perennial

Living for 3 or more years.

Perforation

A circular opening.

Perianth

All the sepals and petals of a flower.

Perigynium

A sac-like structure enclosing the pistil and later the seed in *Carex*.

Petiole

Leaf stalk.

Pinnate

Divided once along an elongated axis into distinct segments.

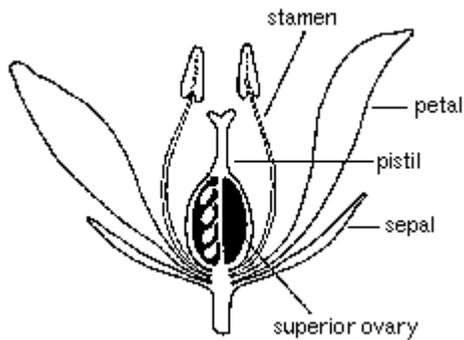


Pinnatifid

Divided nearly to the axis.

Pistil

The ovule-producing part of the flower.



Pith

The central, often soft, part of a stem.

Plumose

Feathery.

Prostrate

Lying flat on the ground.

Raceme

A grouping of flowers along an elongated axis where each flower has its own stalk.



Rachis

The axis of a flowering branch.

Ray

A flattened flower part in the aster family that is actually several petals fused together.

Receptacle

That part of the flower to which the sepals, petals, stamens, and pistils are usually attached.

Recurved

Curving downward.

Reflexed

Turned downward.

Reticulate

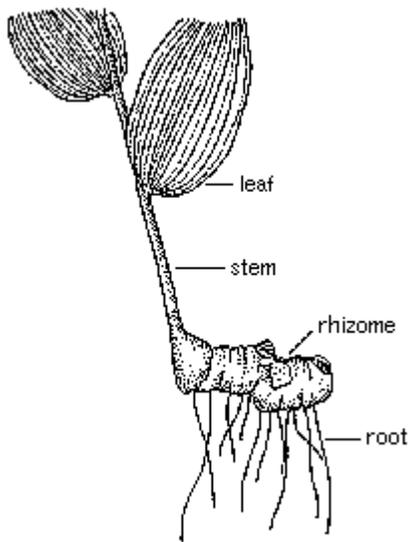
Like a net.

Revolute

Turned under along the edges.

Rhizome

An underground, horizontal stem.



Ribbed

Bearing ridges.

Rosette

A cluster of leaves around the base of the plant.

Samara

An indehiscent winged fruit.



Scale

A tiny, leaflike structure; the structure that subtends each flower in a grass or sedge.

Septate

With cross-walls.

Sessile

Without a stalk.

Setose

Bearing bristles.

Sheath

The base of a leaf that encircles the stem.

Sori

Structures found in ferns that contain the spore-producing sporangia.

Spadix

A fleshy axis in which flowers are embedded.

Spathe

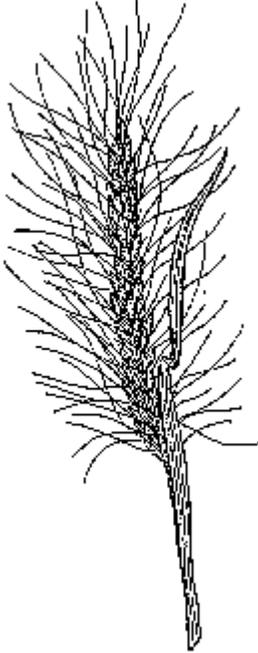
A large bract subtending or sometimes enclosing a cluster of flowers.

Spatulate

Shaped like a spatula, broadest at the tip and tapering to the base.

Spike

A grouping of flowers along an elongated axis where each flower lacks a stalk.



Spikelet

A small spike.

Spinulose

Bearing small spines.

Sporangia

Structures that bear spores.

Spore

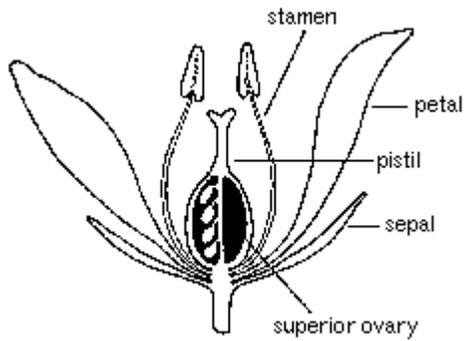
A microscopic reproductive body in ferns.

Spur

A slender, backward-pointing part of some flowers.

Stamen

The pollen-producing organ of a flower.



Stigma

The terminal part of a pistil.

Stipule

A green, often leaf-like, structure found at the base of some leaves.

Stolon

A horizontal stem lying on the surface of the soil.

Style

That part of the pistil between the ovary and the stigma.

Subglobose

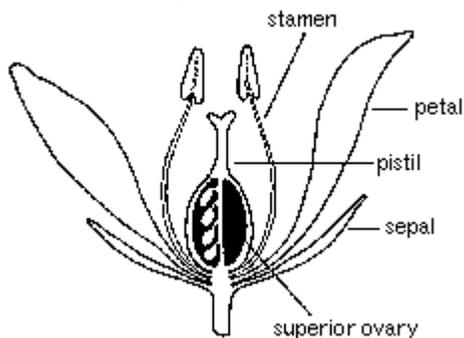
Nearly round.

Succulent

Fleshy.

Superior

Referring to the position of the ovary when it is above the point of attachment of sepals, petals, stamens, and pistils.



Sutures

Seams; areas where splitting occurs.

Tendrils

A device, usually coiled, that enables some vines to climb.

Ternate

Divided into 3's.

Truncate

Cut straight across.

Tuber

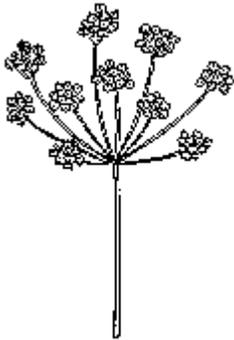
A thickened, underground stem that stores food.

Tubercle

A wart-like process.

Umbel

A cluster of flowers in which the flower stalks arise from the same level.



Undulating

Wavy.

Valvate

Placed edge to edge.

Valve

The wing of the fruit in *Rumex*.

Whorl

The arrangement of 3 or more structures at a point on the stem.



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Alphabetical List of Species in This Guide

The 300 Southern wetland plants selected for this project are given in the following list. The list is arranged by groups as found in the [key to groups](#). Within each group the plants are arranged alphabetically first by the scientific name of the genus, then alphabetically by species within the genus. The scientific and common names are those given in the National List of Plant Species that Occur in Wetlands: Southeast (Region 2), 1988.

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- [Group 8](#) -- Dicot Herbs with Most Leaves Simple and Basal or Alternate
- [Group 9](#) -- Woody Vines

Group 1. Ferns and Horsetails

- [Rattlesnake Fern](#) (*Botrychium virginianum* (L.) Swartz)
- [Spinulose Woodfern](#) (*Dryopteris spinulosa* (O.F. Muell.) Watt)
- [Japanese Climbing Fern](#) (*Lygodium japonicum* (Thunb.) Sw.)
- [Sensitive Fern](#) (*Onoclea sensibilis* L.)
- [Cinnamon Fern](#) (*Osmunda cinnamomea* L.)
- [Netted Chain Fern](#) (*Woodwardia areolata* (L.) T. Moore)
- [Virginia Chainfern](#) (*Woodwardia virginica* (L.) J.E. Smith)

Group 2. Grasses

- [Bushy Bluestem](#) (*Andropogon glomeratus* (Walter) BSP.)
- [Broom-sedge](#) (*Andropogon virginicus* L.)
- [Pineland Three-awn Grass](#) (*Aristida stricta* Michx.)
- [Joint-head Arthraxon](#) (*Arthraxon hispidus* (Thunb.) Makino)
- [Southern Carpet Grass](#) (*Axonopus affinis* Chase)
- [Broad-leaf Signal Grass](#) (*Brachiaria platyphylla* (Griseb.) Nash)
- [Slender Spikegrass](#) (*Chasmanthium laxum* (L.) H. Yates)
- [Long-leaf Spikegrass](#) (*Chasmanthium sessiliflorum* (Poir.) H. Yates)
- [Pitted Jointgrass](#) (*Coelorachis cylindrica* (Michx.) Nash)

[Toothache Grass](#) (*Ctenium aromaticum* (Walter) A. Wood)
[Velvet Dichantherium](#) (*Dichantherium scoparium* (Lam.) Gould)
[Hairy Crabgrass](#) (*Digitaria sanguinalis* (L.) Scop.)
[Jungle-rice](#) (*Echinochloa colona* (L.) Link)
[Coast Cockspur](#) (*Echinochloa walteri* (Pursh) A. Heller)
[Purple Lovegrass](#) (*Eragrostis spectabilis* (Pursh) Steud.)
[Sugar Cane Plumegrass](#) (*Erianthus giganteus* (Walter) F.T. Hubb.)
[Nepal Microstegium](#) (*Eulalia viminea* (Trin.) Kuntze)
[Mexican Sprangle-top](#) (*Leptochloa uninervia* (J. Presl) A. Hitchc. & Chase)
[Basket Grass](#) (*Oplismenus hirtellus* (L.) Beauv.)
[Witchgrass](#) (*Panicum capillare* L.)
[Switchgrass](#) (*Panicum virgatum* L.)
[Joint Paspalum](#) (*Paspalum distichum* L.)
[Brown-seed Paspalum](#) (*Paspalum plicatulum* Michx.)
[Vasey Grass](#) (*Paspalum urvillei* Steud.)
[Carolina Canary Grass](#) (*Phalaris caroliniana* Walter)
[Savannah Panic Grass](#) (*Phanopyrum gymnocarpon* (Elliott) Nash)
[American Cupscale](#) (*Sacciolepis striata* (L.) Nash)
[Little Bluestem](#) (*Schizachyrium scoparium* (Michx.) Nash)
[Knotroot Bristle Grass](#) (*Setaria geniculata* (Lam.) Beauv.)
[Indian Grass](#) (*Sorghastrum nutans* (L.) Nash)
[Sand Cordgrass](#) (*Spartina bakeri* Merrill)
[Long-spike Tidens](#) (*Tridens strictus* (Nutt.) Nash)
[Eastern Gamagrass](#) (*Tripsacum dactyloides* (L.) L.)
[Southern Wildrice](#) (*Zizaniopsis miliacea* (Michx.) Doell & Aschers.)

Group 3. Sedges

[Cypress-knee Sedge](#) (*Carex decomposita* Muhl.)
[Poorland Flatsedge](#) (*Cyperus compressus* L.)
[Sheathed Flatsedge](#) (*Cyperus haspan* L.)
[Starbrush White-top-sedge](#) (*Dichromena colorata* (L.) Hitchcock)
[Gulf Coast Spikerush](#) (*Eleocharis cellulosa* Torr.)
[Horse-tail Spikerush](#) (*Eleocharis equisetoides* (Elliott) Torr.)
[Small Spikerush](#) (*Eleocharis parvula* (Roem. & J.A. Schultes) Bluff & Fingerh.)
[Tall Fimbry](#) (*Fimbristylis dichotoma* (L.) Vahl)
[Hairy Umbrella-sedge](#) (*Fuirena squarrosa* Michx.)
[Horned Beaked-rush](#) (*Rhynchospora corniculata* (Lam.) Gray)
[Fasciculate Beakrush](#) (*Rhynchospora fascicularis* (Michx.) Vahl)
[Nodding Beakrush](#) (*Rhynchospora inexpansa* (Michx.) Vahl)
[Pineland Beakrush](#) (*Rhynchospora perplexa* Britton)

Group 4. Other Monocots

[Golden Colic-root](#) (*Aletris aurea* Walter)
[Green Dragon](#) (*Arisaema dracontium* (L.) Schott)
[Four-leaf Yam](#) (*Dioscorea quaternata* (Walter) J.F. Gmel.)

[Ten-angle Pipewort](#) (*Eriocaulon decangulare* L.)
[Creeping Rush](#) (*Juncus repens* Michx.)
[Needle-pod Rush](#) (*Juncus scirpoides* Lam.)
[Round-head Rush](#) (*Juncus validus* Coville)
[Carolina Redroot](#) (*Lachnanthes caroliniana* (Lam.) Dandy)
[Marsh Dewflower](#) (*Murdannia keisak* (Hassk.) Hand. -Mazz.)
[Arrow Arum](#) (*Peltandra virginica* (L.) Kunth)
[Bull-tongue Arrowhead](#) (*Sagittaria lancifolia* L.)
[Delta Arrow-head](#) (*Sagittaria platyphylla* (Englem.) J.G. Smith)
[Eastern Blue-eyed Grass](#) (*Sisyrinchium atlanticum* Bickn.)
[False-solomon's-seal](#) (*Smilacina racemosa* (L.) Desf.)
[American Burreed](#) (*Sparganium americanum* Nutt.)

Group 5. Trees and Shrubs, excluding Woody Vines

[Box-elder](#) (*Acer negundo* L.)
[Red Buckeye](#) (*Aesculus pavia* L.)
[Downy Service-berry](#) (*Amelanchier arborea* (Michx. f.) Fern.)
[Hercules Club](#) (*Aralia spinosa* L.)
[Red Chokeberry](#) (*Aronia arbutifolia* (L.) Elliott)
[Black Chokeberry](#) (*Aronia melanocarpa* (Michx.) Elliott)
[St. Andrew's Cross](#) (*Ascyrum hypericoides* L.)
[St. Peterswort](#) (*Ascyrum stans* Michx.)
[Dwarf Pawpaw](#) (*Asimina parviflora* (Michx.) Dunal)
[Common Pawpaw](#) (*Asimina triloba* (L.) Dunal)
[Salt-water False-willow](#) (*Baccharis angustifolia* Michx.)
[Groundsel Tree](#) (*Baccharis halimifolis* L.)
[Gum Bumelia](#) (*Bumelia lanuginosa* (Michx.) Pers.)
[Buckthorn Bumelia](#) (*Bumelia lycioides* (L.) Pers.)
[American Beauty-berry](#) (*Callicarpa americana* L.)
[Water Hickory](#) (*Carya aquatica* (Michx. f.) Nutt.)
[Bitter-nut Hickory](#) (*Carya cordiformis* (Wangenh.) K. Koch)
[Sweet Pignut Hickory](#) (*Carya glabra* (Mill.) Sweet)
[Nutmeg Hickory](#) (*Carya myristiciformis* (Michx. f.) Nutt.)
[Catalpa](#) (*Catalpa bignonioides* Walter)
[Coast Pepper-bush](#) (*Clethra alnifolia* L.)
[Silky Dogwood](#) (*Cornus amomum* Mill.)
[Rough-leaf Dogwood](#) (*Cornus drummondii* C. A. Meyer)
[May Hawthorn](#) (*Crataegus aestivalis* (Walter) Torr. & Gray)
[Cockspur Hawthorn](#) (*Crataegus crus-galli* L.)
[Parsley Hawthorn](#) (*Crataegus marshallii* Eggelst.)
[Washington Hawthorn](#) (*Crataegus phaenopyrum* (L. f.) Medik)
[Green Hawthorn](#) (*Crataegus viridis* L.)
[Swamp Cyrilla](#) (*Cyrilla racemiflora* L.)
[American Strawberry-bush](#) (*Euonymus americanus* L.)
[Carolina Ash](#) (*Fraxinus caroliniana* Mill.)
[Pumpkin Ash](#) (*Fraxinus profunda* (Bush) Bush)
[Black Huckleberry](#) (*Gaylussacia baccata* (Wangenh.) K. Koch)
[Dwarf Huckleberry](#) (*Gaylussacia dumosa* (Andr.) Torr. & Gray)
[Dangle-berry](#) (*Gaylussacia frondosa* (L.) Torr. & Gray)

[Water-locust](#) (*Gleditsia aquatica* Marshall)
[Loblolly Bay](#) (*Gordonia lasianthus* (L.) J. Ellis)
[Carolina Silver-bell](#) (*Halesia carolina* L.)
[Two-wing Silver-bell](#) (*Halesia diptera* J. Ellis)
[American Witch-hazel](#) (*Hamamelis virginiana* L.)
[Round-pod St. Johnswort](#) (*Hypericum cistifolium* Lam.)
[Bushy St. Johnswort](#) (*Hypericum densiflorum* Pursh)
[Sandweed St. Johnswort](#) (*Hypericum fasciculatum* Lam.)
[Bedstraw St. Johnswort](#) (*Hypericum galioides* Lam.)
[Atlantic St. Johnswort](#) (*Hypericum reductum* (Svens.) W. P. Adams)
[Sarvis Holly](#) (*Ilex amelanchier* M. A. Curt.)
[Dahoon Holly](#) (*Ilex cassine* L.)
[Bay-gall Holly](#) (*Ilex coriacea* (Pursh) Chapm.)
[Ink-berry](#) (*Ilex glabra* (L.) Gray)
[Yaupon](#) (*Ilex vomitoria* Ait.)
[Virginia Willow](#) (*Itea virginica* L.)
[Big-leaf Sumpweed](#) (*Iva frutescens* L.)
[Eastern Red Cedar](#) (*Juniperus virginiana* L.)
[Coastal Dog-hobble](#) (*Leucothoe axillaris* (Lam.) D. Don)
[Fetter-bush](#) (*Leucothoe racemosa* (L.) Gray)
[Northern Spicebush](#) (*Lindera benzoin* (L.) Blume)
[Southern Spicebush](#) (*Lindera melissifolia* (Walter) Blume)
[Carolina Wolf-berry](#) (*Lycium carolinianum* Walter)
[Rusty Lyonia](#) (*Lyonia ferruginea* (Walter) Nutt.)
[Maleberry](#) (*Lyonia ligustrina* (L.) DC.)
[Fetter-bush](#) (*Lyonia lucida* (Lam.) K. Koch)
[Piedmont Stagger-bush](#) (*Lyonia mariana* (L.) D. Don)
[Fraser's Magnolia](#) (*Magnolia fraseri* Walter)
[Umbrella Magnolia](#) (*Magnolia tripetala* (L.) L.)
[Sweetbay Magnolia](#) (*Magnolia virginiana* L.)
[Red Mulberry](#) (*Morus rubra* L.)
[Southern Bayberry](#) (*Myrica cerifera* L.)
[Evergreen Bayberry](#) (*Myrica heterophylla* Raf.)
[Odorless Bayberry](#) (*Myrica inodora* W. Bartram)
[Water Tupelo](#) (*Nyssa aquatica* L.)
[Black Gum](#) (*Nyssa sylvatica* Marshall)
[Swamp Tupelo](#) (*Nyssa sylvatica* Marshall var. *biflora* (Walt.) Sarg.)
[Eastern Hop-hornbeam](#) (*Ostrya virginiana* (Mill.) K. Koch)
[Red Bay](#) (*Persea borbonia* (L.) Spreng.)
[Slash Pine](#) (*Pinus elliottii* Engelm.)
[Spruce Pine](#) (*Pinus glabra* Walter)
[Pond Pine](#) (*Pinus serotina* Michx.)
[Planer-tree](#) (*Planera aquatica* Walter)
[Cherry-bark Oak](#) (*Quercus falcata* Michx. var. *pagodifolia* Ell.)
[Laurel Oak](#) (*Quercus laurifolia* Michx.)
[Overcup Oak](#) (*Quercus lyrata* Walt.)
[Water Oak](#) (*Quercus nigra* L.)
[Nuttall Oak](#) (*Quercus nuttallii* Palmer)
[Pin Oak](#) (*Quercus palustris* Muenchh.)
[Dwarf Oak](#) (*Quercus pumila* Walt.)
[Carolina Buckthorn](#) (*Rhamnus caroliniana* Walter)
[Hoary Azalea](#) (*Rhododendron canescens* (Michx.) Sweet)
[Hammock Sweet Azalea](#) (*Rhododendron serrulatum* (Small) Millais)
[Swamp Azalea](#) (*Rhododendron viscosum* (L.) Torr.)

[Carolina Rose](#) (*Rosa carolina* L.)
[Prairie Rose](#) (*Rosa setigera* Michx.)
[Serrate-leaf Blackberry](#) (*Rubus argutus* Link)
[Northern Dewberry](#) (*Rubus flagellaris* Willd.)
[Bristly Blackberry](#) (*Rubus hispidus* L.)
[Dwarf Palmetto](#) (*Sabal minor* (Jacq.) Pers.)
[Coastal-plain Willow](#) (*Salix caroliniana* Michx.)
[Gulf Sebastian-bush](#) (*Sebastiania fruticosa* (W. Bartram) Fernald)
[Steeple-bush](#) (*Spiraea tomentosa* L.)
[American Snowbell](#) (*Styrax americana* Lam.)
[Coral-berry](#) (*Symphoricarpos orbiculatus* Moench)
[Horse-sugar](#) (*Symplocos tinctoria* (L.) L'Her.)
[Poison Oak](#) (*Toxicodendron quercifolia* (Michx.) Greene)
[Poison Sumac](#) (*Toxicodendron vernix* (L.) Kuntze)
[American Elm](#) (*Ulmus americana* L.)
[Cedar Elm](#) (*Ulmus crassifolia* Nutt.)
[Slippery Elm](#) (*Ulmus rubra* Muhl.)
[Farkleberry](#) (*Vaccinium arboreum* Marshall)
[Highbush Blueberry](#) (*Vaccinium corymbosum* L.)
[Elliott Blueberry](#) (*Vaccinium elliotii* Chapm.)
[Deerberry](#) (*Vaccinium stamineum* L.)
[Possum-haw Viburnum](#) (*Viburnum nudum* L.)
[Hercules-club](#) (*Zanthoxylum clava-herculis* L.)
[Dusty Zenobia](#) (*Zenobia pulverulenta* (W. Bartr.) Pollard)

Group 6. Dicot Herbs with Some of the Leaves Compound

[American Joint-vetch](#) (*Aeschynomene americana* L.)
[Swamp Virgin's-bower](#) (*Clematis crispa* L.)
[Virginia Virgin's-bower](#) (*Clematis virginiana* L.)
[Small Dog-fennel Thorough-wort](#) (*Eupatorium capillifolium* (Lam.) Small)
[White Avens](#) (*Geum canadense* Jacq.)
[Japanese Clover](#) (*Lespedeza striata* (Thunb.) Hook. & Arn.)
[Yellow Sweetclover](#) (*Melilotus officinalis* Lam.)
[Yellow-puff](#) (*Neptunia lutea* (Leavenw.) Benth.)
[Early Wood Lousewort](#) (*Pedicularis canadensis* L.)
[Comb-leaf Mermaid-weed](#) (*Proserpinaca pectinata* Lam.)
[Nuttall's Mock Bishop-weed](#) (*Ptilimnium nuttallii* (DC.) Britton)
[Bulbous Buttercup](#) (*Ranunculus bulbosus* L.)
[Bag-pod Rattle-bush](#) (*Sesbania vesicaria* (Jacq.) Elliott)
[Trailing Wildbean](#) (*Strophostyles helvola* (L.) Elliott)

Group 7. Dicot Herbs with Most or All of the Leaves Simple and Opposite or Whorled

[Alligator Weed](#) (*Alternanthera phylloxeroides* (Mart.) Griseb.)
[Scarlet Pimpernel](#) (*Anagallis arvensis* L.)
[Carolina Water-hyssop](#) (*Bacopa caroliniana* (Walter) B. Rob.)

[Blue Waxweed](#) (*Cuphea viscosissima* Jacq.)
[Gulf Coast Swallow-wort](#) (*Cynanchum angustifolium* Pers.)
[Wild Mudwort](#) (*Dicliptera brachiata* (Pursh) Spreng.)
[Spotted Broomspurge](#) (*Euphorbia maculata* L.)
[Catchweed Bedstraw](#) (*Galium aparine* L.)
[Orange-grass](#) (*Hypericum gentianoides* (L.) BSP.)
[Dotted St. Johnswort](#) (*Hypericum punctatum* Lam.)
[Creeping Seedbox](#) (*Ludwigia repens* J. Forst.)
[Whorled Loosestrife](#) (*Lysimachia quadrifolia* L.)
[Saltmarsh Loosestrife](#) (*Lythrum lineare* L.)
[Purple Mecardonia](#) (*Mecardonia acuminata* (Walter) Small)
[Climbing Hempweed](#) (*Mikania scandens* (L.) Willd.)
[Partridge-berry](#) (*Mitchella repens* L.)
[Rose Meadow-beauty](#) (*Rhexia alifanus* Walter)
[Virginia Meadow-beauty](#) (*Rhexia virginica* L.)
[Hairy Wild Petunia](#) (*Ruellia humilis* Nutt.)
[Pinewoods Rose-gentian](#) (*Sabatia gentianoides* Elliott)
[Hyssop Skullcap](#) (*Scutellaria integrifolia* L.)
[Climbing-dogbane](#) (*Trachelospermum difforme* (Walter) Gray)
[Marsh St. Johnswort](#) (*Triadenum virginicum* (L.) Raf.)
[Brazilian Vervain](#) (*Verbena brasiliensis* Vell.)

Group 8. Dicot Herbs with Most Leaves Simple and Basal or Alternate

[Three-seeded Mercury](#) (*Acalypha virginica* L.)
[Groove-stem Indian-plantain](#) (*Arnoglossum platagineum* Raf.)
[Common Shepherd's Purse](#) (*Capsella bursa-pastoris* (L.) Medik)
[Balloonvine](#) (*Cardiospermum halicacabum* L.)
[Southern Cayaponia](#) (*Cayaponia quinqueloba* (Raf.) Shinnery)
[Erect Coinleaf](#) (*Centella erecta* (L. f.) Fernald)
[Yellow Thistle](#) (*Cirsium horridulum* Michx.)
[Canada Horseweed](#) (*Conyza canadensis* (L.) Cronq.)
[Spoon-leaf Sundew](#) (*Drosera intermedia* Hayne)
[Carolina Elephant-foot](#) (*Elephantopus carolinianus* Raeusch)
[Rattlesnake-master](#) (*Eryngium yuccifolium* Michx.)
[Purple Cudweed](#) (*Gamochaeta purpurea* (L.) Cabrera)
[Swamp Sunflower](#) (*Helianthus angustifolius* L.)
[Common Sunflower](#) (*Helianthus annuus* L.)
[Jerusalem-artichoke](#) (*Helianthus tuberosus* L.)
[Swamp Rosemallow](#) (*Hibiscus moscheutos* L.)
[Coastal-plain Penny-wort](#) (*Hydrocotyle bonariensis* Lam.)
[Many-flowered Penny-wort](#) (*Hydrocotyle umbellata* L.)
[Ovate False-fiddle-leaf](#) (*Hydrolea ovata* Nutt.)
[Pale Touch-me-not](#) (*Impatiens pallida* Nutt.)
[Common Morning-glory](#) (*Ipomoea purpurea* (L.) Roth)
[Hairy Cluster-vine](#) (*Jacquemontia tamnifolia* (L.) Griseb.)
[Virginia Seashore Mallow](#) (*Kosteletzkya virginica* (L.) Gray)
[Virginia Dwarf-dandelion](#) (*Krigia virginica* (L.) Willd.)
[Pricky Lettuce](#) (*Lactuca serriola* L.)
[Poor-man's Pepper-grass](#) (*Lepidium virginicum* L.)

[Cattail Gayfeather](#) (*Liatris pycnostachya* Michx.)
[Primrose Willow](#) (*Ludwigia decurrens* Walter)
[Floating Seedbox](#) (*Ludwigia peploides* (HBK.) Raven)
[Large-seed Forget-me-not](#) (*Myosotis macrosperma* Engelm.)
[Yellow Passion-flower](#) (*Passiflora lutea* L.)
[Yellow Butterwort](#) (*Pinguicula lutea* Walter)
[Saltmarsh Camphor-weed](#) (*Pluchea purpurascens* (Swartz) DC.)
[Pink Milkwort](#) (*Polygala incarnata* L.)
[Dwarf Milkwort](#) (*Polygala nana* (Michx.) DC.)
[Virginia Knotweed](#) (*Polygonum virginianum* L.)
[Great Coneflower](#) (*Rudbeckia maxima* Nutt.)
[Yellow Trumpets](#) (*Sarracenia alata* A. Wood)
[Yellow Pitcher-plant](#) (*Sarracenia flava* L.)
[Hooded Pitcher-plant](#) (*Sarracenia minor* Walter)
[Sweet Pitcher-plant](#) (*Sarracenia rubra* Walter)
[Lizard's Tail](#) (*Saururus cernuus* L.)
[Prairie Dock](#) (*Silphium terebinthinaceum* Jacq.)
[Tall Goldenrod](#) (*Solidago altissima* L.)
[Pinebarren Goldenrod](#) (*Solidago fistulosa* Mill.)
[Wrinkled Goldenrod](#) (*Solidago rugosa* Mill.)
[New York Ironweed](#) (*Vernonia noveboracensis* (L.) Michx.)
[Northern White Violet](#) (*Viola pallens* (Banks) Brainerd)
[Downy Yellow Violet](#) (*Viola pubescens* Ait.)

Group 9. Woody Vines

[Peppervine](#) (*Ampelopsis arborea* (L.) Koehne)
[Heart-leaf Pepper-vine](#) (*Ampelopsis cordata* Michx.)
[Woolly Dutchman's-pipevine](#) (*Aristolochia tomentosa* Sims)
[Alabama Supple-jack](#) (*Berchemia scandens* (J. Hill) K. Koch)
[Crossvine](#) (*Bignonia capreolata* L.)
[Redvine](#) (*Brunnichia cirrhosa* Gaertn.)
[Cupseed](#) (*Calyocarpum lyonii* Gray)
[Trumpet Creeper](#) (*Campsis radicans* (L.) Seem.)
[Ivy Treebine](#) (*Cissus incisa* (Nutt.) Des Moul.)
[Carolina Coral-beads](#) (*Cocculus carolinus* (L.) DC.)
[Southeast Decumaria](#) (*Decumaria barbara* L.)
[Rankin's Trumpet-flower](#) (*Gelsemium rankinii* Small)
[Yellow Jessamine](#) (*Gelsemium sempervirens* (L.) Ait. f.)
[Japanese Honeysuckle](#) (*Lonicera japonica* Thunb.)
[Trumpet Honeysuckle](#) (*Lonicera sempervirens* L.)
[Virginia Creeper](#) (*Parthenocissus quinquefolia* (L.) Planch.)
[Saw Greenbrier](#) (*Smilax bona-nox* L.)
[Cat Greenbrier](#) (*Smilax glauca* Walter)
[Bristly Greenbrier](#) (*Smilax hispida* Muhl.)
[Laurel-leaf Greenbrier](#) (*Smilax laurifolia* L.)
[Common Greenbrier](#) (*Smilax rotundifolia* L.)
[Lance-leaf Greenbrier](#) (*Smilax smallii* Morong)
[Coral Greenbrier](#) (*Smilax walteri* Pursh)
[Poison Ivy](#) (*Toxicodendron radicans* (L.) Kuntze)

[Summer Grape](#) (*Vitis aestivalis* Michx.)

[Pigeon Grape](#) (*Vitis cinerea* Engelm.)

[Cat Grape](#) (*Vitis palmata* Vahl)

[River-bank Grape](#) (*Vitis riparia* Michx.)

[Muscadine Grape](#) (*Vitis rotundifolia* Michx.)

[Frost Grape](#) (*Vitis vulpina* L.)

[American Wisteria](#) (*Wisteria frutescens* (L.) Poir.)

Southern Wetland Flora

Key to Groups of Wetland Plants in South

1.	Ferns or horsetails, reproducing by spores, not seeds	<u>Group 1</u>
1.	Plants reproducing by flowers and seeds	<u>Go To 2</u>
2.	Plants woody, either trees, shrubs, or vines	<u>Go To 3</u>
2.	Plants herbaceous; stems not woody	<u>Go To 4</u>
3.	Trees and Shrubs	<u>Group 5</u>
3.	Woody vines	<u>Group 9</u>
4.	Monocots; leaves usually with parallel veins; flower parts usually in 3's or multiples of 3's	<u>Go To 5</u>
4.	Dicots; leaves usually with net veins; flower parts usually in 4's or 5's or multiples thereof	<u>Go To 7</u>
5.	Flowers without sepals and petals, each flower subtended by a scale, with all the flowers arranged in spikelets	<u>Go To 6</u>
5.	Flowers with sepals and petals (green or brown in <i>Juncus</i>), or borne on a spadix, but not arranged in spikelets	<u>Group 4</u>
6.	At least one or more scales at the base of each spikelet not subtending a flower; stems never triangular	<u>Group 2</u>
6.	All the scales of a spikelet subtending a flower; stems sometimes triangular	<u>Group 3</u>
7.	At least some of the leaves compound; that is, divided into distinct leaflets	<u>Group 6</u>
7.	None of the leaves compound	<u>Group 8</u>

8.	Most or all the leaves opposite or whorled	<u>Group</u> <u>7</u>
8.	Most or all the leaves alternate and/or basal	<u>Group</u> <u>8</u>

Southern Wetland Flora

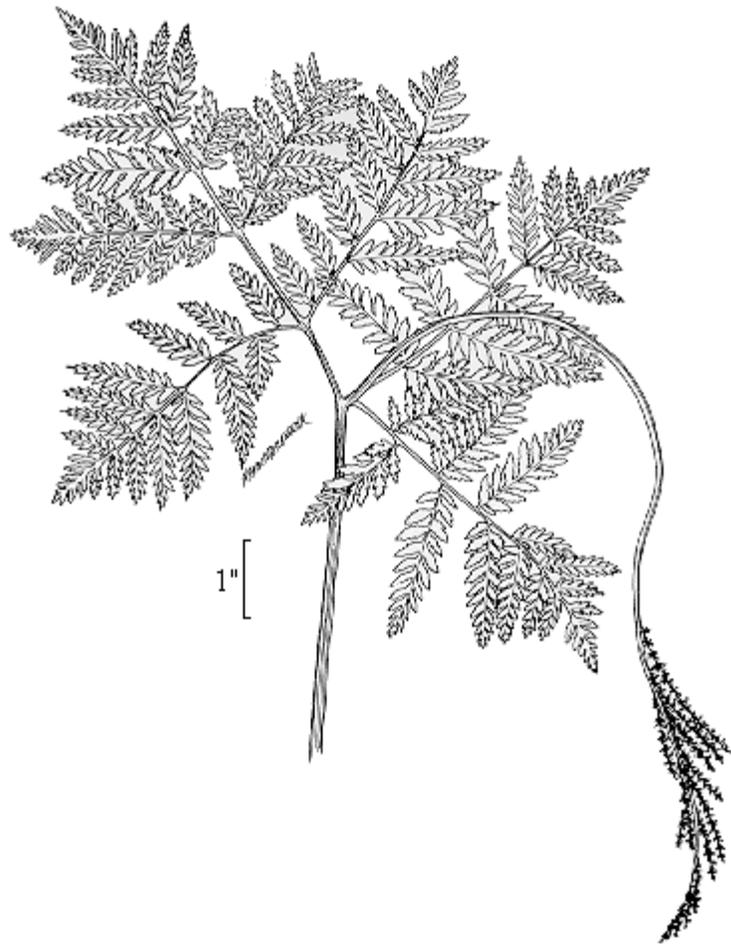
Field Office Guide to Plant Species

Rattlesnake Fern

Botrychium virginianum (L.) Swartz



- **Family:** Adder's-tongue Fern (Ophioglossaceae)
- **Spores:** September-November
- **Field Marks:** This fern, which dies back during the winter, has a basic triangular shape. The reproductive bodies are borne on stalks which arise directly from the leaf stalks.
- **Habitat:** Woodlands, ravines.
- **Habit:** Perennial fern from short rootstocks and usually fleshy roots.
- **Stems:** Stems underground, short, thick, erect.
- **Leaves:** Solitary, arising from the underground rootstock, basically triangular in shape, rather thin, the segments once- or twice-divided, smooth, up to 1 1/2 feet long.
- **Reproductive Structures:** Spores borne in round sori clustered at the tip of a stalk that rises directly from the leaf stalk.



Southern Wetland Flora

Field Office Guide to Plant Species

Spinulose Woodfern

Dryopteris spinulosa (O.F. Muell.) Watt



- **Family:** Fern (Polypodiaceae)
- **Sori:** June-October
- **Field Marks:** The lowermost leaf segments on each leaf are longer than the leaf segment above them. The sori are round.
- **Habitat:** Wet shaded cliffs, swamps.
- **Habit:** Perennial fern with stout, creeping rhizomes.
- **Stems:** All underground.
- **Leaves:** Large, much divided, 1 1/2 pinnately compound, up to 1 1/2 feet long, ovate-lanceolate; leaf stalks up to 12 inches long, brown-scaly.
- **Reproductive Structures:** Spore-bearing sori round, near but not on the margin of the leaves.

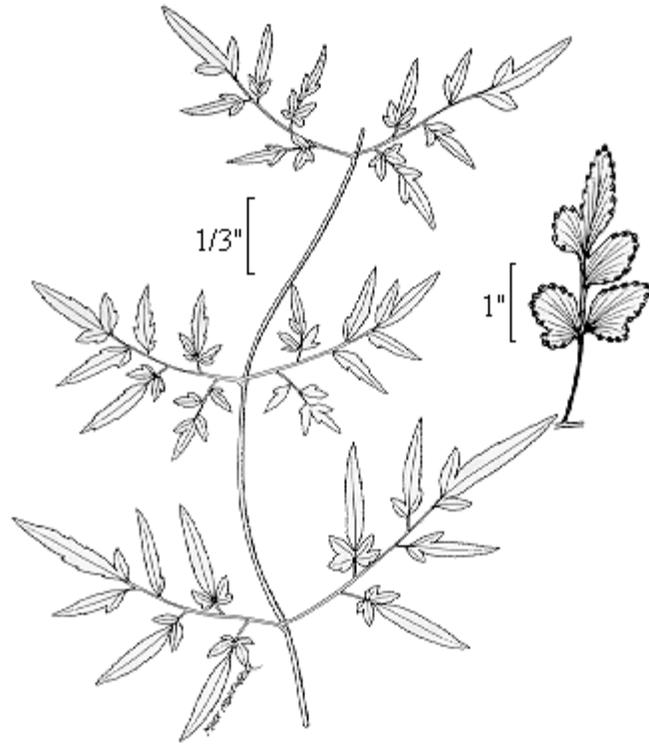
Southern Wetland Flora

Field Office Guide to Plant Species

Japanese Climbing Fern
Lygodium japonicum (Thunb.) Sw.



- **Family:** Curly-grass (Schizaeaceae)
- **Spores:** June-September
- **Field Marks:** The genus *Lygodium* consists of viny ferns with palmately or pinnately compound leaves. Japanese climbing fern has pinnately divided leaves.
- **Habitat:** Low woods, thickets, along rivers and streams.
- **Habit:** Climbing or twining perennial fern, sometimes forming vine-like clumps, with slender, creeping rhizomes.
- **Stems:** Climbing or twining, slender, from several to many feet long.
- **Leaves:** Alternate, pinnately compound, up to 8 inches long, the leaflets triangular-lanceolate, pointed at the tip, the fertile segments sometimes deeply cleft, with sporangia in double rows.
- **Notes:** The similar native climbing fern (*L. palmatum*) has palmately compound leaves.



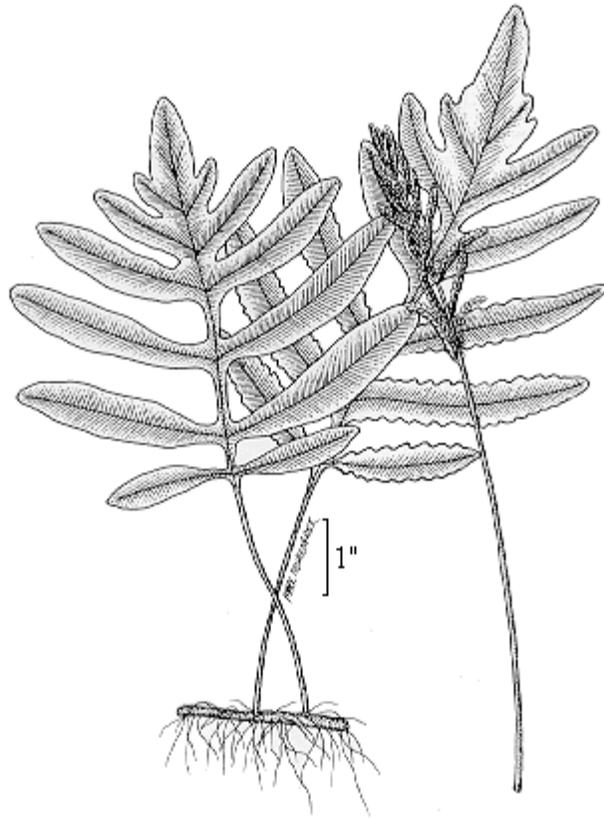
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Field Office Guide to Plant Species

Sensitive Fern *Onoclea sensibilis* L.



- **Family:** Fern (Polypodiaceae)
- **Spores:** June-November
- **Field Marks:** The large, deeply pinnatifid fronds and the spherical spore-bearing bodies borne on a separate stalk distinguish this species.
- **Habitat:** Wet woods, along streams and riverbanks, swamps, bogs.
- **Habit:** Perennial fern from underground rhizomes.
- **Stems:** No aerial stems present.
- **Leaves:** Large, deeply pinnatifid, the stalk winged, each segment of the leaf lanceolate to oblong, with or without teeth or with a few undulations, up to 4 1/2 feet long.
- **Flowering:** Borne in globose bodies at the tip of a stalk separate from the leaves.
- **Notes:** The common name is derived from the early sensitivity of this fern to frost.



Southern Wetland Flora

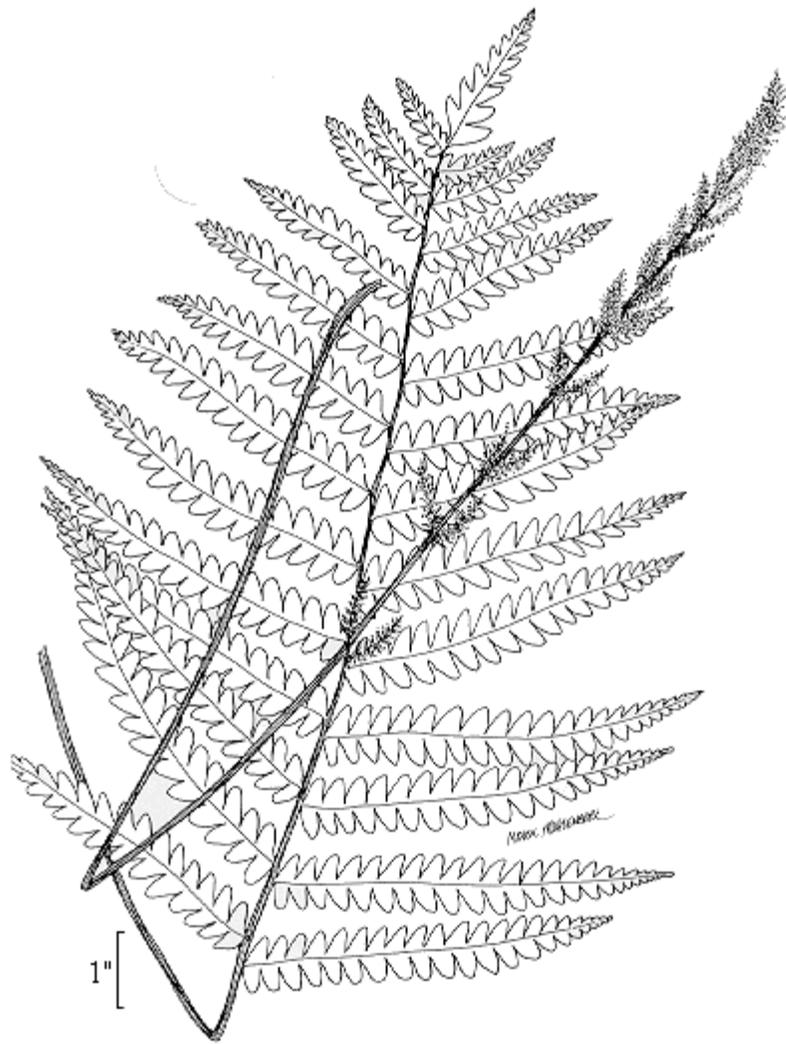
Field Office Guide to Plant Species

Cinnamon Fern

Osmunda cinnamomea L.



- **Family:** Royal Fern (Osmundaceae)
- **Spores:** May-June
- **Field Marks:** This fern, with its large leaves up to 5 feet long, has cinnamon-colored hairs covering its leaf stalks and its reproductive bodies.
- **Habitat:** Wet ground, often near springs; low woods, swamps, wet thickets, bayheads, marshes, rocky ledges.
- **Habit:** Perennial fern with a thick rootstock.
- **Stems:** Underground, widely creeping.
- **Leaves:** Sterile leaves up to 5 feet long, 1 1/2 pinnate, each segment of the leaf more or less rounded at the tip; leaf stalk up to 1 foot long, covered with dense cinnamon-colored hairs.
- **Reproductive Structures:** Spore-bearing sori densely crowded on the back of much reduced fertile leaves; sporangia cinnamon-colored.
- **Notes:** This large, handsome fern is a popular ornamental.

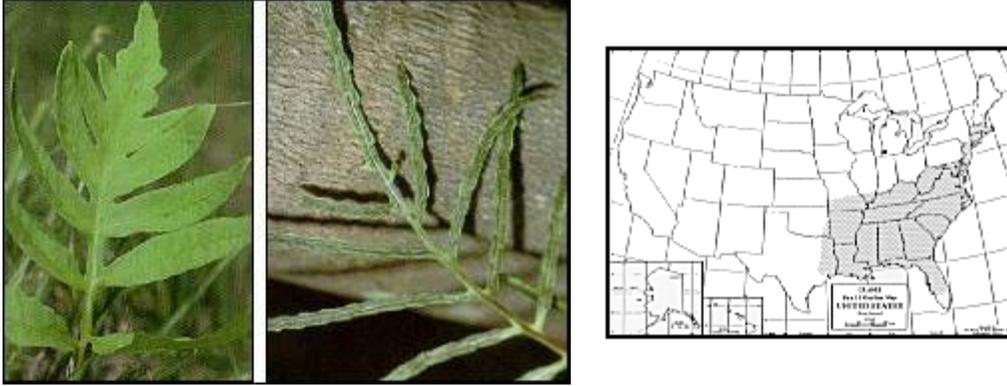


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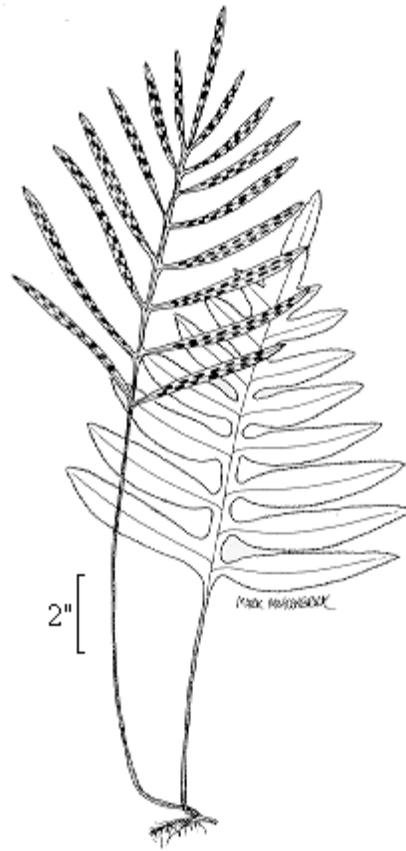
Field Office Guide to Plant Species

Netted Chain Fern

Woodwardia areolata (L.) T. Moore



- **Family:** Fern (Polypodiaceae)
- **Spores:** July-October
- **Field Marks:** This fern has once-pinnate leaves and elongated sori in parallel rows on the back of leaves much narrower than the fertile leaves.
- **Habitat:** Swamps, wet woods, damp thickets, stream banks, bottomlands.
- **Habit:** Perennial fern with slender rhizomes.
- **Stems:** Underground, slender, branched, covered with brown scales.
- **Leaves:** Of two types: sterile leaves deeply pinnatifid or once-pinnate, up to 2 feet long, on purplish brown stalks, with each segment coarsely toothed or pinnatifid, smooth, pointed at the tip; fertile leaves erect, much narrower, on purplish brown stalks.
- **Sori:** Elongated, narrow, in parallel rows, one row on each side of the midvein.
- **Notes:** The sterile leaves resemble those of the sensitive fern (*Onoclea sensibilis*), although the fertile leaves have green tissue, while those of the sensitive ferns do not.



Southern Wetland Flora

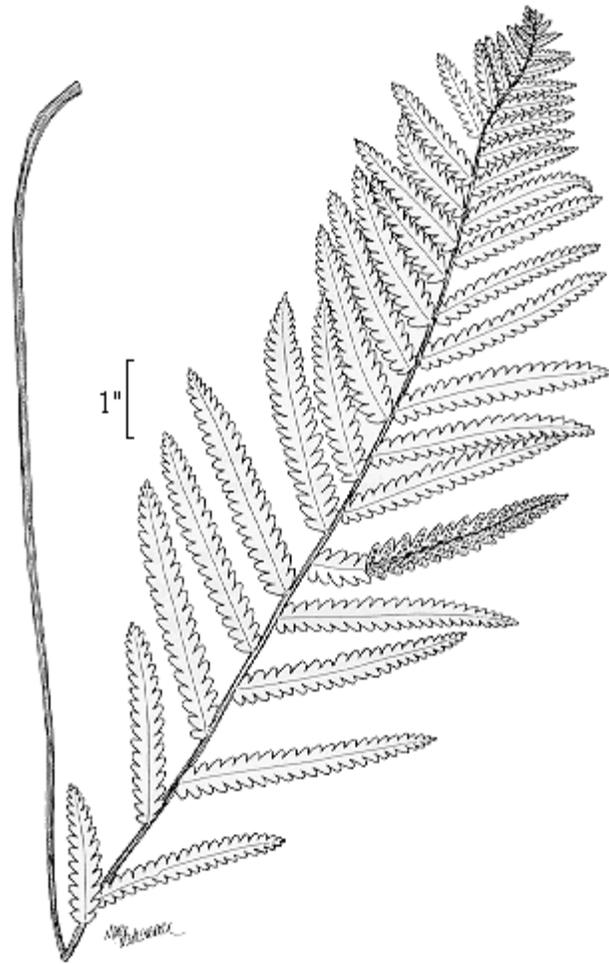
Field Office Guide to Plant Species

Virginia Chainfern

Woodwardia virginica (L.) J.E. Smith



- **Family:** Fern (Polypodiaceae)
- **Spores:** June-September
- **Field Marks:** This fern differs from all others by its double row of elongated sori on the back of the normal-sized leaves.
- **Habitat:** Damp thickets, swamps, bottomlands, bayheads.
- **Habit:** Perennial fern with long, slender, black, branched rhizomes.
- **Stems:** All underground in the form of rhizomes.
- **Leaves:** Ascending, up to 2 feet long, up to 9 inches wide, 1 1/2 pinnate, oblong-lanceolate in outline, the segments bluntly pointed, somewhat leathery, more or less smooth.
- **Sori:** In double rows on either side of the vein of the leaf segment, elongated.
- **Notes:** Some of the leaves remain sterile all their lives.



Southern Wetland Flora

Field Office Guide to Plant Species

Bushy Bluestem

Andropogon glomeratus (Walter) BSP.



- **Family:** Grass (Poaceae)
- **Flowering:** September-October
- **Field Marks:** This grass differs by its thick, massive, terminal inflorescence with its paired spikelets. One spikelet of each pair is reduced to a long-hairy bristle.
- **Habitat:** Low roadsides, moist pinelands, brackish and freshwater marsh borders, sloughs, wet ditches.
- **Habit:** Coarse grass with short rhizomes.
- **Stems:** Upright, stout, up to 4 feet tall, smooth except sometimes at the uppermost nodes.
- **Leaves:** Elongated, sometimes nearly as long as the flowering stem, up to 1/8 inch wide, rough to the touch, at least along the edges.
- **Flowers:** Borne in spikelets, the spikelets arranged in racemes; racemes densely crowded, forming a massive oblong head up to 15 inches long.
- **Spikelets:** Borne in pairs, although one member of the pair reduced to a long-hairy bristle, the other member awned.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary superior.
- **Notes:** Some botanists consider this grass to be a variety of *Andropogon virginicus*.

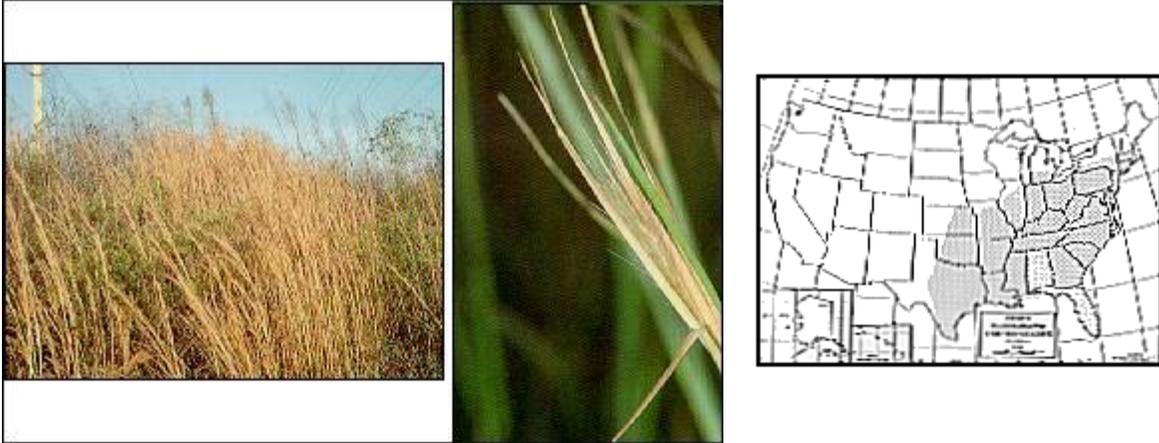


Southern Wetland Flora

Field Office Guide to Plant Species

Broom-sedge

Andropogon virginicus L.



- **Family:** Grass (Poaceae)
- **Flowering:** August-November
- **Field Marks:** Broom-sedge has a sessile spikelet shorter than the adjacent stalk. The racemes curve gracefully, and the flowering spikes are not as thick as in *Andropogon glomeratus*.
- **Habitat:** Moist to dry soils in old fields, pastures, prairies, glades.
- **Habit:** Tufted perennial grass with short rhizomes.
- **Stems:** Upright, branched, usually smooth, up to 4 feet tall.
- **Leaves:** Elongated, narrow, up to 1 1/2 feet long, up to 1/6 inch wide, rough to the touch above, smooth below; sheaths densely hairy.
- **Flowers:** Borne in paired spikelets; one member of the pair sessile and with both stamens and pistils, the other reduced to a stalk; spikelets many in curved racemes; branches of the racemes with long, silky hairs.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1-3.
- **Pistils:** Ovary superior.
- **Notes:** This species, unpalatable when mature to grazing livestock, forms conspicuous orange-brown tufts in pastures.



Southern Wetland Flora

Field Office Guide to Plant Species

Pineland Three-awn Grass

Aristida stricta Michx.



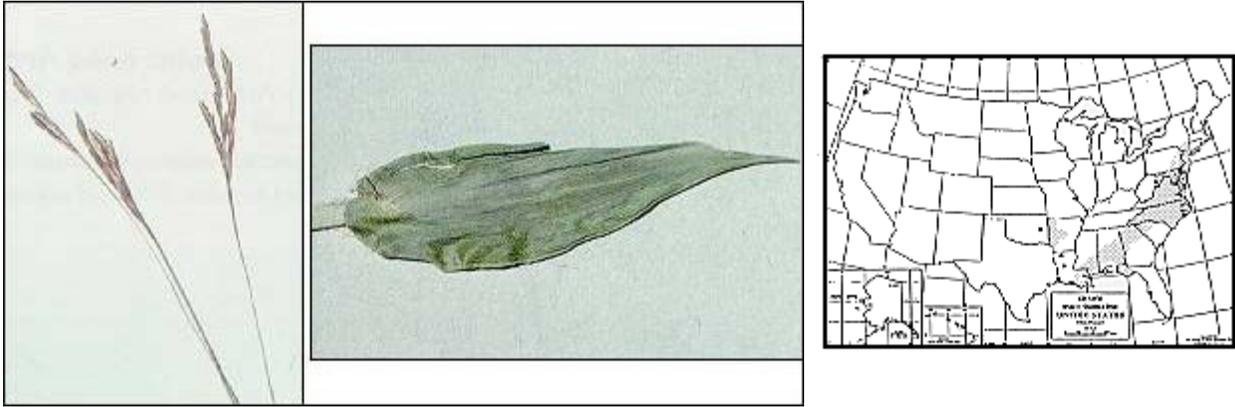
- **Family:** Grass (Poaceae)
- **Flowering:** August-October
- **Field Marks:** This is the only *Aristida* of wetlands that has densely hairy leaves on the upper surface near the base of the blade.
- **Habitat:** Low to high pinelands, flatwoods, wet prairies, boggy areas.
- **Habit:** Perennial, clump-forming grass.
- **Stems:** Upright, up to 4 feet tall, smooth.
- **Leaves:** Very long and narrow, folded together lengthwise, up to 1/12 inch wide, hairy on the upper surface near the base; sheaths hairy.
- **Flowers:** Borne in spikelets, the spikelets loosely arranged in a panicle up to 18 inches long.
- **Spikelets:** 1-flowered, bearing three awns up to 1/2 inch long, the two lateral awns usually spreading at right angles to the middle awn.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Very narrow.
- **Notes:** This species usually flowers only following burning.



Southern Wetland Flora

Field Office Guide to Plant Species

Joint-head Arthraxon *Arthraxon hispidus* (Thunb.) Makino



- **Family:** Grass (Poaceae)
- **Flowering:** September-October
- **Field Marks:** This grass is identified by its creeping habit, its short, broad leaves that are heart-shaped at the base, and its sessile, 1-flowered spikelet, sometimes with a twisted awn.
- **Habitat:** Floodplain forests, wet ditches, moist pastures, along shores.
- **Habit:** Annual grass with fibrous roots, rooting at the nodes.
- **Stems:** Very slender, wiry, creeping or the flowering stems upright, much branched, smooth, the branches up to 4 inches long, sometimes reddish purple.
- **Leaves:** Ovate to lanceolate, pointed at the tip, heart-shaped at the base, smooth or somewhat hairy on the leaves, up to 3 inches long, up to 1 inch wide; sheaths hispid.
- **Flowers:** Flowers borne in spikelets, with the spikelets arranged in 2-10 often crowded racemes, the racemes up to 1 1/2 inches long.
- **Spikelets:** 1-flowered, sessile, up to 1/4 inch long, sometimes with a twisted awn.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Slender, yellowish, up to 1/6 inch long.



Southern Wetland Flora

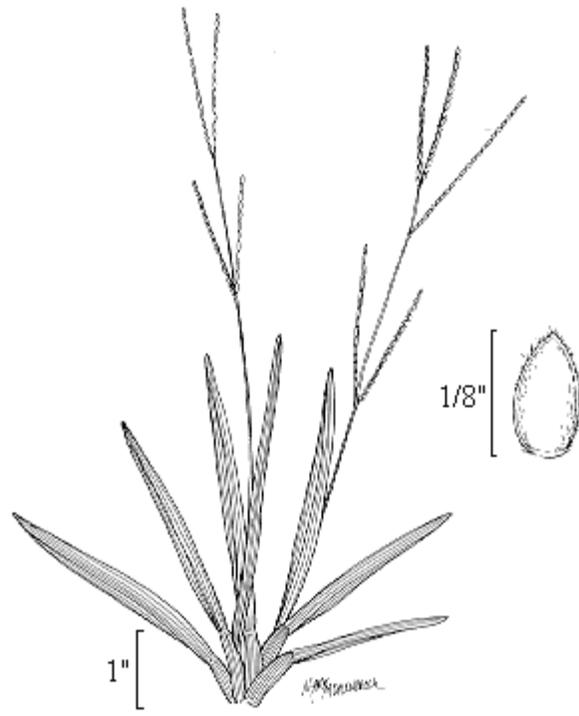
Field Office Guide to Plant Species

Southern Carpet Grass

Axonopus affinis Chase



- **Family:** Grass (Poaceae)
- **Flowering:** June-October
- **Field Marks:** The spikelets of this grass, which are arranged in two rows on each spike, are silky-hairy.
- **Habitat:** Wet to dry soils in fields, lawns, sandy shores, ditches, and open woodlands.
- **Habit:** Annual, mat-forming grass forming stolons, rooting at the nodes.
- **Stems:** Smooth, creeping, except for the ascending flowering stems, up to 3 feet tall at maturity, smooth.
- **Leaves:** Basal or near the base of the stems, elongated, more or less rounded at the tip, smooth or slightly hairy, rough along the margins, up to 6 inches long, up to 1/2 inch wide.
- **Flowers:** Borne in spikelets on slender, elongated, erect spikes, the spikes usually 2 or 3 in number.
- **Spikelets:** 1-flowered, sessile, alternating on 2 sides of the 3-sided axis, up to 1/8 inch long, usually silky-hairy.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Ellipsoid, flat, yellowish or grayish.
- **Notes:** This grass was widely planted in the South as a pasture grass, but is no longer in favor.

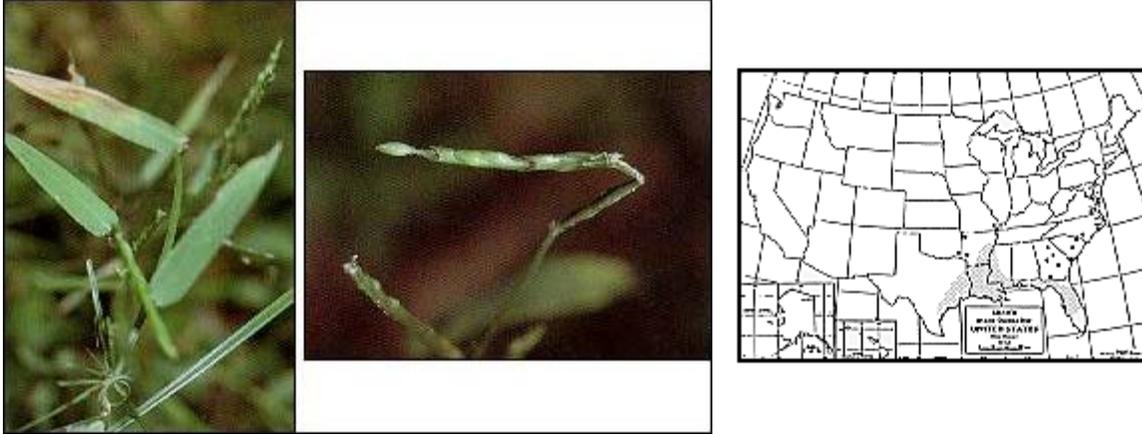


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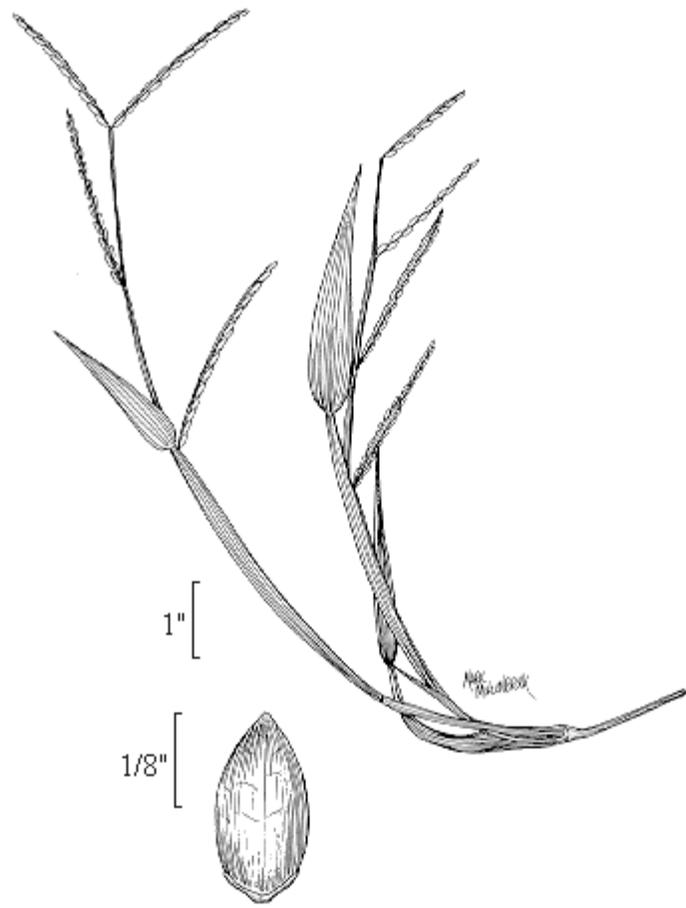
Field Office Guide to Plant Species

Broad-leaf Signal Grass

Brachiaria platyphylla (Griseb.) Nash



- **Family:** Grass (Poaceae)
- **Flowering:** July-October
- **Field Marks:** This annual grass differs by its 5 or 6 slender, spike-like racemes, and its ovoid spikelets borne in two rows.
- **Habitat:** Wet ditches, boggy thickets, swampy woods, moist disturbed areas.
- **Habit:** Annual grass, rooting at the lowermost nodes.
- **Stems:** The lowerpart creeping, the upperpart ascending to erect, up to 2 feet tall, smooth.
- **Leaves:** Elongated, up to 6 inches long, up to 3/4 inch wide, smooth except for rough edges and a ciliate base; sheaths hairy, at least at the base.
- **Flowers:** Borne in spikelets, the spikelets arranged in 5 or 6 spike-like racemes up to 3 1/2 inches long.
- **Spikelets:** 1-flowered, ovoid, borne in 2 rows, up to 1/4 inch long, nearly rounded at the tip, on very short, hairy stalks.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Ellipsoid, yellowish.



Southern Wetland Flora

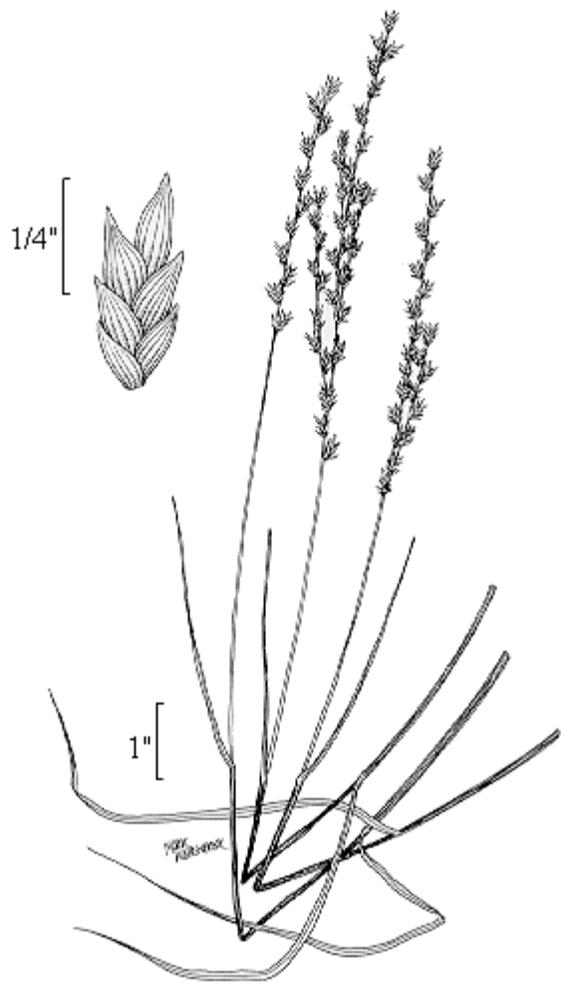
Field Office Guide to Plant Species

Slender Spikegrass

Chasmanthium laxum (L.) H. Yates



- **Family:** Grass (Poaceae)
- **Flowering:** June-October
- **Field Marks:** Although resembling *Chasmanthium sessiliflorum* very closely, this species is readily distinguished by its smooth leaf sheaths.
- **Habitat:** Swamps, low woods, stream banks, wet hammocks, wet ditches.
- **Habit:** Tufted perennial grass with short, thickened rhizomes.
- **Stems:** Upright or nodding, unbranched, smooth or sparsely hairy at the nodes, up to 3 feet tall.
- **Leaves:** Elongated, up to 1 foot long, up to 1/3 inch wide, smooth except for a few hairs at the base, although rough to the touch along the edges; sheaths smooth.
- **Flowers:** Borne in spikelets, the spikelets borne in panicles with strongly ascending branches.
- **Spikelets:** Not crowded, 3- to 5-flowered, flat, up to 1/2 inch long; lemmas pointed.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Somewhat flattened, brown or black, up to 1/8 inch long.



Southern Wetland Flora

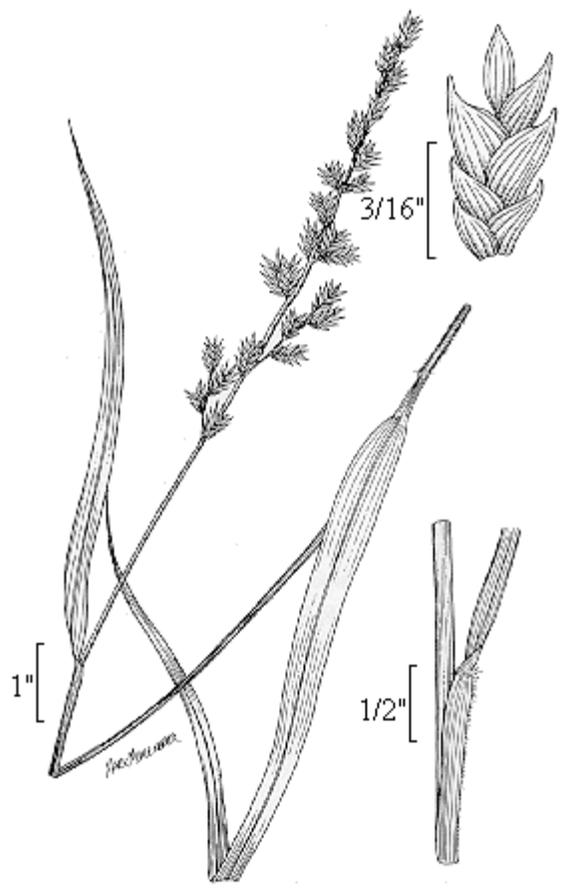
Field Office Guide to Plant Species

Long-leaf Spikegrass

Chasmanthium sessiliflorum (Poir.) H. Yates



- **Family:** Grass (Poaceae)
- **Flowering:** August-October
- **Field Marks:** Pointed, 2- to 5-flowered spikelets and the hairy leaf sheaths distinguish this grass from the similar *Chasmanthium laxum*.
- **Habitat:** Hammocks, steep ravines, moist or dry soils in pinelands, along rivers and streams, moist prairies.
- **Habit:** Tufted perennial grass with short, thickened rhizomes.
- **Stems:** Upright or nodding, unbranched, smooth or hairy, up to 2 1/2 feet tall.
- **Leaves:** Elongated, up to 1 1/2 feet long, up to 1/2 inch wide, finely hairy on the upper surface, smooth or finely hairy on the lower surface, rough to the touch along the edges; sheaths hairy.
- **Flowers:** Borne in spikelets, the spikelets borne in panicles with strongly ascending branches.
- **Spikelets:** Not crowded, 2- to 5-flowered, flat, up to 1/3 inch long; lemmas pointed.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Somewhat flattened, black, up to 1/8 inch long.

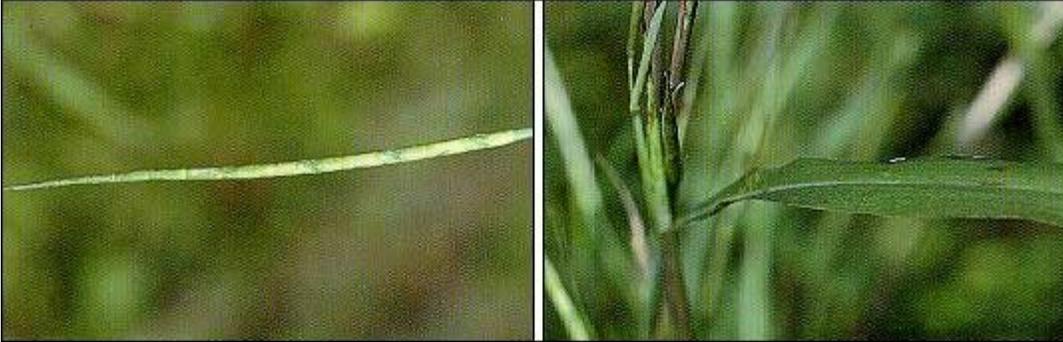


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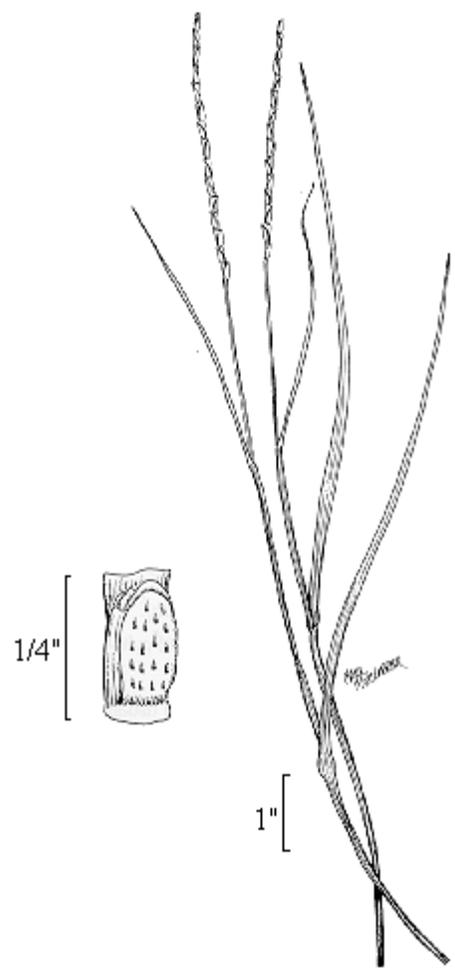
Field Office Guide to Plant Species

Pitted Jointgrass

Coelorachis cylindrica (Michx.) Nash



- **Family:** Grass (Poaceae)
- **Flowering:** June-October
- **Field Marks:** Jointgrasses are distinguished by their jointed, cylindric spikes. The pitted jointgrass differs from the others by hairy glumes that are usually pitted.
- **Habitat:** Moist to dry sites such as flatwoods, prairies, fields, roadsides, and ditches.
- **Habit:** Perennial grass with short rhizomes.
- **Stems:** Upright, unbranched, smooth, up to 3 feet tall.
- **Leaves:** Elongated and very narrow, smooth or sparsely hairy.
- **Flowers:** Borne in spikelets, the spikelets arranged in jointed cylindric spikes, the base of the spikes often enclosed by the sheath.
- **Spikelets:** Tightly fitting into a hollow in the rachis; glumes usually pitted and hairy.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Notes:** This jointgrass is sometimes known as *Manisurus cylindrica*. The pits on the glumes are not always apparent.

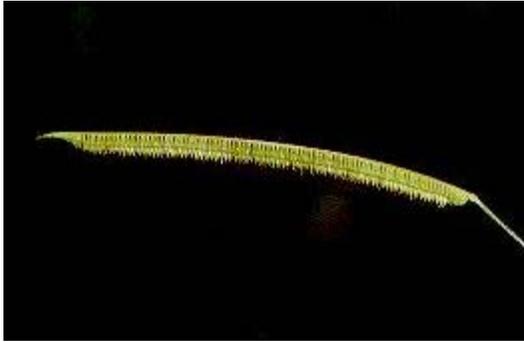


Southern Wetland Flora

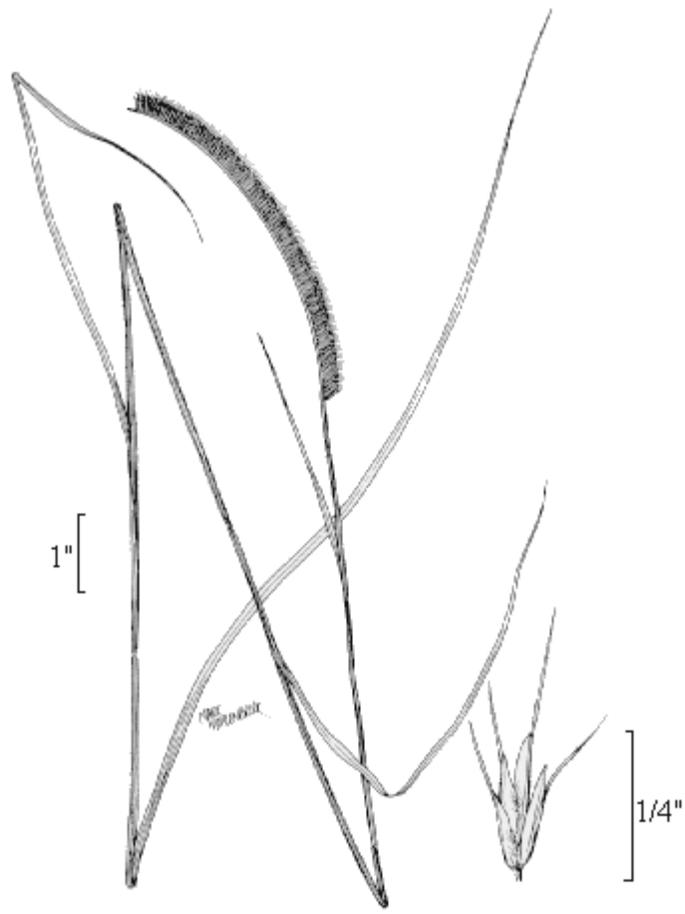
Field Office Guide to Plant Species

Toothache Grass

Ctenium aromaticum (Walter) A. Wood



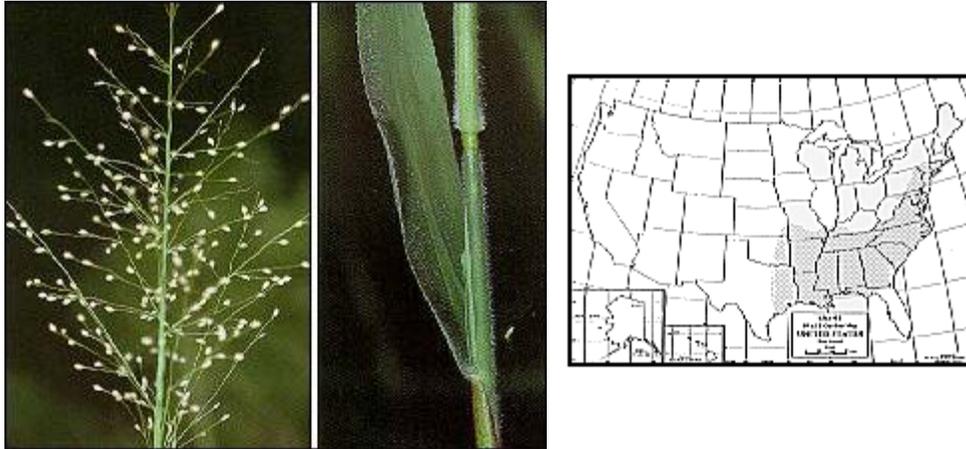
- **Family:** Grass (Poaceae)
- **Flowering:** June-August
- **Field Marks:** This grass is easily recognized by the stiff, comb-like spikes. From the very similar *Ctenium floridanum*, it differs by not having rhizomes.
- **Habitat:** Bogs, moist or dry soils in pinelands, savannas.
- **Habit:** Tufted perennial grass, without rhizomes, with many fibrous old leaf bases persisting.
- **Stems:** Upright, up to 4 feet tall, hairy except at the nodes.
- **Leaves:** Mostly all crowded near the base of the stems, elongated and narrow, up to 15 inches long, up to 1/4 inch wide, rough to the touch but mostly without hairs.
- **Flowers:** Borne in paired spikelets on one side of a curved axis, the axis up to 6 inches long.
- **Spikelets:** 1-flowered but with 3 lemmas, up to 1/3 inch long, short-awned.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Dark red, shiny, linear, up to 1/6 inch long.
- **Notes:** When young stems and leaves are crushed, they have the odor of citrus. Chewing parts of the grass has been used to alleviate toothache.



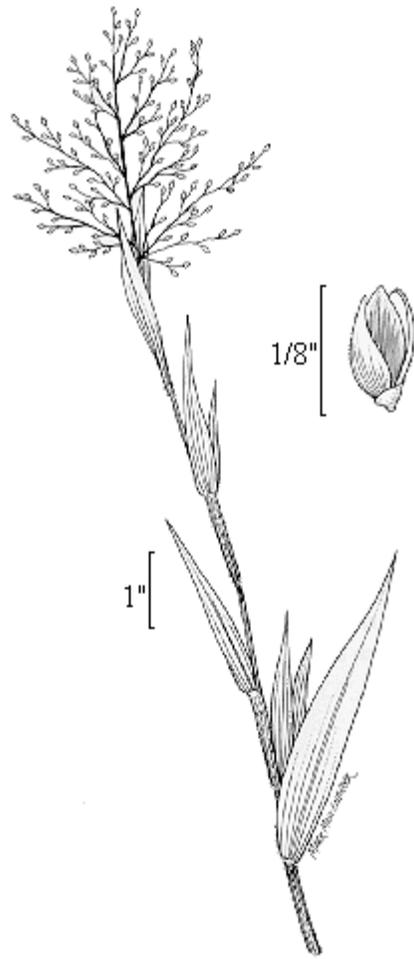
Southern Wetland Flora

Field Office Guide to Plant Species

Velvet Dichanthelium
Dichanthelium scoparium (Lam.) Gould



- **Family:** Grass (Poaceae)
- **Flowering:** June-August
- **Field Marks:** This grass differs from other dichantheliums and the closely related panicums by the stems that have a smooth ring immediately below the bearded nodes, and by its velvety leaves.
- **Habitat:** Open swales, prairies, sandy woods.
- **Habit:** Tall perennial grass.
- **Stems:** Erect, branched or unbranched, hairy, bearded at the nodes but completely smooth just beneath each node, up to 4 feet tall.
- **Leaves:** Long, narrow, velvety-hairy, up to 2/3 inch broad.
- **Flowers:** 1 per spikelet, with many spikelets forming a panicle up to 6 inches long; spikelets oval, rounded at the tip, 1/12-1/8 inch long, pubescent.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; styles 3.
- **Grains:** About 1/12 inch long.



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Field Office Guide to Plant Species

Hairy Crabgrass

Digitaria sanguinalis (L.) Scop.



- **Family:** Grass (Poaceae)
- **Flowering:** June-September
- **Field Marks:** Crabgrass is recognized by its slender spikes that radiate like fingers from a hand, except that the spikes do not all arise at the same place at the end of the stem.
- **Habitat:** Disturbed soil.
- **Habit:** Annual grass with fibrous roots
- **Stems:** Upright or spreading, often rooting at the lower nodes, up to 3 feet long, smooth.
- **Leaves:** Elongated, narrow, up to 6 inches long, less than 1/2 inch wide, hairy; sheaths with hairs with swollen bases.
- **Flowers:** Borne in spikelets; spikelets 1-flowered, arranged along 3-10 slender spikes that radiate from the tip of the stem.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; stigmas 2, feathery.
- **Grains:** Small, smooth.
- **Notes:** This native grass from Europe is a problem weed in cultivated and disturbed soil throughout North America. It is sometimes called finger-grass or pigeon-grass.



Southern Wetland Flora

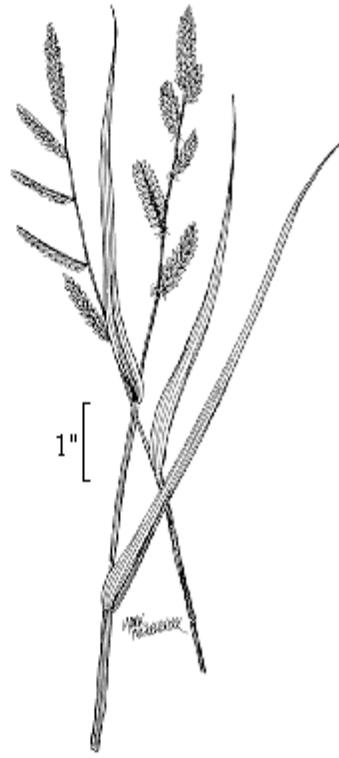
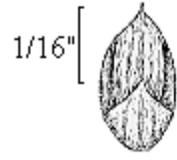
Field Office Guide to Plant Species

Jungle-rice

Echinochloa colona (L.) Link



- **Family:** Grass (Poaceae)
- **Flowering:** July-October
- **Field Marks:** This annual grass has its spikelets crowded into 4 rows on one side of the axis of the spike.
- **Habitat:** Disturbed low ground, wet ditches, old fields, sand and gravel bars.
- **Habit:** Annual grass with fibrous roots.
- **Stems:** Several, upright or prostrate, sometimes creeping at first and rooting at the nodes, smooth, up to 2 1/2 feet tall.
- **Leaves:** Elongated and very narrow, smooth or sometimes sparsely hairy on the upper surface, smooth on the lower surface, up to 6 inches long, up to 1/4 inch wide.
- **Flowers:** Borne in spikelets, the spikelets crowded into 4 rows on one side of the axis of the spike; each spike up to 1 1/2 inches long, with several spikes forming a narrow panicle.
- **Spikelets:** 1-flowered, ovoid, up to 1/8 inch long, without an awn, green or sometimes purplish.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Ellipsoid, whitish.
- **Notes:** This species is native in the old world tropics, but occurs adventively in moist warm areas in temperate regions.



Southern Wetland Flora

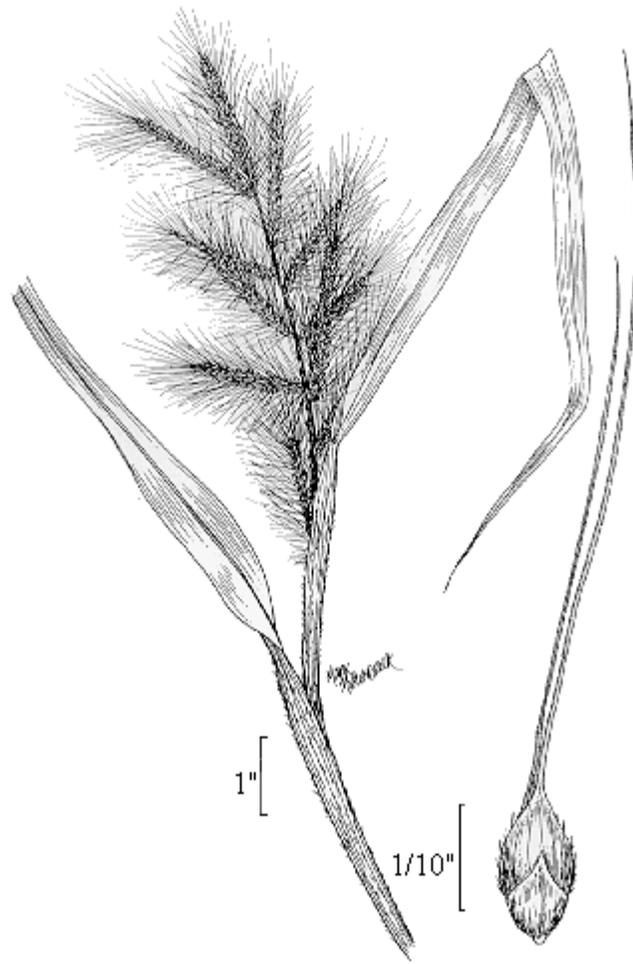
Field Office Guide to Plant Species

Coast Cockspur

Echinochloa walteri (Pursh) A. Heller



- **Family:** Grass (Poaceae)
- **Flowering:** July-October
- **Field Marks:** This distinctive grass is recognized by its 1-2 inch long reddish purple awns on the lemmas.
- **Habitat:** Wet ditches, along shores, swamps, marshes, wet disturbed soil, sometimes in shallow standing water.
- **Habit:** Coarse annual grass with fibrous roots.
- **Stems:** Upright, coarse, smooth, up to 6 feet tall.
- **Leaves:** Elongated and relatively broad, up to 15 inches long, up to 1 1/2 inches wide, smooth but rough to the touch on the edges; sheaths smooth, or more commonly hairy with swollen, basal hairs.
- **Flowers:** Borne in spikelets, with numerous spikelets arranged in panicles up to 1 foot long, the panicles usually arching or nodding.
- **Spikelets:** 1-flowered, crowded on the branches, ellipsoid, hairy; lemmas often with purplish awns up to 2 inches long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Ellipsoid, whitish, up to 1/10 inch long.



Southern Wetland Flora

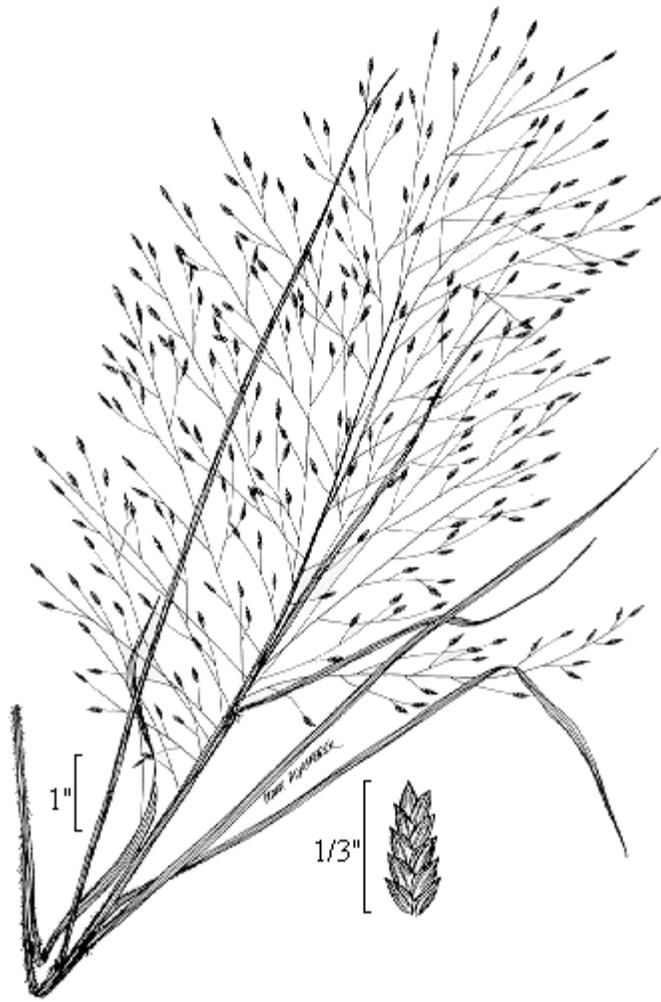
Field Office Guide to Plant Species

Purple Lovegrass

Eragrostis spectabilis (Pursh) Steud.



- **Family:** Grass (Poaceae)
- **Flowering:** July-October
- **Field Marks:** The thread-like, bright pink branchlets and the several-flowered spikelets of the seed head distinguish this species.
- **Habitat:** Moist to dry soils in old fields, along roads.
- **Habit:** Perennial grass, with a short rhizome.
- **Stems:** Upright, smooth, up to 2 feet long.
- **Leaves:** Elongated, narrow, smooth, up to 1/3 inch wide; sheaths smooth or hairy.
- **Flowers:** Arranged in spikelets on thread-like stalks; spikelets with 3-15 flowers, arranged in large pink panicles larger than the remainder of the plant.
- **Spikelets:** Up to 1/3 inch long, up to 1/10 inch wide.
- **Stamens:** Usually 3.
- **Pistils:** Ovary superior.
- **Notes:** The large pink panicle usually breaks off in its entirety and rolls along with the wind. It is sometimes called the tumbleweed lovegrass.



Southern Wetland Flora

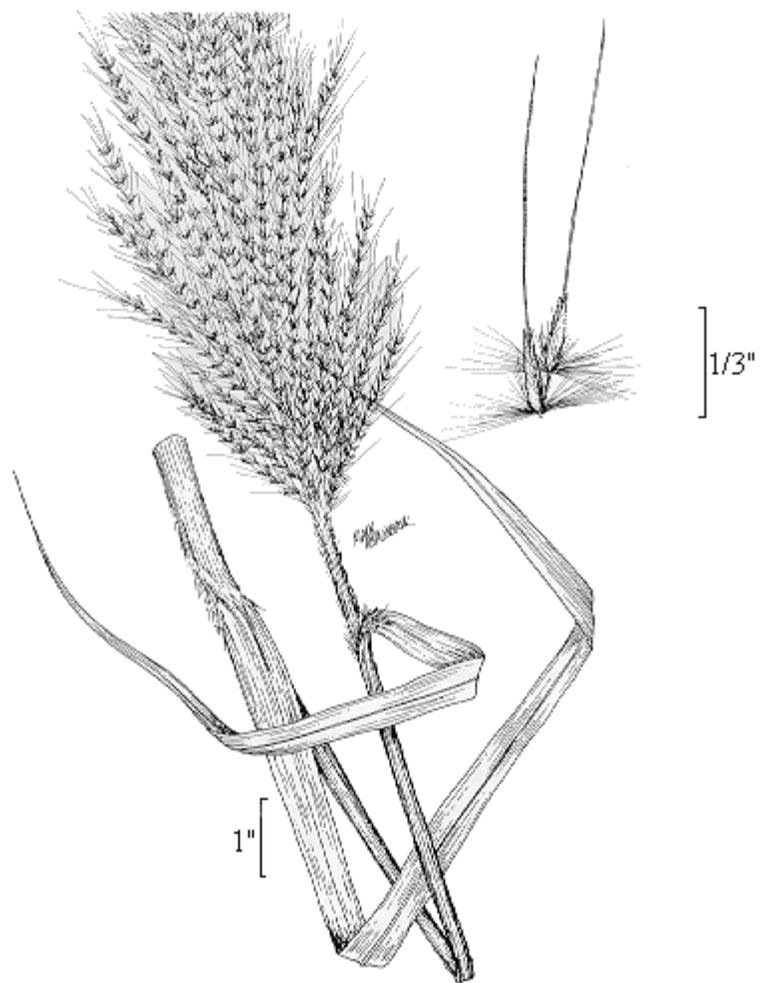
Field Office Guide to Plant Species

Sugar Cane Plumegrass

Erianthus giganteus (Walter) F.T. Hubb.



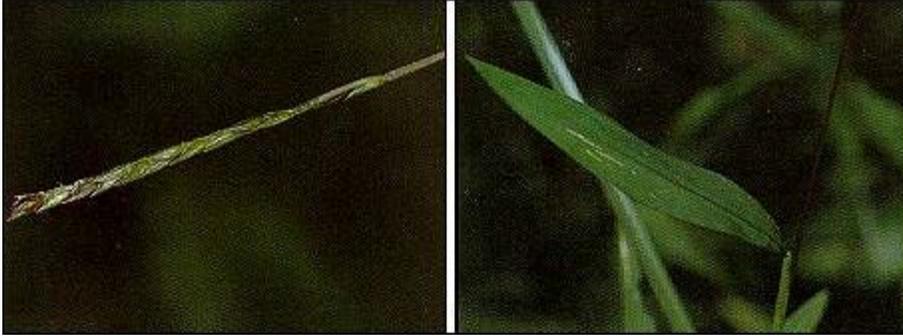
- **Family:** Grass (Poaceae)
- **Flowering:** September-October
- **Field Marks:** This plumegrass is distinguished by its huge plume-like spikes up to 15 inches long and more than 3 inches wide, and by its untwisted awns of the spikelets.
- **Habitat:** Low pinelands, brackish marshes, sloughs, flatwoods, swamps, wet ditches, savannas, swales.
- **Habit:** Coarse perennial grass with short, thick rhizomes.
- **Stems:** Upright, up to 10 feet tall, usually smooth just beneath the spike, the nodes hairy when young.
- **Leaves:** Elongated, narrow or as much as 1 inch wide, smooth or hairy, rough to the touch along the edges; sheaths hairy.
- **Flowers:** Borne in spikelets, with many spikelets crowded into large, spike-like panicles; panicles up to 15 inches long, more than 3 inches wide.
- **Spikelets:** In pairs, lanceolate, brown, up to 1/3 inch long, silky-hairy, with awns up to 1 inch long, one spikelet of the pair sessile, the other with a stalk.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Up to 1/12 inch long.
- **Notes:** When the plume of spikelets first appears, and until after the seed head expands, it is silver in color. After expansion, it is grayish tan.



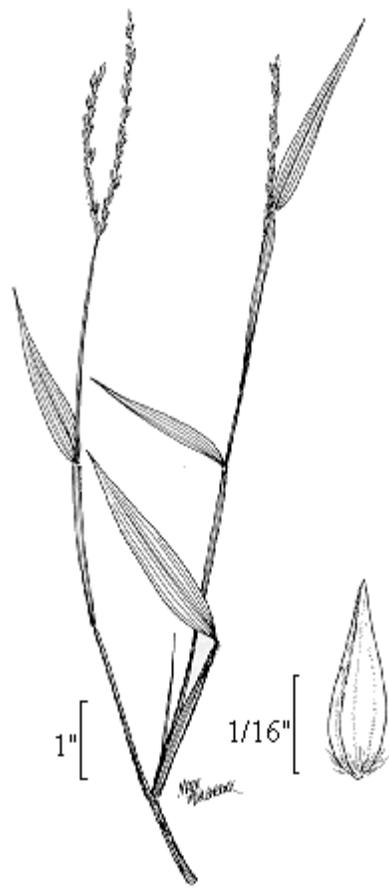
Southern Wetland Flora

Field Office Guide to Plant Species

Nepal Microstegium
Eulalia viminea (Trin.) Kuntze



- **Family:** Grass (Poaceae)
- **Flowering:** September-October
- **Field Marks:** This is a weak, sprawling grass that usually bears a single, terminal, spike-like raceme. The spikelets are borne in pairs, one of which is sessile and the other stalked.
- **Habitat:** Marshes, low woods, wet ditches, along streams, floodplain forests.
- **Habit:** Sprawling, mat-forming, annual herb rooting at the nodes.
- **Stems:** Much branched, creeping, with the flowering stems ascending, smooth, up to 4 feet long.
- **Leaves:** Elongated but relatively short, up to 4 inches long, up to 3/4 inch wide, rough to the touch along the edges, smooth on the upper surface, sparsely hairy on the lower surface; sheaths hairy along the edges.
- **Flowers:** Borne in spikelets, the spikelets arranged in 1-few slender, spike-like racemes; racemes up to 3 inches long.
- **Spikelets:** In pairs, one sessile, the other stalked, both fertile, up to 1/4 inch long, ciliate, sometimes awned.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Ellipsoid, yellowish to reddish, up to 1/8 inch long.
- **Notes:** This sprawling grass is a native of Asia, but it has been introduced into the United States where it has spread to warmer parts of the country in moist areas.

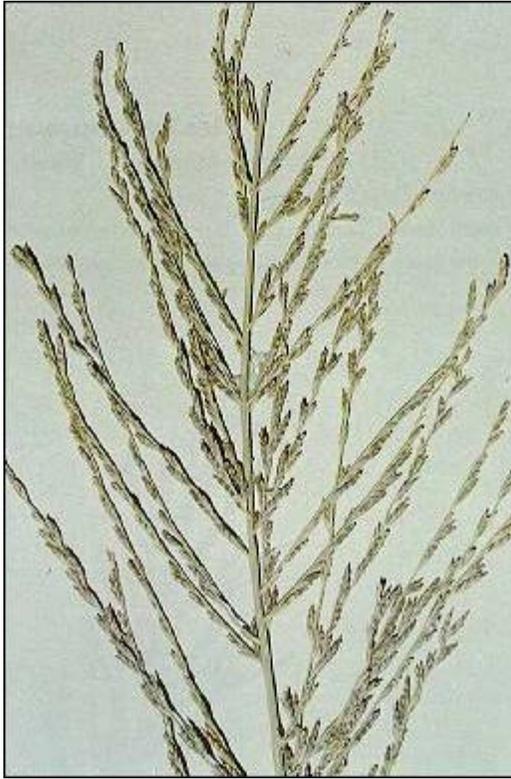


Southern Wetland Flora

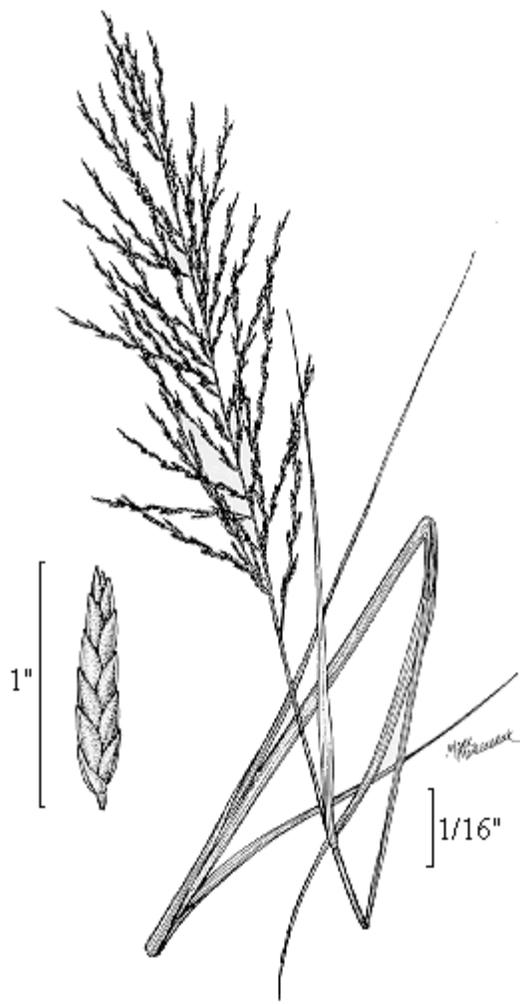
Field Office Guide to Plant Species

Mexican Sprangle-top

Leptochloa uninervia (J. Presl) A. Hitchc. & Chase



- **Family:** Grass (Poaceae)
- **Flowering:** June-August
- **Field Marks:** This species, with 6- to 10-flowered spikelets, is distinguished from similar species in the genus by its smooth sheaths and lemmas rounded but mucronate at the tip.
- **Habitat:** Moist sandy soil, pond or lake beds, marshes, disturbed areas, sometimes in shallow standing water.
- **Habit:** Tufted annual grass with fibrous roots.
- **Stems:** Upright, 1-several, smooth, unbranched, up to 3 feet tall.
- **Leaves:** Elongated, very narrow, up to 1/8 inch wide, smooth, more or less involute, rough to the touch on both surfaces and along the edges; ligules up to 1/4 inch long.
- **Flowers:** Borne in spikelets, with many spikelets arranged alternately along an elongated, slender axis.
- **Spikelets:** Some of them overlapping, about 1/6-1/4 inch long, with 6-12 flowers; lemmas awnless, rounded or with a short point at the tip, with hairs appressed along the margins.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Yellow to pale red, flat, ellipsoid.
- **Notes:** This species is sometimes known as *Diplachne uninervia*.



Southern Wetland Flora

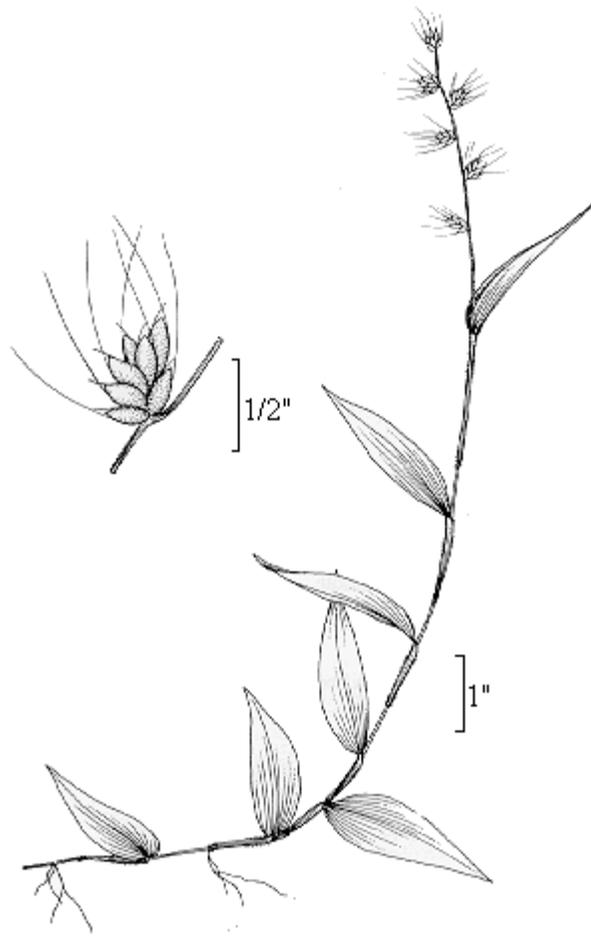
Field Office Guide to Plant Species

Basket Grass

Oplismenus hirtellus (L.) Beauv.



- **Family:** Grass (Poaceae)
- **Flowering:** July-October
- **Field Marks:** This distinctive grass is recognized by its short leaves and its slender racemes of awned spikelets which are not crowded.
- **Habitat:** Rich woods, swamps, along streams, low hammocks.
- **Habit:** Perennial grass, rooting at the nodes.
- **Stems:** Creeping, very slender, usually smooth.
- **Leaves:** Alternate, simple, lanceolate, smooth or short-hairy, up to 3 inches long, up to 3/4 inch wide; ligule fringed.
- **Flowers:** Borne in spikelets, the spikelets borne in pairs in slender racemes, not crowded; spikelets 2-flowered, short-hairy, awned.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Small, smooth.



Southern Wetland Flora

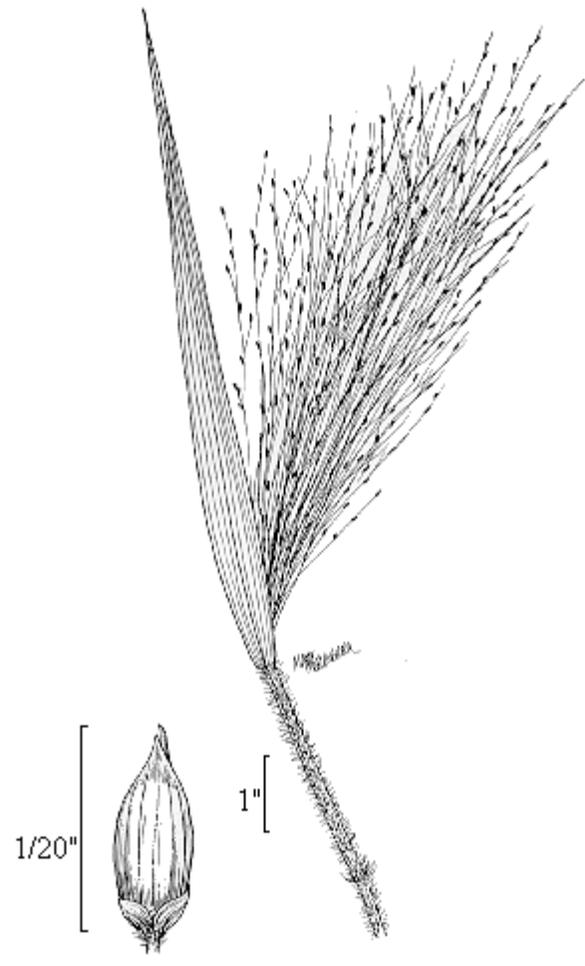
Field Office Guide to Plant Species

Witchgrass

Panicum capillare L.



- **Family:** Grass (Poaceae)
- **Flowering:** July-September
- **Field Marks:** This *Panicum* is distinguished by its dense arrangement of thread-like panicle branches and its densely hairy leaf sheaths.
- **Habitat:** Moist or dry soils in cultivated fields, roadsides, disturbed soils.
- **Habit:** Tufted, sprawling, annual grass.
- **Stems:** Upright or ascending, unbranched or sparsely branched, up to 2 feet long.
- **Leaves:** Elongated, narrow, up to 1 foot long, up to 2/3 inch wide, usually hairy; sheaths densely hairy.
- **Flowers:** 1 per spikelet, with numerous spikelets on thread-like stalks forming a dense, terminal panicle up to 14 inches long.
- **Spikelets:** 1-flowered, pointed, about 1/20 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Yellowish, enclosed by a hardened scale.



Southern Wetland Flora

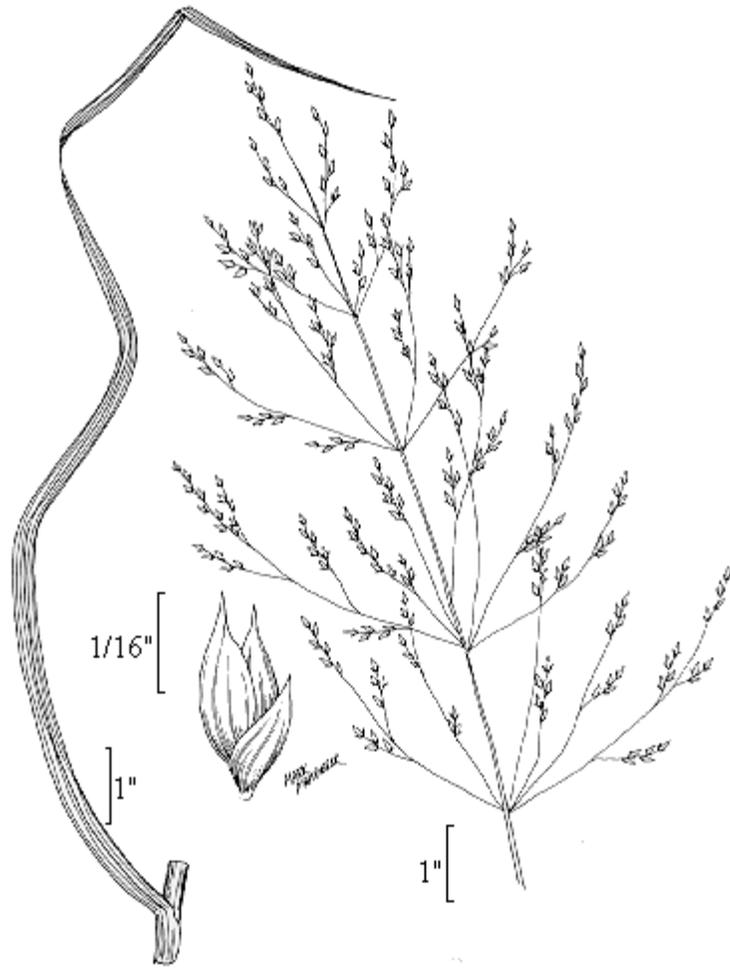
Field Office Guide to Plant Species

Switchgrass

Panicum virgatum L.



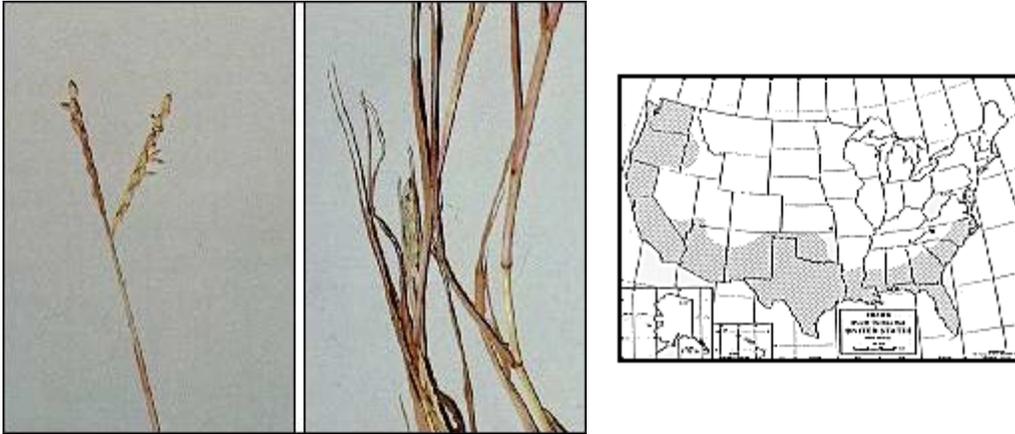
- **Family:** Grass (Poaceae)
- **Flowering:** July-September
- **Field Marks:** Switchgrass differs from other species of *Panicum* by its nearly smooth leaves and sheaths, large size, and by its pointed spikelets.
- **Habitat:** Prairies, along streams, wet or dry woods, brackish and fresh marshes, sloughs, swales, low pinelands, shoals.
- **Habit:** Perennial bunch grass with branching rhizomes.
- **Stems:** Upright, smooth, branched, up to 7 feet tall.
- **Leaves:** Elongated, narrow, tapering to a long point, green to blue-green, smooth except for the roughened edges, up to 1/2 inch wide; sheaths smooth.
- **Flowers:** Borne singly in pointed spikelets; spikelets many in a large panicle with thread-like branches; panicle up to 20 inches long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Hard, enclosed by the subtending scales.
- **Notes:** This is a good forage grass for domestic livestock.



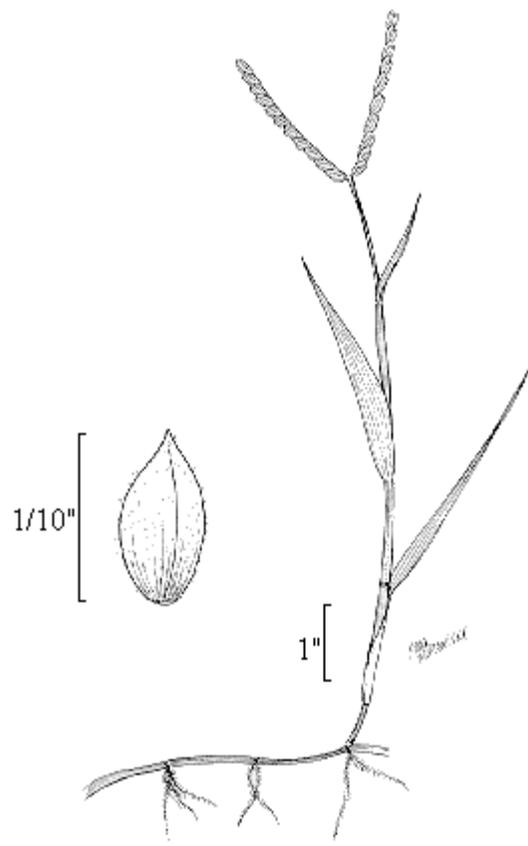
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Joint Paspalum *Paspalum distichum* L.



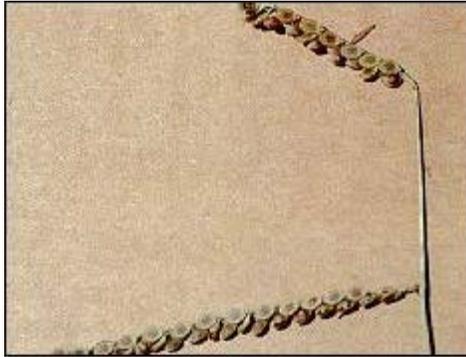
- **Family:** Grass (Poaceae)
- **Flowering:** June-August
- **Field Marks:** This *Paspalum* usually only has 2 racemes at the end of the flowering stem. Stems that do not bear racemes often crawl or creep on the ground, rooting at the nodes.
- **Habitat:** Brackish and freshwater marshes, shores, ponds, ditches, wet clearings, sometimes in shallow standing water.
- **Habit:** Perennial grass with either stolons, rhizomes, or both, frequently forming mats.
- **Stems:** All except the raceme-bearing stems crawling or creeping on the ground, rooting at the nodes; raceme-bearing stems upright, smooth, up to 1 1/2 feet tall.
- **Leaves:** Elongated, tapering to a very slender tip, smooth, up to 1/3 inch wide; leaf sheaths usually with some hairs at their summit.
- **Flowers:** Borne in spikelets, with several spikelets arranged in two rows on one side of the rachis; racemes 2 at the end of each upright stem, up to 3 inches long.
- **Spikelets:** 1-flowered, ellipsoid, pointed at the tip, up to 1/8 inch in diameter, hairy.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Oblongoid to ellipsoid, yellowish, about 1/10 inch long.
- **Notes:** This species is sometimes called knot-grass.



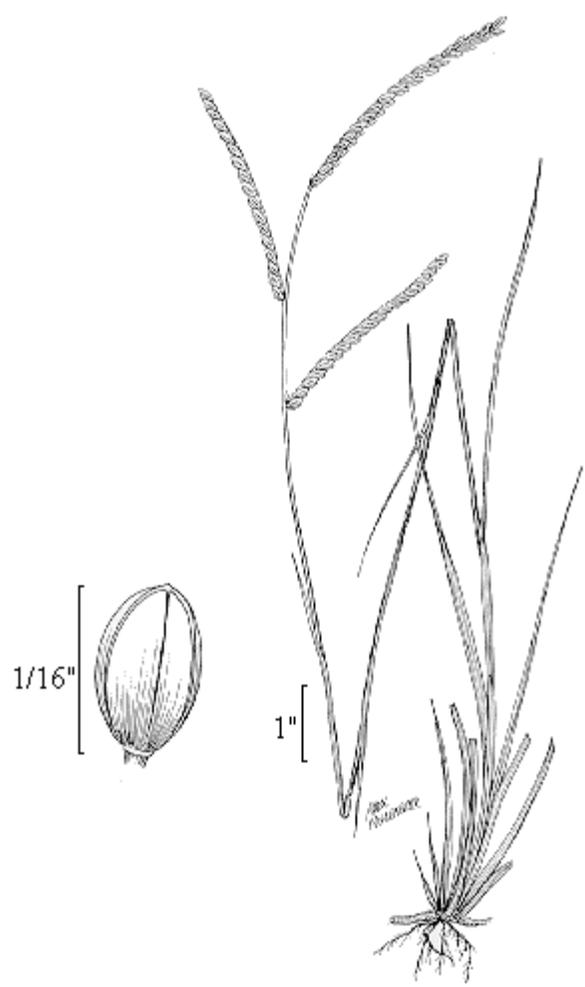
Southern Wetland Flora

Field Office Guide to Plant Species

Brown-seed Paspalum *Paspalum plicatulum* Michx.



- **Family:** Grass (Poaceae)
- **Flowering:** May-July
- **Field Marks:** The distinguishing features of this *Paspalum* are the spikelets borne in pairs, fruits shiny brown with transverse wrinkles on the sterile lemma, and the perennial habit.
- **Habitat:** Moist to dry roadsides, pineland depressions, savannas, wet fields, flatwoods, prairies.
- **Habit:** Tufted perennial grass with short rhizomes.
- **Stems:** Upright, slender, smooth, up to 2 1/2 feet tall.
- **Leaves:** Elongated, usually inrolled along the edges, up to 1/5 inch wide, smooth on the upper surface, smooth or hairy on the lower surface; leaf sheaths smooth or sparsely hairy.
- **Flowers:** Borne in spikelets, with several spikelets in pairs and borne in 4 rows on one side of the rachis; racemes 2-6 per stem, up to 2 1/2 inches long.
- **Spikelets:** 1-flowered, ellipsoid, rounded at the tip, smooth, up to 1/8 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Ellipsoid, yellowish.



Southern Wetland Flora

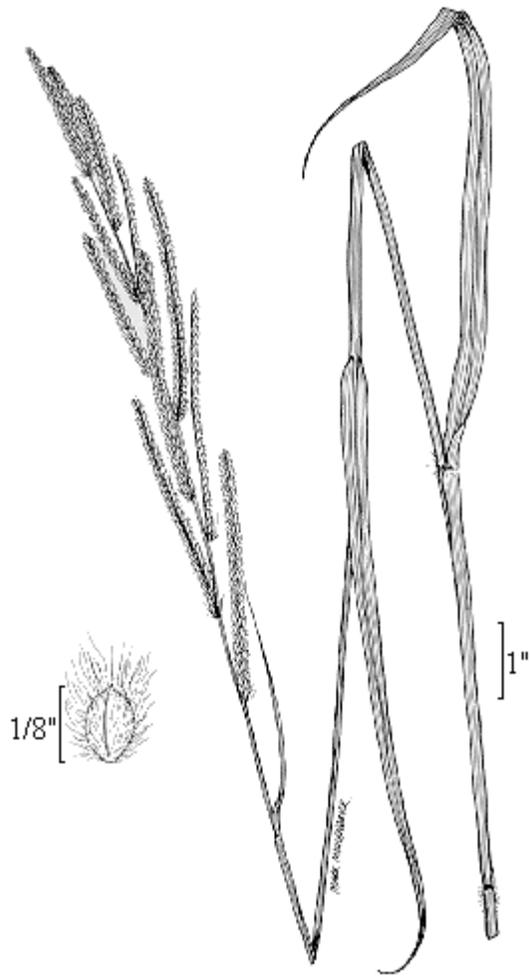
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Vasey Grass

Paspalum urvillei Steud.



- **Family:** Grass (Poaceae)
- **Flowering:** May-September
- **Field Marks:** This paspalum has silky hairs that are longer than the spikelets; spikelets 1/8-1/10 inch long, and 8-22 racemes in the panicle.
- **Habitat:** Moist soil.
- **Habit:** Tufted perennial with short rhizomes.
- **Stems:** Upright, smooth or sparsely pubescent, up to 6 feet tall.
- **Leaves:** Long, narrow, up to 1/2 inch broad, smooth except near the base; base of sheaths with swollen-based hairs.
- **Flowers:** One per spikelet; spikelets borne in 8-22 racemes arranged in a panicle; each raceme up to 5 inches long.
- **Spikelets:** Arranged in 4 rows, ellipsoid, pointed at the tip, long silky-hairy.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Brownish, oblongoid, about 1/10 inch long.
- **Notes:** This is one of the few species in this genus that has hairy spikelets. It is also the tallest species in this genus.



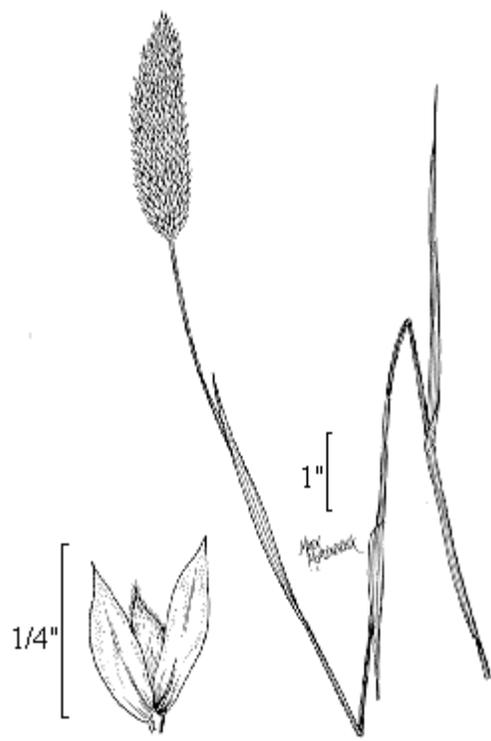
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Carolina Canary Grass *Phalaris caroliniana* Walter



- **Family:** Grass (Poaceae)
- **Flowering:** May-June
- **Field Marks:** This canary grass is recognized by its long-cylindrical spikes at least 2 1/2 inches long and the glumes about 1/4 inch long.
- **Habitat:** Moist ditches, roadsides, floodplains, stream banks, old fields, disturbed areas.
- **Habit:** Tufted annual grass with fibrous roots.
- **Stems:** Upright, smooth, up to 3 feet tall.
- **Leaves:** Elongated, up to 8 inches long, up to 1/2 inch wide, smooth on both surfaces but slightly rough on the lower surface; ligules 1/4 inch long.
- **Flowers:** Borne in spikelets, with many spikelets crowded into a spike; spike ellipsoid, at least 2 1/2 inches long, up to 3/4 inch wide.
- **Spikelets:** 1-flowered, but with 2 sterile lemmas; glumes about 1/4 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Oblong, reddish, about 1/10 inch long.



Southern Wetland Flora

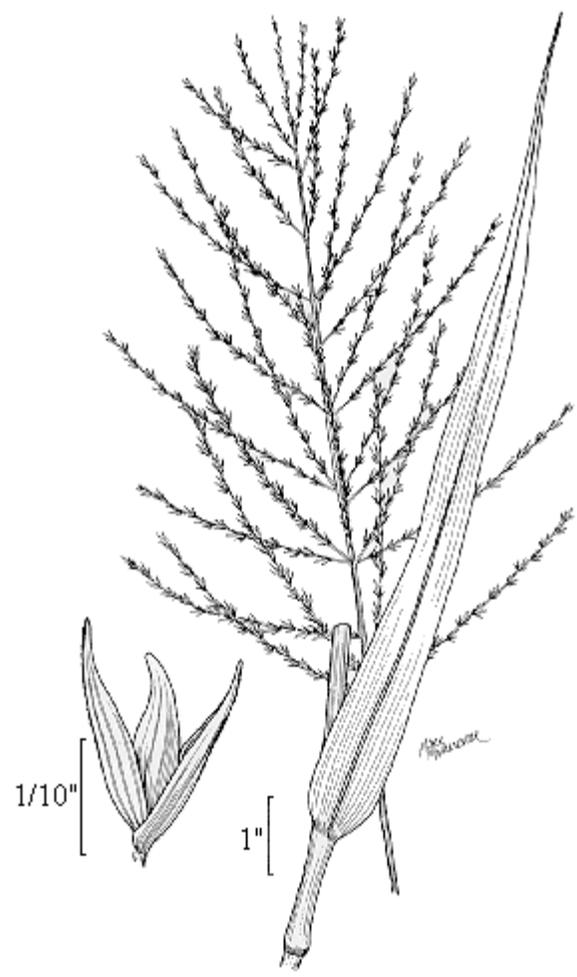
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Savannah Panic Grass

Phanopyrum gymnocarpon (Elliott) Nash



- **Family:** Grass (Poaceae)
- **Flowering:** August-October
- **Field Marks:** This grass has very pointed, 1-flowered spikelets, leaves up to 1 inch wide, and a dark olive-green band at the nodes.
- **Habitat:** Sloughs, swales, marshes, swamps, wet woodlands, floodplain forests, wet ditches, along streams, around ponds and lakes.
- **Habit:** Coarse annual grass with fibrous roots, often creeping or sprawling, rooting at the nodes.
- **Stems:** Sprawling to ascending, rooting at the nodes, smooth, up to 3 feet long; nodes with a broad olive-green band.
- **Leaves:** Elongated, up to 14 inches long, up to 1 inch wide, smooth except for the usually roughened margins; sheaths smooth.
- **Flowers:** Borne in spikelets, with many spikelets arranged in panicles; panicles up to 15 inches long, the branches spreading or ascending.
- **Spikelets:** 1-flowered, appressed to the branchlets, long-pointed, up to 1/5 inch long, on a short stalk.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Obovoid, purplish.
- **Notes:** This species is sometimes called *Panicum gymnocarpon*.



Southern Wetland Flora

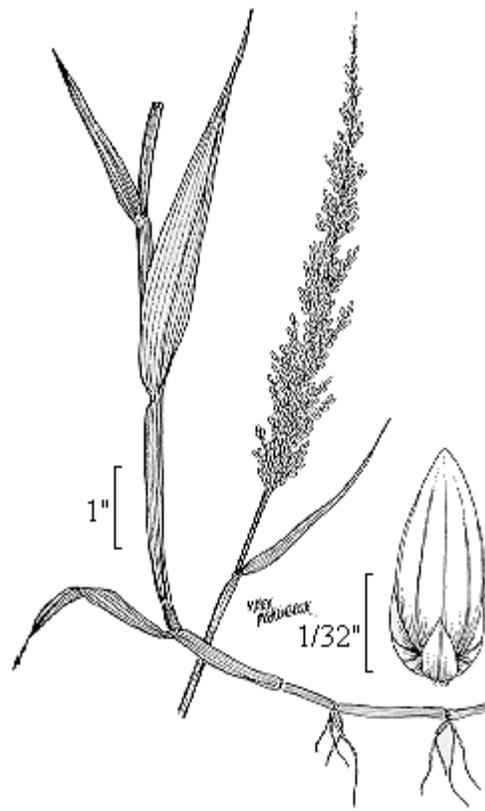
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American Cupscale

Sacciolepis striata (L.) Nash



- **Family:** Grass (Poaceae)
- **Flowering:** July-October
- **Field Marks:** Species of *Sacciolepis* have 1-flowered spikelets borne in crowded, spike-like panicles or racemes. They differ from any other grasses including the closely related *Panicum* by their swollen, sac-like, second glume. *Sacciolepis striata* differs from *Sacciolepis indica* by being a perennial with creeping stolons.
- **Habitat:** Marshes, ditches, sloughs, margins of bayous and streams, pools, around ponds and lakes.
- **Habit:** Perennial grass with creeping stolons, rooting at the nodes, often forming large colonies.
- **Stems:** Creeping, slender, weak, occasionally producing upright branches up to 3 feet tall, smooth.
- **Leaves:** Elongated, narrow, flat, up to 8 inches long, up to 1 inch wide, smooth; sheaths hairy.
- **Flowers:** Borne in spikelets, with numerous spikelets crowded into elongated spike-like panicles; panicles up to 8 inches long.
- **Spikelets:** 1-flowered, up to 1/4 inch long, with an inflated second glume.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Gray, ellipsoid, about 1/16 inch long.

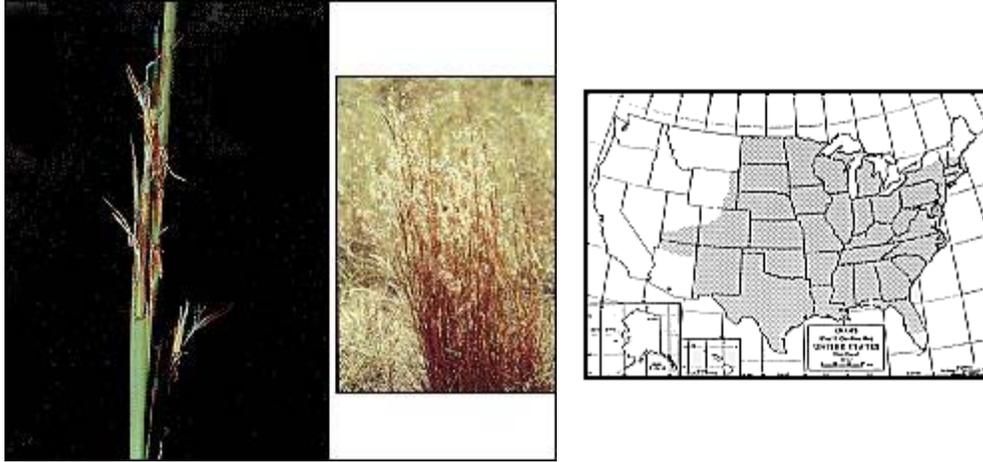


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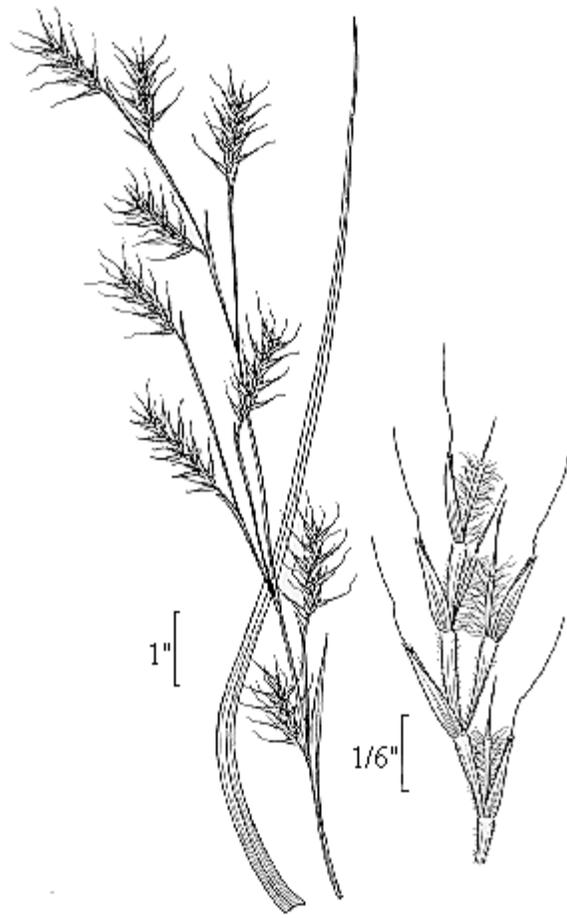
Field Office Guide to Plant Species

Little Bluestem

Schizachyrium scoparium (Michx.) Nash



- **Family:** Grass (Poaceae)
- **Flowering:** August-October
- **Field Marks:** The spikelets of little bluestem are borne in pairs; one spikelet of each pair is fertile and sessile, the other is sterile and stalked.
- **Habitat:** Mainly on well-drained sites, but sometimes colonizing moist to wet sites that are disturbed; old fields; prairies; swales; open woods.
- **Habit:** Perennial bunch grass with a much branched fibrous root system.
- **Stems:** Upright, branched or unbranched, usually smooth, up to 4 1/2 feet tall.
- **Leaves:** Long, narrow, smooth or hairy, up to 1/3 inch wide; sheaths smooth or hairy.
- **Flowers:** Borne in spikelets; spikelets formed into racemes.
- **Spikelets:** Spikelets in pairs: one of them fertile and sessile, the other sterile and stalked; fertile spikelet up to 1/4 inch long; awn spiral, bent, up to 2/3 inch long.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Notes:** Little bluestem is a valuable forage grass. Its pollen may cause hay fever.



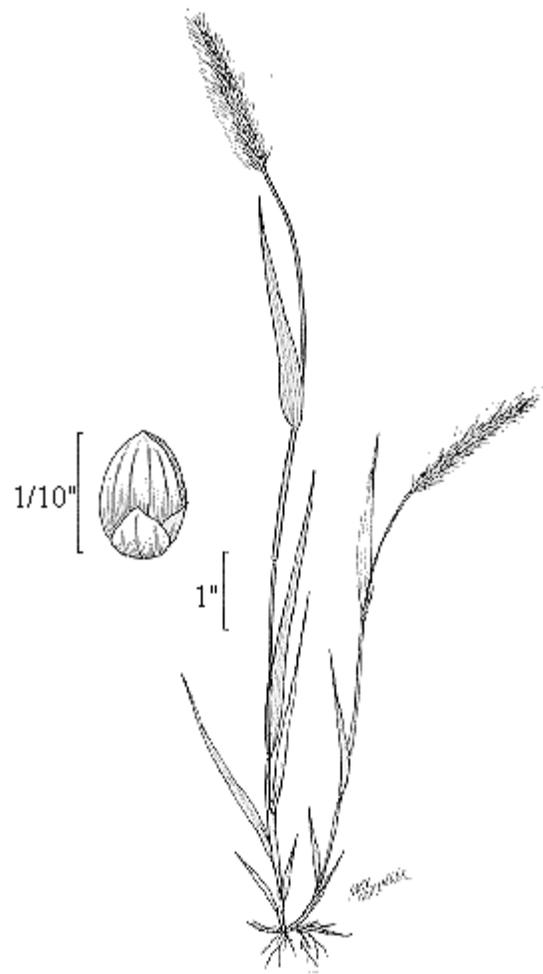
Southern Wetland Flora

Field Office Guide to Plant Species

Knotroot Bristle Grass
Setaria geniculata (Lam.) Beauv.



- **Family:** Grass (Poaceae)
- **Flowering:** May-October
- **Field Marks:** This *Setaria* differs from all others in the genus by its smooth sheaths and presence of rhizomes.
- **Habitat:** Pinelands, roadsides, shifting coastal sands, brackish or fresh shores, flatwoods, sand hills, disturbed areas.
- **Habit:** Tufted perennial grass with slender rhizomes.
- **Stems:** Upright, green to purplish, unbranched, smooth, up to 2 1/2 feet long.
- **Leaves:** Elongated, ascending, up to 1/3 inch wide; sheaths smooth along the margins.
- **Flowers:** Borne in spikelets, the spikelets crowded into a dense, cylindrical, spike-like panicle; spikelets up to 1/10 inch long, subtended by 4-8 bristles.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Ellipsoid, enclosed by the persisting scales.



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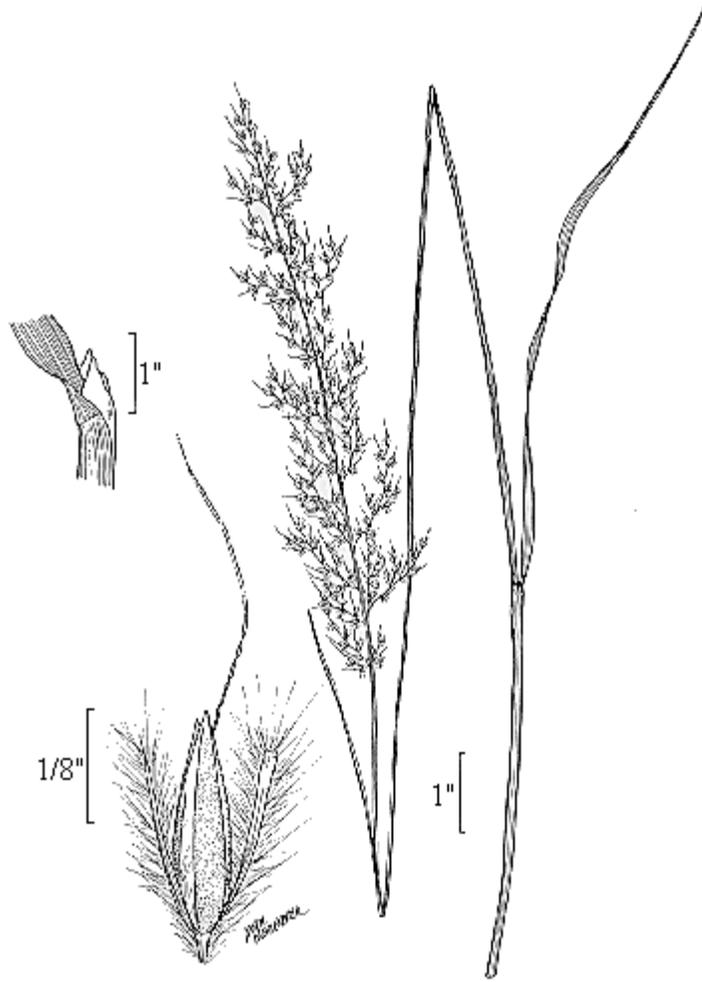
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Indian Grass

Sorghastrum nutans (L.) Nash



- **Family:** Grass (Poaceae)
- **Flowering:** July-November
- **Field Marks:** This tall grass is readily distinguished by its spikelets, some of which are fertile and awned, others sterile and reduced to hairy stalks, and the prominent auricular lobes (ears) at the top of the leaf sheath.
- **Habitat:** Moist to dry soils in pinelands and prairies.
- **Habit:** Coarse perennial grass with scaly rhizomes.
- **Stems:** Upright, smooth except for the hairy nodes, unbranched, up to 8 feet tall.
- **Leaves:** Elongated, narrow, up to 1/2 inch wide, rough to the touch, green to bluish green; sheaths smooth or hairy, with prominent auricles (ears).
- **Flowers:** Borne in spikelets, the spikelets numerous and forming a panicle up to 12 inches long; some spikelets sterile and reduced to hairy stalks; other spikelets fertile, hairy, terminated by an awn up to 3/4 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.



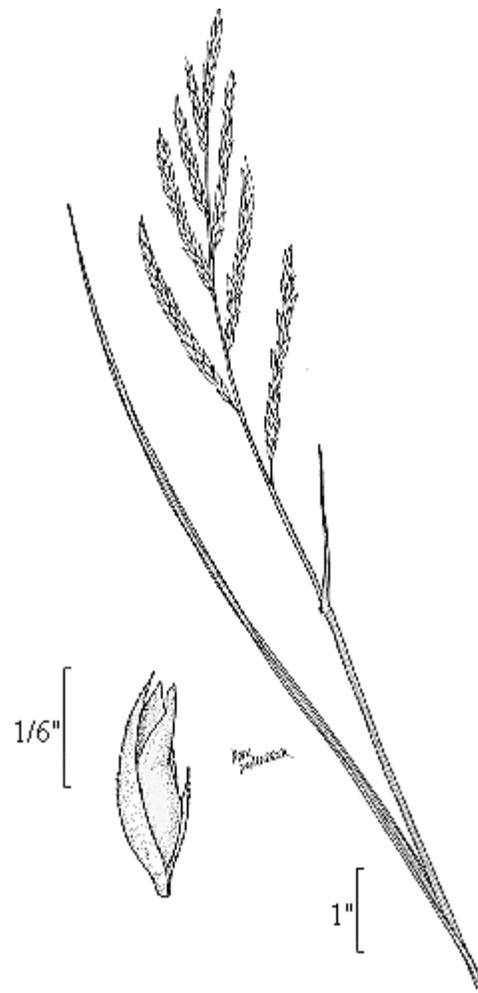
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Field Office Guide to Plant Species

Sand Cordgrass *Spartina bakeri* Merrill



- **Family:** Grass (Poaceae)
- **Flowering:** May-June
- **Field Marks:** This clump-forming grass differs from all other species of *Spartina* by its needle-like leaves and its slender flower spikes that bloom in the spring.
- **Habitat:** Borders of marshes, wet prairies, wet pinelands.
- **Habit:** Perennial, clump-forming grass with short rhizomes.
- **Stems:** Upright, smooth, up to 6 feet tall.
- **Leaves:** Elongated, needle-like, the edges rolled inward.
- **Flowers:** Borne in spikelets, with several spikelets in 3-12 slender spikes up to 2 1/2 inches long.
- **Spikelets:** 1-flowered, up to 1/3 inch long, the back of the glumes and lemma toothed.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Grains:** Very narrow.



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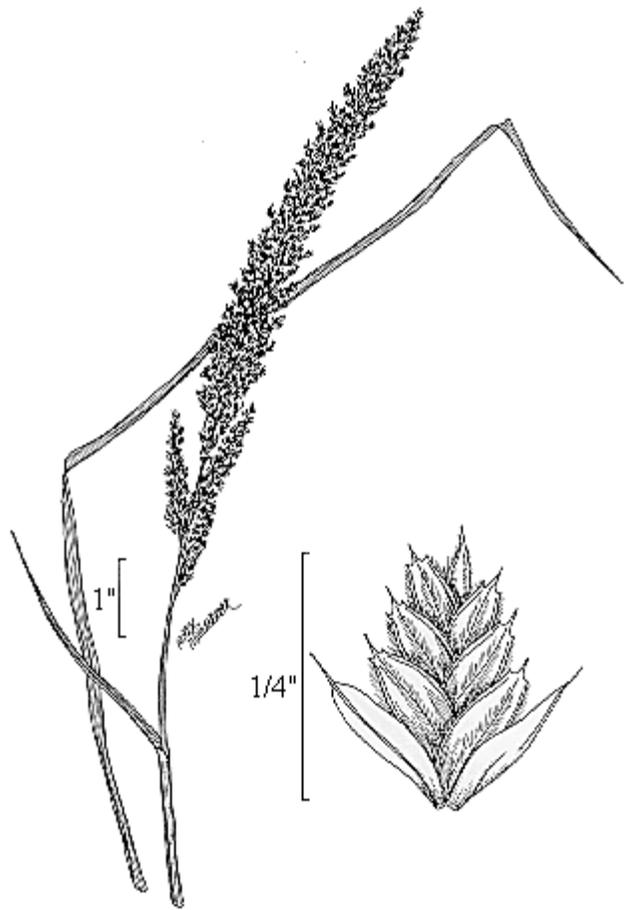
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Long-spike Tidens

Tridens strictus (Nutt.) Nash



- **Family:** Grass (Poaceae)
- **Flowering:** July-October
- **Field Marks:** This grass has solitary spikes up to 12 inches long, spikelets that are 4- to 10-flowered, and a ligule that consists of a ring of hairs.
- **Habitat:** Along streams, around lakes and ponds, wet prairies, savannas.
- **Habit:** Perennial grass with short rhizomes.
- **Stems:** Upright, smooth, unbranched, up to 4 feet tall.
- **Leaves:** Elongated, up to 1/3 inch wide, rough to the touch on the upper surface, smooth on the lower surface; sheaths smooth or ciliate; ligule a ring of hairs.
- **Flowers:** 4-10 borne in spikelets; spikelets arranged in a contracted spike-like panicle up to 12 inches long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Notes:** The old fibrous leaf bases from the year before usually persist during the next season.



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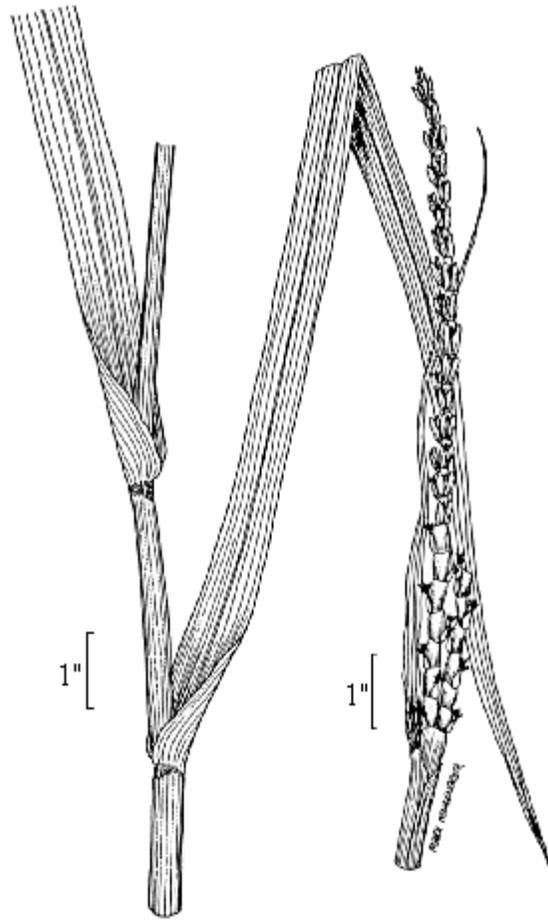
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Eastern Gamagrass

Tripsacum dactyloides (L.) L.



- **Family:** Grass (Poaceae)
- **Flowering:** May-September
- **Field Marks:** This coarse grass has ascending, stiff spikes, usually with the male flowers above and the female flowers below.
- **Habitat:** Moist to wet soil, swales, stream banks, roadsides, low woods, ditches, and meadows.
- **Habit:** Stout perennial grass with thick rhizomes.
- **Stems:** Upright, smooth, up to 8 feet tall.
- **Leaves:** Mostly all near the base of the stem, flat, elongated, tapering to the tip, up to 1 1/2 inches wide, rough to the touch, at least along the edges, with long hairs near the base.
- **Flowers:** Borne in spikelets; spikelets borne in spikes, the male spikelets separate from the female, either above the female on the same spike or on a separate branch of the same plant.
- **Spikelets:** Male spikelets 2-flowered, borne in pairs; female spikelets 1-flowered, in excavated joint-like structures.
- **Stamens:** 3.
- **Pistils:** Ovary superior; stigmas 3, light purple, feathery.
- **Grains:** Partly enclosed in the jointed excavations, hard, shiny, closely compressed, breaking off individually.



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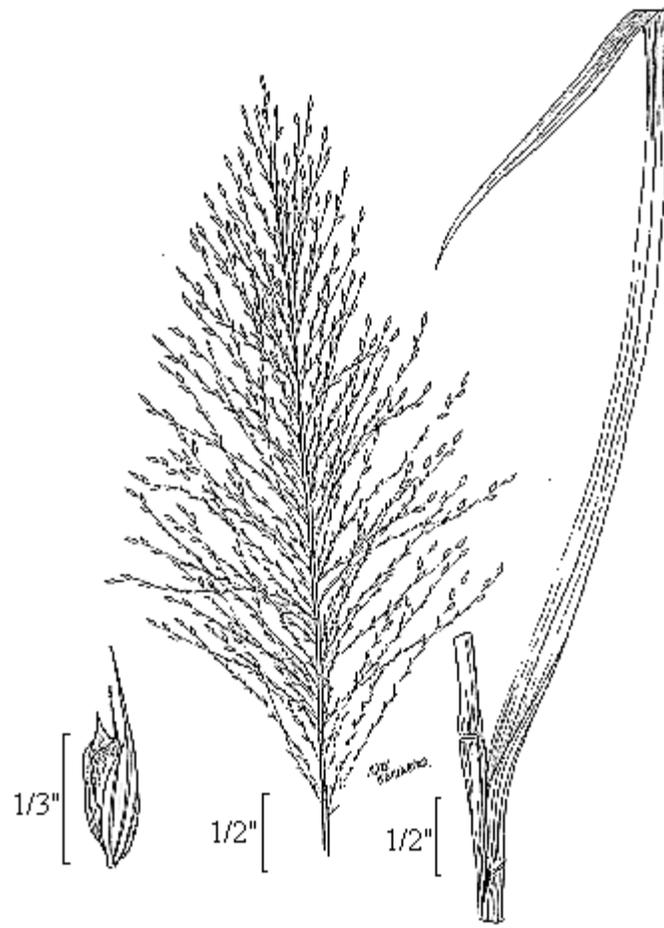
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Southern Wildrice

Zizaniopsis miliacea (Michx.) Doell & Aschers.



- **Family:** Grass (Poaceae)
- **Flowering:** May-July
- **Field Marks:** This large grass is distinguished by its broad leaves and large panicles with the female spikelets at the tip and the staminate spikelets at the base.
- **Habitat:** Fresh or brackish marshes, sloughs, stream banks, quiet waters, ditches, around lakes, swampy forests, often in shallow water.
- **Habit:** Coarse perennial grass with extensive rhizomes.
- **Stems:** Stout, upright, up to 9 feet tall.
- **Leaves:** Elongated, narrow, flat, up to 3 feet long, up to nearly 2 inches wide, smooth, although rough along the edges.
- **Flowers:** Borne in spikelets, the male spikelets separate from the female spikelets; spikelets borne in panicles, with the female spikelets at the tips of the panicle branches and the male flowers at the base.
- **Spikelets:** Male spikelets smooth, the lemmas up to 1/3 inch long; female spikelets smooth, the lemmas awned, the body and the awn each up to 1/3 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 6.
- **Pistils:** Ovary superior.
- **Grains:** Spherical to obovoid, yellowish, up to 1/8 inch long.
- **Notes:** This species is also known as giant cutgrass.



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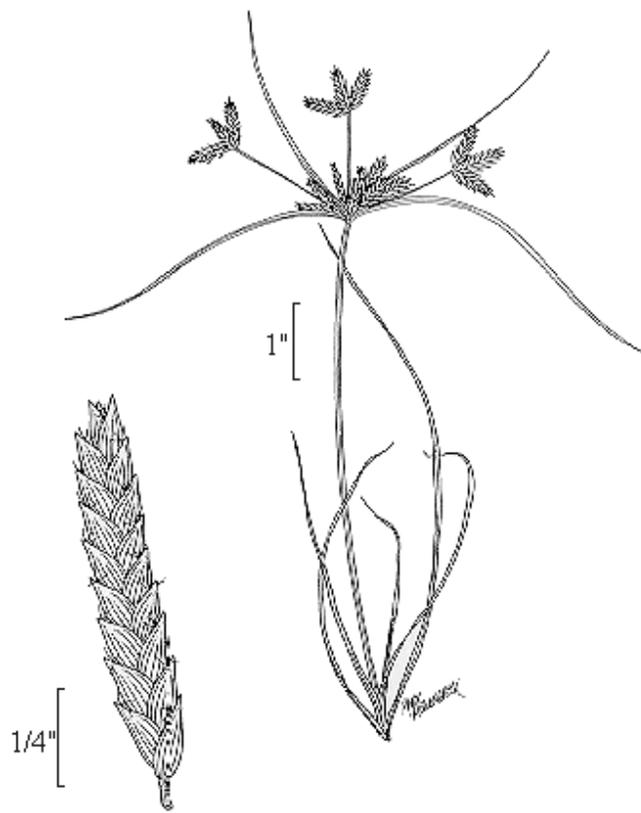
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Poorland Flatsedge

Cyperus compressus L.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-September
- **Field Marks:** This sedge has flat, crowded spikelets not arranged in large, branched clusters. It differs from most other similar sedges because it is an annual.
- **Habitat:** Moist to wet sands in ditches, roadsides, fields, and disturbed sites.
- **Habit:** Tufted annual sedge with fibrous roots.
- **Stems:** Upright or ascending, up to 15 inches long, smooth.
- **Leaves:** Elongated and very slender, some of the leaves usually reaching or surpassing the inflorescence, not more than 1/10 inch wide, smooth.
- **Flowers:** Borne in several spikelets, most of them sessile at the tips of the stems, a few sometimes on longer stalks, all subtended by 2-5 leaf-like bracts.
- **Spikelets:** Many-flowered, linear to narrowly oblong, up to 1 inch long, with the tip of the scales pointed and somewhat spreading.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes obovoid, triangular, brown, less than 1/12 inch long.



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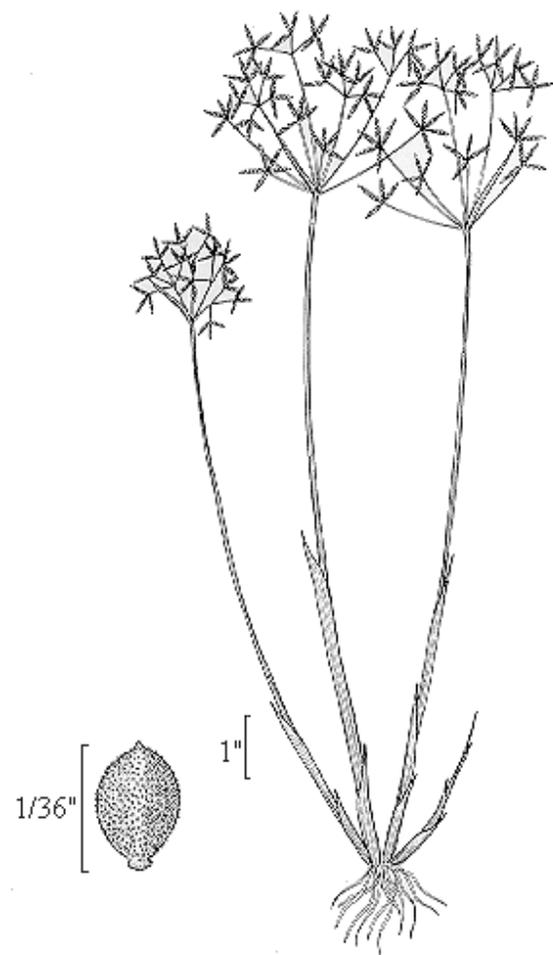
Field Office Guide to Plant Species

Sheathed Flatsedge

Cyperus haspan L.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-September
- **Field Marks:** The way this species differs from others in the genus is by the following combination of characters: leaves consisting only of bladeless sheaths, plants growing in tufts, bracts subtending the inflorescence 3 or fewer, achenes triangular.
- **Habitat:** Wet ditches, marshes, shores, shallow streams, edges of swamps, wet clearings.
- **Habit:** Annual or short-lived, tufted perennial herb.
- **Stems:** Upright, 3-angled, rather soft, smooth, up to 4 1/2 feet tall.
- **Leaves:** Reduced almost entirely to bladeless sheaths near the bases of the stems; sheaths usually purplish.
- **Flowers:** Borne in spikelets, with many spikelets in a much branched, terminal inflorescence subtended by 3 or fewer bracts.
- **Spikelets:** Flat, linear, 5- to 15-flowered, up to 3/4 inch long, up to 1/16 inch wide, green or brownish, often purple-tinged.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes 3-angled, obovoid, minutely warty, about 1/36 inch long.



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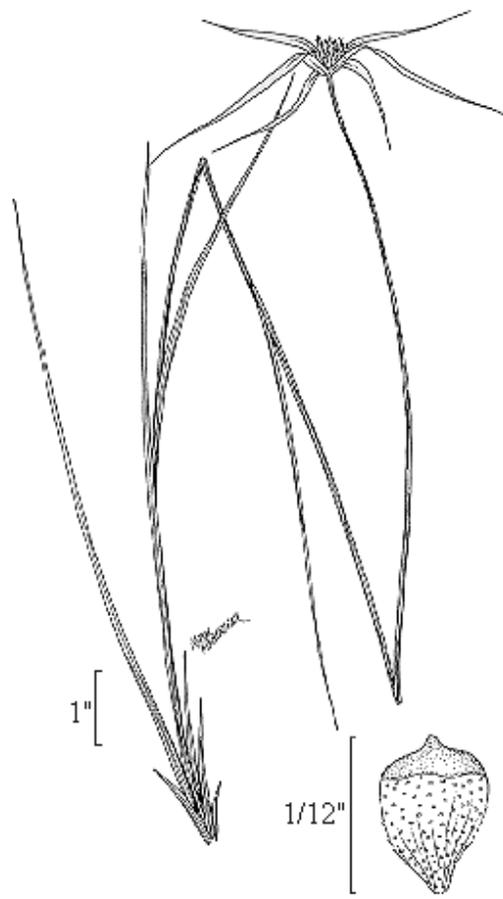
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Starbrush White-top-sedge

Dichromena colorata (L.) Hitchcock



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-September
- **Field Marks:** This species is readily recognized by the white bracts that subtend the spikelets. The leaves are only about 1/8 inch wide.
- **Habitat:** Wet ditches, sand flats, savannas, pine flatwoods, bogs, moist glades.
- **Habit:** Perennial herb with slender, elongated, straw-colored rhizomes.
- **Stems:** Upright, slender, smooth, sharply triangular, up to 1 3/4 feet tall, longer than the leaves.
- **Leaves:** Elongated, narrow, up to 1/8 inch wide, shorter than the flowering stem, smooth except for the slightly rough edges.
- **Flowers:** Borne in spikelets at the tip of the stem, the cluster of spikelets subtended by 4-6 linear to lanceolate bracts conspicuously whitened and long-pointed at the tip.
- **Spikelets:** Many, crowded, many-flowered, white, ovoid to lanceoloid, up to 1/3 inch long, about 1/8 inch wide, the lower bearing only pistils, the upper bearing only stamens; scales flat, white except for the brownish base.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; style 2-cleft.
- **Fruits:** Achenes brown or yellow, obovoid, up to 1/12 inch long, minutely warty or wrinkled, flattened, with a terminal tubercle as wide as the achene.

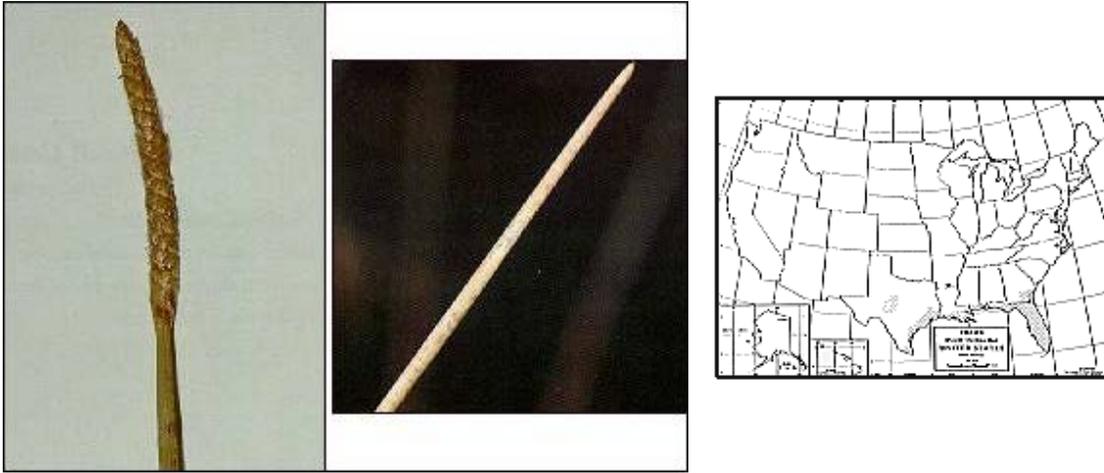


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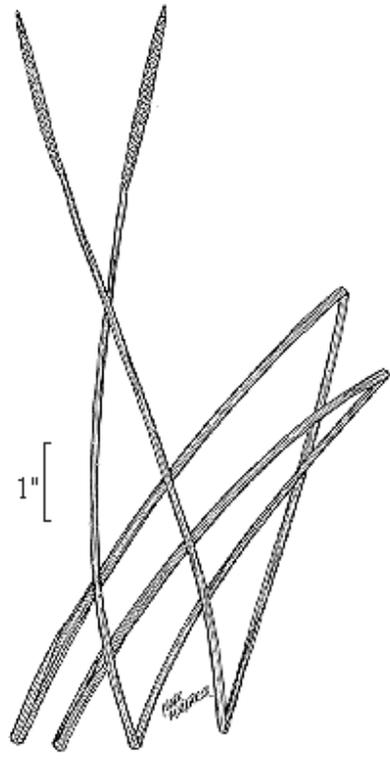
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Gulf Coast Spikerush

Eleocharis cellulosa Torr.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-September
- **Field Marks:** This is one of the spikerushes which has its spike no wider than the stem that bears it. It differs from similar species by not having cross-markings on its stem and with the coarse stem more than 1/8 inch thick.
- **Habitat:** Tidal marshes, sloughs, wet ditches, often in shallow standing water.
- **Habit:** Coarse perennial sedge with stout rhizomes.
- **Stems:** Upright, coarse, smooth, round in cross-section, without cross-markings, more than 1/8 inch thick, up to 2 1/2 feet tall.
- **Leaves:** Reduced to sheaths at the base of the stems.
- **Flowers:** Crowded into a solitary spike at the tip of the stem; spike cylindrical, no wider than the stem that supports it, up to 2 1/2 inches long, straw-colored, many-flowered.
- **Scales:** Straw-colored, rounded at the tip, up to 1/4 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes obovoid, light brown to reddish brown, up to 1/8 inch long, tapering to a triangular tip, subtended by 6 bristles about as long as the achene.
- **Notes:** This species, because of its extensive rhizome system, usually forms extensive colonies.



Southern Wetland Flora

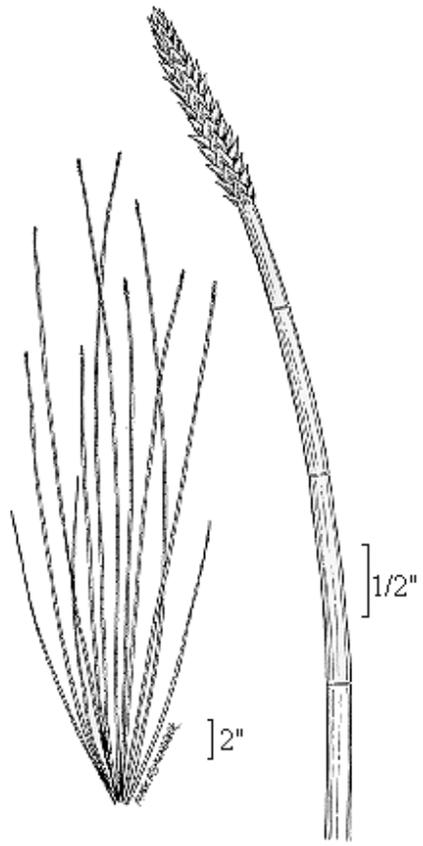
Field Office Guide to Plant Species

Horse-tail Spikerush

Eleocharis equisetoides (Elliott) Torr.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-October
- **Field Marks:** This spikerush is unique in having lighter colored lines across the stems giving it a "jointed" appearance.
- **Habitat:** From wet ground to shallow water around the margins of ponds and lakes.
- **Habit:** Perennial herb with stout, thickened rootstocks.
- **Stems:** Upright, round in cross-section, hollow, with conspicuous cross-walls, smooth, up to 3 feet tall.
- **Leaves:** 0.
- **Flowers:** Crowded into a solitary, terminal spikelet; spikelet cylindrical, rounded, or somewhat pointed, up to 1/2 inches long, about the same diameter as the supporting stem.
- **Spikelets:**
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; style 3-cleft.
- **Fruits:** Achenes obovoid, brown, shiny, with a conical tubercle at the tip, subtended by six bristles.



Southern Wetland Flora

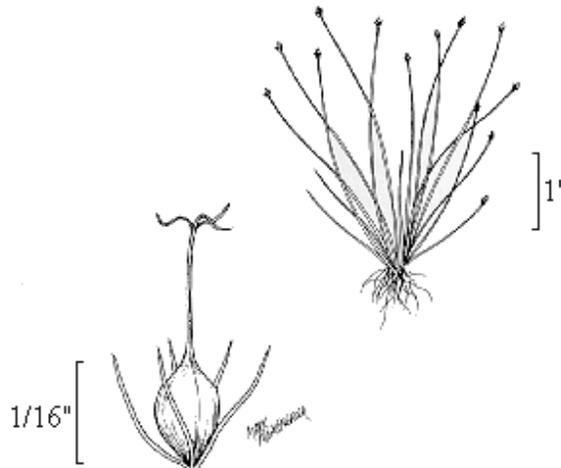
Field Office Guide to Plant Species

Small Spikerush

Eleocharis parvula (Roem. & J.A. Schultes) Bluff & Fingerh.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** This sedge, which grows no taller than 4 inches, differs from other similar short spikerushes by its triangular achene which tapers imperceptibly into the terminal tubercle.
- **Habitat:** Alluvial banks, brackish shores, around lakes and ponds, along streams, marshes, often in shallow standing water.
- **Habit:** Tufted perennial with short, slender rhizomes, often forming extensive turfs.
- **Stems:** Ascending to upright, up to 4 inches tall, smooth, angular.
- **Leaves:** Reduced to sheaths at the base of the stems.
- **Flowers:** 4-10, crowded into a solitary spike at the tip of the stem; spike ovoid to ellipsoid, much wider than the stem that supports it, up to 1/4 inch long, straw-colored.
- **Scales:** Straw-colored, rounded at the tip, up to 1/10 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes obvoid, yellowish to pale brown, up to 1/16 inch long, subtended by as many as 6 bristles as long as or longer than the achenes.
- **Notes:** Ducks feed on the tiny tubers on the rhizomes of this plant, and frequently one will find windrows of this plant floating in the water along the shores where ducks have been feeding.



Southern Wetland Flora

Field Office Guide to Plant Species

Tall Fimbry

Fimbristylis dichotoma (L.) Vahl



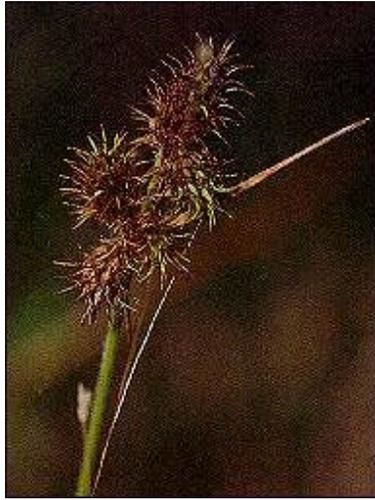
- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-September
- **Field Marks:** Species of *Fimbristylis* do not have tubercles on their achenes, nor are their achenes subtended by bristles. This species differs from others in the genus by being a perennial that lacks rhizomes, and its achenes that have up to 12 rows of rectangular pits.
- **Habitat:** Moist disturbed areas, ditches, wet meadows, savannas.
- **Habit:** Perennial tufted herb with fibrous roots.
- **Stems:** Upright, unbranched, smooth, up to 2 1/2 feet tall.
- **Leaves:** Elongated, very sharply pointed, up to 1/4 inch wide, much shorter than the stems; leaf sheaths somewhat hairy.
- **Flowers:** Borne in spikelets, with several spikelets in umbel-like clusters.
- **Spikelets:** Several-flowered, oblongoid to narrowly ovoid, up to 1/3-3/4 inch long, up to 1/6 inch wide; scales oblong to ovate, with a short point at the tip.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1-2.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes lenticular, about 1/12 inch long, with up to 12 horizontal rows of rectangular pits.



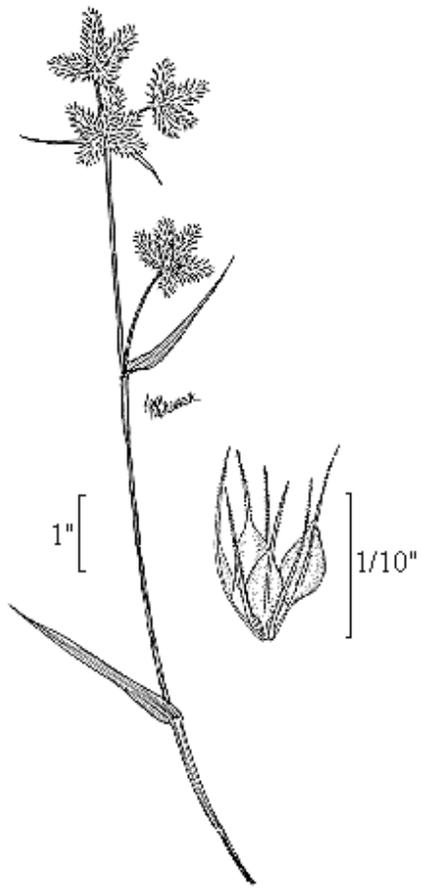
Southern Wetland Flora

Field Office Guide to Plant Species

Hairy Umbrella-sedge
Fuirena squarrosa Michx.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** This well-marked sedge is distinguished by its bristly looking spikelets crowded into small clusters.
- **Habitat:** Low pinelands, swales, wet ditches, bogs, savannas, marshes.
- **Habit:** Perennial sedge with short rhizomes, frequently growing in clumps.
- **Stems:** Upright, up to 2 1/2 feet tall, smooth except usually for some short hairs just below the inflorescence.
- **Leaves:** Elongated, narrow, up to 6 inches long, up to 1/3 inch wide, smooth or hairy on the upper surface, smooth on the lower surface; sheaths hairy.
- **Flowers:** Borne in spikelets; spikelets 2-several, crowded in clusters at the tip of the stem, each spikelet 1/2-1 inch long, appearing short bristly because of the awned scales.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; style 3-cleft.
- **Fruits:** Achenes triangular, brown to greenish, obovoid, minute, less than 1/16 inch long, subtended by short bristles.



Southern Wetland Flora

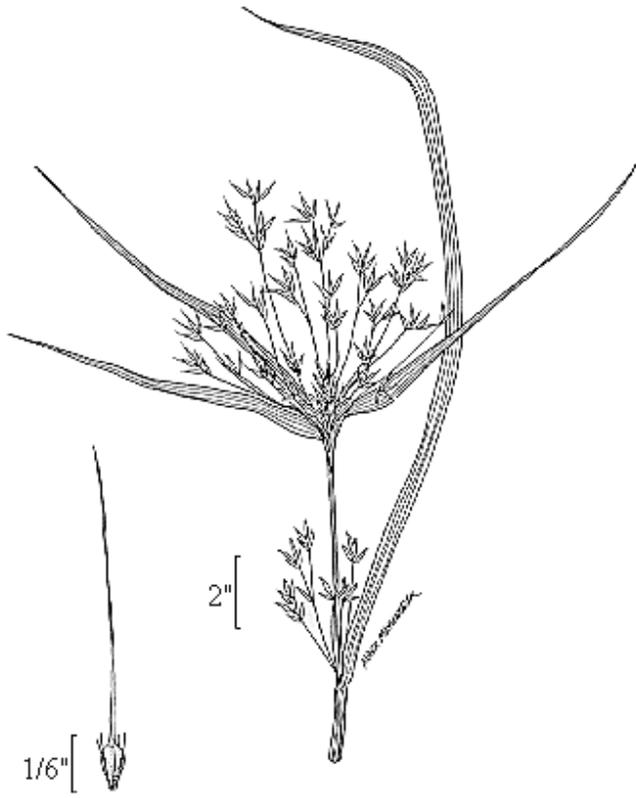
Field Office Guide to Plant Species

Horned Beaked-rush

Rhynchospora corniculata (Lam.) Gray



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-September
- **Field Marks:** This beaked-rush has a long beak terminating the achene, but the bristles that subtend the achene are only 1/6 inch long. This is a robust plant that will grow up to 7 feet tall.
- **Habitat:** Wet to saturated soil in marshes, openings in swamps, ditches, margins of ponds, lakes, bayous, and other wet soil situations.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, triangular, smooth, unbranched, up to 7 feet long.
- **Leaves:** Long, narrow, flat, rough along the edges, up to 2/3 inch wide.
- **Flowers:** Borne in spikelets, the spikelets arranged in terminal and axillary umbels as much as 1 foot across.
- **Spikelets:** 1-flowered, up to 1/2 inch long, with lanceolate, pointed scales.
- **Stamens:** 3.
- **Pistils:** Ovary superior; style 2-cleft.
- **Fruits:** Achenes obovate, flat, dark brown, about 1/10 inch long, with a long, terminal beak up to 1 inch long, subtended by 2-6 bristles about 1/6 inch long.



Southern Wetland Flora

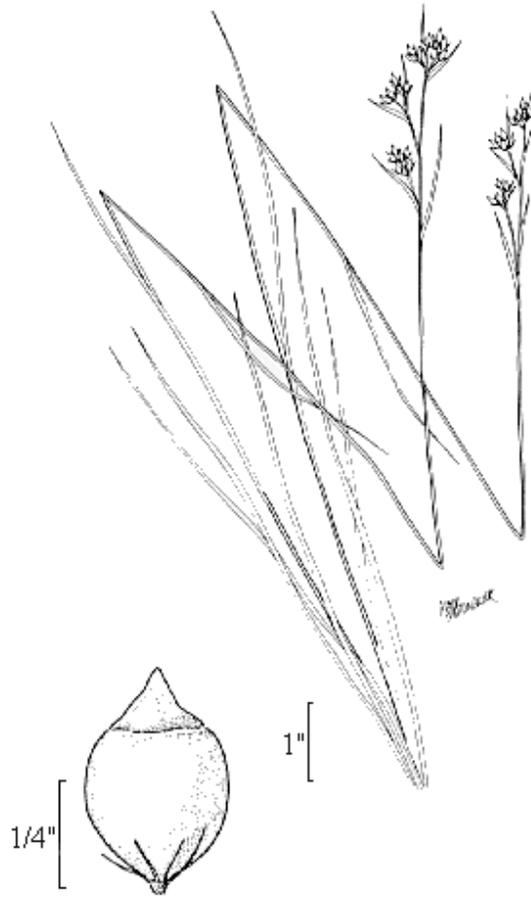
Field Office Guide to Plant Species

Fasciculate Beakrush

Rhynchospora fascicularis (Michx.) Vahl



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-September
- **Field Marks:** This beakrush differs from all other species of *Rhynchospora* by its smooth achenes that are much longer than the bristles. None of the leaves is as long as the stiff stem.
- **Habitat:** Sloughs, sandy shores, low pinelands, flatwoods, swamps, roadsides, wet clearings.
- **Habit:** Tufted perennial.
- **Stems:** Upright, coarse, stiff, unbranched, smooth, up to 3 1/4 feet tall.
- **Leaves:** Elongated, flat, smooth, 1/10-1/6 inch wide, shorter than the stem.
- **Flowers:** Borne in spikelets, with spikelets in terminal and axillary clusters.
- **Spikelets:** 2- to 3-flowered, ovoid, brown, up to 1/5 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes ellipsoid to nearly round, brown except for a yellowish center, smooth, about 1/12 inch long, subtended by 5-6 bristles much shorter than the achenes; bristles with upward pointing hairs.

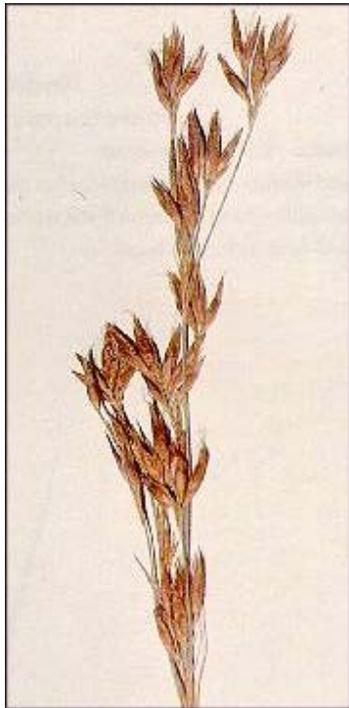


Southern Wetland Flora

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Nodding Beakrush

Rhynchospora inexpansa (Michx.) Vahl



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-September
- **Field Marks:** The characteristics that distinguish this beakrush from all the others are its achene that has horizontal ridges on it, the setose tubercle perched on top of the achene, and its achene about twice as long as broad.
- **Habitat:** Sandy and alluvial shores, low pinelands, wet ditches, bogs, savannas, moist to dry soils in flatwoods, around ponds.
- **Habit:** Tufted perennial sedge with a thickened rootstock.
- **Stems:** Upright, rather stout, up to 3 feet tall, smooth.
- **Leaves:** Elongated, narrow, shorter than the flowering stems, up to 1/4 inch wide.
- **Flowers:** Borne in spikelets; spikelets borne in axillary and terminal cymes, the inflorescence up to 6 inches long.
- **Spikelets:** Lanceolate, brown, 1- to 4-flowered, up to 1/2 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes flat, ellipsoid, at least twice as long as broad, up to 1/6 inch long, yellowish, marked with horizontal ridges, the terminal tubercle very slender, setose; bristles subtending the achene 6, longer than the achene.



Southern Wetland Flora

Field Office Guide to Plant Species

Golden Colic-root
Aletris aurea Walter



- **Family:** Lily (Liliaceae)
- **Flowering:** May-July
- **Field Marks:** Species of *Aletris* usually have all or most of their leaves at the base of the plant, flowers in racemes, and 6 perianth parts united for at least half their length. The golden colic-root is the only *Aletris* with yellow flowers in which the perianth lobes are not spreading.
- **Habitat:** From moist to wet soils in pinelands, bogs, savannas, pocosins, and wet prairies.
- **Habit:** Perennial herb with short, thick rhizomes.
- **Stems:** Upright, up to 3 feet tall, bearing flowers at the tip but usually without leaves.
- **Leaves:** Usually nearly all basal, oblanceolate to elliptic, pointed at the tip, tapering to the base, without teeth, smooth, up to 3 inches long, up to nearly one inch wide.
- **Flowers:** Several in a raceme at the tip of each stem, each flower subtended by 2 small bracts.
- **Perianth:** 6-parted, united for more than 1/2 its length into a cylinder, golden-yellow, up to 1/2 inch long, the lobes triangular and not spreading.
- **Stamens:** 6, attached to the perianth, not exserted.
- **Pistils:** Ovary partly inferior; stigmas 3.
- **Fruits:** Capsules up to 1/3 inch long, swollen at the base, tapering above, with the perianth persisting; seeds ovoid, shiny, reddish brown.

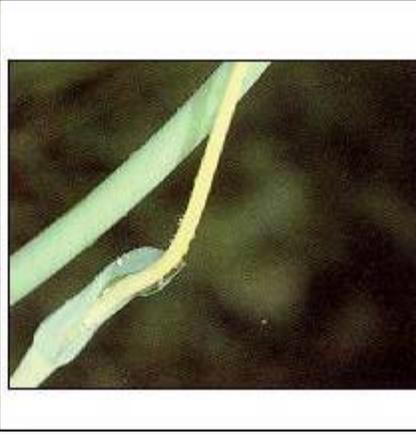


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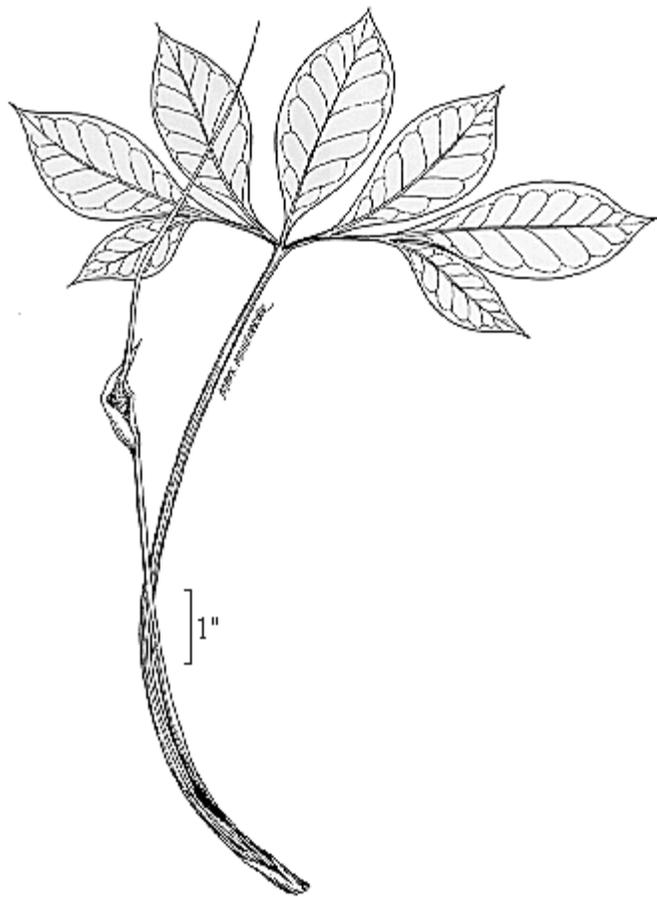
Field Office Guide to Plant Species

Green Dragon

Arisaema dracontium (L.) Schott



- **Family:** Aroid (Araceae)
- **Flowering:** April-June
- **Field Marks:** This species is distinguished from all others by the single leaf divided into 5-15 leaflets and the long, slender, yellow "tail" of the flower cluster that is exerted from the spathe.
- **Habitat:** Rich, damp, shaded woods; thickets; swales.
- **Habit:** Herb with an underground corm and no aerial stem.
- **Stems:** Underground, thickened, giving rise to a leafless flower stalk and a single, compound leaf.
- **Leaves:** Single, arising from an underground stem, divided into 5-15 leaflets; each leaflet obovate or oblong, often asymmetrical, pointed at the tip, tapering to the base, usually without teeth, smooth, up to 10 inches long, up to 4 inches wide.
- **Flowers:** Male and female flowers borne separately on a thickened stalk (spadix) which tapers to a long, slender, yellow "tail," the flowers of the base of the spadix surrounded by a green spathe.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 4, very tiny.
- **Pistils:** Ovary superior, 1-parted.
- **Fruits:** Berries crowded into a dense cluster, red; each berry shiny, about 1/6 inch in diameter.
- **Notes:** The corm, which is starchy, can be dried and ground and used as flour.



Southern Wetland Flora

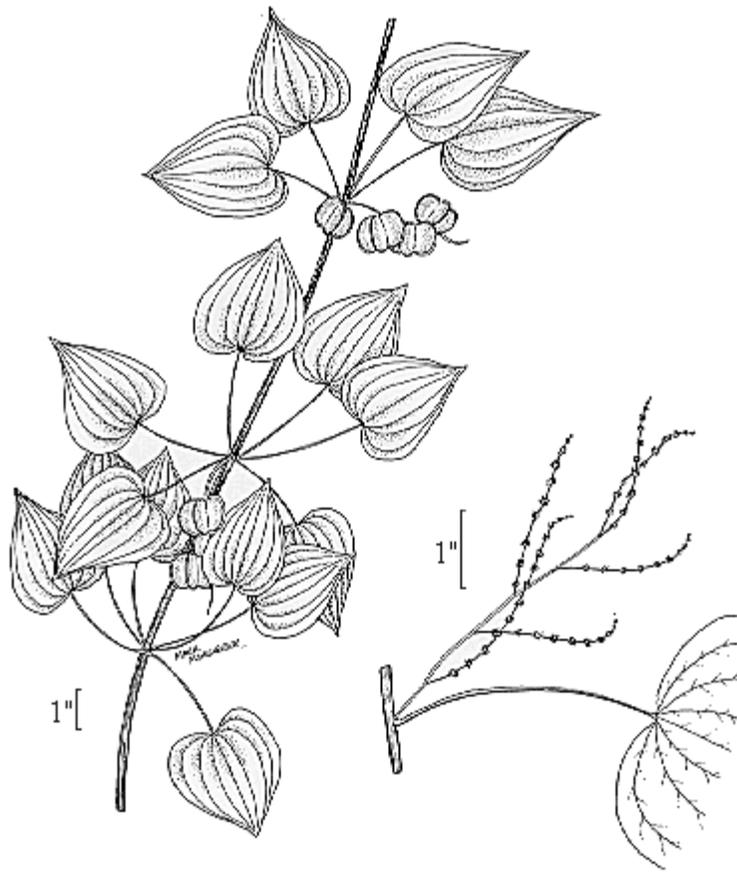
Field Office Guide to Plant Species

Four-leaf Yam

Dioscorea quaternata (Walter) J.F. Gmel.



- **Family:** Yam (Dioscoreaceae)
- **Flowering:** May-June
- **Field Marks:** This vine has some or all its leaves in clusters of 4. The dry fruits are winged and up to 1 1/2 inches long.
- **Habitat:** Rich woods, thickets, bottomland terraces, river banks, swamps.
- **Habit:** Upright or twining perennial vine from a thickened root.
- **Stems:** Upright or twining, slender, smooth, up to 10 feet long.
- **Leaves:** At least the lower ones in groups of 4-7, simple, ovate, pointed at the tip, heart-shaped at the base, smooth or slightly hairy below, often paler on the lower surface, with net venation and prominent curved venation, up to 6 inches long, up to 4 inches wide.
- **Flowers:** Male and female flowers borne on different plants; male flowers in slender, axillary panicles; female flowers 3-10 in a cluster.
- **Sepals:** 6, united below, about 1/12 inch long, greenish yellow.
- **Petals:** 0.
- **Stamens:** 3 or 6.
- **Pistils:** Ovary inferior; styles 3.
- **Fruits:** Capsules ellipsoid to obovoid, up to 1 1/2 inches long, 3-winged; seeds about 3/4 inch wide.
- **Notes:** This species is closely related to the cultivated yam.



Southern Wetland Flora

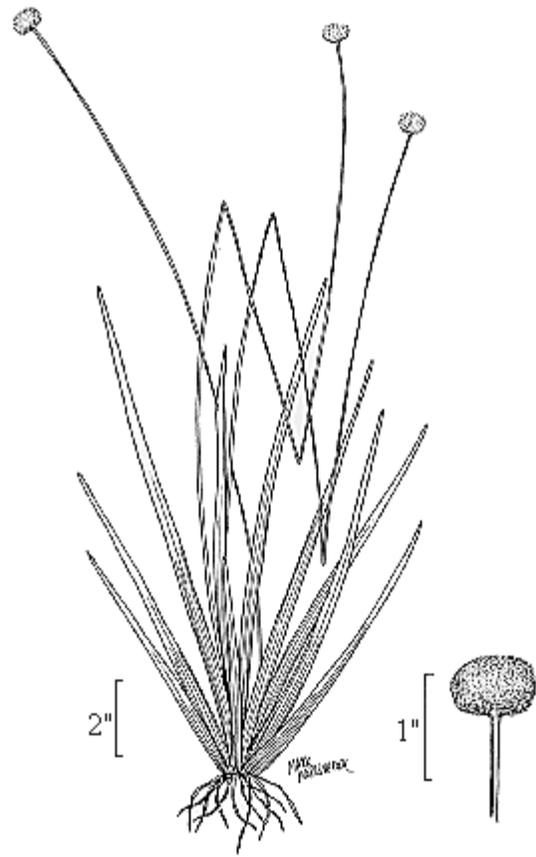
Field Office Guide to Plant Species

Ten-angle Pipewort

Eriocaulon decangulare L.



- **Family:** Pipewort (Eriocaulaceae)
- **Flowering:** June-October
- **Field Marks:** Pipeworts are recognized by their single white or gray heads of flowers and their leafless stems. This species has hard, hairy heads of flowers and its bracts longer than its flowers.
- **Habitat:** Low pinelands, wet prairies, flatwoods, bogs, wet ditches, stream banks, along shores, sometimes in water as much as 3 feet deep.
- **Habit:** Perennial herb with stout, much-branched rhizomes, forming clumps.
- **Stems:** Upright, twisted, with 8-12 vertical ridges, up to 44 inches tall, bearing no leaves and a single head of flowers.
- **Leaves:** All basal, elongated, very narrow, drawn out into a long point, up to 15 inches long, up to 1/3 inch wide, smooth.
- **Flowers:** Many crowded into a hard, white, nearly spherical head up to 3/4 inch in diameter; flowers subtended by hairy bracts longer than the flowers; male and female flowers separate but in the same head.
- **Sepals:** 2, linear, up to 1/6 inch long, yellowish white, bearing club-shaped hairs.
- **Petals:** 2, spatulate, united at the base, shorter than the sepals, hairy.
- **Stamens:** Usually 4.
- **Pistils:** Ovary superior, on a short stalk; styles 2-branched.
- **Fruits:** Capsules containing minute, oval seeds.



Southern Wetland Flora

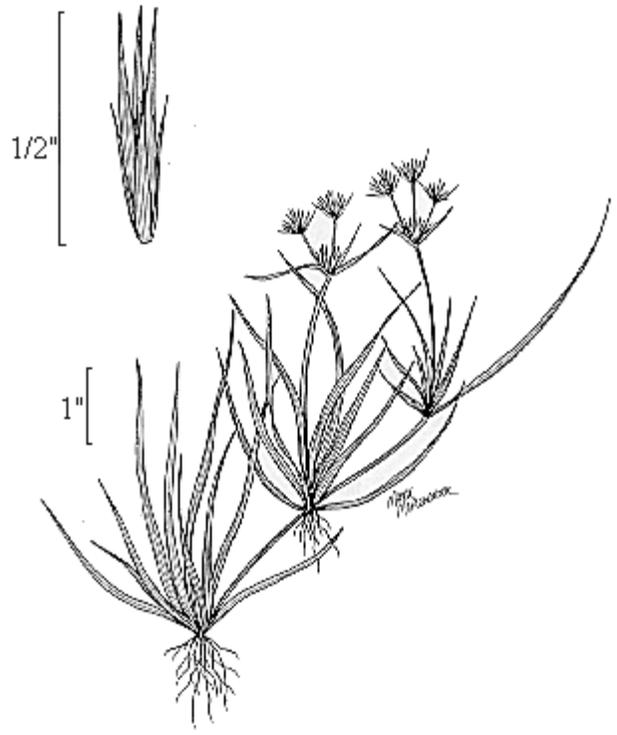
Field Office Guide to Plant Species

Creeping Rush

Juncus repens Michx.



- **Family:** Rush (Juncaceae)
- **Flowering:** June-October
- **Field Marks:** This small, annual rush is often found growing in shallow standing water. Its flowers are borne in clusters and not singly, and its petals are 1/4-1/2 inch long, much longer than the petals of any other annual rush.
- **Habitat:** Ditches, swamps, peaty margins, ponds and pond margins, lakes, drainage canals, often in shallow standing water.
- **Habit:** Sometimes annual but usually perennial herb with fibrous roots, but forming dense mats by a flat, black rhizome which may be above or below the soil's surface when growing in water.
- **Stems:** Tufted when growing on land, creeping and rooting at the nodes when growing in water, slender, smooth.
- **Leaves:** All basal, linear, elongated, soft, flat, smooth; sheaths flattened.
- **Flowers:** Borne in heads in cymose clusters, each head with 5-15 flowers.
- **Sepals:** 3, green turning brown, narrowly linear, long-pointed at the tip, up to 1/3 inch long.
- **Petals:** 3, green turning brown, narrowly linear, long-pointed at the tip, up to 1/4-1/2 inch long, always longer than the sepals.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules narrowly lanceolate, brown, smooth, 1/6-1/4 inch long, much shorter than the subtending petals; seeds many, dark brown, oblong to oval but asymmetrical, finely net-veined.
- **Notes:** This species will form extensive mats when growing in water, and often overwinters in this condition. Flowering usually occurs only after the water recedes.



Southern Wetland Flora

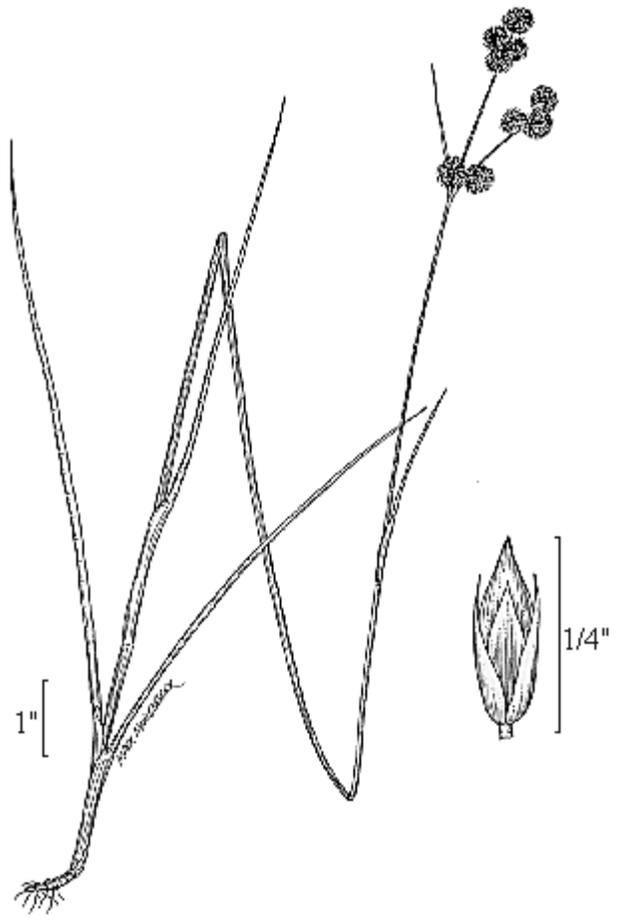
Field Office Guide to Plant Species

Needle-pod Rush

Juncus scirpoides Lam.



- **Family:** Rush (Juncaceae)
- **Flowering:** June-October
- **Field Marks:** This rush is distinguished by its spherical heads, hollow, cylindrical leaves, and its capsules longer than the sepals and petals.
- **Habitat:** Wet soil to shallow water in prairies, swamps, bogs, and savannas.
- **Habit:** Perennial herb with thickened, whitish rootstocks.
- **Stems:** Upright, smooth, usually several together, up to 3 feet tall.
- **Leaves:** 1-3 per stem, cylindrical, hollow, with conspicuous cross walls, without hairs.
- **Flowers:** Up to 30 in spherical heads, with several heads per plant, 1/4-1/3 inch in diameter.
- **Sepals:** 3, very slender, pointed, 1/8-1/6 inch long.
- **Petals:** 3, very slender, pointed, a little shorter than the sepals.
- **Stamens:** 3.
- **Pistils:** Ovary superior
- **Fruits:** Capsules narrow, long-pointed, 1/6-1/4 inch long, longer than the sepals and petals.



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Round-head Rush *Juncus validus* Coville



- **Family:** Rush (Juncaceae)
- **Flowering:** July-September
- **Field Marks:** This is one of several species of rushes which has flowers crowded in spherical heads and which has septate leaves. It differs from all other similar species by the very narrow capsule longer than the sepals and petals, and its flattened, uncurved leaves.
- **Habitat:** Wet ditches, pond margins, stream margins, marshes, damp fields, wet prairies.
- **Habit:** Perennial, usually clump-forming herb, with rhizomes.
- **Stems:** Upright, smooth, up to 3 feet tall.
- **Leaves:** Alternate, mostly on the lower half of the stem, elongated, slender, flattened, septate, up to 1/4 inch wide; sheaths greenish.
- **Flowers:** Flowers crowded into several spherical heads in cymes, each head 1/2-2/3 inch in diameter.
- **Sepals:** 3, green turning brown, narrowly lanceolate, up to 1/4 inch long.
- **Petals:** 3, green turning brown, narrowly lanceolate, usually slightly shorter than the sepals.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules very narrowly lanceolate, straw-colored, smooth, up to 1/3 inch long, always longer than the sepals and petals; seeds many, broadly elliptic, pale brown, finely net-veined.



Southern Wetland Flora

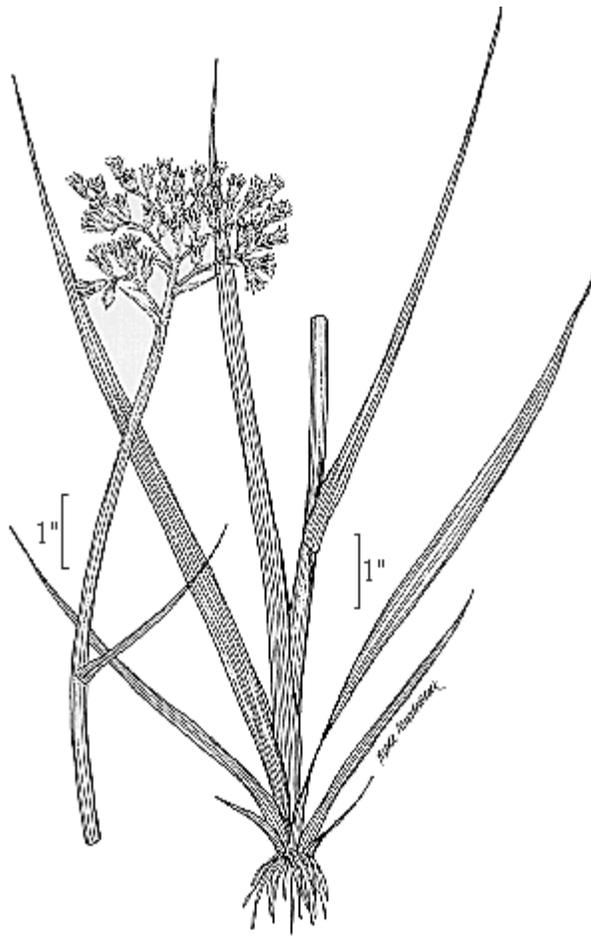
Field Office Guide to Plant Species

Carolina Redroot

Lachnanthes caroliniana (Lam.) Dandy



- **Family:** Bloodwort (Haemodoraceae)
- **Flowering:** July-September
- **Field Marks:** This species is characterized by its long, narrow, basal leaves, its white-woolly flower branches with dense clusters of yellow, 6-parted flowers, and its red rhizomes containing a red juice.
- **Habitat:** Wet sandy soil in bogs, swamps, ditches, pine flatwoods, and savannas.
- **Habit:** Perennial herb with a short rootstock and red, fibrous roots, which yield a red juice when squeezed.
- **Stems:** Upright, unbranched, smooth near base, woolly-hairy above, up to 2 1/2 feet tall.
- **Leaves:** Long, narrow, pointed at the tip, hairy, the lower leaves shorter than the middle leaves, up to 1/2 inch wide.
- **Flowers:** Numerous in round-topped panicles; branches of the panicle white-woolly; each flower 1/3-1/2 inch across.
- **Perianth:** 6-parted, yellow, united near the base, hairy on the outside, smooth on the inside, pointed at the tip, with a small bract at the base.
- **Stamens:** 3.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules spherical, about 1/4 inch in diameter, hairy, containing flat, orbicular seeds.
- **Notes:** This species also occurs in the West Indies. It is one of the few plants in North America whose roots contain a red juice. This plant is an excellent food for surface-feeding ducks.



Southern Wetland Flora

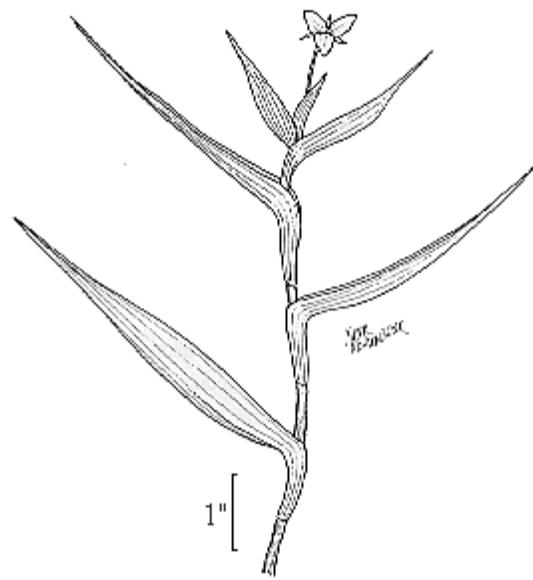
Field Office Guide to Plant Species

Marsh Dewflower

Murdannia keisak (Hassk.) Hand. -Mazz.



- **Family:** Spiderwort (Commelinaceae)
- **Flowering:** September-October
- **Field Marks:** This creeping annual has 3 pinkish petals alternating with 3 green sepals, 2 or 3 fertile stamens, 3 or 4 sterile stamens, and tubular leaf sheaths.
- **Habitat:** Marshes, shores, edges of swamps, ditches, canals, stream banks, sometimes in shallow water.
- **Habit:** Creeping annual herb, rooting at the nodes, often forming dense mats.
- **Stems:** Creeping, the tips usually ascending, sparsely glandular-hairy.
- **Leaves:** Alternate, simple, linear to narrowly ovate, pointed at the tip, usually clasping the stem at its base, up to 2 1/2 inches long, up to 1/2 inch wide, toothless, smooth; leaf sheaths tubular.
- **Flowers:** Solitary or 2-4 in axillary racemes; flower stalks up to 2 1/2 inches long.
- **Sepals:** 3, green, free from each other, ovate to oblong, up to 1/3 inch long, hairy on the outer surface.
- **Petals:** 3, pink, free from each other, up to 2/5 inch long, a little longer than the sepals.
- **Stamens:** 6, 2 or 3 fertile, the others sterile and not producing pollen.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ellipsoid to oval, pointed at the tip, smooth, up to 1/2 inch long; seeds ovate to oblong, gray, flat, up to 1/6 inch long.
- **Notes:** This species has sometimes been known as *Aneilema keisak*. It is a native of eastern Asia.



Southern Wetland Flora

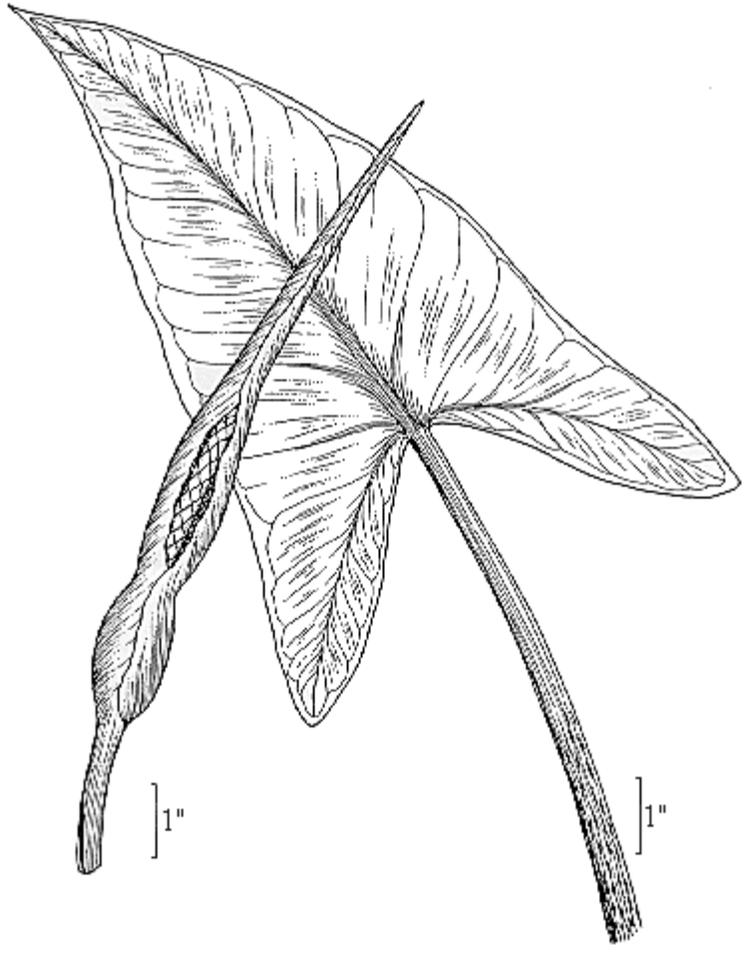
Field Office Guide to Plant Species

Arrow Arum

Peltandra virginica (L.) Kunth



- **Family:** Aroid (Araceae)
- **Flowering:** May-June
- **Field Marks:** This species is readily recognized by its arrowhead-shaped leaves that are pinnately veined and by its flowers borne on a spadix that is surrounded by a spathe.
- **Habitat:** Wet ground, swamps, sloughs, oxbow lakes, river bottoms, marshes, margins of ponds, along slow streams, and other open or shaded wet soil sites.
- **Habit:** Perennial herb with a thick, perpendicular root.
- **Stems:** No aerial stems present.
- **Leaves:** All basal, arrowhead-shaped, with a pair of spreading lobes at the base, pinnately veined, pointed at the tip, smooth, up to 12 inches long at flowering time, then becoming larger.
- **Flowers:** Crowded on a fleshy stalk (spadix), surrounded by a cylindrical green sheath (spathe) up to 8 inches long; male flowers crowded along the upper part of the spadix; female flowers crowded near the bottom of the spadix.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 4-5.
- **Pistils:** Ovary superior.
- **Fruits:** Berries greenish to brown, up to 1/2 inch long, in a fleshy, club-shaped structure, turning black after falling into water.
- **Notes:** The roots reputedly can be boiled and eaten as a potato-like vegetable.



Southern Wetland Flora

Field Office Guide to Plant Species

Pineland Beakrush

Rhynchospora perplexa Britton



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-September
- **Field Marks:** All species of beakrush have tubercles on the achenes and bristles that subtend the achenes. The pineland beakrush has wrinkled-looking, flat achenes that are longer than the bristles. The bristles also have upward pointing hairs.
- **Habitat:** Swamps, bogs, low pinelands, wet prairies, savannas, ditches, flatwoods, sometimes growing in shallow water.
- **Habit:** Tufted perennial.
- **Stems:** Upright, mostly unbranched, smooth, up to 3 feet tall.
- **Leaves:** Elongated, flat, smooth, up to 1/6 inch wide, much shorter than the flowering stem.
- **Flowers:** Borne in spikelets, with spikelets arranged in branched, axillary clusters; branches of the flower clusters very slender.
- **Spikelets:** 2- to 4-flowered, ovoid, dark brown, up to 1/6 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes flat, elliptic to obovate, reddish, wrinkled-looking, 1/8-1/6 inch long, subtended by 1-6 bristles much shorter than the achenes; bristles with upward pointing hairs.
- **Notes:** Sometimes the bristles that subtend the achene are absent.



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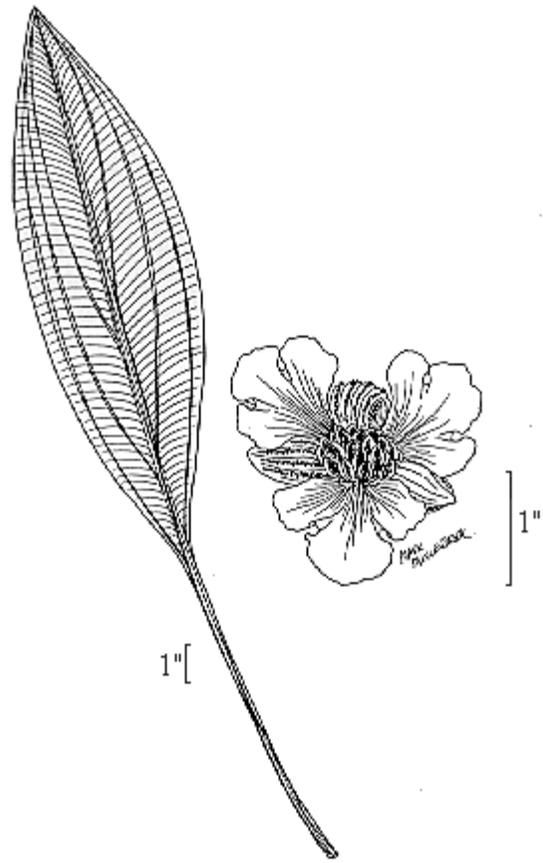
Field Office Guide to Plant Species

Bull-tongue Arrowhead

Sagittaria lancifolia L.



- **Family:** Water Plantain (Alismataceae)
- **Flowering:** May-June
- **Field Marks:** This arrowhead differs from others by its leathery, elliptic leaves which lack the lower pointed lobes of most arrowheads, and its smooth bracts.
- **Habitat:** Swamps and ponds, usually somewhat brackish, often in shallow water.
- **Habit:** Perennial herb with stout rhizomes.
- **Stems:** Upright, smooth, bearing only the flowers, up to 4 feet tall, longer than the leaves.
- **Leaves:** Basal, erect, linear to elliptic to ovate, not arrowhead-shaped or lobed, smooth, leathery, up to 15 inches long, up to 8 inches wide; leaf stalks spongy.
- **Flowers:** Male and female flowers borne separately on the same plant, arranged in whorls of 5-12; bracts smooth, up to 1/2 inch long.
- **Sepals:** 3, green, smooth, turned downward, up to 1/2 inch long.
- **Petals:** 3, white, free from each other, up to 1 inch long.
- **Stamens:** Numerous.
- **Pistils:** Numerous; ovaries superior.
- **Fruits:** Achenes crowded into spherical heads up to 1 inch in diameter, the achenes up to 1/8 inch long, winged, with a curved beak.
- **Notes:** Some botanists combine this species with *S. falcata*.

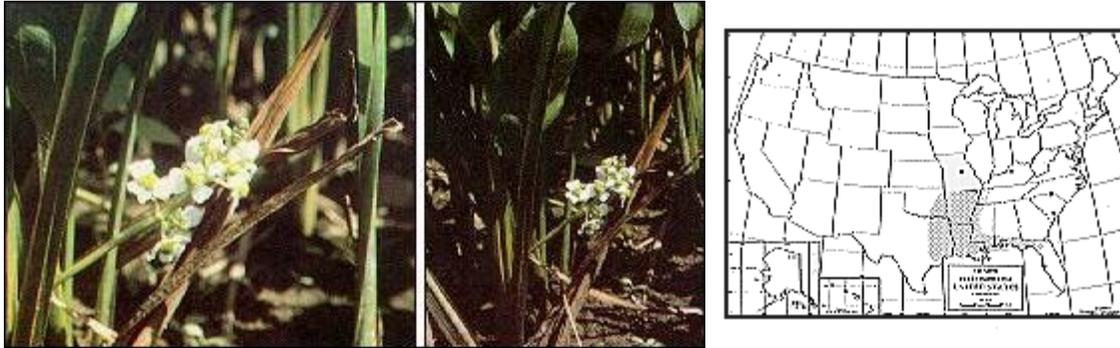


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Field Office Guide to Plant Species

Delta Arrow-head

Sagittaria platyphylla (Englem.) J.G. Smith



- **Family:** Water Plantain (Alismataceae)
- **Flowering:** June
- **Field Marks:** This is one of the species of arrow-heads that lacks the pointed basal lobes of the leaves. The stalks of the fruiting heads are recurved. All the leaves that stand above the water are lanceolate to elliptic to ovate.
- **Habitat:** Swamps, wet ditches, ponds, marshes, shores, sloughs, often in standing water.
- **Habit:** Perennial herb with slender rhizomes.
- **Stems:** Upright, branched, smooth, up to 5 feet tall, bearing only flowers.
- **Leaves:** Of 2 types: those above water upright, lanceolate to elliptic to ovate, usually pointed at the tip, rounded or tapering to the base, up to 8 inches long, up to 3 1/2 inches wide, toothless and lobeless, smooth, with long stalks; those under water strap-shaped, up to 10 inches long, up to 3/4 inch wide, smooth, toothless and lobeless.
- **Flowers:** Male and female flowers borne separately but on the same plant near the tip of the leafless stems; flowers subtended by bracts up to 1/3 inch long.
- **Sepals:** 3, free from each other, up to 1/3 inch long, those of the female flowers turned downward and persistent in fruit.
- **Petals:** 3, white, free from each other, up to nearly 1 inch long, falling away long before the sepals.
- **Stamens:** Numerous.
- **Pistils:** Numerous, crowded on a receptacle; ovaries superior.
- **Fruits:** Achenes obovate, tapering to the base, about 1/10 inch long, winged, borne in a head; fruiting heads on recurved stalks.
- **Notes:** This species is sometimes considered to be a variety of *Sagittaria graminea*, but the fruiting heads of *S. graminea* are rarely recurved. This species is sometimes called Delta Duck Potato because of the tubers on the rhizomes. These tubers are a choice food for ducks.



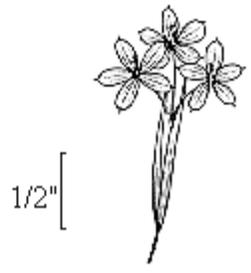
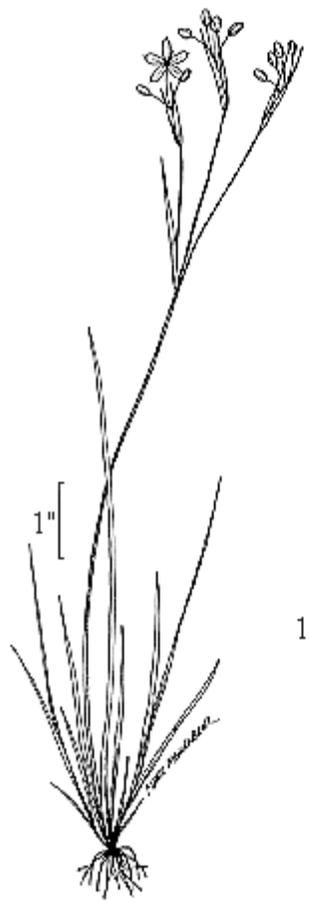
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Field Office Guide to Plant Species

Eastern Blue-eyed Grass *Sisyrinchium atlanticum* Bickn.



- **Family:** Iris (Iridaceae)
- **Flowering:** April-June
- **Field Marks:** This species is distinguished by its tufted branching stems, very slender flower stalks, blue-green leaves and stems, and flattened spathes from which the flower arises.
- **Habitat:** Open situations with wet to moist soils.
- **Habit:** Perennial herb with short rootstocks.
- **Stems:** Tufted, upright or reclining, slender, narrowly 2-winged, smooth, branched above, blue-green, up to 2 feet tall.
- **Leaves:** Basal and alternate, very slender, up to 1/12 inch wide, the lowest not longer than the stem, blue-green, smooth.
- **Flowers:** Subtended by a pair of equal green or purplish bracts, on erect stalks up to 3/4 inch long.
- **Perianth:** 6 segments, blue with a yellow center, occasionally white, rounded at the tip but usually with a central projection, up to 1/3 inch long.
- **Stamens:** 6, united below.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules spherical, up to 1/4 inch in diameter, smooth, becoming dark green or black at maturity, with several oval, dark seeds.



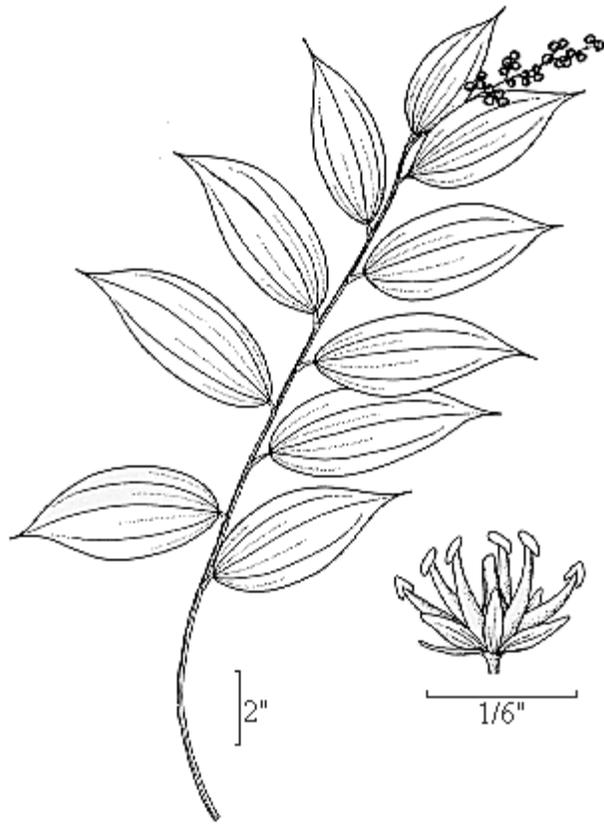
Southern Wetland Flora

Field Office Guide to Plant Species

False-solomon's-seal
Smilacina racemosa (L.) Desf.



- **Family:** Lily (Liliaceae)
- **Flowering:** April-June
- **Field Marks:** This species has white flowers in a terminal raceme and red berries.
- **Habitat:** Rich shady woods.
- **Habit:** Perennial herb with thickened rhizomes.
- **Stems:** Upright or arching, unbranched, smooth or finely hairy, up to 3 feet tall.
- **Leaves:** Alternate, oval to lanceolate, pointed at the tip, rounded or tapering to the base, usually finely hairy on the lower surface, without teeth but often ciliate, up to 6 inches long, up to 3 inches wide.
- **Flowers:** Several in a terminal panicle; each flower up to 1/6 inch across, short-stalked.
- **Perianth:** 6 segments, free from each other, white.
- **Stamens:** 6, attached to the base of the perianth segments.
- **Pistils:** Ovary superior; stigma 3-parted.
- **Fruits:** Berries red, spherical, up to 1/4 inch in diameter.
- **Notes:** This species is also known as false spikenard.



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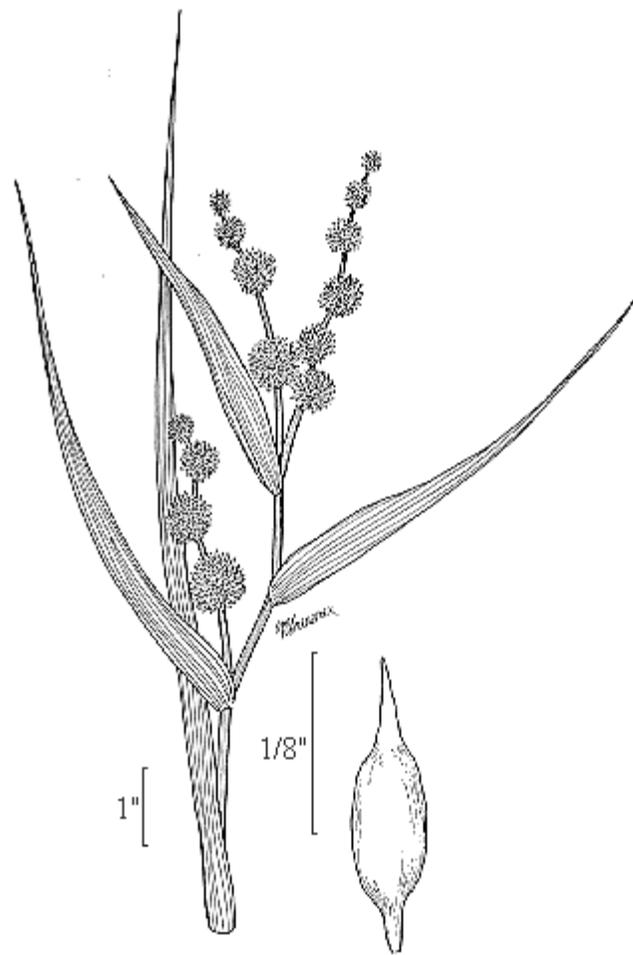
Field Office Guide to Plant Species

American Burreed

Sparganium americanum Nutt.



- **Family:** Burreed (Sparganiaceae)
- **Flowering:** May-September
- **Field Marks:** The male and female flowers of the species of *Sparganium* are borne separately in spherical heads on the same plant. This burreed differs from all others by its dull fruits and unbranched flower clusters.
- **Habitat:** Sloughs, swamps, slow-flowing streams, usually growing in water.
- **Habit:** Perennial herb with slender rhizomes.
- **Stems:** Upright, rather stout, smooth, up to 3 feet tall and becoming zigzagged on the flower-bearing stalks.
- **Leaves:** Elongated, narrow, thickish and spongy, mostly near the base of the plant, some of them overtopping the flower clusters, rounded at the tip, toothless, smooth, up to 1 inch wide.
- **Flowers:** Male and female flowers borne in separate spherical heads at the ends of the same stem.
- **Perianth:** Usually 5-parted, scale-like, up to 1/8 inch long.
- **Stamens:** Usually 5.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes ellipsoid to obovoid, beaked, 1/4-1/2 inch long, brown, dull.



Southern Wetland Flora

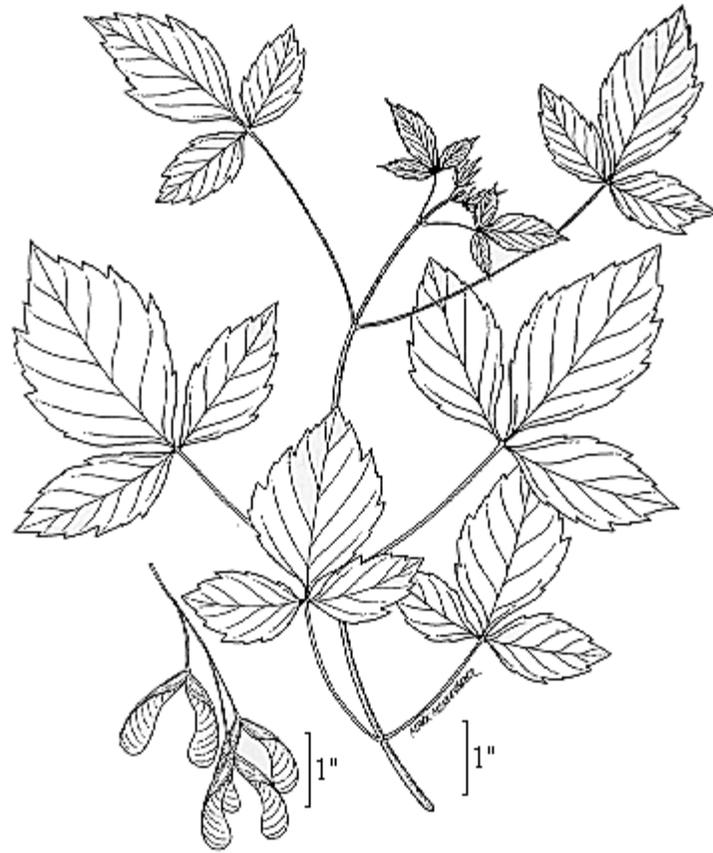
Field Office Guide to Plant Species

Box-elder

Acer negundo L.



- **Family:** Maple (Aceraceae)
- **Flowering:** April-May
- **Field Marks:** The box elder has opposite leaves divided into 3 or 5 or 7 leaflets. It differs from ashes by its green twigs and paired fruits.
- **Habitat:** Wet woods, along streams, damp thickets.
- **Habit:** Tree up to 60 feet tall with a wide-spreading crown.
- **Bark:** Light brown, ridged when young, becoming deeply furrowed with age.
- **Twigs:** Smooth, green, shiny, with white dots (lenticels).
- **Leaves:** Opposite, pinnately compound, with 3, 5, or 7 leaflets; each leaflet elliptic to ovate, pointed at the tip, tapering or rounded at the base, usually coarsely toothed along the edges, light green and smooth on the upper surface, paler on the lower surface, up to 4 inches long.
- **Flowers:** Male and female borne on separate trees, several in a cluster, greenish yellow, appearing as the leaves begin to unfold.
- **Sepals:** Minute.
- **Petals:** 0.
- **Stamens:** Usually 8.
- **Pistils:** Ovary superior, 2-parted.
- **Fruits:** Samaras 1-seeded, pale yellow, many, in long, drooping clusters, each one 1 1/2-2 inches long, maturing in autumn and persisting in the spring.
- **Notes:** The lower surface of the leaflets is sometimes hairy. The wood of the box-elder is soft, weak, and white. It has been used for paper pulp. The pollen of this wind-pollinated species may cause hay fever.



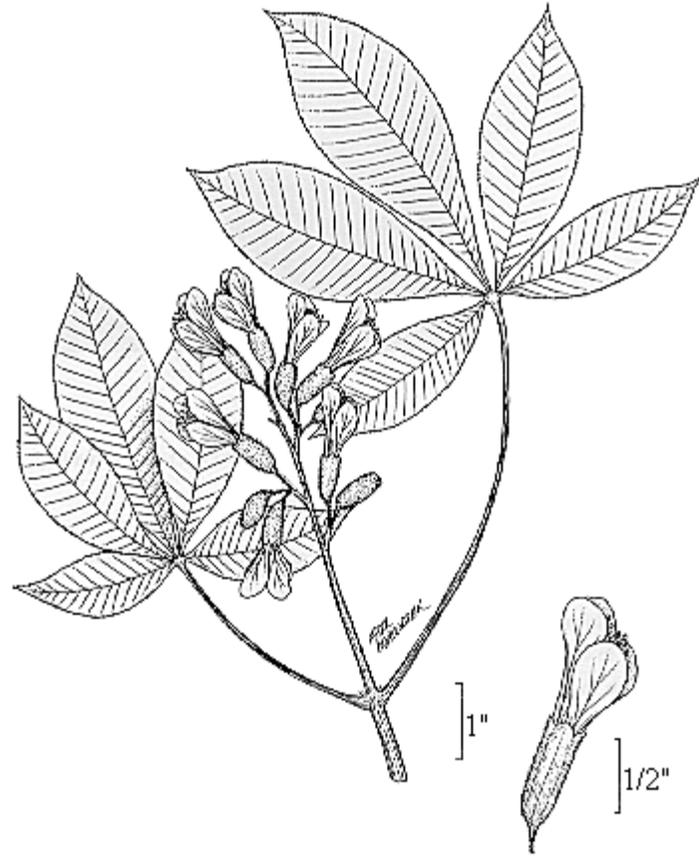
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Field Office Guide to Plant Species

Red Buckeye
Aesculus pavia L.



- **Family:** Horse Chestnut (Hippocastanaceae)
- **Flowering:** April
- **Field Marks:** This buckeye is recognized by its red flowers. The husk surrounding the buckeye is not prickly.
- **Habitat:** Rich wooded bluffs, ravines, hammocks, floodplains, stream banks.
- **Habit:** Small tree or shrub up to 30 feet tall; trunk diameter up to 1 foot; crown spreading.
- **Bark:** Gray to tan, smooth.
- **Twigs:** Rather stout, grayish, smooth, with large, triangular leaf scars.
- **Leaves:** Opposite, palmately compound, with 5, rarely 7, leaflets; leaflets elliptic to ovate, pointed at the tip, tapering to the base, toothed, green and smooth on the upper surface, paler and finely hairy on the lower surface, up to 6 inches long, up to 3 inches wide.
- **Flowers:** Numerous, red, in large, loosely-flowered clusters nearly 1 foot long.
- **Sepals:** 5-parted, united to form a tube, red or pinkish.
- **Petals:** Usually 4, red, free from each other, tapering to a narrow yellowish claw at the base.
- **Stamens:** 5-8, about as long as or slightly longer than the longest petals.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules spherical or punching-bag shaped, up to 2 inches across, light brown, not prickly, containing 1 or 2 light reddish brown seeds.



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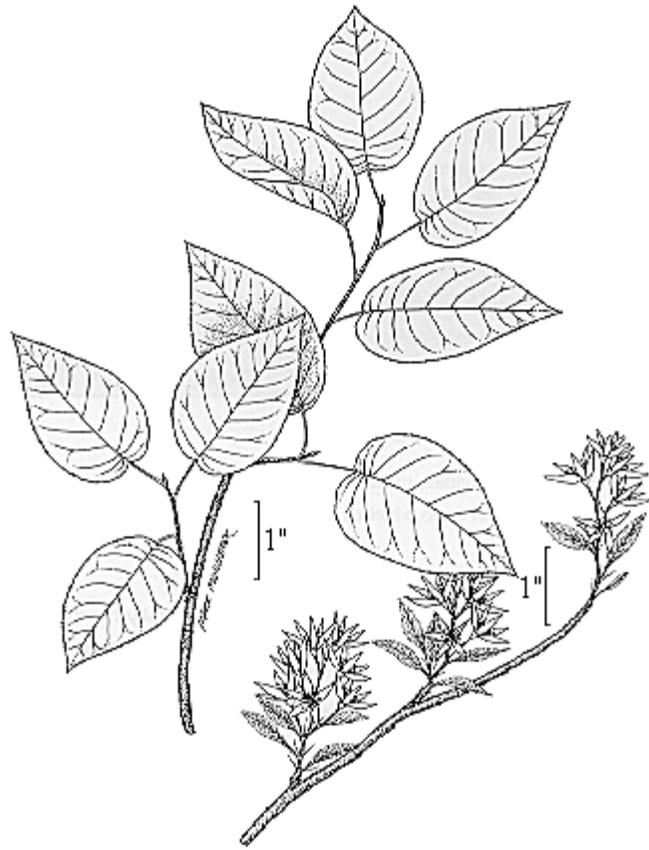
Field Office Guide to Plant Species

Downy Service-berry

Amelanchier arborea (Michx. f.) Fern.



- **Family:** Rose (Rosaceae)
- **Flowering:** March-May
- **Field Marks:** This species is distinguished by its slightly heart-shaped leaf bases and the white flowers with 5 narrow petals.
- **Habitat:** Rich wooded slopes and bluffs, steep ravines, moist hammocks.
- **Habit:** Tree up to 20 feet tall, with a trunk diameter up to 8 inches; crown rounded and spreading. It is usually found as an understory tree.
- **Bark:** Smooth and gray or silvery, becoming darker and scaly when old.
- **Leaves:** Alternate, simple, oval to broadly lanceolate, pointed at the tip, often slightly heart-shaped at the base, finely toothed along the edges, pale and often hairy on the lower surface, up to 4 inches long, up to 2 inches wide.
- **Flowers:** Several in drooping clusters, sometimes blooming before the leaves appear.
- **Sepals:** 5, united, the lobes reflexed, smooth.
- **Petals:** 5, white, free from each other, narrowly oblong, 1/2-3/4 inch long.
- **Stamens:** Numerous, attached to the sepals.
- **Pistils:** Ovary inferior; styles 2-5, united.
- **Fruits:** Berry-like, spherical, red to purple, sweet.
- **Notes:** The fruit of the downy service-berry is edible. Other common names are shadbush and juneberry.



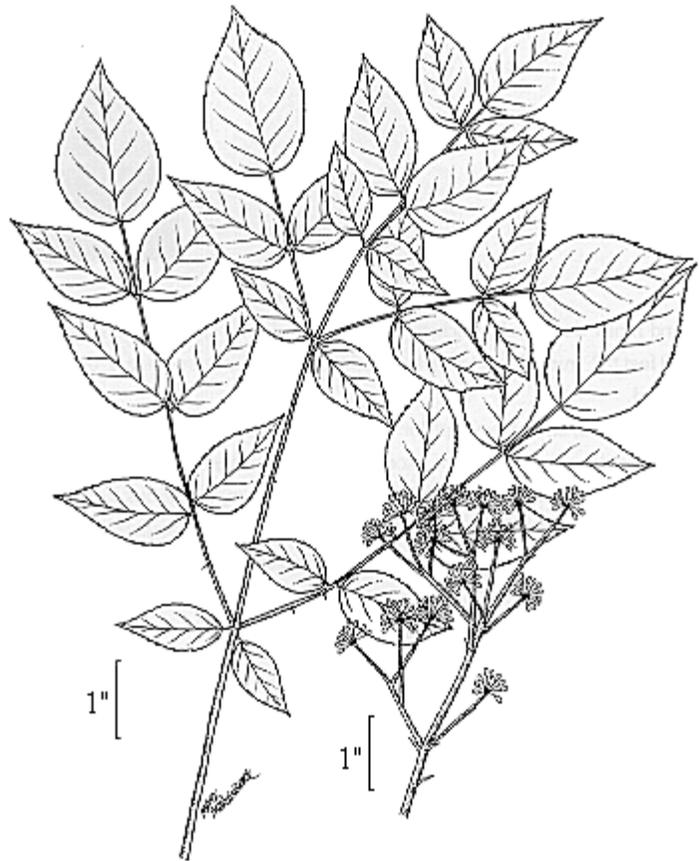
Southern Wetland Flora

Field Office Guide to Plant Species

Hercules Club *Aralia spinosa* L.



- **Family:** Aralia (Araliaceae)
- **Flowering:** June-September
- **Field Marks:** This tree is readily recognized by its prickly stems, huge doubly-compound leaves, and large heads of white flowers and purple drupes.
- **Habitat:** Low and moist woodlands, thickets, bluffs, bottomlands, steep ravines, hammocks.
- **Habit:** Tree to 30 feet tall; trunk diameter up to 6 inches; crown widely spreading; underground runners often formed.
- **Bark:** Gray to dark brown, smooth except for short, hard prickles.
- **Twigs:** Stout, pale brown or gray, smooth except for the short, hard prickles.
- **Leaves:** Alternate, doubly or triply pinnately compound, with very numerous leaflets; leaflets ovate to lance-ovate, pointed at the tip, tapering or rounded at the base, coarsely toothed, usually with a few prickles on the veins or the lower surface of the leaves, up to 3 inches long, up to 1 1/2 inches wide.
- **Flowers:** Numerous in many umbrella-shaped clusters; each flower borne on a purple, hairy stalk.
- **Sepals:** 5, very small, united at the base.
- **Petals:** 5, white, free from each other, about 1/8 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary inferior; styles usually 5, united at the base.
- **Fruits:** Drupes spherical to ovoid, black-purple, up to 1/4 inch long.
- **Notes:** This species is also known as devil's walking-stick. The berries are a delight to cedar waxwings. The underground runners are responsible for several stems usually found growing very close together.



Southern Wetland Flora

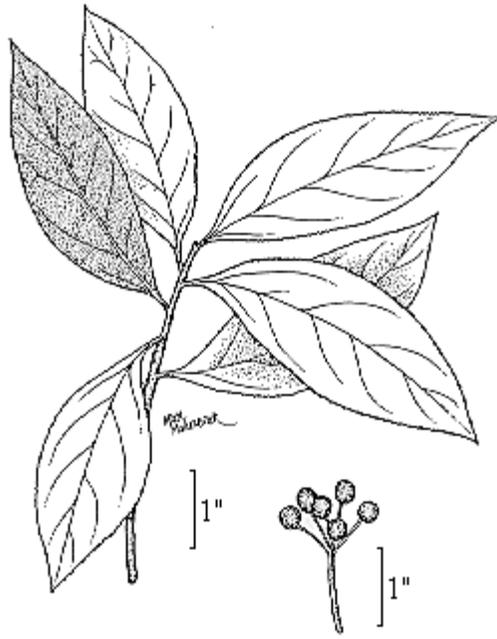
Field Office Guide to Plant Species

Red Chokeberry

Aronia arbutifolia (L.) Elliott



- **Family:** Rose (Rosaceae)
- **Flowering:** March-May
- **Field Marks:** This species differs from other chokeberries by its bright red fruits, its red, gland-tipped teeth of the leaves, and its usually densely hairy lower leaf surface.
- **Habitat:** Swamps, bogs, along streams, moist thickets, wet prairies, low pinewoods, seepage slopes.
- **Habit:** Shrub up to 12 feet tall, spreading by underground runners, often forming colonies.
- **Stems:** Rather slender, densely hairy, particularly when young.
- **Leaves:** Alternate, simple, oval to elliptic, usually rounded at the tip, tapering to the base, finely toothed with red-tipped glandular teeth, densely hairy on the lower surface, up to 4 inches long, up to 2 inches wide.
- **Flowers:** Several in round-topped clusters, each flower white, up to 1/2 inch long; buds of flowers pink.
- **Sepals:** 5, green, forming a short tube, the lobes glandular.
- **Petals:** 5, white at maturity, free from each other, rounded at the tip.
- **Stamens:** 15-20, usually with pink anthers.
- **Pistils:** Ovary inferior; styles 5, united basally.
- **Fruits:** Bright red, spherical, up to 1/4-1/3 inch in diameter, persisting throughout much of the winter.



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Black Chokeberry

Aronia melanocarpa (Michx.) Elliott



- **Family:** Rose (Rosaceae)
- **Flowering:** April-May
- **Field Marks:** This shrub differs from similar species by its smooth leaves, smooth flower stalks, and black or purplish fruits.
- **Habitat:** Boggy ground, swamps, low woods, edge of sandstone cliffs, pine savannas, flatwoods, wet thickets, stream banks.
- **Habit:** Branched shrub up to 10 feet tall.
- **Stems:** Gray, smooth.
- **Leaves:** Alternate, simple, obovate to oval, usually pointed at the tip, narrowed to the base, finely toothed, smooth, paler on the lower surface, up to 4 inches long, up to nearly 2 inches wide.
- **Flowers:** Several in compound cymes; branches of the flower clusters smooth.
- **Sepals:** 5, united into a short cup, smooth, but with tiny glands.
- **Petals:** 5, white, usually rounded at the tip.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior; styles 3-5, united at the base.
- **Fruits:** Fleshy, more or less spherical, smooth, black or purple, up to 1/3 inch in diameter.



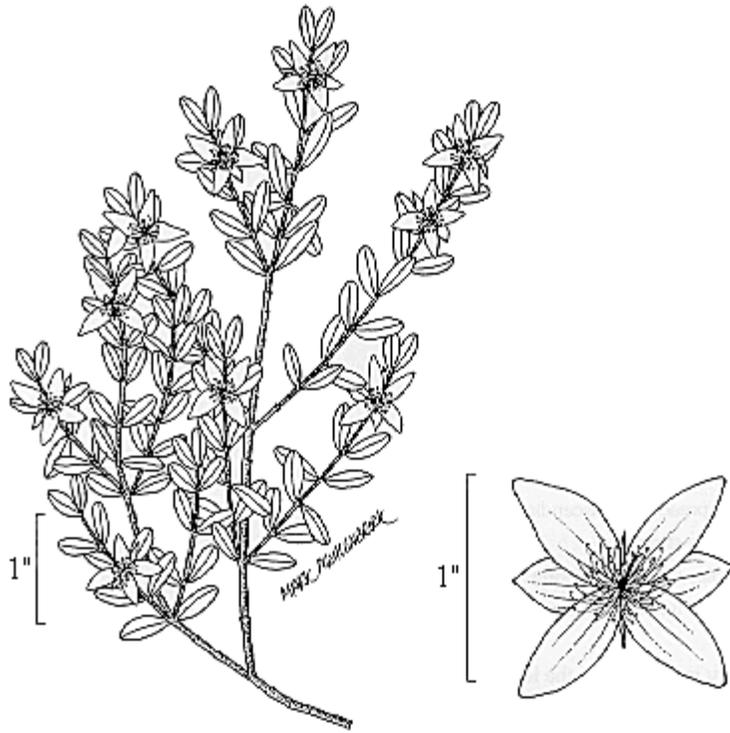
Southern Wetland Flora

Field Office Guide to Plant Species

St. Andrew's Cross
Ascyrum hypericoides L.



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** May-August
- **Field Marks:** This species is recognized by its slightly woody stems, opposite, toothless leaves, 4 yellow petals, and numerous stamens.
- **Habitat:** Wet to dry soils, open to dense woodlands of various species composition.
- **Habit:** Dwarf shrub with wiry branches.
- **Stems:** Slightly woody, spreading to ascending, branched, more or less flattened, up to 3 feet tall, the bark exfoliating into shreds.
- **Leaves:** Opposite, simple, elliptic to oblong, rounded at the tip, tapering or rounded at the sessile base, without teeth, dotted on both surfaces, smooth, up to 1 inch long, less than 1/2 inch wide.
- **Flowers:** Usually solitary in the axils of the leaves, on stalks up to 1/4 inch long.
- **Sepals:** 4, green, arranged in 2 pairs; outer pair longer and wider than inner pair, dotted on both surfaces.
- **Petals:** 4, pale yellow, oblong-linear, up to 1/2 inch long, free from each other.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior; styles 2.
- **Fruits:** Capsules ovoid, smooth, less than 1/2 inch long, with numerous small black seeds.
- **Notes:** This is a rather variable species with respect to growth form and to leaf size. It is found in a wide variety of habitats. This species is sometimes called *Hypericum hypericoides*.



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St. Peterswort

Ascyrum stans Michx.



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** June-October
- **Field Marks:** This small shrub is distinguished by its opposite leaves, four petals, and the outer two sepals rounded at the tip.
- **Habitat:** Moist to dry soils in pinelands, flatwoods, stream banks, wet prairies, damp thickets, bogs.
- **Habit:** Slender shrub, the bark becoming shredded at maturity.
- **Stems:** Upright, slightly woody, slender, smooth, up to 3 feet tall.
- **Leaves:** Opposite, simple, leathery, lanceolate to oblong to ovate, rounded at the tip, rounded or tapering or even slightly clasping at the base, up to 1 1/2 inches long, up to 3/4 inch wide.
- **Flowers:** Solitary or few together in the axils of the leaves, up to 1 1/2 inches across, subtended by a pair of bracts.
- **Sepals:** 4, green, dotted, the outer two ovate, up to 3/4 inch long, the inner two lanceolate.
- **Petals:** 4, yellow, free from each other, 1/2-3/4 inch long.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior; styles 3-4.
- **Fruits:** Capsules ovoid, smooth, up to nearly 1/2 inch long, containing many brown seeds.
- **Notes:** This plant closely resembles *Ascyrum hypericoides*, whose habitat overlaps this plant, but can be distinguished by having 3-4 styles and broader leaves up to 3/4 inch wide, whereas *A. hypericoides* has only 2 styles and narrower leaves up to 1/3 inch wide.



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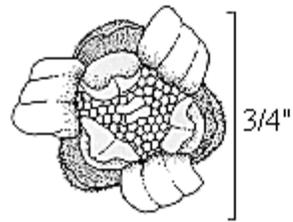
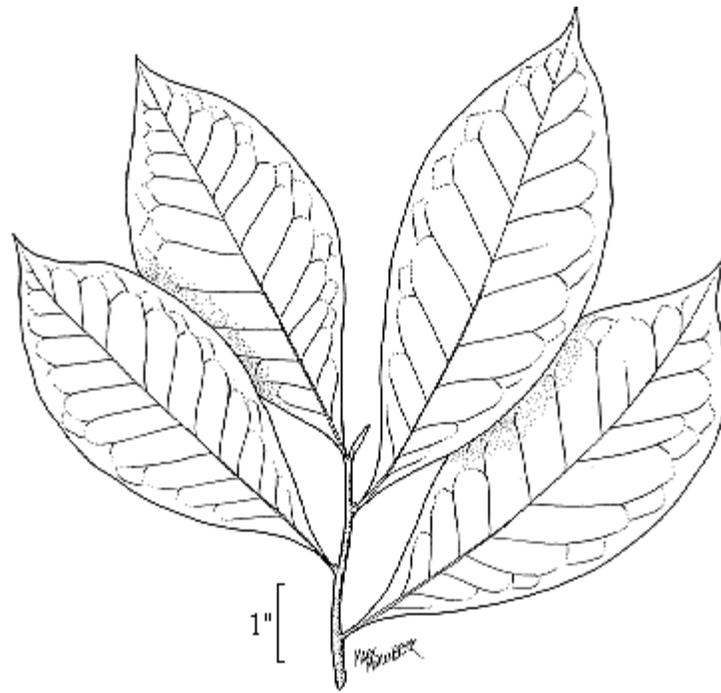
Field Office Guide to Plant Species

Dwarf Pawpaw

Asimina parviflora (Michx.) Dunal



- **Family:** Custard Apple (Annonaceae)
- **Flowering:** April-May
- **Field Marks:** This species differs from others in the genus by its smaller flowers less than one inch across and its short fruits less than 3 inches long.
- **Habitat:** Rich woods, hammocks, steep ravines.
- **Habit:** Shrub up to 10 feet tall.
- **Twigs:** Reddish brown hairy at first, becoming smooth and grayish brown at maturity.
- **Leaves:** Alternate, simple, oblong to obovate or oblanceolate, pointed at the tip, tapering to the base, without teeth, smooth at maturity, except for some hairs on the veins on the lower surface, up to 8 inches long.
- **Flowers:** Solitary, borne in axils of the leaf scars, maroon, up to 3/4 inch across, usually with a slightly bad odor.
- **Sepals:** 3, maroon with a few brown hairs on the back, free from each other, up to 1/3 inch long.
- **Petals:** 6, in 2 circles of 3, maroon, somewhat fleshy, the outer 3 up to 3/4 inch long, recurved at the pointed tip, with some reddish hairs on the outside, the inner 3 similar but about half as long.
- **Stamens:** Numerous.
- **Pistils:** 5-7, free from each other, with appressed red hairs.
- **Fruits:** Berries greenish yellow at maturity, smooth, up to 3 inches long.
- **Notes:** The fruits are edible and particularly relished by wildlife.



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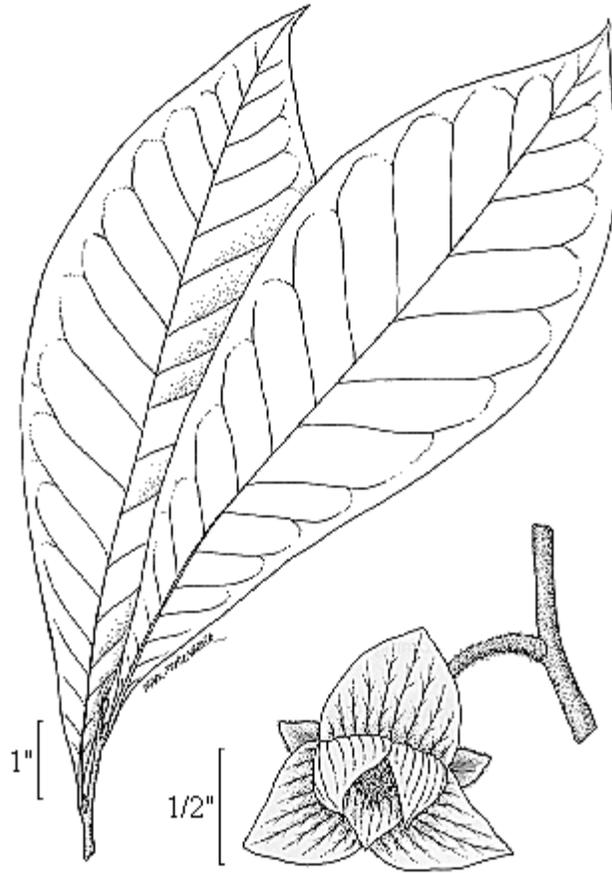
Field Office Guide to Plant Species

Common Pawpaw

Asimina triloba (L.) Dunal



- **Family:** Custard Apple (Annonaceae)
- **Flowering:** March-May
- **Field Marks:** This species is distinguished by its large, toothless, alternate leaves, its 9-parted maroon flowers, and its fleshy fruits.
- **Habitat:** Slopes, low woods, stream and river bottoms, damp thickets.
- **Habit:** Tree up to 40 feet tall; trunk diameter up to 10 inches; crown broad and spreading.
- **Bark:** Dark brown, thin, smooth to shallowly fissured.
- **Twigs:** Slender, smooth, gray at maturity, but rusty-hairy when young.
- **Buds:** Narrow, dark rusty-brown.
- **Leaves:** Alternate, simple, broadly elliptic, pointed at the tip, narrowed to the base, without teeth, rusty-hairy when young, but becoming smooth, paler on the lower surface, up to 12 inches long, up to 6 inches wide.
- **Flowers:** Borne singly when the leaves begin to unfold, up to 1 1/2 inches across.
- **Sepals:** 3, wrinkled, leathery, deep maroon.
- **Petals:** 6, wrinkled, leathery, deep maroon.
- **Stamens:** Numerous.
- **Pistils:** Ovaries several.
- **Fruits:** Fleshy, oblong, thick, up to 6 inches long, greenish yellow, with several dark brown seeds.
- **Notes:** The fruit is edible. Pawpaws often grow in thickets because of the development of root suckers.



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Salt-water False-willow
Baccharis angustifolia Michx.



- **Family:** Aster (Asteraceae)
- **Flowering:** September-November
- **Field Marks:** This is the only species of *Baccharis* which has leaves no more than 1/4 inch wide.
- **Habitat:** Brackish marshes and shores, sloughs, coastal marshes and hammocks, mangrove swamps.
- **Habit:** Shrub up to 12 feet tall.
- **Stems:** Much branched, smooth.
- **Leaves:** Alternate, simple, more or less leathery, bright green, linear to narrowly elliptic, without teeth, smooth, up to 2 inches long, up to 1/4 inch wide.
- **Flowers:** Male and female borne in heads on different plants; all flower heads composed only of disk flowers; heads up to 1/4 inch long.
- **Sepals:** 0.
- **Petals:** 5, united below to form a very slender tube.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes brown, about 1/20 inch long, with slender bristles up to 1/2 inch long at the tip.
- **Notes:** When in fruit, this shrub is a mass of white.



Southern Wetland Flora

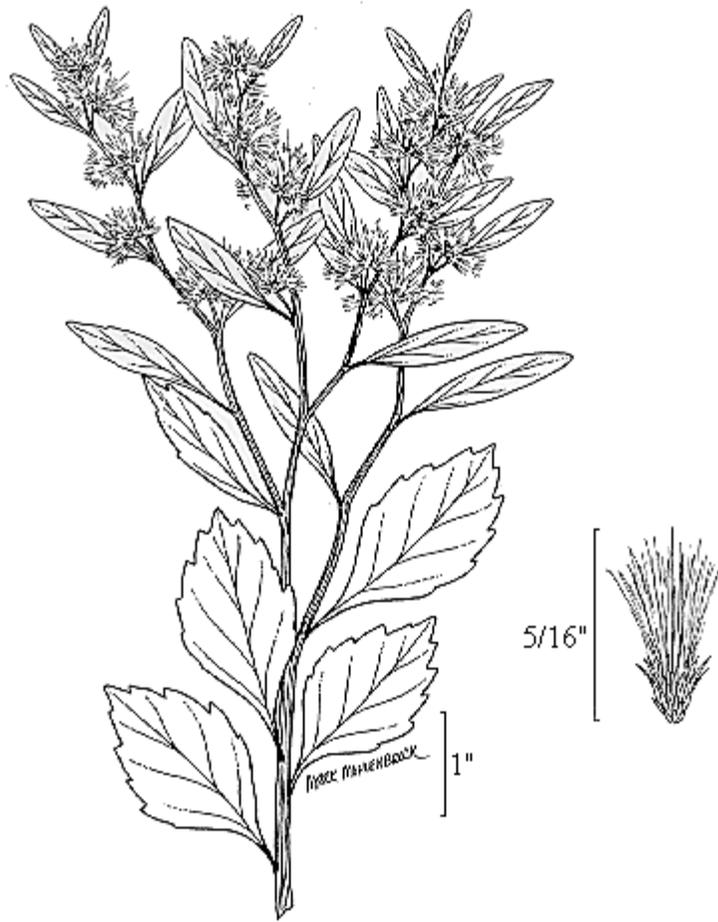
Field Office Guide to Plant Species

Groundsel Tree

Baccharis halimifolis L.



- **Family:** Aster (Asteraceae)
- **Flowering:** August-November
- **Field Marks:** This woody member of the aster family may reach a height of 10 feet. The whitish flower heads are subtended by toothless leaves, while the rest of the leaves on the stem are usually coarsely toothed.
- **Habitat:** Moist soil, particularly in low areas in wetlands; recently spreading to disturbed sites inland.
- **Habit:** Shrub, with the male flowers and female flowers borne on separate plants.
- **Stems:** Erect, branched, smooth or slightly roughened, up to 10 feet tall.
- **Leaves:** Of two kinds: those subtending the flowering heads elliptic, rounded or slightly pointed at the tip, toothless, smooth; those lower on the stem elliptic-ovate to ovate, pointed at the tip, coarsely toothed, smooth, up to 3 inches long.
- **Flowers:** Many crowded together into heads, all very narrowly tubular, whitish, with several flowers per head; each head up to 1/8 inch long, subtended by narrow, green-tipped bracts.
- **Sepals:** 0.
- **Petals:** Whitish, narrowly tubular, 5-lobed.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes flattened, ribbed, very small, subtended by white hairs called the pappus.
- **Notes:** Because of the conspicuous white hairs surrounding each seed, this plant is sometimes known as the cottonseed tree. The whole bush may appear white in the early fall because of the numerous, fluffy, white seeds.



Southern Wetland Flora

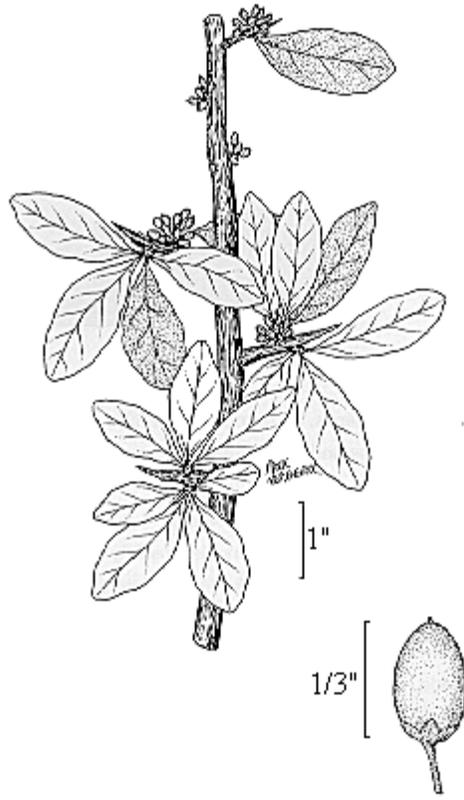
Field Office Guide to Plant Species

Gum Bumelia

Bumelia lanuginosa (Michx.) Pers.



- **Family:** Sapodilla (Sapotaceae)
- **Flowering:** August-October
- **Field Marks:** The distinguishing features of this *Bumelia* are its twigs hairy at maturity and its densely hairy lower surface of its leaves. The hairs are not matted.
- **Habitat:** Rich wooded bluffs, steep ravines, hammocks, sand hills, moist or dry soils in sandy woods and old fields, and along streams and the margins of swamps.
- **Habit:** Small tree to 35 feet tall.
- **Bark:** At maturity breaking up into flaky, red-brown scales.
- **Twigs:** Young twigs densely hairy; some of the branchlets usually with sharp thorns.
- **Leaves:** Alternate although sometimes crowded at the tip of branches, simple, oblanceolate to elliptic, rounded or slightly pointed at the tip, tapering to the base, usually smooth and somewhat shiny on the upper surface, densely hairy on the lower surface, without teeth, up to 4 1/2 inches long, up to nearly 2 inches wide.
- **Flowers:** Several to many in dense, usually sessile umbels in the axils of the leaves.
- **Sepals:** 5, united at the base, usually hairy, the lobes up to 1/8 inch long.
- **Petals:** 5, white, united at the base, only slightly longer than the sepals.
- **Stamens:** 10, 5 of them fertile, 5 of them sterile and resembling small petals, attached to the tube of the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Berries obovoid to ellipsoid, up to 1/3 inch long, shiny black, the base of the style usually persistent as a terminal point.

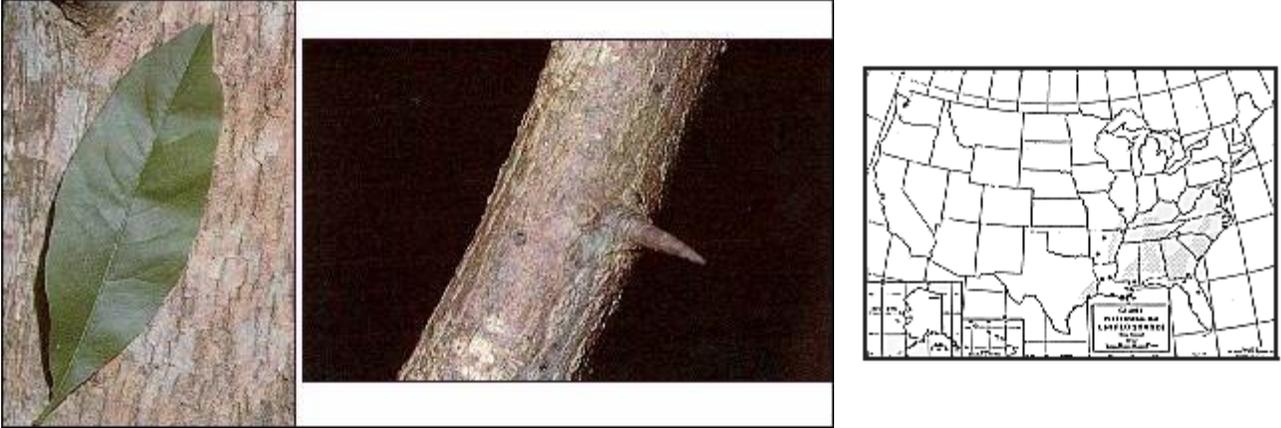


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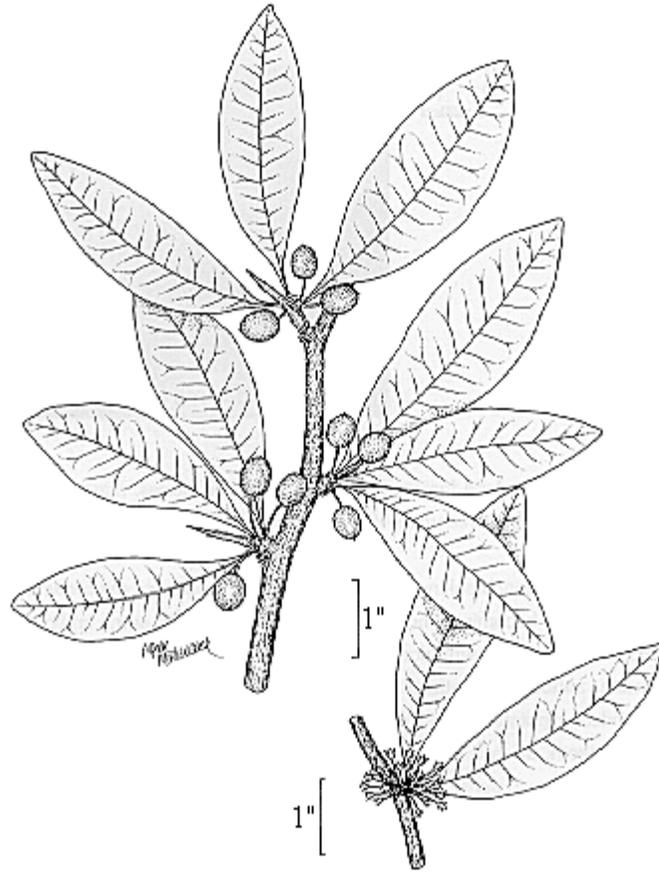
Field Office Guide to Plant Species

Buckthorn Bumelia

Bumelia lycioides (L.) Pers.



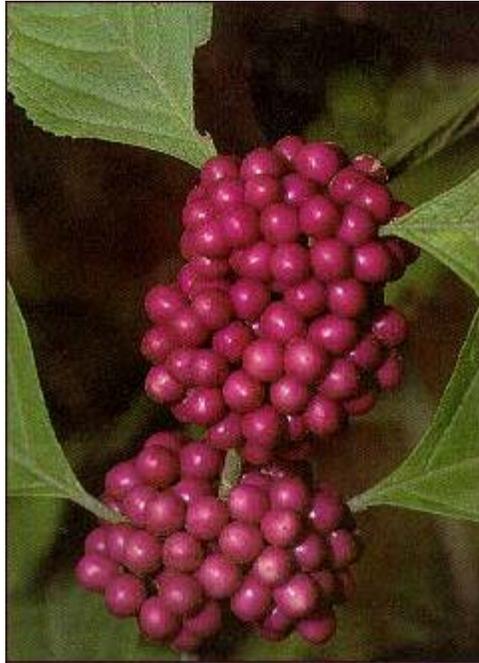
- **Family:** Sapodilla (Sapotaceae)
- **Flowering:** September-October
- **Field Marks:** This *Bumelia* differs by its smooth twigs, smooth or only sparsely hairy leaves, and black berries at least 1/2 inch long.
- **Habitat:** Low woods, bottomland forests, moist or dry soils on slopes, ridges, and bluffs.
- **Habit:** Much branched shrub or tree up to 40 feet tall; diameter of trunk up to 8 inches; crown usually columnar.
- **Bark:** Gray-brown, at maturity breaking into scales or plates, exposing a red-brown inner bark.
- **Twigs:** Hairy at first, but becoming smooth or nearly so at maturity, some ending in a sharp thorn; thorns also sometimes present along the twigs.
- **Leaves:** Alternate, although sometimes crowded at the tip of branches, simple, elliptic to oblanceolate, rounded or pointed at the tip, tapering to the base, smooth or only sparsely hairy at maturity, without teeth, up to 5 inches long, up to nearly 2 inches wide.
- **Flowers:** Several to many in dense, usually sessile umbels in the axils of the leaves.
- **Sepals:** 5, united at the base, smooth, the lobes up to 1/8 inch long.
- **Petals:** 5, white, united at the base, only slightly longer than the sepals.
- **Stamens:** 10, 5 of them fertile, 5 of them sterile and resembling small petals, attached to the tube of the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Berries ovoid to nearly spherical, up to 1/2 inch long, black, the base of the style usually persistent as a terminal point.



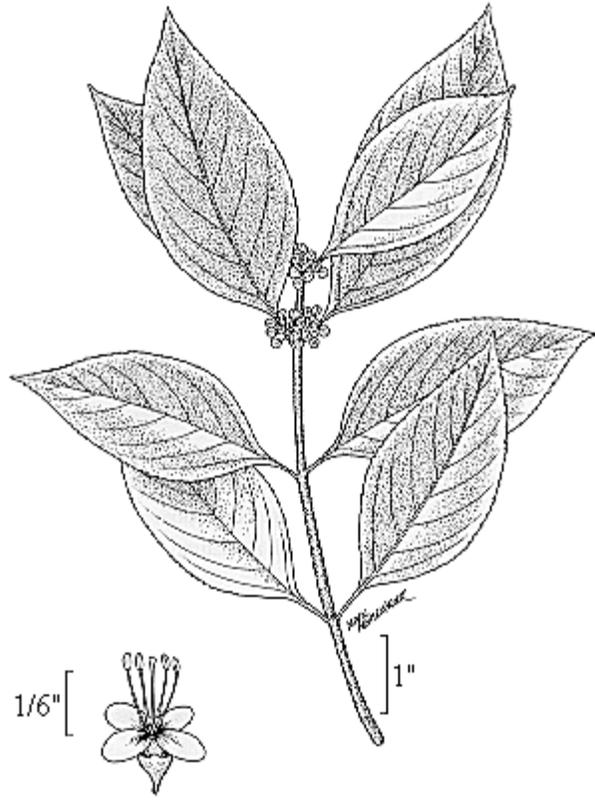
Southern Wetland Flora

Field Office Guide to Plant Species

American Beauty-berry
Callicarpa americana L.



- **Family:** Vervain (Verbenaceae)
- **Flowering:** June-July
- **Field Marks:** This shrub is recognized by its opposite, glandular-dotted, toothed leaves and brilliant violet-blue fruits.
- **Habitat:** Wet to dry soils in woodlands, thickets, fencerows, and rights-of-way.
- **Habit:** Shrub up to 9 feet tall.
- **Stems:** Woody, more or less hairy when young, much branched.
- **Leaves:** Opposite, sometimes 3 at a node, simple, ovate, pointed at the tip, narrowed to the base, toothed except near the base, usually smooth at maturity, thin, glandular-dotted, up to 6 inches long, up to 3 inches wide.
- **Flowers:** Many arranged in cymes, on very short stalks, growing around the stem at the petiole bases.
- **Sepals:** 4, united, very short.
- **Petals:** 4, united below, funnel-shaped, pale blue, pinkish or white, up to 1/6 inch long.
- **Stamens:** 4, exserted beyond the petals.
- **Pistils:** Ovary superior; style long-exserted.
- **Fruits:** Fleshy, spherical, up to 1/4 inch in diameter, violet-blue, usually densely clustered, each containing 1-4 nutlets.
- **Notes:** This handsome shrub is sometimes grown as an ornamental.



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Field Office Guide to Plant Species

Water Hickory

Carya aquatica (Michx. f.) Nutt.



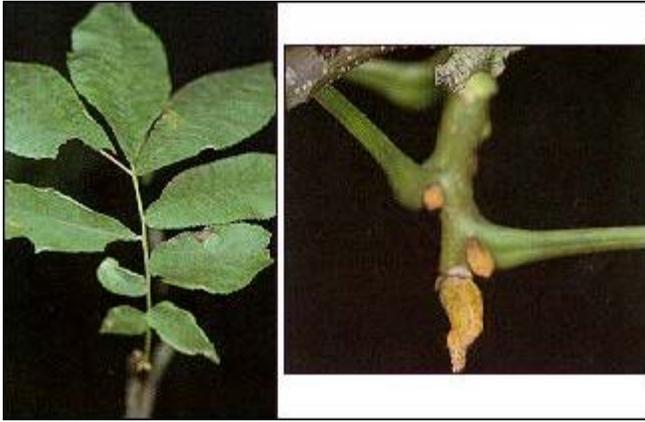
- **Family:** Walnut (Juglandaceae)
- **Flowering:** April-May
- **Field Marks:** This hickory is distinguished by its 7-17 curved leaflets and its short, ellipsoid, flattened fruits with a bitter kernel.
- **Habitat:** Swampy woods, floodplains subjected to long winter flooding and river banks.
- **Habit:** Tree up to 100 feet tall; trunk diameter up to 3 feet; crown narrow.
- **Bark:** Red-brown to gray, furrowed, sometimes exfoliating into strips.
- **Twigs:** Slender, red-brown or gray, usually smooth.
- **Buds:** Pointed, red-brown with yellow scales, usually hairy, up to 1/4 inch long.
- **Leaves:** Alternate, pinnately compound, with 7-17 leaflets; leaflets lanceolate, curved, pointed at the tip, tapering to the base, finely toothed, smooth or somewhat hairy on the lower surface, up to 5 inches long, up to 2 inches wide.
- **Flowers:** Male and female borne separately, but on the same tree, appearing when the leaves are partly grown; the male in slender, drooping spikes up to 3 inches long; the female in clusters of 2-6.
- **Sepals:** Very tiny, 2- to 3-parted.
- **Pistils:** Ovary inferior.
- **Fruits:** Short-ellipsoid, flattened, up to 1 1/2 inches long, up to 1 inch broad, 4-winged, containing a flattened, 4-angled nut with a bitter kernel.
- **Notes:** The wood of this species has been used for fence posts and fuel. This tree resembles the pecan and occasionally grows in the same habitat, but it has a flattened nut while the nut of the pecan is round in cross-section.

Southern Wetland Flora

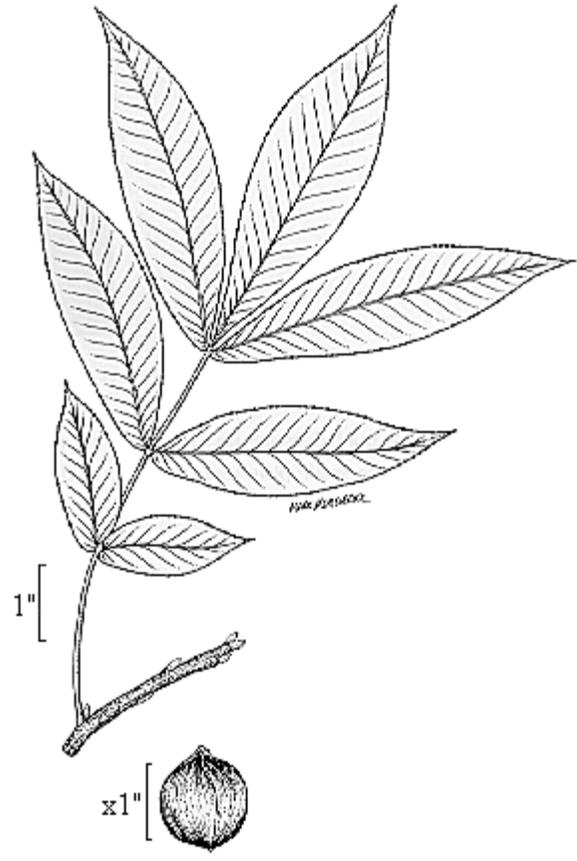
Field Office Guide to Plant Species

Bitter-nut Hickory

Carya cordiformis (Wangenh.) K. Koch



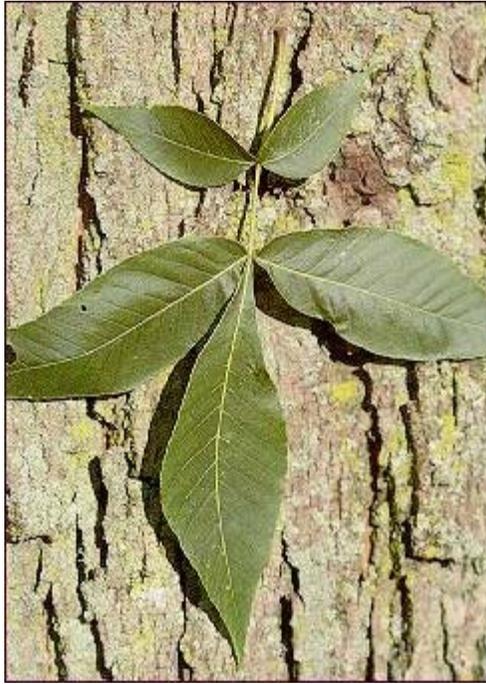
- **Family:** Walnut (Juglandaceae)
- **Flowering:** April-May
- **Field Marks:** The distinguishing features of this hickory are its slender, mustard-yellow buds and its usually curved leaflets in 7's or 9's.
- **Habitat:** Low woods, slopes and bottoms, along streams, river bottoms, and extending into uplands.
- **Habit:** Tree up to 115 feet tall; trunk diameter up to 3.3 feet; crown broadly rounded.
- **Bark:** Brown, thin, separating into small, platy scales or shallow ridges and fissures.
- **Twigs:** Slender, grayish or orange-brown, smooth; buds valvate, narrow, slender, pointed, mustard-yellow.
- **Leaves:** Alternate, pinnately compound with 7-9 leaflets; leaflets lanceolate, curved, pointed at the tip, tapering or rounded at the base, toothed, smooth on the upper surface, usually hairy on the lower surface, up to 6 inches long.
- **Flowers:** Male and female borne separately but on the same tree, appearing after the leaves have begun to unfold; male flowers in slender, drooping spikes; female flowers in groups of 1 or 2.
- **Sepals:** 2-4, minute, united to each other.
- **Petals:** 0.
- **Stamens:** 3-10.
- **Pistils:** Ovary inferior; styles usually 2.
- **Fruits:** More or less spherical, up to 1 1/4 inches in diameter; the husk thin, yellowish, with 4 distinct ridges extending about halfway down; nut somewhat flattened; seed very bitter.
- **Notes:** The wood of the bitter-nut hickory is used for fuel and fence posts.



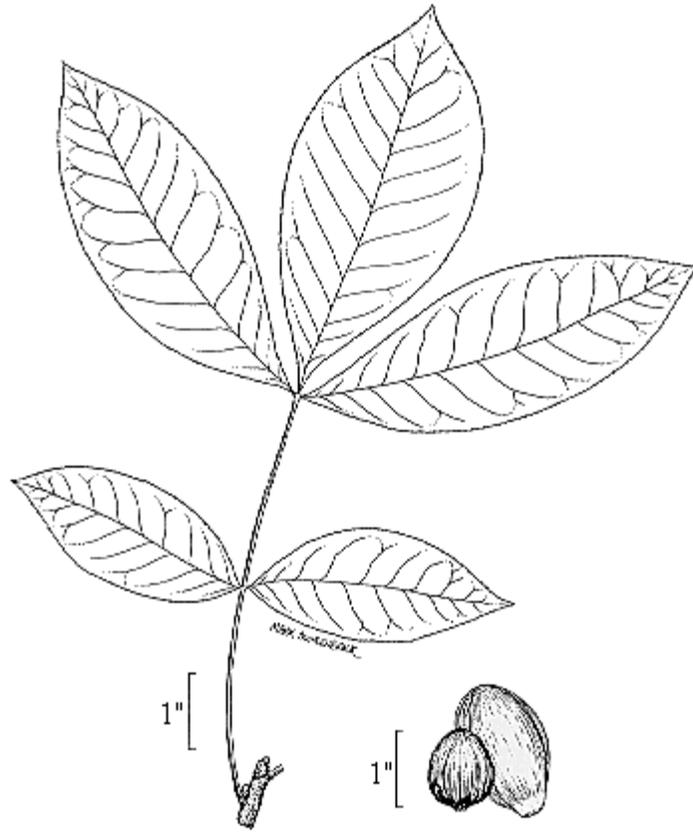
Southern Wetland Flora

Field Office Guide to Plant Species

Sweet Pignut Hickory
Carya glabra (Mill.) Sweet



- **Family:** Walnut (Juglandaceae)
- **Flowering:** April-May
- **Field Marks:** This hickory is recognized by its usually 5 leaflets, its small, nearly smooth buds, and its tight, scaly bark.
- **Habitat:** Moist to dry soils on ridges, slopes, stream and river bottoms, wet hammocks, stabilized dunes, bottomlands, floodplains.
- **Habit:** Tree up to 132 feet tall; trunk diameter up to 4 feet; crown oblong or obovoid.
- **Bark:** Light gray to black, tight, not peeling into shreds, at maturity furrowed and ridged.
- **Twigs:** Slender, brown or gray, shiny, smooth, tough.
- **Buds:** Small, brown to gray, smooth or with a few hairs.
- **Leaves:** Alternate, pinnately compound, with usually 5, or less commonly 7, leaflets; leaflets lanceolate, pointed at the tip, tapering to the base, toothed, smooth except for a few hairs on the veins on the lower surface, up to 5 inches long, up to 2 inches wide.
- **Flowers:** Male and female borne separately, but on the same tree, appearing after the leaves have begun to expand; the male in slender, drooping spikes; the female in clusters of 1-3.
- **Sepals:** Very tiny, 2- to 3-parted.
- **Petals:** 0.
- **Stamens:** 3-10.
- **Pistils:** Ovary inferior.
- **Fruits:** Spherical to pear-shaped, up to 1 inch long, nearly as broad; the husks thin, greenish, usually not splitting all the way to the base.
- **Notes:** The wood is heavy and strong, and is used for fence posts, fuel, and tool handles.

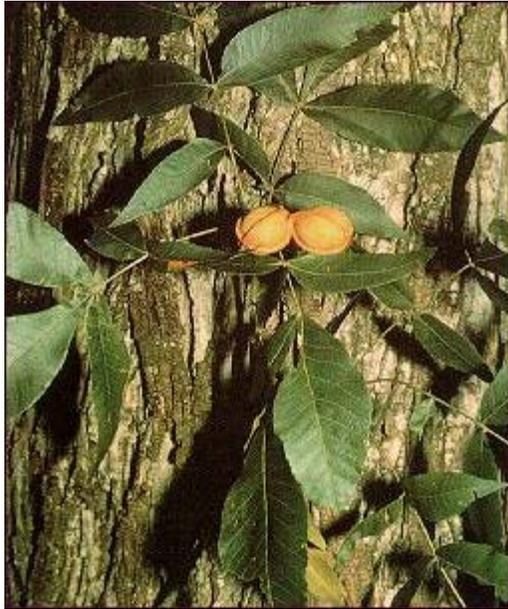


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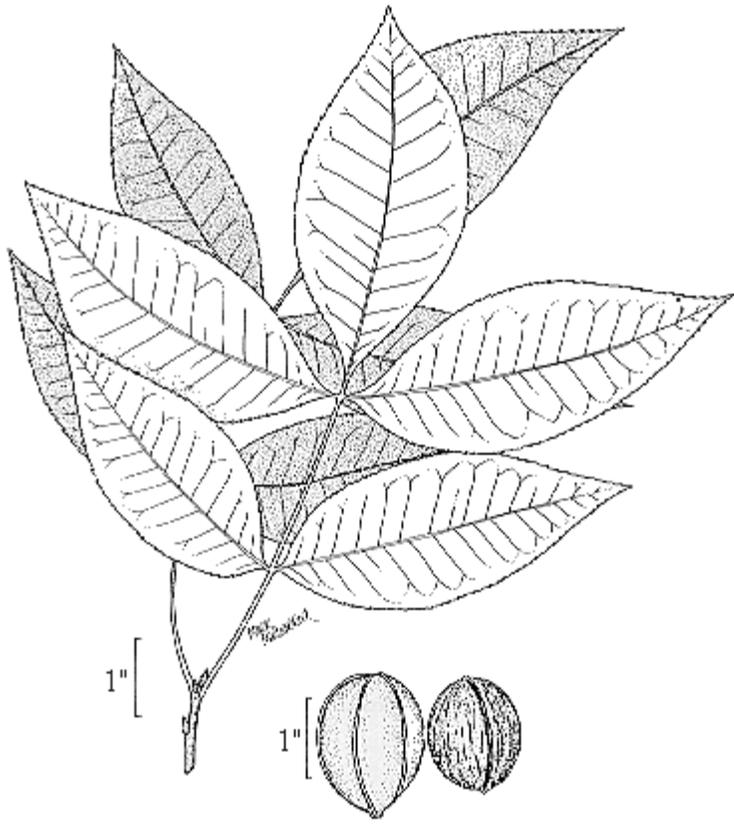
Field Office Guide to Plant Species

Nutmeg Hickory

Carya myristiciformis (Michx. f.) Nutt.



- **Family:** Walnut (Juglandaceae)
- **Flowering:** April
- **Field Marks:** The distinguishing features of the nutmeg hickory are its yellow, ovoid buds, its 5-9 leaflets that are minutely scaly on the lower surface, and its ellipsoid fruit up to 1 3/4 inches long.
- **Habitat:** Swamps, river banks.
- **Habit:** Tree up to 90 feet tall; trunk diameter up to 2 feet; crown rather narrow.
- **Bark:** Dark brown but reddish tinged, eventually breaking up into thin, appressed scales.
- **Twigs:** Dark red-brown, scaly at first, becoming smooth.
- **Leaves:** Alternate, pinnately compound, with 5, 7, or 9 leaflets; leaflets lanceolate to ovate to obovate, pointed at the tip, tapering to the base, finely toothed, smooth and dark green on the upper surface, smooth or hairy or silvery-white on the lower surface, up to 10 inches long, up to nearly 2 inches wide.
- **Flowers:** Male and female flowers borne separately but on the same plant, appearing after the leaves have begun to unfold; male flowers in slender, drooping spikes; female flowers in clusters of 2-5.
- **Sepals:** 4, minute.
- **Petals:** 0.
- **Stamens:** 3-10.
- **Pistils:** Ovary inferior; styles usually 4.
- **Fruits:** Ellipsoid to obovoid, up to 1 3/4 inches long; husk very thin, covered with a yellow scurfiness, with 4 ridges running from the top to the base; nut dark red-brown, mottled with gray.
- **Notes:** The kernels of the nuts are sweet.



Southern Wetland Flora

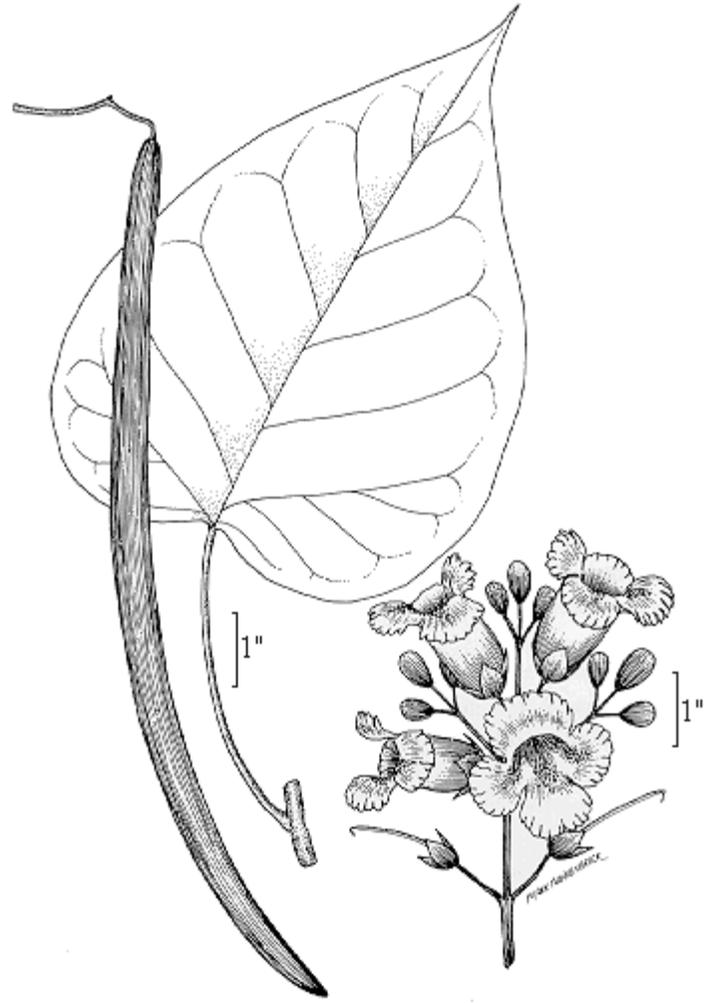
Field Office Guide to Plant Species

Catalpa

Catalpa bignonioides Walter



- **Family:** Trumpet Creeper (Bignoniaceae)
- **Flowering:** May-July
- **Field Marks:** Catalpas are the only trees with large, opposite or whorled, heart-shaped, toothless leaves. This catalpa differs from the northern catalpa (*C. speciosa*) by its more densely purple-spotted flowers and its leaves that have a bad odor when crushed.
- **Habitat:** Wet woods, along streams.
- **Habit:** Tree up to 40 feet tall, with a broadly rounded crown.
- **Bark:** Light brown, thin, scaly.
- **Twigs:** Stout, smooth or slightly hairy, with conspicuous lenticels.
- **Leaves:** Opposite or whorled, ovate, short-pointed at the tip, heart-shaped at the base, without teeth, smooth on the upper surface, paler and finely hairy on the lower surface, up to 8 inches long, nearly as broad.
- **Flowers:** Large, showy, several in a large cluster.
- **Sepals:** United, splitting into 2 parts, green.
- **Petals:** 5, unequal in size, united below into a tube, white with dense purple spots, up to 1 1/2 inches long.
- **Stamens:** 2, not exerted beyond the tube of the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules long and slender, up to 18 inches long, up to 1/2 inch broad, containing many seeds; seeds in pairs, winged, with a tuft of hair at the tip of each wing.
- **Notes:** The clusters of large flowers make this species a popular ornamental. The wood of this tree is used primarily for railroad ties and fence posts. It has escaped from cultivation and is now widespread throughout the south. The catalpa or catawba "worms" (moth larvae) are used as fish bait.



Southern Wetland Flora

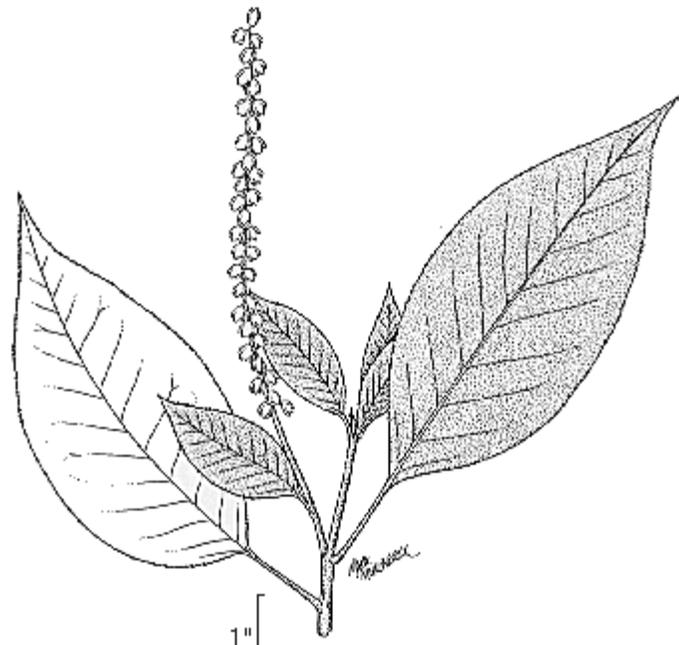
Field Office Guide to Plant Species

Coast Pepper-bush

Clethra alnifolia L.



- **Family:** White-alder (Clethraceae)
- **Flowering:** May-July
- **Field Marks:** This species differs from all other shrubs by its erect racemes, 5 white petals, 10 long-exserted stamens, and small, spherical, hairy capsules.
- **Habitat:** Bayheads, along streams, damp thickets, low pinelands, wet prairies, bogs, around ponds, swamps, pocosins.
- **Habit:** Shrub up to 13 feet tall.
- **Stems:** Woody, densely hairy at first, becoming smooth and purple-brown at maturity.
- **Leaves:** Alternate, simple, elliptic to lanceolate, usually pointed at the tip, tapering to the base, toothed, smooth on the upper surface, smooth or hairy on the lower surface, up to 3 1/2 inches long, up to 2 inches wide.
- **Flowers:** Many in densely crowded, erect racemes; branches of the racemes densely hairy; flowers subtended by narrow bracts up to nearly 1/2 inch long.
- **Sepals:** 5, green, united below, densely hairy.
- **Petals:** 5, white, free from each other, up to 1/3 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules nearly spherical, up to 1/6 inch in diameter, crowded into racemes, surrounded loosely by the persistent sepals.
- **Notes:** The flowers are pungently fragrant, accounting for the common name of pepper-bush. The racemes, bearing empty capsules, persist on this plant during the fall and winter months.



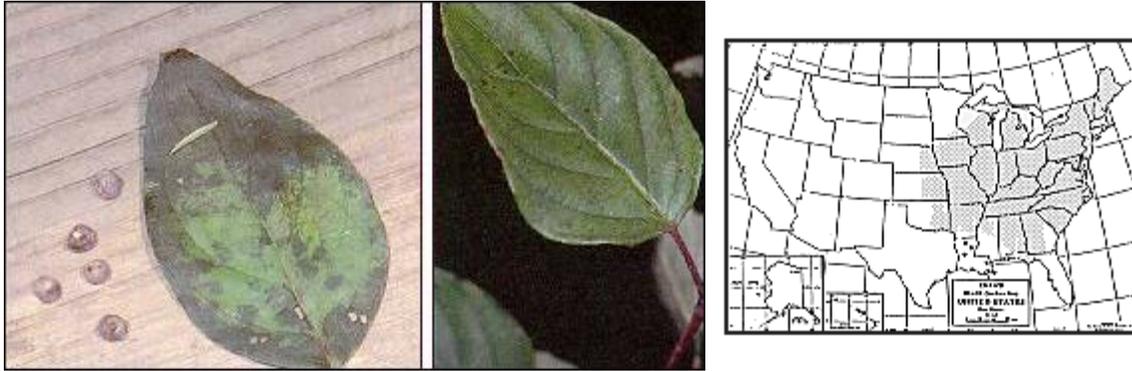
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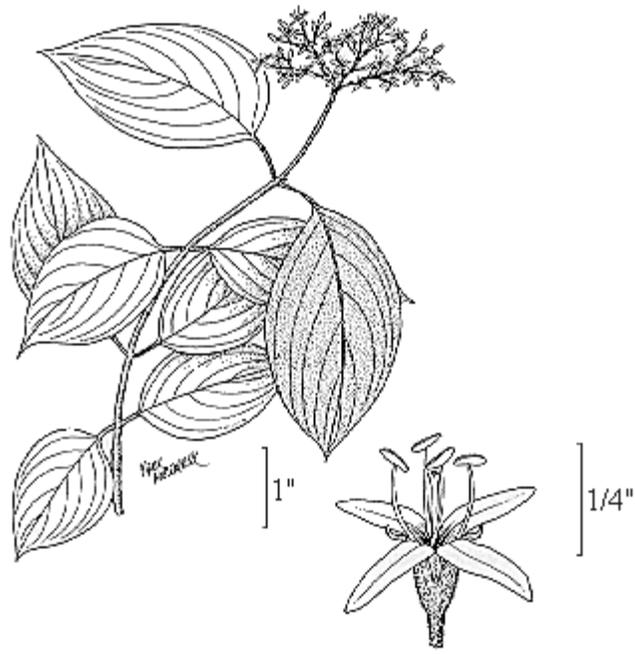
Southern Wetland Flora

Field Office Guide to Plant Species

Silky Dogwood *Cornus amomum* Mill.



- **Family:** Dogwood (Cornaceae)
- **Flowering:** May-June
- **Field Marks:** The distinguishing features of this dogwood are the smooth upper leaf surfaces and its brown pith.
- **Habitat:** Swamps, along rivers and streams, wet thickets.
- **Habit:** Shrub, usually with several upright or arching stems, up to 15 feet tall.
- **Stems:** Woody, hairy when young but usually becoming smooth with age, green at first but becoming reddish or purplish; pith brown.
- **Leaves:** Opposite, simple, ovate to lance-ovate, pointed at the tip, rounded or sometimes tapering to the base, without teeth, usually smooth on the upper surface, red- or gray-hairy on the lower surface, up to 4 inches long, up to 3 inches wide; leaf stalks usually hairy.
- **Flowers:** Several in flat-topped cymes, the branches of the cymes hairy.
- **Sepals:** 4, green, united below, hairy, the lobes minute.
- **Petals:** 4, white, free from each other, very slender and pointed, up to 1/4 inch long.
- **Stamens:** 4.
- **Pistils:** Ovary inferior.
- **Fruits:** Drupes blue, sometimes creamy-mottled, spherical, up to 1/3 inch in diameter.
- **Notes:** The venation of the leaves is arcuate, typical of all dogwoods.



Southern Wetland Flora

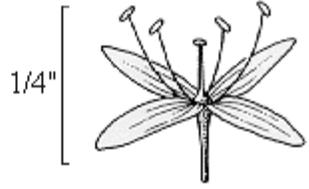
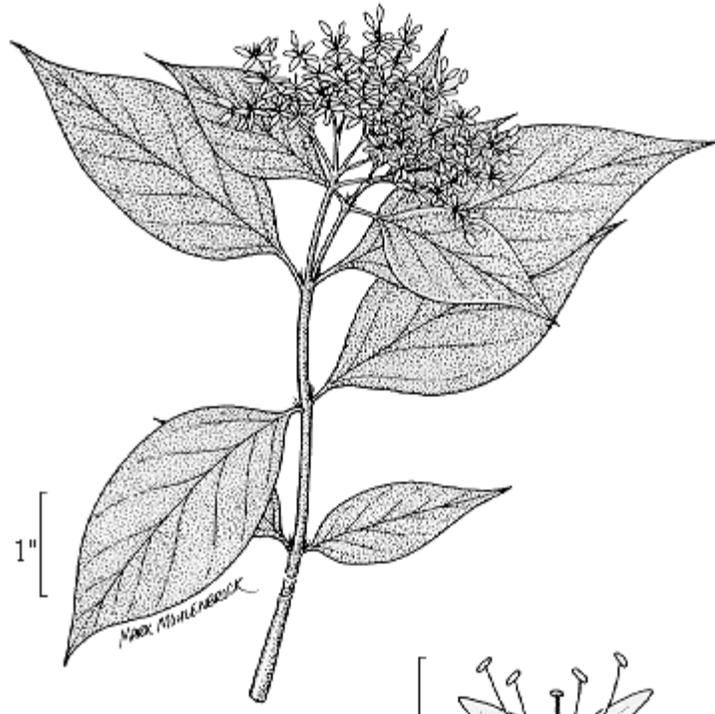
Field Office Guide to Plant Species

Rough-leaf Dogwood

Cornus drummondii C. A. Meyer



- **Family:** Dogwood (Cornaceae)
- **Flowering:** May-June
- **Field Marks:** This is the only dogwood with short hairs on the upper surface of the leaves, making it rough to the touch.
- **Habitat:** From moist to wet soil, frequently along streams, rivers, levees, and margins of swamps.
- **Habit:** Small tree to 30 feet tall, with an open, irregular crown.
- **Bark:** Reddish brown, scaly, shallowly furrowed.
- **Twigs:** Slender, pale brown to gray, smooth or slightly hairy.
- **Leaves:** Opposite, simple, elliptic to narrowly ovate, pointed at the tip, tapering or rounded at the base, without teeth, rough on the upper surface with short hairs, paler and hairy on the lower surface, up to 4 inches long, up to half as wide; leaf stalks hairy, up to 1/2 inch long.
- **Flowers:** Several in round-topped clusters, white.
- **Sepals:** 4, green, very small.
- **Petals:** 4, white, free from each other, about 1/8 inch long.
- **Stamens:** 4.
- **Pistils:** Ovary inferior.
- **Fruits:** Drupes white, globose, about 1/4 inch in diameter, 1-seeded, on red stalks.
- **Notes:** The fruits as they are developing have a rancid odor. The veins of the leaves are typical of all dogwoods and curve along the margins.



Southern Wetland Flora

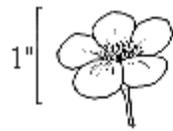
Field Office Guide to Plant Species

May Hawthorn

Crataegus aestivalis (Walter) Torr. & Gray



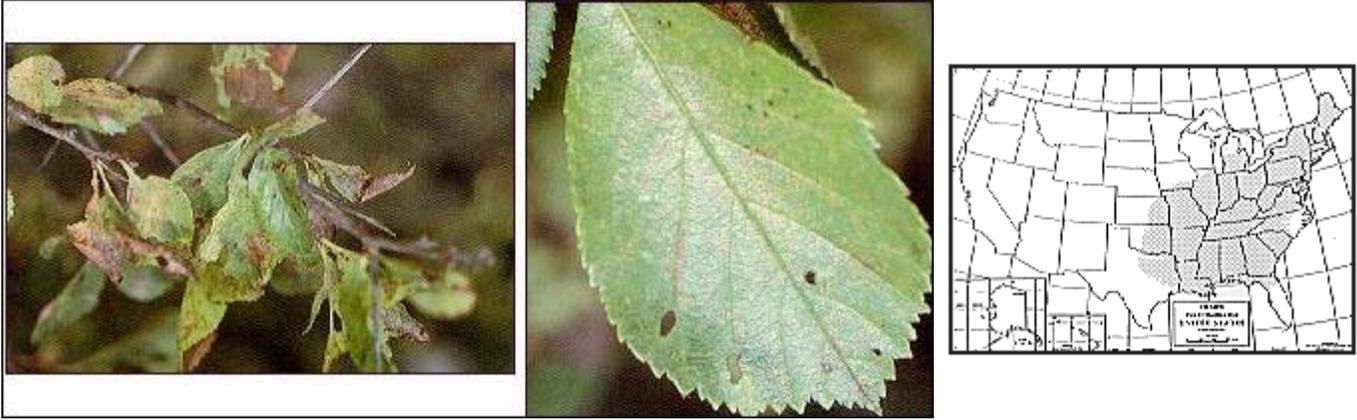
- **Family:** Rose (Rosaceae)
- **Flowering:** March-April
- **Field Marks:** Of the southern hawthorns, this one may be distinguished by its leaves broadest above the middle and rusty brown hairs on the lower surface of the leaves, particularly along the veins.
- **Habitat:** Bottomlands, sloughs, sandy woods, in shallow ponds and shallow areas around ponds, swamps.
- **Habit:** Tree to 20 feet tall, sometimes appearing more like a several-stemmed shrub.
- **Bark:** Gray, breaking into flakes to expose a reddish underbark.
- **Twigs:** Gray, often with sharp thorns up to nearly 2 inches long.
- **Leaves:** Alternate, simple, broadest above the middle, toothed or shallowly lobed, smooth or hairy on the upper surface, usually with rusty brown hairs beneath on the veins, varying in size and shape depending on whether they are on flowering or non-flowering branches; leaves on flowering branches elliptic to spatulate, rounded or pointed at the tip, tapering to the base, up to 2 inches long, up to 1 inch wide; leaves on non-flowering branches ovate to obovate, up to 3 inches long, up to 1 1/2 inches wide.
- **Flowers:** Solitary or in few-flowered umbels, on smooth stalks less than 1 inch long.
- **Sepals:** 5, green, united below, smooth or hairy, the lobes up to 1/4 inch long.
- **Petals:** 5, white or pink-tinged, up to 1/2 inch long.
- **Stamens:** 15-20.
- **Pistils:** Ovary inferior; styles 2-5.
- **Fruits:** Pomes red, nearly spherical, up to 1/2 inch in diameter.
- **Notes:** The acid fruits can be made into a fine jelly. A Mayhaw Festival is held each year in Colquit, Georgia.



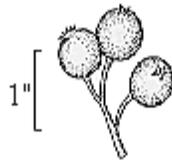
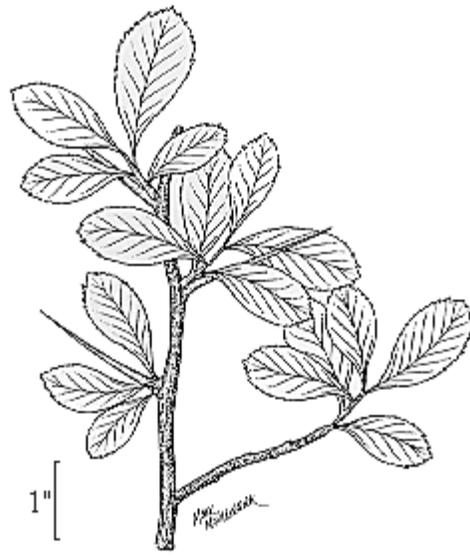
Southern Wetland Flora

Field Office Guide to Plant Species

Cockspur Hawthorn
Crataegus crus-galli L.



- **Family:** Rose (Rosaceae)
- **Flowering:** May-June
- **Field Marks:** The leaves of this hawthorn are broadest above the middle, unlobed, and completely smooth.
- **Habitat:** Pastures, thickets, woods, fencerows, bottomland forests, wet pine flatwoods.
- **Habit:** Tree to 20 feet tall; trunk diameter up to 8 inches; crown broadly rounded.
- **Bark:** Dark brown, scaly.
- **Twigs:** Moderately stout, light brown, smooth, usually with sharp spines up to 4 inches long.
- **Leaves:** Alternate, simple, somewhat leathery, obovate to oblanceolate, broadest above the middle, rounded or short-pointed at the tip, tapering to the base, toothed, at least in the upper half of the leaf, dark green, smooth and shiny on the upper surface, paler and smooth on the lower surface, up to 4 inches long, up to 1 1/2 inches wide.
- **Flowers:** Showy, several in a cluster, each about 3/4 inch across.
- **Sepals:** 5, green, very narrow, pointed, united below, up to 1/4 inch long.
- **Petals:** 5, white, free from each other, up to 1/3 inch long.
- **Stamens:** About 20.
- **Pistils:** Ovary inferior.
- **Fruits:** Spherical or nearly so, red, fleshy but dry, up to 1/2 inch in diameter, containing 1-5 nutlets.



Southern Wetland Flora

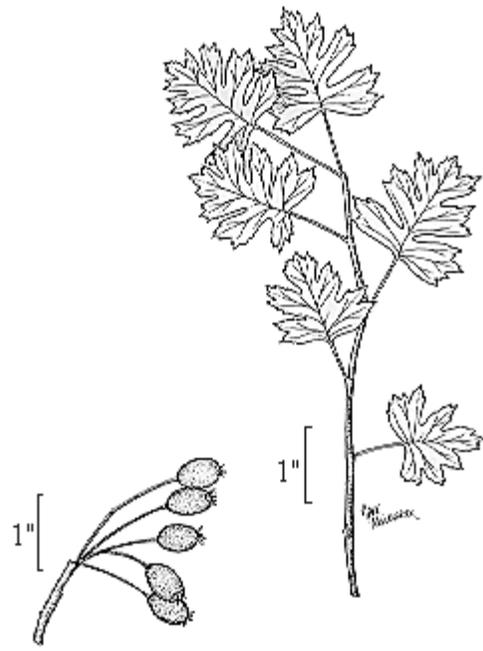
Field Office Guide to Plant Species

Parsley Hawthorn

Crataegus marshallii Eggest.



- **Family:** Rose (Rosaceae)
- **Flowering:** April-May
- **Field Marks:** This is one of the easier hawthorns to recognize because of its deeply cut leaves.
- **Habitat:** Alluvial bottomlands, floodplain forests, wet woods, along streams and rivers.
- **Habit:** Tree to 25 feet tall, sometimes forming a dense understory.
- **Bark:** Gray, becoming scaly with age.
- **Twigs:** Gray, hairy at first but usually becoming smooth, sometimes with slender thorns up to 1 1/2 inches long.
- **Leaves:** Alternate, simple, broadest at or below the middle, triangular to ovate, deeply several-lobed, with each lobe sharply toothed, more or less pointed at the tip, truncate at the base, hairy on both surfaces when young, becoming rather smooth at maturity, up to 2 1/2 inches long, often nearly as wide.
- **Flowers:** Few to many in compound cymes, the branches of the cymes hairy; flowers nearly 1 inch across.
- **Sepals:** 5, green, united below, hairy, the lobes glandular-toothed, up to 1/4 inch long.
- **Petals:** 5, white or pink-tinged, free from each other, up to nearly 1/2 inch long.
- **Stamens:** 10-20.
- **Pistils:** Ovary inferior; styles 2-5.
- **Fruits:** Pomes red, ellipsoid, up to 1/3 inch long.
- **Notes:** The intricate divisions of the leaves make this species a candidate for ornamental use.



Southern Wetland Flora

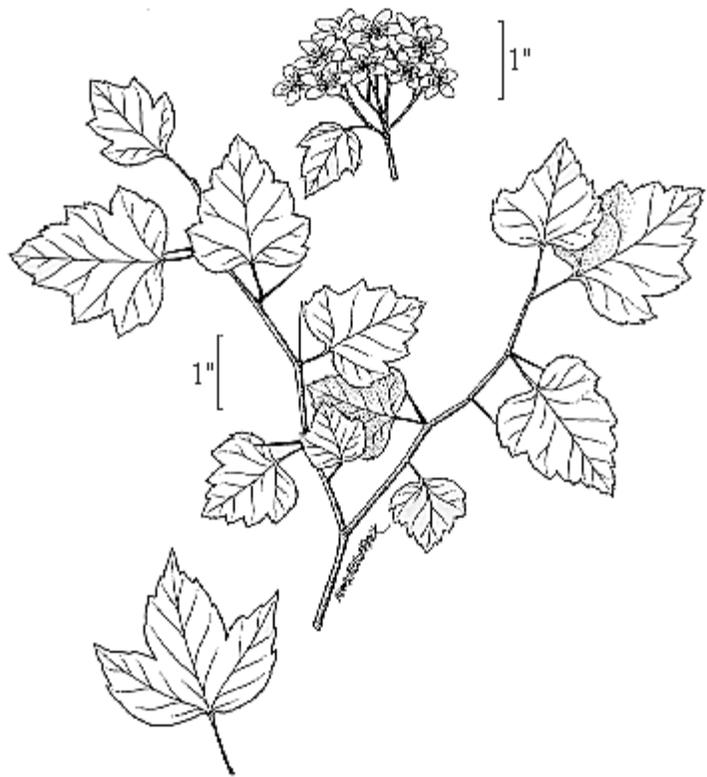
Field Office Guide to Plant Species

Washington Hawthorn

Crataegus phaenopyrum (L. f.) Medik



- **Family:** Rose (Rosaceae)
- **Flowering:** May-June
- **Field Marks:** This hawthorn can be distinguished from most others by its ovate, usually 3-lobed leaves and its flowers not more than 3/4 inch across.
- **Habitat:** Thickets, open woods.
- **Habit:** Tree up to 35 feet tall; trunk diameter up to 12 inches; crown broadly rounded.
- **Bark:** Brownish gray, soon becoming scaly.
- **Twigs:** Usually gray, slender, bearing sharp thorns.
- **Leaves:** Alternate, simple, ovate, pointed at the tip, rounded or heart-shaped at the base, often 3-lobed, toothed, usually smooth, dark green and shiny on the upper surface, up to 3 inches long.
- **Flowers:** Several in a cluster, each flower up to 3/4 inch across.
- **Sepals:** 5, green, pointed, united below.
- **Petals:** 5, white, free from each other.
- **Stamens:** About 20, with yellow anthers.
- **Pistils:** Ovary inferior.
- **Fruits:** Spherical or nearly so, red, up to 1/4 inch in diameter, containing 3-5 nutlets.
- **Notes:** The bright red fruits make this hawthorn an attractive ornamental.



Southern Wetland Flora

Field Office Guide to Plant Species

Green Hawthorn *Crataegus viridis* L.



- **Family:** Rose (Rosaceae)
- **Flowering:** April
- **Field Marks:** This hawthorn differs by its thin leaves that are usually broadest below the middle and that taper to the base.
- **Habitat:** Wet woods, along streams, around lakes and ponds.
- **Habit:** Tree to 30 feet tall, with an irregular crown.
- **Bark:** Pale gray, scaly.
- **Twigs:** Slender, usually bearing slender thorns; thorns on the trunk sometimes branched.
- **Leaves:** Alternate, obovate to oblong to elliptic, thin, sometimes lobed, toothed, pointed at the tip, tapering to the base, smooth except for hairs in tufts along the veins beneath, up to 2 inches long.
- **Flowers:** Several in clusters, white or pink, 1/2 to 3/4 inch across.
- **Sepals:** 5, green, usually smooth.
- **Petals:** 5, free from each other, white or pink.
- **Stamens:** About 20.
- **Pistils:** Ovary inferior.
- **Fruits:** Fleshy, bright red, up to 1/4 inch in diameter, containing 3 or 5 nutlets.



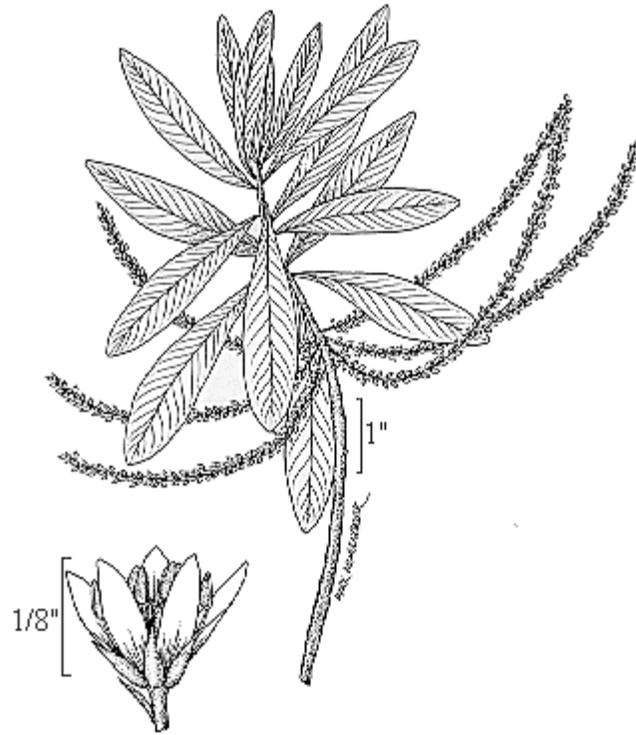
Southern Wetland Flora

Field Office Guide to Plant Species

Swamp Cyrilla *Cyrilla racemiflora* L.



- **Family:** Leatherwood (Cyrillaceae)
- **Flowering:** May-July
- **Field Marks:** This species is distinguished by its racemes of densely crowded, white flowers which persist on the plant during the fall and winter months.
- **Habitat:** Swamps, along streams, bogs, bayheads, backwaters, wet prairies, low pinelands, pocosins, flatwood depressions, preferring acid, sandy, or peaty soils.
- **Habit:** Shrub, often with a spongy base, commonly forming sprouts.
- **Stems:** Woody, usually up to 10 feet tall, sometimes as much as 35 feet tall, smooth.
- **Leaves:** Alternate, simple, oblanceolate to oval, rounded or pointed at the tip, narrowed to the base, thick, without teeth, smooth, sometimes nearly evergreen, reticulate-veined, up to 4 inches long, up to 1 inch wide.
- **Flowers:** Many, crowded in racemes borne on last year's twigs; racemes up to 6 inches long; flower stalks subtended by slender bracts.
- **Sepals:** Usually 5, united at the base, pointed at the tip.
- **Petals:** 5, white, free from each other, up to 1/4 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Ovoid, dry, about 1/12 inch long, with 1-5 seeds, but only 1 seed maturing.
- **Notes:** In tropical rain forests, this species is a large tree. This species is frequently called titi. The leaves sometimes turn reddish or yellowish in the autumn.



Southern Wetland Flora

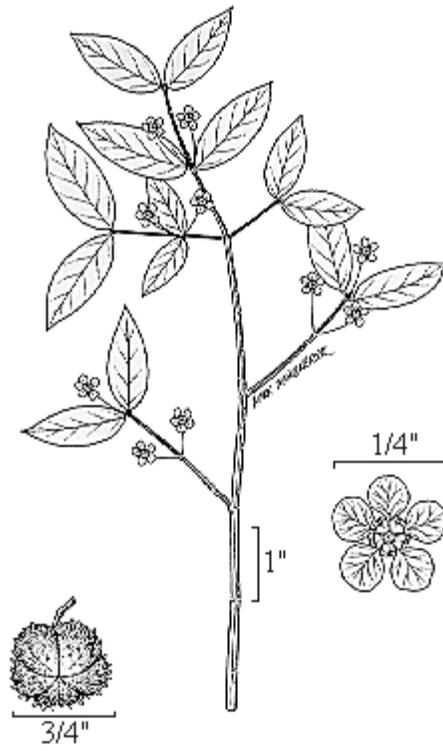
Field Office Guide to Plant Species

American Strawberry-bush

Euonymus americanus L.



- **Family:** Bittersweet (Celastraceae)
- **Flowering:** May-June
- **Field Marks:** This shrub differs from other erect shrubs in the genus *Euonymus* by its short leaf stalks only 1/8 inch long. It differs from other associated species of shrubs by its green square twigs.
- **Habitat:** Low rich woods, wooded slopes, stream banks, low ground near swamps.
- **Habit:** Shrub up to 8 feet tall.
- **Stems:** Gray, usually 4-angled, smooth.
- **Leaves:** Opposite, simple, broadly lanceolate to oblong-lanceolate, usually pointed at the tip, tapering or rounded at the nearly sessile base, finely round-toothed, smooth on both surfaces, except for hairs sometimes on the veins of the lower surface.
- **Flowers:** 1-3 in the axils of the leaves, greenish purple, on slender stalks up to 1 inch long.
- **Sepals:** 5, green, united below.
- **Petals:** 5, greenish, free from each other, nearly orbicular, usually finely toothed at the tip.
- **Stamens:** 5, attached to a fleshy disk.
- **Pistils:** Ovary superior, surrounded by a fleshy disk.
- **Fruits:** Capsule 3- to 5-lobed, flattened on top, crimson, covered with tiny warts, splitting open to expose the red-orange seeds.
- **Notes:** The leaves stay on the plant until November or December in the warmer parts of its range. The capsules persist until after the seeds have fallen.



Southern Wetland Flora

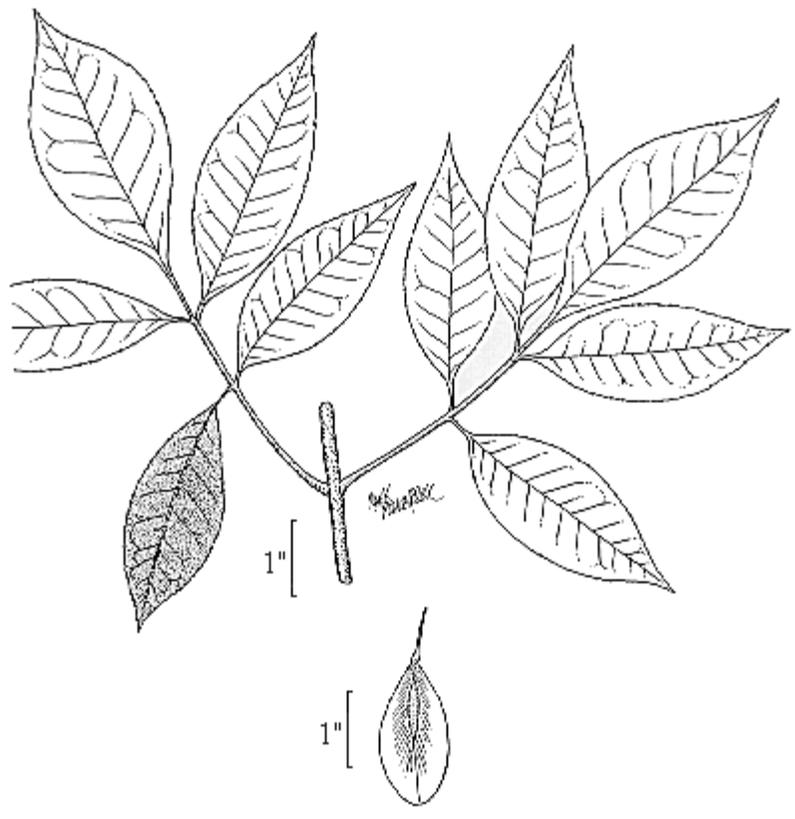
Field Office Guide to Plant Species

Carolina Ash

Fraxinus caroliniana Mill.



- **Family:** Ash (Oleaceae)
- **Flowering:** May
- **Field Marks:** This ash is distinguished by its flat fruits which are winged all the way to the base.
- **Habitat:** Low pinelands, flatwoods, swamps, along streams, sloughs, oxbows, edges of ponds, often in standing water for a portion of the year.
- **Habit:** Tree up to 39 feet tall; trunk diameter up to 12 inches.
- **Twigs:** Gray to brown, hairy at first, usually smooth at maturity.
- **Leaves:** Opposite, pinnately compound, usually with 5 or 7 leaflets; leaflets lanceolate to elliptic to ovate, pointed at the tip, tapering to the sometimes asymmetrical base, irregularly toothed or without teeth, smooth on the upper surface, smooth or short-hairy on the lower surface, up to 5 inches long, up to 2 1/2 inches wide.
- **Flowers:** Male and female flowers borne separately and on different trees in clusters.
- **Sepals:** Minute.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary superior.
- **Fruits:** Samaras flat, winged all the way to the base, oblong to oblanceolate to elliptic, smooth, up to 2 inches long, up to 3/4 inch wide.
- **Notes:** The fruits are sometimes 3-winged.



Southern Wetland Flora

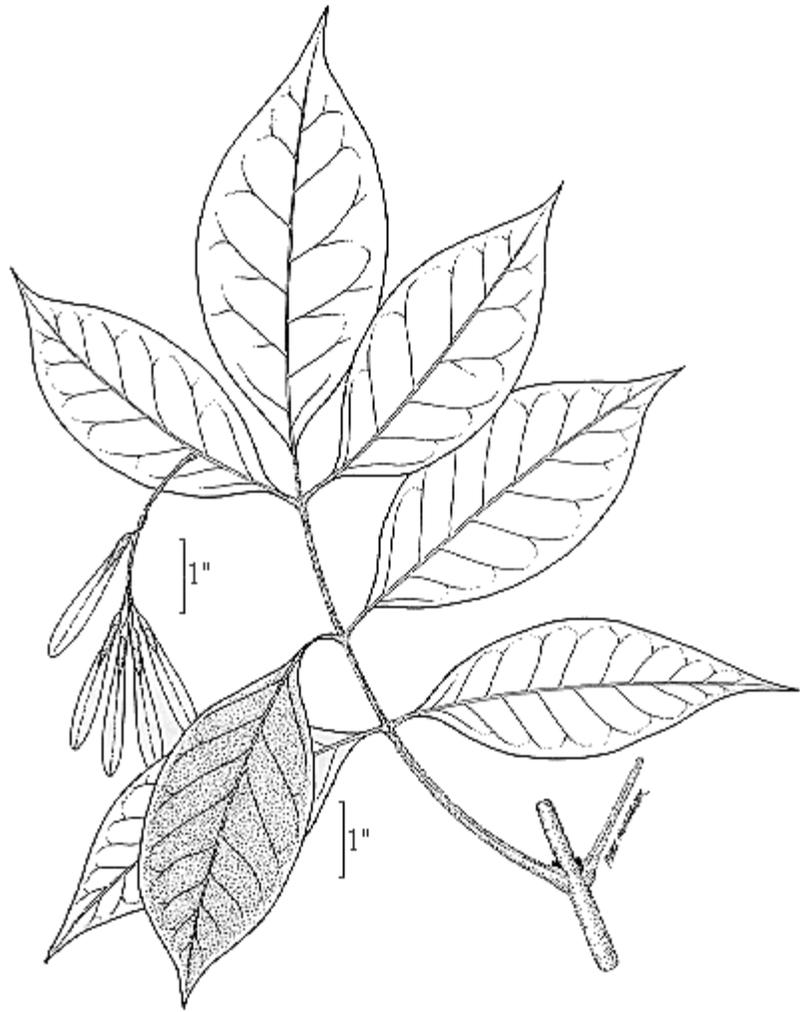
Field Office Guide to Plant Species

Pumpkin Ash

Fraxinus profunda (Bush) Bush



- **Family:** Ash (Oleaceae)
- **Flowering:** April-May
- **Field Marks:** This is the only ash with velvety-hairy twigs and usually toothless leaflets.
- **Habitat:** Swamps, low woods.
- **Habit:** Tree up to 120 feet tall, with a trunk diameter up to 3 feet; crown broadly rounded.
- **Bark:** Gray, becoming scaly with age.
- **Twigs:** Stout, gray or brown, usually velvety.
- **Leaves:** Opposite, pinnately compound, with 7-9 leaflets; leaflets lanceolate to elliptic, pointed at the tip, tapering or rounded at the base, usually toothless, smooth on the upper surface, velvety-hairy on the lower surface, up to 10 inches long, up to 5 inches wide.
- **Flowers:** Male and female borne on separate trees, in crowded clusters, appearing before the leaves.
- **Sepals:** 4, very small, green to purplish.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary superior.
- **Fruits:** Several in an elongated cluster, winged, flat, oblong, sometimes notched at the tip, up to 3 inches long, up to 1/2 inch broad.
- **Notes:** The wood of pumpkin ash, which is heavy and hard, is used for boxes, paper pulp, and fuel.



Southern Wetland Flora

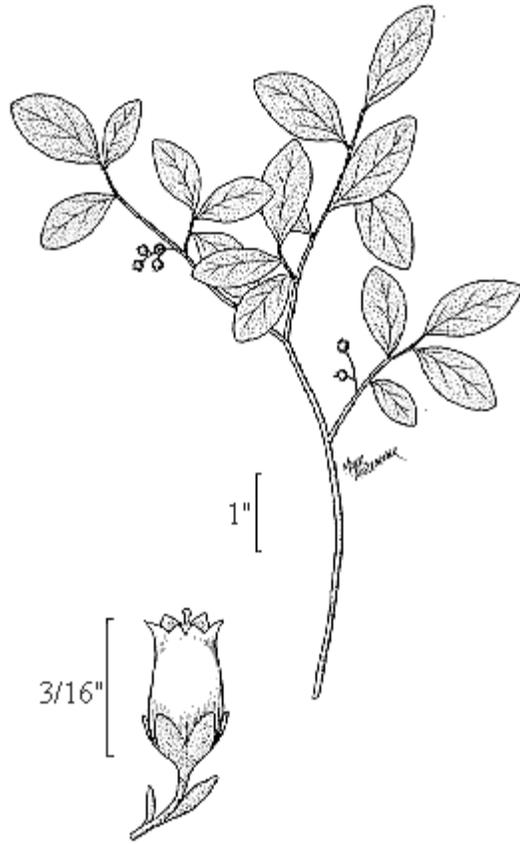
Field Office Guide to Plant Species

Black Huckleberry

Gaylussacia baccata (Wangenh.) K. Koch



- **Family:** Heath (Ericaceae)
- **Flowering:** May-June
- **Field Marks:** The features that distinguish this huckleberry from the others are the leaves that are green on both surfaces but with many dots, and its small, deciduous bracts shorter than the flower stalks.
- **Habitat:** Dry to moist soils in woods and clearings.
- **Habit:** Shrub with many upright, stiff branchlets.
- **Stems:** Slender, gray, hairy when young but usually smooth at maturity, up to 3 feet tall.
- **Leaves:** Alternate, simple, not evergreen, leathery, oval to oblong, rounded or somewhat pointed at the tip, tapering to the base, without teeth, smooth and green on both surfaces, with many dots, up to 2 inches long, usually less than 1 inch wide.
- **Flowers:** Several in short racemes, bell-shaped, up to 1/4 inch long, each flower subtended by small, deciduous bracts shorter than the flower stalks.
- **Sepals:** 5, green, united into a small cup.
- **Petals:** 5, pink or red, united to form a short, cylindrical bell.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Berry-like drupes black or rarely bluish, spherical, up to 1/4 inch in diameter, sweet; nutlets 10.
- **Notes:** The fruits are edible but are very seedy.



Southern Wetland Flora

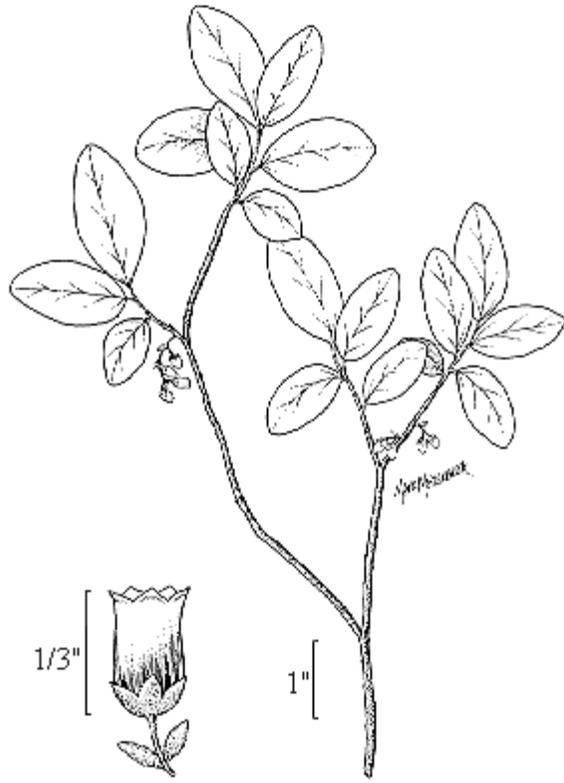
Field Office Guide to Plant Species

Dwarf Huckleberry

Gaylussacia dumosa (Andr.) Torr. & Gray



- **Family:** Heath (Ericaceae)
- **Flowering:** May-June
- **Field Marks:** This is the only huckleberry that has bracts persistent when the fruits mature and young branchlets with curly hairs.
- **Habitat:** Moist or dry soils in woodlands and pinelands; bogs.
- **Habit:** Clone-forming shrub up to 15 feet tall, with underground runners.
- **Stems:** Gray, branched, with curly glandular hairs, at least when young.
- **Leaves:** Alternate, simple, not evergreen, obovate to elliptic, rounded or pointed at the tip, tapering to the base, without teeth or rarely with very tiny rounded teeth, hairy at first, but at maturity usually hairy only on the veins and the edges of the leaves, sparsely dotted, up to 1 1/2 inches long, up to 1 inch wide.
- **Flowers:** Several in racemes up to 15 inches long, bell-shaped, up to 1/3 inch long, each flower subtended by oval bracts that persist until after the fruit matures.
- **Sepals:** 5, green, hairy, united into a small cup.
- **Petals:** 5, white or pinkish, united to form a short, cylindrical tube.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Berry-like drupes black, up to 1/3 inch in diameter, not sweet; nutlets 10.
- **Notes:** The fruits of this species are not prized by humans for food.



Southern Wetland Flora

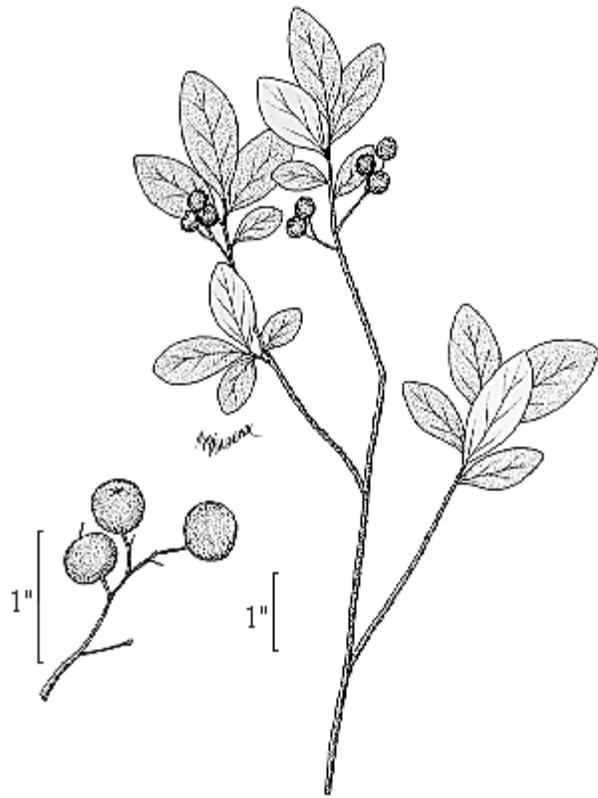
Field Office Guide to Plant Species

Dangle-berry

Gaylussacia frondosa (L.) Torr. & Gray



- **Family:** Heath (Ericaceae)
- **Flowering:** May-June
- **Field Marks:** This is the only deciduous species of huckleberry with the lower surface of the leaves pale.
- **Habitat:** Moist to dry soils in oak woods and pinelands, bogs, bays, swamps.
- **Habit:** Shrub with many upright, stiff branchlets, up to 6 feet tall.
- **Stems:** Slender, gray, smooth or hairy, glandular-dotted.
- **Leaves:** Alternate, simple, not evergreen, not leathery, elliptic to oval to oblanceolate, more or less rounded at the tip, tapering to the base, without teeth, smooth or hairy on both surfaces, distinctly paler on the lower surface, dotted, up to 3 inches long, up to 1 1/4 inches wide.
- **Flowers:** Several in short racemes, bell-shaped; each flower up to 1/6 inch long, subtended by small, narrow bracts shorter than the flower stalks.
- **Sepals:** 5, green, although sometimes glaucous, united to form a short cup, smooth, dotted.
- **Petals:** 5, greenish white to pinkish, united to form a short-cylindric cup.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Berry-like drupes, bluish, glaucous, spherical, up to 1/3 inch in diameter, sweet; nutlets 10.
- **Notes:** This is an extremely variable species, particularly with respect to leaf size and hairiness.



Southern Wetland Flora

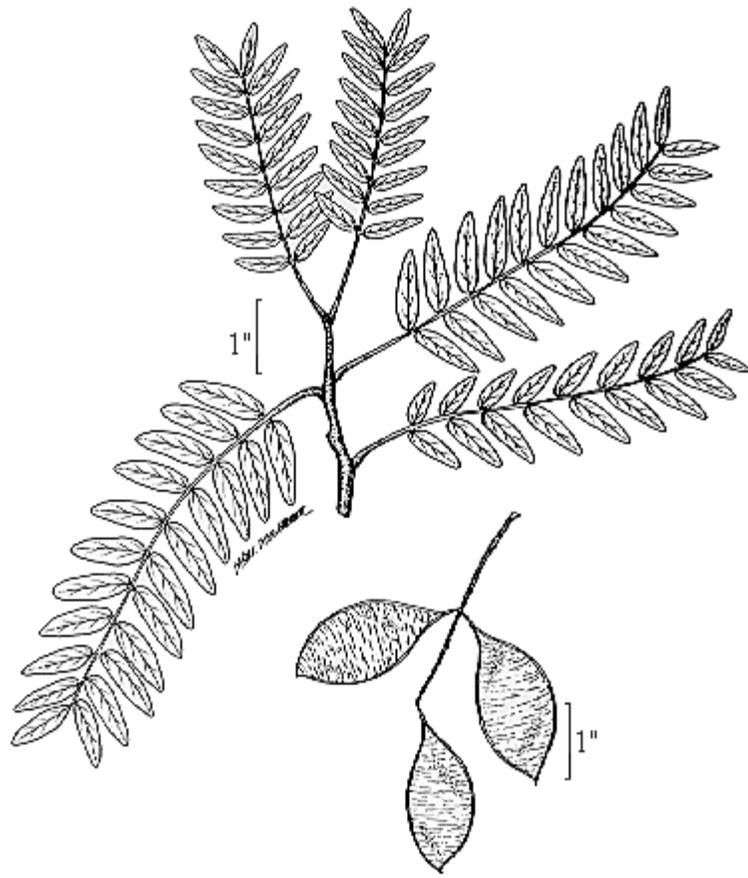
Field Office Guide to Plant Species

Water-locust

Gleditsia aquatica Marshall



- **Family:** Pea (Fabaceae)
- **Flowering:** May-June
- **Field Marks:** This species, which closely resembles honey-locust by its singly and doubly compound leaves, differs by its very short, 1-seeded pods.
- **Habitat:** Swamps, low woods, sloughs.
- **Habit:** Tree to 60 feet tall, with a trunk diameter up to 2 feet; crown irregularly spreading.
- **Bark:** Dark gray or brown, with shallow furrows; branched thorns sometimes present.
- **Twigs:** Slender, gray or brown, smooth, sometimes bearing unbranched thorns.
- **Leaves:** Alternate, once or twice pinnately compound, with many leaflets; each leaflet oblong to oblong-ovate, rounded or slightly pointed at the tip, rounded at the base, sometimes minutely toothed, smooth except sometimes with a few hairs on the veins on the lower surface, up to 1 inch long, up to 1/2 inch wide.
- **Flowers:** In elongated clusters, up to 4 inches long, some with both stamens and pistils, some with one or the other.
- **Sepals:** Usually 5, united below, greenish.
- **Petals:** Usually 5, free from each other, yellow-green, about 1/8 inch long.
- **Stamens:** 3-10.
- **Pistils:** Ovary superior.
- **Fruits:** Pods oval, flat, smooth, up to 1 1/2 inches long, up to 1 inch broad, 1-seeded.
- **Notes:** Unlike the honey-locust, this species does not have pulpy material around the seeds.

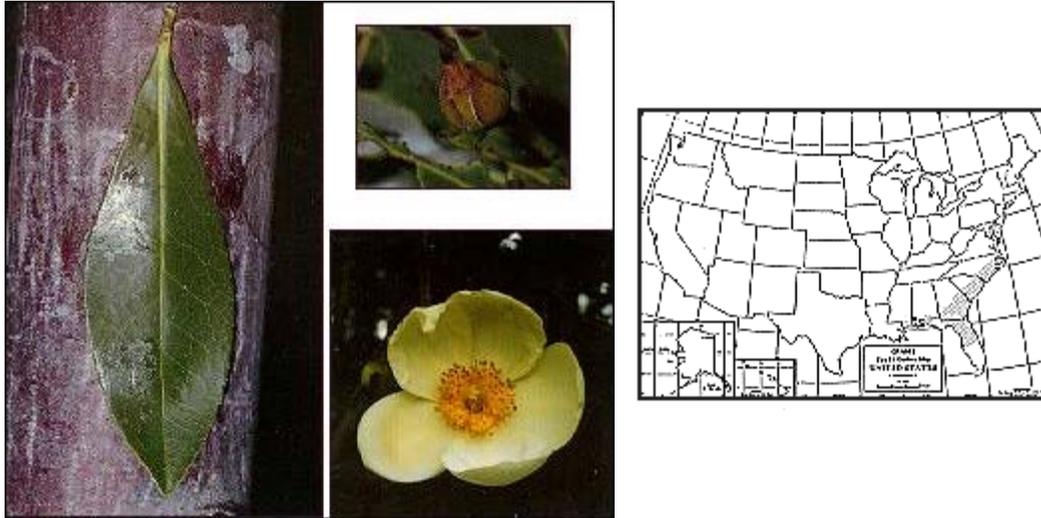


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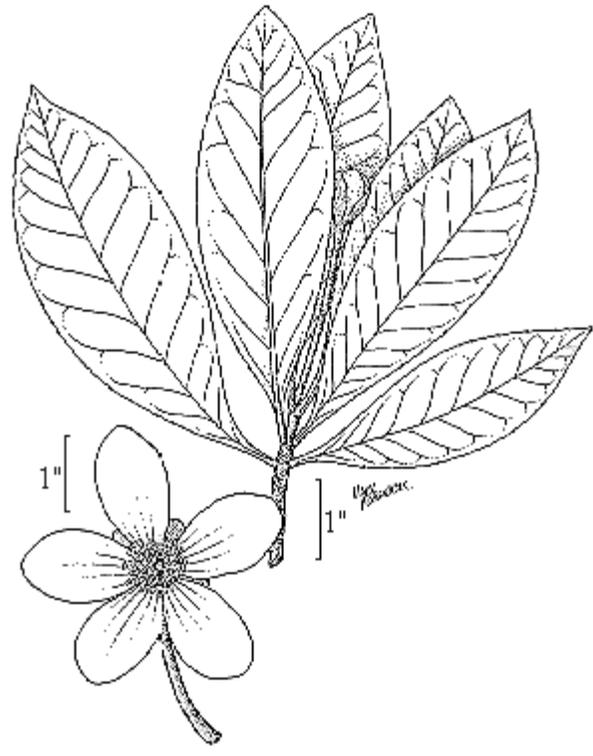
Field Office Guide to Plant Species

Loblolly Bay

Gordonia lasianthus (L.) J. Ellis



- **Family:** Tea (Theaceae)
- **Flowering:** July-September
- **Field Marks:** This handsome flowering tree is recognized by its solitary, white, 5-petalled flowers up to 3 1/2 inches across, its leathery, evergreen leaves, and its flat, winged seeds.
- **Habitat:** Swamps, bayheads, deep ravines, hammocks, stream banks, bottomlands, pocosins.
- **Habit:** Evergreen tree up to 75 feet tall; crown narrow and conical; bark dark gray, rough and furrowed at maturity.
- **Twigs:** Gray, smooth or hairy, at least when young.
- **Leaves:** Alternate, simple, evergreen, leathery, elliptic, pointed or rounded at the tip, tapering to the base, shallowly round-toothed, smooth except for hairs on the veins on the lower surface of the leaves, dark green above, paler beneath, up to 8 inches long, up to 2 1/2 inches wide.
- **Flowers:** Solitary in the axils of the leaves, white, up to 3 1/2 inches across; flower stalks stout, up to 3 1/2 inches long.
- **Sepals:** 5, green, rounded at the tip, silky-hairy on the outer surface.
- **Petals:** 5, white, barely united at the base, rounded at the tip, ciliate, silky-hairy on the outer surface.
- **Stamens:** Numerous, yellow, united at the base.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules woody, hard, ovate-oblong, silky-hairy, up to 3/4 inch long; seeds 4-8, flat, winged, up to 1/2 inch long.

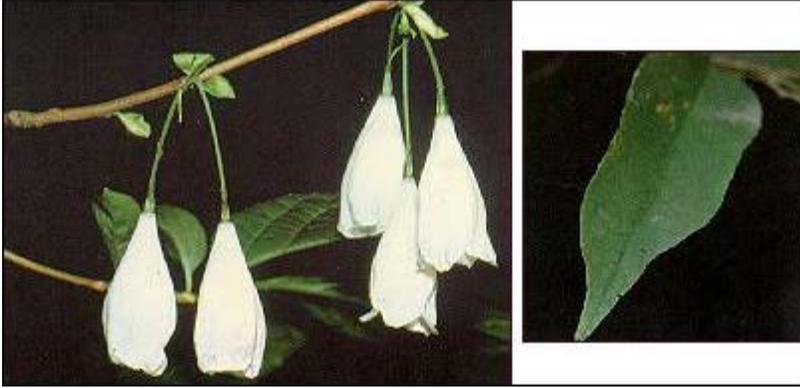


Southern Wetland Flora

Field Office Guide to Plant Species

Carolina Silver-bell

Halesia carolina L.



- **Family:** Storax (Styracaceae)
- **Flowering:** April-May
- **Field Marks:** This species is distinguished by its white, bell-shaped flowers and its dry, 4-winged fruits.
- **Habitat:** Rich woods, along streams, river bottoms, on slopes.
- **Habit:** Tree to 45 feet tall, with a trunk diameter up to 20 inches.
- **Bark:** Red-brown, with whitish stripes, becoming a little scaly.
- **Twigs:** Slender, red-brown, usually smooth.
- **Leaves:** Alternate, simple, oval to elliptic, pointed at the tip, tapering or rounded at the base, finely toothed, usually smooth on the upper surface, smooth or slightly hairy on the lower surface, up to 6 inches long, up to 3 inches broad, on stalks up to 1/2 inch long.
- **Flowers:** Few in hanging clusters, showy.
- **Sepals:** 4, green, united below.
- **Petals:** 4, white, united to form a bell up to 3/4 inch long.
- **Stamens:** 8-16.
- **Pistils:** Ovary superior.
- **Fruits:** Oblong, dry, with 4 wings, up to 2 inches long, with a persistent style at the tip.
- **Notes:** This tree is a handsome ornamental because of its beautiful, 'White, bell-shaped flowers. The fruits of the Carolina silver-bell remain on the branches into the winter.



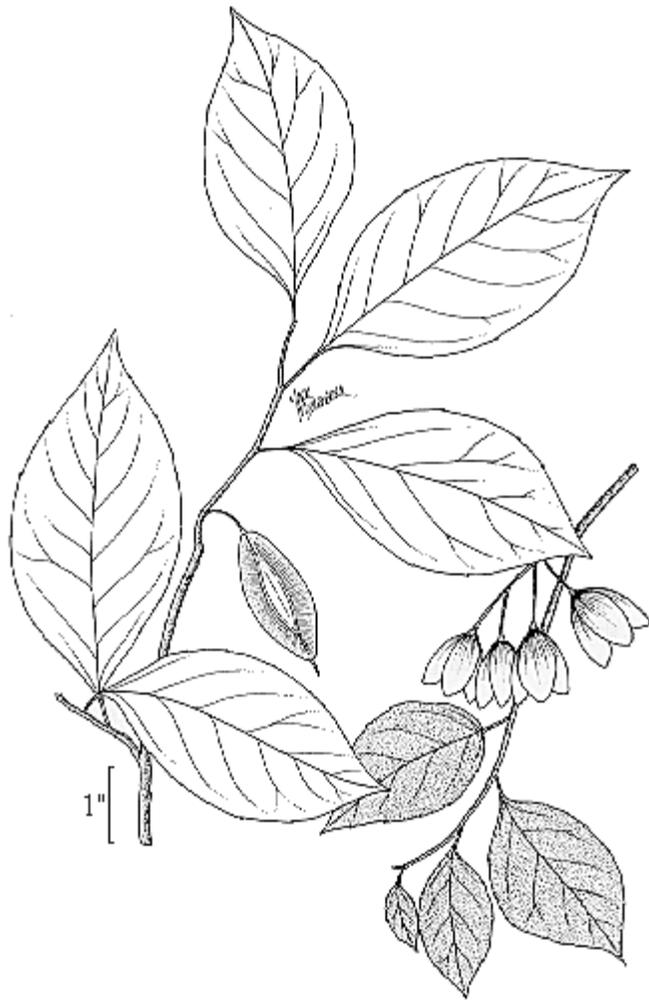
Southern Wetland Flora

Field Office Guide to Plant Species

Two-wing Silver-bell
Halesia diptera J. Ellis



- **Family:** Storax (Styracaceae)
- **Flowering:** April-May
- **Field Marks:** Silver-bells are recognized by their showy, white, bell-shaped flowers. This one differs from others by its broadly 2-winged fruits.
- **Habitat:** Rich wooded bluffs, bottomland forests, steep ravines, hammocks.
- **Habit:** Tree up to 45 feet tall; bark furrowed, breaking up into thin, narrow plates.
- **Twigs:** Slender, gray, usually hairy; pith diaphragmed.
- **Leaves:** Alternate, simple, oval to obovate, pointed at the tip, tapering or somewhat rounded at the base, irregularly toothed, the teeth gland-tipped, sparsely hairy on both surfaces, paler on the lower surface.
- **Flowers:** Few in drooping clusters, white, up to 1 1/2 inches long.
- **Sepals:** 4, green, hairy, united to form a short tube.
- **Petals:** 4, white, united for part of their length, up to 1 1/2 inches long.
- **Stamens:** 8-16.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules broadly 2-winged, up to 2 1/4 inches long, up to 1 inch broad, broadly elliptic to oval.
- **Notes:** There is considerable variation in flower size and leaf hairiness. This species makes a handsome ornamental.



Southern Wetland Flora

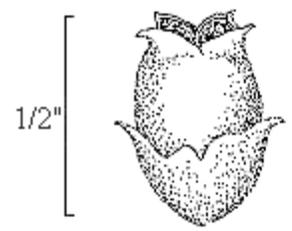
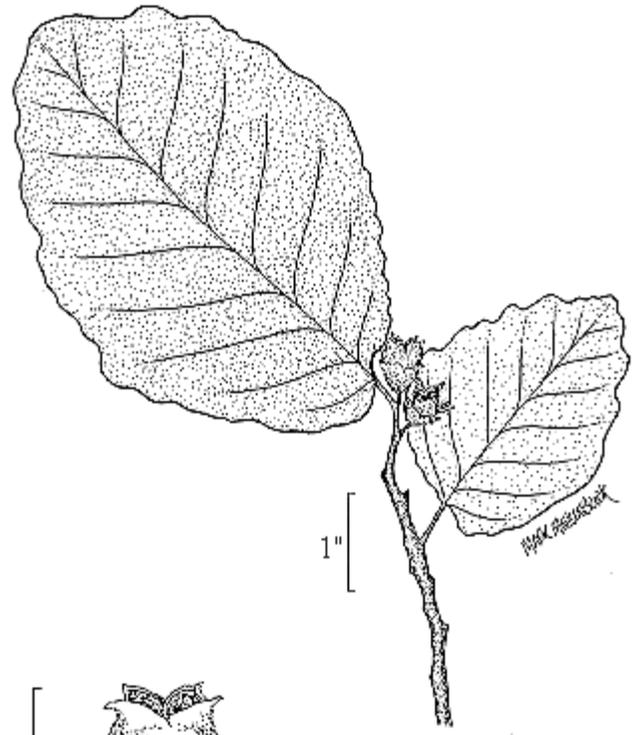
Field Office Guide to Plant Species

American Witch-hazel

Hamamelis virginiana L.



- **Family:** Sweet Gum (Hamamelidaceae)
- **Flowering:** September-December
- **Field Marks:** The alternate leaves of the American witch-hazel have rounded teeth along the margins. The flowers, which bloom in the autumn and early winter, have four narrow yellow petals.
- **Habitat:** Moist to dry soils in woods, along streams, bluffs, steep ravines, hammocks, floodplain forests, bogs.
- **Habit:** Tree to 25 feet tall; trunk diameter up to 10 inches; crown broadly rounded.
- **Bark:** Light brown, becoming scaly with age.
- **Twigs:** Slender, flexible, brown, hairy at first, becoming smooth at maturity.
- **Leaves:** Alternate, simple, obovate, usually rounded at the tip, rounded at the base, round-toothed along the edge, dark green and somewhat hairy on the upper surface, paler and hairy on the lower surface, up to 6 inches long.
- **Flowers:** Several in a cluster up to 2/3 inch long, borne from the axils of leaf scars.
- **Sepals:** 4, attached to the lower part of the ovary.
- **Petals:** 4, yellow, strap-shaped, free from each other, up to 1 inch long.
- **Stamens:** 4.
- **Pistils:** Ovary partly inferior, very hairy; styles 2.
- **Fruits:** Capsules ovoid to ellipsoid, up to 1/2 inch long, brown, hairy, splitting open explosively to expel several small, shiny seeds.
- **Notes:** Witch hazel, an astringent, is derived from this plant. The fruits mature one year after flowering.



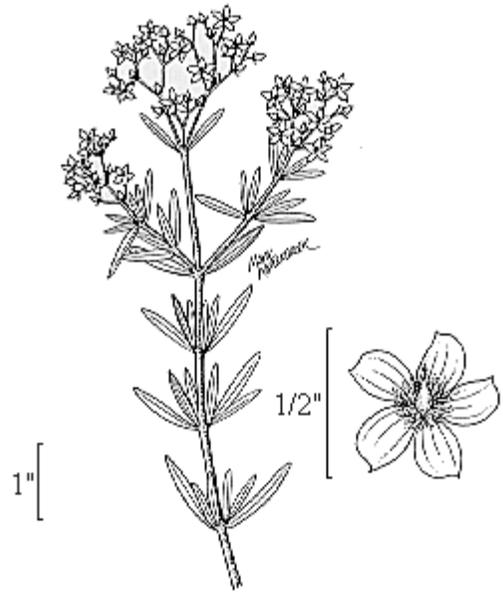
Southern Wetland Flora

Field Office Guide to Plant Species

Round-pod St. Johnswort *Hypericum cistifolium* Lam.



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** June-August
- **Field Marks:** This is one of the somewhat shrubby species of *Hypericum*. It differs from all the rest of the shrubby species by its leaves that are 1/4-1/2 inch wide and rolled under along the edges, its 5 yellow petals 1/4-1/3 inch long, and its 1-celled capsule.
- **Habitat:** Low pinelands, stream banks, flatwoods, low prairies, bogs, savannas, ditches.
- **Habit:** Shrub with 1-several stems.
- **Stems:** Upright, woody, branched or unbranched, slender, smooth, wing-angled, up to 3 feet tall.
- **Leaves:** Opposite, simple, each pair at right angles to the pair above and below, elliptic to lanceolate, rounded or pointed at the tip, rounded or even slightly clasping at the sessile base, without teeth but with the edges rolled under, smooth, dotted on both surfaces, up to 1 1/2 inches long, 1/4-1/2 inch wide.
- **Flowers:** Several in terminal, compound cymes, up to 1/2 inch across.
- **Sepals:** 5, green, free from each other, up to 1/8 inch long.
- **Petals:** 5, yellow, free from each other, 1/4-1/3 inch long.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Capsules ovoid, up to 1/4 inch long; seeds brown, 1/20 inch long.
- **Notes:** There are often short branchlets formed in the axils of the leaves.



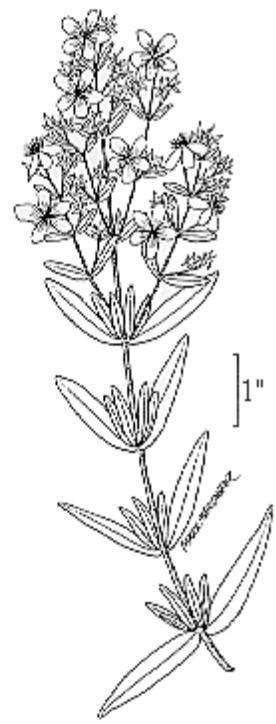
Southern Wetland Flora

Field Office Guide to Plant Species

Bushy St. Johnswort *Hypericum densiflorum* Pursh



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** June-August
- **Field Marks:** This shrubby St. Johnswort differs from other shrubby species by its small capsules about 1/4 inch long and its largest leaves about 1 1/2 inches long or longer.
- **Habitat:** Bogs, moist to dry woods, wet meadows, along streams, around lakes and ponds, wet ditches, floodplains.
- **Habit:** Shrub up to 7 feet tall.
- **Stems:** Much branched, smooth.
- **Leaves:** Opposite, simple, linear to elliptic to oblong, rounded at the tip, tapering to the base, smooth, dotted at least on the upper surface, up to 2 inches long, up to 1/4 inch wide, with several leaves in the axils of the main leaves.
- **Flowers:** Several, in terminal cymes, up to 2/3 inch across, on stalks up to 1/3 inch long.
- **Sepals:** 5, green, free from each other, shorter than the petals, linear, up to 1/3 inch long.
- **Petals:** 5, yellow, free from each other, up to 1/2 inch long.
- **Stamens:** Numerous, free from each other.
- **Pistils:** Ovary superior; styles 3, but usually united to form a beak.
- **Fruits:** Capsules ovoid, smooth, up to 1/4 inch long; seeds numerous, red-brown.



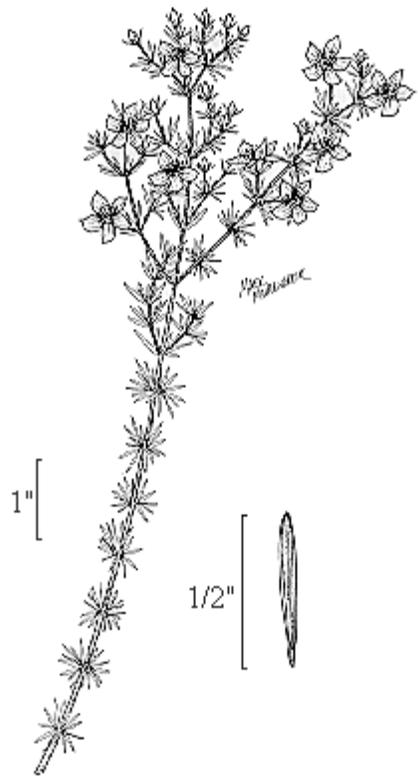
Southern Wetland Flora

Field Office Guide to Plant Species

Sandweed St. Johnswort
Hypericum fasciculatum Lam.



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** May-September
- **Field Marks:** This slightly woody St. Johnswort has leaves less than 1/20 inch wide. It differs from other very narrow-leaved species of *Hypericum* by being erect and having leaves more than 1/2 inch long and with 2 longitudinal grooves on the under surface of the leaves.
- **Habitat:** Low pinelands, bogs, flatwoods, margins of swamps and streams, ditches, sometimes in water.
- **Habit:** Shrub with 1-several stems.
- **Stems:** Upright, woody, much branched, slightly winged at first, becoming corky and exfoliating when old, spongy-thickened below, up to 6 feet tall.
- **Leaves:** Opposite, simple, but with short branches of tiny leaves in the axils, needle-like, less than 1/20 inch wide, more than 1/2 inch long, smooth, dotted, sessile, with 2 longitudinal grooves on the under surface.
- **Flowers:** Usually in terminal and axillary cymes, rarely solitary in the leaf axils, up to 2/3 inch across.
- **Sepals:** 5, green, free from each other, very narrow, up to 1/3 inch long.
- **Petals:** 5, yellow, free from each other, up to 1/3 inch long, with a tooth near the tip.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior; styles 3, often united.
- **Fruits:** Capsules ovoid, up to 1/4 inch long; seeds brown, very tiny.



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Field Office Guide to Plant Species

Bedstraw St. Johnswort
Hypericum galioides Lam.



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** June-August
- **Field Marks:** This woody St. Johnswort differs from other woody species of *Hypericum* by having leaves up to 1/3 inch wide and less than 1 1/2 inches long, and capsules less than 1/3 inch long.
- **Habitat:** Swamps, stream banks, marshes.
- **Habit:** Shrub with 1-several stems.
- **Stems:** Upright, woody, much branched, slender, smooth, up to 4 1/2 feet tall.
- **Leaves:** Opposite, simple, oblanceolate, pointed or rounded at the tip, tapering to the sessile base, without teeth, smooth, dotted, up to 1 1/2 inches long, up to 1/3 inch wide.
- **Flowers:** Many in compound cymes, up to 3/4 inch across.
- **Sepals:** 5, green, free from each other, up to 1/5 inch long.
- **Petals:** 5, yellow, free from each other, with a tooth near the tip.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Capsules obconic, up to 1/3 inch long; seeds dark brown, less than 1/20 inch long.
- **Notes:** There are usually short branchlets in the axils of the leaves.

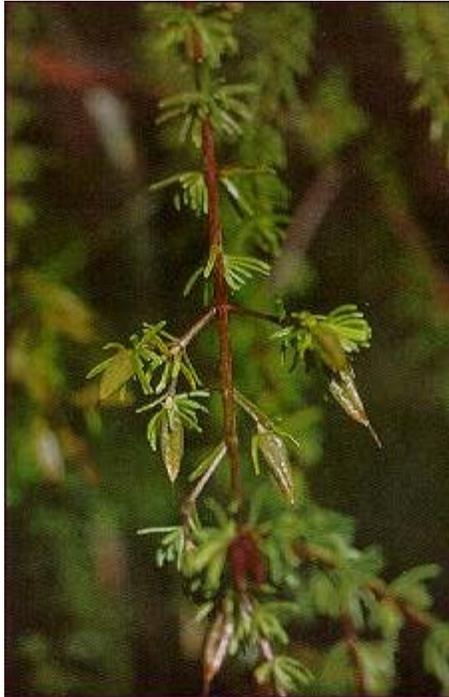


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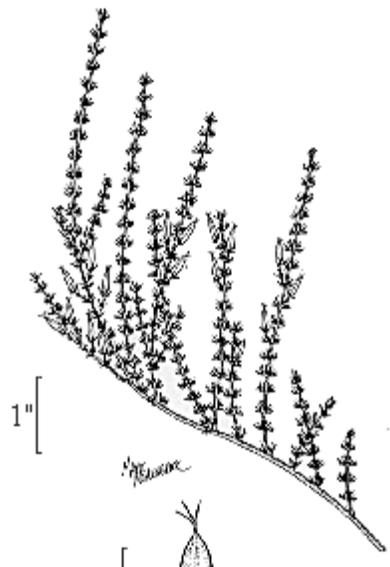
Field Office Guide to Plant Species

Atlantic St. Johnswort

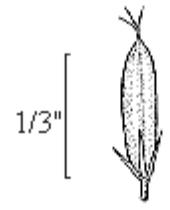
Hypericum reductum (Svens.) W. P. Adams



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** June-September
- **Field Marks:** This woody St. Johnswort differs from other woody species of *Hypericum* by its mat-forming habit and its needle-like leaves.
- **Habitat:** Low pinelands, flatwoods, wet prairies, around ponds, coastal dunes.
- **Habit:** Mat-forming shrub with several stems, the mat up to 3 feet across.
- **Stems:** Woody, spreading or ascending, usually not more than 2 feet tall, the bark exfoliating into thin strips at maturity.
- **Leaves:** Opposite, simple, but with short branches of tiny leaves in the axils, needle-like, up to 1/2 inch long, less than 1/20 inch wide, rolled under along the edges, dotted, smooth.
- **Flowers:** Several in terminal and axillary cymes, sometimes solitary in the leaf axils, up to 2/3 inch across.
- **Sepals:** 5, green, free from each other, up to 1/4 inch long.
- **Petals:** 5, yellow, free from each other, up to 1/3 inch long.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Capsules narrowly oblongoid, 1/3-1/2 inch long; seeds black, minute.



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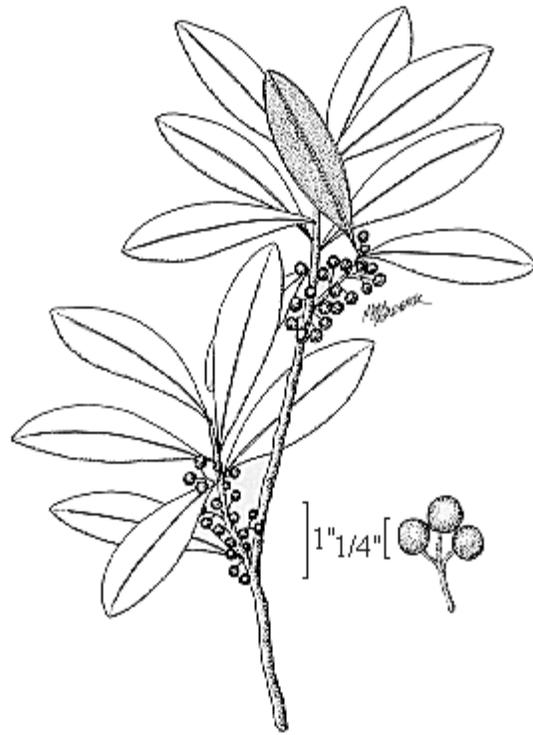
Field Office Guide to Plant Species

Sarvis Holly

Ilex amelanchier M. A. Curt.



- **Family:** Holly (Aquifoliaceae)
- **Flowering:** April-May
- **Field Marks:** This is a deciduous holly that is further distinguished by its sparsely toothed or toothless leaves which are uniformly shaggy hairy on the lower surface.
- **Habitat:** Low sandy woods, swamps, floodplain forests, stream banks.
- **Habit:** Shrub or small tree, usually with several stems, up to 15 feet tall.
- **Twigs:** Grayish brown, hairy when young, becoming smooth with age, with conspicuous lenticels.
- **Leaves:** Alternate, simple, deciduous, oblong to elliptic to obovate, pointed or rounded at the tip, rounded or tapering to the base, toothless or with sparse, small teeth, smooth on the upper surface at maturity, uniformly shaggy hairy on the lower surface, up to 4 inches long, up to 2 inches wide; leaf stalks powdery-hairy.
- **Flowers:** Male and female flowers borne separately on separate plants; male flowers numerous in axillary clusters; female flowers 1 or few, usually in the leaf axils.
- **Sepals:** 4, green, united below.
- **Petals:** 4, white or yellowish, free from each other.
- **Stamens:** 4.
- **Pistils:** Ovary superior; stigmas usually 4.
- **Fruits:** Drupes red, not shiny, spherical, 1/4-1/2 inch in diameter; nutlets 4.



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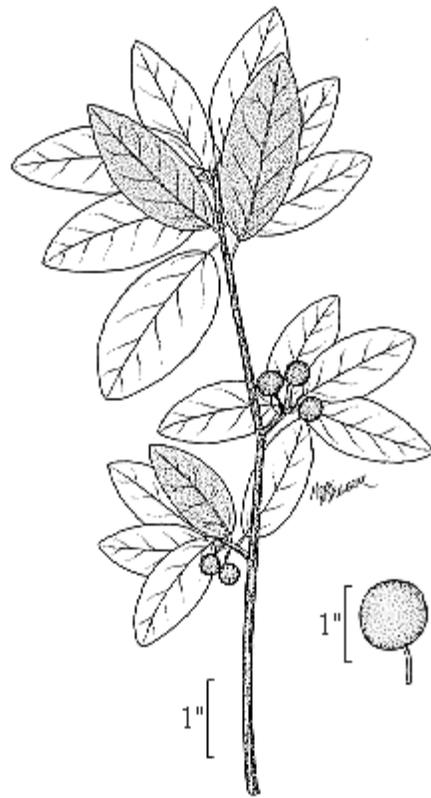
Field Office Guide to Plant Species

Dahoon Holly

Ilex cassine L.



- **Family:** Holly (Aquifoliaceae)
- **Flowering:** May-June
- **Field Marks:** This evergreen holly is recognized by its usually toothless leaves more than 1/2 inch wide.
- **Habitat:** Swamps, stream banks, low pinelands, pond margins, flatwoods, bogs, pocosins.
- **Habit:** Shrub or tree up to 30 feet tall.
- **Bark:** Gray, smooth, even at maturity.
- **Twigs:** Slender, smooth or hairy.
- **Leaves:** Alternate, simple, evergreen, oblong to elliptic to oblanceolate, pointed or less commonly rounded at the tip, tapering to the base, usually toothless, usually smooth on the upper surface, smooth or hairy on the lower surface, up to 6 inches long, up to 2 inches wide.
- **Flowers:** Male and female flowers borne separately on separate plants; male flowers several in axillary cymes up to 2 1/2 inches long; female flowers 1-4 in axillary clusters.
- **Sepals:** 4, green, united below.
- **Petals:** 4, white, free from each other.
- **Stamens:** 4.
- **Pistils:** Ovary superior; stigmas usually 4.
- **Fruits:** Drupes red or orange-red, spherical, 1/4-1/3 inch in diameter; nutlets 4.
- **Notes:** This species makes a handsome ornamental.

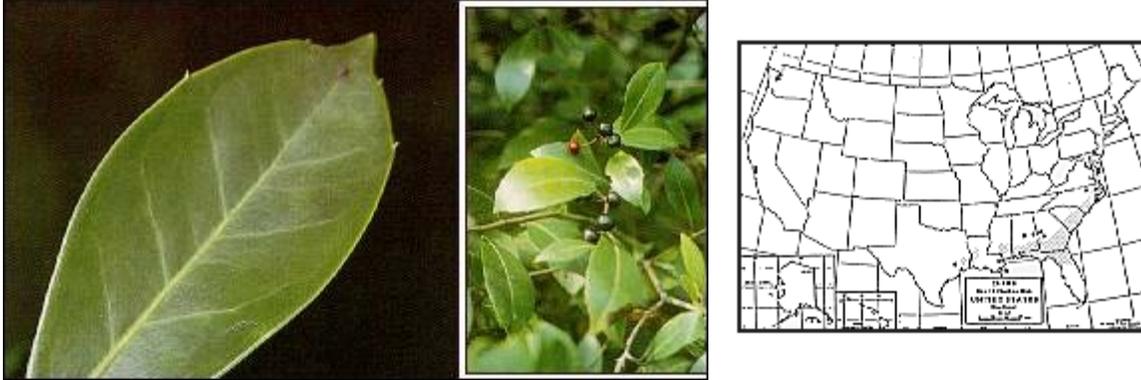


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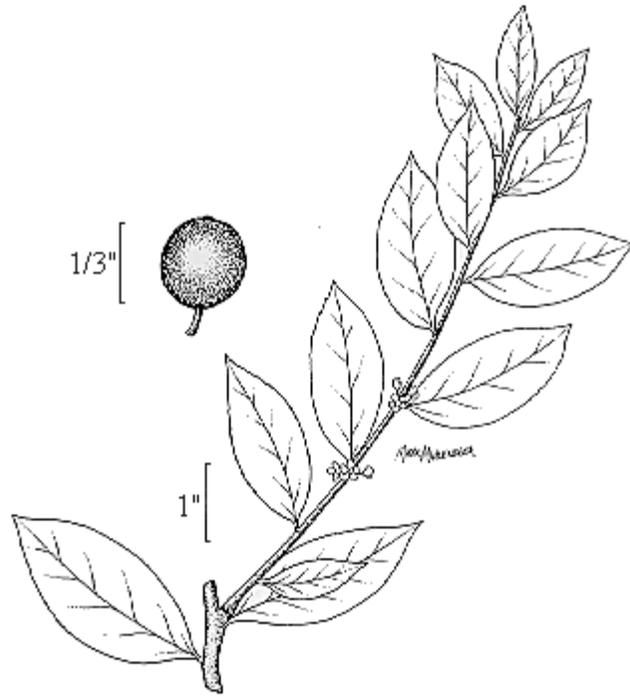
Field Office Guide to Plant Species

Bay-gall Holly

Ilex coriacea (Pursh) Chapm.



- **Family:** Holly (Aquifoliaceae)
- **Field Marks:** This evergreen holly has black drupes at maturity and dotted leaves toothless or with a few bristle-like teeth.
- **Habitat:** Low pinelands, flatwoods, swamps, stream banks, wet thickets, bogs, bays, savannas, wooded ravines.
- **Habit:** Shrub or rarely a small tree, up to 15 feet tall.
- **Twigs:** Dark brown to gray, short-hairy when young, with lenticels.
- **Leaves:** Alternate, simple, evergreen, leathery, elliptic to oval to lanceolate, pointed or rounded at the tip, tapering to the base, without teeth, at least along the upper half of the leaf, or with a few bristle-like teeth, smooth on the upper surface except along the veins, smooth or hairy and dotted on the lower surface, up to 4 inches long, up to 2 inches wide; leaf stalks short-hairy.
- **Flowers:** Male and female flowers borne separately on separate plants; male flowers 1-several in axillary clusters; female flowers 1-several in axillary clusters.
- **Sepals:** 5-9, green, united below.
- **Petals:** 5-9, white, free from each other.
- **Stamens:** 5-9.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes red at first, becoming black and shiny at maturity, spherical, 1/4-1/3 inch in diameter, sweet and juicy; nutlets 5-9.



Southern Wetland Flora

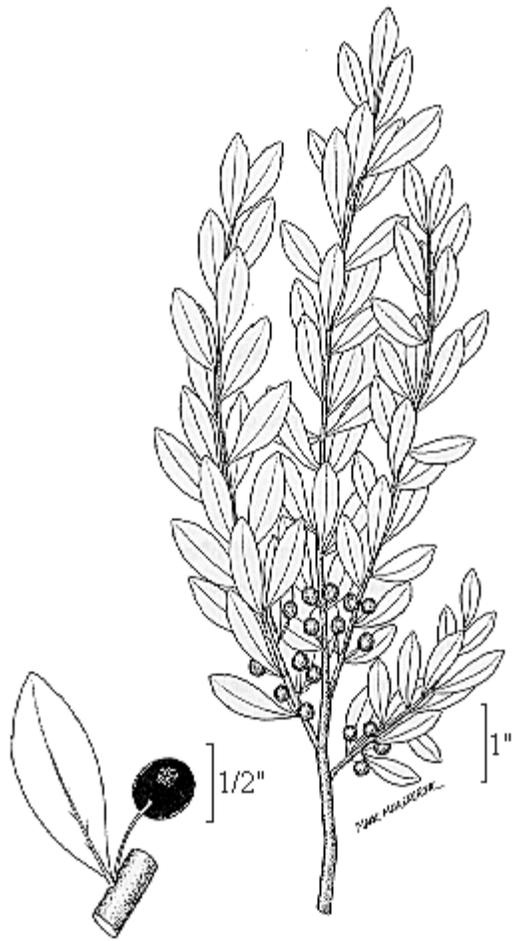
Field Office Guide to Plant Species

Ink-berry

Ilex glabra (L.) Gray



- **Family:** Holly (Aquifoliaceae)
- **Flowering:** June-September
- **Field Marks:** This species differs from all other evergreen hollies by lacking spines on the leaves, only having teeth toward the tip of the leaves, and its drupes black at maturity.
- **Habitat:** Low woods, savannas, pocosins, rocky shores, flatwoods, wet prairies, stream banks, thickets, bogs.
- **Habit:** Shrub up to 12 feet tall, with extensive rhizomes, often forming colonies.
- **Stems:** Woody, slightly hairy, at least when young, green but becoming gray or brown, with lenticels.
- **Leaves:** Alternate, simple, evergreen, leathery, obovate to elliptic, pointed at the tip, tapering to the base, smooth, usually with a few teeth in the upper half, often reddish and dotted on the lower surface, shiny on the upper surface, up to 2 inches long, up to 3/4 inch wide; leaf stalks hairy, up to 1/3 inch long.
- **Flowers:** Male and female flowers borne separately on the same plant, or male and female flowers borne on separate plants; male flowers 3-7 in a cluster in the axils of the leaves; female flowers 1-3 in the axils of the leaves, on stalks up to 1/2 inch long.
- **Sepals:** 5-8, green, very short, united at the base, smooth except sometimes for a few cilia.
- **Petals:** 5-8, white, free from each other.
- **Stamens:** 5-8.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes black at maturity, spherical, up to 1/4 inch in diameter, containing 5-8 nutlets.
- **Notes:** In the past, the leaves were boiled for a tea. The berries, which persist during the winter, have been used as a source of black ink. Within its range, this shrub is one of the most abundant of all the hollies.



Southern Wetland Flora

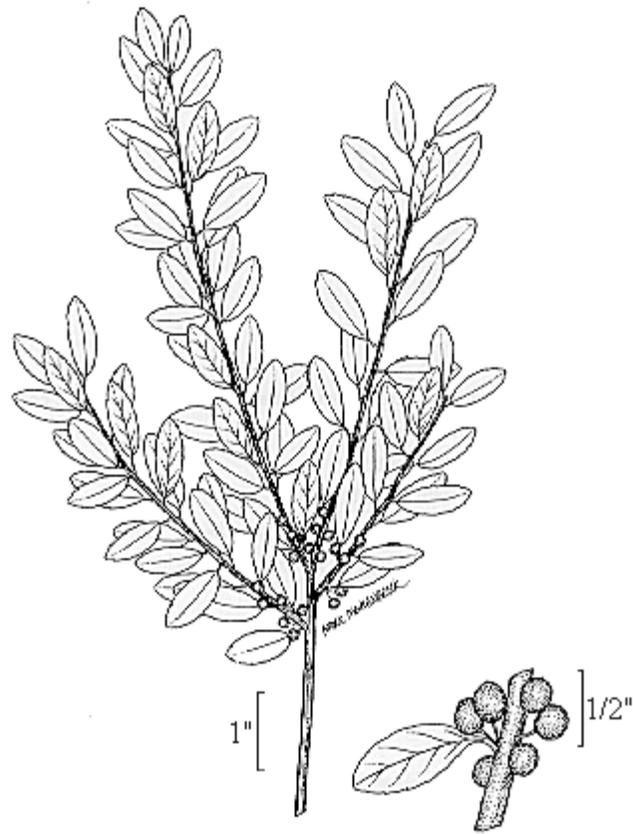
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Yaupon

Ilex vomitoria Ait.



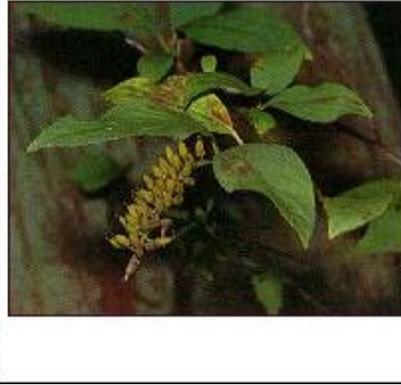
- **Family:** Holly (Aquifoliaceae)
- **Flowering:** March-May
- **Field Marks:** This species is distinguished from other evergreen hollies by its leaves that are finely toothed throughout their entire length and which are not spine-tipped.
- **Habitat:** Swamps, low woods, steep ravines, scrub oak woodlands, hammocks, bluffs, coastal dunes, fencerows, flatwoods, along streams, floodplains.
- **Habit:** Shrub, sprouting vigorously from the roots.
- **Stems:** Woody, up to 24 feet tall; twigs with short hairs.
- **Leaves:** Alternate, simple, evergreen, oblong to elliptic, rounded at the tip, rounded at the base, finely round-toothed along the edges, smooth, shiny, up to 1 1/2 inches long, up to 3/4 inch wide; leaf stalks hairy, up to 1/8 inch long.
- **Flowers:** Male and female flowers borne on the same plant; male flowers 2-3 clustered in the axils of the leaves; female flowers 1-3 in the axils of the leaves.
- **Sepals:** 4, green, free from each other, rounded at the tip.
- **Petals:** 4, white, free from each other.
- **Stamens:** 4.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes red, spherical, shiny, up to 1/4 inch in diameter, containing 4 nutlets.
- **Notes:** This species often forms dense thickets.



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Field Office Guide to Plant Species

Virginia Willow *Itea virginica* L.



- **Family:** Saxifrage (Saxifragaceae)
- **Flowering:** May-June
- **Field Marks:** This species is characterized by its alternate, finely toothed leaves and its elongated clusters of white flowers followed by slender, beaked capsules.
- **Habitat:** Swamps, low woods.
- **Habit:** Shrub to 10 feet tall.
- **Stems:** Branched, the younger ones hairy.
- **Leaves:** Alternate, simple, elliptic, pointed at the tip, tapering to the base, finely toothed, usually smooth, up to 3 inches long.
- **Flowers:** Several in elongated clusters up to 6 inches long, each flower on a short stalk.
- **Sepals:** 5, green, united to form a shallow cup.
- **Petals:** 5, white, free from each other, 1/8-1/4 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Several capsules in elongated clusters; each capsule beaked, leathery, up to 1/2 inch long.



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Field Office Guide to Plant Species

Big-leaf Sumpweed

Iva frutescens L.



- **Family:** Aster (Asteraceae)
- **Flowering:** August-November
- **Field Marks:** This much branched plant which has stems woody at the base has opposite leaves and greenish flowers in heads subtended by narrow bracts.
- **Habitat:** Brackish shores, marshes, and drainage ditches.
- **Habit:** Shrubby plant, much branched from the base, up to 10 feet tall.
- **Stems:** Much branched, woody at base, short-hairy.
- **Leaves:** Opposite (except for the uppermost), simple, lanceolate, pointed at the tip, tapering to the sessile base, usually toothed (except for the uppermost), smooth or slightly hairy, up to 3 inches long, up to 1 inch wide.
- **Flowers:** Borne in small green heads, the heads borne in terminal spikes and subtended by leafy, alternate, toothless bracts; each head up to 1/6 inch long; male and female flowers borne in the same head.
- **Sepals:** 0.
- **Petals:** 5, united to form a funnel in the male flowers; 2, united to form a tube in the female flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes obovate, flattened, dark purple-brown, resin-dotted, up to 1/10 inch long; fruiting stalks appear in late summer and persist through the fall and sometimes into early winter.



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Field Office Guide to Plant Species

Eastern Red Cedar
Juniperus virginiana L.



- **Family:** Cypress (Cupressaceae)
- **Fruits:** October-November
- **Field Marks:** The eastern red cedar has two kinds of leaves: some of them are scale-like; others are short needles. The blue berries have a whitish covering.
- **Habitat:** Moist to dry soils in old fields, bluff tops, woodlands.
- **Habit:** Tree up to 90 feet tall, usually much smaller; trunk diameter up to 3 feet; crown narrowly pyramidal or broad and rounded.
- **Bark:** Reddish brown to gray, splitting into long shreds.
- **Twigs:** Slender, brown, 4-angled.
- **Leaves:** Of 2 kinds: one type flat, triangular, scale-like, opposite, up to 1/16 inch long; one type short and needle-like, up to 3/4 inch long, blue-green to green to yellow-green.
- **Flowers:** Male and female on different trees; male in small, narrow, yellowish spikes; female in small, ovoid, purplish clusters.
- **Fruits:** Berry-like, spherical, up to 1/4 inch in diameter, dark blue with a whitish covering.
- **Notes:** This species grows in a variety of habitats, but most abundant on alkaline soils. The wood is used for clothing chests, pencils, and fence posts.



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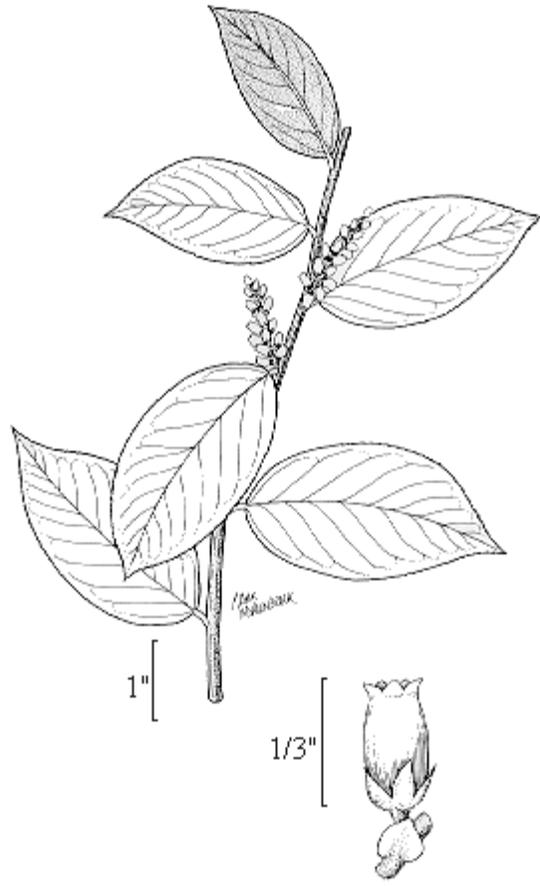
Field Office Guide to Plant Species

Coastal Dog-hobble

Leucothoe axillaris (Lam.) D. Don



- **Family:** Heath (Ericaceae)
- **Flowering:** March-May
- **Field Marks:** This evergreen shrub differs from similar species in the heath family by its more than 15 urn-shaped flowers borne in axillary racemes.
- **Habitat:** Banks, backwaters, and swamps of pineland streams, bayheads, deep ravines, wet woodlands, floodplain forests, bogs, pocosins.
- **Habit:** Branched shrub with arching branchlets, up to 4 1/2 feet tall.
- **Stems:** Slender, arching, green at first, becoming brown, usually short-hairy.
- **Leaves:** Alternate, simple, evergreen, leathery, ovate to elliptic to lanceolate, pointed at the tip, tapering or rounded at the base, dark green on the upper surface, paler on the lower surface, not toothed or fine-toothed, usually short-hairy, at least on the lower surface, up to 5 inches long, up to 2 inches wide; leaf stalks up to 1/2 inch long.
- **Flowers:** Usually more than 15 in axillary racemes, the racemes up to 3 inches long; axis of racemes hairy; flowers urn-shaped, on hairy stalks up to 1/4 inch long.
- **Sepals:** 5, green, united below, about 1/10 inch long.
- **Petals:** 5, white, united to form an urn, 1/4-1/3 inch long.
- **Stamens:** 10, with anthers of the stamens with 4 short, pointed awns.
- **Pistils:** Ovary superior.
- **Fruits:** Spherical but flattened at one or both ends, up to 1/4 inch in diameter, dark brown with light-colored markings; seeds numerous, light brown, shiny.



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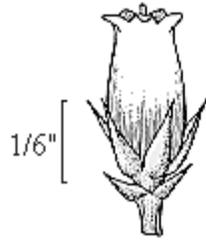
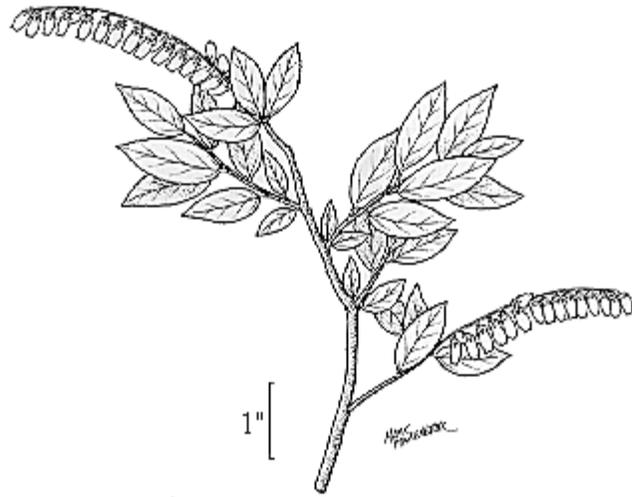
Field Office Guide to Plant Species

Fetter-bush

Leucothoe racemosa (L.) Gray



- **Family:** Heath (Ericaceae)
- **Flowering:** March-June
- **Field Marks:** This *Leucothoe* has deciduous leaves, anthers of the stamens with four short, pointed awns, and wingless seeds.
- **Habitat:** Swamps, stream banks, bayheads, pond margins, bogs, wet thickets, savannas.
- **Habit:** Shrub up to 4 1/2 feet tall.
- **Stems:** Slender, gray to tan, short-hairy.
- **Leaves:** Alternate, simple, deciduous, elliptic to lanceolate, pointed at the tip, rounded or tapering to the base, toothed, short-hairy, at least when young, up to 2 inches long, up to 1 1/2 inches wide; leaf stalks hairy, up to 1/6 inch long.
- **Flowers:** Several in solitary racemes in the axils of the leaves, the racemes arching, up to 4 inches long, with the axes short-hairy.
- **Sepals:** 5, green, united at the base, up to 1/6 inch long, persistent on the fruit.
- **Petals:** 5, white or tinged with pink, united to form an urn, up to 1/3 inch long.
- **Stamens:** 10, with anthers of the stamens with 4 short, pointed awns.
- **Pistils:** Ovary superior.
- **Fruits:** Spherical but flattened at one or both ends, up to 1/4 inch in diameter, dark brown with light-colored markings; seeds numerous, light brown, shiny, wingless.



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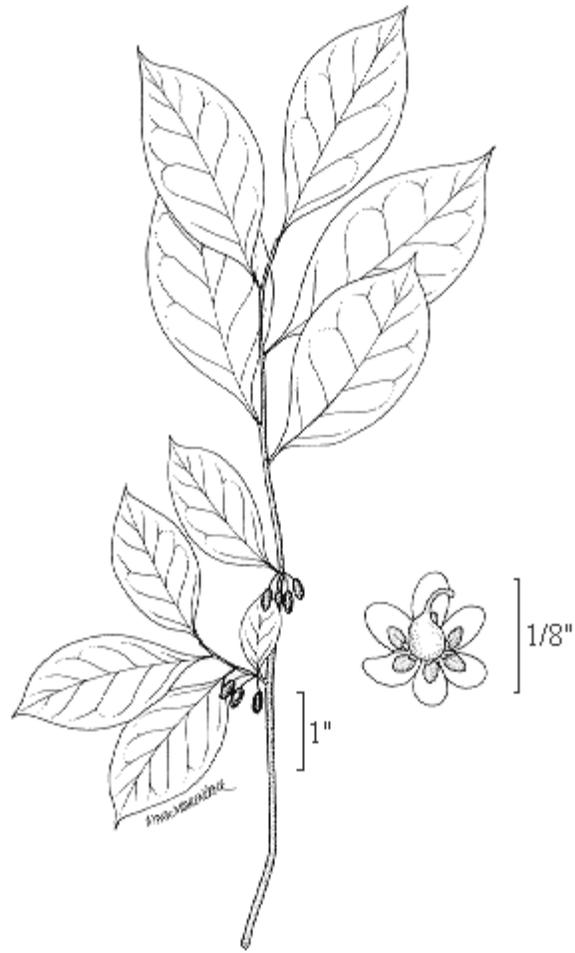
Field Office Guide to Plant Species

Northern Spicebush

Lindera benzoin (L.) Blume



- **Family:** Laurel (Lauraceae)
- **Flowering:** April-May
- **Field Marks:** This species is recognized by the distinctive spicy odor of its crushed leaves and its obovate leaves that taper to the base.
- **Habitat:** Thickets, moist woods, rich woods, along streams, bottomlands.
- **Habit:** Shrub up to 20 feet tall.
- **Stems:** Woody, much branched; twigs usually smooth.
- **Leaves:** Alternate, simple, obovate to oval, pointed at the tip, tapering to the base, without teeth, smooth on the upper surface, smooth or sometimes hairy on the lower surface, up to 5 inches long, up to 2 1/2 inches wide.
- **Flowers:** Male and female flowers borne on separate plants, yellow, up to 1/8 inch across, spicy-scented.
- **Perianth:** 6-parted, yellow, free from each other.
- **Stamens:** 9.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes red, ellipsoid, spicy-scented, up to 1/2 inch long.
- **Notes:** The leaves are often variable in size, with several smaller leaves intermixed with the larger leaves.



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Field Office Guide to Plant Species

Southern Spicebush

Lindera melissifolia (Walter) Blume



- **Family:** Laurel (Lauraceae)
- **Flowering:** March-April
- **Field Marks:** This spicebush has aromatic leaves and red, ellipsoid drupes. It differs from the common spicebush (*Lindera benzoin*) by its narrower leaves rounded at the base and its distinctly veiny leaves, at least as seen from the under surface.
- **Habitat:** Swampy areas, bogs, pond margins, sandy sinkholes.
- **Habit:** Shrub to 6 feet tall.
- **Stems:** Slender, gray to brown, hairy at first, becoming smooth with age.
- **Leaves:** Alternate, simple, aromatic, elliptic to oval to narrowly ovate, pointed at the tip, usually rounded at the base, toothless, usually hairy on both surfaces, conspicuously veiny on the lower surface, up to 4 inches long, up to 1 1/2 inches wide.
- **Flowers:** Male and female flowers borne separately and usually on separate plants, usually before the leaves expand, in small clusters.
- **Sepals:** 3, yellow, free from each other, about 1/10 inch long.
- **Petals:** 3, yellow, free from each other, about 1/10 inch long.
- **Stamens:** Usually 9, sometimes 10 or 11, the innermost with a pair of glands at base.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes ellipsoid, shiny, bright red, up to 1/2 inch long; stalks of drupes up to 1/2 inch long, swollen at the tip.
- **Notes:** This is a Federally threatened species and receives protection under the Endangered Species Act of 1973.



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Carolina Wolf-berry

Lycium carolinianum Walter



- **Family:** Nightshade (Solanaceae)
- **Flowering:** September-October
- **Field Marks:** This shrub usually has spine-tipped branches, succulent leaves up to 1/4 inch wide, and blue or lavender, 4- or 5-parted, tubular flowers.
- **Habitat:** Brackish or saline marshes and shores, mangrove swamps.
- **Habit:** Branched shrub up to 10 feet tall.
- **Stems:** Smooth, stiff, pale, often spine-tipped.
- **Leaves:** Alternate, simple, succulent, narrowly oblanceolate to spatulate, rounded at the tip, tapering to the base, toothless, smooth, up to 1 inch long, up to 1/4 inch wide.
- **Flowers:** Solitary in the axils of the leaves, smooth, slender, on stalks up to 1 inch long.
- **Sepals:** Usually 4, green, united to form a short tube, usually persistent on the fruits, up to 1/4 inch long.
- **Petals:** Usually 4, less commonly 5, blue or lavender, united below to form a tube, the tube up to 1/6 inch long, hairy inside at the top.
- **Stamens:** Usually 4, protruding above the tube of the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Berries ellipsoid to nearly spherical, red, shiny, up to 3/4 inch long.
- **Notes:** There are often tufts of small leaves in the axils of the main leaves.

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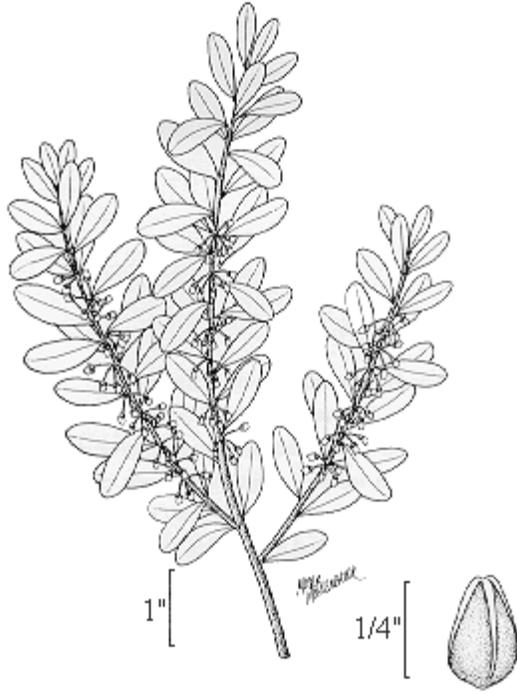
Field Office Guide to Plant Species

Rusty Lyonia

Lyonia ferruginea (Walter) Nutt.



- **Family:** Heath (Ericaceae)
- **Flowering:** April-May
- **Field Marks:** Lyonias differ from other heaths by a combination of urn-shaped flowers with a superior ovary and an inflorescence that is umbel-like, rather than racemose. Rusty lyonia differs from the others in the genus by its evergreen, scale-bearing leaves and its flowers borne on branches of the previous season.
- **Habitat:** Bayheads, pine flatwoods, moist hammocks, sand scrub.
- **Habit:** Colony-forming shrub up to 15 feet tall, with rhizomes.
- **Stems:** Sometimes branched, irregularly spreading, gray or gray-brown, hairy and scaly.
- **Leaves:** Alternate, simple, evergreen, leathery, elliptic to obovate, pointed at the tip, tapering to the base, without teeth, often revolute, densely rusty-scaly when young, usually somewhat hairy and scaly at maturity, with both rusty and gray scales, up to 3 1/2 inches long, up to 1 1/2 inches wide.
- **Flowers:** Several in axillary clusters on branches of the previous season; flower stalks scaly.
- **Sepals:** 5, united at base, scaly on outside, up to 1/10 inch long, persistent on the fruit.
- **Petals:** 5, white, united to form an urn, up to 1/4 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ovoid, hairy at first, scaly, up to 1/4 inch long, with 5 thickened sutures.

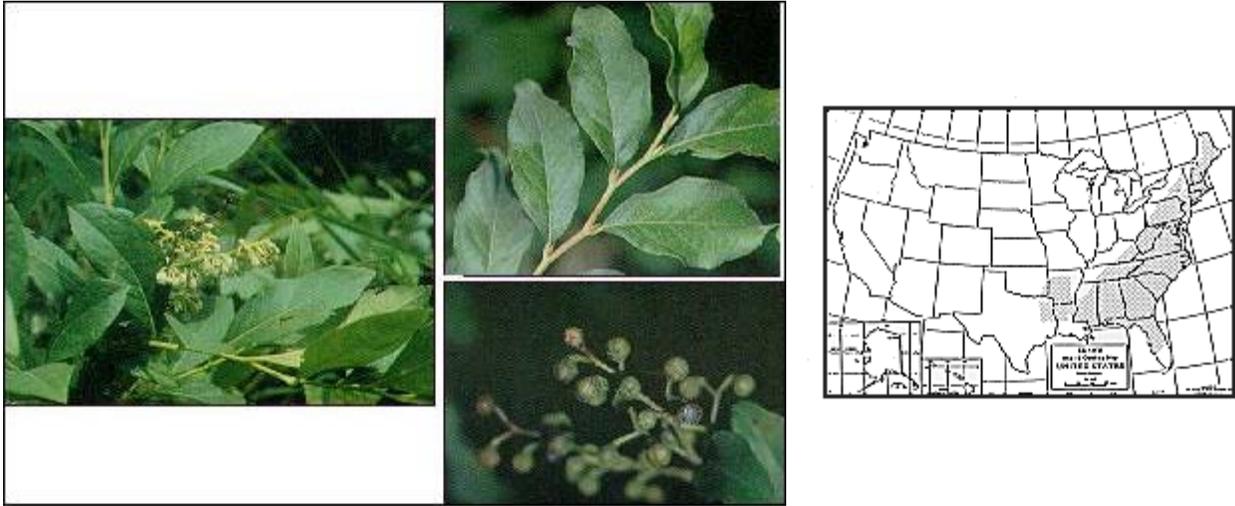


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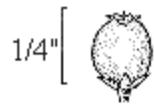
Field Office Guide to Plant Species

Maleberry

Lyonia ligustrina (L.) DC.



- **Family:** Heath (Ericaceae)
- **Flowering:** April-June
- **Field Marks:** This *Lyonia* differs from all others in the genus by its deciduous leaves, its minutely toothed leaf margins, and its spherical flowers less than 1/4 inch long.
- **Habitat:** Low woods, edges of swamps, stream banks, bogs, bays.
- **Habit:** Shrub up to 12 feet tall, with spreading rhizomes.
- **Stems:** Slender, purple-brown at maturity, hairy at first, becoming smooth when older.
- **Leaves:** Alternate, simple, deciduous, elliptic to obovate to lanceolate, rounded or pointed at the tip, tapering to the base, minutely toothed, usually hairy only on the veins of both the upper and lower surface, less commonly hairy on the blades as well, up to 4 inches long, up to 2 inches wide; leaf stalks hairy, up to 1/4 inch long.
- **Flowers:** Solitary or in axillary clusters on branches of the previous season.
- **Sepals:** 5, green, united for about half their length, very tiny, hairy.
- **Petals:** 5, white or pinkish tinged, nearly spherical, united, up to 1/4 inch long.
- **Stamens:** 10, not exerted beyond the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules spherical, sometimes flattened at the top, sparsely short-hairy, brown, with paler sutures; seeds numerous, pale, often curved.

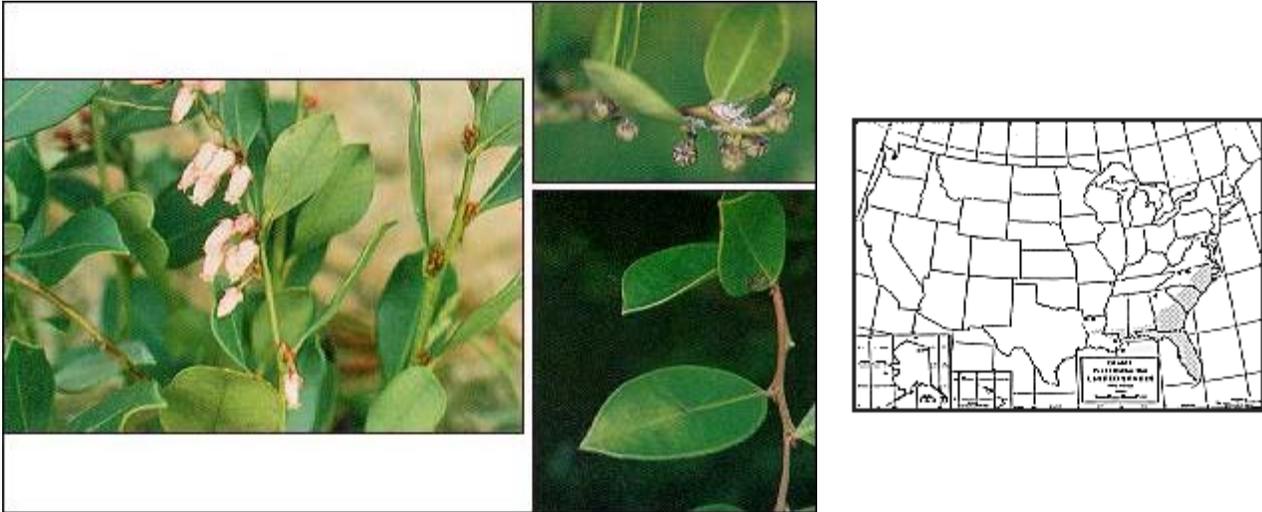


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Field Office Guide to Plant Species

Fetter-bush

Lyonia lucida (Lam.) K. Koch



- **Family:** Heath (Ericaceae)
- **Flowering:** April-June
- **Field Marks:** This evergreen *Lyonia* is distinguished by its smooth lower leaf surfaces.
- **Habitat:** Swamps, bogs, bayheads, low pinelands, savannas, flatwoods, wet woodlands, pocosins.
- **Habit:** Often colony-forming shrub up to 12 feet tall, with rhizomes.
- **Stems:** Slender, green to gray, strongly angled.
- **Leaves:** Alternate, simple, evergreen, shiny, leathery, elliptic to obovate, pointed at the tip, tapering to the base, without teeth, smooth, dark green above, paler and minutely dotted beneath, up to 4 inches long, up to 2 inches wide.
- **Flowers:** Several in axillary clusters on branches of the previous season; flower stalks up to 1/2 inch long, sparsely hairy.
- **Sepals:** 5, green, united at base, up to 1/3 inch long, sometimes persistent in fruit.
- **Petals:** 5, pink varying to white or red, united to form a short cylinder, 1/3-1/2 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ovoid to nearly spherical, brown, with pale sutures, up to 1/4 inch long.



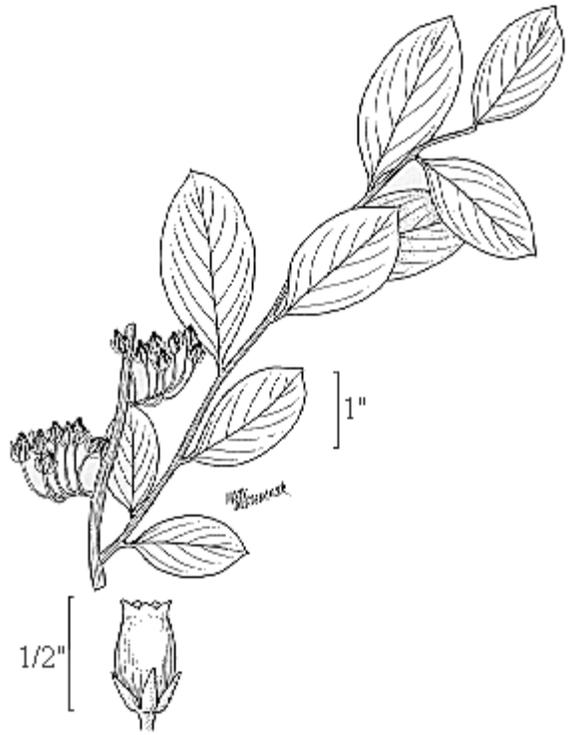
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Field Office Guide to Plant Species

Piedmont Stagger-bush
Lyonia mariana (L.) D. Don



- **Family:** Heath (Ericaceae)
- **Flowering:** April-May
- **Field Marks:** The distinguishing features of this *Lyonia* are its deciduous leaves, angled stems, and flowers 1/3-1/2 inch long.
- **Habitat:** Bayheads, savannas, flatwoods, bogs, cypress ponds.
- **Habit:** Colony-forming shrub up to 6 feet tall, with rhizomes.
- **Stems:** Slender, angled, branched, smooth.
- **Leaves:** Alternate, simple, deciduous, elliptic to lance-elliptic, rounded or pointed at the tip, tapering to the base, toothless, smooth on the upper surface, smooth or hairy on the veins on the lower surface, up to 4 inches long, up to 2 inches wide.
- **Flowers:** Several in nodding, axillary clusters on the previous season's branches.
- **Sepals:** 5, purple-red, united at base, up to 1/3 inch long, persistent on the fruit.
- **Petals:** 5, white or pinkish, united into a tube 1/3-1/2 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ovoid to conical, up to 1/4 inch long, usually smooth, brown with pale sutures; seeds many, tiny, pale brown.



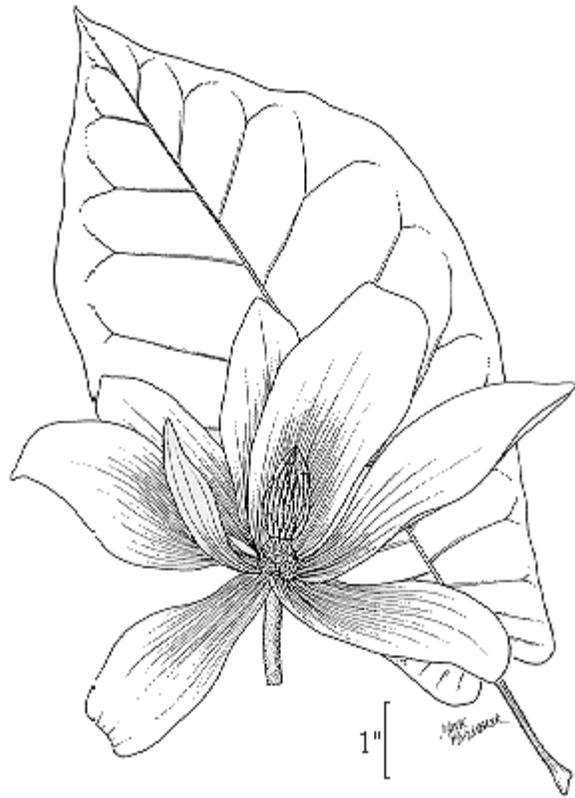
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Field Office Guide to Plant Species

Fraser's Magnolia *Magnolia fraseri* Walter



- **Family:** Magnolia (Magnoliaceae)
- **Flowering:** April-May
- **Field Marks:** This magnolia has auriculate leaf bases and 6-12 white or yellow petals 3-5 inches long.
- **Habitat:** Wooded bluffs, rich woods, swamps, along streams.
- **Habit:** Tree up to 50 feet tall; trunk diameter up to 2 feet; crown widely spreading.
- **Bark:** Dark brown, smooth, but eventually breaking up into small scales.
- **Twigs:** Red-brown and shiny at first, becoming gray, with tiny pale lenticels.
- **Leaves:** Alternate but crowded at the tip of the branches so as to appear whorled, simple, deciduous, oblong to obovate, pointed or rounded at the tip, auriculate at the base, without teeth, smooth, up to 20 inches long, up to 8 inches wide; leaf stalks smooth, up to 5 inches long.
- **Flowers:** Solitary, up to 10 inches across, fragrant; flower stalks stout, up to 1 1/2 inches long, glaucous.
- **Sepals:** 3, petal-like, free from each other, up to 5 inches long, falling away as the flower opens.
- **Petals:** 6-12, white or yellow, free from each other, up to 4 inches long.
- **Stamens:** Numerous.
- **Pistils:** Several, free from each other, with superior ovaries.
- **Fruits:** Many follicles crowded together into a cone, rose red, up to 4 inches long, smooth; seeds fleshy, up to 1/3 inch long.
- **Notes:** The large flowers and leaves account for the popularity of this species as an ornamental.



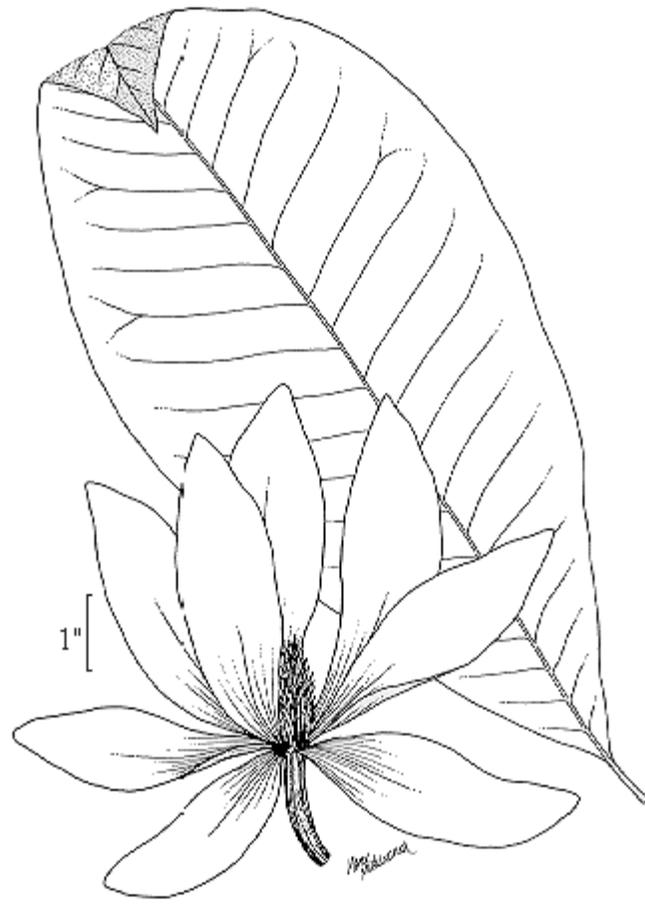
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Field Office Guide to Plant Species

Umbrella Magnolia *Magnolia tripetala* (L.) L.



- **Family:** Magnolia (Magnoliaceae)
- **Flowering:** April-May
- **Field Marks:** This species differs from all other magnolias by its deciduous leaves that are crowded at the ends of the branches, its leaves that taper to the base, white flowers, and long, pointed, black winter buds.
- **Habitat:** Wooded slopes, rich woods, ravines, stream banks, edges of swamps.
- **Habit:** Tree up to 40 feet tall; trunk diameter up to 2 feet; crown wide-spreading.
- **Bark:** Light gray, smooth.
- **Twigs:** Green to reddish at first, becoming brown or gray, with many tiny pale lenticels.
- **Leaves:** Alternate but crowded at the tips of the branches so as to appear whorled, simple, deciduous, obovate to lanceolate, pointed at the tip, tapering to the base, without teeth, smooth at maturity, up to 20 inches long, up to 10 inches wide; leaf stalks stout, up to 1 1/2 inches long.
- **Flowers:** Solitary, up to 10 inches across, with a very disagreeable odor up close; flower stalks stout, up to 2 1/2 inches long.
- **Sepals:** 3, light green, free from each other, up to 6 inches long, turned downward.
- **Petals:** 6 or 9, white, free from each other, leathery, ovate, up to 5 inches long.
- **Stamens:** Numerous.
- **Pistils:** Several, free from each other, with superior ovaries.
- **Fruits:** Many follicles crowded together into a cone, rose-colored, up to 4 inches long; seeds fleshy, up to 1/2 inch long.
- **Notes:** This species is grown as an ornamental.



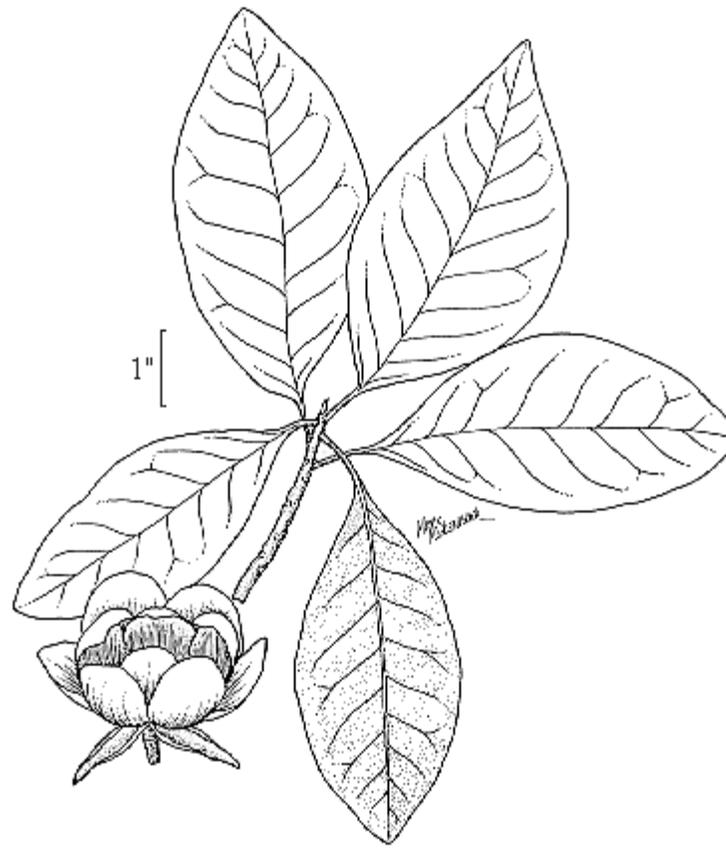
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Sweetbay Magnolia *Magnolia virginiana* L.



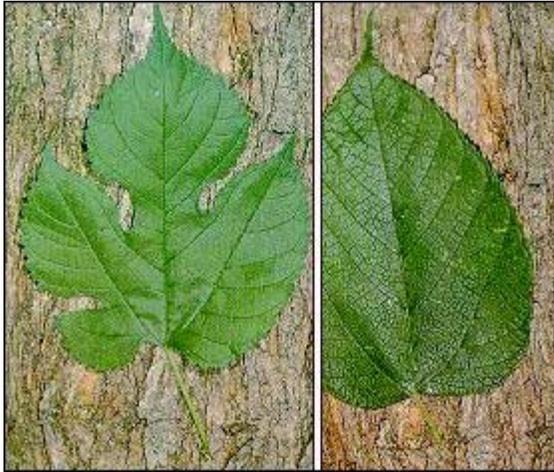
- **Family:** Magnolia (Magnoliaceae)
- **Flowering:** April-July
- **Field Marks:** The distinguishing characteristics of this magnolia are the leaves that are not clustered at the tip of the branches, the leaves tapering to the base, and the creamy white flowers.
- **Habitat:** Swamps, bottomlands, bayheads, wooded slopes, along streams, pocosins, savannas.
- **Habit:** Tree up to 90 feet tall; trunk up to 3 feet in diameter; crown usually round-topped.
- **Bark:** Gray, smooth at first.
- **Twigs:** Green and hairy when young, becoming reddish and then brown and smooth at maturity, with many pale lenticels.
- **Leaves:** Alternate, simple, deciduous or evergreen, leathery, elliptic, rounded or pointed at the tip, tapering to the base, without teeth, silvery-silky when young, eventually becoming smooth on the upper surface, glaucous, hairy on the lower surface, up to 6 inches long, up to 3 inches wide; leaf stalks slender, up to 3/4 inch long.
- **Flowers:** Solitary, up to 3 inches across, creamy white, fragrant; flower stalks slender, smooth, up to 3/4 inch long.
- **Sepals:** 3, free from each other, turned downward, falling away as the flower opens.
- **Petals:** 9-12, creamy white, free from each other, up to 1 1/2 inches long.
- **Stamens:** Numerous.
- **Pistils:** Several, free from each other, with superior ovaries.
- **Fruits:** Many follicles crowded together into a cone, dark red, up to 2 inches long, smooth; seeds flattened, up to 1/4 inch long.



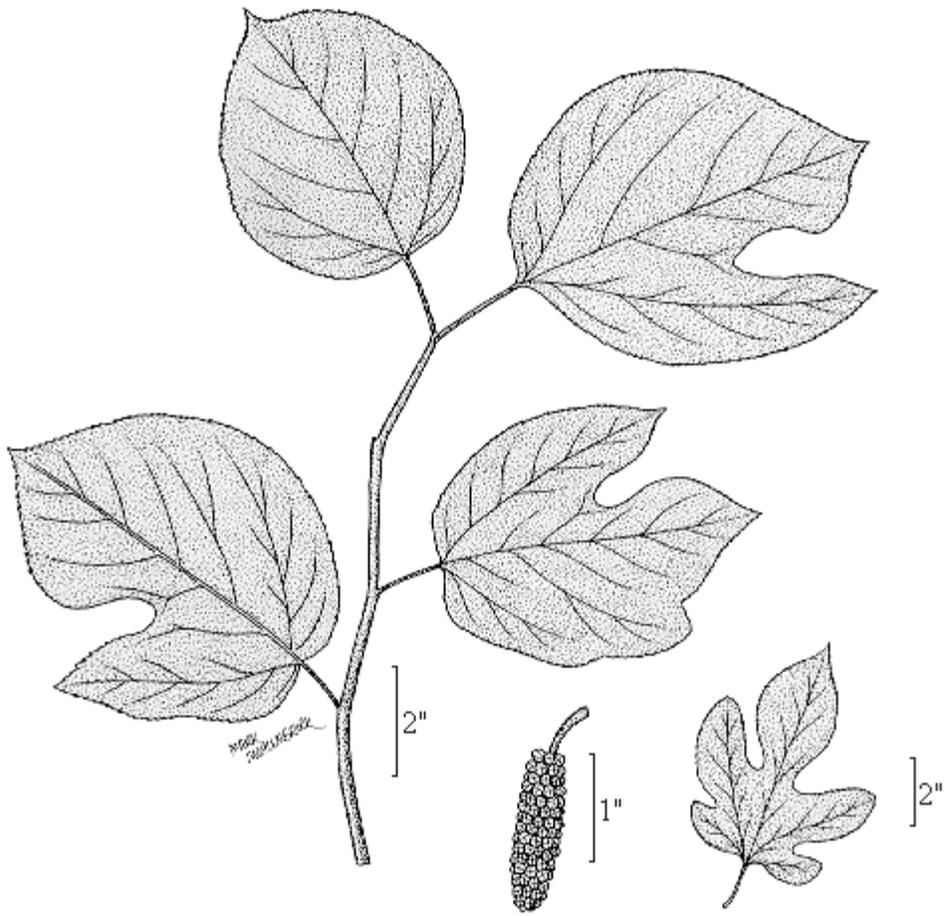
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Field Office Guide to Plant Species

Red Mulberry *Morus rubra* L.



- **Family:** Mulberry (Moraceae)
- **Flowering:** April-May
- **Field Marks:** Red mulberry differs from white mulberry by having the lower surface of the leaves hairy between the veins.
- **Habitat:** Upland woods, lowland woods, bottomlands, old fields, roadsides, fencerows.
- **Habit:** Tree up to 66 feet tall; trunk diameter up to 4 1/2 feet; crown broadly rounded.
- **Bark:** Dark brown, divided into long, scaly plates.
- **Twigs:** Slender, smooth or sometimes hairy, reddish brown to dark brown, more or less zigzag.
- **Leaves:** Alternate, simple, ovate, pointed at the tip, more or less heart-shaped at the base, up to 8 inches long and sometimes nearly as wide, coarsely toothed, sometimes 2-lobed, sometimes 3- or 5-lobed, often unlobed, usually rough to the touch, hairy between the veins on the lower surface; latex present.
- **Flowers:** Male and female flowers borne separately, either on the same or on different plants, appearing as the leaves unfold; male flowers crowded into narrow green clusters up to 2 inches long; female flowers crowded into short, thick spikes up to 1 inch long.
- **Sepals:** 4, green, united, small.
- **Petals:** 0.
- **Stamens:** 4.
- **Pistils:** Ovary superior; stigmas 2
- **Fruits:** Fleshy, up to 1 1/2 inches long, sweet, juicy, at first red, becoming purple or nearly black, rarely pale.
- **Notes:** The fruits are edible. The wood is used for fence posts and barrels.



Southern Wetland Flora

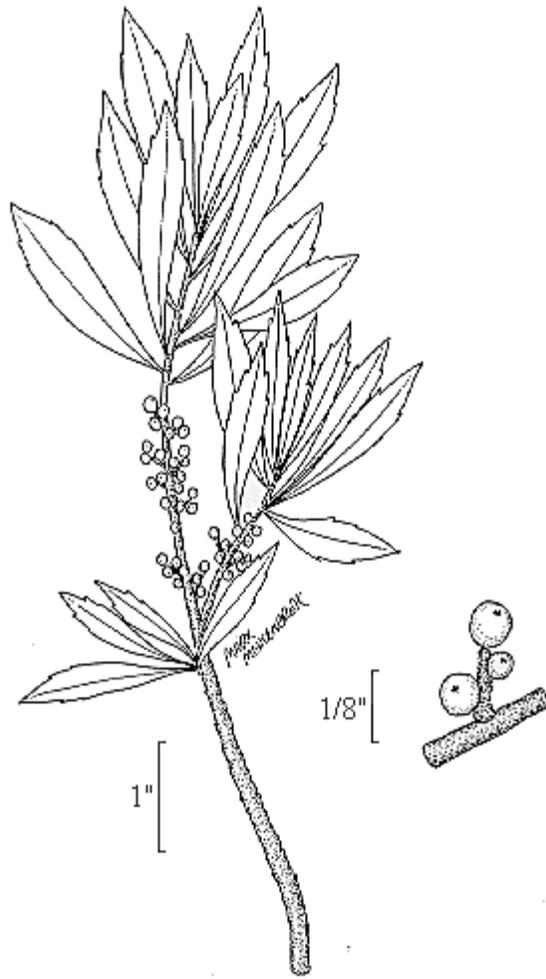
Field Office Guide to Plant Species

Southern Bayberry

Myrica cerifera L.



- **Family:** Myrtle (Myrtaceae)
- **Flowering:** April
- **Field Marks:** This species differs from others in the genus by its fruits covered with white wax and its pointed, oblanceolate leaves.
- **Habitat:** Flatwoods, swamps, low pinelands, wet prairies, bogs, bayheads, low hammocks, pine savannas, wet hammocks, fencerows.
- **Habit:** Shrub or small tree up to 30 feet tall.
- **Stems:** Woody, smooth, gray, sometimes waxy.
- **Leaves:** Alternate, simple, evergreen, oblanceolate, pointed at the tip, tapering to the base, toothless or with an occasional tooth, smooth or sometimes hairy on the lower surface, fragrant when crushed, brown-dotted, up to 3 inches long, up to 3/4 inch wide.
- **Flowers:** Male and female flowers borne separately, either in the axils of the leaves or on old wood; male flowers in ovoid spikes, the spikes up to 1/2 inch long; female flowers in narrow, interrupted spikes, the spikes up to 1/2 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 4-8.
- **Pistils:** Ovary superior; styles 2.
- **Fruits:** Drupes spherical, warty-looking, covered with a white wax, up to 1/8 inch in diameter.
- **Notes:** The heavy wax on the fruits is used in candle-making. The leaves are very variable on some plants.



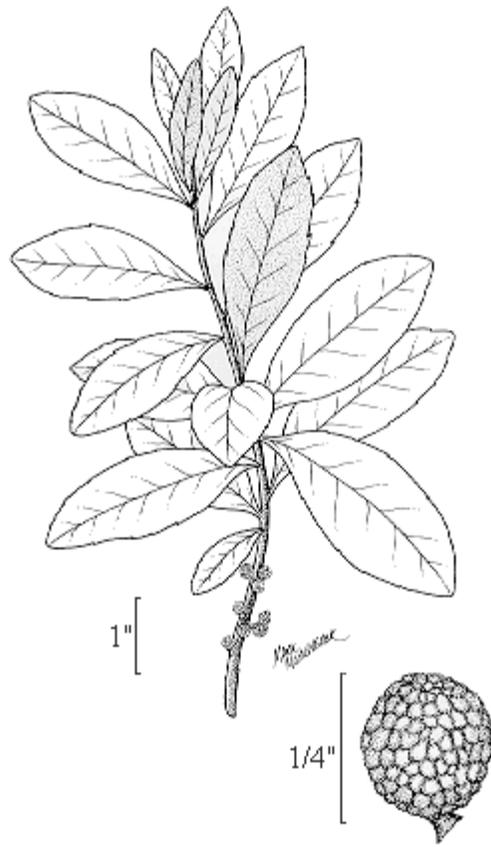
Southern Wetland Flora

Field Office Guide to Plant Species

Evergreen Bayberry *Myrica heterophylla* Raf.



- **Family:** Myrtle (Myricaceae)
- **Flowering:** March-April
- **Field Marks:** This bayberry differs from all others by its aromatic leaves that are dotted only on their lower surface.
- **Habitat:** Bogs, low pinelands, flatwoods, bays, savannas, pocosins.
- **Habit:** Shrub up to 9 feet tall.
- **Stems:** Slender, dark brown to nearly black, sometimes gray, hairy when young, usually becoming rather smooth at maturity.
- **Leaves:** Alternate, simple, evergreen, leathery, aromatic, elliptic to obovate, rounded or pointed at the tip, tapering to the base, with or without teeth, smooth or sparsely hairy on the upper surface, usually sparsely hairy and dotted on the lower surface, up to 4 1/2 inches long, up to 1 1/2 inches wide; leaf stalks up to 1/2 inch long.
- **Flowers:** Male and female flowers borne separately, on separate plants, crowded in short spikes.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 2-20.
- **Pistils:** Ovary superior; stigmas 2.
- **Fruits:** Drupes spherical to ovoid, up to 1/4 inch in diameter, usually covered with white or grayish wax.
- **Notes:** This species is also known as swamp candleberry. The leaf shape and degree of leaf tothing are variable. The wax from the berries was added to candle wax during colonial times to give candies a pleasant odor when lit.



Southern Wetland Flora

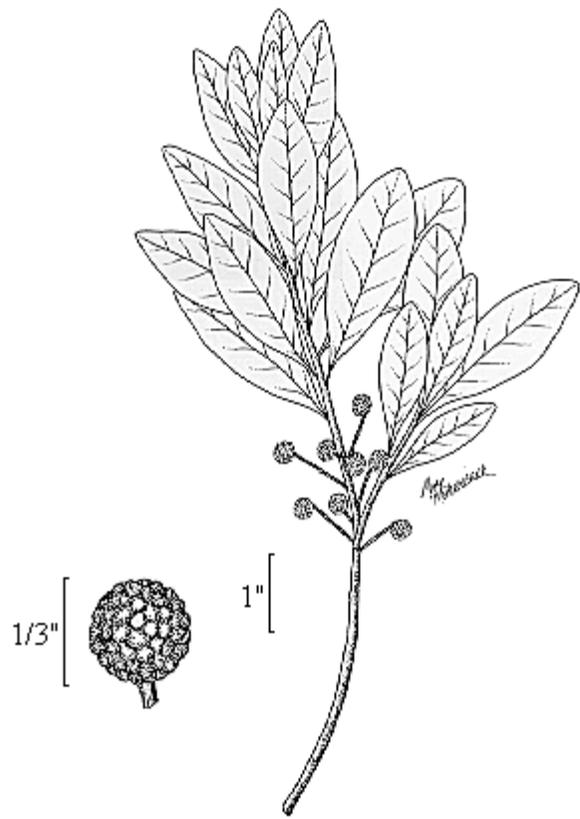
Field Office Guide to Plant Species

Odorless Bayberry

Myrica inodora W. Bartram



- **Family:** Myrtle (Myricaceae)
- **Flowering:** March-April
- **Field Marks:** This is the only bayberry that does not have aromatic leaves when crushed, lacks teeth along the margins of the leaves, and is dotted on both the upper and lower surfaces.
- **Habitat:** Swamps, along streams, bayheads, bogs, flatwoods, cypress ponds.
- **Habit:** Shrub or small tree up to 20 feet tall.
- **Stems:** Slender, rusty and scaly when young, becoming gray and smooth at maturity.
- **Leaves:** Alternate, simple, evergreen, leathery, not aromatic, oblanceolate to elliptic to obovate, rounded at the tip, tapering to the base, without teeth, revolute, smooth but dotted on both surfaces, up to 3 1/2 inches long, up to 1 1/2 inches wide.
- **Flowers:** Male and female flowers borne separately on separate plants, crowded in rounded head-like spikes.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 2-20.
- **Pistils:** Ovary superior; stigmas 2.
- **Fruits:** Drupes oblongoid to ovoid, up to 1/3 inch in diameter, warty, dark brown to black, sometimes with a sparse white wax between the warts.



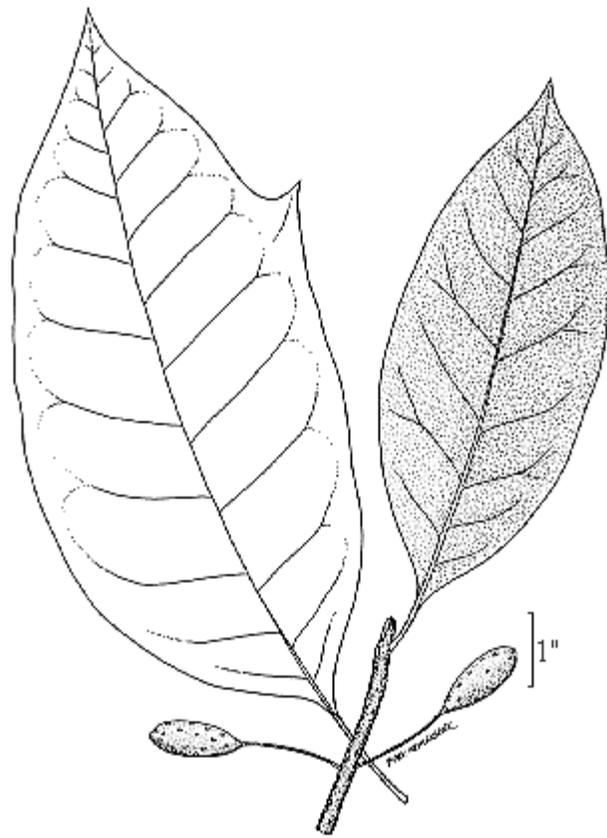
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Field Office Guide to Plant Species

Water Tupelo *Nyssa aquatica* L.



- **Family:** Nyssa (Nyssaceae)
- **Flowering:** April-May
- **Field Marks:** Some of the large, alternate leaves have an occasional tooth along the otherwise toothless margins. The purple, elongated, fleshy fruits usually have pale speckles.
- **Habitat:** Swamps, wet woods, and riparian habitats.
- **Habit:** Tree up to 100 feet tall, with trunk diameter up to 4 feet; crown spreading; trunk swollen at the base becoming 10 to 12 feet in diameter.
- **Bark:** Light or dark gray, breaking up into thin scales.
- **Twigs:** Stout, more or less angular, gray or brown, smooth; with partitioned pith.
- **Leaves:** Alternate, simple, ovate to oblong, pointed at the tip, rounded or slightly heart-shaped at the base, with an occasional coarse tooth or toothless, smooth or somewhat hairy on the upper surface, paler and soft-hairy on the lower surface, up to 8 inches long and up to 4 inches wide, on hairy stalks up to 3 inches long.
- **Flowers:** Male and female borne on separate trees, appearing as the leaves begin to unfold, greenish, small, the male in spherical clusters, the female solitary on long stalks.
- **Sepals:** 5, tiny, green, united below.
- **Petals:** Usually none.
- **Stamens:** 5-15.
- **Pistils:** Ovary inferior.
- **Fruits:** Drupes oblong, dark purple with pale speckles, bitter, up to 1 1/2 inches long, 1-seeded; seed flattened and longitudinally ridged.
- **Notes:** The wood of water tupelo is used for rough lumber, veneer core stock, woodenware, and paper pulp. Trees with swollen bases occur in swamps or regularly flooded areas.



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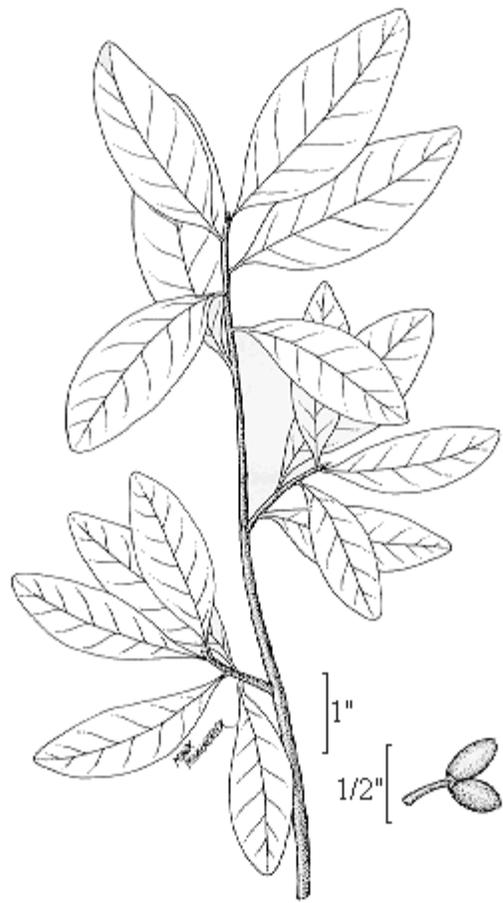
Field Office Guide to Plant Species

Swamp Tupelo

Nyssa sylvatica Marshall var. *biflora* (Walt.) Sarg.



- **Family:** Nyssa (Nyssaceae)
- **Flowering:** April-June
- **Field Marks:** The plant differs from the similar black gum (*Nyssa sylvatica*) by its thicker, stiffer, round-tipped leaves.
- **Habitat:** Bogs, pocosins, wet woods, swamps, flatwoods, savannas, shallow coastal ponds and lakes; brackish swamps and sloughs.
- **Habit:** Tree to 100 feet tall; trunk diameter up to 3 feet, often swollen at the base; crown rounded.
- **Bark:** Brown to black.
- **Twigs:** Red-brown to gray, smooth.
- **Leaves:** Alternate, simple, oblanceolate, rounded at the tip, tapering to the base, without teeth, smooth or with some hairs on the lower surface, up to 5 inches long, up to 2 inches wide.
- **Flowers:** Male and female borne on separate trees, appearing after the leaves begin to unfold; the male in spherical clusters, the female 1-few on long stalks arising from the leaf axils.
- **Sepals:** 5, tiny, green, united below.
- **Petals:** Usually none.
- **Stamens:** 5-15.
- **Pistils:** Ovary inferior.
- **Fruits:** Drupes ellipsoid, dark blue or black, up to 2/3 inch long, 1-seeded.
- **Notes:** This tree is sometimes considered to be a distinct species. It frequently grows in standing water. Leaves of seedling plants may have an occasional tooth.



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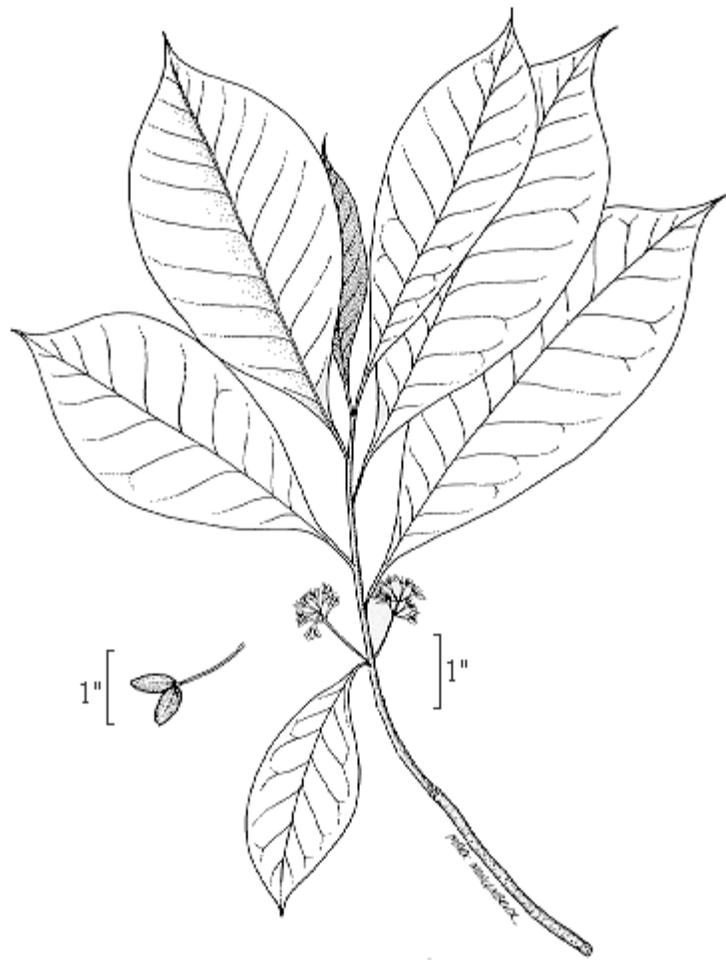
Field Office Guide to Plant Species

Black Gum

Nyssa sylvatica Marshall



- **Family:** Nyssa (Nyssaceae)
- **Flowering:** April-June
- **Field Marks:** The abruptly pointed leaves, which rarely have teeth on the margins, appear crowded at the tip of the branchlets and serve to distinguish this species.
- **Habitat:** Low woods, dry upland woods.
- **Habit:** Tree to 100 feet tall, with a trunk diameter up to 3 feet; crown rounded.
- **Bark:** Brown to black, often broken up into squarish blocks.
- **Twigs:** Red-brown, smooth, with partitioned pith.
- **Leaves:** Alternate (although seemingly almost whorled at the tip of the branchlets), simple, obovate, abruptly pointed at the tip, tapering to the base, sometimes with an erratic tooth along the edges, otherwise toothless, smooth and shiny on the upper surface, paler and sometimes hairy on the lower surface, up to 5 inches long, up to 2 inches wide, on stalks 1-1 1/2 inches long.
- **Flowers:** Male and female borne on separate trees, appearing after the leaves begin to unfold, the male in spherical clusters, the female 1-several on long stalks arising from the leaf axils.
- **Sepals:** 5, tiny, green, united below.
- **Petals:** Usually none.
- **Stamens:** 5-15.
- **Pistils:** Ovary inferior.
- **Fruits:** Drupes oval, dark blue, bitter, up to 1/2 inch long, 1-seeded; seed indistinctly ribbed.
- **Notes:** The leaves of this tree are the first to turn red during the year.



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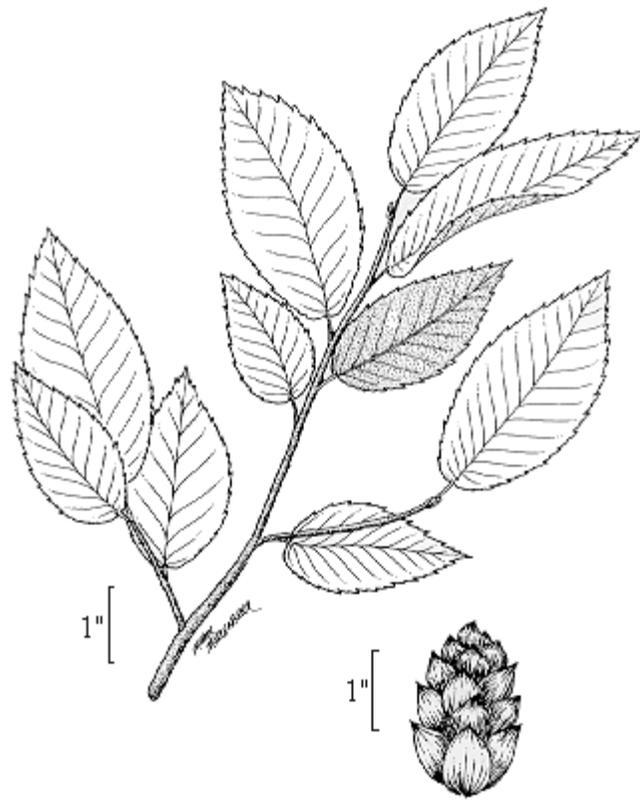
Field Office Guide to Plant Species

Eastern Hop-hornbeam

Ostrya virginiana (Mill.) K. Koch



- **Family:** Birch (Betulaceae)
- **Flowering:** April-May
- **Field Marks:** This species differs from similar-appearing species by its scaly bark and inflated fruits.
- **Habitat:** Moist or dry soils in woods, rocky slopes, hammocks, steep ravines.
- **Habit:** This understory tree up to 35 feet tall; trunk diameter up to 1 foot; crown usually rounded.
- **Bark:** Brown and scaly at maturity.
- **Twigs:** Slender, reddish brown, sometimes hairy.
- **Leaves:** Alternate, simple, elliptic to ovate, pointed at the tip, rounded or tapering to the base, finely doubly toothed, slightly hairy on the lower surface, up to 5 inches long.
- **Flowers:** Male and female borne separately but on the same tree; male flowers crowded into drooping spikes through the winter; female flowers in small clusters.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 2-10.
- **Pistils:** Ovary inferior, subtended and later enclosed by a tubular bract.
- **Fruits:** Nutlets enclosed by an inflated bladder, crowded together in a cluster resembling hops.
- **Notes:** This species is often known as ironwood. The hard wood has been used for tool handles.



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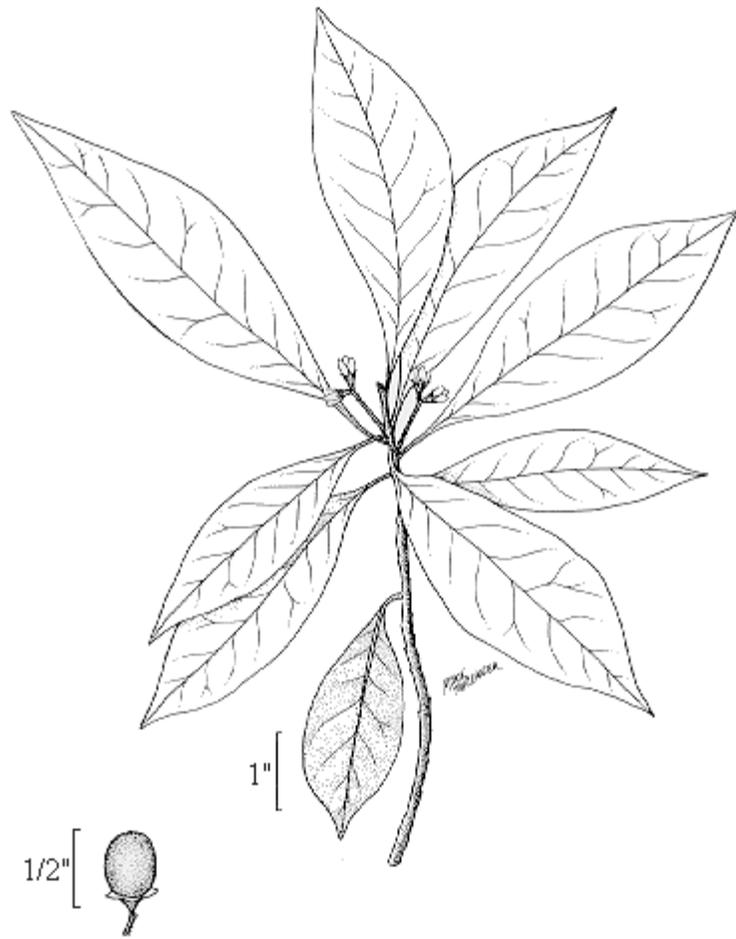
Field Office Guide to Plant Species

Red Bay

Persea borbonia (L.) Spreng.



- **Family:** Laurel (Lauraceae)
- **Flowering:** May-June
- **Field Marks:** This evergreen tree may be distinguished by its smooth leaves, its dark blue or black, spherical berries, and its hairy sepals and petals.
- **Habitat:** Moist to dry hammocks, woods, steep ravines, swamps, bayheads, bogs, low woods, sandy areas.
- **Habit:** Tree or shrub up to 65 feet tall; trunk diameter up to 3 feet; crown broad.
- **Bark:** Brownish gray, roughened.
- **Twigs:** Slender, smooth or sparsely hairy.
- **Leaves:** Alternate, simple, evergreen, very aromatic when crushed, elliptic to lance-elliptic, pointed or rounded at the tip, tapering to the base, without teeth, smooth on the upper surface, smooth or sparsely hairy on the lower surface, paler on the lower surface, up to 5 inches long, up to 2 1/2 inches wide.
- **Flowers:** Few in small, axillary cymes; flower stalks hairy.
- **Sepals:** 3, free from each other, hairy, about 1/10 inch long.
- **Petals:** 3, free from each other, hairy, about 1/5 inch long.
- **Stamens:** 9-12.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes spherical, dark blue or black, up to 1/2 inch in diameter; stalks of fruit red.
- **Notes:** The leaves of this tree are used in cooking as "bay leaves."



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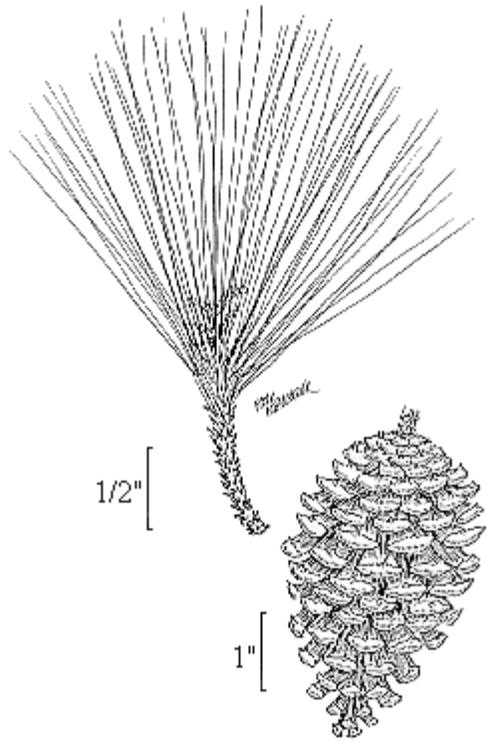
Field Office Guide to Plant Species

Slash Pine

Pinus elliottii Engelm.



- **Family:** Pine (Pinaceae)
- **Pollen Shed:** January-February
- **Field Marks:** This pine has needles 6 inches long or longer and in clusters of 2's and 3's. The winter buds are brown, while those of the similar longleaf pine (*Pinus palustris*) are silvery tinged.
- **Habitat:** Flatwoods, low thickets, bayheads, shallow ponds, coastal sands.
- **Habit:** Tree up to 120 feet tall; trunk diameter up to 3 feet.
- **Bark:** Breaking into irregularly shaped plates.
- **Twigs:** Rather stout, roughened by the persistent scale leaves; winter buds brown, up to 3/4 inch in diameter.
- **Leaves:** Needles in clusters of 2's or 3's, rather stiff, the mature ones 6 inches long or longer.
- **Male Cones:** Deep purple, up to 3 inches long, up to 1/2 inch in diameter.
- **Female Cones:** Reddish brown, shiny, 2 1/2 -5 inches long, with a slender prickle on the scale.
- **Notes:** This pine is commonly planted in plantations, far from its original range.



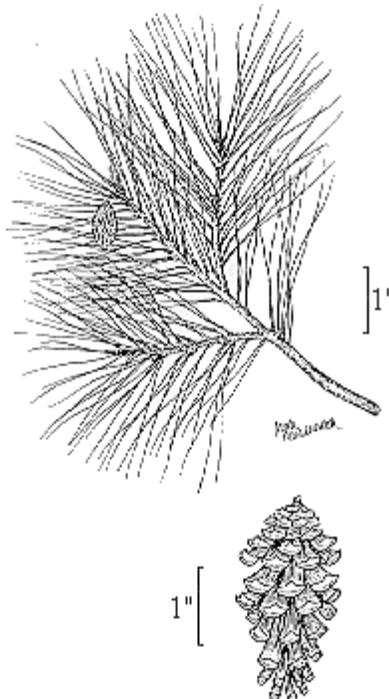
Southern Wetland Flora

Field Office Guide to Plant Species

Spruce Pine *Pinus glabra* Walter



- **Family:** Pine (Pinaceae)
- **Pollen Shed:** March-April
- **Field Marks:** This pine has needles 2 1/2-4 inches long, always in clusters of 2's, and twisted.
- **Habitat:** Moist woods, floodplains, moist hammocks, shaded ravines, ravines, bluffs.
- **Habit:** Tree up to 120 feet tall; trunk diameter up to 2 1/2 feet.
- **Bark:** Becoming ridged and furrowed, brown or gray.
- **Twigs:** Slender, more or less smooth; winter buds grayish or brown, about 1/10 inch in diameter.
- **Leaves:** Needles in clusters of 2's, dark green, twisted, 2 1/2-4 inches long.
- **Male Cones:** Purplish yellow, up to 1/3 inch long, up to 1/5 inch in diameter.
- **Female Cones:** Brown, becoming gray when old, 1 1/2-3 inches long with a small, straight prickle on the scale.
- **Notes:** The bark of this pine is totally different from other pines because of its small, narrow plates. It is also different from most other pines because of its tolerance to flooding, being almost like pond pine in this respect.



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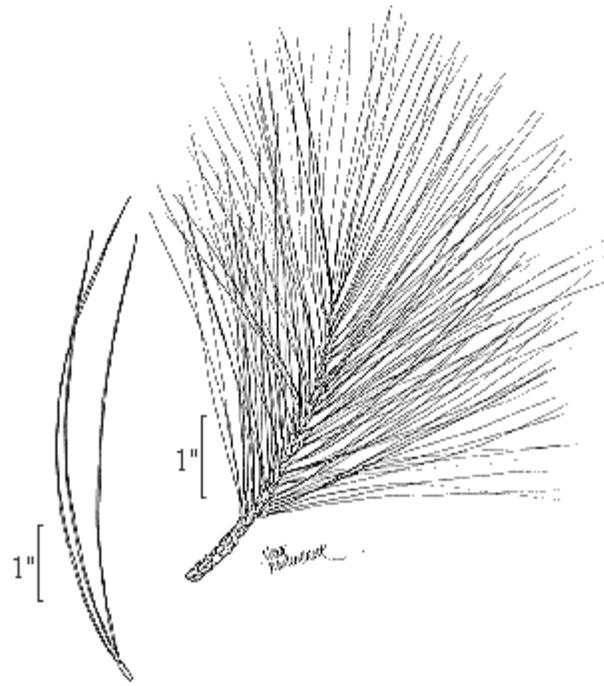
Field Office Guide to Plant Species

Pond Pine

Pinus serotina Michx.



- **Family:** Pine (Pinaceae)
- **Pollen Shed:** April
- **Field Marks:** The needles of this pine are mostly in groups of 3 and vary from 3 to 8 inches long. This species differs from loblolly pine (*Pinus taeda*) by its shorter cones up to 3 1/2 inches long.
- **Habitat:** Acid swamps, shallow ponds, boggy depressions in pinelands, flatwoods.
- **Habit:** Tree up to 75 feet tall; trunk diameter up to 2 feet.
- **Bark:** Breaking into narrow plates.
- **Twigs:** Rather stout, roughened by the persistent scale leaves; winter buds reddish brown, up to 1/4 inch in diameter.
- **Leaves:** Needles mostly in clusters of 3's, less commonly in 2's or 4's, flexible, 3-8 inches long.
- **Male Cones:** Greenish yellow to rose-tinged, up to 1 3/4 inches long, up to 1/3 inch in diameter.
- **Female Cones:** Dark brown, 2-3 inches long, with a sharp prickle on the scale.
- **Notes:** If the foliage of this tree has been killed by fire, it will resprout needles from the trunk and limbs. The cones are readily opened by fire and persist on the tree for long periods of time. This is the most water-tolerant of all of the southern pines.



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Field Office Guide to Plant Species

Planer-tree

Planera aquatica Walter



- **Family:** Elm (Ulmaceae)
- **Flowering:** March-April
- **Field Marks:** This species has leaves that resemble the leaves of elms in the genus *Ulmus*, but the edges are only singly toothed. The fruits are nut-like and not winged.
- **Habitat:** Swamps, low woods, bottomlands, sand and gravel bars.
- **Habit:** Tree to 50 feet tall; trunk diameter up to 18 inches; crown broadly rounded.
- **Bark:** Gray or pale brown, but black if flooded for long periods, smooth at first, but later splitting into large scales which expose the reddish brown inner bark.
- **Twigs:** Slender, reddish brown to gray, smooth or sparsely hairy.
- **Leaves:** Alternate, simple, lanceolate to lanceolate-ovate, pointed at the tip, tapering to the usually asymmetrical base, singly toothed, smooth on the upper surface, smooth or slightly hairy on the lower surface, up to 3 inches long.
- **Flowers:** Male and female usually borne separately on the same tree; male flowers in small clusters on last year's twigs; female flowers in the axils of the leaves.
- **Sepals:** 4-5, small, united below.
- **Petals:** 0.
- **Stamens:** 4-5.
- **Pistils:** Ovary superior, on a short stalk.
- **Fruits:** Nut-like, ovoid, soft prickly, up to 1/4 inch long.
- **Notes:** Some of the flowers may have both stamens and pistils. When they do, there is usually only 1 stamen. This low tree is found as an understory tree of swamps and other areas that are frequently inundated. It can withstand long periods of flooding. This species is often called water elm.



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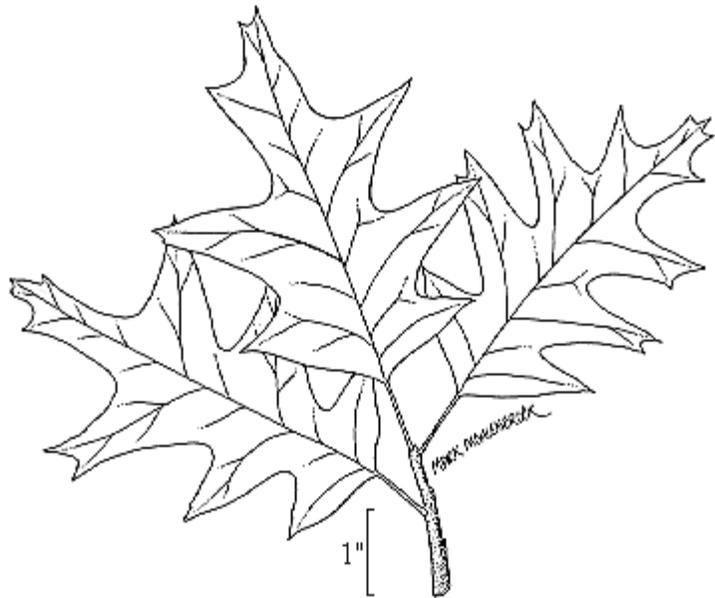
Field Office Guide to Plant Species

Cherry-bark Oak

Quercus falcata Michx. var. *pagodifolia* Ell.



- **Family:** Beech (Fagaceae)
- **Flowering:** April-May
- **Field Marks:** This species has star-shaped hairs on the lower surface of the leaves. It differs from southern red oak (*Quercus falcata*) by having more lobes which are not as curved and which are cut no more than half-way to the middle. The base of the leaf is not U-shaped.
- **Habitat:** Low woods, rich alluvial woods, floodplains, bottomlands.
- **Habit:** Tree up to 100 feet tall; trunk diameter up to 4 feet; crown broadly rounded.
- **Bark:** Dark gray, broken by narrow ridges into small scales.
- **Twigs:** Rather stout, reddish brown to gray, usually hairy when young, becoming smooth.
- **Leaves:** Alternate, simple, pinnately divided into 5-11 pointed lobes, the sinuses cut no more than half-way to the midvein, smooth and shiny on the upper surface, paler and with star-shaped hairs on the lower surface, not U-shaped at the base, up to 10 inches long, up to 7 inches wide.
- **Flowers:** Male and female borne separately on the same plant, appearing when the leaves begin to unfold; male flowers crowded into slender, drooping spikes; female flowers few together.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3-12.
- **Pistils:** Ovary inferior.
- **Fruits:** Acorns solitary or 2 together, with or without a stalk, the nut ellipsoid, about 1/2 inch long, enclosed for less than 1/3 its length by the cup.
- **Notes:** This tree is sometimes considered to be a distinct species. It has also been called swamp spanish oak. The wood is used for interior finishing, furniture, and cabinets.



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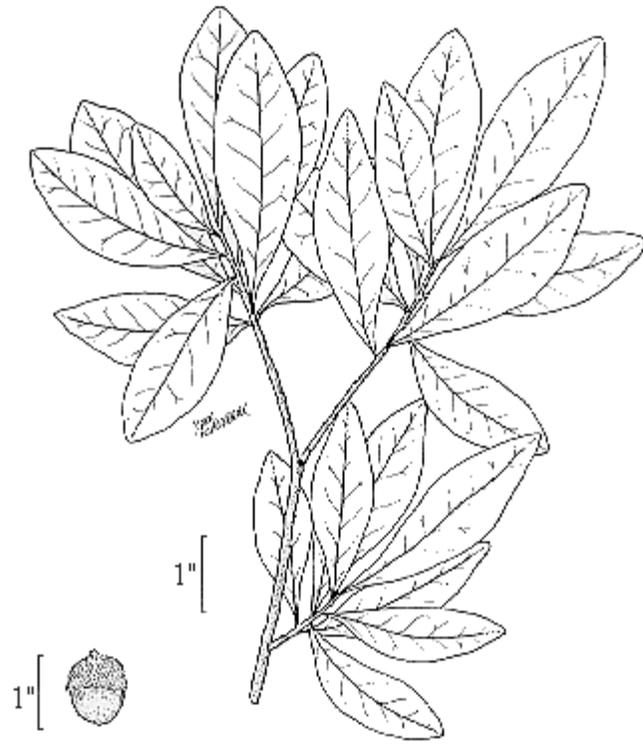
Field Office Guide to Plant Species

Laurel Oak

Quercus laurifolia Michx.



- **Family:** Beech (Fagaceae)
- **Flowering:** March-April
- **Field Marks:** This species is characterized by lobeless, toothless leaves, some of which are diamond-shaped.
- **Habitat:** Floodplains, bottomlands, low hammocks, stream banks, lake shores, bayheads.
- **Habit:** Tree up to 100 feet tall; trunk diameter up to 4 feet; crown densely round-topped.
- **Bark:** Brown to gray, becoming low-ridged when old.
- **Twigs:** Dark brown, smooth.
- **Leaves:** Alternate, simple, semi-evergreen in the northern part of its range, evergreen in the deep south, thick, leathery, variable, spatulate to oblanceolate, but some of them diamondshaped, usually rounded at the tip, tapering to the base, smooth and dark green on the upper surface, hairy on the veins and in the vein axils on the lower surface, toothless, usually lobeless, up to 4 inches long, up to 2 1/2 inches wide.
- **Flowers:** Male and female flowers borne separately on the same plant; male flowers many, crowded into drooping spikes; female flowers 1-few in short spikes.
- **Petals:** 5-6, green, very small, united below to form a cup.
- **Stamens:** 0.
- **Pistils:** 3-12.
- **Fruits:** Ovary inferior; styles 3.
- **Notes:** Acorns ovoid to oblongoid, up to 3/4 inch long, enclosed 1/4-1/2 by the cup.



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Overcup Oak *Quercus lyrata* Walt.



- **Family:** Beech (Fagaceae)
- **Flowering:** April-May
- **Field Marks:** The nut of the overcup oak is nearly completely enclosed by the cup. The leaves are divided into 5-7 lobes that are pale on the lower surface.
- **Habitat:** Wet ground, swamps, along streams, bayous, floodplains.
- **Habit:** Tree up to 100 feet tall; trunk diameter up to 3 feet; crown rounded to oblong.
- **Bark:** Gray or grayish brown, divided into flat plates.
- **Twigs:** Coarse, up to 1/6 inch thick, smooth.
- **Leaves:** Alternate, simple, divided into 5-7 rounded lobes, the sinuses shallow to deep, dark green and smooth on the upper surface, pale and softly hairy to nearly smooth on the lower surface, up to 10 inches long, up to 4 1/2 inches wide.
- **Flowers:** Male and female borne separately on the same plant, appearing when the leaves begin to unfold; male flowers crowded into slender, drooping spikes; female flowers few together.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3-12.
- **Pistils:** Ovary inferior.
- **Fruits:** Acorns solitary or 2 together, with or without a stalk, the nut nearly spherical or flattened, up to 1 inch in diameter, often nearly entirely enclosed by the scaly cup.
- **Notes:** The wood is used for interior finishing, cabinets, fuel, and fence posts. The leaves are highly variable, even on the same tree. The light undersurface of the leaves is a good recognition feature.

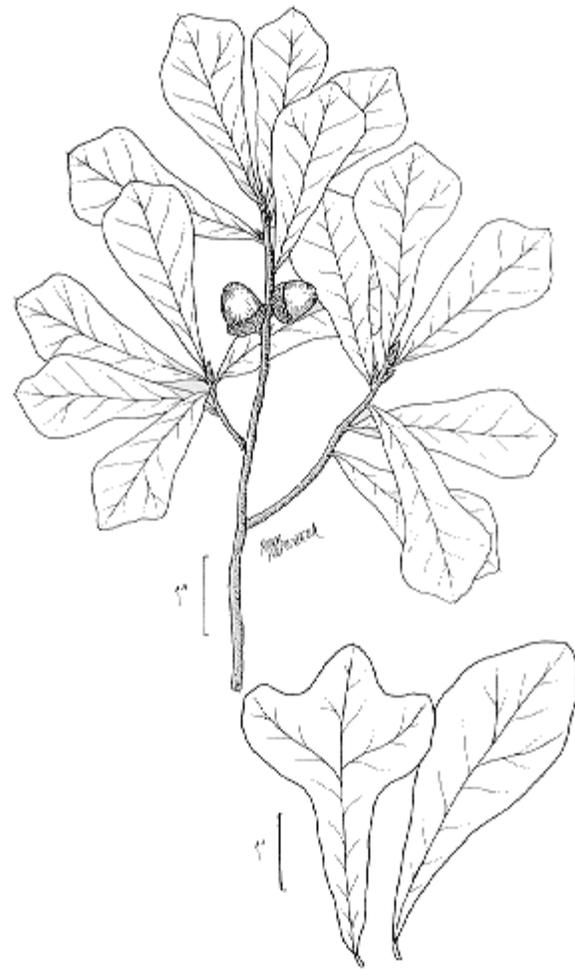
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Water Oak *Quercus nigra* L.



- **Family:** Beech (Fagaceae)
- **Flowering:** April
- **Field Marks:** This deciduous oak has bristle-tipped, usually unlobed leaves that are broadest above the middle and less than 4 inches long.
- **Habitat:** Moist to dry soils in flatwoods and pinelands, along streams, floodplain woods, wet hammocks, old fields.
- **Habit:** Tree up to 80 feet tall; trunk diameter up to 3 1/2 feet; crown round-topped.
- **Bark:** Dark gray, with closely appressed scales.
- **Twigs:** Brown to reddish, slender, smooth.
- **Leaves:** Alternate, simple, obovate, extremely variable, usually unlobed or occasionally lobed, bristle-tipped, smooth, broadest above the middle, up to 4 inches long, up to 2 1/2 inches wide.
- **Flowers:** Male and female flowers borne separately but on the same tree; male flowers crowded into drooping spikes; female flowers 1-few in a cluster.
- **Sepals:** 6-parted, united below, small.
- **Petals:** 0.
- **Stamens:** 3-12.
- **Pistils:** Ovary inferior; styles 3.
- **Fruits:** Acorns ovoid to nearly spherical, up to 1/2 inch long, enclosed about 1/5 of their length by the cup.
- **Notes:** The leaves of seedling and stump sprouts are highly variable, ranging from elliptic to multi-lobed.

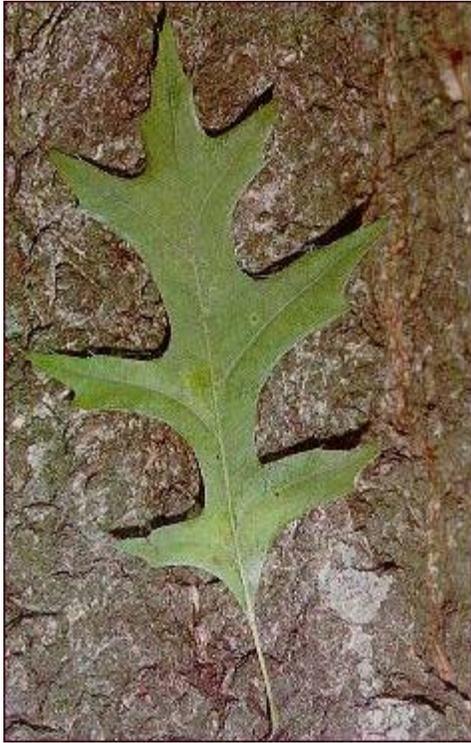


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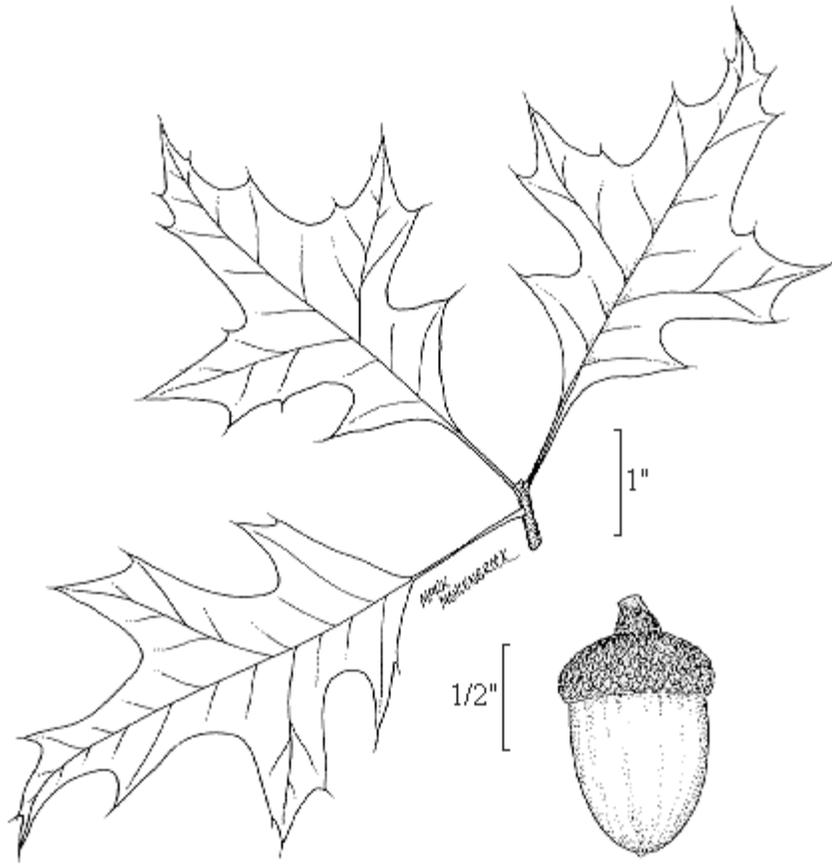
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Nuttall Oak

Quercus nuttallii Palmer



- **Family:** Beech (Fagaceae)
- **Flowering:** April-May
- **Field Marks:** Nuttall oak most nearly resembles pin oak, differing by its larger acorns 3/4 - 1 inch long and its larger buds.
- **Habitat:** Low woods, alluvial bottomlands that are frequently flooded.
- **Habit:** Tree up to 80 feet tall; trunk diameter up to 2 1/2 feet; crown rounded.
- **Bark:** Light brown to dark brown, shallowly furrowed.
- **Twigs:** Slender, smooth, reddish brown to gray.
- **Leaves:** Alternate, simple, 5- to 7-lobed, the sinuses extending not more than half-way to the midvein, smooth on the upper surface, paler and smooth on the lower surface except for tufts of hairs in the axils of the veins, up to 10 inches long, up to 5 1/2 inches wide.
- **Flowers:** Male and female borne separately on the same plant, appearing when the leaves begin to unfold; male flowers crowded into slender, drooping spikes; female flowers few together.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3-12.
- **Pistils:** Ovary inferior.
- **Fruits:** Acorns 1-4 together, 1 - 1 1/2 inches long, with or without stalks, the nut ellipsoid, up to 1 1/4 inches across, reddish with dark vertical stripes, enclosed for 1/3 - 1/2 its length by the cup.



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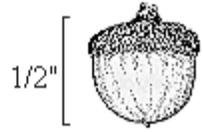
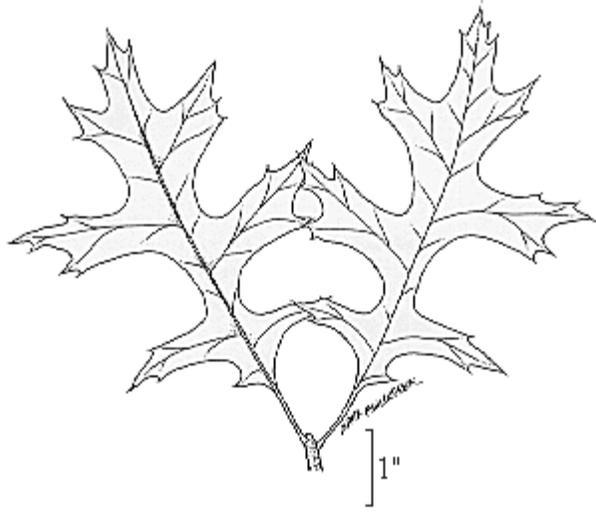
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Pin Oak

Quercus palustris Muenchh.



- **Family:** Beech (Fagaceae)
- **Flowering:** April-May
- **Field Marks:** Pin oak is recognized by its lower hanging branches, its deeply 5- to 7-lobed leaves, and its small acorns about 1/2 inch long.
- **Habitat:** Low woods, often growing as pure stands on tight clay soil, along streams, sloughs.
- **Habit:** Tree up to 82 feet tall; trunk diameter usually less than 3 feet; crown narrowly rounded or oblong, with the lower branches drooping and persisting on the tree after they are dead.
- **Bark:** Light or dark brown, scarcely furrowed.
- **Twigs:** Slender, smooth, reddish brown to dark gray.
- **Leaves:** Alternate, simple, with 5-7 lobes, the sinuses extending more than half-way to the midvein, dark green, smooth and shiny on the upper surface, paler and smooth on the lower surface except for tufts of hairs in the axils of the veins, up to 7 inches long, up to 4 inches wide.
- **Flowers:** Male and female borne separately on the same plant, appearing when the leaves begin to unfold.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3-12.
- **Pistils:** Ovary inferior.
- **Fruits:** Acorns 1-4 together, with or without stalks, up to 1/2 inch long, the nut hemispherical, up to 1/2 inch across, enclosed less than 1/4 by the cup.
- **Notes:** The wood is used in general construction and for fuel and fence posts. Pin oak is a popular ornamental. The acorns are eaten by waterfowl.



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Dwarf Oak

Quercus pumila Walt.



- **Family:** Beech (Fagaceae)
- **Flowering:** March-April
- **Field Marks:** This shrubby oak is rarely more than 6 feet tall. It has elliptic, toothless, unlobed leaves, and acorns about 1/2 inch long.
- **Habitat:** Dry to moist soils in flatwoods and pinelands.
- **Habit:** Shrub up to 6 feet tall, often forming colonies because of branched, slender rhizomes.
- **Twigs:** Grayish brown, hairy at least during the first year, becoming brown with age.
- **Leaves:** Alternate, simple, elliptic, round or pointed but with a bristle at the tip, tapering to the base, up to 4 1/2 inches long, up to 1 1/2 inches wide, larger on sprouts, toothless and lobeless, smooth and shiny dark green on the upper surface, gray-hairy on the lower surface.
- **Flowers:** Male and female flowers borne separately on the same plant; male flowers many in elongated, drooping spikes; female flowers 1-few together.
- **Sepals:** 5-6, green, united below.
- **Petals:** 0.
- **Stamens:** 3-12.
- **Pistils:** Ovary inferior; styles 3.
- **Fruits:** Acorns ovoid, up to 1/2 inch long, about 1/3 enclosed by the bowl-shaped cup.
- **Notes:** This species is often called running oak. It sprouts vigorously after a burn.



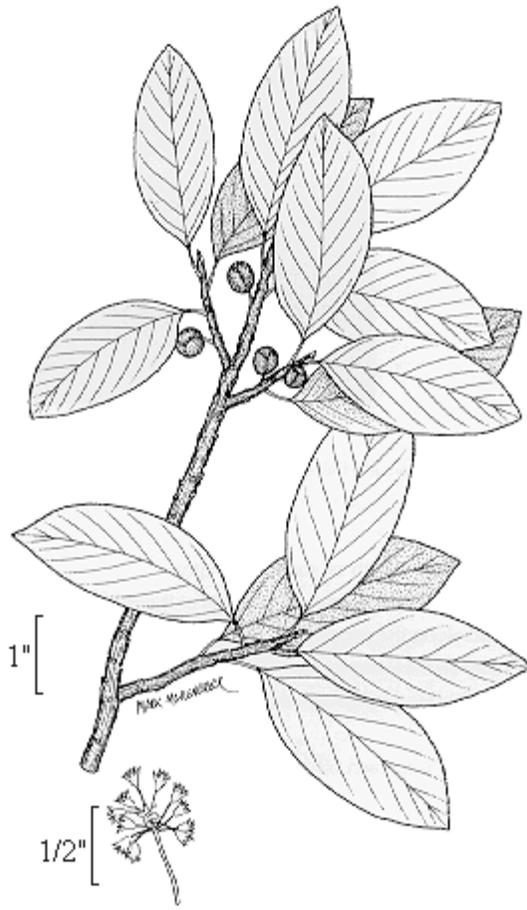
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Field Office Guide to Plant Species

Carolina Buckthorn
Rhamnus caroliniana Walter



- **Family:** Buckthorn (Rhamnaceae)
- **Flowering:** May-June
- **Field Marks:** This buckthorn lacks spiny-tipped twigs, but has very fine teeth along the edges, unlike any other species in the genus.
- **Habitat:** Low woods, along streams, wooded slopes, glades, thickets, ravines, hammocks.
- **Habit:** Tree to 30 feet tall; trunk diameter up to 6 inches; crown spreading.
- **Bark:** Gray, somewhat roughened.
- **Twigs:** Slender, gray or pale brown, smooth or somewhat hairy.
- **Leaves:** Alternate, simple, elliptic, pointed or nearly rounded at the tip, tapering or rounded at the base, usually finely toothed along the edges, dark green, smooth and shiny on the upper surface, paler and smooth or hairy on the lower surface, up to 6 inches long, up to 2 inches wide.
- **Flowers:** Few in umbrella-like clusters, appearing when the leaves are nearly grown.
- **Sepals:** 5, green, united below.
- **Petals:** 5, greenish or cream, free from each other, about 1/8 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes spherical, red and shiny when mature, up to 1/3 inch in diameter, containing 2-4 seeds.
- **Notes:** The wood is used for fuel. The shiny leaves and red drupes make this tree a desirable ornamental. This tree is often called Indian cherry.



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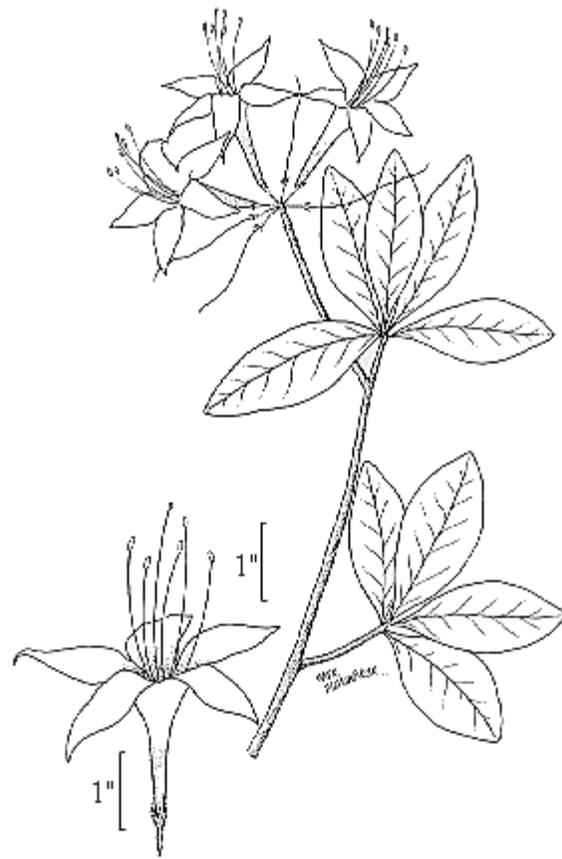
Field Office Guide to Plant Species

Hoary Azalea

Rhododendron canescens (Michx.) Sweet



- **Family:** Heath (Ericaceae)
- **Flowering:** March-May
- **Field Marks:** This azalea differs from other similar species by its pink flowers, hairy sepals without glands, and its non-glandular capsules.
- **Habitat:** Pinelands, bluffs, pocosins, savannas, swamp forests, bogs, flatwoods, wooded slopes.
- **Habit:** Shrub to 15 feet tall, with short rhizomes.
- **Stems:** Slender, usually densely hairy.
- **Leaves:** Alternate, simple, oblanceolate to elliptic to obovate, pointed or rounded at the tip, tapering to the base, toothless, hairy on the lower surface, up to 4 inches long, up to 1 3/4 inches wide; leaf stalks up to 1/2 inch long, hairy.
- **Flowers:** Several in terminal clusters, showy, fragrant; flower stalks 1/5-3/4 inch long, densely hairy.
- **Sepals:** 5, green, united below, hairy but not glandular, lobes up to 1/12 inch long.
- **Petals:** 5, pink, united below into a long, slender tube, glandular-hairy on the outside, up to 2 inches long.
- **Stamens:** 5, exserted beyond the corolla.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules narrow, curved, hairy but not glandular, up to 1 1/2 inches long.



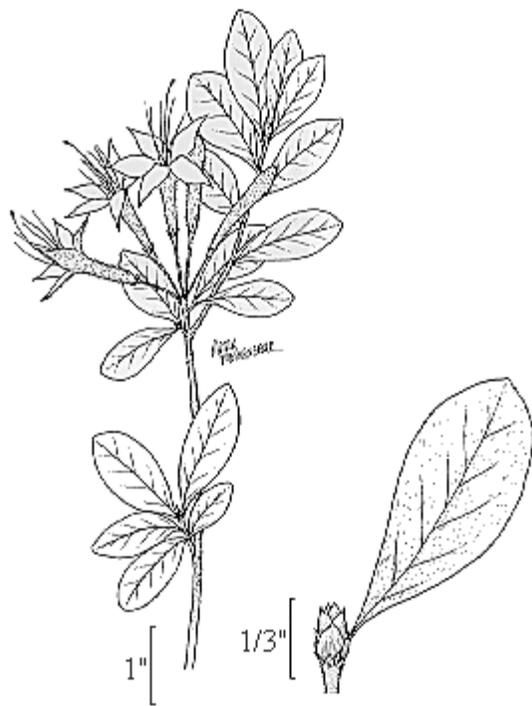
Southern Wetland Flora

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Hammock Sweet Azalea *Rhododendron serrulatum* (Small) Millais



- **Family:** Heath (Ericaceae)
- **Flowering:** May-July
- **Field Marks:** This species has flowers with white petals that are sometimes pink-tinged and which bloom in the summer after the leaves are mature. It differs from *Rhododendron viscosum* by having the inside of the corolla tube smooth and its winter buds with awned scales.
- **Habitat:** Low pinelands, moist hammocks, bayheads, swamps, bogs, wet woodlands, flatwoods.
- **Habit:** Shrub to 15 feet tall, with stiffly ascending branchlets.
- **Stems:** Hairy when young, becoming smooth with age; winter bud scales awned.
- **Leaves:** Alternate, simple, oblanceolate to obovate, pointed or rounded at the tip, tapering to the base, toothless but often with cilia around the edge, usually with some degree of hairiness, up to 4 inches long, up to 1 1/2 inches wide; leaf stalks up to 1/4 inch long.
- **Flowers:** Several in clusters, showy, fragrant, blooming during the summer after the leaves are mature; flower stalks up to 1 inch long, hairy.
- **Sepals:** 5, green, united below, sparsely glandular-hairy.
- **Petals:** 5, white, sometimes pink-tinged, united below into a long tube, the tube up to 1 inch long, smooth on the inside, the lobes up to 1/2 inch long.
- **Stamens:** 5, exserted beyond the corolla.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules up to 1 inch long, glandular-hairy.
- **Notes:** Some botanists consider this plant to be a variety of *Rhododendron viscosum*.



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Swamp Azalea

Rhododendron viscosum (L.) Torr.



- **Family:** Heath (Ericaceae)
- **Flowering:** May-July
- **Field Marks:** The flowers of this species are usually white with an occasional pink tinge. It differs from similar species except *Rhododendron serrulatum* by blooming in summer after the leaves are mature. It is very similar to *Rhododendron serrulatum*, but differs by the corolla tube hairy on the inside and by its winter bud scales not awned.
- **Habitat:** Bogs, pocosins, stream banks, swamps, wet woods, flatwoods.
- **Habit:** Shrub to 15 feet tall, with stiffly ascending branchlets.
- **Stems:** Hairy when young, becoming smooth with age; winter bud scales not awned.
- **Leaves:** Alternate, simple, oblanceolate to elliptic, pointed or rounded at the tip, tapering to the base, toothless but often with cilia around the edge, usually more or less hairy, up to 4 inches long, up to 1 1/2 inches wide; leaf stalks 1/12-1/4 inch long.
- **Flowers:** Several in clusters, showy, fragrant, blooming during the summer after the leaves are mature; flower stalks 1/4-1 inch long, hairy.
- **Sepals:** 5, green, united below, sparsely glandular-hairy.
- **Petals:** 5, white, sometimes pink-tinged, united below into a long tube, the tube up to 1 inch long, hairy on the inside, the lobes up to 1/2 inch long.
- **Stamens:** 5, exserted beyond the corolla.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules up to 1 inch long, glandular-hairy.
- **Notes:** This species, because of its handsome flowers, has ornamental value.



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Carolina Rose
Rosa carolina L.



- **Family:** Rose (Rosaceae)
- **Flowering:** May-June
- **Field Marks:** This shrub differs from other wild roses by its 5-9 leaflets and stipules that are not divided into short, thread-like segments.
- **Habitat:** Prairies, thickets, roadsides, open woods, glades.
- **Habit:** Shrub with stout, recurved spines.
- **Stems:** Arching, smooth but spiny, up to 8 feet long.
- **Leaves:** Alternate, pinnately compound, with 5-9 leaflets; each leaflet oval to oblong to broadly lanceolate, more or less pointed at the tip, tapering or rounded at the base, finely toothed, smooth on the upper surface, paler and sometimes hairy on the lower surface, up to 3 inches long, the stipules not divided into short, thread-like segments.
- **Flowers:** Solitary or several in a terminal cluster, up to 3 inches across.
- **Sepals:** 5, green, united below, the lobes very long-pointed, bristly hairy.
- **Petals:** 5, pink to rose, free from each other, often with a broad notch at the tip, up to 1 1/2 inches long.
- **Stamens:** Numerous.
- **Pistils:** Ovaries several, superior; styles distinct.
- **Fruits:** Fleshy, more or less spherical, smooth, red, up to 1/2 inch in diameter.



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Prairie Rose

Rosa setigera Michx.



- **Family:** Rose (Rosaceae)
- **Flowering:** May-July
- **Field Marks:** This wild rose has some leaves with only 3 leaflets and styles which are attached to each other.
- **Habitat:** Low woods, wet prairies, pastures, damp thickets, roadsides.
- **Habit:** Shrub with arching or climbing stems.
- **Stems:** Stout, arching or climbing, with curved prickles.
- **Leaves:** Alternate, pinnately compound, with 3 or 5 leaflets; each leaflet ovate, pointed at the tip, rounded at the base, sharply toothed, up to 3 inches long.
- **Flowers:** Several in a terminal cluster; each flower up to 2 1/2 inches across.
- **Sepals:** 5, green, united below, ovate, pointed at the tip, hairy, usually pointed downward.
- **Petals:** 5, pink to rose, free from each other, often with a broad notch at the tip, up to 1 1/4 inches long.
- **Stamens:** Numerous.
- **Pistils:** Ovaries several, superior; styles attached to each other.
- **Fruits:** Fleshy, spherical, glandular-hairy, red, about 1/3 inch in diameter.



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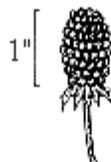
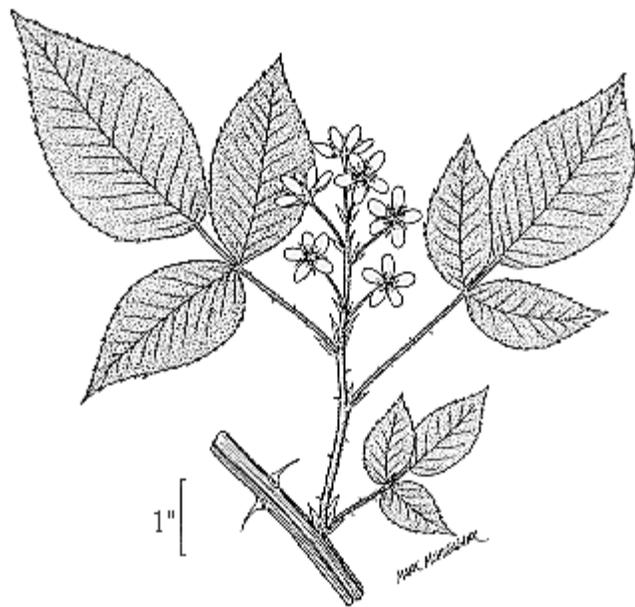
Field Office Guide to Plant Species

Serrate-leaf Blackberry

Rubus argutus Link



- **Family:** Rose (Rosaceae)
- **Flowering:** April-June
- **Field Marks:** This blackberry differs from other arching species by lacking gland-tipped hairs on the flower stalk and by its small petals up to 2/3 inch long.
- **Habitat:** Wet woods, damp thickets, fencerows.
- **Habit:** Shrub with thickened roots.
- **Stems:** Upright or arching, branched, up to 10 feet long, smooth or hairy, with stout, straight, or hooked prickles.
- **Leaves:** Alternate, divided into 3 or 5 leaflets; leaflets ovate to elliptic, pointed at the tip, usually rounded at the base, toothed, smooth on the upper surface, densely hairy on the lower surface, up to 5 inches long.
- **Flowers:** Few in a terminal raceme, the branches of the raceme hairy and prickly; flowers up to 1 inch across.
- **Sepals:** 5, green, pointing downward, up to 1/4 inch long.
- **Petals:** 5, white, free from each other, up to 2/3 inch long.
- **Stamens:** Numerous.
- **Pistils:** Numerous; ovaries superior.
- **Fruits:** Clusters of closely packed drupelets, black, juicy, the entire fruits up to 1 inch long.
- **Notes:** The fruits of this blackberry are edible.



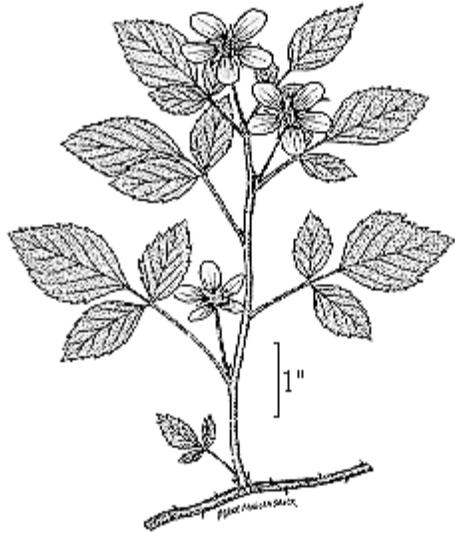
Southern Wetland Flora

Field Office Guide to Plant Species

Northern Dewberry
Rubus flagellaris Willd.



- **Family:** Rose (Rosaceae)
- **Flowering:** April-June
- **Field Marks:** This blackberry has stems that trail along the ground and that have sharp prickles but no stiff hairs.
- **Habitat:** Prairies, thickets, open woods, roadsides.
- **Habit:** Trailing shrub with many stout, hooked prickles.
- **Stems:** Lying flat on the ground, up to 4 feet long.
- **Leaves:** Alternate, palmately divided in 3, 5, or less commonly 7 leaflets; each leaflet broadly lanceolate to ovate, pointed at the tip, narrowed or rounded at the base, toothed, usually hairy, up to 2 inches long; the stalks usually have some prickles.
- **Flowers:** Solitary or few in terminal racemes, up to 1 1/4 inches across, usually on prickly stalks.
- **Sepals:** 5, green, free from each other.
- **Petals:** 5, white, free from each other, up to 3/4 inch long.
- **Stamens:** Numerous.
- **Pistils:** Many, crowded together; ovaries superior.
- **Fruits:** Black, juicy, up to 1 1/4 inches long, composed of many spherical drupelets.
- **Notes:** This is one of the tastiest wild species of blackberries.



Southern Wetland Flora

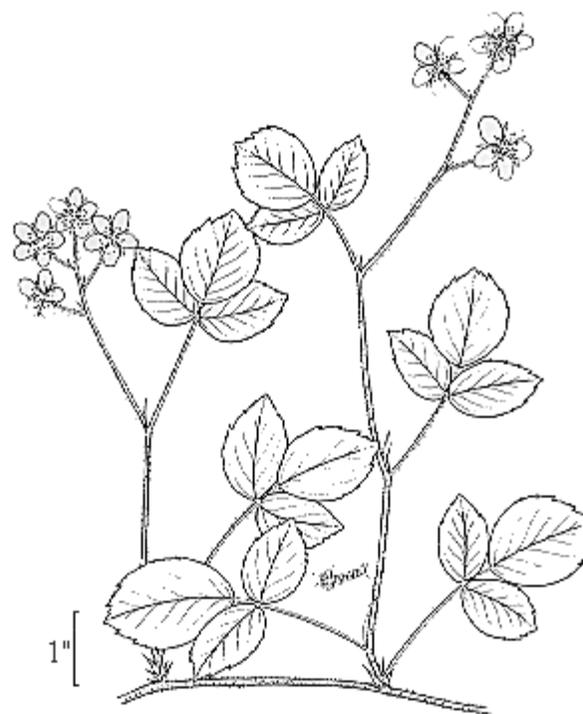
Field Office Guide to Plant Species

Bristly Blackberry

Rubus hispidus L.



- **Family:** Rose (Rosaceae)
- **Flowering:** May-June
- **Field Marks:** This blackberry has stems that trail on the ground. It differs from other trailing blackberries by having flower stalks less than 1 inch long and petals only about 1/2 inch long.
- **Habitat:** Low woods, swamps, pocosins.
- **Habit:** Trailing shrub creeping along the ground.
- **Stems:** Slender, smooth or sometimes slightly hairy, bearing weak thorns.
- **Leaves:** Leaves alternate, compound, divided into three leaflets; leaflets obovate to broadly elliptic, rounded at the tip, narrow or rounded at the base, singly or doubly toothed, shiny, smooth on the upper surface, smooth or slightly hairy on the lower surface, up to 2 1/2 inches long, up to 1 3/4 inches wide.
- **Flowers:** Few to several in terminal or axillary racemes or cymes; flowers up to 3/4 inch across, on stalks less than 1 inch long.
- **Sepals:** 5, green, densely hairy, united below, up to 1/4 inch long.
- **Petals:** 5, white, free from each other, up to 1/2 inch long.
- **Stamens:** Numerous, attached to the calyx.
- **Pistils:** 20-40; ovaries superior.
- **Fruits:** A cluster of drupelets, up to 1/2 inch long.
- **Notes:** The fruits are sour.



Southern Wetland Flora

Field Office Guide to Plant Species

Dwarf Palmetto

Sabal minor (Jacq.) Pers.



- **Family:** Palm (Arecaceae)
- **Flowering:** September-November
- **Field Marks:** This species differs from other low-growing palms by the absence of threads along the leaf margins and by the absence of spines on the leaf stalks.
- **Habitat:** Moist ravine slopes, moist hammocks, bottomlands, floodplains, swamps, river terraces.
- **Habit:** Shrub with underground rootstocks.
- **Stems:** Underground and sometimes above ground, up to 20 feet tall.
- **Leaves:** Clustered at the base of the plant, fan-like, palmately divided into many narrow segments, bluish, up to 3 feet across, each segment without threads along the margin and with a very short or no midvein; leaf stalks smooth.
- **Flowers:** Several in clusters, small.
- **Sepals:** 3, up to 1/10 inch long.
- **Petals:** 3, up to 1/8 inch long.
- **Stamens:** 6.
- **Pistils:** Ovary superior; style very short.
- **Fruits:** Drupes black, spherical, dull or shiny, about 1/2 inch in diameter.
- **Notes:** The fruits are eaten by various species of birds and mammals.

Southern Wetland Flora

Field Office Guide to Plant Species

Coastal-plain Willow
Salix caroliniana Michx.



- **Family:** Willow (Salicaceae)
- **Flowering:** March-April
- **Field Marks:** This willow has leaves very whitened on the lower surface. The stipules are usually persistent.
- **Habitat:** Along streams and rivers, margins of swamps and coastal lakes, swamps, marshes, around ponds and lakes, ditches, canals, wet clearings.
- **Habit:** Tree to 40 feet tall; trunk diameter up to 1 foot; crown widely spreading, often irregular.
- **Bark:** Dark brown to gray to black, scaly and ridged.
- **Twigs:** Slender, brown, usually finely hairy.
- **Leaves:** Alternate, simple, lanceolate, pointed at the tip, tapering to the base, finely toothed, white on the lower surface, hairy when young, smooth or with hairs only on the veins on the lower surface at maturity, up to 5 inches long, up to 1 inch wide; stipules usually persistent.
- **Flowers:** Male and female flowers borne on separate trees, appearing as the leaves begin to unfold, crowded in elongated, yellowish, hairy spikes.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3-6.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules narrow, flask-shaped, brownish, up to 1/4 inch long, crowded in elongated clusters.



Southern Wetland Flora

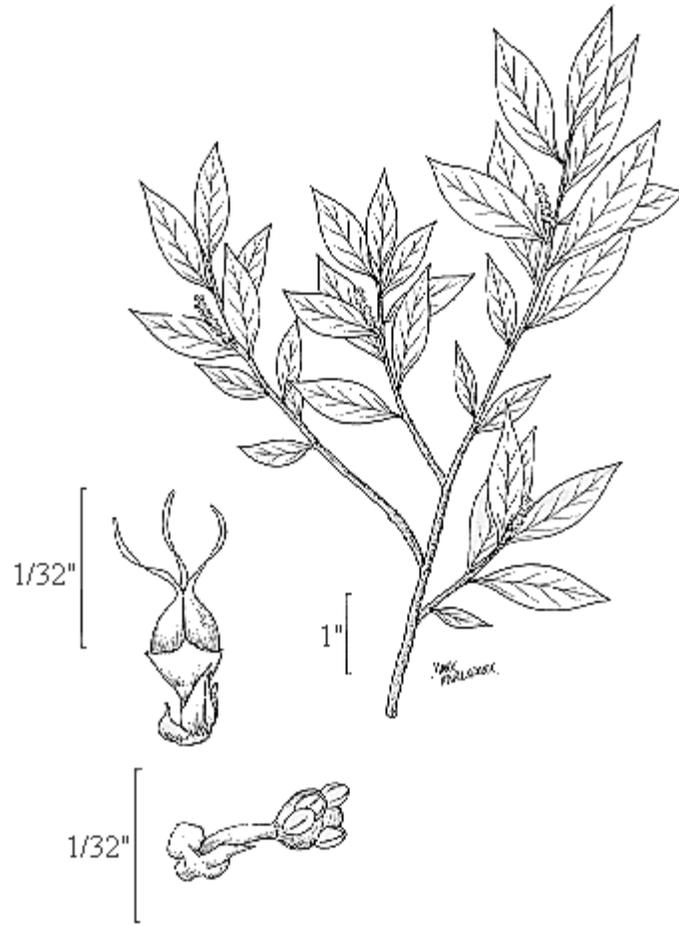
Field Office Guide to Plant Species

Gulf Sebastian-bush

Sebastiania fruticosa (W. Bartram) Fernald



- **Family:** Spurge (Euphorbiaceae)
- **Flowering:** May-June
- **Field Marks:** This shrub has lanceolate to elliptic, toothless, alternate leaves, yellowish green flowers in spike-like racemes borne in the axils of the uppermost leaves. The leaf stalks are never more than 1/2 inch long.
- **Habitat:** Low woods, swamps, shaded stream banks, alluvial woods, moist hammocks, deep ravines, floodplain woods.
- **Habit:** Shrub to 10 feet tall.
- **Stems:** Branched, grayish to brown, smooth, bearing persistent leathery bases of the stipules.
- **Leaves:** Alternate, simple, lanceolate to elliptic, pointed at the tip, tapering to the base, up to 3 1/2 inches long, up to 1 1/2 inches wide, toothless, smooth; leaf stalks up to 1/2 inch long, usually ciliate near the top.
- **Flowers:** Several borne in spike-like racemes in the axils of the uppermost leaves; male and female flowers borne separately on the same plant, the male flowers above, the female flowers below.
- **Sepals:** 3, free or united at the base.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; stigmas 3, recurved.
- **Fruits:** Capsules ovoid, 3-parted, broader than long, smooth, up to 1/3 inch long; seeds ovoid to oblongoid, light brown, up to 1/4 inch long.
- **Notes:** This species was known as *Sebastiania ligustrina* in the past.



Southern Wetland Flora

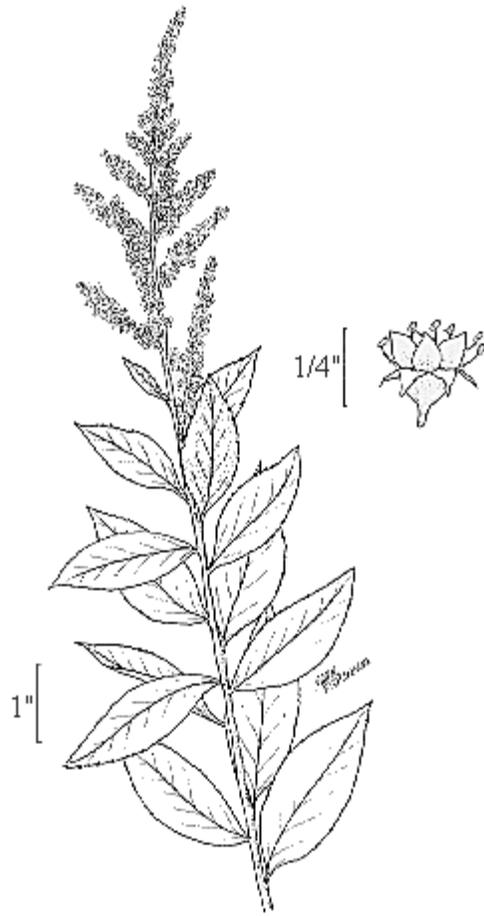
Field Office Guide to Plant Species

Steeple-bush

Spiraea tomentosa L.



- **Family:** Rose (Rosaceae)
- **Flowering:** July-September
- **Field Marks:** This shrub is distinguished by its dense panicles of pink flowers and its leaves that have a dense covering of white wool on the lower surface.
- **Habitat:** Bogs, wet meadows, low woods, swamps.
- **Habit:** Shrub up to 6 feet tall.
- **Stems:** Upright, usually unbranched, woolly-hairy.
- **Leaves:** Alternate, simple, lanceolate to elliptic to oval, rounded or pointed at the tip, tapering or rounded at the base, simply or doubly toothed, dark green and smooth on the upper surface, covered with white wool on the lower surface, up to 2 inches long, up to 1 inch wide.
- **Flowers:** Many crowded in a narrow, terminal panicle, each flower about 1/6 inch across.
- **Sepals:** 5, green, united below.
- **Petals:** 5, pink, less commonly white, free from each other but attached to the calyx, up to 1/10 inch long.
- **Stamens:** 15-20, free from each other but attached to the calyx.
- **Pistils:** Usually 5, free from each other; ovaries superior.
- **Fruits:** Follicles up to 1/8 inch long, hairy; seeds very narrow.
- **Notes:** This shrub is also known as hardhack.



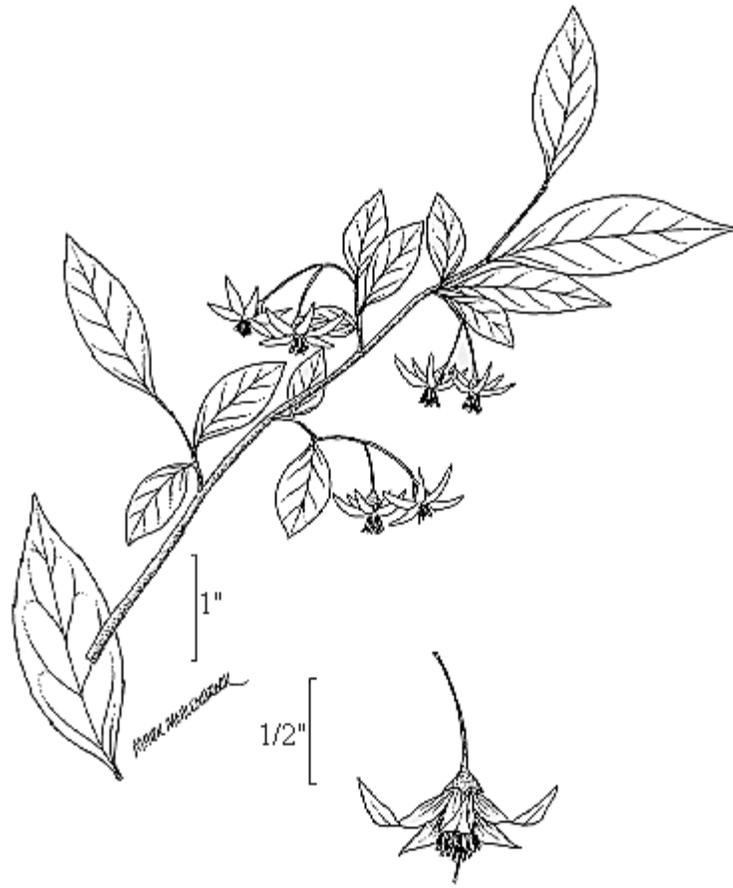
Southern Wetland Flora

Field Office Guide to Plant Species

American Snowbell
Styrax americana Lam.



- **Family:** Storax (Styracaceae)
- **Flowering:** April-May
- **Field Marks:** This shrub is recognized by its alternate leaves which have sparse, yellow-tipped teeth, and its showy, drooping, white flowers.
- **Habitat:** Wet woods along creeks and river bottoms; margins of swamps, lakes, and ponds.
- **Habit:** Shrub up to 10 feet tall.
- **Stems:** Slender, smooth.
- **Leaves:** Alternate, simple, oblong to oval, usually sparsely toothed with yellow-tipped teeth, usually pointed at the tip, tapering to the base, smooth or hairy, paler on the lower surface, up to 2 1/2 inches long on stalks up to 1/3 inch long.
- **Flowers:** Borne in clusters, usually drooping, up to 3/4 inch across.
- **Sepals:** 5, green, united below to form a cup, smooth or hairy.
- **Petals:** 5, white, free from each other, pointed at the tip, up to 1/2 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Dry, spherical, finely hairy, about 1/4 inch in diameter.
- **Notes:** The handsome, drooping clusters of white flowers make this shrub an attractive ornamental.



Southern Wetland Flora

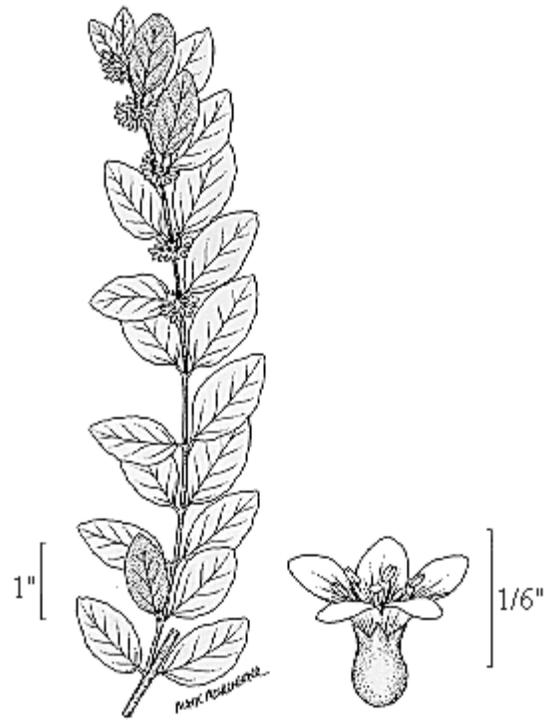
Field Office Guide to Plant Species

Coral-berry

Symphoricarpos orbiculatus Moench



- **Family:** Honeysuckle (Caprifoliaceae)
- **Flowering:** July-September
- **Field Marks:** This shrub is recognized by its opposite, toothless leaves, its small, pinkish, bell-shaped flowers, and its purple-red berries.
- **Habitat:** Along streams, moist or dry woods, thickets, and pastures.
- **Habit:** Shrub up to 6 feet tall.
- **Stems:** Erect or ascending, usually hairy, purplish, brown, or gray.
- **Leaves:** Opposite, simple, ovate to oval, rounded to pointed at the tip, rounded at the base, toothless but wavy-edged, smooth on the upper surface, softly hairy on the lower surface, up to 1 1/2 inches long, up to 1 1/2 inches wide; leaf stalks up to 1/6 inch long.
- **Flowers:** Several crowded into clusters in the axils of the leaves, sometimes the clusters elongating into short spikes.
- **Sepals:** 5, green, united to form a short tube; tube hairy on the inside.
- **Petals:** 5, pinkish, united into a short bell-shaped structure, up to 1/6 inch long.
- **Stamens:** 5, attached to the petals.
- **Pistils:** Ovary inferior.
- **Fruits:** Berries ovoid to spherical, purple-red, up to 1/6 inch long.
- **Notes:** This species is sometimes called buckbrush or Indian currant. The slender stems are sometimes woven into baskets.

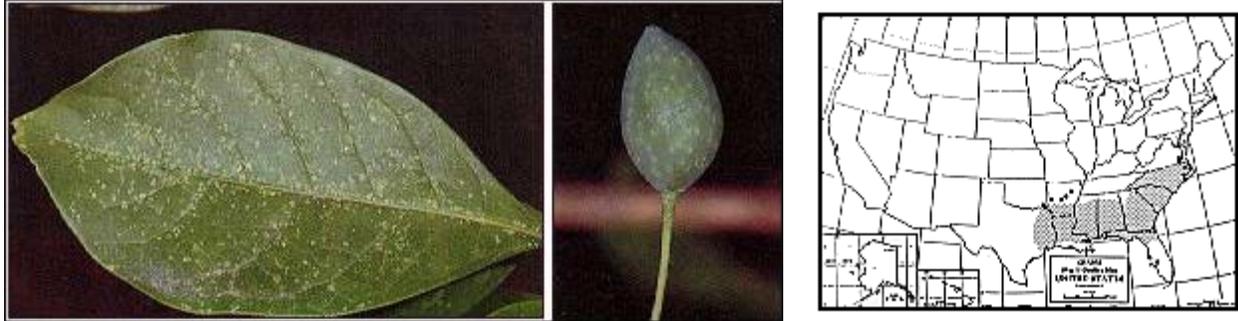


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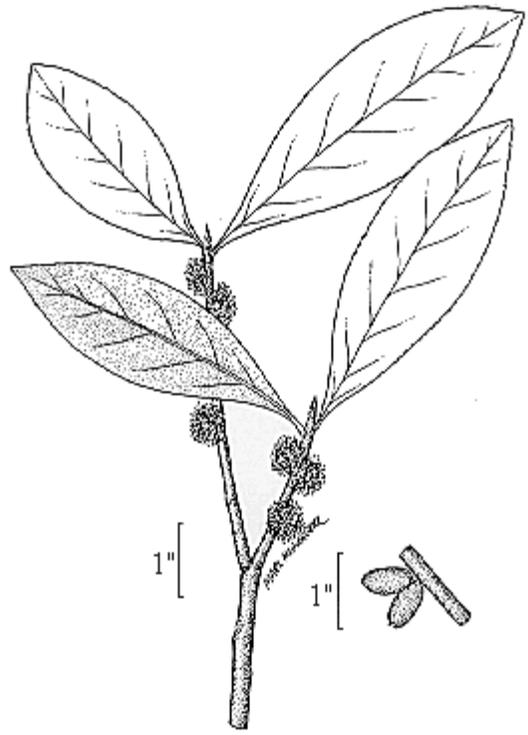
Field Office Guide to Plant Species

Horse-sugar

Symplocos tinctoria (L.) L'Her.



- **Family:** Sweetleaf (Symplocaceae)
- **Flowering:** March-April
- **Field Marks:** This shrub or small tree is characterized by its alternate, simple leaves with low teeth and its dense cluster of bright yellow, fragrant flowers with many stamens. The leaves, when chewed, produce a sweet taste.
- **Habitat:** Woods, thickets, borders of streams.
- **Habit:** Shrub or small tree to 20 feet tall.
- **Stems:** Slender, usually hairy, at least when young.
- **Leaves:** Alternate, simple, deciduous or evergreen in the southernmost locations, oblong to obovate, pointed at the tip, tapering to the base, with low teeth or wavy edges, pale and hairy on the lower surface, up to 6 inches long, up to 3 inches wide.
- **Flowers:** Clustered along the sides of the branchlets, bright yellow, up to 1/2 inch across, fragrant.
- **Sepals:** 5, green, united below into a tube.
- **Petals:** 5, bright yellow, nearly free from each other, rounded at the tip.
- **Stamens:** Many, arranged in clusters at the base of each petal.
- **Pistils:** Half-inferior.
- **Fruits:** Dry, oblongoid, green, hairy, up to 1/2 inch long, with persistent calyx at the tip, 1-seeded.
- **Notes:** This woody plant is also known as sweetleaf.



Southern Wetland Flora

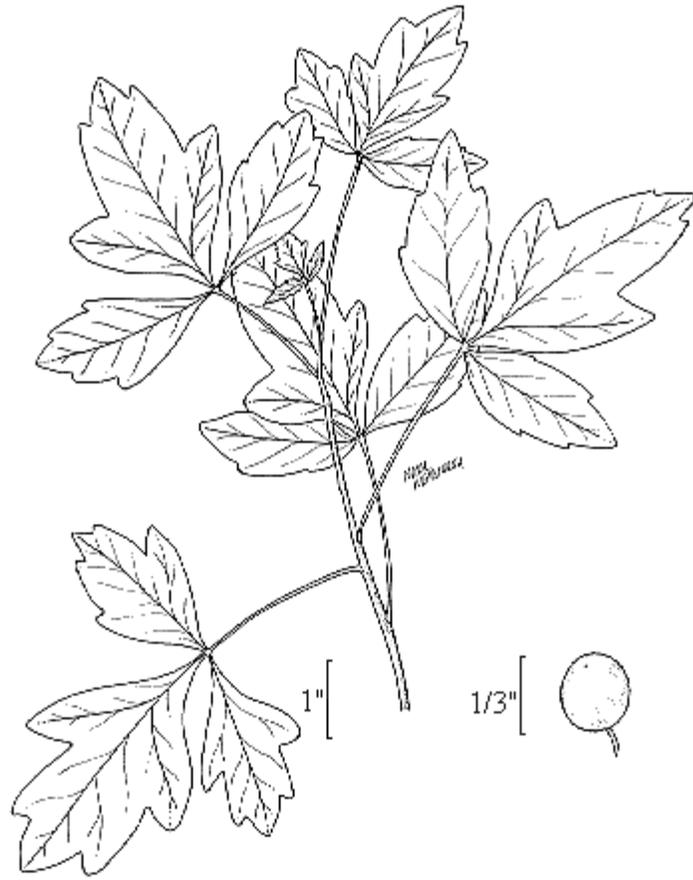
Field Office Guide to Plant Species

Poison Oak

Toxicodendron quercifolia (Michx.) Greene



- **Family:** Cashew (Anacardiaceae)
- **Flowering:** April-May
- **Field Marks:** This species differs from the very similar poison ivy by its more blunt-tipped leaflets, its always upright stature, and its usually larger, hairier drupes.
- **Habitat:** Pinelands, fields, upland woods, thickets, sandy ridges, along railroads, in both moist and dry soils.
- **Habit:** Erect shrub up to 3 feet tall, rarely taller.
- **Stems:** Brown, rusty-hairy at first, becoming smooth with age.
- **Leaves:** Alternate, divided into 3 leaflets; leaflets ovate to elliptic, coarsely toothed or shallowly lobed, more or less rounded at the tip, rounded or tapering to the base, hairy on both surfaces, up to 4 inches long, up to 2 1/2 inches wide.
- **Flowers:** Several in spreading or ascending panicles, with the male and female flowers often borne separately on separate plants.
- **Sepals:** 5, green, united below.
- **Petals:** 5, creamy white, free from each other, up to 1/12 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes spherical, white, or greenish white, up to 1/3 inch in diameter, densely hairy.
- **Notes:** This species is sometimes called *Toxicodendron toxicarium* or *Rhus toxicodendron*. Contact with any part of this plant may cause mild to severe skin rashes.



Southern Wetland Flora

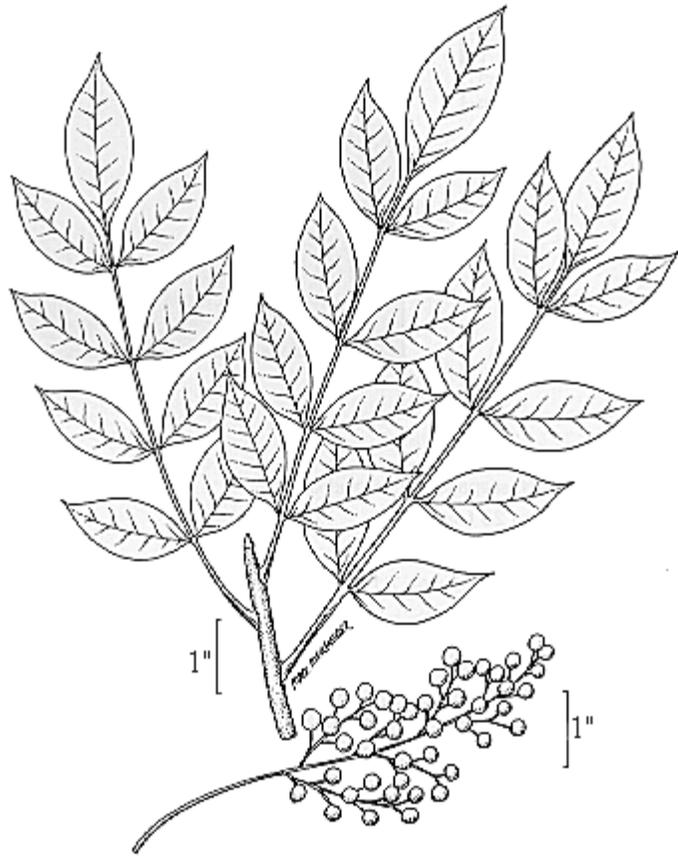
Field Office Guide to Plant Species

Poison Sumac

Toxicodendron vernix (L.) Kuntze



- **Family:** Sumac (Anacardiaceae)
- **Flowering:** June-July
- **Field Marks:** This species has alternate, pinnately compound, toothless leaves and clusters of gray-white, spherical drupes.
- **Habitat:** Wet thickets, swamps, seepage slopes, and bogs.
- **Habit:** Shrub or small tree up to 25 feet tall.
- **Stems:** Slender, smooth or finely hairy.
- **Leaves:** Alternate, pinnately compound, with 7-13 leaflets; each leaflet oblong to elliptic, pointed at the tip, tapering to the base, without teeth, smooth or rarely finely hairy, up to 3 inches long.
- **Flowers:** Several in panicles up to 8 inches long, very small, white or greenish.
- **Sepals:** 5, green, united below.
- **Petals:** 5, white or greenish, free from each other.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes spherical, gray-white, smooth, about 1/6 inch in diameter.
- **Notes:** All parts of the plant are poisonous to the touch. The leaves turn red in the autumn.



Southern Wetland Flora

Field Office Guide to Plant Species

American Elm *Ulmus americana* L.



- **Family:** Elm (Ulmaceae)
- **Flowering:** February-April
- **Field Marks:** This species has double-toothed, strongly asymmetrical leaves that do not feel like sandpaper on the upper surface. The hairy-edged fruits have a tiny perforation near the tip.
- **Habitat:** River and stream bottoms and edges of swamps.
- **Habit:** Tree up to 100 feet tall, with a trunk diameter up to 10 feet; crown vase-shaped, widely spreading.
- **Bark:** Light or dark gray, furrowed, breaking into plates as it ages.
- **Twigs:** Slender, brown, smooth or sparsely hairy.
- **Leaves:** Alternate, simple, oval to elliptic, pointed at the tip, strongly asymmetrical at the base, coarsely doubly toothed, smooth or somewhat rough to the touch on the upper surface, pale and smooth or soft-hairy on the lower surface, up to 6 inches long, up to 3 inches broad, with a short stalk.
- **Flowers:** In drooping clusters of 3-4, appearing before the leaves, small, hairy.
- **Sepals:** 7-9, united below, greenish red, very small.
- **Petals:** 0.
- **Stamens:** 7-9.
- **Pistils:** Ovary superior.
- **Fruits:** Samaras ovate to oval, veiny, flat, smooth on the faces but densely ciliate along the edges, with a small perforation near the top.
- **Notes:** The strong, heavy wood of this species has been used for flooring and in shipbuilding. American elm is a favorite ornamental. This species has been greatly reduced by Dutch elm disease.

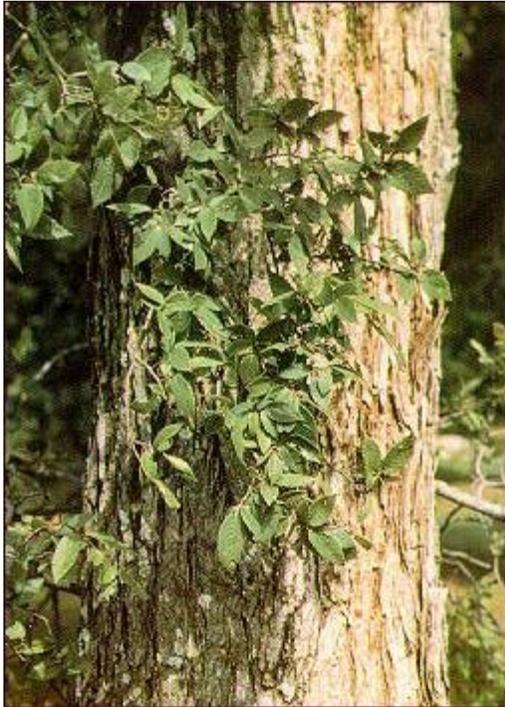


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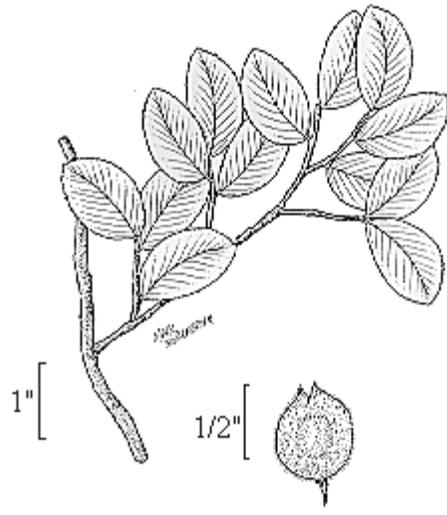
Field Office Guide to Plant Species

Cedar Elm

Ulmus crassifolia Nutt.



- **Family:** Elm (Ulmaceae)
- **Flowering:** August-October
- **Field Marks:** This elm is distinguished by its autumnal flowering period and its small, elliptic to ovate leaves that are rough to the touch on the upper surface and soft-hairy on the lower surface.
- **Habitat:** From dry to moist soil in floodplains, uplands, slopes, and along streams and rivers.
- **Habit:** Tree to 80 feet tall, often with crooked, interlacing branches; trunk diameter up to 3 feet; crown usually round-topped.
- **Bark:** Furrowed and ridged, often breaking up into scales.
- **Twigs:** Brown, very hairy when young, later becoming more or less smooth, sometimes winged.
- **Leaves:** Alternate, simple, elliptic to ovate, rounded or pointed at the tip, tapering or rounded at the sometimes asymmetrical base, singly or doubly toothed, rough to the touch on the upper surface, soft-hairy on the lower surface, up to 1 3/4 inches long, up to 1 1/2 inches wide; leaf stalks hairy, up to 1/4 inch long.
- **Flowers:** Small, usually in clusters of 3-5 in the axils of the leaves, blooming in the autumn.
- **Sepals:** 4-9, united below, hairy near base.
- **Petals:** 0.
- **Stamens:** 4-6.
- **Pistils:** Ovary superior; styles 2.
- **Fruits:** Samaras ovate to oval, up to 1/2 inch long, with veiny wings, the 2 styles persistent at the tip.



Southern Wetland Flora

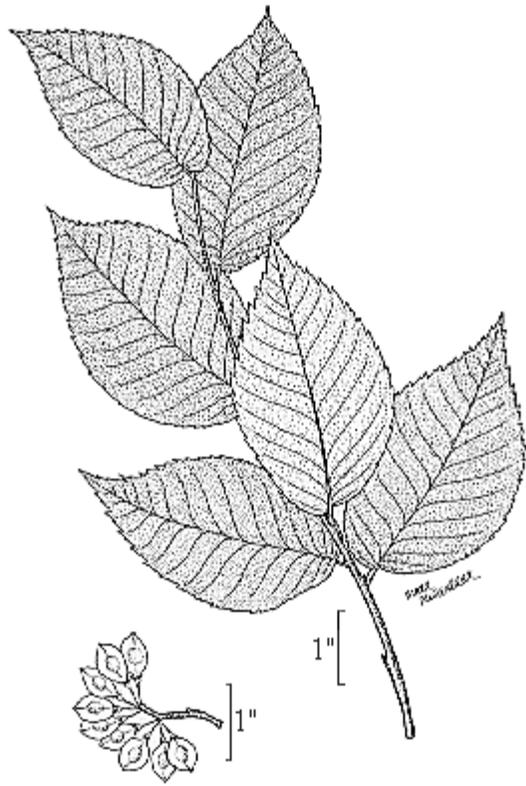
Field Office Guide to Plant Species

Slippery Elm

Ulmus rubra Muhl.



- **Family:** Elm (Ulmaceae)
- **Flowering:** February-April
- **Field Marks:** This elm lacks the perforation of the tip of the winged fruit. The leaves usually are very sandpapery to the touch.
- **Habitat:** Woods, along streams, rich wooded bluffs, bottomlands.
- **Habit:** Tree up to 80 feet tall; trunk diameter up to 4 feet; crown broadly rounded or flat-topped.
- **Bark:** Reddish brown to gray, with shallow furrows; inner bark becoming slippery when chewed.
- **Twigs:** Rather stout, reddish brown, with short gray hairs.
- **Leaves:** Alternate, simple, oval to elliptic, pointed at the tip, strongly asymmetrical at the base, coarsely doubly toothed, the upper surface very rough to the touch, the lower surface smooth or hairy.
- **Flowers:** In drooping clusters, appearing before the leaves unfold, greenish, small.
- **Sepals:** 7-9, united below, greenish, very small.
- **Petals:** 0.
- **Stamens:** 7-9.
- **Pistils:** Ovary superior.
- **Fruits:** Samaras circular, winged, up to 3/4 inch in diameter, not hairy except over the seed, the wing surrounding a single seed.
- **Notes:** The inner bark has soothing properties that are useful in treating laryngitis. The wood has been used for shipbuilding, farm implements, and fence posts.



Southern Wetland Flora

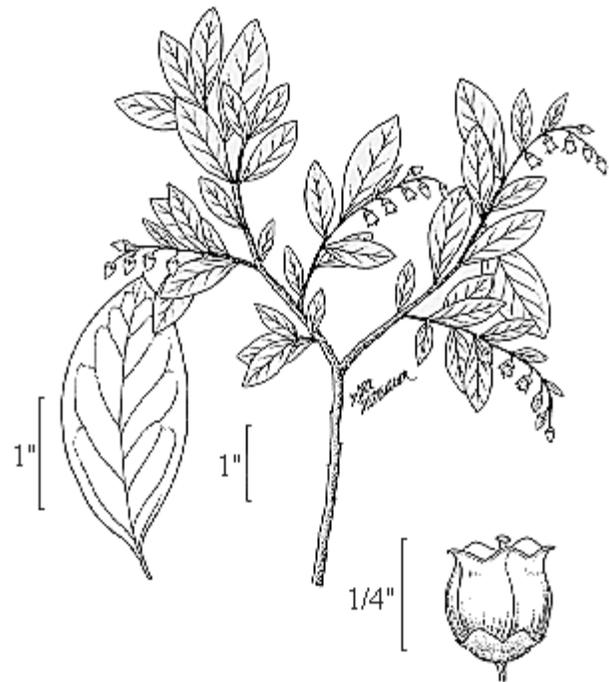
Field Office Guide to Plant Species

Farkleberry

Vaccinium arboreum Marshall



- **Family:** Heath (Ericaceae)
- **Flowering:** May-June
- **Field Marks:** This species differs from most other species of *Vaccinium* by its short, bell-shaped flowers and its stamens that are not exerted beyond the petals.
- **Habitat:** Moist to dry soils in hammocks, on bluffs, and in steep ravines.
- **Habit:** Much branched shrub up to 30 feet tall.
- **Stems:** Woody, smooth or hairy, up to 3/4 inch in diameter, much branched.
- **Leaves:** Alternate, simple, leathery, shiny, oval to obovate, pointed or rounded at the tip, tapering to the base, toothless or with a few small teeth, smooth on the upper surface, smooth or hairy on the lower surface.
- **Flowers:** Pendulous, borne in racemes, the flowers subtended by leafy bracts.
- **Sepals:** 5, green, united at the base.
- **Petals:** 5, white, united to form a bell 1/4 inch long.
- **Stamens:** 10, not exerted beyond the petals.
- **Pistils:** Ovary inferior.
- **Fruits:** Berries spherical, black, up to 1/4 inch in diameter; seeds many.
- **Notes:** Other common names for this species are tree huckleberry and sparkleberry.



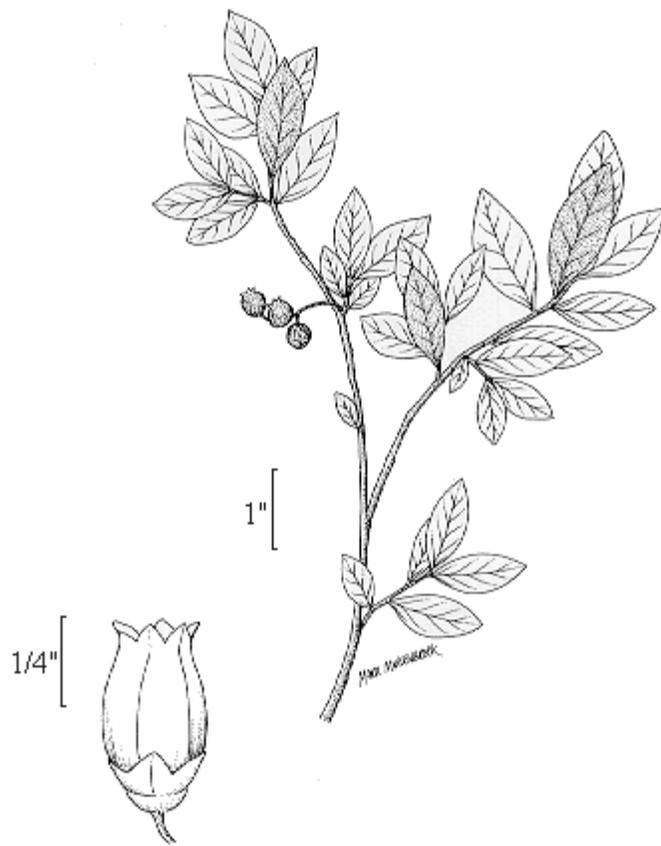
Southern Wetland Flora

Field Office Guide to Plant Species

Highbush Blueberry *Vaccinium corymbosum* L.



- **Family:** Heath (Ericaceae)
- **Flowering:** July-August
- **Field Marks:** This *Vaccinium* has cylindrical flowers borne in racemes and bluish fruits.
- **Habitat:** Bogs, flatwoods, low pinelands, swamps, bottomlands, rich woods, bayheads.
- **Habit:** Much branched shrub up to 15 feet tall.
- **Stems:** Woody, smooth or hairy, minutely warty.
- **Leaves:** Alternate, simple, oval to oblong, pointed at the tip, tapering to the base, toothless or finely toothed, smooth on the upper surface, paler and hairy on the lower surface, at least on the veins, up to 3 inches long, up to 1 1/2 inches wide.
- **Flowers:** Several borne in short racemes.
- **Sepals:** 5, green, united at the base.
- **Petals:** 5, white, rarely pink, united into a short cylinder up to 1/2 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary inferior.
- **Fruits:** Berries bluish, spherical, up to 1/3 inch in diameter.
- **Notes:** The fruits are edible.

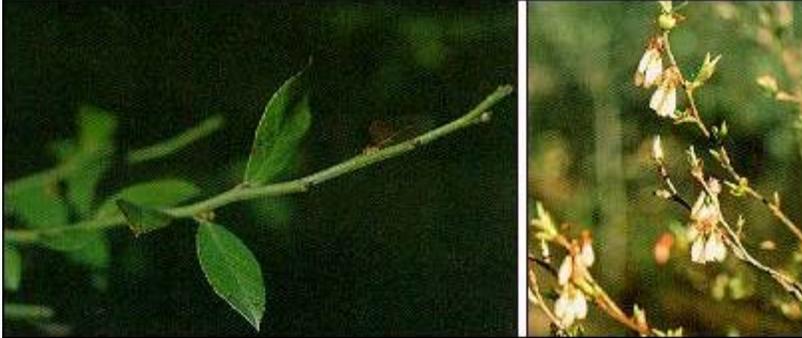


Southern Wetland Flora

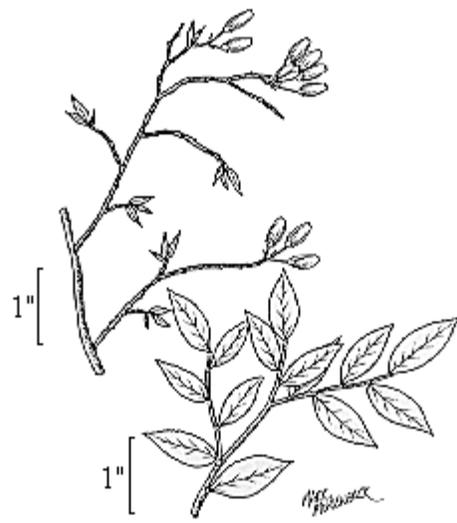
Field Office Guide to Plant Species

Elliott Blueberry

Vaccinium elliotii Chapm.



- **Family:** Heath (Ericaceae)
- **Flowering:** March-April
- **Field Marks:** This *Vaccinium* differs from all other species in the genus by its leaves which are deciduous, less than 1 1/2 inches long, and smooth or hairy without glands on the lower surface.
- **Habitat:** Brackish marshes and shores, moist to dry soils in upland woods, stream banks, bottomland woods, damp thickets, swampy forests.
- **Habit:** Much branched shrub up to 12 feet tall.
- **Stems:** Slender, green, sometimes hairy with glandular hairs, sometimes smooth.
- **Leaves:** Alternate, simple, elliptic to narrowly ovate, pointed at the tip, tapering to the base, glandular-toothed, more or less hairy, particularly on the veins, up to 1 1/2 inches long, up to 3/4 inch wide; leaf stalks short, hairy.
- **Flowers:** Borne in clusters of 2-6 on branches of the previous season, flowering before or after the leaves begin to unfold.
- **Sepals:** 5, green, united below, the lobes rounded at the tip.
- **Petals:** 5, white or pinkish, united to form an urn, up to 1/3 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary inferior.
- **Fruits:** Berries spherical, black, up to 1/2 inch in diameter.



Southern Wetland Flora

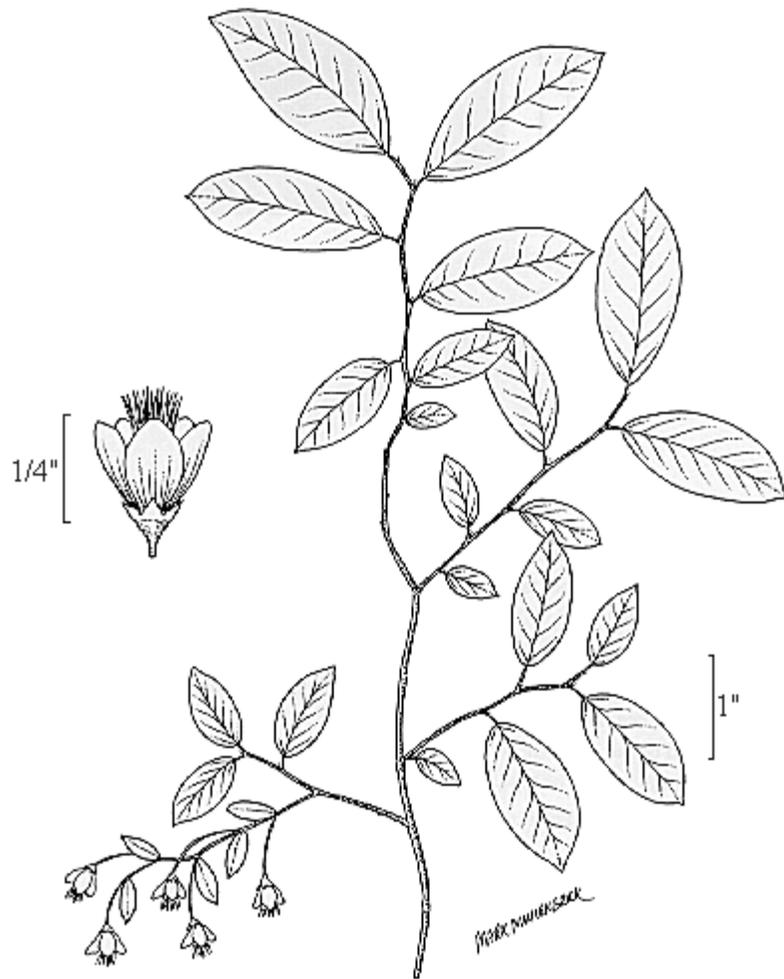
Field Office Guide to Plant Species

Deerberry

Vaccinium stamineum L.



- **Family:** Heath (Ericaceae)
- **Flowering:** April-June
- **Field Marks:** This species has alternate, leathery leaves. It differs from all other species of *Vaccinium* by its stamens which protrude from the flower.
- **Habitat:** From dry to moist soils, preferably in sand and acidic soils in the coastal plain.
- **Habit:** Much branched shrub to 8 feet tall.
- **Stems:** Slender, smooth or hairy.
- **Leaves:** Alternate, simple, leathery, oblong to oval, pointed at the tip, tapering to the base, without teeth, pale and sometimes hairy on the lower surface, up to 4 inches long, up to 1 1/2 inches wide.
- **Flowers:** Several in leafy racemes, on slender, drooping stalks.
- **Sepals:** 5, green, united below, smooth.
- **Petals:** 5, white to purplish, united to form a bell.
- **Stamens:** 10, protruding past the petals.
- **Pistils:** Ovary inferior.
- **Fruits:** Berries green, yellowish, or purple, more or less spherical, up to 1/4 inch in diameter.
- **Notes:** The fruit of this species is not edible raw, although a jelly can be made from it.



Southern Wetland Flora

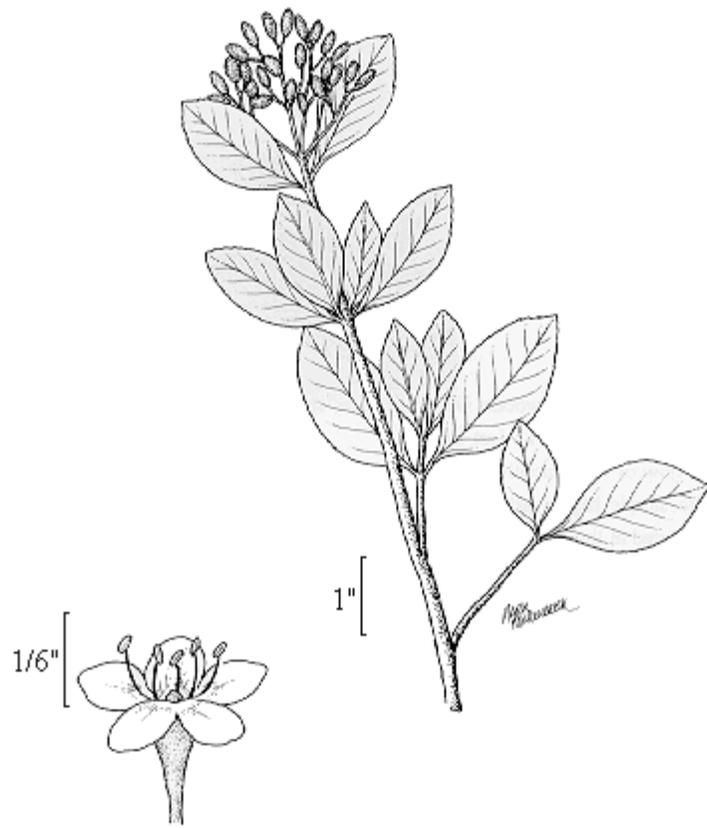
Field Office Guide to Plant Species

Possum-haw Viburnum

Viburnum nudum L.



- **Family:** Honeysuckle (Caprifoliaceae)
- **Flowering:** April-May
- **Field Marks:** This *Viburnum* differs from all others by its finely toothed or untoothed elliptic leaves and its blue drupes 1/4-1/2 inch long.
- **Habitat:** Savannas, swamps, flatwoods, wet woodlands, stream banks, bays, bogs, pocosins.
- **Habit:** Shrub or small tree up to 15 feet tall.
- **Stems:** Slender, gray or tan, smooth, sometimes sprawling.
- **Leaves:** Opposite, simple, highly variable but usually elliptic to elliptic-lanceolate, pointed at the tip, tapering or rounded at the base, finely toothed or even toothless but usually revolute along the edges, smooth, glandular dotted on the upper surface, up to 6 inches long, up to 2 1/2 inches wide; leaf stalks 1/4-1 inch long, usually winged.
- **Flowers:** Several in terminal and axillary cymes, the cymes up to 6 inches across; flowers up to 1/3 inch across.
- **Sepals:** 5, green, united below, usually smooth.
- **Petals:** 5, white, united at the base.
- **Stamens:** 5, attached to the petal tube.
- **Pistils:** Ovary inferior.
- **Fruits:** Drupes blue, ellipsoid to ovoid, 1/4-1/2 inch long.



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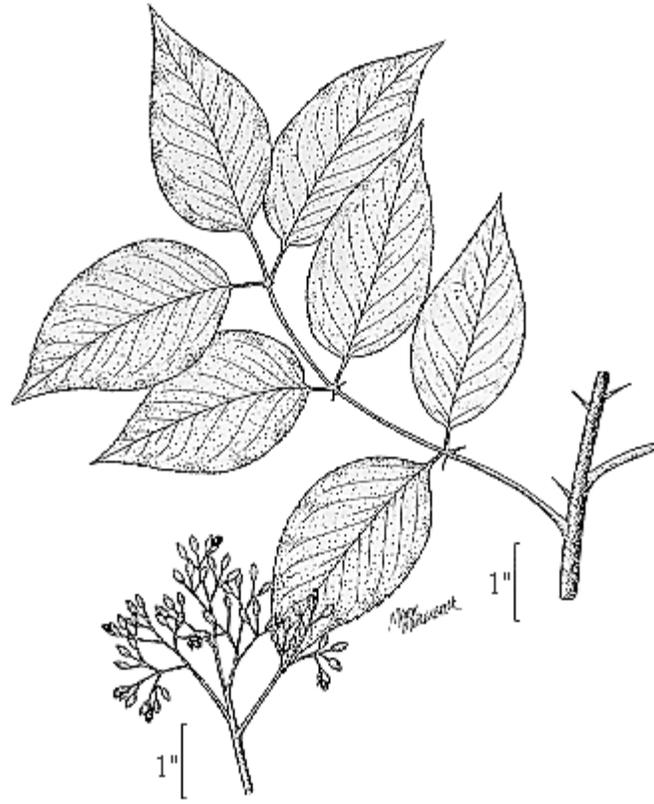
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Hercules-club

Zanthoxylum clava-herculis L.



- **Family:** Citrus (Rutaceae)
- **Flowering:** April-May
- **Field Marks:** This shrub or tree is characterized by flat-based prickles, pinnately compound leaves with yellow glands along the margins in notches formed by the teeth, compound cymes with small greenish yellow flowers, and follicles.
- **Habitat:** Moist to dry soils along roads, pineland depressions, sandy areas, roadsides, fencerows.
- **Habit:** Shrub or tree to 30 feet tall; trunk up to 18 inches in diameter; crown rounded.
- **Bark:** Gray, covered with flat-based prickles.
- **Twigs:** Gray, sometimes with flat-based prickles.
- **Leaves:** Alternate, pinnately compound, with 5-19 leaflets; leaflets lanceolate to ovate, pointed at the tip, rounded at the asymmetrical base, crinkled along the margins with yellowish glands in notches formed by the teeth, smooth but dotted on both surfaces, up to 3 inches long, usually with prickles in the leaf axils.
- **Flowers:** Many in compound cymes.
- **Sepals:** 4-5, minute, green, free from each other, or absent.
- **Petals:** 4-5, greenish yellow, free from each other, up to 1/5 inch long.
- **Stamens:** 4-5.
- **Pistils:** 1-5, free from each other.
- **Fruits:** Follicles red, smooth, up to 1/4 inch long; seeds spherical, shiny, black, up to 1/6 inch in diameter.
- **Notes:** This tree is sometimes called toothache tree because of the numbing effect of the inner bark when placed against the gum.



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Dusty Zenobia

Zenobia pulverulenta (W. Bartr.) Pollard



- **Family:** Heath (Ericaceae)
- **Flowering:** April-June
- **Field Marks:** Zenobia differs from all other members of the heath family by its superior ovary, its bell-shaped white flowers, and its 10 stamens which have short, pointed awns projecting from their tip.
- **Habitat:** Pine savannas, bays, bogs, swamps, pocosins.
- **Habit:** Colony-forming shrub spreading by underground rhizomes.
- **Stems:** Slender, smooth, sometimes glaucous, up to 6 feet tall.
- **Leaves:** Alternate, simple, elliptic to elliptic-ovate, pointed or rounded at the tip, rounded or tapering to the base, with low rounded teeth along the margins, usually hairy at first, becoming smooth, often bluish white on the lower surface, up to 3 1/2 inches long, up to 2 inches wide; leaf stalks up to 1/3 inch long.
- **Flowers:** Several in showy racemes or corymbs; flower stalks 1/2-1 inch long.
- **Sepals:** 5, green, united below, up to 1/8 inch long, leathery, the lobes pointed.
- **Petals:** 5, white, united into a bell-shaped corolla, 1/4-1/2 inch long.
- **Stamens:** 10, with awn-pointed teeth at the tips.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules spherical but sometimes flattened, up to 1/4 inch in diameter; seeds numerous, tiny, rusty in color, shiny.
- **Notes:** There is considerable variation in the leaves of this species. Its handsome flowers account for the ornamental value of this species.



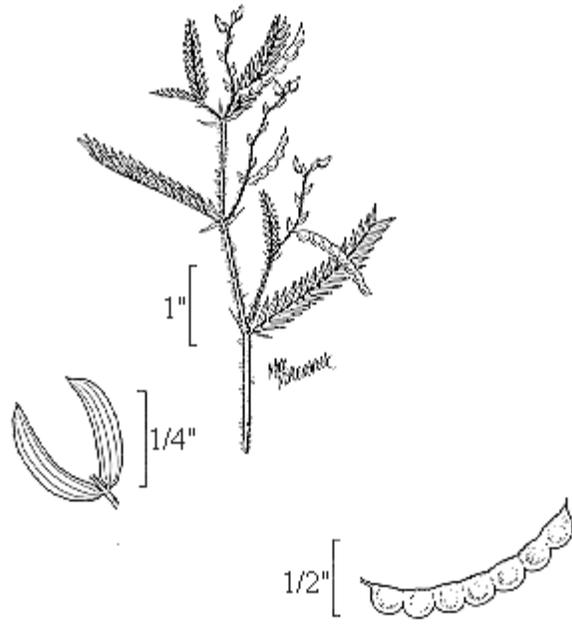
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Field Office Guide to Plant Species

American Joint-vetch *Aeschynomene americana* L.



- **Family:** Pea (Fabaceae)
- **Flowering:** July-October
- **Field Marks:** The fruits of this joint-vetch are conspicuously scalloped. Each leaflet has 2 or 3 conspicuous veins.
- **Habitat:** Roadsides, ditches, low waste places, swales, and fresh marshes.
- **Habit:** Annual herb with slender roots.
- **Stems:** Upright, branched, up to 6 feet tall, stiff-hairy when young, becoming nearly smooth at maturity.
- **Leaves:** Alternate, pinnately compound, with up to 30 pairs of leaflets; leaflets linear, asymmetrical, without teeth, minutely hairy, up to 3/4 inch long, with 2 or 3 conspicuous veins.
- **Flowers:** Few in axillary, zigzag racemes, the flower stalks with small, stiff hairs; bracts subtending the flowers ciliate.
- **Sepals:** 5-parted, united, 2-lipped, green.
- **Petals:** Sweet-pea shaped, red, purple, or yellowish, up to 1/2 inch long.
- **Stamens:** 10, united below.
- **Pistils:** Ovary superior.
- **Fruits:** Segmented pods (loments) deeply scalloped along one edge, with 3-9 segments; segments smooth, each containing a single seed; seeds dark purple or black, about 1/8 inch long.
- **Notes:** This species may be common in one area one year, and absent from the same area the next year.



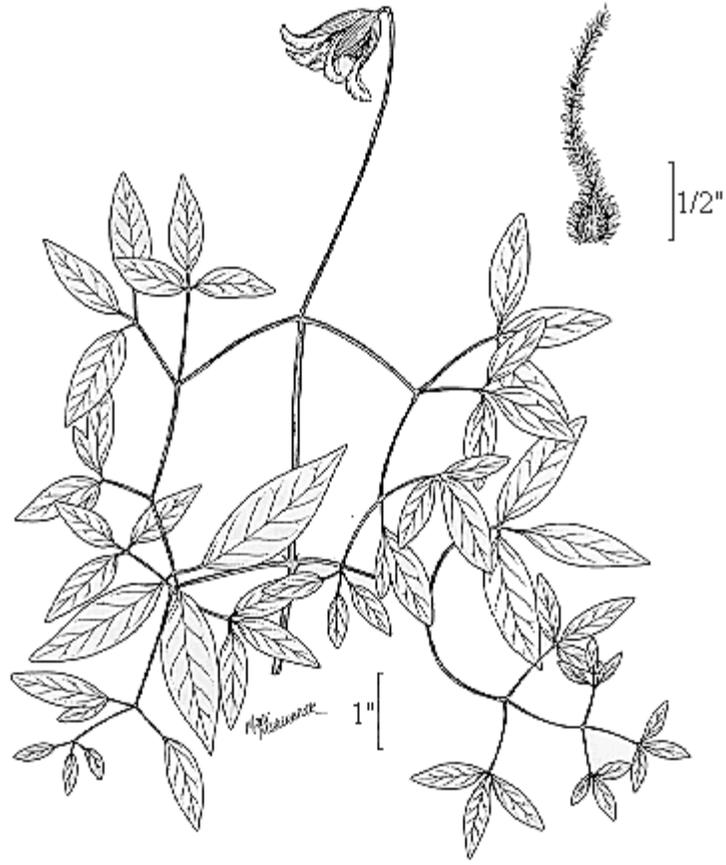
Southern Wetland Flora

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Swamp Virgin's-bower *Clematis crispa* L.



- **Family:** Buttercup (Ranunculaceae)
- **Flowering:** April-August
- **Field Marks:** This viny *Clematis* has solitary flowers which are not subtended by bracts.
- **Habitat:** Alluvial swamps, thickets, floodplains, bay shores, moist hammocks, swamps, wet woodlands, marshes, wet savannas and flatwoods, along rivers and streams.
- **Habit:** Climbing vine or ascending herb.
- **Stems:** Climbing or ascending, smooth, ribbed, up to several feet long.
- **Leaves:** Opposite, simple or more usually compound, with 2-5 leaflets; leaflets narrowly lanceolate to elliptic to ovate, lobed or unlobed, usually pointed at the tip, tapering or rounded at the base, smooth, up to 3 1/2 inches long, up to 2 inches wide.
- **Flowers:** Solitary, terminating each branch, borne on a stalk up to 4 inches long.
- **Sepals:** 4, petal-like, free from each other, bluish or rose, thick and spongy, long pointed at the tip, wavy along the edges, up to 2 inches long, white-hairy on the inner face.
- **Petals:** 0.
- **Stamens:** Numerous.
- **Pistils:** Numerous; ovaries superior.
- **Fruits:** Achenes flat, nearly spherical, up to 2/5 inch in diameter; styles persistent, hairy, up to 1 1/2 inches long.



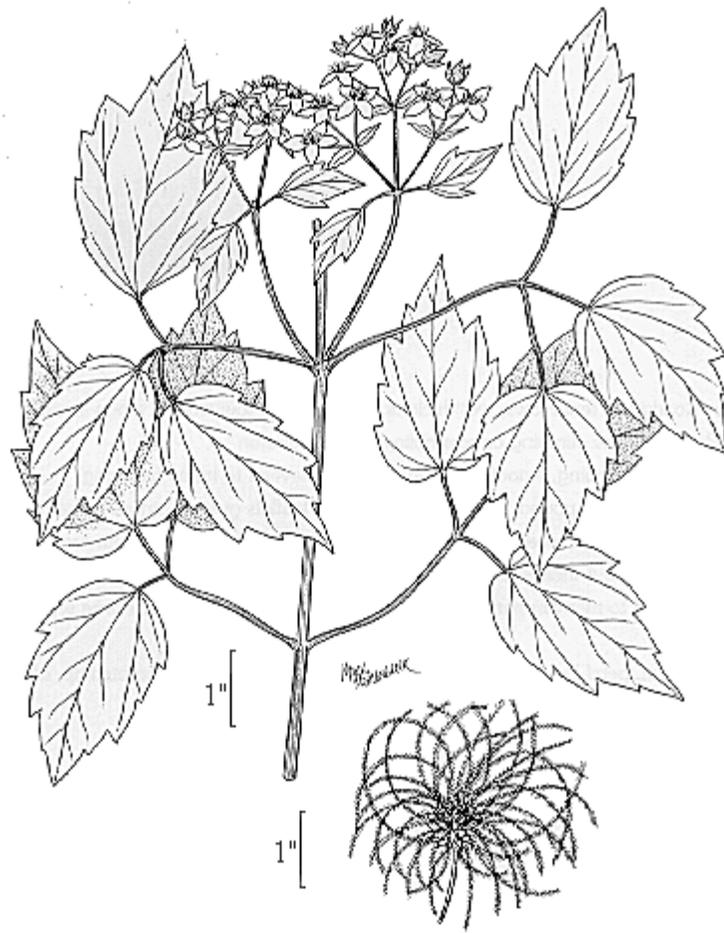
Southern Wetland Flora

Field Office Guide to Plant Species

Virginia Virgin's-bower
Clematis virginiana L.



- **Family:** Buttercup (Ranunculaceae)
- **Flowering:** July-September
- **Field Marks:** The distinguishing features of this vine are its many white flowers in panicles or cymes and its leaves divided into 3 coarsely toothed or lobed leaflets.
- **Habitat:** Roadsides, fencerows, wet thickets, bottomlands, low woods, along streams.
- **Habit:** Perennial vine climbing or scrambling over vegetation.
- **Stems:** Slender, climbing, smooth or hairy, angular, several to many feet long.
- **Leaves:** Opposite, compound, usually with 3 leaflets; leaflets ovate, pointed at the tip, usually heart-shaped at the base, coarsely toothed or shallowly lobed, rarely without teeth or lobes, usually smooth, up to 4 inches long, up to 2 1/2 inches wide.
- **Flowers:** Several to many in panicles or cymes; male and female flowers borne separately on different plants.
- **Sepals:** 4, white, petal-like, free from each other, oblong, tapering to a pointed tip, silky-hairy, about 1/2 inch long.
- **Petals:** 0.
- **Stamens:** Numerous.
- **Pistils:** Numerous; ovaries superior.
- **Fruits:** Achenes ellipsoid to obovoid, brownish, up to 1/4 inch long; styles persistent, plumose-hairy, up to 1 1/2 inches long.
- **Notes:** When in fruit, this plant has a cottony appearance because of the persistent, plumose styles.



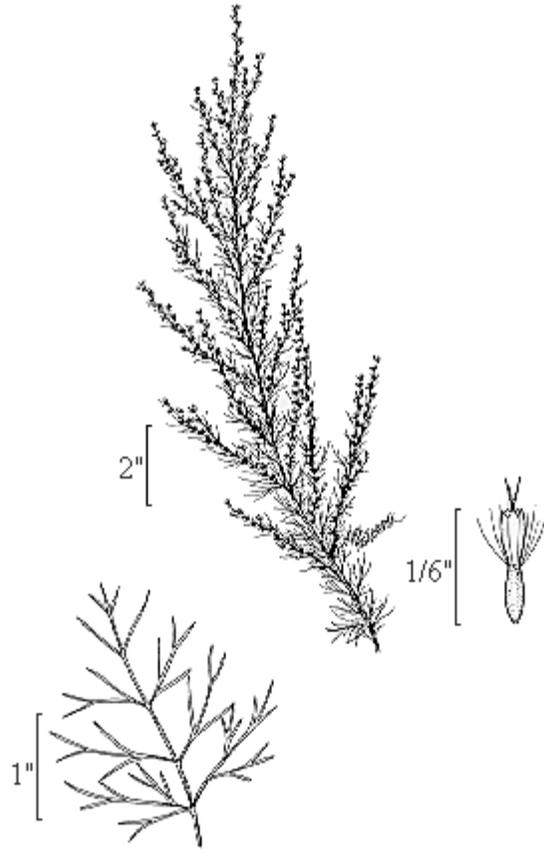
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Field Office Guide to Plant Species

Small Dog-fennel Thorough-wort
Eupatorium capillifolium (Lam.) Small



- **Family:** Aster (Asteraceae)
- **Flowering:** September-November
- **Field Marks:** This bushy, much branched perennial has numerous small flower heads, compound leaves with thread-like segments, and stems with shaggy hairs.
- **Habitat:** Moist or dry soils in fields, roadsides, disturbed areas, moist thickets, around ponds and lakes, wet meadows.
- **Habit:** Usually a coarse perennial herb with thickened rootstocks, often forming a number of basal offshoots.
- **Stems:** Upright, branched or unbranched, up to 9 feet tall, very hairy.
- **Leaves:** Opposite, or the upper ones sometimes alternate, once or twice pinnately divided into many leaflets, or the uppermost leaves simple; leaflets thread-like or linear, smooth.
- **Flowers:** 3-5 in small heads, with numerous heads arranged to form a much branched panicle; heads up to 1/6 inch long, subtended by small, pointed bracts.
- **Sepals:** 0.
- **Petals:** 5, creamy white to purplish, united to form a slender tube.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes up to 1/16 inch long, black, more or less shiny, with a tuft of cream-colored hairs at the tip.
- **Notes:** This species may sometimes form dense stands in excess of an acre.



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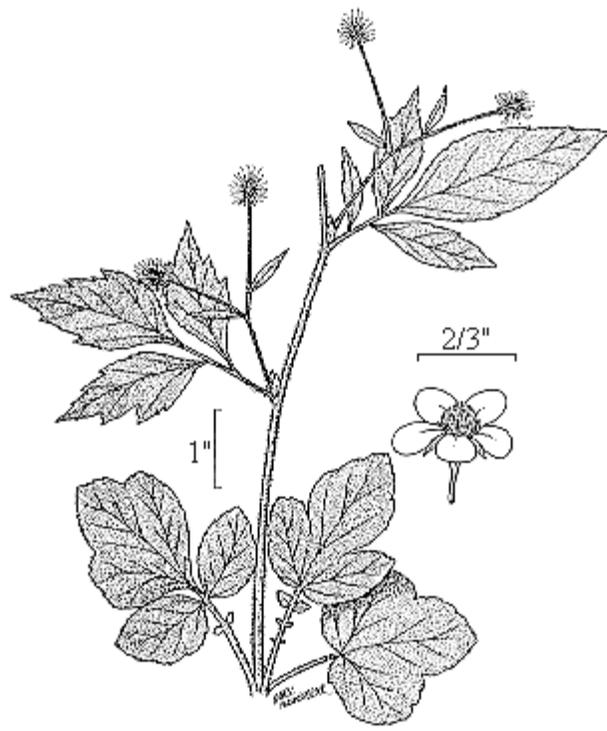
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White Avens

Geum canadense Jacq.



- **Family:** Rose (Rosaceae)
- **Flowering:** May-October
- **Field Marks:** This species is characterized by its 5 white petals and its spherical, densely bristly fruits which persist on the plant after it dies.
- **Habitat:** Rich Woods, along streams, thickets, bogs.
- **Habit:** Perennial herb with tufted roots.
- **Stems:** Upright, usually hairy, branched, up to 2 1/2 feet tall.
- **Leaves:** Basal leaves 3-lobed or divided into 3 or more leaflets, or simple and unlobed, toothed, hairy, borne on long stalks; stem leaves usually divided into 3-5 sessile leaflets, toothed, hairy.
- **Flowers:** 1-several from the upper part of the stem, up to 2/3 inch broad, on slender, velvety-hairy stalks.
- **Sepals:** 5, green, lanceolate, abruptly pointed, turned downward.
- **Petals:** 5, white, free from each other, as long as or longer than the sepals.
- **Stamens:** Numerous.
- **Pistils:** Numerous; ovaries superior.
- **Fruits:** Spherical, densely bristly, up to 1/2 inch in diameter.
- **Notes:** This is a fairly common understory plant in wet to damp areas.

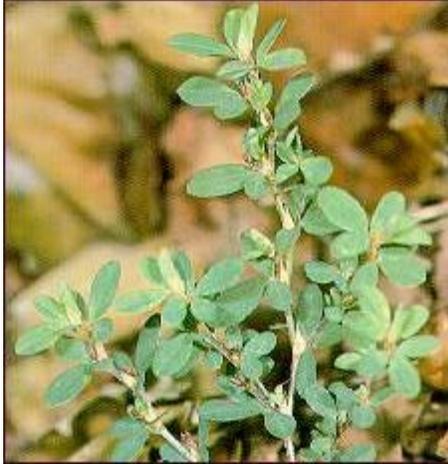


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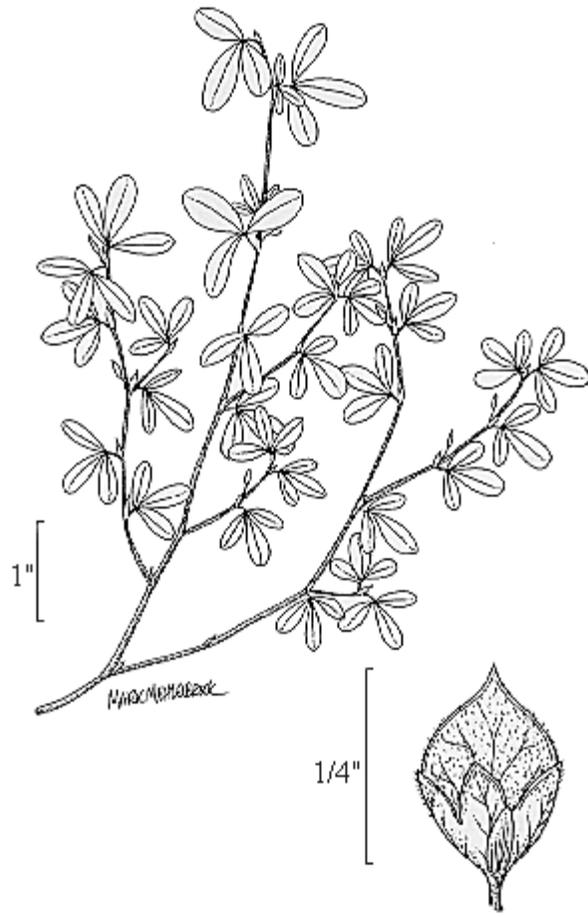
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Japanese Clover

Lespedeza striata (Thunb.) Hook. & Arn.



- **Family:** Pea (Fabaceae)
- **Flowering:** July-October
- **Field Marks:** The small axillary flowers and the hairs on the stem that point downward distinguish this species.
- **Habitat:** Disturbed soil, lawns, along streams, fields, open woods.
- **Habit:** Annual herb with an elongated taproot.
- **Stems:** Sprawling or ascending, much branched, with tiny hairs that point downward on the stem.
- **Leaves:** Alternate, divided into 3 leaflets; each leaflet oblong, rounded at the tip, tapering to the base, toothless but usually with marginal cilia, up to 3/4 inch long, up to 1/3 inch wide; leaf stalks up to 1/6 inch long.
- **Flowers:** 1-3 in the axils of the leaves; some flowers with petals, others without.
- **Sepals:** 5, ovate, green, united below.
- **Petals:** 5 when present, pink or purple, up to 1/20 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Pods oval, pointed at the tip, protruding above the persistent sepals, up to 1/4 inch long.
- **Notes:** This species is native of eastern Asia. It is sometimes used as a forage species. Some botanists have recently called this species *Kummerowia striata*.



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Yellow Sweetclover *Melilotus officinalis* Lam.



- **Family:** Pea (Fabaceae)
- **Flowering:** June-September
- **Field Marks:** This species has compound leaves with 3 leaflets and elongated clusters of yellow flowers.
- **Habitat:** Moist to dry soil in fields, roadsides, and disturbed areas.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched, usually smooth, up to 7 feet tall.
- **Leaves:** Alternate, divided into 3 leaflets; leaflets oblong, rounded at the tip, tapering to the base, toothed, smooth or sometimes hairy, up to 1 inch long.
- **Flowers:** Many, borne in slender clusters up to 4 inches long.
- **Sepals:** 5, green, united below.
- **Petals:** 5, yellow, arranged to form a typical pea-shaped flower, the largest petal about 1/6 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Pods up to 1/6 inch long, usually slightly hairy, with a honeycomb appearance.
- **Notes:** This species is visited by bees and is a good honey species. It is also used for hay.



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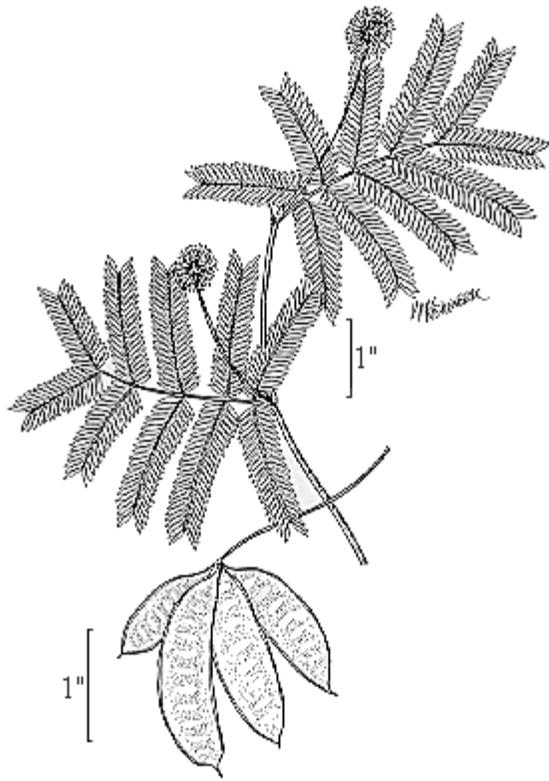
Field Office Guide to Plant Species

Yellow-puff

Neptunia lutea (Leavenw.) Benth.



- **Family:** Pea (Fabaceae)
- **Flowering:** April-October
- **Field Marks:** This member of the pea family has doubly pinnately compound leaves with tiny leaflets, 30-60 yellow flowers in rounded heads, short-stalked fruits, and no spines.
- **Habitat:** Wet meadows, damp fields, wet or dry sand.
- **Habit:** Herbaceous perennial with thickened, orange taproots.
- **Stems:** Slender, spreading, usually smooth, up to 3 feet long.
- **Leaves:** Alternate, doubly pinnately compound, with 8-18 pairs of leaflets; leaflets linear, pointed at the tip, tapering to the base, toothless, usually smooth, up to 1/4 inch long, conspicuously veiny on the lower surface.
- **Flowers:** 30-60 crowded into spherical heads; heads up to 1/2 inch in diameter.
- **Sepals:** 5, green, up to 1/10 inch long, united below to form a cup.
- **Petals:** 5, yellow, up to 1/6 inch long, united below to form a cup with the sepals.
- **Stamens:** Usually 10.
- **Pistils:** Ovary superior.
- **Fruits:** Legumes flat, up to 1 1/2 inches long, up to 3/4 inch wide, on a stalk up to 1/2 inch long.
- **Notes:** This plant has sensitive leaves which will fold up when touched.

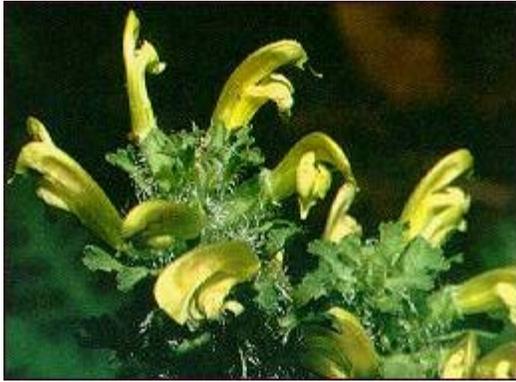


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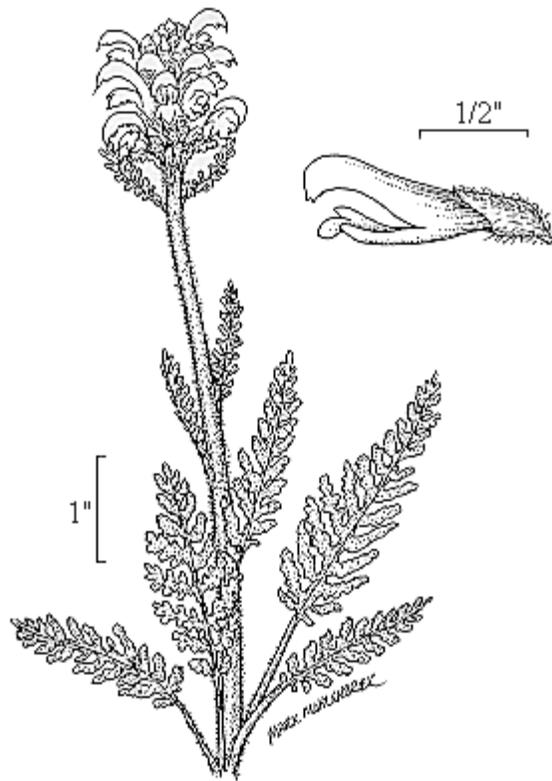
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Early Wood Lousewort

Pedicularis canadensis L.



- **Family:** Figwort (Scrophulariaceae)
- **Flowering:** April-May
- **Field Marks:** The combination of deeply pinnately lobed leaves and terminal spikes of 2-lipped yellow flowers distinguishes this species.
- **Habitat:** Upland woods, along streams, low ground, prairies, high pinelands.
- **Habit:** Perennial herb with a spreading rootstock.
- **Stems:** Tufted, ascending to upright, smooth or hairy, unbranched, up to 1 1/2 feet tall.
- **Leaves:** Mostly alternate, simple, oblong to lanceolate, the lowest pinnately compound, the upper deeply pinnately lobed, rounded or pointed at the tip, tapering to the base, smooth or hairy, up to 5 inches long.
- **Flowers:** Several crowded into a terminal spike, subtended by toothed, hairy bracts; spikes up to 8 inches long.
- **Sepals:** Green, asymmetrical, united but split along one side, up to 1/4 inch long, sparsely hairy.
- **Petals:** United, 2-lipped with a cylindrical tube, the lower lip 3-lobed, yellow, up to 1 inch long.
- **Stamens:** 4, under the upper lip of the petals.
- **Pistils:** Ovary superior; style usually protruding above the upper lip, containing several oblongoid seeds.
- **Fruits:** Capsules lanceoloid, smooth, asymmetrical, up to 2/3 inch long.



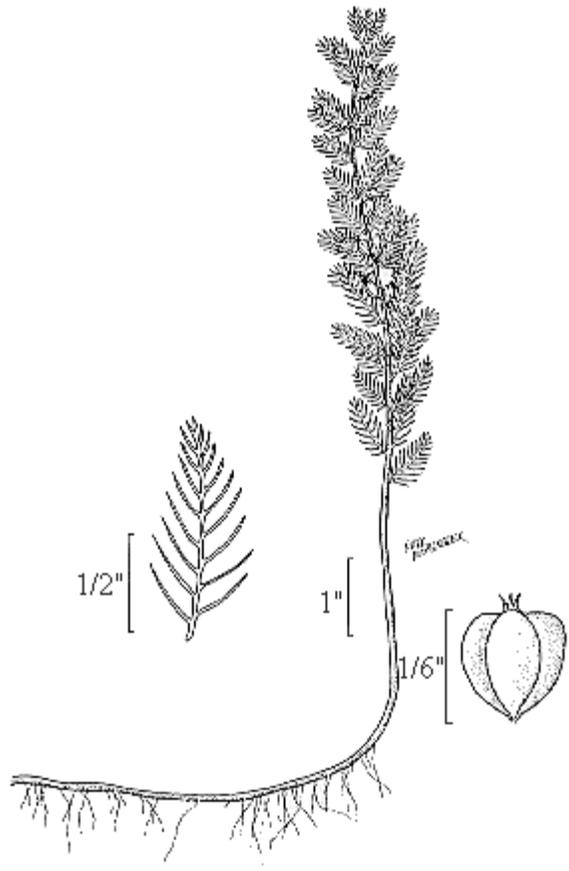
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Comb-leaf Mermaid-weed
Proserpinaca pectinata Lam.



- **Family:** Milfoil (Haloragidaceae)
- **Flowering:** June-October
- **Field Marks:** This species, which often is found in standing water, has all leaves pinnately divided, with none of the leaf segments more than 1/20 inch wide.
- **Habitat:** Wet sandy ditches, stream banks, bogs, shores, borders of swamps and sloughs, wet savannas, flatwoods, often in shallow water.
- **Habit:** Perennial herb, often growing in water.
- **Stems:** Creeping, rooting at the nodes if on land, often branched, smooth, up to 1 1/2 feet long.
- **Leaves:** Alternate, up to 1 1/2 inches long, deeply pinnately divided into 10-18 very narrow segments in water, each segment less than 1/20 inch wide and sometimes with minute teeth; leaves on terrestrial plants merely toothed.
- **Flowers:** Solitary in the leaf axils.
- **Sepals:** 3, green, triangular, united below.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Ovoid, 3-angled, up to 1/6 inch long.



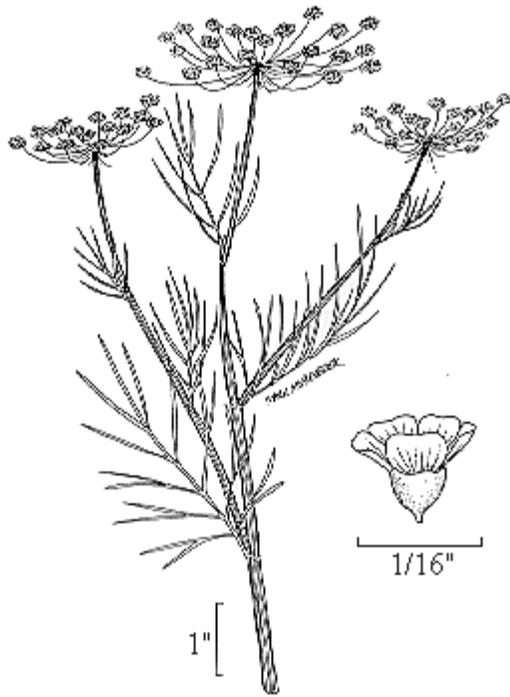
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Nuttall's Mock Bishop-weed
Ptilimnium nuttallii (DC.) Britton



- **Family:** Carrot (Apiaceae)
- **Flowering:** June-August
- **Field Marks:** This bishop-weed differs by its leaflets that are not whorled and by its toothless bracts.
- **Habitat:** Swampy meadows, wet woodlands, wet prairies, bogs, wet ditches, abandoned rice fields.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched, smooth, up to 3 feet tall.
- **Leaves:** Alternate, pinnately divided; leaf segments thread-like, alternate or opposite, smooth, up to 3 inches long.
- **Flowers:** Several, in compound umbels up to 4 inches across; umbels subtended by toothless, thread-like bracts; flower stalks about 1/3 inch long.
- **Sepals:** Minute, green, united.
- **Petals:** 5, white, free from each other.
- **Stamens:** 5, with purple anthers.
- **Pistils:** Ovary inferior.
- **Fruits:** Nearly spherical to ovoid, smooth, about 1/20 inch in diameter, with conspicuous lateral ribs.



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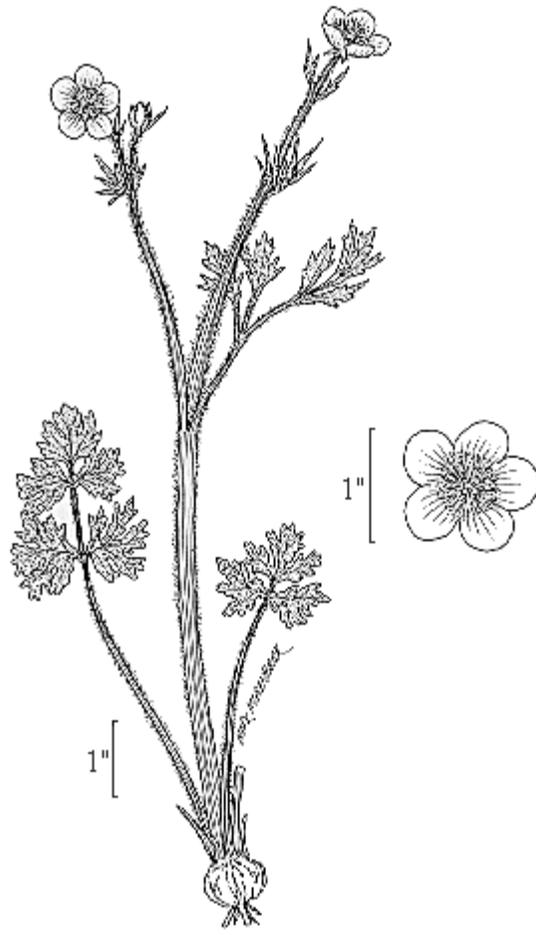
Field Office Guide to Plant Species

Bulbous Buttercup

Ranunculus bulbosus L.



- **Family:** Buttercup (Ranunculaceae)
- **Flowering:** April-June
- **Field Marks:** This buttercup is distinguished by its thickened, bulb-like base.
- **Habitat:** Wet areas, often in pastures, old fields, lawns, along streams.
- **Habit:** Perennial herb with a thickened, bulb-like base.
- **Stems:** Upright, smooth or hairy, up to 1 1/2 feet tall.
- **Leaves:** Basal and alternate, hairy or rarely smooth; the basal on long stalks and 3-parted, each part cleft or coarsely toothed; the alternate leaves smaller and less divided.
- **Flowers:** Few to several, up to 1 inch across, on long, hairy stalks.
- **Sepals:** 5, green, free from each other, pointing downward, up to 1/3 inch long.
- **Petals:** 5, bright yellow, waxy on the inner face, obovate, rounded at the tip, up to 2/3 inch long.
- **Stamens:** Numerous.
- **Pistils:** Numerous; ovaries superior.
- **Fruits:** Achenes flattened, up to 1/8 inch long (excluding the beak), with a short, curved beak, crowded into a spherical head.
- **Notes:** This species is a native of Europe. The thickened base and roots reportedly can be eaten after boiling.



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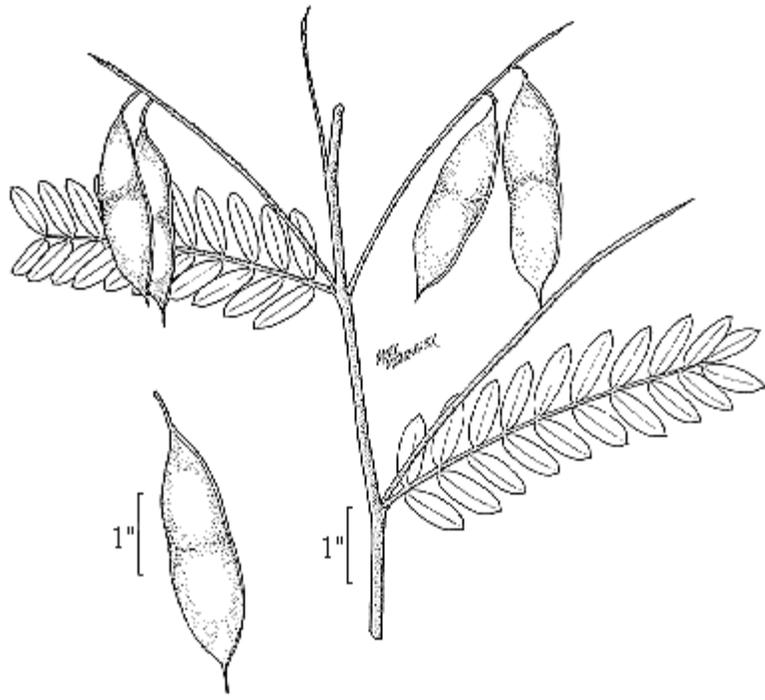
Field Office Guide to Plant Species

Bag-pod Rattle-bush

Sesbania vesicaria (Jacq.) Elliott



- **Family:** Pea (Fabaceae)
- **Flowering:** July-September
- **Field Marks:** This annual *Sesbania* differs from other herbaceous members of the genus by its shorter, 2-seeded pods up to 3 1/2 inches long.
- **Habitat:** Sandy roadsides, fields, shores, freshwater marshes, disturbed areas.
- **Habit:** Annual herb with slender roots.
- **Stems:** Upright, branched, densely white-hairy at first, becoming smooth with age, up to 10 feet tall.
- **Leaves:** Alternate, pinnately compound with 20-52 leaflets; leaflets oblong to elliptic, rounded at the tip, rounded or tapering to the base, without teeth, silky-hairy at first, becoming smooth, up to 1 1/2 inches long, up to 1/4 inch wide.
- **Flowers:** Several borne in racemes; racemes up to 6 inches long; stalks of the raceme and of the individual flowers silky-hairy when young, becoming smooth.
- **Sepals:** 5, green, united below, smooth or short-hairy, up to 1/8 inch long.
- **Petals:** Sweet-pea shaped, yellow, the largest petal up to 1/2 inch long.
- **Stamens:** 10, 9 of them united to each other, the other one separate.
- **Pistils:** Ovary superior.
- **Fruits:** Pods oblong to elliptic, up to 3 1/2 inches long, up to 1 inch wide; seeds usually 2.
- **Notes:** The pods usually persist during much of the winter. This species has sometimes been called *Glottidium vesicarium*.



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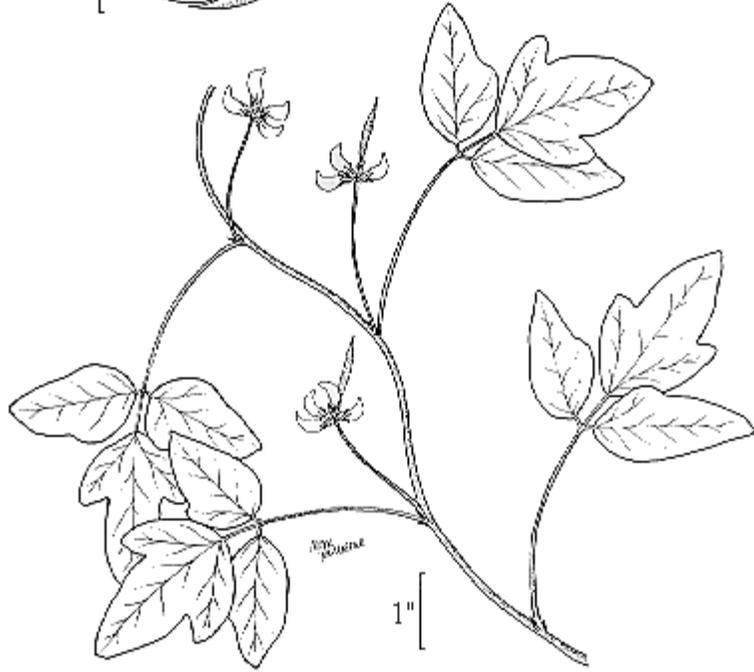
Field Office Guide to Plant Species

Trailing Wildbean

Strophostyles helvola (L.) Elliott



- **Family:** Pea (Fabaceae)
- **Flowering:** June-September
- **Field Marks:** This annual, viny member of the pea family has one or more of its 3 leaflets usually with shallow lobes.
- **Habitat:** River banks, thickets, ditches, shores, disturbed areas, beaches, open woods.
- **Habit:** Trailing or twining annual vine up to 8 feet long.
- **Stems:** Slender, rough-hairy or sometimes smooth.
- **Leaves:** Alternate, divided into 3 leaflets, broadly ovate to ovate-oblong, some of them usually shallowly lobed, pointed at the tip, rounded at the base, toothless, smooth or sparsely hairy, up to 3 inches long.
- **Flowers:** 3-10 in head-like, axillary clusters, each cluster on stalks often longer than the leaves; individual flower stalks very short or absent.
- **Sepals:** 5, green, united below, usually somewhat asymmetrical, smooth or hairy, up to 1/8 inch long.
- **Petals:** Pea-shaped, greenish purple to rosy, the back petal rounded, up to 2/3 inch long, the petal facing the back petal coiled.
- **Stamens:** 10, 9 of them attached to each other, the other one free.
- **Pistils:** Ovary superior.
- **Fruits:** Pods up to 4 inches long, sparsely hairy; seeds oblongoid, hairy, about 1/8 inch long.



Southern Wetland Flora

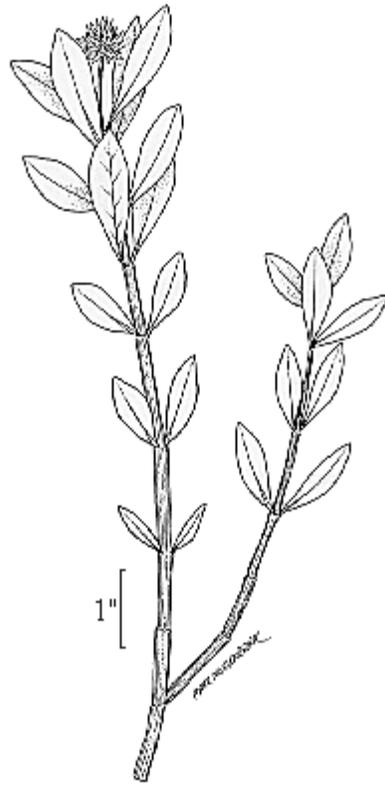
Field Office Guide to Plant Species

Alligator Weed

Alternanthera phylloxeroides (Mart.) Griseb.



- **Family:** Pigweed (Amaranthaceae)
- **Flowering:** April-October
- **Field Marks:** This mat-forming species is distinguished by its smooth, opposite, toothless leaves and its long-stalked spikes of small white flowers.
- **Habitat:** Wet to moist soils, forming mats over still water, including water-filled ditches, sloughs, swales, bayous, lakes, ponds, canals.
- **Habit:** Perennial herb, forming mats.
- **Stems:** Trailing, mat-forming, smooth except for a few hairs where the leaves are attached; flowering stems upright, up to 1 foot tall.
- **Leaves:** Opposite, simple, elliptic to oblanceolate, pointed or somewhat rounded at the tip, tapering to the sessile base, smooth, toothless, somewhat fleshy, up to 4 inches long.
- **Flowers:** Small, crowded into terminal or axillary spikes; spike about 1/2 inch long, on a stalk up to 3 inches long.
- **Sepals:** 4-5, white, free from each other, up to 1/4 inch long, minutely toothed near the tip.
- **Petals:** None.
- **Stamens:** 5, united at the base.
- **Pistils:** Ovary superior; styles 2.
- **Fruits:** Small, indehiscent, 1-seeded.
- **Notes:** This species, native in the tropics, can be an aggressive weed in wetlands. The flowers have a sweetish odor.



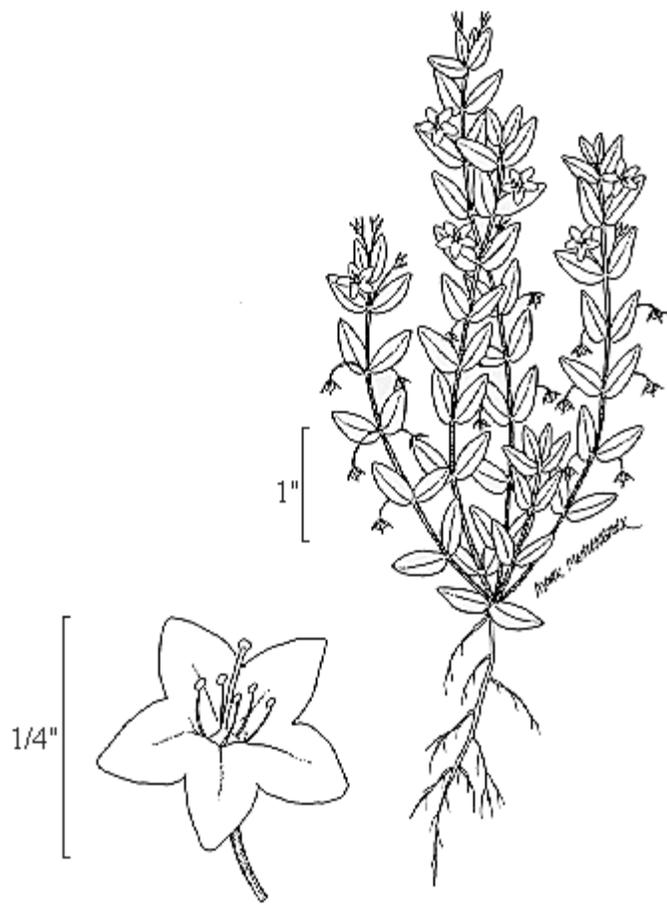
Southern Wetland Flora

Field Office Guide to Plant Species

Scarlet Pimpernel *Anagallis arvensis* L.



- **Family:** Primrose (Primulaceae)
- **Flowering:** May-August
- **Field Marks:** This species is characterized by its small, ovate, opposite leaves and its 5-parted scarlet to salmon-colored flowers on slender stalks.
- **Habitat:** Moist, disturbed soil, often in fallow fields, lawns, ditches, sand and gravel banks.
- **Habit:** Much branched annual herb.
- **Stems:** Slender, square, smooth, up to 1 foot long, spreading or ascending.
- **Leaves:** Opposite, simple, oval to ovate, more or less pointed at the tip, rounded at the sessile or nearly clasping base, without teeth, smooth, black-dotted on the lower surface, up to 3/4 inch long.
- **Flowers:** Solitary, on slender stalks as long as or longer than the leaves.
- **Sepals:** 5, united at the base, smooth.
- **Petals:** 5, united at the base, usually scarlet, rarely blue or white, up to 1/8 inch long, with minute teeth.
- **Stamens:** 5, attached to the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules spherical, about 1/6 inch in diameter, smooth, many-seeded.



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Field Office Guide to Plant Species

Carolina Water-hyssop
Bacopa caroliniana (Walter) B. Rob.



- **Family:** Snapdragon (Scrophulariaceae)
- **Flowering:** May-September
- **Field Marks:** This usually aquatic species is distinctly aromatic with opposite leaves and small bractlets at the base of each blue flower.
- **Habitat:** Wet sandy ditches, shores, stream banks, around ponds and lakes, swamps, usually in shallow water.
- **Habit:** Perennial herb with rhizomes, often forming extensive mats.
- **Stems:** Floating, creeping, or ascending, hairy, the upright part up to 1 foot tall.
- **Leaves:** Opposite, simple, ovate, rounded at the tip, clasping at the base, dotted, aromatic, up to 1 inch long, up to 1/2 inch wide, without teeth, sparsely hairy on the veins of the lower surface.
- **Flowers:** Solitary in the axils of the leaves, the stalks very short at first but lengthening as the fruit develops; each flower with a pair of small bractlets at its base.
- **Sepals:** 5, green, some of them ovate and up to 1/4 inch long, the others linear and shorter.
- **Petals:** 5, blue, united, up to 1/2 inch long.
- **Stamens:** 4, the longer 2 exerted from the corolla.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ovoid, up to 1/4 inch long; seeds grayish brown, distinctly veiny.
- **Notes:** This plant is often called lemon-scented bacopa because of the lemony smell given off from crushed leaves.

Southern Wetland Flora

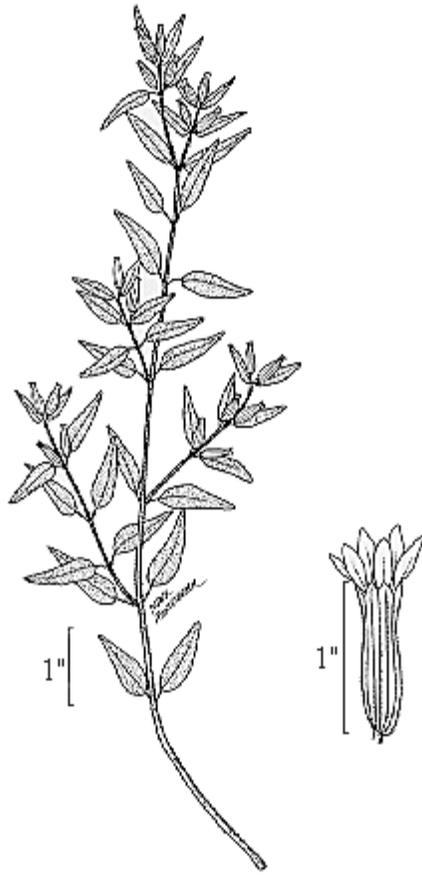
Field Office Guide to Plant Species

Blue Waxweed

Cuphea viscosissima Jacq.



- **Family:** Loosestrife (Lythraceae)
- **Flowering:** July-October
- **Field Marks:** The stems and the opposite leaves are covered with sticky hairs. The 6 purple petals and usually 11 stamens are also distinctive.
- **Habitat:** Open woods, thickets, old fields, prairies, wet meadows, ditches, edge of ponds and lakes, along streams, gravel bars.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, slender, sticky-hairy, up to 20 inches tall.
- **Leaves:** Opposite, simple, ovate-lanceolate, pointed at the tip, more or less rounded at the base, without teeth, usually sticky-hairy, up to 1 1/2 inches long.
- **Flowers:** 1-2 in the axils of the leaves, on short stalks.
- **Sepals:** 6, united into a long tube, up to 1 inch long, glandular-hairy.
- **Petals:** 6, unequal in size, purple, free from each other.
- **Stamens:** Usually 11.
- **Pistils:** Ovary superior, with a curved gland at its base.
- **Fruits:** Capsules oblongoid, containing several flattened, brownish seeds.
- **Notes:** This species is sometimes called the clammy cuphea. Its scientific name is sometimes given as *Cuphea petiolata*.



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Gulf Coast Swallow-wort *Cynanchum angustifolium* Pers.



- **Family:** Milkweed (Asclepiadaceae)
- **Flowering:** June-July
- **Field Marks:** This climbing member of the milkweed family has very slender stems, linear leaves less than 1/4 inch wide, and umbel-like clusters of small greenish white flowers.
- **Habitat:** Brackish marshes and coastal shores, hammocks.
- **Habit:** Slender twining herb, climbing over vegetation.
- **Stems:** Slender, twining, up to 4 feet long or longer, hairy at first but smooth at maturity.
- **Leaves:** Opposite, simple, linear, pointed at the tip, tapering to the sessile base, up to 3 1/2 inches long, less than 1/4 inch wide, toothless, smooth or sparsely hairy.
- **Flowers:** Few in axillary, umbel-like clusters; stalks of the flower clusters a little shorter to a little longer than the leaves; individual flowers up to 1/4 inch across.
- **Sepals:** 5, green, united below, up to 1/6 inch long.
- **Petals:** 5, greenish white, sometimes rose-tinged.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Follicles narrowly lanceoloid, sparsely short-hairy, up to 2 1/2 inches long, up to 1/3 inch wide.
- **Notes:** This species is sometimes known as *Cynanchum palustre*.

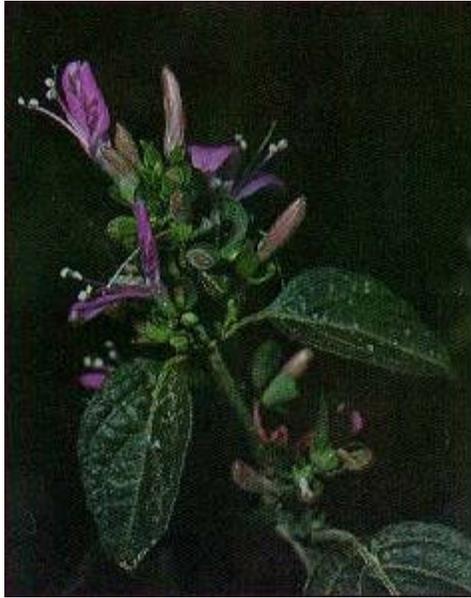


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Field Office Guide to Plant Species

Wild Mudwort

Dicliptera brachiata (Pursh) Spreng.



- **Family:** Acanthus (Acanthaceae)
- **Flowering:** August-October
- **Field Marks:** This species is distinguished by its combination of opposite, toothless leaves, opposite branching, angled stem, small, bluish, funnel-shaped flowers in short spikes, 2 stamens, and conspicuously swollen nodes.
- **Habitat:** Floodplains, bottomlands, along rivers and streams, lowland woods.
- **Habit:** Perennial herb with thickened fibrous roots.
- **Stems:** Upright, angular, smooth or hairy, with swollen nodes, up to 4 feet tall.
- **Leaves:** Opposite, simple, ovate to lanceolate-ovate, pointed at the tip, tapering or rounded at the base, without teeth, smooth or sparsely hairy, up to 6 inches long, up to 3 inches wide; stalks of lower leaves longer than those of upper leaves.
- **Flowers:** Several in axillary and terminal spikes, subtended by ciliate bracts.
- **Sepals:** 5, united below, hairy, the lobes very slender, up to 1/6 inch long.
- **Petals:** 5, blue or pink, united below to form a funnel, the lobes unequal and 2-lipped.
- **Stamens:** 2, usually enclosed by the upper lip of the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ovoid to ellipsoid, brown, flattened, up to 1/4 inch long; seeds brown, flattened.



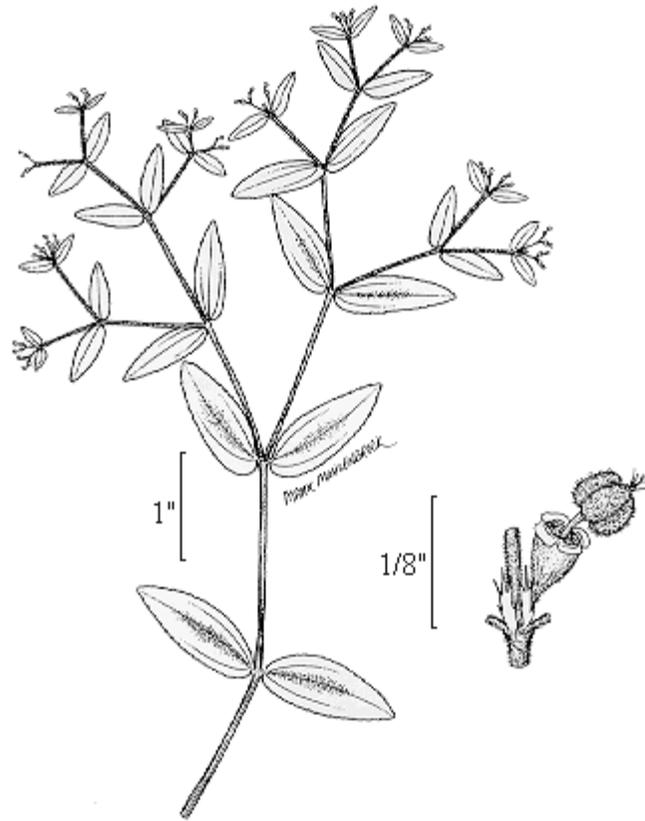
Southern Wetland Flora

Field Office Guide to Plant Species

Spotted Broomspurge *Euphorbia maculata* L.



- **Family:** Spurge (Euphorbiaceae)
- **Flowering:** May-October
- **Field Marks:** This species has milky sap, opposite, asymmetrical leaves with small teeth, and fine hairs at least near the tip of the stems.
- **Habitat:** Old fields, thickets, roadsides, open woods, sandy shores, sand and gravel bars, and cultivated croplands.
- **Habit:** Annual herb with slender roots.
- **Stems:** Upright or ascending or prostrate, branched, up to 2 feet long, hairy at least near the tip, with milky sap.
- **Leaves:** Opposite, simple, mostly oblong, rounded or pointed at the tip, rounded at the asymmetrical base, finely toothed, usually somewhat hairy, up to 1 1/2 inches long, often with a red blotch in the center of the leaf, with milky sap.
- **Flowers:** 1-few in the axils of the leaves.
- **Sepals:** 0.
- **Petals:** 0, replaced by 4 red or white, usually spherical glands.
- **Stamens:** 1 per flower.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules 3-lobed, smooth or sometimes with short, stiff hairs, up to 1/12 inch in diameter; seeds minute, 4-angled, with wavy ridges.
- **Notes:** This species is usually poisonous to livestock. The leaves are extremely variable in size and shape.



Southern Wetland Flora

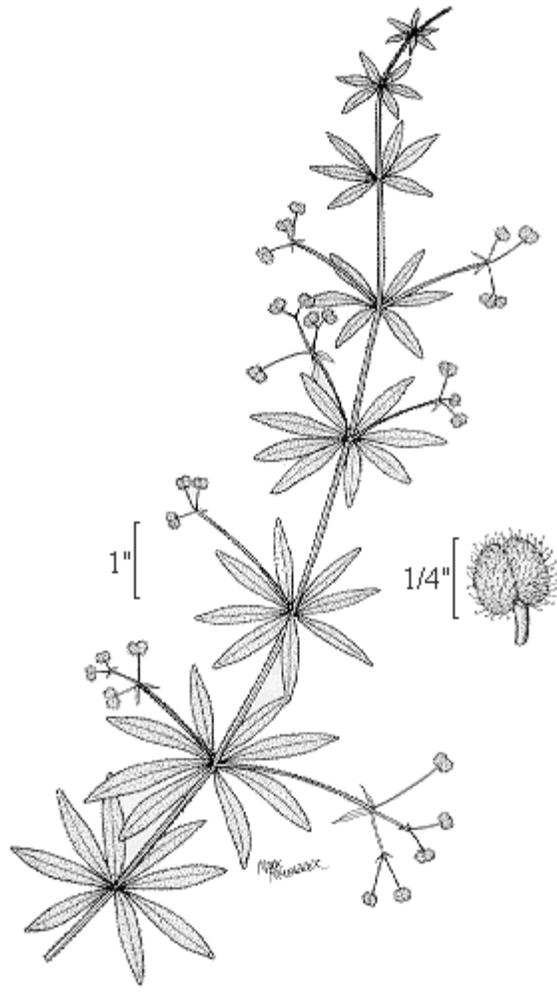
Field Office Guide to Plant Species

Catchweed Bedstraw

Galium aparine L.



- **Family:** Madder (Rubiaceae)
- **Flowering:** April-May
- **Field Marks:** This is the only bedstraw that consistently has as many as 8 leaves in a whorl.
- **Habitat:** Damp thickets, wet meadows, floodplain woods, disturbed areas, abandoned land.
- **Habit:** Annual, mat-forming herb.
- **Stems:** Sprawling or trailing, up to 3 feet long, 4-angled, each angle with sharp, retrorse, hooked prickles.
- **Leaves:** Simple, whorled in groups of 6-8 at each node, linear to oblanceolate, short-pointed at the tip, tapering to the base, without teeth, hairy, the veins and the edges of the leaves covered with sharp, short, hooked prickles, up to 2 inches long, up to 1/4 inch wide.
- **Flowers:** Several in compound cymes; each flower up to 1/6 inch across.
- **Sepals:** 0.
- **Petals:** 4, white, united below, each lobe up to 1/12 inch long.
- **Stamens:** 4.
- **Pistils:** Ovary inferior, bristly; styles 2.
- **Fruits:** Dry or a little fleshy, consisting of 2 segments, brown or black, up to 1/4 inch wide, covered with small hooked bristles.
- **Notes:** This species is also known as cleavers, rough bedstraw, or goose-grass.



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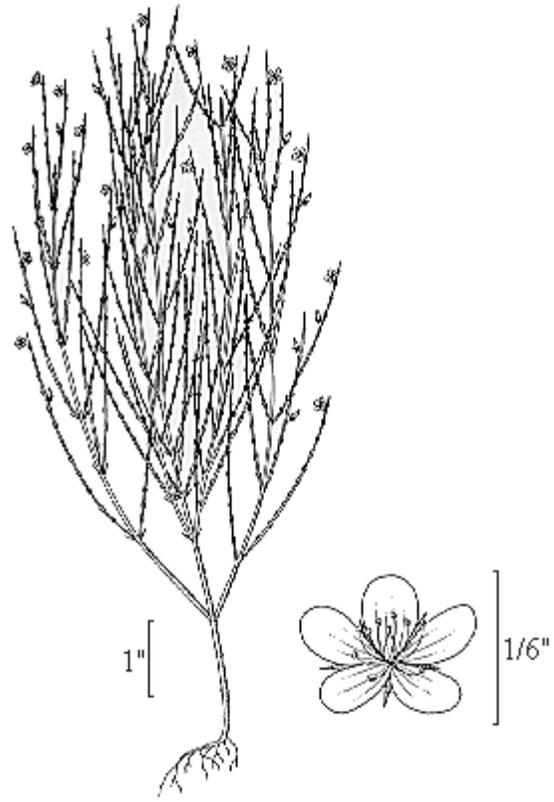
Field Office Guide to Plant Species

Orange-grass

Hypericum gentianoides (L.) BSP.



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** June-September
- **Field Marks:** This St. Johnswort differs from all others by its leaves reduced to scales and its small yellow flowers up to 1/6 inch across.
- **Habitat:** Fields, roadsides, sandy pine woodlands, rock outcroppings.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, wiry, much branched, smooth, up to 2 feet tall.
- **Leaves:** Opposite, simple, scale-like, appressed to the stem, up to 1/8 inch long, smooth.
- **Flowers:** Usually solitary, up to 1/6 inch across, nearly sessile.
- **Sepals:** 5, green, free from each other, linear-lanceolate, up to 1/8 inch long.
- **Petals:** 5, yellow, free from each other, up to 1/8 inch long.
- **Stamens:** Usually 10.
- **Pistils:** Ovary superior; styles 3, free from each other.
- **Fruits:** Capsules lanceoloid, smooth, pointed at the tip, usually becoming purplish, up to 1/3 inch long; seeds yellow.
- **Notes:** This species is also known as pineweed or orangeweed.



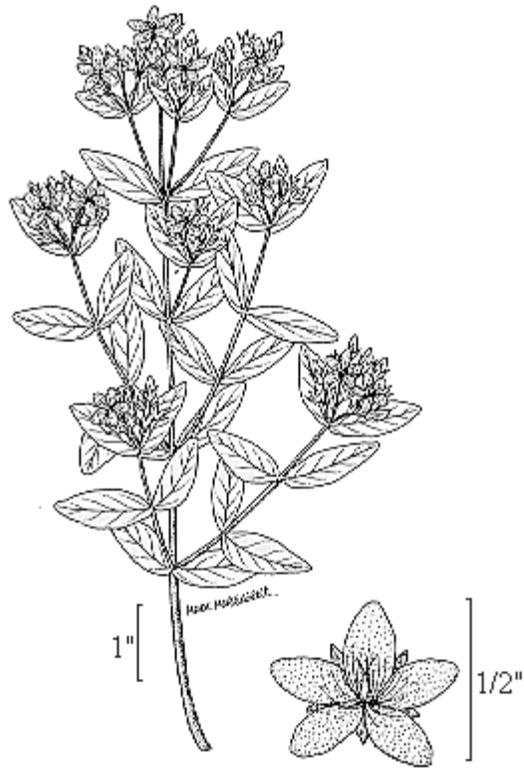
Southern Wetland Flora

Field Office Guide to Plant Species

Dotted St. Johnswort
Hypericum punctatum Lam.



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** June-September
- **Field Marks:** The distinctive features of this St. Johnswort are the black-dotted leaves and petals and the capsules about 1/4 inch long.
- **Habitat:** Old fields, moist woods, thickets, prairies, along roads.
- **Habit:** Perennial herb with a rather woody base.
- **Stems:** Upright, sparsely branched, smooth, black-dotted, up to 2 1/2 feet tall.
- **Leaves:** Opposite, simple, elliptic to oblong, rounded or slightly pointed at the tip, rounded at the sessile or clasping base, without teeth, smooth, black-dotted with 5 or 7 veins, up to 2 1/2 inches long, up to 2/3 inch wide.
- **Flowers:** Several, borne in cymes, on stalks up to 1/8 inch long; each flower about 1/2 inch across.
- **Sepals:** 5, green, free from each other, ovate to oblong, black-dotted or black-lined, up to 1/8 inch long.
- **Petals:** 5, yellow, free from each other, black-dotted, up to 1/4 inch long.
- **Stamens:** Numerous, borne in clusters of 5.
- **Pistils:** Ovary superior; styles 3, free from each other.
- **Fruits:** Capsules ovoid, glandular, up to 1/4 inch long; seeds yellow.



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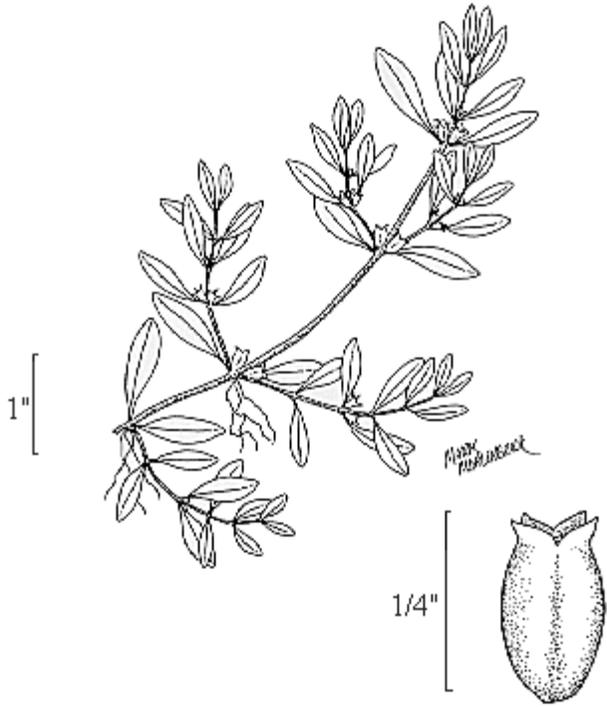
Field Office Guide to Plant Species

Creeping Seedbox

Ludwigia repens J. Forst.



- **Family:** Evening Primrose (Onagraceae)
- **Flowering:** July-September
- **Field Marks:** This creeping herb has small, yellow, 4-parted, axillary flowers. It differs from the very similar marsh purslane (*Ludwigia palustris*) by having petals and by lacking vertical green stripes on the capsule.
- **Habitat:** Wet ground in ditches, along streams, around ponds, swamps, shallow spring water.
- **Habit:** Perennial herb, rooting at the nodes, often forming mats.
- **Stems:** Creeping, smooth or rarely hairy, up to 3 feet long.
- **Leaves:** Opposite, simple, spatulate to elliptic to nearly spherical, pointed or rounded at the tip, tapering to the base, without teeth, smooth, up to 2 inches long, up to nearly 1 inch wide, with or without stalks.
- **Flowers:** Solitary in the axils of the leaves, stalkless or with a very short stalk.
- **Sepals:** 4, green, ovate to triangular, up to 1/8 inch long.
- **Petals:** 4, yellow, up to 1/4 inch long, falling off soon after formed.
- **Stamens:** 4.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules 4-sided, green, smooth, longer than broad, up to 1/4 inch long, lacking vertical green stripes, containing many minute seeds.
- **Notes:** The stems are eaten by muskrats. This species, when growing in water, usually develops flaccid leaves and stems.



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Whorled Loosestrife
Lysimachia quadrifolia L.



- **Family:** Primrose (Primulaceae)
- **Flowering:** May-July
- **Field Marks:** This perennial herb has leaves in whorls of 3-6 and yellow flowers with 5 petals solitary in the axils of the leaves.
- **Habitat:** Moist to dry soils in woods, stream banks, bottomland woods.
- **Habit:** Perennial herb with rhizomes.
- **Stems:** Upright, usually unbranched, slender to stout, hairy, up to 2 feet tall.
- **Leaves:** In whorls of 3-6, simple, except for scale-like leaves on the lower 1/3 of the stem, lanceolate to elliptic to ovate, pointed at the tip, tapering to the base, toothless, smooth or hairy, purple-dotted, up to 5 inches long, up to 2 inches wide.
- **Flowers:** Solitary in the axils of some of the upper leaves, on slender stalks up to 2 1/2 inches long.
- **Sepals:** 5, green but streaked with purple, united only at the base, up to 1/4 inch long.
- **Petals:** 5, yellow with occasional purple streaks and a purple blotch at the base, united only at the base, up to 1/4 inch long.
- **Stamens:** 5, united below.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules nearly spherical, up to 1/5 inch in diameter, purple-spotted; seeds numerous, shiny, dark brown, veiny.

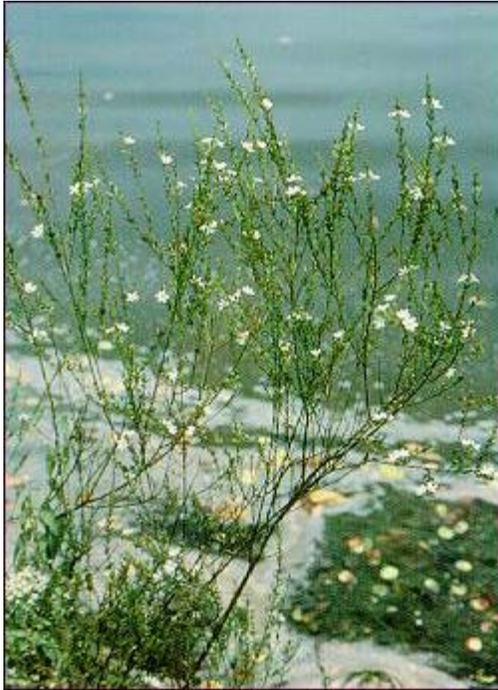


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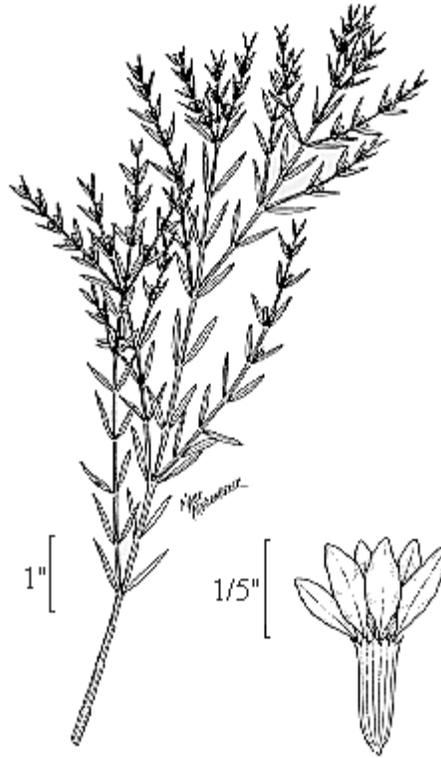
Field Office Guide to Plant Species

Saltmarsh Loosestrife

Lythrum lineare L.



- **Family:** Loosestrife (Lythraceae)
- **Flowering:** July-October
- **Field Marks:** This much branched perennial herb is recognized by its narrow opposite leaves and its white or pale violet flowers with usually 6 petals.
- **Habitat:** Brackish marshes and shores.
- **Habit:** Perennial herb, with basal offshoots rooting at the nodes later in the season.
- **Stems:** Upright, much branched, smooth, up to 4 1/2 feet tall.
- **Leaves:** Opposite, simple, linear to narrowly lanceolate, rounded at the tip, tapering to the base, without teeth, smooth, up to 2 inches long, up to 1/5 inch wide.
- **Flowers:** Solitary in the axils of leaf-like bracts.
- **Sepals:** Usually 6, united below, up to 1/5 inch long, usually with 6 large appendages so that there appears to be 12 sepals.
- **Petals:** Usually 6, white or pale violet, free from each other, up to 1/5 inch long.
- **Stamens:** Usually 6.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules cylindrical; seeds brownish to yellowish, minute.



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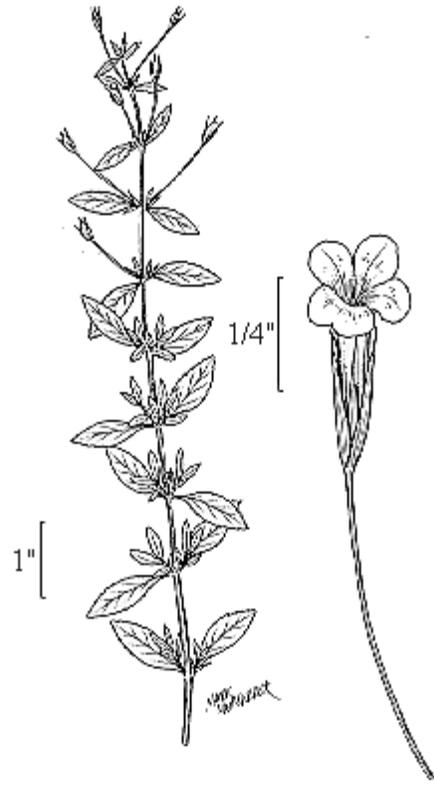
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Purple Mecardonia

Mecardonia acuminata (Walter) Small



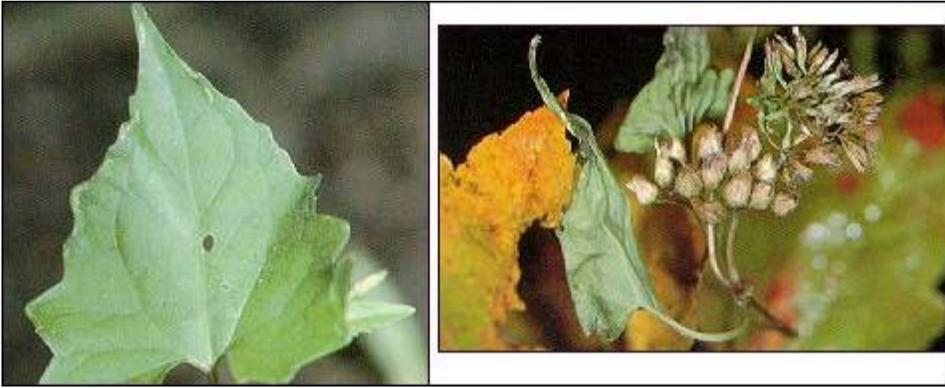
- **Family:** Figwort (Scrophulariaceae)
- **Flowering:** July-September
- **Field Marks:** The characteristics which distinguish this species from all others are opposite leaves, axillary flowers, 5 sepals, and 4 stamens.
- **Habitat:** Bottomlands, moist ditches, stream banks, low pinelands, savannas, flatwoods, bogs, floodplain forests, marshes.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright or sometimes prostrate, smooth, branched, angled, up to 20 inches tall.
- **Leaves:** Opposite, simple, elliptic to oblanceolate, pointed at the tip, tapering to the base, toothed, smooth, up to 2 inches long, up to 1/2 inch wide.
- **Flowers:** Solitary in the axils of the leaves, on smooth, slender stalks up to 1 1/2 inches long.
- **Sepals:** 5, green, 2 different sizes, free or nearly free from each other, the longest up to nearly 1/2 inch long.
- **Petals:** 5, white with purple veins, united, up to 1/2 inch long.
- **Stamens:** 4.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ellipsoid, 1/4-1/3 inch long; seeds numerous, veiny.
- **Notes:** When this plant dies back in the fall, it turns black and persists over the winter months.



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Climbing Hempweed *Mikania scandens* (L.) Willd.



- **Family:** Aster (Asteraceae)
- **Flowering:** July-October
- **Field Marks:** This is one of a few vines that belongs to the aster family. The opposite leaves are wavy-edged or even shallowly lobed. When the fluffy white seeds are on the plant, they will make anything the plant climbs on appear white at a distance.
- **Habitat:** Low woods, swamps, stream banks, wet ditches, shores, thickets, flatwoods.
- **Habit:** Perennial herbaceous vine, climbing without tendrils.
- **Stems:** Twining, smooth or sparsely hairy, up to 15 feet long.
- **Leaves:** Opposite, simple, ovate, pointed at the tip, heart-shaped at the base, usually smooth, wavy edged, sometimes with a few teeth or shallow lobes, up to 4 inches long, up to 2 inches wide; leaf stalk up to 3 inches long.
- **Flowers:** Four in a head, with the heads arranged in a round-topped cluster arising from the axils of the leaves; bracts tapering to a long point.
- **Sepals:** 0.
- **Petals:** 5, white or pink, united to form a tube.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes elongated, more or less 5-angled, sticky, up to 1/10 inch long, with numerous stiff bristles at the top.
- **Notes:** The leaves of this vine can be highly variable in shape.

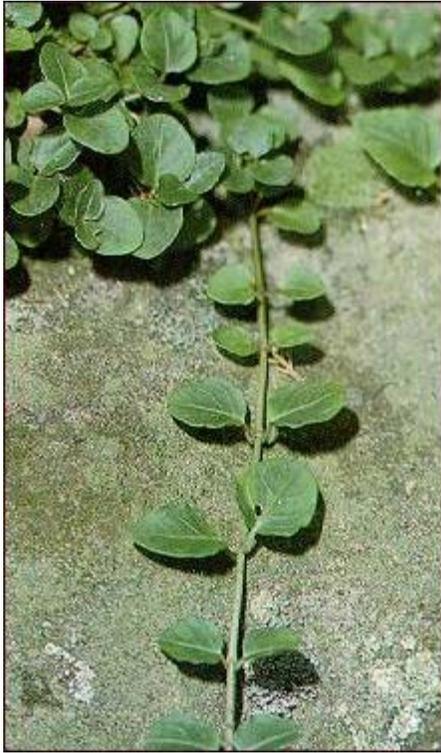


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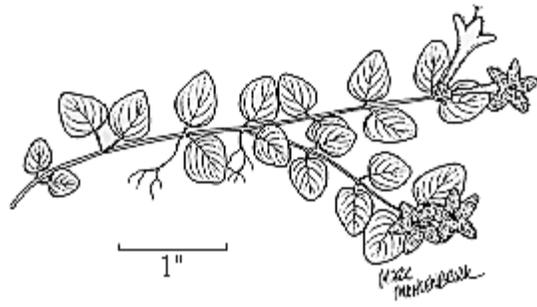
Field Office Guide to Plant Species

Partridge-berry

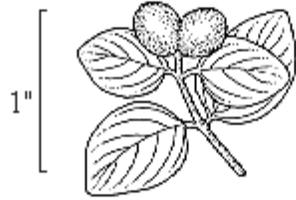
Mitchella repens L.



- **Family:** Madder (Rubiaceae)
- **Flowering:** April-June
- **Field Marks:** Partridge-berry is recognized by its creeping stems with round, opposite, evergreen leaves, small white flowers in the axils of the leaves, and bright red fruits.
- **Habitat:** Rich woods, damp shaded cliffs, steep ravines, hammocks, sandy bogs.
- **Habit:** Creeping perennial herb with fibrous roots, often forming mats.
- **Stems:** Creeping, slender, rooting at the nodes, branched, smooth except for a few hairy patches, up to 1 foot long.
- **Leaves:** Opposite, simple, evergreen, orbicular to ovate, rounded or sometimes heart-shaped at the base, usually smooth, without teeth, up to 3/4 inch long.
- **Flowers:** Borne in pairs, terminal or in the axils of the leaves, 1/2 - 2/3 inch long, united by their bases.
- **Sepals:** 4, green, united, minute.
- **Petals:** 4, white, sometimes pink-tinged, united to form a slender tubular funnel; lobes hairy on the inner face.
- **Stamens:** 4, attached to the top of the tube of the petals.
- **Pistils:** Ovary inferior; stigmas 4.
- **Fruits:** Twin drupes, red, spherical, up to 1/3 inch in diameter, with persistent sepals.
- **Notes:** This evergreen creeper is a popular plant for terraria. The flowers are fragrant. Some flowers on the plant have the stamens longer than the petals, while other flowers have stamens shorter than the petals. The fruits are said to be edible.



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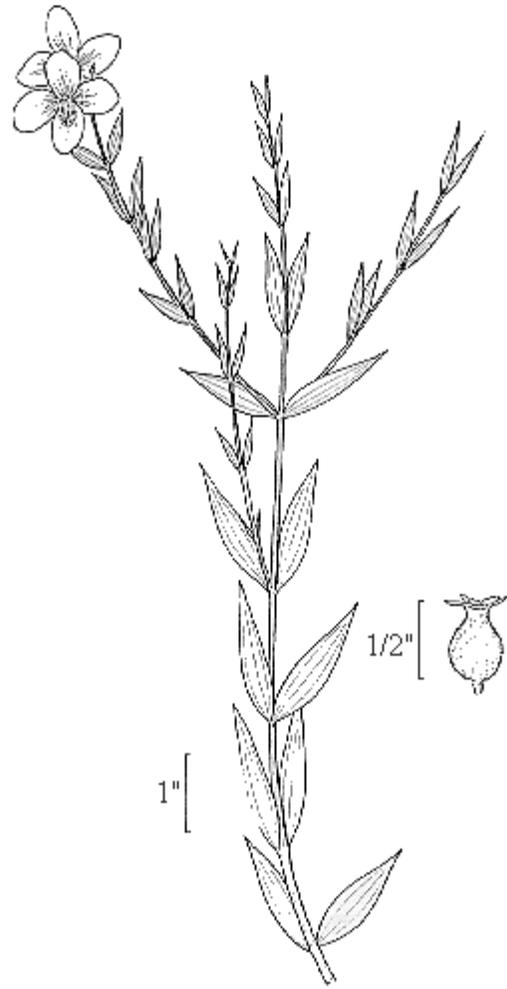
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Field Office Guide to Plant Species

Rose Meadow-beauty *Rhexia alifanus* Walter



- **Family:** Meadow-beauty (Melastomaceae)
- **Flowering:** May-September
- **Field Marks:** Species of *Rhexia* are readily recognized by their opposite leaves with 3 parallel veins and their flowers with four petals and 8 jointed stamens. This meadow-beauty differs from all others by its smooth stems and leaves and its lanceolate leaves.
- **Habitat:** Moist to dry pinelands, flatwoods, wet prairies, bogs, roadsides, sandy disturbed areas, savannas.
- **Habit:** Perennial herb with a short, spongy rootstock.
- **Stems:** Upright, branched or unbranched, smooth, up to 3 feet tall.
- **Leaves:** Opposite, simple, lanceolate to elliptic, pointed at the tip, tapering to the base, up to 3 inches long, up to 1/2 inch wide, with 3 conspicuous parallel veins, toothless, smooth.
- **Flowers:** Few to several in terminal cymes.
- **Sepals:** 4, triangular, green, smooth, united below to form a vase-like tube, the lobes up to 1/12 inch long, the tube up to 1 inch long.
- **Petals:** 4, purple to rose, up to 1 inch long, slightly hairy.
- **Stamens:** 8.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules vase-shaped, up to 1/2 inch long, glandular-hairy; seeds brown, shiny, angular, smooth or nearly so, up to 1/12 inch long.



Southern Wetland Flora

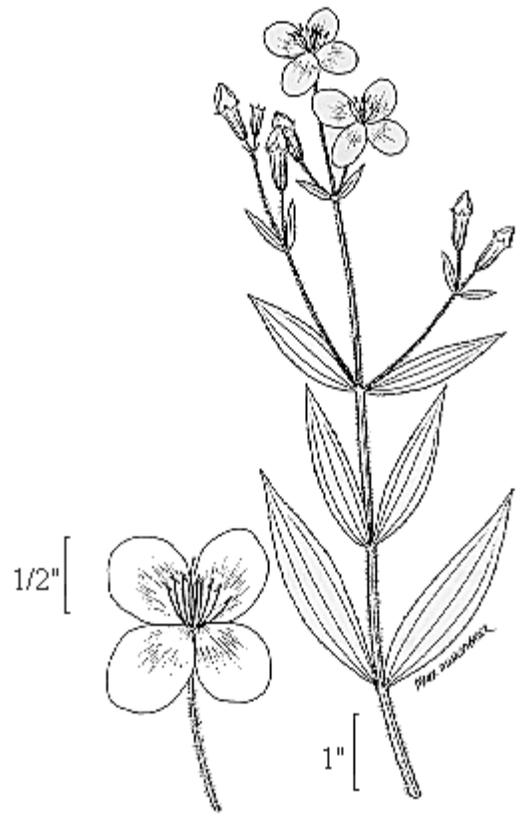
Field Office Guide to Plant Species

Virginia Meadow-beauty

Rhexia virginica L.



- **Family:** Meadow-beauty (Melastomaceae)
- **Flowering:** June-October
- **Field Marks:** This meadow-beauty has square, winged stems that are bristly hairy and pink flowers with 4 petals and 8 stamens.
- **Habitat:** Wet to saturated soils in swamps, higher parts of marshes, savannas, wet meadows and prairies, ditches, margins of lakes and ponds.
- **Habit:** Perennial herb, occasionally with a few tubers.
- **Stems:** Upright, branched or unbranched, up to 18 inches tall, square with wing angles, bristly hairy.
- **Leaves:** Opposite, simple, oval to ovate, pointed at the tip, usually rounded at the sessile base, strongly 3-nerved, bristly hairy, ciliate-toothed, up to 2 inches long, up to 1 inch wide.
- **Flowers:** Few to several in a terminal cluster, borne on bristly hairy stalks.
- **Sepals:** 4, united below to form an urn-shaped calyx, hairy, up to 1/2 inch long.
- **Petals:** 4, pink-purple, free from each other, rounded at the tip, up to 3/4 inch long.
- **Stamens:** 8, with the yellow anthers at right angles to the filaments.
- **Pistils:** Ovary superior; style slender.
- **Fruits:** Capsules urn-shaped, hairy, 1/2-3/4 inch long, persisting on the plant after the plant has died.
- **Notes:** This plant can be identified by its hairy urn-shaped capsules as long as the dead plant stands.



Southern Wetland Flora

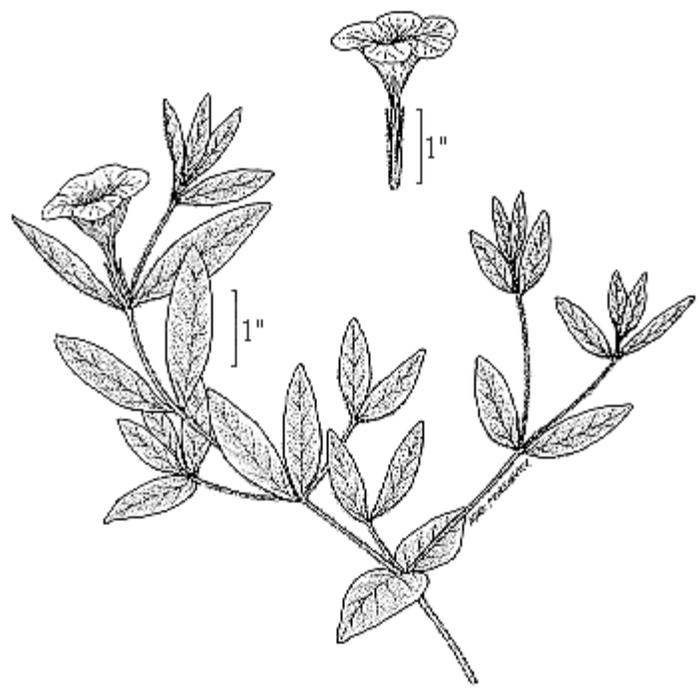
Field Office Guide to Plant Species

Hairy Wild Petunia

Ruellia humilis Nutt.



- **Family:** Acanthus (Acanthaceae)
- **Flowering:** May-October
- **Field Marks:** This wild petunia, with large, funnel-shaped lavender flowers, is densely hairy throughout.
- **Habitat:** Prairies, glades, open woods, bluff-tops.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Sprawling or ascending, densely hairy, up to 2 feet long.
- **Leaves:** Opposite, simple, oblong to ovate, more or less pointed at the tip, tapering or rounded at the sessile base, without teeth, densely hairy, up to 3 inches long.
- **Flowers:** Solitary or few in the axils of the leaves, sessile or nearly so, up to 1 1/2 inches across.
- **Sepals:** 5, green, very narrow, densely hairy, up to 1 inch long.
- **Petals:** 5, lavender, united below into a very slender tube, the tube about twice as long as the sepals.
- **Stamens:** 4, attached to the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules oblongoid, subtended by the sepals, up to 3/4 inch long.
- **Notes:** This species may be eaten by livestock.



Southern Wetland Flora

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Pinewoods Rose-gentian
Sabatia gentianoides Elliott



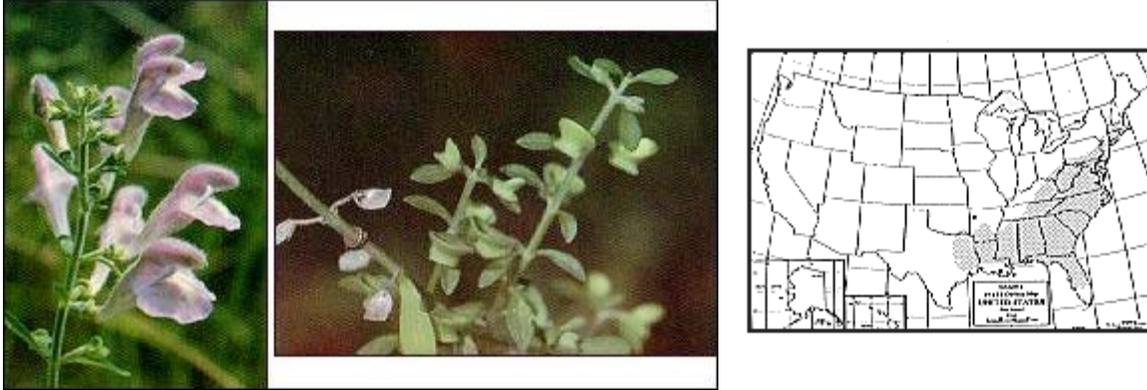
- **Family:** Gentian (Gentianaceae)
- **Flowering:** July-August
- **Field Marks:** This rose-gentian is characterized by its flowers which have 7-12 petals and flowers sessile or nearly so.
- **Habitat:** Low pinelands, flatwoods, bogs, wet prairies, savannas, wet ditches, seepage slopes.
- **Habit:** Annual herb with slender roots.
- **Stems:** Upright, branched or unbranched, smooth, up to 2 feet tall.
- **Leaves:** Of two kinds: basal leaves in a rosette, simple, oblong to elliptic, up to 1 1/2 inches long, up to 1/2 inch wide; leaves on stem opposite, simple, linear, up to 2 1/2 inches long, up to 1/8 inch wide; all leaves toothless, smooth.
- **Flowers:** Flowers sessile, crowded into small heads with up to 5 flowers.
- **Sepals:** 10, green, smooth, united below in a cup, the lobes very narrow and pointed, up to 1/2 inch long, the cup up to 1/4 inch long.
- **Petals:** 7-12, united below in a tube, the lobes pink, up to 1 1/4 inches long, up to 1/3 inch wide, the tube greenish yellow, up to 1/2 inch long.
- **Stamens:** 5-12, attached to the corolla tube.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ellipsoid to ovoid, up to 1/3 inch long; seeds numerous, gray-green, minute.



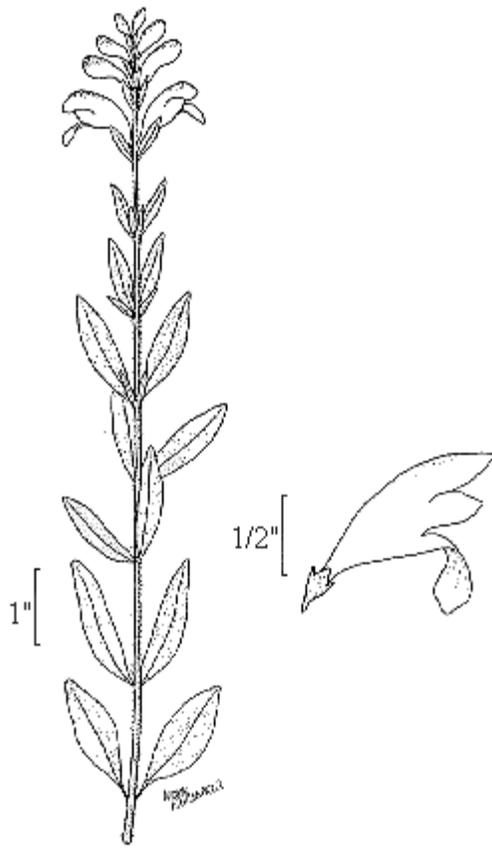
Southern Wetland Flora

Field Office Guide to Plant Species

Hyssop Skullcap *Scutellaria integrifolia* L.



- **Family:** Mint (Lamiaceae)
- **Flowering:** May-July
- **Field Marks:** Skullcaps are recognized by the crested calyx. This one differs from others in the genus by its flowers in racemes and its toothless upper leaves.
- **Habitat:** Pinelands, sand hills, sandy roadsides, savannas, bogs, meadows, flatwoods, wet thickets.
- **Habit:** Perennial herb without stolons.
- **Stems:** Upright, branched or unbranched, hairy, up to 2 1/2 feet tall.
- **Leaves:** Opposite, simple, the lower leaves ovate and few-toothed, the upper leaves narrow and toothless, all leaves sparsely hairy and dotted on both surfaces; lower leaves up to 1 1/2 inches long, on slender hairy stalks.
- **Flowers:** Several in terminal racemes; racemes up to 8 inches long; flower stalks up to 1/6 inch long, hairy.
- **Sepals:** 2-lipped but usually 4- or 5-parted, asymmetrical, crested, hairy, up to 1/8 inch long.
- **Petals:** 5, attached to each other, 2-lipped, blue to pinkish, up to 1 1/4 inches long.
- **Stamens:** 4.
- **Pistils:** Ovary superior, 4-parted.
- **Fruits:** Nutlets 4 in a group, ovate to orbicular, black or dark brown, bluntly warty, minute.

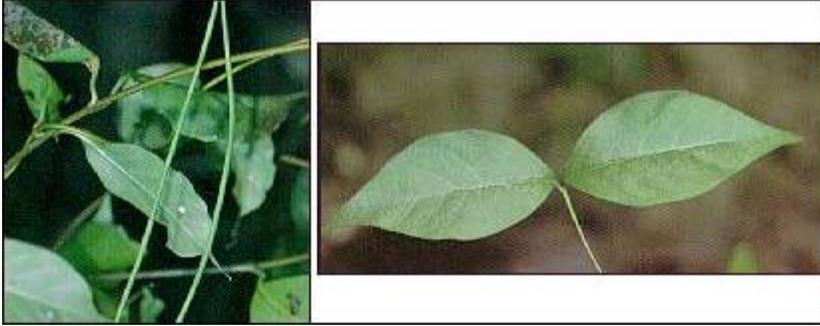


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Field Office Guide to Plant Species

Climbing-dogbane

Trachelospermum difforme (Walter) Gray



- **Family:** Dogbane (Apocynaceae)
- **Flowering:** June-August
- **Field Marks:** This vine has opposite leaves, milky sap, short-tubular creamy yellow flowers, and slender, paired fruits.
- **Habitat:** Along streams, swamps, sloughs, floodplain woods, bottomlands, marshes, wet thickets.
- **Habit:** Vine climbing high into trees, without tendrils.
- **Stems:** Slender, climbing, smooth or rarely hairy, with milky sap.
- **Leaves:** Opposite, simple, lanceolate to ovate, abruptly pointed at the tip, tapering to the base, without teeth, usually smooth on the upper surface, hairy on the lower surface or rarely smooth, up to 3 inches long, up to 2 inches wide, with milky sap.
- **Flowers:** Several in terminal and axillary cymes; stalks of flowers up to 1/2 inch long, slender, smooth.
- **Sepals:** 5, green, united below, the lobes very narrow.
- **Petals:** 5, creamy yellow, united to form a short tube, up to 1/2 inch long.
- **Stamens:** 5.
- **Pistils:** Ovaries 2 per flower, superior.
- **Fruits:** Follicles borne in pairs, very slender, up to 9 inches long, containing many seeds with tufts of long, silky hairs at the tip.
- **Notes:** The leaves of this species are extremely variable in shape, even on the same plant.



Southern Wetland Flora

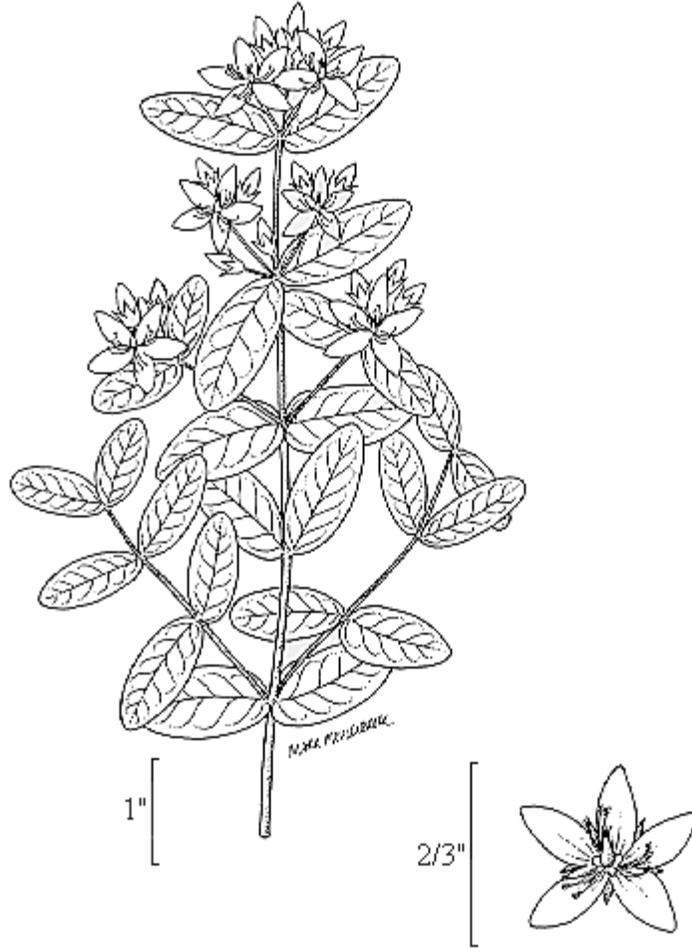
Field Office Guide to Plant Species

Marsh St. Johnswort

Triadenum virginicum (L.) Raf.



- **Family:** St. Johnswort (Hypericaceae)
- **Flowering:** August-September
- **Field Marks:** The genus *Triadenum* is characterized by opposite, blunt-tipped leaves and pink flowers with 9 stamens.
- **Habitat:** Bogs, swamps, marshy shores, wet woodlands, sometimes growing on floating mat of vegetation and on stumps and floating logs in swamps.
- **Habit:** Perennial herb with slender rhizomes.
- **Stems:** Upright, usually unbranched, smooth, up to 28 inches tall.
- **Leaves:** Opposite, simple, ovate to oblong, broadly rounded at the tip, rounded or even cordate-clasping at the base, smooth, toothless, black-dotted, up to 3 inches long, up to 1 inch broad.
- **Flowers:** Crowded in terminal and axillary clusters, pink, up to 2/3 inch across.
- **Sepals:** 5, green, free from each other, up to 1/3 inch long.
- **Petals:** 5, pink, free from each other, up to 1/2 inch long.
- **Stamens:** 9.
- **Pistils:** Ovary superior; styles 3, separate from each other.
- **Fruits:** Capsules ovoid, up to 1/2 inch long, with dark brown seeds.



Southern Wetland Flora

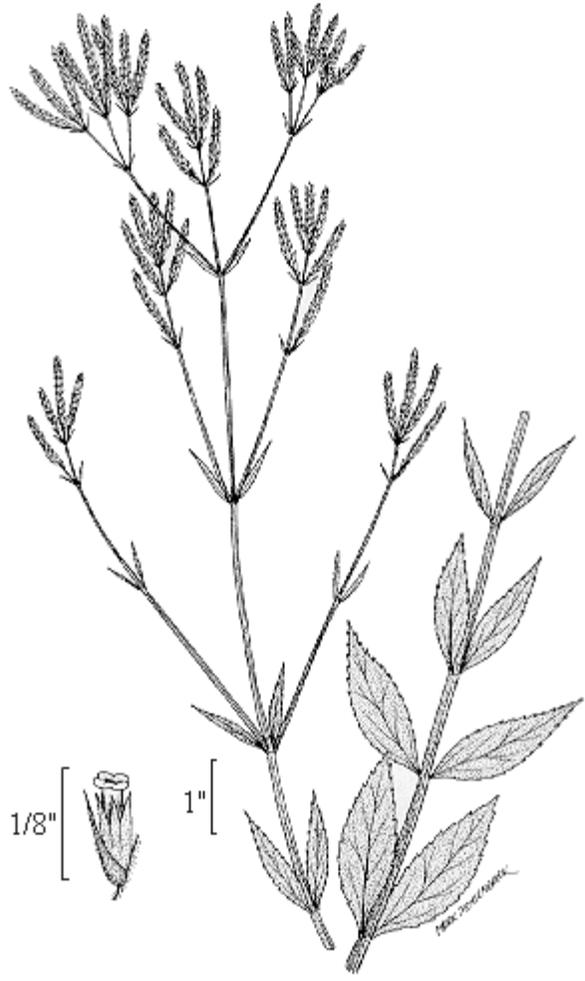
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Brazilian Vervain

Verbena brasiliensis Vell.



- **Family:** Vervain (Verbenaceae)
- **Flowering:** May-October
- **Field Marks:** This vervain is recognized by its numerous, short spikes with small purple flowers and its sharply 4-angled stems.
- **Habitat:** From dry to wet soil in disturbed sites, edges of ditches, abandoned fields, and roadsides, primarily in the coastal plain.
- **Habit:** Perennial herb with a thickened crown.
- **Stems:** Upright, sharply 4-angled, hairy or even spinulose in the upper part, usually smooth in the lower part, up to 8 feet tall.
- **Leaves:** Opposite, simple, elliptic to lanceolate, pointed at the tip, tapering to the base, coarsely toothed, sparsely hairy on both surfaces, up to 4 inches long, up to 1 inch wide.
- **Flowers:** Numerous, crowded into several spikes up to 2 inches long; each flower subtended by a bract about as long as the calyx.
- **Sepals:** 5, green, united below, up to 1/6 inch long, slightly hairy.
- **Petals:** Usually 4, unequal in size, purple, united below, a little longer than the sepals.
- **Stamens:** 4, attached to the tube of the petals.
- **Pistils:** Ovary superior, 4-lobed.
- **Fruits:** 2 or 4 nutlets, brown on one face, gray on the other, slightly warty.
- **Notes:** This plant persists over most of the winter, and in the deep south may remain green until December or January during mild winters.



Southern Wetland Flora

Field Office Guide to Plant Species

Three-seeded Mercury

Acalypha virginica L.



- **Family:** Spurge (Euphorbiaceae)
- **Flowering:** June-October
- **Field Marks:** This species differs from all others in the genus by its relatively short leaf stalks and its 9- to 15-lobed bracts.
- **Habitat:** Along streams, swales, low woods, disturbed soil.
- **Habit:** Annual herb with slender roots.
- **Stems:** Upright, branched or unbranched, up to 2 feet tall, usually hairy with long and short hairs, sometimes becoming purplish with age.
- **Leaves:** Alternate, simple, ovate to elliptic to lanceolate, pointed at the tip, tapering or sometimes rounded at the base, coarsely to finely toothed, usually somewhat hairy, up to 4 inches long, up to 2 inches wide; leaf stalks up to 1/3 as long as the blades.
- **Flowers:** Several in axillary clusters, subtended by a leaf-like bract, the male flowers borne separately from the female flowers, but on the same plant; bracts 9- to 15-lobed, up to 1 inch long.
- **Sepals:** Green, very small, 2- to 5-parted.
- **Petals:** 0.
- **Stamens:** 8-16, united at the base.
- **Pistils:** Ovary superior; stigmas much branched.
- **Fruits:** Capsules 3-lobed but nearly spherical, up to 1/12 inch in diameter, sparsely hairy, usually 3-seeded.



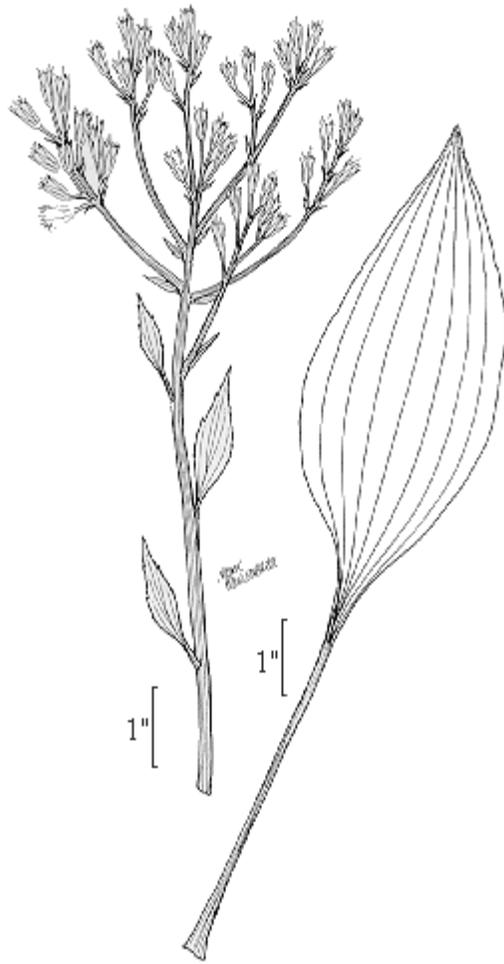
Southern Wetland Flora

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Groove-stem Indian-plantain
Arnoglossum platagineum Raf.



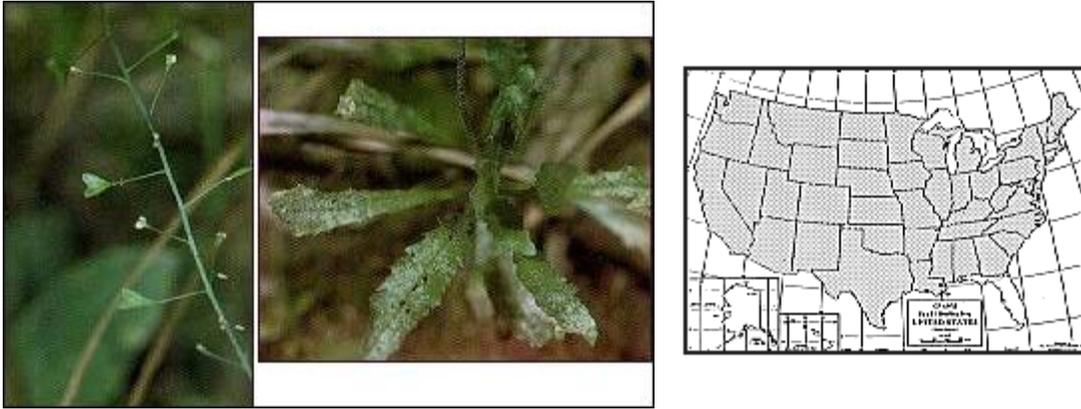
- **Family:** Aster (Asteraceae)
- **Flowering:** June-August
- **Field Marks:** This species has a basal cluster of large, oval, strongly veined leaves and several short-cylindrical heads of white flowers.
- **Habitat:** Prairies, roadsides, bogs, damp pastures, and along railroads.
- **Habit:** Rather coarse perennial herb with thickened rootstocks.
- **Stems:** Upright, stout, usually unbranched, angled, smooth, up to 6 feet tall.
- **Leaves:** Of 2 kinds: basal leaves oval to ovate, rounded or pointed at the tip, tapering to the long-stalked base, up to 8 inches long, up to 3 inches wide, without teeth, smooth, strongly 5- to 9-nerved; leaves on upper part of stem alternate, smaller, with short or no leaf stalks, and a few teeth near the tip.
- **Flowers:** 5 in heads, with numerous heads in a terminal, branched cluster; each head short-cylindrical, about 1/6-1/4 inch high, subtended by very narrow, green bracts; flowers all tubular.
- **Sepals:** 0.
- **Petals:** 5, white, united to form a tube.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes oblongoid, smooth.
- **Notes:** This species has been known as *Cacalia plantaginea* and *Cacalia tuberosa*.



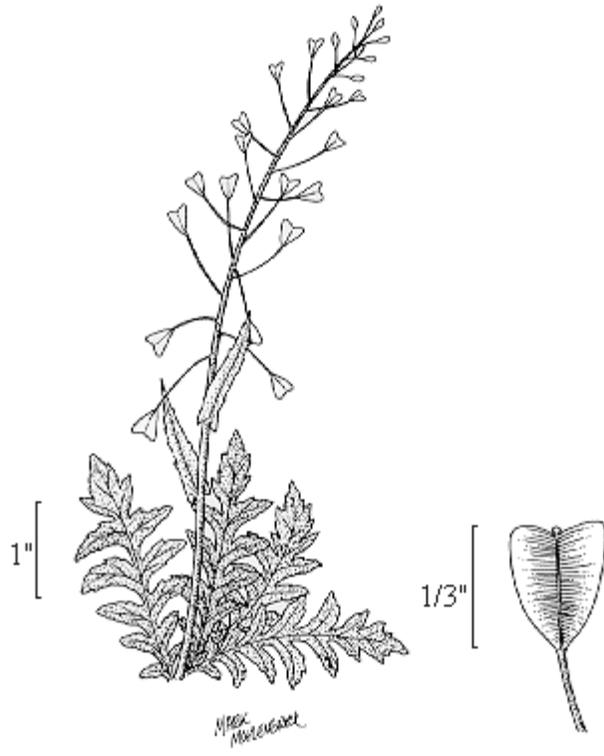
Southern Wetland Flora

Field Office Guide to Plant Species

Common Shepherd's Purse *Capsella bursa-pastoris* (L.) Medik



- **Family:** Mustard (Brassicaceae)
- **Flowering:** January-December
- **Field Marks:** This white-flowered mustard differs from other members of the mustard family by its triangular-shaped fruits and its deeply lobed leaves clustered at the base of the plant.
- **Habitat:** Old fields, pastures, disturbed open soil, along streams, wet meadows.
- **Habit:** Annual herb with a taproot.
- **Stems:** Upright, often branched, more or less hairy, up to 1 1/2 feet tall.
- **Leaves:** Mostly basal, a few on the stem; basal leaves usually deeply pinnately lobed, pointed at the tip, tapering to the base, hairy, up to 5 inches long; stem leaves alternate, toothed or toothless, pointed at the tip, clasping the stem at the base, much smaller than the basal leaves.
- **Flowers:** Several in a terminal raceme; each flower on a slender stalk.
- **Sepals:** 4, green, free from each other, hairy, much shorter than the petals.
- **Petals:** 4, white, free from each other, broadly rounded at the tip, up to 1/8 inch long.
- **Stamens:** 6.
- **Pistils:** Ovary superior.
- **Fruits:** Triangular, notched at the tip, tapering to the base, smooth, up to 1/3 inch long, containing numerous orange-yellow seeds.
- **Notes:** This species is a native of Europe. The young leaves of the common shepherd's purse can be cooked and eaten as a green vegetable.



Southern Wetland Flora

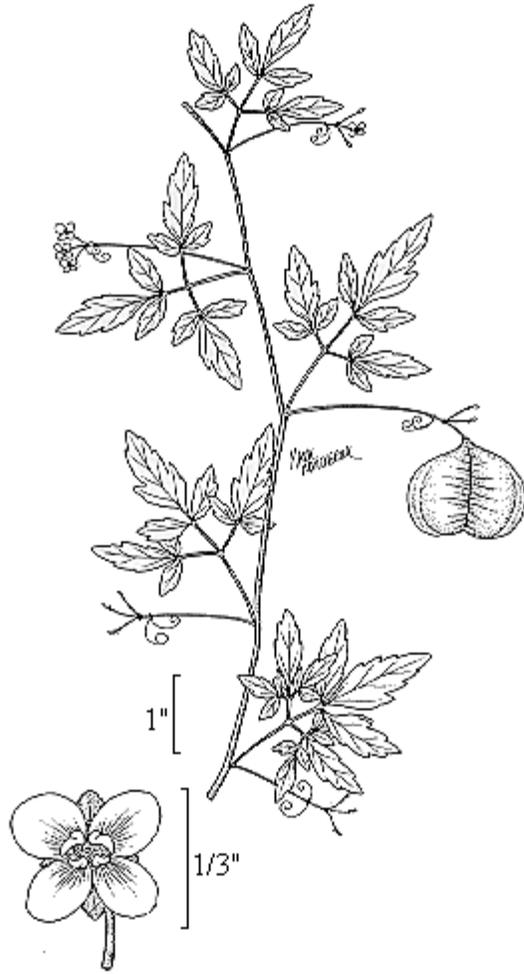
Field Office Guide to Plant Species

Balloonvine

Cardiospermum halicacabum L.



- **Family:** Soapberry (Sapindaceae)
- **Flowering:** August-September
- **Field Marks:** This distinctive viny species is recognized by its alternate, doubly ternately compound leaves, its 4 unequally sized white petals, and its inflated, balloon-like fruits.
- **Habitat:** Moist soils along streams, roadsides, waste areas, and fields.
- **Habit:** Climbing herbaceous perennial.
- **Stems:** Slender, smooth or slightly hairy, bearing axillary tendrils.
- **Leaves:** Alternate, usually doubly ternately compound; leaflets ovate to oblong, pointed at the tip, more or less tapering to the base, coarsely toothed or shallowly lobed, smooth or slightly hairy, up to nearly 2 inches long, up to nearly 1 inch wide.
- **Flowers:** Few arranged at the tip of the tendril-bearing branchlets, up to 1/3 inch across.
- **Sepals:** 4, green, free from each other, of unequal size.
- **Petals:** 4, white, free from each other, of unequal size, up to 1/6 inch long.
- **Stamens:** 8, unequal in length.
- **Pistils:** Ovary superior; stigmas 3.
- **Fruits:** Capsules inflated, spherical to obovoid, up to 1 1/2 inches long, hairy, bearing half black and half white, spherical seeds.
- **Notes:** This species, a native of tropical America, is often planted as an ornamental. It occasionally escapes into moist disturbed sites.



Southern Wetland Flora

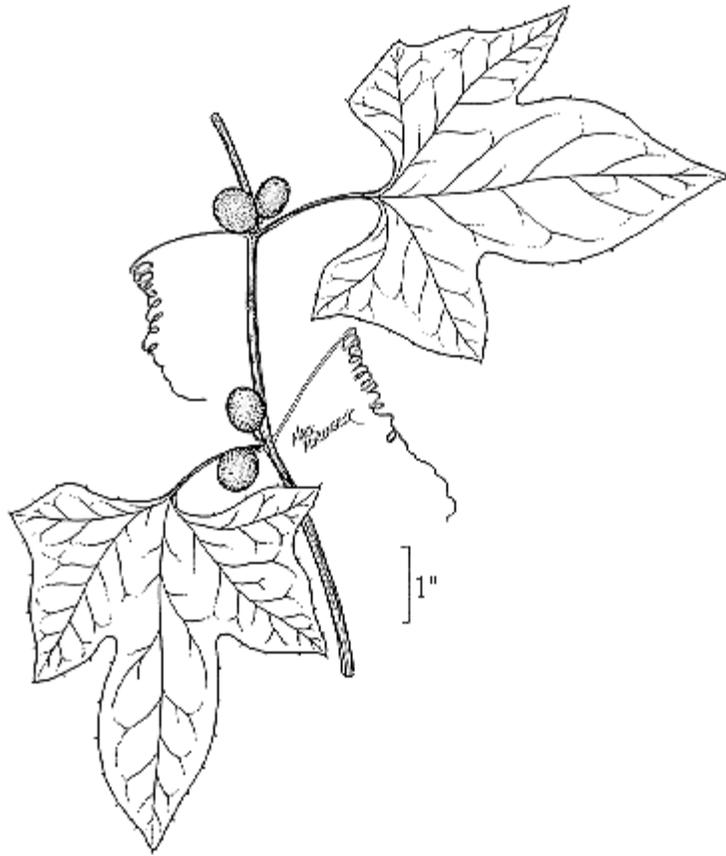
Field Office Guide to Plant Species

Southern Cayaponia

Cayaponia quinqueloba (Raf.) Shinnars



- **Family:** Gourd (Cucurbitaceae)
- **Flowering:** June-November
- **Field Marks:** This vine has 3- to 5-lobed leaves, tendrils, and yellow unisexual flowers with united petals.
- **Habitat:** Low woods, swamps, along rivers and streams, bottomland forests.
- **Habit:** Perennial herbaceous vine climbing by tendrils, with rhizomes.
- **Stems:** Slender, finely hairy, climbing over vegetation by means of tendrils.
- **Leaves:** Alternate, simple, heart-shaped at the base, palmately 3-lobed, each lobe pointed at the tip, minutely toothed, rough to the touch on the upper surface, hairy on the lower surface, up to 4 inches long, nearly as wide; leaf stalks bristly hairy.
- **Flowers:** Male and female flowers borne separately but on the same plant, solitary or in racemes or panicles in the axils of the leaves, on stalks shorter than the leaf stalks.
- **Sepals:** 5, green, united below, up to 1/3 inch long.
- **Petals:** 5, greenish white to yellow, united below but with spreading lobes, up to 1/2 inch long.
- **Stamens:** 3, free from each other; filaments twisted.
- **Pistils:** 5, greenish white to yellow, united below but with spreading lobes, up to 1/2 inch long.
- **Fruits:** Berries red, ovoid to ellipsoid, up to 3/4 inch long; seeds few, dark brown, ovoid, up to 1/3 inch long.
- **Notes:** *Cayaponia boykinii* is the same as this species.



Southern Wetland Flora

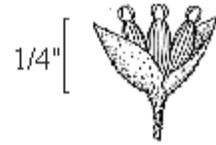
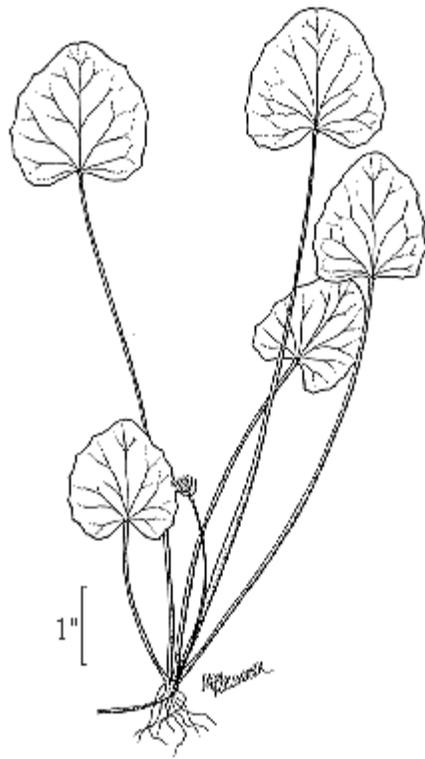
Field Office Guide to Plant Species

Erect Coinleaf

Centella erecta (L. f.) Fernald



- **Family:** Carrot (Apiaceae)
- **Flowering:** June-August
- **Field Marks:** This distinctive species is recognized by its simple, ovate to oblong leaf which arises from a creeping stolon, and its basal umbel of tiny flowers.
- **Habitat:** Low pinelands, wet ditches, sandy shores, wet pine savannas, flatwoods, bogs, along streams.
- **Habit:** Perennial herb with creeping stems rooting at the nodes.
- **Stems:** Slender, smooth to hairy, up to 2 feet or more long.
- **Leaves:** Arising from the creeping stem, simple, ovate to oblong, rounded at the tip, heart-shaped at the base, with or without low teeth, smooth or hairy, up to 4 inches long, sometimes nearly as wide; leaf stalks smooth or hairy, up to 12 inches long.
- **Flowers:** 1-4 in umbels; umbels 1-5 from each node, on stalks much shorter than the leaf stalks.
- **Sepals:** 0.
- **Petals:** 5, free from each other, white, sometimes rose-tinged, quickly falling from the flower; bracts usually 2, ovate, up to 1/4 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Ellipsoid, strongly flattened, up to 1/4 inch long, usually nearly as broad or broader, strongly ribbed.
- **Notes:** This species is sometimes known as *Centella asiatica*.



Southern Wetland Flora

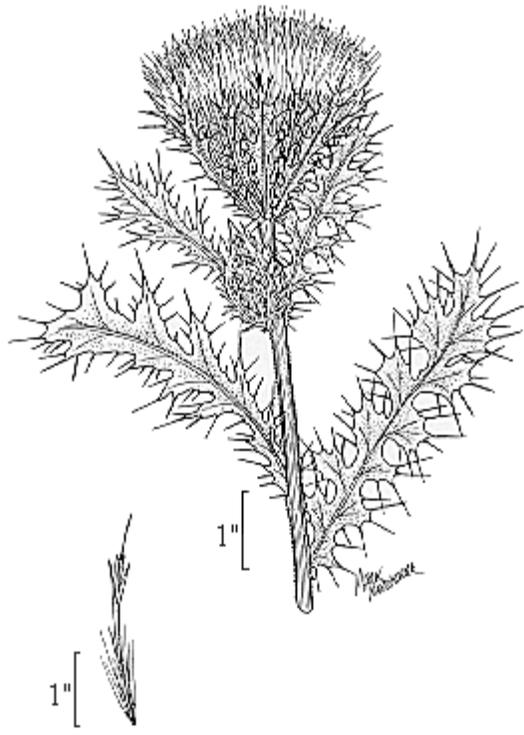
Field Office Guide to Plant Species

Yellow Thistle

Cirsium horridulum Michx.



- **Family:** Aster (Asteraceae)
- **Flowering:** March–October
- **Field Marks:** The flowering heads are subtended by a number of spiny-toothed bracts.
- **Habitat:** Low rich ground, wet ditches, savannas, meadows, flatwoods, marshes, wet prairies, moist or dry disturbed sites.
- **Habit:** Biennial herb with a thickened root.
- **Stems:** Upright, branched or unbranched, covered with cobwebby hairs, up to 4 feet tall.
- **Leaves:** Some forming a basal rosette, others alternate on the stem, simple but deeply divided, sometimes almost to the midvein, with sharp, spine-tipped teeth, smooth or usually hairy, up to 1 foot long, up to 4 inches wide.
- **Flowers:** Many crowded together into a head, with 1-10 heads per plant; each head up to 2 1/2 inches long, subtended by bracts, some which are spiny toothed; flowers all tubular.
- **Sepals:** 0.
- **Petals:** 5, yellow to reddish purple, united to form a short tube.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes smooth, topped by a cluster of plumose bristles up to nearly 2 inches long.
- **Notes:** The common name, yellow thistle, applies to some plants that live on the coastal plain that have yellow flowers. Other specimens of the same species on the coastal plain and elsewhere have reddish purple flowers.



Southern Wetland Flora

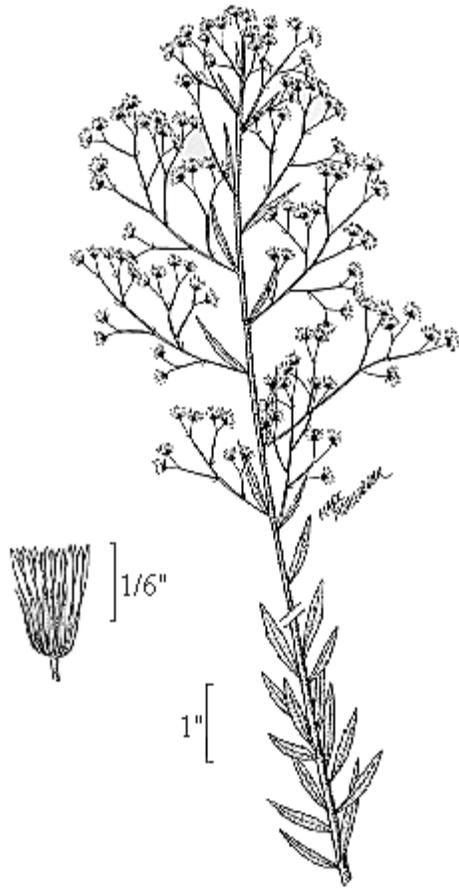
Field Office Guide to Plant Species

Canada Horseweed

Conyza canadensis (L.) Cronq.



- **Family:** Aster (Asteraceae)
- **Flowering:** June-November
- **Field Marks:** This species is distinguished by its very crowded, narrow, hairy, alternate leaves and its many tiny heads of flowers.
- **Habitat:** Moist or dry soils in old fields, prairies, glades, along roads, disturbed open areas.
- **Habit:** Usually biennial herb with thickened roots.
- **Stems:** Upright, branched above, usually densely hairy, up to 10 feet tall.
- **Leaves:** Alternate, simple, crowded, spatulate to linear, pointed at the tip, tapering to the base, sparsely toothed, hairy, up to 4 inches long.
- **Flowers:** Flowers many, crowded together into heads; each head up to 1/6 inch across, subtended by several very narrow green bracts; some flowers with tiny white rays, or rays absent; other flowers tubular.
- **Sepals:** 0.
- **Petals:** 4-parted, united,
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes elongated, with a tuft of hairs at the tip.
- **Notes:** This coarse weed used to be placed in the genus *Erigeron*. The pollen may cause hay fever in some individuals. This species is usually not grazed by domestic livestock because of its bitter qualities.



Southern Wetland Flora

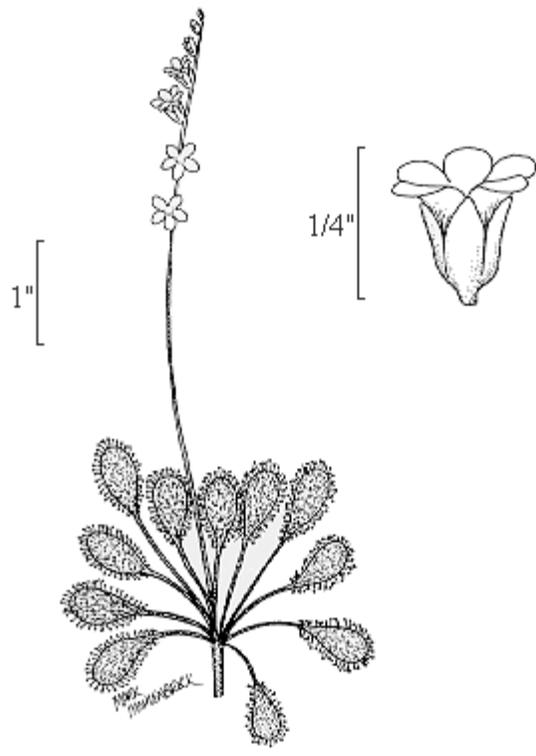
Field Office Guide to Plant Species

Spoon-leaf Sundew

Drosera intermedia Hayne



- **Family:** Sundew (Droseraceae)
- **Flowering:** July-September
- **Field Marks:** This sundew is distinguished by its leaves that are longer than broad, its leaf stalks at least 1 1/2 inches long, and its smooth flowering stalk.
- **Habitat:** Wet ditches, bogs, swamps, along streams, savannas; sometimes in standing water.
- **Habit:** Biennial herb with elongated roots.
- **Stems:** Upright, up to 8 inches tall, smooth, curved near the base.
- **Leaves:** Mostly all basal, a few sometimes on the stem, spatulate, rounded at the tip, tapering to the base, up to 1 inch long, covered with sticky hairs and sticky glands, reddish; stalks very slender, smooth, 1 1/2 - 3 inches long.
- **Flowers:** 1-20 along one side of the terminal raceme, on smooth or short-hairy stalks.
- **Sepals:** 5, green, united at the base, up to 1/6 inch long.
- **Petals:** 5, white or pinkish, free from each other, up to 1/4 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior; styles 3, each 2-cleft.
- **Fruits:** Capsules containing numerous reddish brown, low-warty seeds.
- **Notes:** Like all sundews, this species traps insects and uses some of the nutrients in the insects body for itself.



Southern Wetland Flora

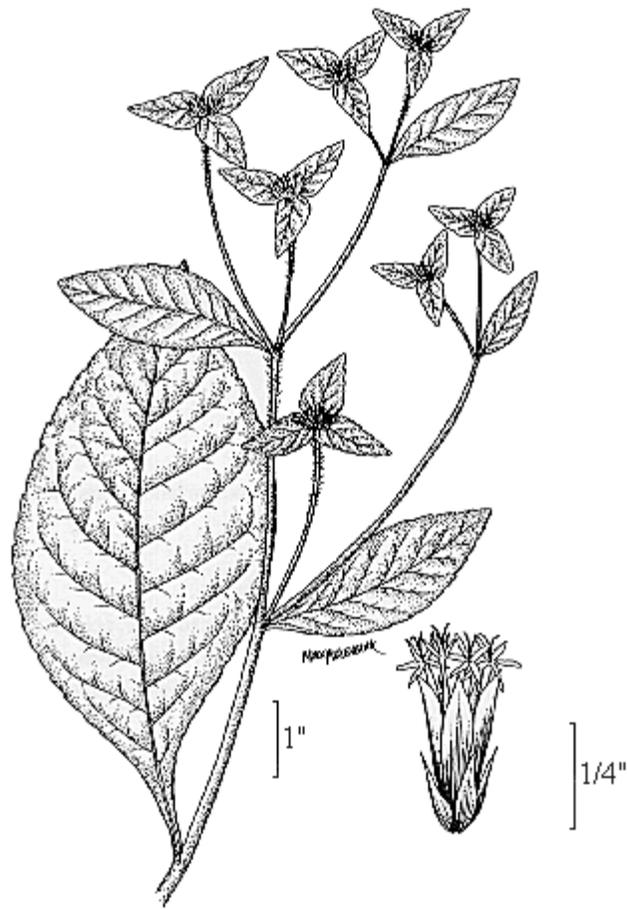
Field Office Guide to Plant Species

Carolina Elephant-foot

Elephantopus carolinianus Raeusch



- **Family:** Aster (Asteraceae)
- **Flowering:** August-October
- **Field Marks:** This species is recognized by its large, oval, wrinkled-looking leaves and its 4 purple flowers in a head, with the head subtended by 3 large, leafy bracts.
- **Habitat:** Low woods, along streams, open woods, thickets, bottomland forests, moist bluffs, meadows.
- **Habit:** Perennial herb with a thickened rootstock.
- **Stems:** Upright, branched, densely hairy, up to 2 1/2 feet tall.
- **Leaves:** Basal and alternate; basal leaves obovate to broadly elliptic to ovate, pointed at the tip, tapering to the base, wrinkled-looking, hairy, up to 10 inches long, up to 4 inches wide.
- **Flowers:** Usually 4 in a head, purple, with few-several heads per plant; each head up to 1/2 inch long, subtended by 3 large, leafy bracts.
- **Sepals:** 0.
- **Petals:** 5, purple, united to form a short tube.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes up to 1/4 inch long, hairy, with a tuft of hairs at the tip.
- **Notes:** The largest leaves are found near the middle of the stem.



Southern Wetland Flora

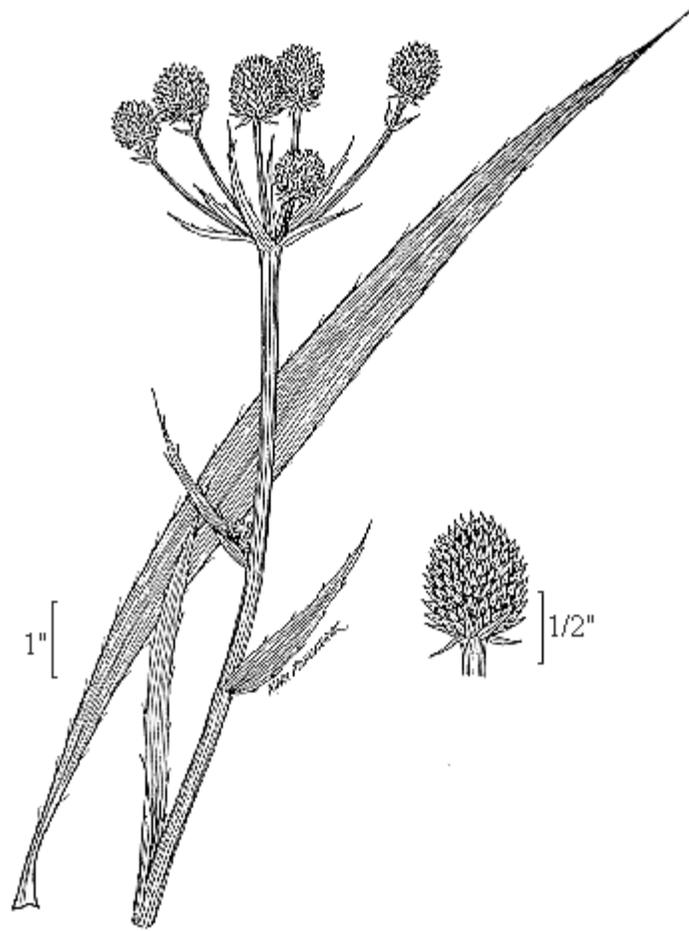
Field Office Guide to Plant Species

Rattlesnake-master

Eryngium yuccifolium Michx.



- **Family:** Carrot (Apiaceae)
- **Flowering:** July-August
- **Field Marks:** The long, strap-shaped leaves with spine-tipped teeth and the spherical heads of white flowers readily distinguish this species.
- **Habitat:** Flat woods, bogs, savannas, ditches, extending into well-drained, open woodlands.
- **Habit:** Perennial herb with thickened roots.
- **Stems:** Upright, stout, smooth, up to 6 feet tall.
- **Leaves:** Narrow, elongate, basal and alternate, parallel-veined; lower leaves up to 3 feet long; upper leaves much smaller, long-pointed at the tip, usually clasping the stem at the base, with spine-tipped teeth, smooth on both surfaces.
- **Flowers:** Many, crowded into spherical heads, the heads 1/2-4/5 inch in diameter, subtended by jagged-edged bracts.
- **Sepals:** 5, united below, ovate, pointed at the tip, green.
- **Petals:** 5, white, short-pointed at the tip, about 1/8 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary inferior; styles 2.
- **Fruits:** Dry, scaly, 1/12 inch long.
- **Notes:** The leaves resemble those of yucca of the lily family. New growth of rattlesnake-master is palatable and nutritious for livestock and is readily grazed. The plant may be dried and used as indoor winter decorations.



Southern Wetland Flora

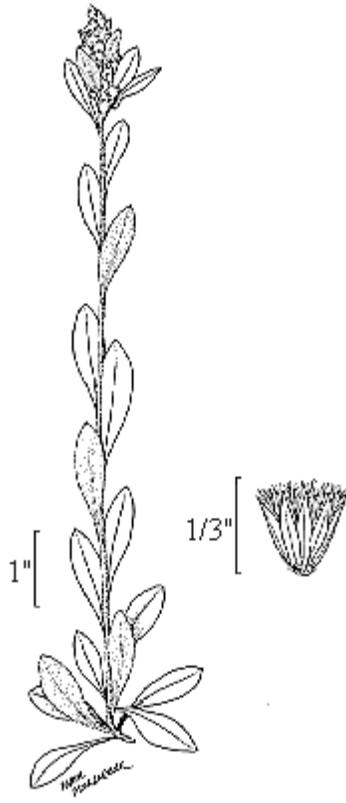
Field Office Guide to Plant Species

Purple Cudweed

Gamochaeta purpurea (L.) Cabrera



- **Family:** Aster (Asteraceae)
- **Flowering:** April-June
- **Field Marks:** This cudweed is distinguished by its purplish, pointed bracts and its flowers that bloom in the spring. This plant persists into the winter and can be identified by its grayish green leaves with the white-woolly undersurface.
- **Habitat:** Old fields, thickets, prairies, stream banks, open woodlands.
- **Habit:** Annual or biennial herb with slender roots.
- **Stems:** Upright, up to 2 feet tall, covered with white, matted hairs.
- **Leaves:** Basal and alternate, simple, spatulate to linear, rounded or slightly pointed at the tip, tapering to the base, white-woolly on the lower surface, pale green on the upper, up to 2 inches long, up to 1/2 inch wide.
- **Flowers:** Several flowers crowded together into a head, with many heads arranged in a spike; each head up to 1/3 inch high, subtended by several purplish, pointed bracts.
- **Sepals:** 0.
- **Petals:** Tubular, of 2 types: the outer 4-lobed, the inner 5-lobed.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes elongated, roughish, bearing a tuft of bristles at the top.
- **Notes:** In the past this species has been known as *Gnaphalium purpureum*.



Southern Wetland Flora

Field Office Guide to Plant Species

Swamp Sunflower *Helianthus angustifolius* L.



- **Family:** Aster (Asteraceae)
- **Flowering:** August-October
- **Field Marks:** This sunflower is readily distinguished by its very narrow, rough, hairy leaves and by its purplish disk in the center of the flower head.
- **Habitat:** Sandy woods, wet prairies, thickets, low pinelands, flatwoods, moist road shoulders, bogs, swales, ditches; sometimes upland woods and old fields.
- **Habit:** Perennial herb with a short crown and slender rhizomes.
- **Stems:** Upright, branched or unbranched, often hairy, up to 7 feet tall.
- **Leaves:** Alternate above, opposite below, simple, linear, pointed at the tip, tapering to the sessile base, without teeth, hairy, up to 7 inches long, up to 1/2 inch wide.
- **Flowers:** Many crowded into a head, with several heads on each plant; each head up to 2 1/2 inches across, with 10-20 yellow rays surrounding a purplish center, subtended by narrow, pointed, hairy bracts.
- **Sepals:** 0.
- **Petals:** 5, united, some of them ray-like and yellow, others united to form a short tube and purple.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes flat, brown, usually smooth, up to 1/4 inch long, with two short projections at the tip.



Southern Wetland Flora

Field Office Guide to Plant Species

Common Sunflower

Helianthus annuus L.



- **Family:** Aster (Asteraceae)
- **Flowering:** July-November
- **Field Marks:** This robust sunflower has flower heads up to 12 inches across.
- **Habitat:** Prairies, disturbed soil, wet meadows.
- **Habit:** Robust annual herb.
- **Stems:** Upright, branched, rough-hairy, up to 15 feet tall.
- **Leaves:** Alternate, simple, the lowermost sometimes opposite, broadly ovate, pointed at the tip, rounded or heart-shaped at the base, coarsely toothed, rough-hairy on both surfaces, with 3 main veins, up to one foot long.
- **Flowers:** Many crowded into large heads, with 1 or more heads per plant; each head 3-12 inches across, subtended by many green bracts; flowers of 2 kinds: the outer yellow and ray-like; the inner tubular, dark purple or brown, forming a disk.
- **Sepals:** 0.
- **Petals:** Some yellow, ray-like, up to 3 inches long; others dark purple or brown, 5-lobed, tubular.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes oblong, flat, usually hairy, up to 1/2 inch long.
- **Notes:** This plant is often grown as an ornamental or as a crop plant. The seeds are edible and nutritious.



Southern Wetland Flora

Field Office Guide to Plant Species

Jerusalem-artichoke
Helianthus tuberosus L.



- **Family:** Aster (Asteraceae)
- **Flowering:** August-October
- **Field Marks:** This sunflower has heads with yellow centers and long-stalked, hairy leaves with 3 main veins. The upper leaves are usually alternate.
- **Habitat:** Moist woods, dry woods, along streams, moist prairies.
- **Habit:** Perennial herb with thickened, tuber-bearing rootstocks.
- **Stems:** Upright, branched, hairy, up to 12 feet tall.
- **Leaves:** Usually alternate on the upper part of the stem, opposite on the lower part, oblong to ovate, pointed at the tip, tapering to the base, toothed, rough to the touch on the upper surface, hairy on the lower surface, with 3 strong veins, up to 8 inches long, up to 3 inches wide; leaf stalks long, hairy.
- **Flowers:** Many, crowded into a head, with several heads on each plant; each head with 12-20 yellow rays surrounding a yellow center, subtended by pointed, hairy bracts.
- **Sepals:** 0.
- **Petals:** 5, yellow, some of them united to form rays, others united to form small tubes.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes flat, hairy.
- **Notes:** The underground parts of this plant may be cooked and eaten.



Southern Wetland Flora

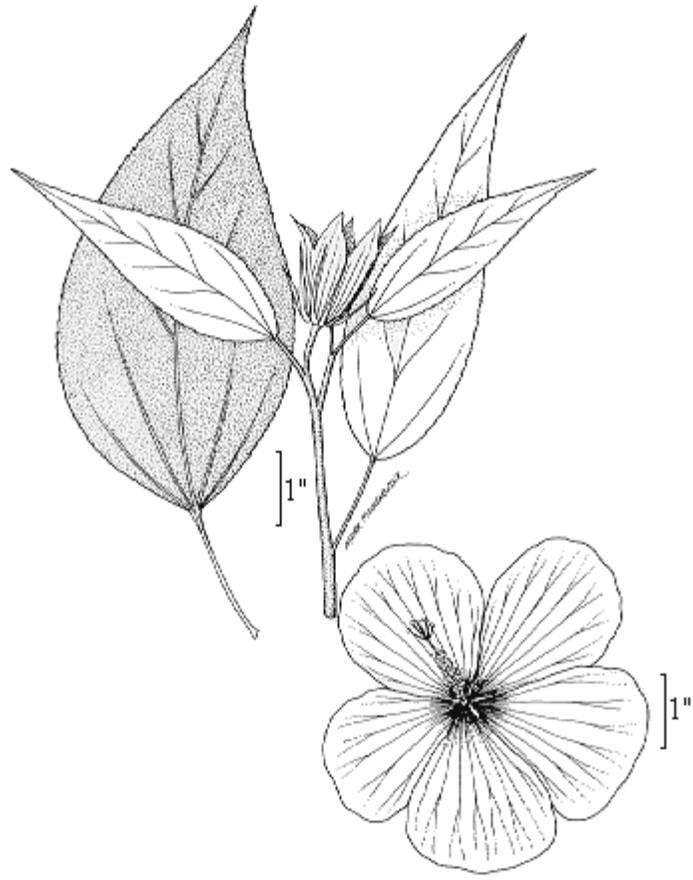
Field Office Guide to Plant Species

Swamp Rosemallow

Hibiscus moscheutos L.



- **Family:** Mallow (Malvaceae)
- **Flowering:** August-September
- **Field Marks:** This rosemallow differs from other similar rosemallows by its narrower leaves which at maturity are smooth on the upper surface and by its smooth capsules.
- **Habitat:** Marshes, swamps, shores of lakes.
- **Habit:** Robust perennial herb with thickened roots.
- **Stems:** Upright, smooth or sometimes hairy, up to 7 feet tall.
- **Leaves:** Alternate, simple, ovate, pointed at the tip, rounded at the base, toothed, slightly hairy on the upper surface, but becoming smooth at maturity, usually with star-shaped hairs on the lower surface, up to 7 inches long, on stalks up to 5 inches long.
- **Flowers:** Several near the tip of the stem, subtended by several narrow bracts.
- **Sepals:** 5, green, ovate, united below.
- **Petals:** 5, usually white or cream-colored with a red or purple base, free from each other, up to 4 inches long.
- **Stamens:** Numerous, attached to a central column.
- **Pistils:** Ovary superior; stigmas 5, at the tip of the central column.
- **Fruits:** Capsules ovoid, smooth, up to 1 inch long.
- **Notes:** This is one of the most beautiful wetland herbs in North America. The leaves are variable in hairiness and shape.



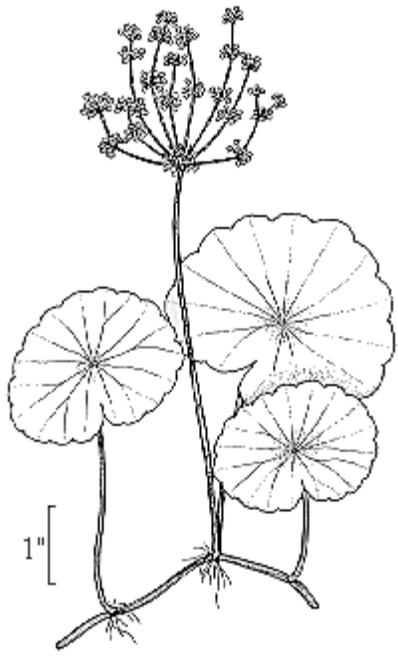
Southern Wetland Flora

Field Office Guide to Plant Species

Coastal-plain Penny-wort
Hydrocotyle bonariensis Lam.



- **Family:** Carrot (Apiaceae)
- **Flowering:** April-September
- **Field Marks:** The distinguishing features of this penny-wort are its peltate leaves and its compound umbels.
- **Habitat:** Sandy shores, ditches, ponds, dunes, disturbed areas, sometimes in shallow water.
- **Habit:** Creeping perennial herb, rooting at the nodes.
- **Stems:** Creeping, smooth, branched.
- **Leaves:** Simple, solitary at the nodes, somewhat fleshy, peltate, orbicular, round-toothed, smooth, up to 2 inches wide; leaf stalks up to 10 inches long.
- **Flowers:** Several in compound umbels at the tip of leafless stalks, white, on slender stalks.
- **Sepals:** Green, minute.
- **Petals:** 5, white or greenish, free from each other, up to 1/8 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Flattened, smooth, up to 1/12 inch long, up to 1/8 inch broad, sharply ribbed.



Southern Wetland Flora

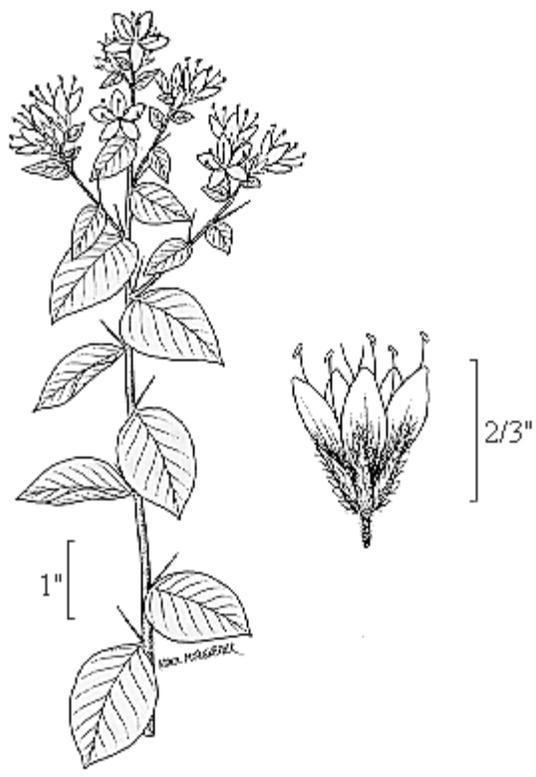
Field Office Guide to Plant Species

Ovate False-fiddle-leaf

Hydrolea ovata Nutt.



- **Family:** Waterleaf (Hydrophyllaceae)
- **Flowering:** June-September
- **Field Marks:** This species, with its blue, bell-shaped flowers and slender spines, differs from other members of its genus by its hairy leaves, hairy sepals, and ovate leaves.
- **Habitat:** Swamps, sloughs, along streams, around ponds, in ditches.
- **Habit:** Perennial herb with underground rhizomes.
- **Stems:** Upright, hairy, up to 3 feet tall, usually bearing slender 3/4 inch spines in the leaf axils.
- **Leaves:** Alternate, simple, ovate to ovate-lanceolate, pointed at the tip, tapering to the base, without teeth, hairy on both surfaces, up to 2 inches long; spines usually present in the leaf axils, up to 3/4 inch long.
- **Flowers:** In short cymes or panicles in the axils of the leaves, each flower up to 1 inch wide.
- **Sepals:** 5, green, free from each other, shorter than the petals, hairy.
- **Petals:** 5, blue, all but one attached to each other to form a short tube, up to 2/3 inch long.
- **Stamens:** 5, attached to the petals.
- **Pistils:** Ovary superior; styles 2.
- **Fruits:** Capsules spherical to oval, short-hairy, glandular, up to 1/4 inch in diameter.
- **Notes:** This species often grows in colonies because of its extensive rhizome system.



Southern Wetland Flora

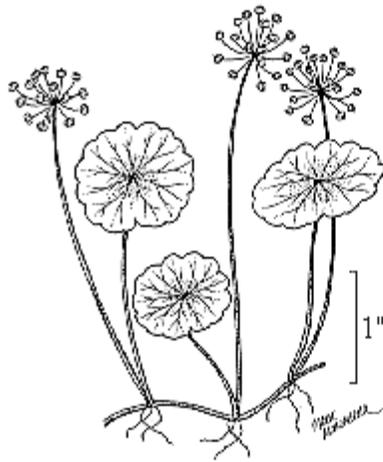
Field Office Guide to Plant Species

Many-flowered Penny-wort

Hydrocotyle umbellata L.



- **Family:** Carrot (Apiaceae)
- **Flowering:** April-September
- **Field Marks:** This penny-wort differs from all others by its peltate leaves and the flowers borne in simple, not compound, umbels.
- **Habitat:** In shallow streams, along shores, wet ditches, swamps, seepage areas.
- **Habit:** Perennial herb with underground branches bearing small tubers.
- **Stems:** Creeping along as well as below the ground, rooting at the nodes, smooth, up to several inches long.
- **Leaves:** Arising singly from the nodes on upright stalks, peltate, nearly circular, sometimes heart-shaped, with 7-11 low, rounded lobes, up to 2 inches across; leaf stalks up to 1 inch long.
- **Flowers:** Several in a simple umbel, borne on long, slender, upright, leafless stalks up to 6 inches long.
- **Sepals:** 5, very tiny, united below, green.
- **Petals:** 5, white, free from each other, up to 1/12 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Flattened, more or less kidney-shaped, notched at the top, up to 1/10 inch across.



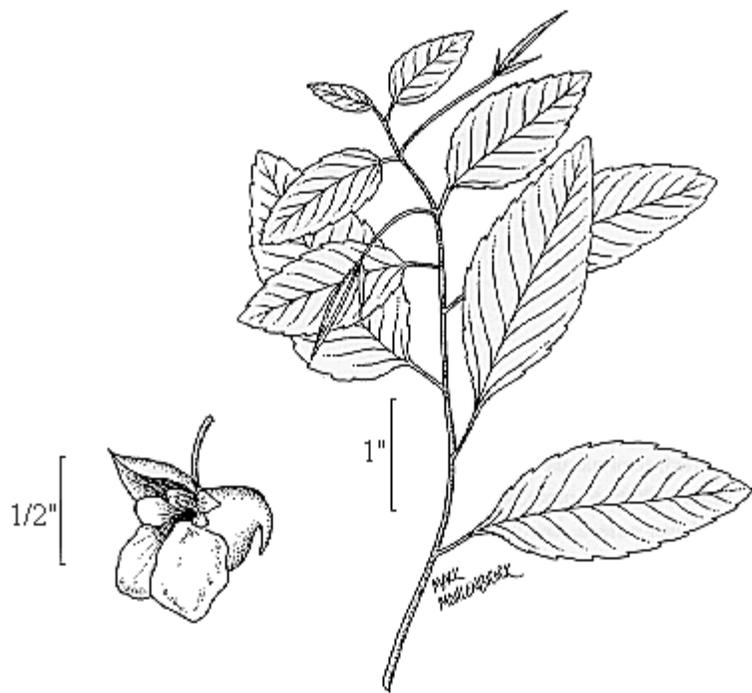
Southern Wetland Flora

Field Office Guide to Plant Species

Pale Touch-me-not
Impatiens pallida Nutt.



- **Family:** Jewelweed (Balsaminaceae)
- **Flowering:** May-October
- **Field Marks:** This jewelweed is distinguished by its pale yellow flowers and succulent stems.
- **Habitat:** Low woods, swamps, stream banks, wet meadows.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched, semi-succulent, hollow, smooth, up to 6 feet tall.
- **Leaves:** Alternate, simple, elliptic to ovate, somewhat pointed at the tip, rounded at the base, sometimes paler on the lower surface, smooth, coarsely toothed, up to 3 1/2 inches long, up to 2 inches wide; leaf stalks up to 3 inches long.
- **Flowers:** 2-4 from the axils of the leaves, pale yellow, up to 1 1/2 inches long; each flower on a slender, drooping stalk.
- **Sepals:** 3, the 2 lateral ones green and small, the middle one yellow, pouch-like, spurred.
- **Petals:** 5, yellow, of different sizes, sometimes with small red dots.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules narrowly oblongoid, green, smooth, up to 1 1/4 inches long, containing dark brown seeds.
- **Notes:** This species is also known as the pale jewelweed. The mature capsules explode when touched, expelling the seeds a considerable distance, hence the common name touch-me-not. The watery sap can be used to relieve the discomfort of poison ivy.



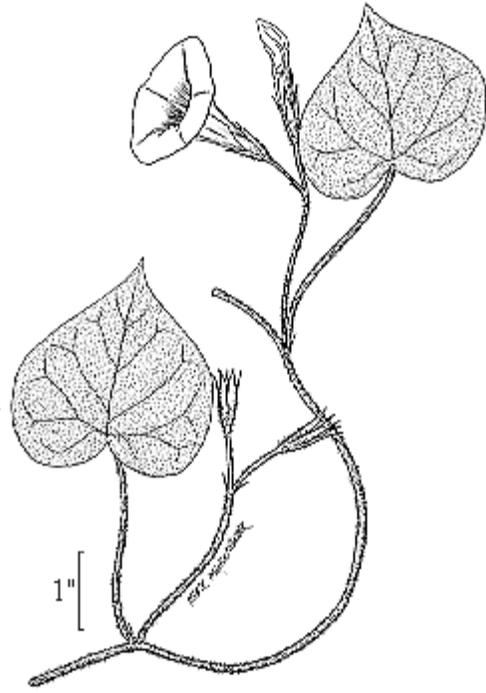
Southern Wetland Flora

Field Office Guide to Plant Species

Common Morning-glory *Ipomoea purpurea* (L.) Roth



- **Family:** Morning-glory (Convolvulaceae)
- **Flowering:** July-October
- **Field Marks:** The distinguishing characteristics of this morning-glory are its purple flowers, its usually unlobed heart-shaped leaves, and 3 stigmas per flower.
- **Habitat:** Old fields, along roads, moist to dry thickets.
- **Habit:** Twining perennial herb with thickened roots.
- **Stems:** Twining or trailing, densely hairy, up to 10 feet tall.
- **Leaves:** Alternate, simple, ovate, pointed at the tip, heart-shaped at the base, without teeth, sometimes 3-lobed, hairy, up to 4 inches long, nearly as wide.
- **Flowers:** 1-5 from the axils of the leaves, on hairy stalks.
- **Sepals:** 5, green, free nearly to the base, short-hairy, up to 2/3 inch long.
- **Petals:** 5, usually blue or purple, united to form a tubular funnel up to 2 1/2 inches long.
- **Stamens:** 5.
- **Pistils:** Ovary superior; stigmas 3.
- **Fruits:** Capsules spherical or flattened on top, up to 1/2 inch in diameter, shorter than the sepals; seeds dark brown.
- **Notes:** This species is native in tropical America.



Southern Wetland Flora

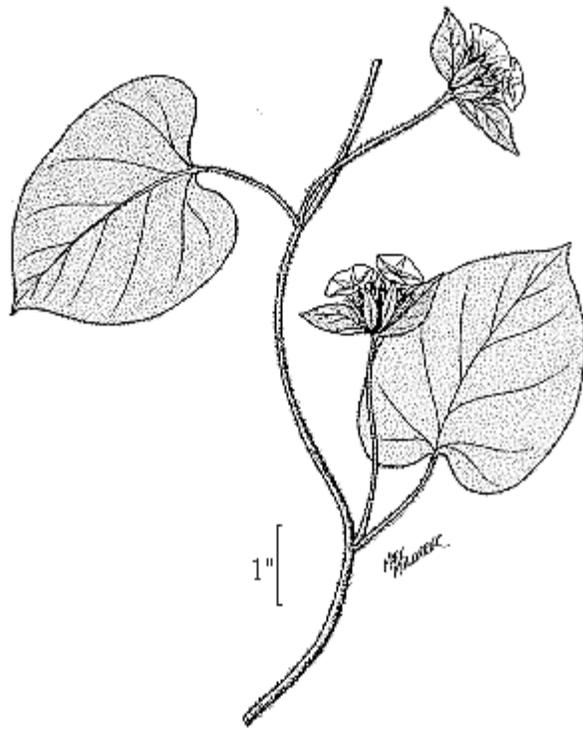
Field Office Guide to Plant Species

Hairy Cluster-vine

Jacquemontia tamnifolia (L.) Griseb.



- **Family:** Morning-glory (Convolvulaceae)
- **Flowering:** August-September
- **Field Marks:** This annual twining vine is recognized by its long-spreading hairs and its blue, funnel-shaped flowers crowded into head-like clusters.
- **Habitat:** Roadsides, fields, disturbed areas, floodplain forests, stream banks, ditches.
- **Habit:** Annual, twining, herbaceous vine.
- **Stems:** Twining, with long, spreading hairs.
- **Leaves:** Alternate, simple, ovate, pointed at the tip, rounded or heart-shaped at the base, without teeth or with wavy edges, sparsely hairy at first, usually becoming smooth at maturity, up to 5 inches long, up to 2 1/2 inches wide.
- **Flowers:** Several in dense, axillary heads, up to 1 1/2 inches across; each flower subtended by lanceolate, long-hairy bracts.
- **Sepals:** 5, green, united below, long-hairy, up to 3/4 inch long.
- **Petals:** 5, blue, united to form a funnel, up to 1 inch across.
- **Stamens:** 5, attached to the tube of the petals.
- **Pistils:** Ovary superior; stigmas 2.
- **Fruits:** Capsules spherical, up to 1/4 inch in diameter, shorter than the persistent sepals; seeds brownish black, smooth, about 1/10 inch long.
- **Notes:** If not controlled, this vine will cover up crop fields in low areas.



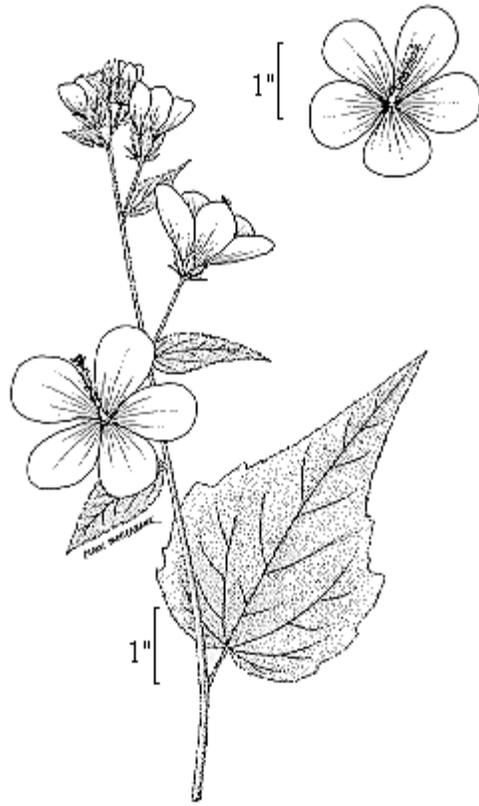
Southern Wetland Flora

Field Office Guide to Plant Species

Virginia Seashore Mallow
Kosteletzkya virginica (L.) Gray



- **Family:** Mallow (Malvaceae)
- **Flowering:** July-August
- **Field Marks:** The handsome pink flowers up to 2 1/2 inches across and the hairy, sometimes hastate, leaves distinguish this species.
- **Habitat:** Saline and brackish marshes, shores, and borders of swamps.
- **Habit:** Perennial herb with extensive root system.
- **Stems:** Upright, branched, usually rough-hairy, up to 4 feet tall.
- **Leaves:** Alternate, simple, ovate, sometimes hastate, irregularly toothed or even 3-lobed, pointed at the tip, rounded or slightly heart-shaped at the base, usually velvety-hairy, up to 5 inches long.
- **Flowers:** Several in terminal panicles, subtended by 8 or 9 very narrow bracts.
- **Sepals:** 5, green, united at the base.
- **Petals:** 5, pink, free from each other, rounded at the tip, up to 1 1/4 inches long.
- **Stamens:** Numerous, attached to a central column.
- **Pistils:** Ovary superior; stigmas 5, at the top of the central column.
- **Fruits:** Capsules 5-lobed, flattened, covered with short, stiff hairs.
- **Notes:** This handsome species also occurs in the Caribbean Islands.



Southern Wetland Flora

Field Office Guide to Plant Species

Virginia Dwarf-dandelion

Krigia virginica (L.) Willd.



- **Family:** Aster (Asteraceae)
- **Flowering:** May-August
- **Field Marks:** This dwarf-dandelion has basal leaves, thread-like stems, and 9 or more bracts that subtend each head and are turned downward. It is the only annual species of *Krigia* that has slender bristles at the tip of the achene.
- **Habitat:** Along streams, prairies, rocky woods, sandy pinelands, along roads, old fields.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, usually smooth, very slender, bearing only a single flower head, up to 15 inches tall; latex present.
- **Leaves:** All basal, lanceolate, deeply pinnately lobed or toothed, or without lobes and teeth, usually smooth, pointed at the tip, tapering to the base, up to 6 inches long; latex present.
- **Flowers:** Several in a head, with one head terminating each stem; each head up to 1/3 inch across, with numerous yellow rays, subtended by narrow, pointed bracts that eventually point downward.
- **Sepals:** 0.
- **Petals:** All united to form rays, yellow, 5-toothed at the tip, up to 1/6 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes flat, dark red-brown, with tiny scales and 5 or more thread-like bristles at the top.



Southern Wetland Flora

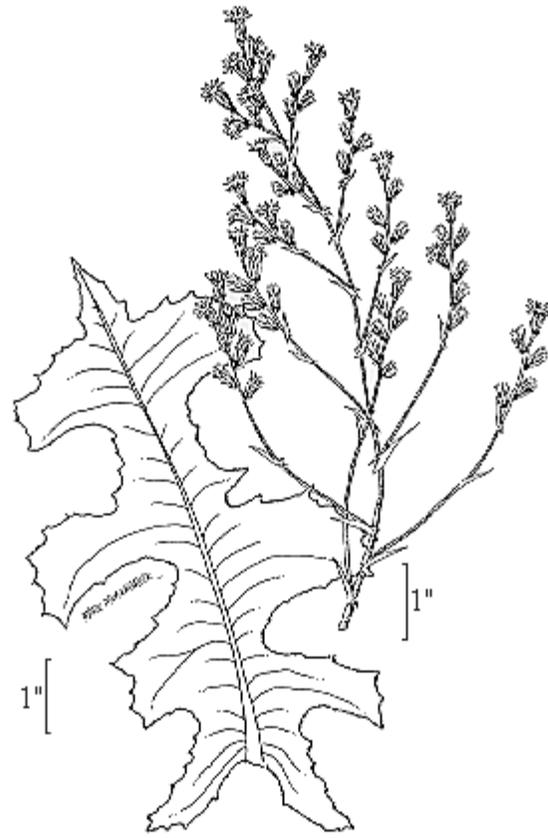
Field Office Guide to Plant Species

Prickly Lettuce

Lactuca serriola L.



- **Family:** Aster (Asteraceae)
- **Flowering:** June-October
- **Field Marks:** This yellow-flowered wild lettuce has prickly toothed leaves which often turn to a vertical position.
- **Habitat:** Old fields, roadsides, disturbed soil.
- **Habit:** Biennial herb with a thickened taproot.
- **Stems:** Upright, branched above, smooth or bristly hairy at the base, up to 7 feet tall; milky sap present.
- **Leaves:** Alternate, oblong to lanceolate, coarsely spiny-toothed or deeply lobed, pointed at the tip, sessile or clasping at the base, up to 10 inches long, up to 3 inches wide, and often turning to a vertical position.
- **Flowers:** Several, crowded into heads with many heads in an open panicle; each head up to 1/3 inch across, with 6-12 flowers, subtended by several bracts.
- **Sepals:** 0.
- **Petals:** 5, pale yellow, united to form flat rays.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes flattened, obovate to oblong, abruptly tapering to a long, slender beak, strongly ribbed, up to 1/6 inch long (excluding the beak).
- **Notes:** The young, tender shoots can be eaten as a vegetable. This plant is easily distinguished by its distinctive leaves which, in many cases, are growing vertically to the ground and, when torn, exude a milky sap.



Southern Wetland Flora

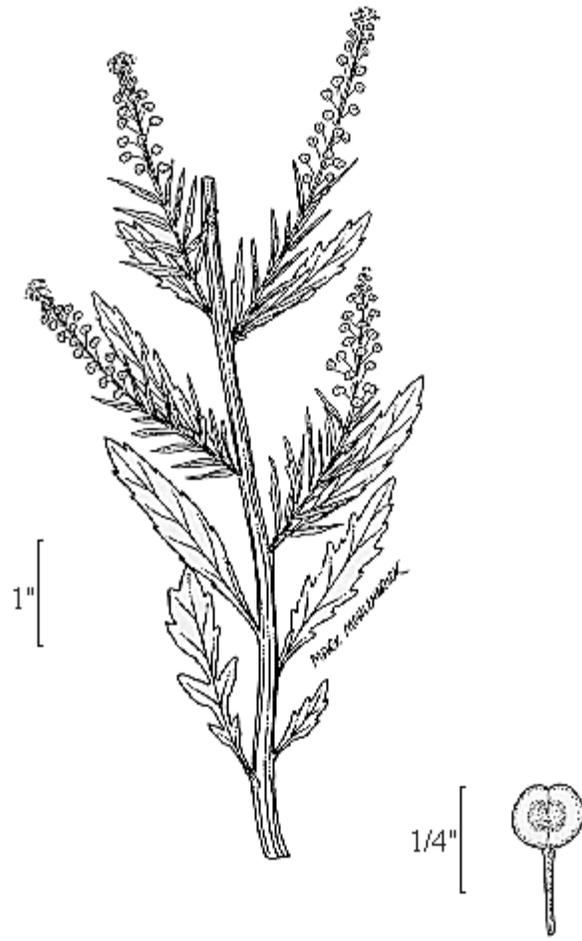
Field Office Guide to Plant Species

Poor-man's Pepper-grass

Lepidium virginicum L.



- **Family:** Mustard (Brassicaceae)
- **Flowering:** February-November
- **Field Marks:** The short, flat, rounded fruits notched at the tip, the very tiny white flowers, and the toothed leaves characterize this species. It is one of the very few members of the mustard family with only 2 stamens per flower.
- **Habitat:** Old fields, pastures, prairies, glades, disturbed areas.
- **Habit:** Annual or perennial herb with a slender taproot.
- **Stems:** Upright, branched, usually somewhat hairy, up to 15 inches tall.
- **Leaves:** Of 2 kinds: the basal ones usually obovate, up to 2 inches long, very deeply lobed with a large terminal lobe, usually somewhat hairy; the leaves on the stem alternate, lanceolate to narrowly oblong, pointed at the tip, tapering to the base, toothed, usually hairy, up to 1 1/2 inches long.
- **Flowers:** Many in terminal racemes, the lower ones on longer stalks than the upper ones.
- **Sepals:** 4, tiny, green.
- **Petals:** 4, white, free from each other, about 1/20 inch long, sometimes absent.
- **Stamens:** 2.
- **Pistils:** Ovary superior.
- **Fruits:** Pods flat, oval to spherical, notched at the tip, with very small wings above, up to 1/8 inch across.
- **Notes:** This is an extremely variable species, particularly the size and shape of its leaves. Its peppery fruits can be used in salads. The plant is primarily an upland plant but, on occasion, it is found in wetland situations.

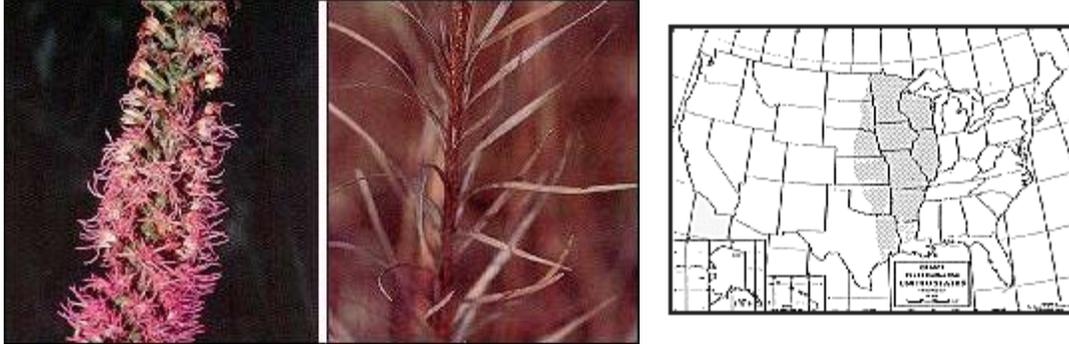


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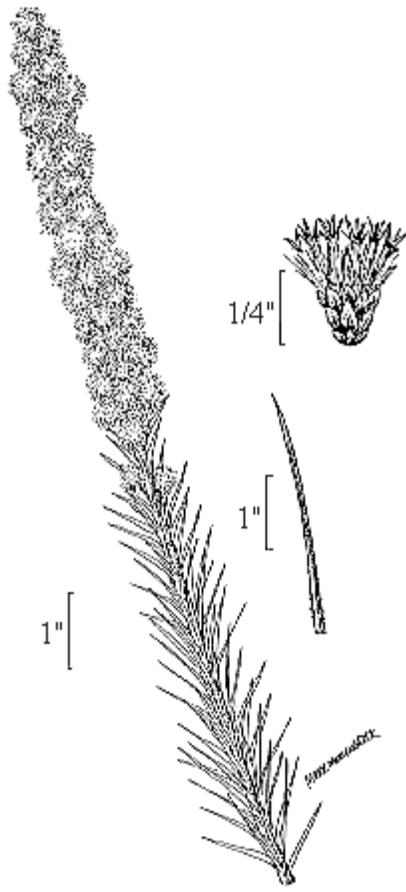
Field Office Guide to Plant Species

Cattail Gayfeather

Liatris pycnostachya Michx.



- **Family:** Aster (Asteraceae)
- **Flowering:** July-October
- **Field Marks:** This handsome herb is recognized by its long-cylindrical, continuous spike of flowers and its hairy stems and leaves.
- **Habitat:** Moist to dry soil in meadows, prairies, rocky openings in woods, and swales.
- **Habit:** Perennial herb with globose tubers.
- **Stems:** Upright, unbranched, hairy, up to 5 feet tall.
- **Leaves:** Alternate, simple, crowded, linear-lanceolate, pointed at the tip, tapering to the base, hairy, up to 1/2 inch wide.
- **Flowers:** Crowded into heads, with the heads densely arranged in a terminal spike; spikes up to 18 inches long; each head 1/3-1/2 inch long and containing 3-6 flowers; heads subtended by many narrow, hairy bracts.
- **Sepals:** 0.
- **Petals:** 5, united into a slender tube, pink-purple.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes slender, 10-ribbed, with plumose bristles.



Southern Wetland Flora

Field Office Guide to Plant Species

Primrose Willow

Ludwigia decurrens Walter



- **Family:** Evening Primrose (Onagraceae)
- **Flowering:** June-October
- **Field Marks:** This is the only *Ludwigia* that has leaves with a wing at the point of attachment. The wing continues down the stem for a short distance. There are 4 large, yellow petals and 8 stamens.
- **Habitat:** Wet ground, sloughs, swamps, along streams, ditches, ponds, sandy shores, shoals, often in shallow water.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, 4-sided, branched or unbranched, smooth, up to 7 feet tall.
- **Leaves:** Alternate, simple, lanceolate, pointed at the tip, tapering to the base and forming a narrow wing along the stem, without teeth, smooth or less commonly slightly hairy, up to 4 inches long.
- **Flowers:** Solitary in the axils of the leaves, up to 1/2 inch across, sessile or on a short stalk.
- **Sepals:** 4, green, united below to form a long tube, the lobes up to 1/2 inch long.
- **Petals:** 4, yellow, free from each other, up to 1/2 inch long.
- **Stamens:** 8.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules obconic, smooth, 4-angled, up to 1 inch long.
- **Notes:** For many years this species was known as *Jussiaea decurrens*. The capsules persist as long as the plant is standing.



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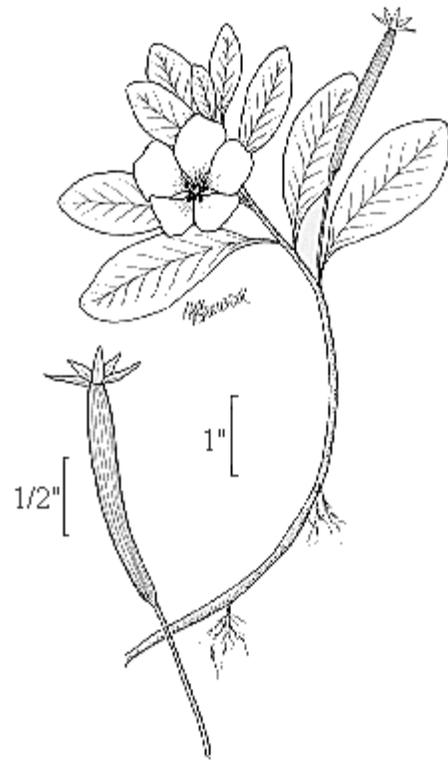
Field Office Guide to Plant Species

Floating Seedbox

Ludwigia peploides (HBK.) Raven



- **Family:** Evening Primrose (Onagraceae)
- **Flowering:** May-September
- **Field Marks:** This species is readily recognized by its 5 large yellow petals, 10 stamens, inferior ovary, and long-stalked, alternate leaves.
- **Habitat:** Shallow ponds, ditches, lakes, pools, streams, canals, usually in shallow water.
- **Habit:** Perennial herb with floating or creeping stems that root at the nodes, often forming mats in shallow water.
- **Stems:** Creeping or floating, smooth or slightly hairy, up to 3 feet long.
- **Leaves:** Alternate, simple, oval to obovate to elliptic, rounded or pointed at the tip, narrowed to the base, up to 4 inches long, up to 1 3/4 inches wide, without teeth, smooth or less commonly sparsely hairy on the lower surface; leaf stalks often as long as the blade.
- **Flowers:** Solitary in the axils of the upper leaves, up to 1 inch across, borne on long, smooth stalks up to 2 3/4 inches long.
- **Sepals:** 5, green, united below and also to the ovary, the lobes up to 1/2 inch long.
- **Petals:** 5, yellow, free from each other, up to 3/4 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules elongated, cylindric, smooth, up to 2 inches long, up to 1/6 inch wide, with the sepals persistent; seeds smooth, embedded in the capsule.
- **Notes:** This species tends to be aggressive and can form dense mats in shallow water. It used to be known as *Jussiaea diffusa* or *J. repens*.



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Field Office Guide to Plant Species

Large-seed Forget-me-not
Myosotis macrosperma Engelm.



- **Family:** Borage (Boraginaceae)
- **Flowering:** April-June
- **Field Marks:** This forget-me-not differs from all others in the genus by its gland-tipped, hooked hairs on the sepals, its unequal, usually 2-lipped calyx, its ascending rather than erect flower stalks, and its large seeds up to 1/10 inch long.
- **Habitat:** Floodplain woods, damp fields, wooded slopes; also in drier habitats.
- **Habit:** Annual or biennial herb with a slightly thickened taproot.
- **Stems:** Upright or ascending, few branched, up to 2 feet tall, with many spreading hairs.
- **Leaves:** Of 2 kinds: the basal arranged in a rosette, simple, oblong, rounded at the tip, tapering to the base to short stalks, up to 3 inches long; the leaves on the stem alternate, simple, oblong to oblanceolate, rounded or somewhat pointed at the tip, tapering to the sessile base, up to 1 1/2 inches long, up to 3/4 inch wide; both kinds toothless and densely hairy on both surfaces.
- **Flowers:** Usually 2-20 in a terminal or less commonly axillary raceme, seldom overlapping; flower stalks ascending, not erect, up to 1/2 inch long, hairy.
- **Sepals:** 5, green, up to 1/6 inch long, united below, unequal, often 2-lipped, covered with numerous gland-tipped, hooked hairs.
- **Petals:** 5, white, united below, up to 1/10 inch long.
- **Stamens:** 5, attached to the corolla tube.
- **Pistils:** Ovary superior, 4-parted.
- **Fruits:** A set of 4 nutlets, obovoid to oval, usually rounded at each end, tan, smooth, shiny, narrowly winged, up to 1/10 inch long.

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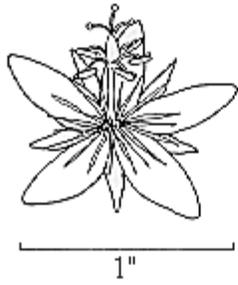
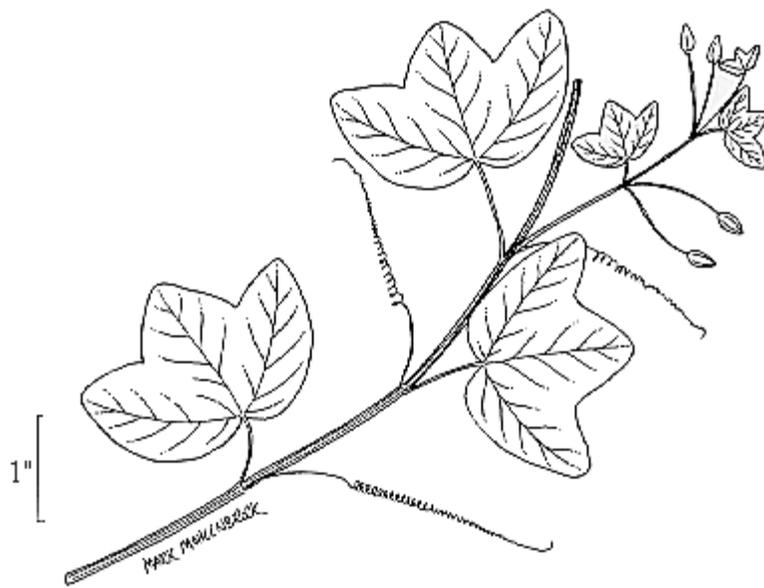
Field Office Guide to Plant Species

Yellow Passion-flower

Passiflora lutea L.



- **Family:** Passion-flower (Passifloraceae)
- **Flowering:** June-September
- **Field Marks:** This vine is recognized by its 3-lobed, toothless leaves, tendrils, and intricate pale yellow flowers.
- **Habitat:** Moist to dry soils in woodlands, bottomlands, slopes, thickets, roadsides.
- **Habit:** Climbing herbaceous vine with tendrils.
- **Stems:** Climbing or twining, bearing tendrils, smooth, up to 10 feet long.
- **Leaves:** Alternate, simple, broader than long, with 3 broad, blunt lobes, toothless, smooth, more or less heart-shaped at the base, up to 3 inches long.
- **Flowers:** Solitary in the axils of the leaves, up to 1 inch across, pale yellow.
- **Sepals:** 5, green, united below, with very narrow lobes.
- **Petals:** 5, pale yellow, free from each other; numerous thread-like accessory parts present.
- **Stamens:** 5, united into a tube that shields the stalk of the ovary.
- **Pistils:** Ovary superior, stalked; styles 3.
- **Fruits:** Berries spherical, dark purple, up to 1/2 inch in diameter; seeds covered with a sweet, gelatinous pulp.



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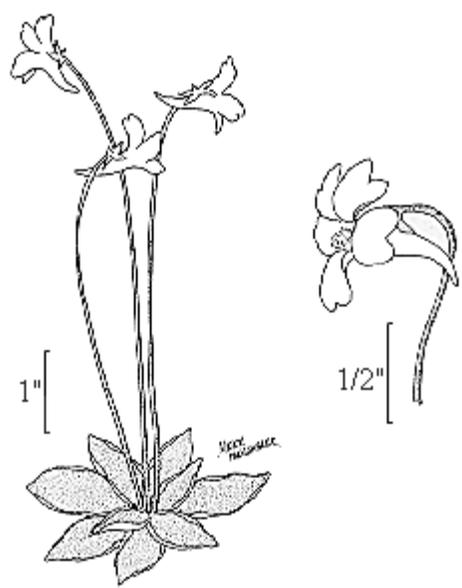
Field Office Guide to Plant Species

Yellow Butterwort

Pinguicula lutea Walter



- **Family:** Bladderwort (Lentibulariaceae)
- **Flowering:** April-May
- **Field Marks:** Butterworts are distinguished by their basal rosettes of rather fleshy leaves and their 5-parted, 2-lipped, solitary flowers with 2 stamens. This species differs from other butterworts by its yellow flowers that are at least 3/4 inch across.
- **Habitat:** Low pinelands, flatwoods, bogs, savannas, wet ditches.
- **Habit:** Perennial herb with shallow roots.
- **Stems:** Upright, glandular-hairy, leafless, usually no more than 1 foot tall, bearing a single flower at the tip.
- **Leaves:** All clustered in a basal rosette, ovate to oblong, pointed at the tip, tapering to the base, rather fleshy, toothless but with the edges rolled upward, glandular-hairy on the upper surface, ciliate along the edges near the base, up to 3 inches long, up to 1 inch wide.
- **Flowers:** Solitary at the tip of the stem, at least 3/4 inch across.
- **Sepals:** 5, 2-lipped, united at the base, glandular-hairy, green, up to 1/3 inch long.
- **Petals:** 5, 2-lipped, united below, the lobes yellow, up to 1/2 inch long, the tube greenish yellow, up to 1 3/4 inches long; one of the petals with a slender spur up to 1/2 inch long.
- **Stamens:** 2, attached to the base of the corolla tube.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules spherical, up to 1/3 inch in diameter; seeds numerous, yellow, oblong, minute.
- **Notes:** This species, like all butterworts, traps small insects on its leaves by means of glandular hairs. The plant then digests the softer parts of the insect.



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Field Office Guide to Plant Species

Saltmarsh Camphor-weed
Pluchea purpurascens (Swartz) DC.



- **Family:** Aster (Asteraceae)
- **Flowering:** August-October
- **Field Marks:** This species is distinguished by its dense clusters of purplish flower heads, its distinctly stalked leaves, and its bracts that are sparsely glandular.
- **Habitat:** Low pinelands, flatwoods, bogs, coastal shores, swales, wet hammocks, brackish and fresh marshes.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched, usually smooth above, hairy nearer the base, up to 3 feet tall.
- **Leaves:** Alternate, simple, ovate to lanceolate, mostly rounded at the tip, tapering to the base, toothed, glandular-hairy, up to 6 inches long, up to 3 inches wide; leaf stalks 1/4-1 inch long.
- **Flowers:** Many crowded together into heads, with few heads crowded into flat-topped cymes; each head up to 1/3 inch long, subtended by numerous sparsely glandular bracts.
- **Sepals:** 0.
- **Petals:** 5, united to form a short tube, purplish.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes hairy, up to 1/12 inch long.
- **Notes:** This plant, like all other species of *Pluchea*, has a fetid odor. It has been called *P. odorata* in the past.



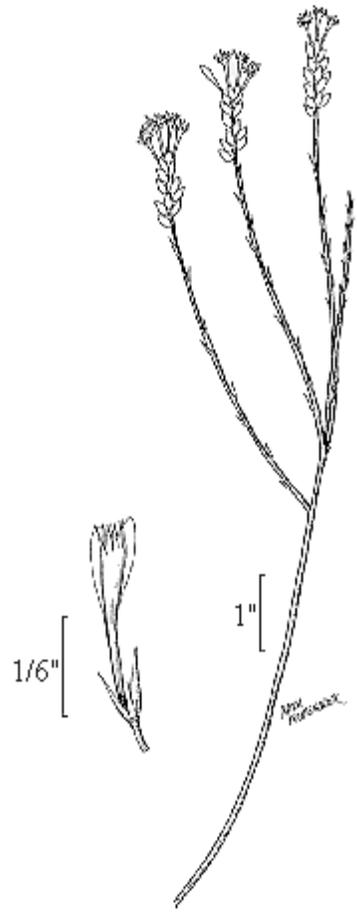
Southern Wetland Flora

Field Office Guide to Plant Species

Pink Milkwort
Polygala incarnata L.



- **Family:** Milkwort (Polygalaceae)
- **Flowering:** June-July
- **Field Marks:** This milkwort has pink to reddish pink flowers and linear, rather fleshy leaves.
- **Habitat:** Sand hills, high pinelands, moist to dry flatwoods, roadsides, ditches, old fields, savannas, bogs, thickets.
- **Habit:** Annual herb with slender, fibrous roots.
- **Stems:** Upright, very slender, branched or unbranched, smooth, glaucous, up to 1 1/2 feet tall.
- **Leaves:** Alternate, simple, rather fleshy, linear, pointed at the tip, toothless, smooth, glaucous, up to 3/4 inch long, lower leaves often scale-like and appressed to the stem.
- **Flowers:** Several, crowded into elongated terminal spikes or racemes; racemes up to 2 1/2 inches long, up to 3/4 inch wide; individual flower stalks very short or absent.
- **Sepals:** 5, of different sizes, 2 of them petal-like, pink, up to 1/8 inch long.
- **Petals:** United to form a reddish pink tube, the tube fringed, up to 1/3 inch long.
- **Stamens:** 8, united into a tube that is attached to the corolla.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ovoid to oblongoid, up to 1/5 inch long; seeds oval, black, white-hairy, up to 1/10 inch long.



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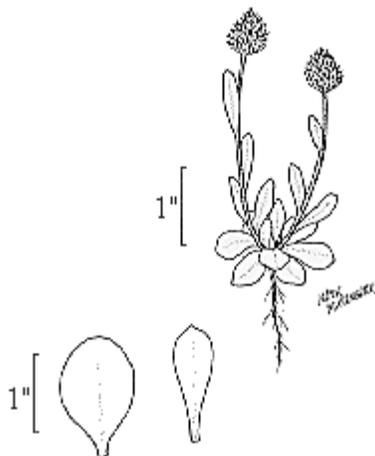
Field Office Guide to Plant Species

Dwarf Milkwort

Polygala nana (Michx.) DC.



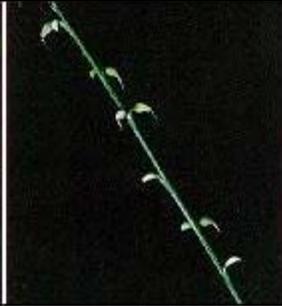
- **Family:** Milkwort (Polygalaceae)
- **Flowering:** March-October
- **Field Marks:** This milkwort is recognized by its yellow flowers in solitary racemes and a stem up to 6 inches long.
- **Habitat:** Low pinelands, flatwoods, wet prairies, bogs, sand ditches, pine savannas, roadsides, seepage slopes.
- **Habit:** Annual, biennial, or short-lived perennial.
- **Stems:** Upright, solitary, smooth, up to 6 inches long.
- **Leaves:** Of 2 types: basal leaves in a rosette, spatulate, more or less succulent, smooth, up to 2 1/2 inches long, up to 1 inch wide; leaves on the stem few, alternate, oblanceolate, up to 2 inches long.
- **Flowers:** Several in compact racemes; racemes up to 1 3/4 inches long, up to 3/4 inch wide; individual flower stalks very short.
- **Sepals:** 5, of different sizes, 2 of them petal-like, lemon yellow, up to 1/3 inch long.
- **Petals:** 5, unequal in size, united below, lemon yellow.
- **Stamens:** 8, united into a tube that is attached to the corolla.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules rounded and notched at the tip; seeds black, elliptic to oblong, hairy, about 1/16 inch long.
- **Notes:** This species is sometimes called candy root or bachelor's buttons.



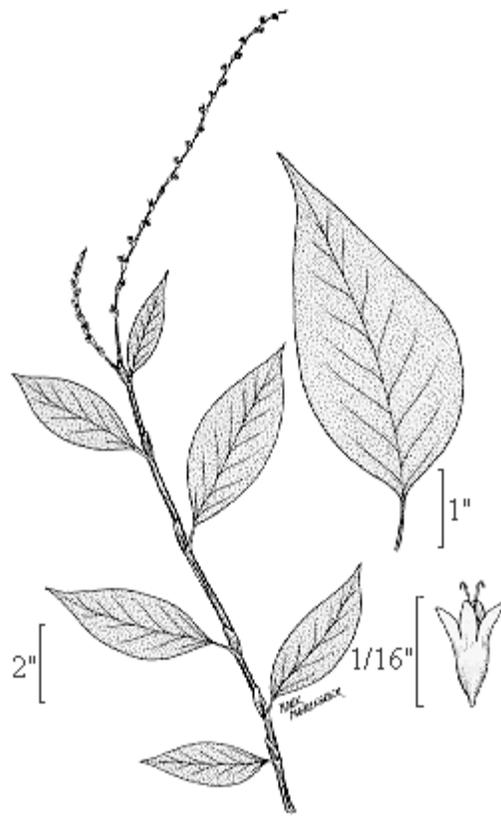
Southern Wetland Flora

Field Office Guide to Plant Species

Virginia Knotweed
Polygonum virginianum L.



- **Family:** Smartweed (Polygonaceae)
- **Flowering:** July-October
- **Field Marks:** This species has widely spaced white flowers in a curving terminal raceme.
- **Habitat:** Rich shaded woods, bottomlands.
- **Habit:** Perennial herb with a knotty rhizome.
- **Stems:** Upright or arching, usually unbranched, smooth or slightly hairy, up to 4 feet tall.
- **Leaves:** Alternate, simple, ovate, long-pointed at the tip, tapering or rounded at the base, without teeth, usually somewhat hairy, up to 6 inches long; sheaths fringed with short bristles.
- **Flowers:** Several arranged in a curving terminal raceme, up to 12 inches long, with none of the flowers touching.
- **Sepals:** 4, white or greenish, sometimes tinged with rose, united below, up to 1/6 inch long.
- **Petals:** 0.
- **Stamens:** 5.
- **Pistils:** Ovary superior; styles 2, hooked at the tip.
- **Fruits:** Achenes flattened, broadly oblong to ovate, usually brown, smooth, shiny, with the persistent styles at the tip.
- **Notes:** Because of several differences between this species and others in the genus *Polygonum*, this species is sometimes called *Tovara virginiana*.



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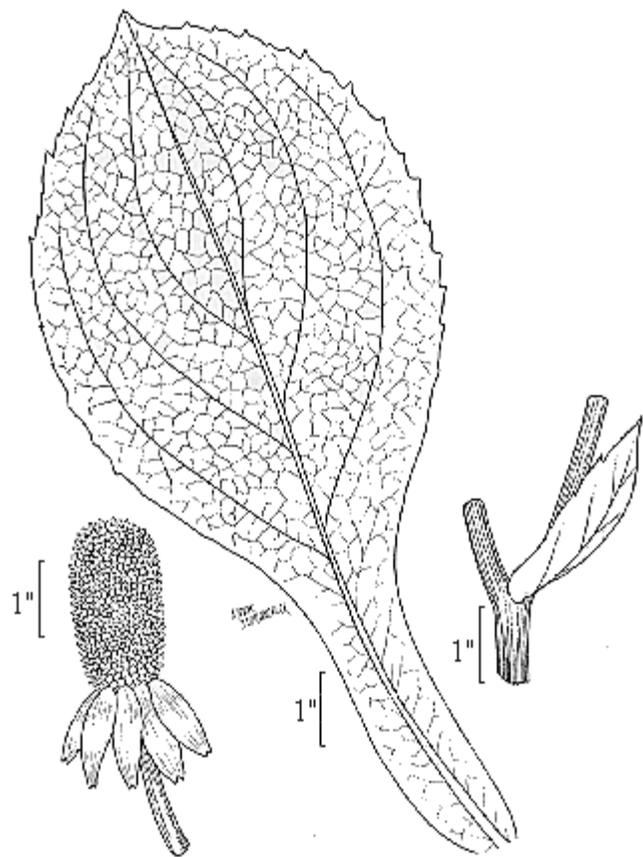
Field Office Guide to Plant Species

Great Coneflower

Rudbeckia maxima Nutt.



- **Family:** Aster (Asteraceae)
- **Flowering:** July-September
- **Field Marks:** This coneflower differs from all other coneflowers by its smooth and glaucous leaves and stems and its dark cone up to nearly 3 inches long.
- **Habitat:** Edges of swamps, swales, marshes, moist open areas.
- **Habit:** Coarse perennial herb with short-branching, thick rootstocks.
- **Stems:** Upright, stout, branched or unbranched, smooth, glaucous, up to 9 feet tall.
- **Leaves:** Of 2 kinds: basal and lowest leaves on the stem ovate to ovate-elliptic to oblong to spatulate, rounded at the tip, tapering to the base, up to 8 inches long, up to 4 inches wide, with or without a few teeth, smooth, glaucous, with long leaf stalks; leaves on upper part of stem much smaller, narrowed to a sessile or even clasping base.
- **Flowers:** Many flowers borne in a head, each head composed of 7-10 or more yellow ray flowers surrounding a central columnar black or purple disk, the disk up to nearly 3 inches long; flowers of 2 kinds, the outer flat and ray-like, those in the disk tubular.
- **Sepals:** 0.
- **Petals:** Those of the ray flowers united to form a flat, yellow ray, 2- or 3-toothed at the tip, up to 2 1/2 inches long, turning downward; those of the disk flowers tubular with 5 lobes, purple or black, up to 1/5 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes up to 1/3 inch long, purplish gray, with a few teeth at the tip.



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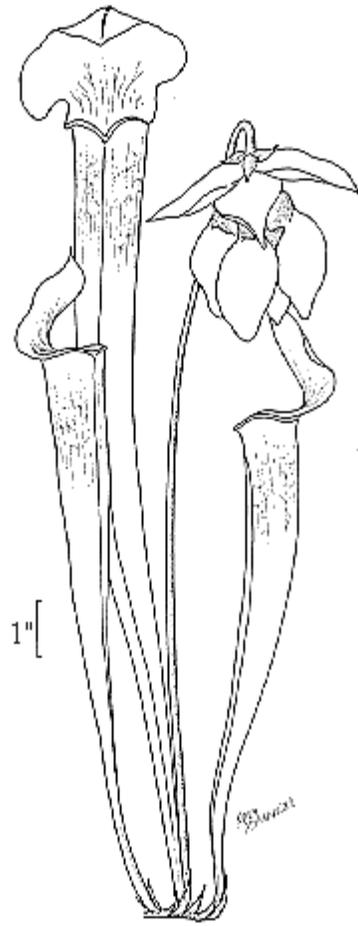
Field Office Guide to Plant Species

Yellow Trumpets

Sarracenia alata A. Wood



- **Family:** Pitcher-plant (Sarraceniaceae)
- **Flowering:** March-April
- **Field Marks:** The distinguishing features of this pitcher-plant are the lack of whitish areas on the pitchers, its upright pitchers, and yellow to yellow-green flower petals. The inner surface of the hood of the pitcher is not purple or purple-spotted.
- **Habitat:** Low pinelands, bogs, wet savannas, flatwoods, seepage slopes.
- **Habit:** Perennial herb with branched rhizomes.
- **Stems:** Upright, unbranched, bearing only a single flower as long as or longer than the pitcher.
- **Leaves:** Most leaves hollow, elongated, tubular, forming the pitchers with a hood or lid at the top; pitchers up to 2 1/2 feet tall, borne in upright clusters, yellow-green, usually with fine red venation; hood ovate, up to 3 inches across, usually not purple or purple-spotted on the inner surface, arching over the mouth of the pitcher; a few flat, sword-shaped leaves sometimes also present.
- **Flowers:** Solitary, nodding, dominated by a broad, umbrella-like, 5-lobed style that is positioned over the rest of the flower; style up to 3 1/2 inches in diameter, yellow to yellow-green.
- **Sepals:** 5, ovate, yellow-green, free from each other, up to 2 1/2 inches long.
- **Petals:** 5, bright or pale yellow or yellow-green, free from each other, up to 3 inches long.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules brown, somewhat warty, splitting along 5 seams; seeds warty.
- **Notes:** The flowers have a musty odor.

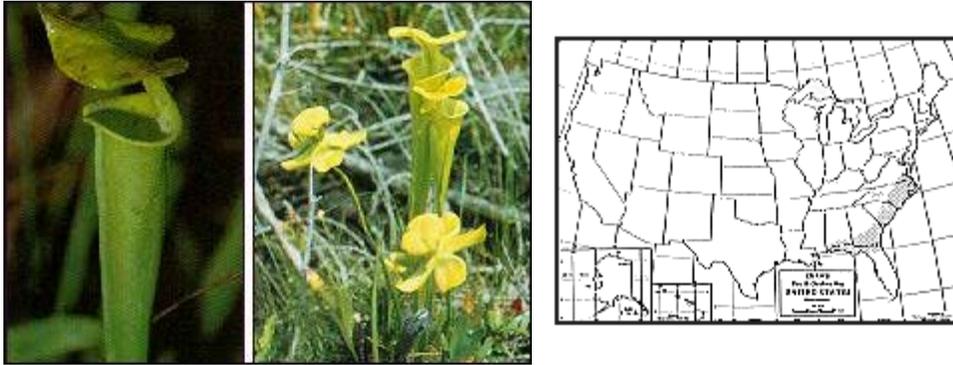


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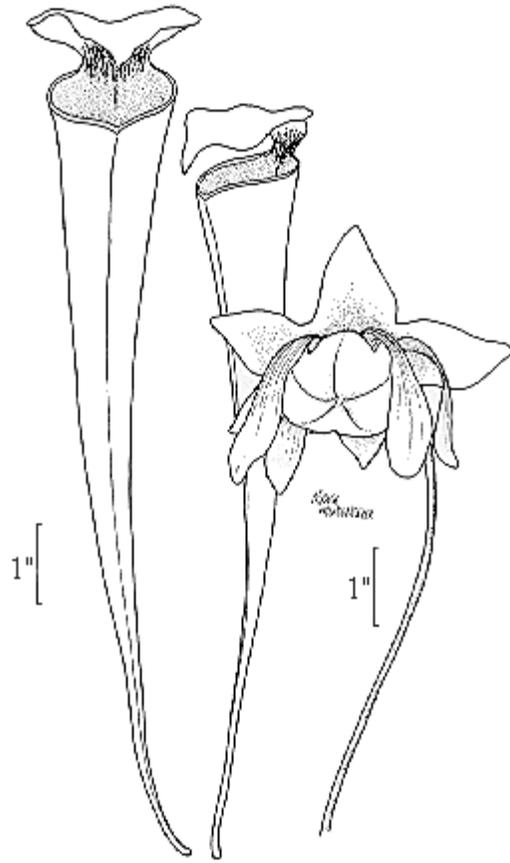
Field Office Guide to Plant Species

Yellow Pitcher-plant

Sarracenia flava L.



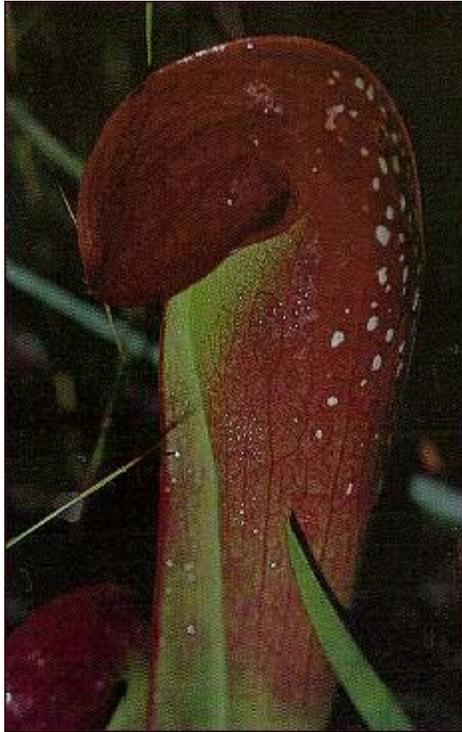
- **Family:** Pitcher-plant (Sarraceniaceae)
- **Flowering:** March-May
- **Field Marks:** The distinguishing characteristics of this pitcher-plant are the lack of whitish areas on the pitchers, upright pitchers, yellow petals, and hoods that are usually purple or purple-spotted on the inner surface.
- **Habitat:** Wet prairies, low pinelands, flatwoods, bogs, savannas, cypress swamps, seepage slopes.
- **Habit:** Perennial herb with branched rhizomes.
- **Stems:** Upright, unbranched, bearing only a flower, longer than the pitchers.
- **Leaves:** Most leaves hollow, elongated, very narrow at the base, forming the pitchers with a hood or lid at the top; pitchers up to 3 feet tall, borne in upright clusters, yellow-green or sometimes even purple-red; hood arching well above the mouth of the pitchers; some leaves flat, sword-like, formed during the summer and persisting through the winter.
- **Flowers:** Solitary, nodding, dominated by a broad, umbrella-like, 5-lobed style that is positioned over the rest of the flower; style up to 3 1/2 inches in diameter, yellow, or yellow-green.
- **Sepals:** 5, ovate to lance-ovate, yellow or yellow-green, free from each other, up to 2 1/2 inches long.
- **Petals:** 5, yellow or yellow-green, free from each other, up to 4 inches long.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules brown, somewhat warty, splitting along 5 seams; seeds warty.
- **Notes:** The flowers have a strong odor.



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Hooded Pitcher-plant *Sarracenia minor* Walter



- **Family:** Pitcher-plant (Sarraceniaceae)
- **Flowering:** March-May
- **Field Marks:** This pitcher-plant has whitish areas on the pitchers, hoods that strongly arch over the mouth of the pitcher, and yellow petals.
- **Habitat:** Bogs, wet ditches, savannas, sandy ditches.
- **Habit:** Perennial herb with branched rhizomes.
- **Stems:** Upright, unbranched, bearing only a flower, longer or shorter than the pitchers.
- **Leaves:** All leaves hollow, elongated, tubular, forming the pitchers with a hood or lid at the top; pitchers up to 1 1/2 feet tall, rarely a little taller, borne in upright clusters, green or reddish, with conspicuous white markings; hood red or red-brown, strongly curving over the mouth of the pitcher, often persisting during the winter.
- **Flowers:** Solitary, nodding, dominated by a broad, umbrella-like, 5-lobed style that is positioned over the rest of the flower; style up to 1 1/2 inches in diameter, pale yellow.
- **Sepals:** 5, ovate-triangular, yellow-green, free from each other, up to 1 3/4 inches long.
- **Petals:** 5, yellow, free from each other, up to 2 inches long.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules brown, somewhat warty, splitting along 5 seams; seeds warty.
- **Notes:** The flowers are odorless.



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Field Office Guide to Plant Species

Sweet Pitcher-plant *Sarracenia rubra* Walter



- **Family:** Pitcher-plant (Sarraceniaceae)
- **Flowering:** April-May
- **Field Marks:** This pitcher-plant lacks whitish areas on the pitchers, has upright pitchers, and maroon to dull purple petals.
- **Habitat:** Low pinelands, bogs, stream banks, peaty areas, wet savannas.
- **Habit:** Perennial herb with branched rhizomes.
- **Stems:** Upright, unbranched, bearing only a flower, longer than the pitchers.
- **Leaves:** Most leaves hollow, elongated, tubular, forming the pitchers with a hood or lid at the tip; pitchers up to 3/4 feet tall, borne in upright clusters, bright red with coppery veins at maturity, usually greenish early in the season; hood ovate, up to 1 1/2 inches across; a few leaves flat, not pitcher-like, often developing late in the season.
- **Flowers:** Solitary, nodding, dominated by a broad, umbrella-like, 5-lobed style that is positioned over the rest of the flower; style up to 1 1/2 inches in diameter, greenish.
- **Sepals:** 5, ovate-triangular, purplish, free from each other, up to 1 1/4 inches long.
- **Petals:** 5, maroon to dull purple, free from each other, up to 1 1/2 inches long.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules brown, somewhat warty, splitting along 5 seams; seeds warty.
- **Notes:** This pitcher-plant is very variable, and several subspecies or even distinct species have been named. The flowers are usually sweetly scented.



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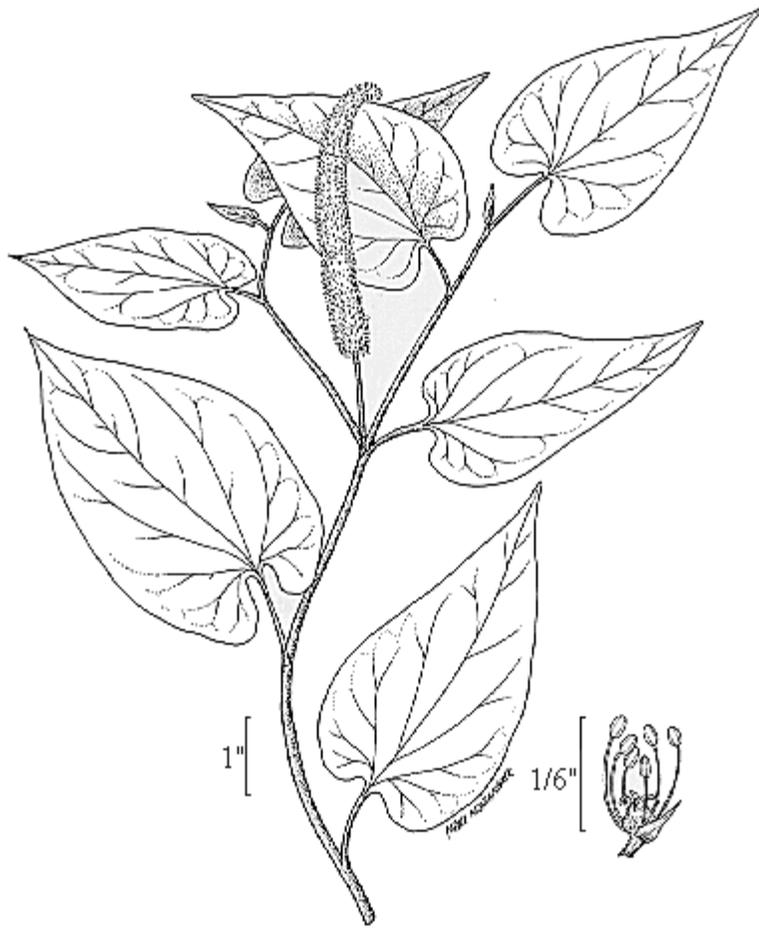
Field Office Guide to Plant Species

Lizard's Tail

Saururus cernuus L.



- **Family:** Lizard's Tail (Saururaceae)
- **Flowering:** May-September
- **Field Marks:** This species is recognized by its heart-shaped, drooping leaves, zigzag stems, and colorful, nodding, curved flowering spikes that lack petals.
- **Habitat:** Margins of marshes, swamps, wet riparian woods, shallow streams, bayous.
- **Habit:** Perennial herb with slender rootstocks.
- **Stems:** Upright, zigzag, slightly hairy or smooth, branched or unbranched, up to 5 feet tall.
- **Leaves:** Alternate, simple, ovate, pointed at the tip, heart-shaped at the base, usually smooth, toothless, palmately veined, up to 6 inches long, up to 3 inches wide, on stalks that are lax and drooping.
- **Flowers:** Crowded into slender, curved, nodding spikes up to 6 inches long, fragrant.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 6-8, white, about 1/6 inch long.
- **Pistils:** 3-4, united at the base.
- **Fruits:** Somewhat fleshy, 1/8-1/6 inch in diameter, wrinkled.

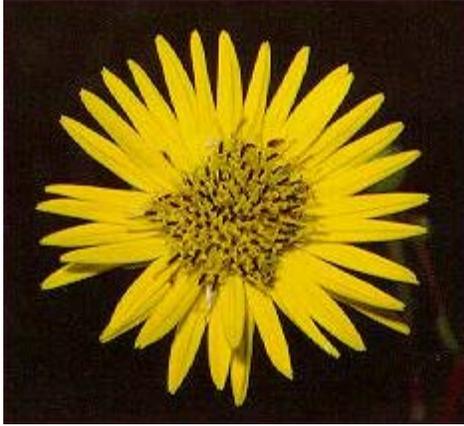


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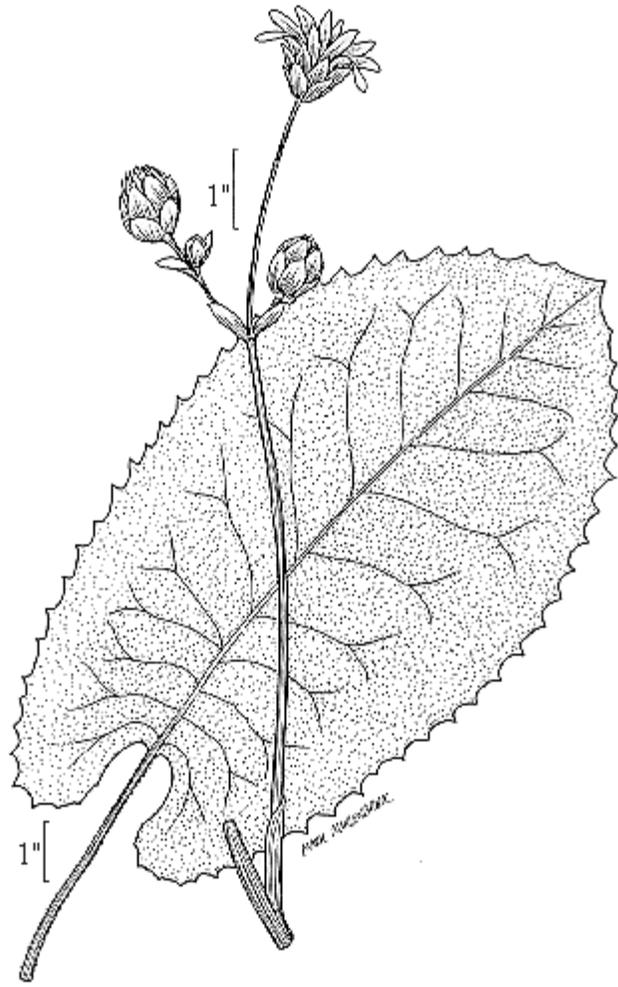
Field Office Guide to Plant Species

Prairie Dock

Silphium terebinthinaceum Jacq.



- **Family:** Aster (Asteraceae)
- **Flowering:** July-October
- **Field Marks:** This robust, sunflower-like plant is distinguished by its large, ovate, sandpapery leaves with pointed teeth.
- **Habitat:** Prairies, glades, edge of woods, old fields.
- **Habit:** Perennial herb.
- **Stems:** Upright, smooth or nearly so, up to 10 feet tall.
- **Leaves:** Nearly all basal, ovate, pointed at the tip, usually heart-shaped at the base, pointed toothed, usually sandpapery to the touch, up to 1 1/2 feet long, often nearly as wide.
- **Flowers:** Several in large heads at the tip of the stem, each head up to 3 inches across, subtended by several broad, green, leathery bracts rounded at the tip.
- **Sepals:** 0.
- **Petals:** Some yellow and ray-like, others 5-lobed and tubular.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes obovate, flattened, winged, notched at the tip, up to 1/2 inch long.



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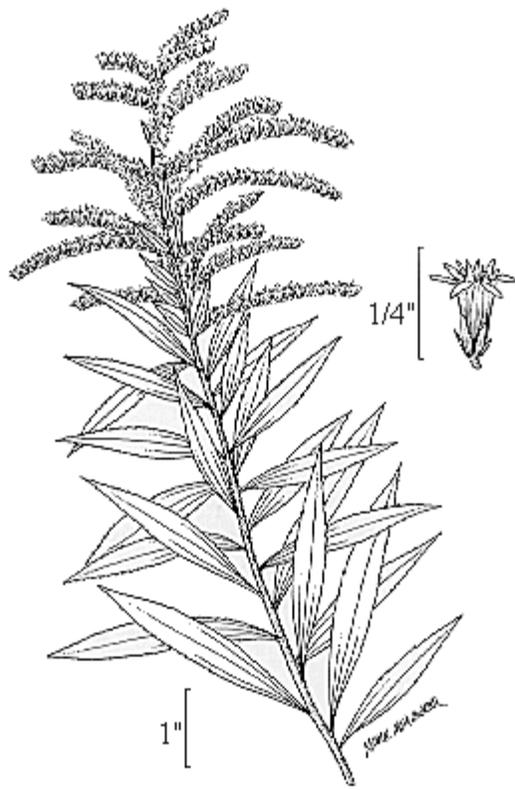
Field Office Guide to Plant Species

Tall Goldenrod

Solidago altissima L.



- **Family:** Aster (Asteraceae)
- **Flowering:** August-November
- **Field Marks:** This goldenrod differs from other similar species by the combination of leaves with 3 major veins, stems hairy, and leaves lanceolate with sharp teeth.
- **Habitat:** Moist or dry soils in old fields, along roads, open woods.
- **Habit:** Perennial herb with elongated rhizomes.
- **Stems:** Upright, hairy, usually unbranched, up to 8 feet tall.
- **Leaves:** Alternate, simple, lanceolate, pointed at the tip, tapering to the base, with 3 major veins, usually sharply toothed, rough on the upper surface, hairy on the lower surface, up to 6 inches long, up to 1 inch wide; uppermost leaves smaller and sessile.
- **Flowers:** Crowded together into heads up to 1/4 inch high, with many heads forming a panicle; heads borne on one side of the arching branches; flowers yellow, of 2 kinds: some flat and ray-like, others tubular and forming a disk.
- **Sepals:** 0.
- **Petals:** Yellow, 9-15 of them ray-like, notched at the tip; those in the center forming a disk, 5-lobed, tubular.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes up to 1/12 inch long, sparsely hairy, bearing soft bristles at the tip.
- **Notes:** This goldenrod often grows in colonies because of its extensive rhizome system. The lowest leaves are usually absent at flowering time.



Southern Wetland Flora

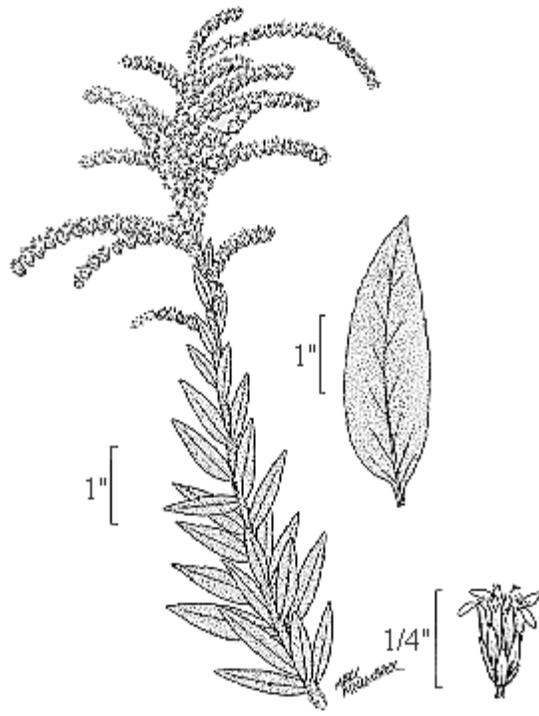
Field Office Guide to Plant Species

Pinebarren Goldenrod

Solidago fistulosa Mill.



- **Family:** Aster (Asteraceae)
- **Flowering:** August-October
- **Field Marks:** This species has conspicuously hairy stems. It differs from the similar *Solidago rugosa* by its sparsely toothed or toothless, non-wrinkled leaves.
- **Habitat:** Cypress-gum pond borders, shrub bogs, flatwoods, swamps, wet woods, savannas, swales, ditches, wet prairies, pocosins.
- **Habit:** Perennial herb with a thickened rootstock.
- **Stems:** Upright, densely hairy, branched or unbranched, up to 7 feet tall.
- **Leaves:** Alternate, simple, ovate-oblong to lanceolate, rounded or pointed at the tip, tapering to the base, hairy, with or without a few teeth; lowermost leaves up to 4 inches long, up to 1 1/2 inches wide, with a winged leaf stalk; uppermost leaves smaller, sessile or nearly clasping the stem.
- **Flowers:** Crowded together into heads up to 1/4 inch high, with many heads forming a panicle; heads borne on one side of arching branches; flowers yellow, of 2 kinds: some flat and ray-like, others tubular and forming a disk.
- **Sepals:** 0.
- **Petals:** Yellow, 7-10 of them ray-like, notched at the tip; those in the center forming a disk, 5-lobed, tubular.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes up to 1/12 inch long, hairy, bearing soft bristles at the tip.



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Field Office Guide to Plant Species

Wrinkled Goldenrod

Solidago rugosa Mill.



- **Family:** Aster (Asteraceae)
- **Flowering:** July-November
- **Field Marks:** This coarse goldenrod has hairy stems and leaves, flowering heads borne on one side of the branches, and wrinkled-looking leaves.
- **Habitat:** Along streams, hammocks, pinelands, bayheads, damp thickets; also in upland woods.
- **Habit:** Perennial herb with a thickened crown and slender rhizomes.
- **Stems:** Upright, hairy, branched or unbranched, up to 8 feet tall.
- **Leaves:** Alternate, simple, ovate to ovate-lanceolate, pointed at the tip, tapering to the base, rough to the touch and hairy, appearing wrinkled, toothed, up to 4 inches long, up to 1 1/2 inches wide; lowermost leaves usually with a stalk; uppermost leaves sessile.
- **Flowers:** Crowded together into heads up to 1/4 inch high, with many heads forming a panicle; heads borne on one side of arching branches; flowers yellow, of 2 kinds: some flat and ray-like, others tubular and forming a disk.
- **Sepals:** 0.
- **Petals:** Yellow, 7-15 of them ray-like, notched at the tip; those in the center forming a disk, 5-lobed, tubular.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes up to 1/12 inch long, hairy, bearing soft bristles at the tip.
- **Notes:** This is an extremely variable species.



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Field Office Guide to Plant Species

New York Ironweed

Vernonia noveboracensis (L.) Michx.



- **Family:** Aster (Asteraceae)
- **Flowering:** July-October
- **Field Marks:** This species is easily distinguished from other Vernonias by the black or dark purple bristles that project from the flowering head.
- **Habitat:** Stream banks, low woods, damp thickets, wet meadows.
- **Habit:** Coarse perennial herb with thickened rootstocks.
- **Stems:** Upright, stout, rough-hairy to nearly smooth, up to 9 feet tall.
- **Leaves:** Alternate, simple, elliptic to narrowly lanceolate, pointed at the tip, tapering to the base, toothed, smooth or hairy on the upper surface, short-hairy on the lower surface, up to 10 inches long, up to 1 inch wide.
- **Flowers:** 20-65 in a head, with several heads in terminal corymbs, each head up to 1/2 inch high, with numerous black or dark purple bristles protruding from the head.
- **Sepals:** 0.
- **Petals:** 5, purple, united to form a tube.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes cylindrical, up to 1/6 inch long, with short, stiff hairs, with a purplish tuft of hairs at the tip.



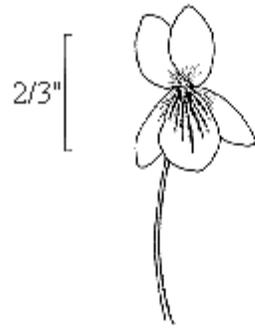
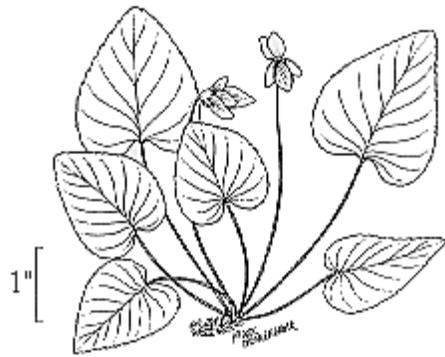
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Field Office Guide to Plant Species

Northern White Violet
Viola pallens (Banks) Brainerd



- **Family:** Violet (Violaceae)
- **Flowering:** April-May
- **Field Marks:** This stemless white violet has broadly ovate leaves and leaf stalks usually sparsely hairy.
- **Habitat:** Wet areas in woods, along streams, bogs.
- **Habit:** Perennial herb without upright aerial stems.
- **Stems:** Underground, except for a few slender creeping stolons that bear flowers without petals.
- **Leaves:** All arising from the underground rhizome, broadly ovate to orbicular, more or less rounded at the tip, heart-shaped at the base, finely toothed, smooth, up to 2 1/2 inches long, up to 2 1/2 inches wide; leaf stalks slightly hairy, up to 7 inches long; apetalous flowers borne on creeping slender stolons.
- **Flowers:** Borne singly on leafless stalks, white, with purple veins, up to 2/3 inch across; flower stalks slightly hairy, up to 8 inches long.
- **Sepals:** 5, green, linear to lanceolate, up to 1/6 inch long.
- **Petals:** 5, white, some with purple veins; one of the petals prolonged backward into a spur; some flowers apetalous.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ellipsoid, green, smooth, up to 1/4 inch long; seeds black.
- **Notes:** The flowers have a pleasant fragrance.



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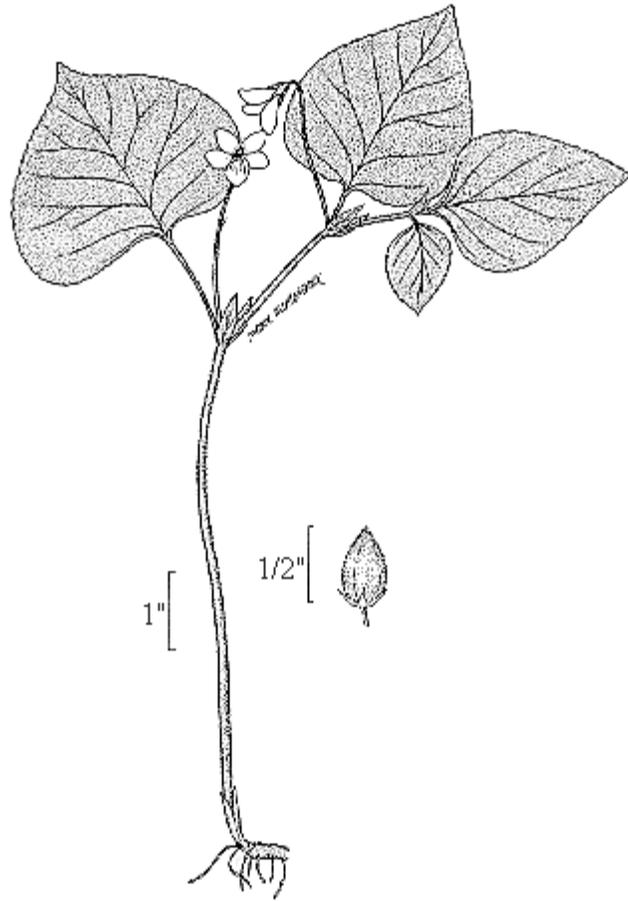
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Downy Yellow Violet

Viola pubescens Ait.



- **Family:** Violet (Violaceae)
- **Flowering:** April-May
- **Field Marks:** This yellow-flowered violet with aerial stems is usually densely hairy.
- **Habitat:** Along streams, meadows, bogs, moist woods.
- **Habit:** Perennial herb with upright aerial stems and thickened rhizomes.
- **Stems:** Upright, densely hairy, up to 12 inches tall.
- **Leaves:** Alternate and basal, simple, broadly ovate, rounded or pointed at the tip, heart-shaped at the base, toothed, densely hairy.
- **Flowers:** 1-several, yellow, up to 2/3 inch across.
- **Sepals:** 5, green, narrowly lanceolate.
- **Petals:** 5, yellow, two of them with a tuft of hairs; one of the petals prolonged backward into a spur.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ovoid, smooth or hairy, up to 1/2 inch long; seeds light brown.
- **Notes:** Smooth yellow-flowered plants are considered to be a different species known as *Viola pensylvanica*.



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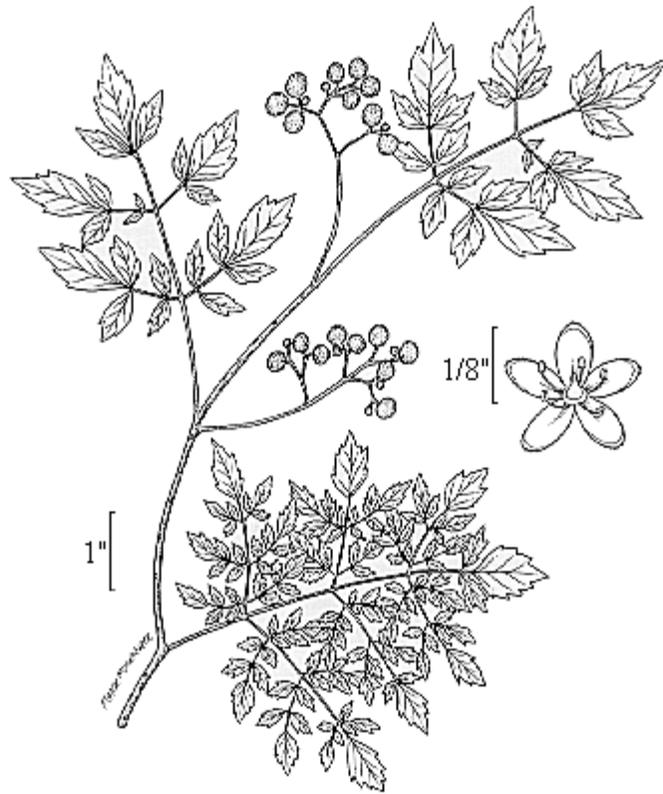
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Peppervine

Ampelopsis arborea (L.) Koehne



- **Family:** Grape (Vitaceae)
- **Flowering:** May-June
- **Field Marks:** This vine differs from all others by its alternate leaves which are double pinnately compound, with coarsely toothed leaflets.
- **Habitat:** A wide variety of habitats from upland fencerows on moist sites to winter-flooded bottomlands.
- **Habit:** High-climbing vine with few or no tendrils, the tendrils usually forked, or low-growing and bush-forming without tendrils.
- **Stems:** Slender, smooth, round to angular in cross-section, sometimes rough with warty oval lenticels, scrambling or climbing, with few or no tendrils.
- **Leaves:** Alternate, doubly pinnately compound, each leaflet ovate, pointed at the tip, tapering or rounded at the base, coarsely toothed, usually smooth on both surfaces, sometimes hairy on the veins beneath, up to 2 inches long but often much smaller.
- **Flowers:** Many in an umbel-like cluster at the tips of the stems, some bearing only fertile stamens, others bearing only fertile pistils.
- **Sepals:** Very small, green or whitish, 4-parted.
- **Petals:** 5, greenish, rounded and ciliate at the tip, free from each other, up to 1/8 inch long.
- **Stamens:** 5, opposite the petals.
- **Pistils:** Ovary superior, sitting on a small, fleshy, lobed disk.
- **Fruits:** Berries in umbel-like clusters, subglobose, black, shiny, 1/4-3/8 inch in diameter, usually smooth, usually with 2-4 seeds.
- **Notes:** The fruits are not edible for humans. The new leaves are reddish but turn dark green at maturity. Leaves on vigorous plants often blue-green.



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Heart-leaf Pepper-vine *Ampelopsis cordata* Michx.



- **Family:** Grape (Vitaceae)
- **Flowering:** May-June
- **Field Marks:** This vine has simple leaves usually truncate at the base, and flowers and fruits in short, round-topped cymes.
- **Habitat:** Swamps, river and stream banks, damp thickets, floodplains, borders of wet woodlands, low thickets, sand and gravel banks.
- **Habit:** High-climbing woody vine, usually with a few tendrils.
- **Stems:** Smooth or sparsely hairy when young, somewhat angular in cross-section, bearing prominent, light-colored lenticels.
- **Leaves:** Alternate, simple, ovate, coarsely toothed, pointed at the tip, truncate or heart-shaped at the base, rarely 3-lobed, smooth, or with a few hairs on the veins of the lower surface.
- **Flowers:** Very small, several, in short, round-topped cymes; male and female flowers borne separately.
- **Sepals:** 5, very small.
- **Petals:** 5, white, free from each other.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Berries spherical, blue to red-brown to greenish, up to 1/4 inch in diameter, with 1-2 seeds, not edible.



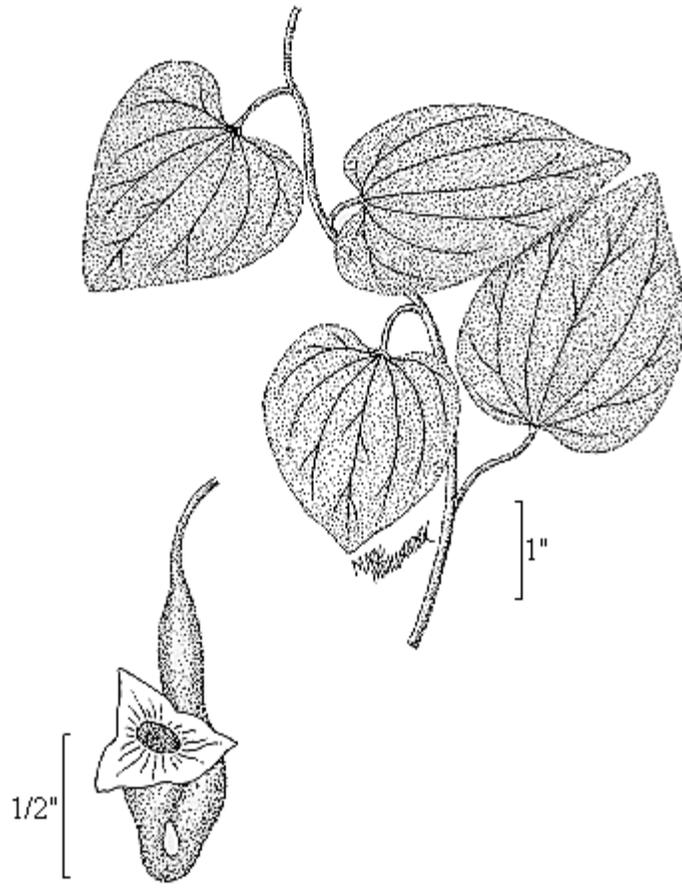
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Woolly Dutchman's-pipevine *Aristolochia tomentosa* Sims



- **Family:** Birthwort (Aristolochiaceae)
- **Flowering:** May-June
- **Field Marks:** This climbing vine is distinguished by its softly hairy, heart-shaped leaves, its curved flowers, and its short, thick fruits that bear layers of flattened seeds.
- **Habitat:** In shaded woodlands, along streams, bottomlands, slopes, and into moist upland sites.
- **Habit:** Perennial high-climbing vine with thickened rootstocks.
- **Stems:** Twining, densely hairy, up to 75 feet long.
- **Leaves:** Alternate, simple, broadly ovate, pointed at the tip, heart-shaped at the base, without teeth, densely soft-hairy, up to 8 inches long, up to 6 inches wide; leaf stalks densely hairy, up to 3 inches long.
- **Flowers:** Usually solitary or paired in the axils of the leaves, very asymmetrical.
- **Sepals:** 3, deep purple, united to form a hairy, curved, yellow-green tube up to 1 1/2 inches long.
- **Petals:** 0.
- **Stamens:** 6.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules oblong-cylindric, up to 4 inches long, with numerous flat, triangular seeds arranged in layers; seeds up to 1/2 inch long.
- **Notes:** The aromatic rootstock can be used for seasoning.



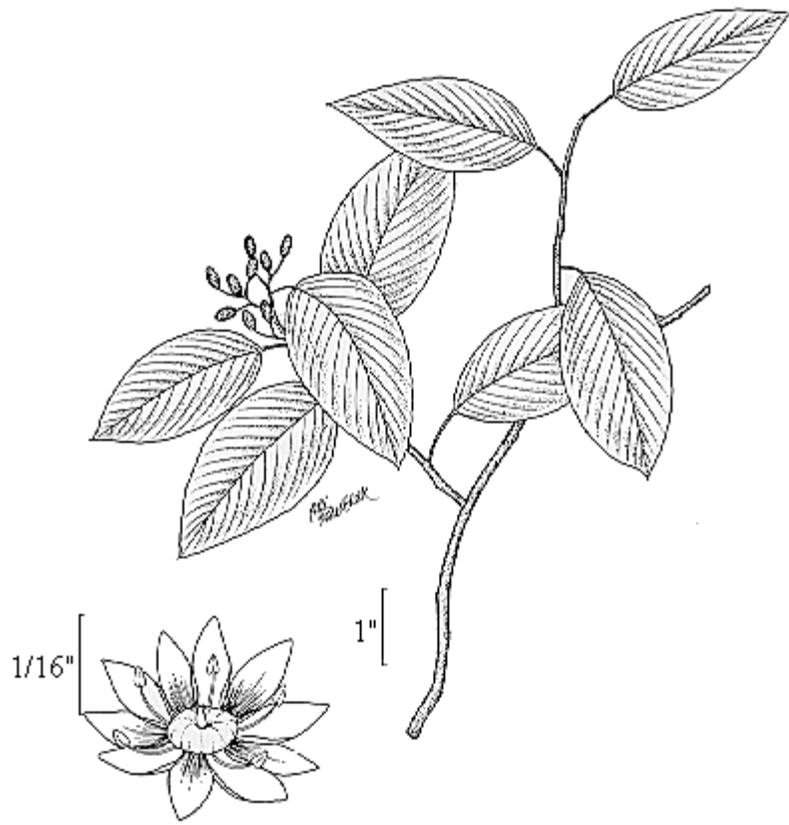
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Alabama Supple-jack
Berchemia scandens (J. Hill) K. Koch



- **Family:** Buckthorn (Rhamnaceae)
- **Flowering:** April-May
- **Field Marks:** This vine differs from all others by its alternate, elliptic, toothless leaves that have distinctly parallel venation, its tiny 5-parted greenish flowers, and its ellipsoid blue-black drupes.
- **Habitat:** Swamps, bottomlands, low hammocks, moist thickets, fencerows, moist flatwoods, pineland bogs.
- **Habit:** Twining and climbing woody vine, several to many feet long.
- **Stems:** Twining, smooth, reddish brown, turning gray with age.
- **Leaves:** Alternate, simple, elliptic, pointed or sometimes rounded at the tip, rounded or tapering to the base, without teeth although sometimes wavy-edged, conspicuously pinnately veined, smooth, green and shiny on the upper surface, paler on the lower surface, up to 3 inches long, up to nearly 2 inches wide.
- **Flowers:** Male and female flowers borne on separate plants, borne in axillary and terminal panicles.
- **Sepals:** 5, green, minute, united.
- **Petals:** 5, greenish, up to 1/16 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes ellipsoid, blue-black, up to 1/3 inch long.
- **Notes:** This vine may form dense entanglements over other vegetation.



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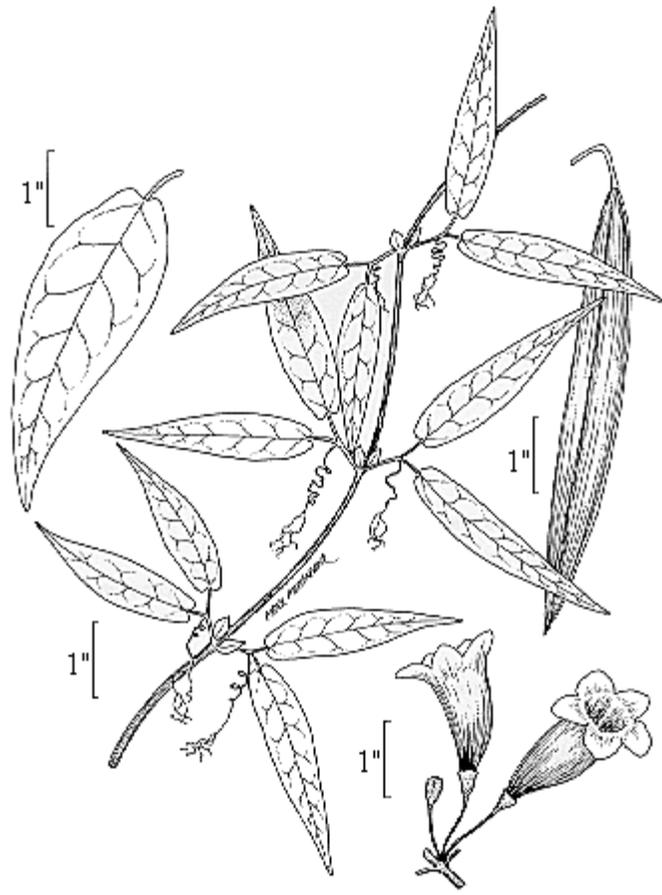
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Crossvine

Bignonia capreolata L.



- **Family:** Trumpet Creeper (Bignoniaceae)
- **Flowering:** April-June
- **Field Marks:** This vine is distinguished by its paired opposite leaflets and its 2 inch long orange, tubular flowers.
- **Habitat:** Thickets, moist woods, edges of swamps, stream banks, bayheads, bottomlands, alluvial floodplains, bogs, fencerows.
- **Habit:** Woody vine, often climbing high in trees.
- **Stems:** Woody, up to 60 feet long, up to 4 inches in diameter.
- **Leaves:** Evergreen, opposite, divided into 2 leaflets and a terminal, branched tendril; each leaflet oblong to ovate, pointed at the tip, more or less heart-shaped or auriculate at the base, up to 7 inches long, up to 3 inches wide.
- **Flowers:** 2-5 in a cluster; each flower on a stalk 1-2 inches long.
- **Sepals:** 5, united into a cup, the lobes very tiny.
- **Petals:** 5, united into a tube, up to 2 inches long, orange outside, yellow at the tips, reddish in the throat inside.
- **Stamens:** 4, shorter than the tubular flower.
- **Pistils:** Ovary superior; stigma 2-cleft.
- **Fruits:** Capsules linear, very flat, up to 7 inches long; seeds broadly winged, papery, flat, up to 1 1/2 inches wide.
- **Notes:** This species is sometimes placed in the genus *Anisostichus*. The cross-section of large vines shows a dark cross in the middle, hence the name "crossvine."



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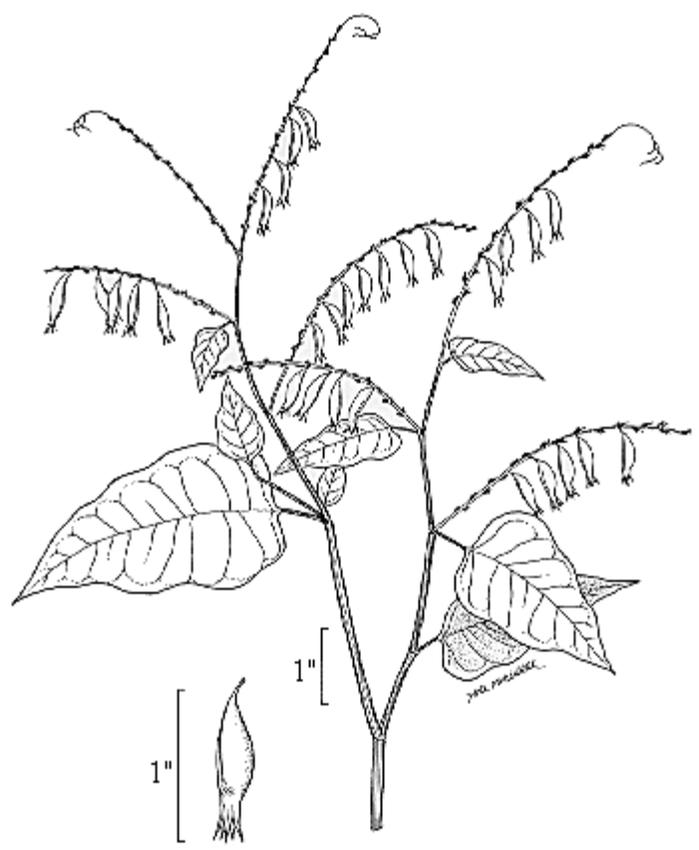
Field Office Guide to Plant Species

Redvine

Brunnichia cirrhosa Gaertn.



- **Family:** Smartweed (Polygonaceae)
- **Flowering:** May-June
- **Field Marks:** This high-climbing vine is characterized by its fruits winged on one side and its alternate, toothless leaves with undulating margins, and tendrils.
- **Habitat:** Swamps, stream and river banks, bottomlands, low alluvial woods, bayous, wet thickets.
- **Habit:** High-climbing perennial vine.
- **Stems:** Slightly woody, slender, much branched, grooved, reddish, up to 30 feet long, bearing lenticels.
- **Leaves:** Alternate, simple, ovate to ovate-lanceolate, pointed at the tip, rounded or truncate at the base, without teeth but with undulating margins, slightly hairy on the lower surface, up to 6 inches long; tendrils very slender; leaf stalks short-hairy.
- **Flowers:** Several in racemes, each on a short, slender stalk that enlarges with age.
- **Sepals:** 5, united below into a slender tube, green to yellow-green.
- **Petals:** None.
- **Stamens:** 8, exserted beyond the sepals.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Achenes up to 1/4 inch long, brown, smooth, enclosed by the persistent tube of the flower; tube up to 1 inch long.
- **Notes:** This species is sometimes known as ladies' ear-drops.



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Cupseed

Calycocarpum lyonii Gray



- **Family:** Moonseed (Menispermaceae)
- **Flowering:** May-June
- **Field Marks:** This species differs from others in the moonseed family by its deeply lobed leaves. Although the leaves more nearly resemble the leaves of grapes, the stems do not bear tendrils.
- **Habitat:** Low woods, swampy areas, banks of streams, thickets.
- **Habit:** High-climbing, slender to rather stout, usually smooth, up to 40 feet long.
- **Stems:** Climbing, slender to rather stout, usually smooth, up to 40 feet long.
- **Leaves:** Alternate, simple, broadly ovate but usually palmately lobed, pointed at the tip, heart-shaped at the base, usually smooth, up to 8 inches long.
- **Flowers:** Male and female borne on separate plants, both in drooping panicles in the axils of the leaves, up to 10 inches long.
- **Sepals:** 6, greenish, free from each other, up to 1/2 inch long.
- **Petals:** 0.
- **Stamens:** 12.
- **Pistils:** 3, free from each other; ovaries superior.
- **Fruits:** Drupes oblongoid, black, up to 1 inch long; seeds scooped out in the form of a cup.

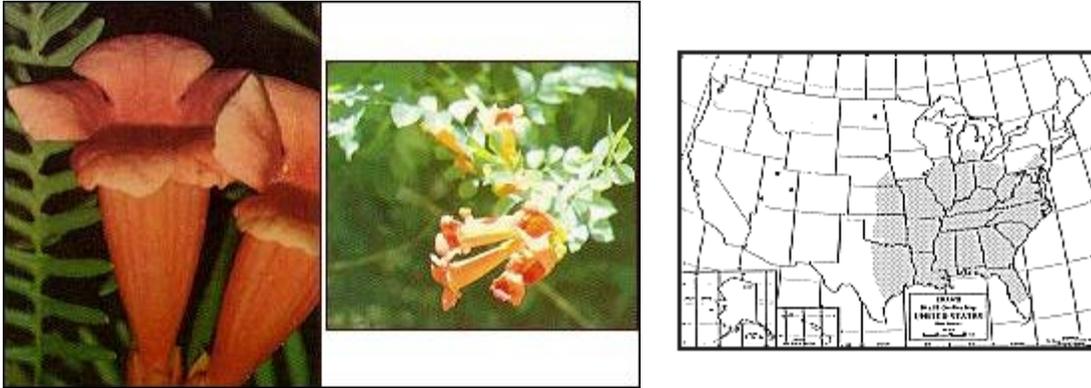


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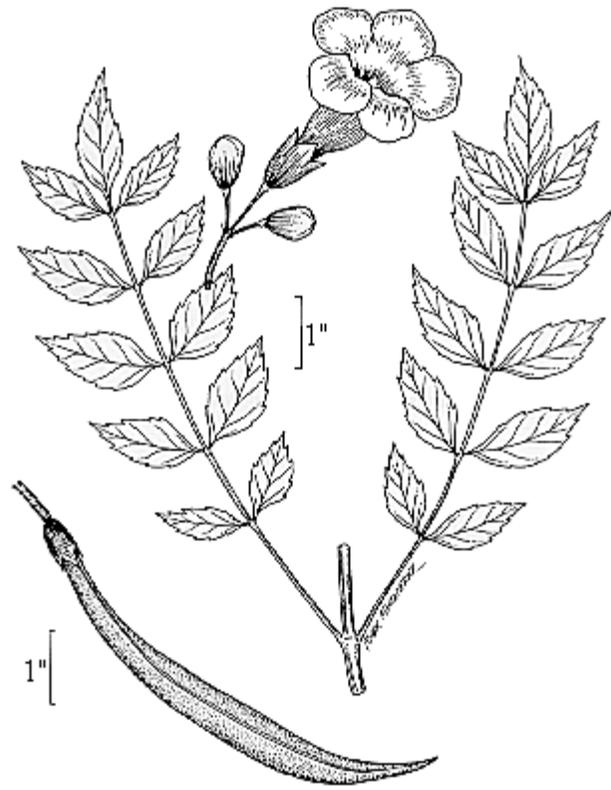
Field Office Guide to Plant Species

Trumpet Creeper

Campsis radicans (L.) Seem.



- **Family:** Trumpet Creeper (Bignoniaceae)
- **Flowering:** May-September
- **Field Marks:** This is the only woody vine that has opposite, pinnately compound leaves and large, red, trumpet-shaped flowers.
- **Habitat:** From wet areas to upland moist sites; moist woods, swampy woods, thickets, old fields, fencerows, roadsides.
- **Habit:** Often high-climbing woody vine, sometimes sprawling where there is nothing to climb on.
- **Stems:** Becoming woody, smooth, without tendrils but bearing aerial roots.
- **Leaves:** Opposite, compound, with 7-11 leaflets; each leaflet ovate to lanceolate, pointed at the tip, tapering to the base, sharply toothed along the edges, smooth, up to 3 inches long, usually much shorter.
- **Flowers:** 2-9 in a cluster, red-orange to red, trumpet-shaped.
- **Sepals:** 5-lobed, tubular below, green, smooth, 1/2-3/4 inch long.
- **Petals:** 5-lobed, tubular below, red-orange to red, up to 4 inches long.
- **Stamens:** 4, not exerted beyond the tubular petals.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules somewhat woody, elongated, tapering to either end, smooth, up to 6 inches long, containing 2 rows of seeds; seeds flat, winged on each side, about 3/4 inch long.
- **Notes:** The beautiful flowers make the trumpet creeper a popular ornamental. The flowers are pollinated by hummingbirds.



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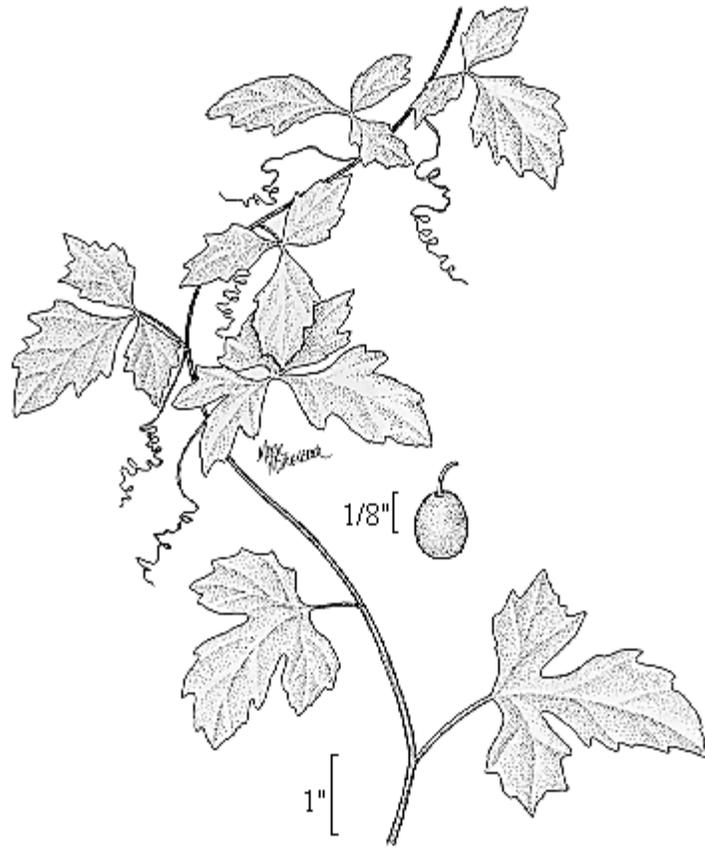
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Ivy Treebine

Cissus incisa (Nutt.) Des Moul.



- **Family:** Grape (Vitaceae)
- **Flowering:** May-July
- **Field Marks:** This vine differs from all other members of the grape family by having leaves sometimes divided into 3 leaflets and its 4-parted flowers.
- **Habitat:** Wet to dry soils in open woodlands to salt marshes.
- **Habit:** Slightly woody vine scrambling, sprawling, or climbing, with tuberous thickened roots.
- **Stems:** Somewhat woody or sometimes rather succulent, warty and tight-barked.
- **Leaves:** Alternate, fleshy thickened and succulent, deeply 3-lobed or divided into 3 leaflets, the leaflets ovate to obovate, pointed at the tip, tapering to the base, coarsely toothed or even lobed, smooth, up to 3 inches long.
- **Flowers:** Several in apparently compound umbels, some of the flowers male only, some female only, some bisexual, but all types on the same plant.
- **Sepals:** 4, green, united below, with very small, rounded lobes.
- **Petals:** 4, greenish white, free from each other.
- **Stamens:** 4.
- **Pistils:** Ovary superior, surrounded by a conspicuous 4-lobed disk.
- **Fruits:** Berries ovoid to obovoid, black, up to 1/2 inch long, usually dryish, containing 1 or 2 triangular seeds.
- **Notes:** This vine is sometimes called marine ivy.



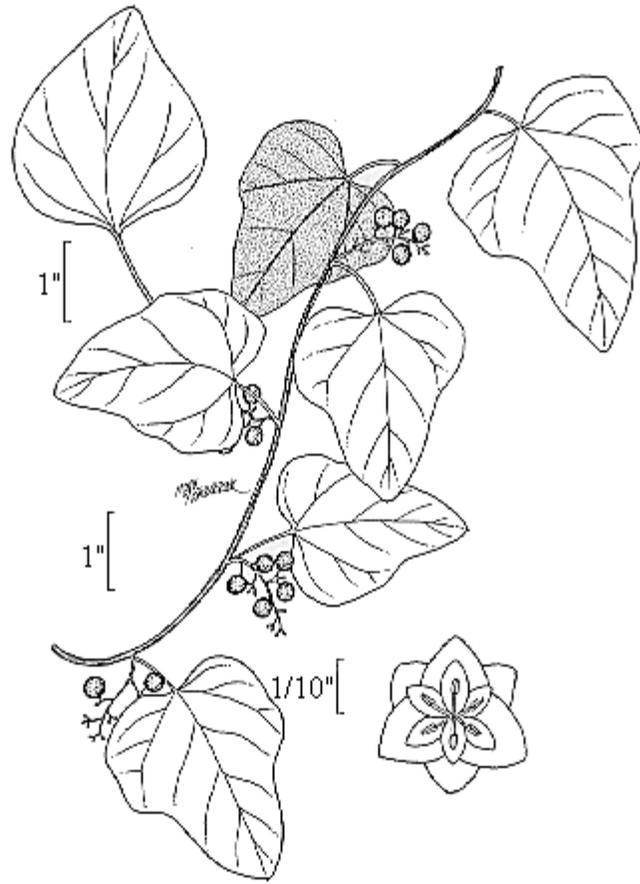
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Field Office Guide to Plant Species

Carolina Coral-beads
Cocculus carolinus (L.) DC.



- **Family:** Moonseed (Menispermaceae)
- **Flowering:** June-August
- **Field Marks:** This vine is recognized by its highly variable leaves and its bright red, spherical drupes.
- **Habitat:** Moist or dry soils in fields, woodlands, fencerows, roadsides, and waste areas.
- **Habit:** Somewhat woody vine climbing or scrambling over vegetation.
- **Stems:** Herbaceous at first, becoming woody and sometimes nearly 1 inch in diameter, brown, smooth or hairy, minutely warty, several to many feet long.
- **Leaves:** Alternate, simple, highly variable in shape, basically ovate, pointed or rounded at the tip, more or less heart-shaped at the base, without teeth but sometimes with shallow lobes, hairy, up to 5 inches long, often nearly as wide.
- **Flowers:** Male and female flowers borne separately on different plants in panicles arising just above the axils of the leaves; panicles of male flowers up to 6 inches long; panicles of female flowers shorter.
- **Sepals:** 6, in 2 groups of 3, free from each other, green, hairy, the outer 3 shorter than the inner 3, none of the sepals more than 1/10 inch long.
- **Petals:** 6, free from each other, shorter than the inner sepals.
- **Stamens:** 6.
- **Pistils:** 6; ovaries superior.
- **Fruits:** Drupes bright red, spherical, up to 1/3 inch in diameter; seeds bony, coiled and warty, resembling a snail.
- **Notes:** This plant is often called snailseed.



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Southeast Decumaria

Decumaria barbara L.

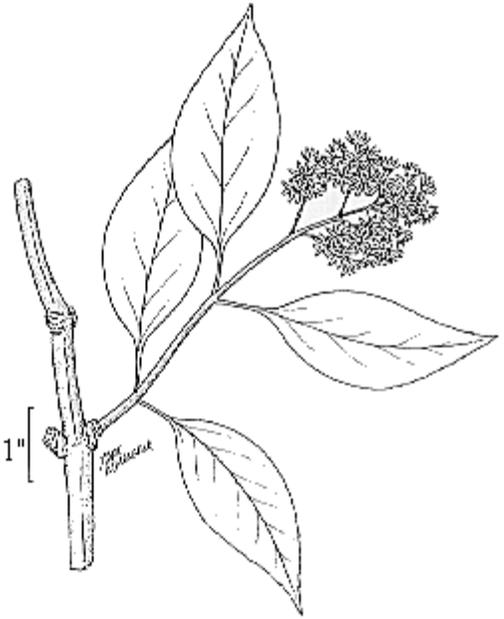


- **Family:** Saxifrage (Saxifragaceae)
- **Flowering:** May-June
- **Field Marks:** This woody vine has opposite leaves, and flowers with 7-12 creamy white petals and 20-30 stamens.
- **Habitat:** Always found in wet to saturated soils in places like low woods, and swamps.
- **Habit:** High-climbing woody vine with numerous aerial roots.
- **Stems:** Climbing, as much as 2 inches in diameter.
- **Leaves:** Opposite, simple, ovate to obovate, pointed at the tip, rounded at the base, up to 5 inches long, up to nearly 3 inches wide, toothless or with a few teeth in the upper half of the leaf, smooth on the upper surface, usually sparsely hairy on the lower surface.
- **Flowers:** Numerous small flowers in terminal, compound cymes, the cymes up to 4 1/2 inches across.
- **Sepals:** 7-12, triangular, creamy white, united below to form a tube, the tube up to 1/5 inch long.
- **Petals:** 7-12, creamy white, lanceolate, up to 1/8 inch long.
- **Stamens:** 20-30.
- **Pistils:** Ovary inferior; stigma with 7-10 lobes.
- **Fruits:** Capsules obovoid, longitudinally ribbed, up to 1/5 inch long, with the style persistent; seeds linear, shiny, yellow, up to 1/10 inch long.
- **Notes:** This species is also called climbing hydrangea.

1/8"



1"



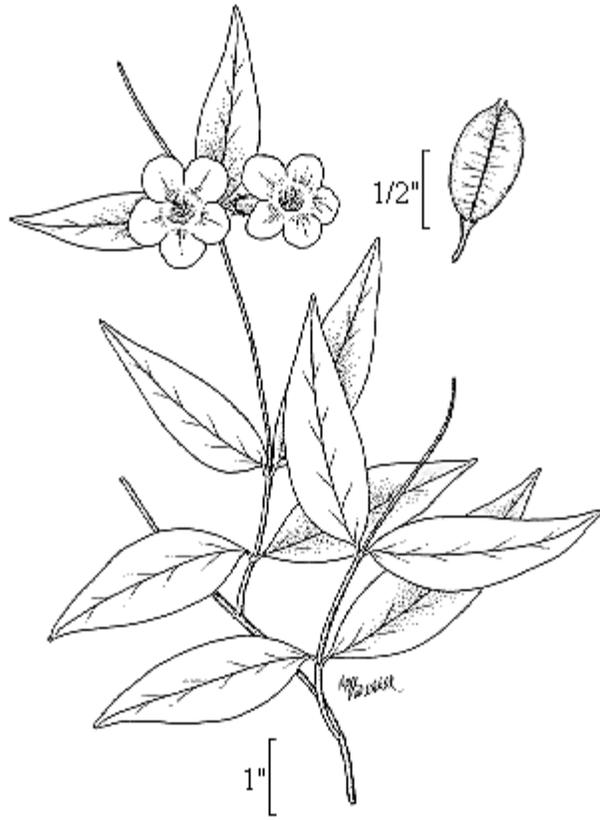
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Field Office Guide to Plant Species

Rankin's Trumpet-flower *Gelsemium rankinii* Small



- **Family:** Logania (Loganiaceae)
- **Flowering:** March-April
- **Field Marks:** This species is very similar to *Gelsemium sempervirens*, except that the pointed sepals persist on the capsules and the flowers lack an odor.
- **Habitat:** Wet woods, swamps, bogs.
- **Habit:** Woody vine climbing high on trees.
- **Stems:** Twining or trailing, smooth, several to many feet long.
- **Leaves:** Opposite, simple, evergreen, lanceolate to ovate, pointed at the tip, rounded or tapering to the base, without teeth, smooth, up to 4 inches long, up to 3/4 inch wide.
- **Flowers:** Solitary or few in a cluster in the axils of the leaves, borne on short stalks.
- **Sepals:** 5, free, green, pointed at the tip, persistent on the fruit, up to 1/4 inch long.
- **Petals:** 5, yellow, united to form a tube, up to 1 3/4 inches long.
- **Stamens:** 5, attached to the tube of the petals.
- **Pistils:** Ovary superior; styles 2, each 2-cleft.
- **Fruits:** Capsules flat, ellipsoid, up to 3/4 inch long, with the pointed sepals persisting; seeds brown, flat, up to 1/4 inch long.



Southern Wetland Flora

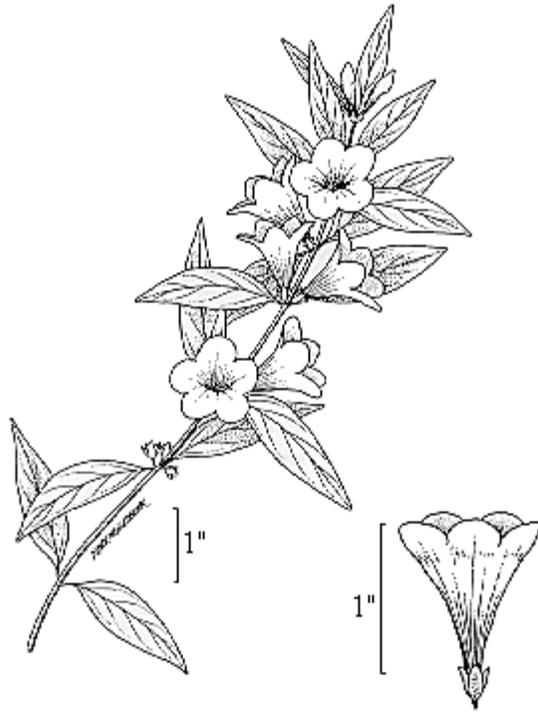
Field Office Guide to Plant Species

Yellow Jessamine

Gelsemium sempervirens (L.) Ait. f.



- **Family:** Logania (Loganiaceae)
- **Flowering:** March-October
- **Field Marks:** This vine is distinguished by its short, trumpet-shaped, very fragrant, yellow flowers and its entire, evergreen, opposite leaves.
- **Habitat:** From moist to wet soil in woodlands, thickets, and along fencerows.
- **Habit:** Climbing or trailing vine up to 20 feet long.
- **Stems:** Slender, smooth.
- **Leaves:** Opposite, simple, evergreen, lanceolate to oblong-lanceolate, pointed at the tip, tapering or rounded at the base, without teeth, smooth, up to 3 inches long, up to 1 inch wide, on short stalks.
- **Flowers:** 1-6 in the axils of the leaves, very fragrant.
- **Sepals:** 5, green, attached at base, oblong, rounded at the tip.
- **Petals:** 5, bright yellow, united to form a short trumpet up to 1 1/2 inches long.
- **Stamens:** 5, attached to the tube of the petals.
- **Pistils:** Ovary superior; style slender, 4-parted.
- **Fruits:** Capsules elliptic, flat, 1/3-1/2 inch long, with flat seeds winged at the tip.



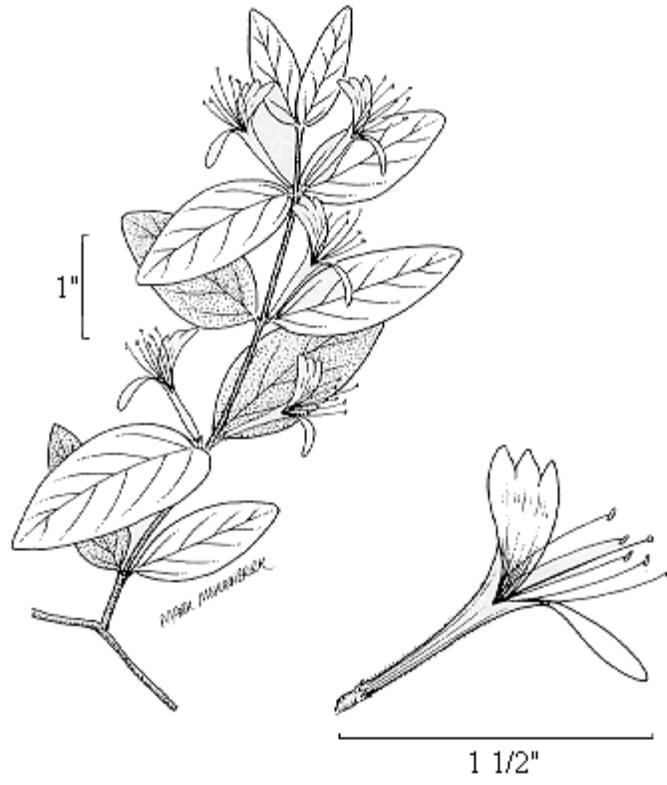
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Japanese Honeysuckle *Lonicera japonica* Thunb.



- **Family:** Honeysuckle (Caprifoliaceae)
- **Flowering:** April-October
- **Field Marks:** This climbing or trailing plant with opposite leaves has sweet-smelling, white, 2-lipped, inch-long flowers in the axils of the leaves.
- **Habitat:** Moist to dry soil in fields, woodlands, roadsides, fencerows, around old housesites, and disturbed sites.
- **Habit:** Trailing or climbing, wiry, woody vine, often growing to the tops of trees under moist conditions.
- **Stems:** Trailing or climbing, usually hairy, from several to many feet long.
- **Leaves:** Opposite, simple, ovate or broadly oblong, rounded or pointed at the tip, rounded at the base, usually without teeth, sparsely hairy on the lower surface, up to 1 inch across.
- **Flowers:** Flowers borne in pairs in the axils of the leaves.
- **Sepals:** 5, tooth-like, green, united below.
- **Petals:** Composed of a 3-parted segment and a 2-parted segment, united below into a hairy tube, very sweet-scented, up to 1 1/2 inches long, becoming cream or yellow with age.
- **Stamens:** 5, attached to the tube of the petals.
- **Pistils:** Ovary inferior.
- **Fruits:** Berries spherical, shining, black, up to 1/3 inch in diameter.
- **Notes:** The lowermost pair of leaves on the stem is sometimes deeply lobed. This plant is an excellent food for deer and rabbits.



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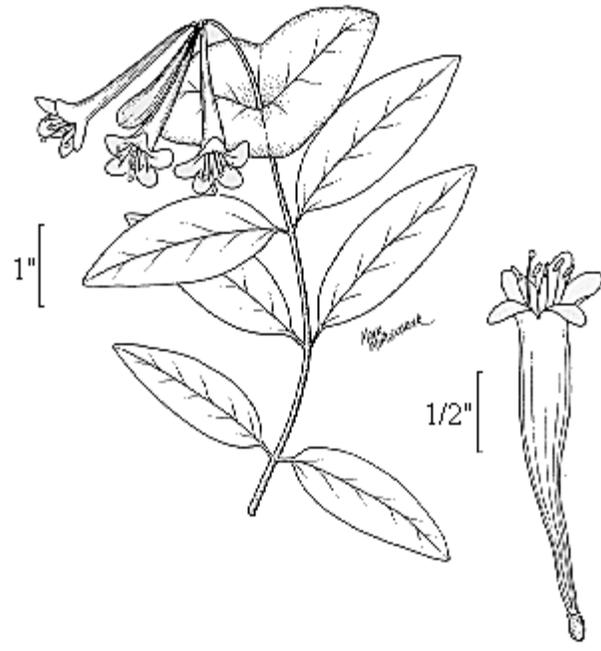
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Trumpet Honeysuckle

Lonicera sempervirens L.



- **Family:** Honeysuckle (Caprifoliaceae)
- **Flowering:** March-July
- **Field Marks:** This vine is readily recognized by its red, long-tubular flowers and the bracts connate and completely encircling the stem.
- **Habitat:** Low woods, swamps, bottomlands, bayheads, fencerows, dry woods, thickets.
- **Habit:** Twining or trailing woody vine up to 15 feet long.
- **Stems:** Slender, sparsely branched or unbranched, smooth or nearly so.
- **Leaves:** Opposite, simple, sometimes evergreen, especially in the deep south, elliptic to oblong to obovate, pointed or rounded at the tip, pointed or rounded at the base, without teeth, smooth or nearly so, green on the upper surface, pale or glaucous on the lower surface, up to 3 1/2 inches long, up to 2 inches wide.
- **Flowers:** Several in interrupted spikes arising from a pair of connate bracts that completely encircle the stems; flowers long-tubular.
- **Sepals:** Minute, often not clearly distinguishable.
- **Petals:** 5, united into a long tube, red on the outside, yellow on the inside, up to 2 1/2 inches long.
- **Stamens:** 5, scarcely exerted beyond the petals.
- **Pistils:** Ovary inferior.
- **Fruits:** Berries spherical, up to 1/4 inch in diameter, black; seeds shiny, black, finely veined.
- **Notes:** This species is sometimes grown as an ornamental.



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Virginia Creeper

Parthenocissus quinquefolia (L.) Planch.



- **Family:** Grape (Vitaceae)
- **Flowering:** May-August
- **Field Marks:** This is the only vine with palmately compound leaves with five leaflets.
- **Habitat:** Moist to dry soils in woods, on bluffs, hammocks, steep ravines, bottomlands.
- **Habit:** Climbing or trailing woody vine.
- **Stems:** Twining, smooth or sometimes hairy, with suction cups at the end of tendrils.
- **Leaves:** Alternate, palmately compound, with 5 leaflets; each leaflet oval to elliptic to broadly lanceolate, pointed at the tip, tapering to the base, coarsely toothed, smooth or sometimes hairy on the lower surface, up to 6 inches long.
- **Flowers:** Several in compound cymes, up to 1/4 inch across.
- **Sepals:** 5, green, united below.
- **Petals:** 5, yellow-green, free from each other, up to 1/8 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Berries spherical, blue, up to 1/4 inch in diameter, with 2-3 seeds; stalk of fruits red.
- **Notes:** This species is sometimes called woodbine. Its foliage turns red in autumn, making it a desirable ornamental. White-tailed deer browse this species, and wild turkey eat the tendrils.



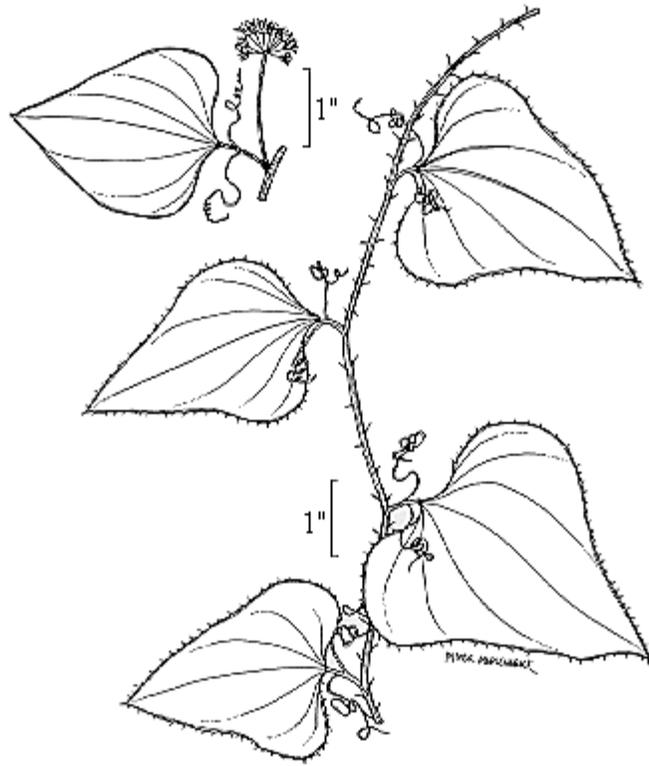
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Field Office Guide to Plant Species

Saw Greenbrier
Smilax bona-nox L.



- **Family:** Lily (Liliaceae)
- **Flowering:** April-July
- **Field Marks:** This species has leaves with a thickened margin resembling a vein. The stalk of the umbel is longer than the stalk of the adjacent leaf.
- **Habitat:** Moist to dry soils in upland woods, old fields, thickets, floodplain forests, hammocks, pinelands, bayheads, sandy hills.
- **Habit:** Climbing or trailing woody vine with pairs of thread-like tendrils; rhizomes tuber-bearing.
- **Stems:** Woody, climbing or trailing, sometimes 4-angled, often warty, usually bearing numerous prickles; prickles stout or needle-like, usually dark-tipped.
- **Leaves:** Alternate, simple, leathery, ovate to triangular with a pair of conspicuous lobes near the base, pointed at the tip, rounded or heart-shaped at the base, usually shiny, often mottled with light green to white, sometimes with spines along the margins and on the veins, the margins thickened, resembling a vein, up to 4 inches long, up to 3 inches wide.
- **Flowers:** Borne in umbels; peduncles of the umbels up to 1 3/4 inches long, smooth, flattened; pedicel of each flower up to 1/3 inch long, smooth; male and female flowers borne on separate plants.
- **Perianth:** 6-parted, free from each other, green, up to 1/8 inch long.
- **Stamens:** 6, exerted above the perianth.
- **Pistils:** Ovary superior; stigmas 1-3.
- **Fruits:** Berries 8-20 in an umbel, black, spherical, up to 1/4 inch in diameter, usually 1-seeded.
- **Notes:** This species can form dense, nearly impenetrable thickets. It has extremely variable leaves.

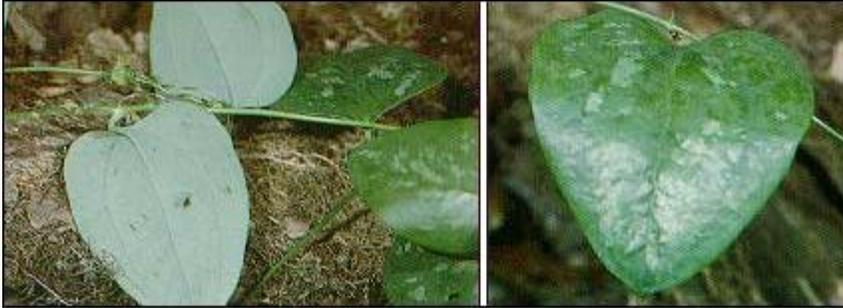


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Cat Greenbrier

Smilax glauca Walter



- **Family:** Lily (Liliaceae)
- **Flowering:** May-June
- **Field Marks:** This species is easily distinguished by the whitish lower leaf surface.
- **Habitat:** Moist or dry soils in woods, old fields, floodplains, fencerows, thickets, pocosins, sandy hills, hammocks, bluffs, bottomlands, swamps.
- **Habit:** Climbing or trailing woody vine with pairs of thread-like tendrils; rhizomes tuber-bearing.
- **Stems:** Woody, climbing or trailing, glaucous, sometimes angular, smooth except usually for scattered sharp prickles.
- **Leaves:** Alternate, simple, ovate, pointed at the tip, rounded or heart-shaped at the base, sometimes mottled with light green to white on the upper surface, whitened on the lower surface, up to 6 inches long, up to 5 inches wide; leaf stalk up to 1/2 inch long.
- **Flowers:** Borne in umbels; stalks of the umbels up to 3/4 inch long, usually somewhat flattened; stalk of each flower up to 1/3 inch long; male and female flowers borne on separate plants.
- **Perianth:** 6-parted, free from each other, green, up to 1/8 inch long.
- **Stamens:** 6, exserted above the perianth.
- **Pistils:** Ovary superior; stigmas 1-3.
- **Fruits:** Berries blue-black, spherical, up to 1/4 inch in diameter; seeds 2-3.
- **Notes:** This species may remain evergreen in suitable protected areas in the southern end of its range.

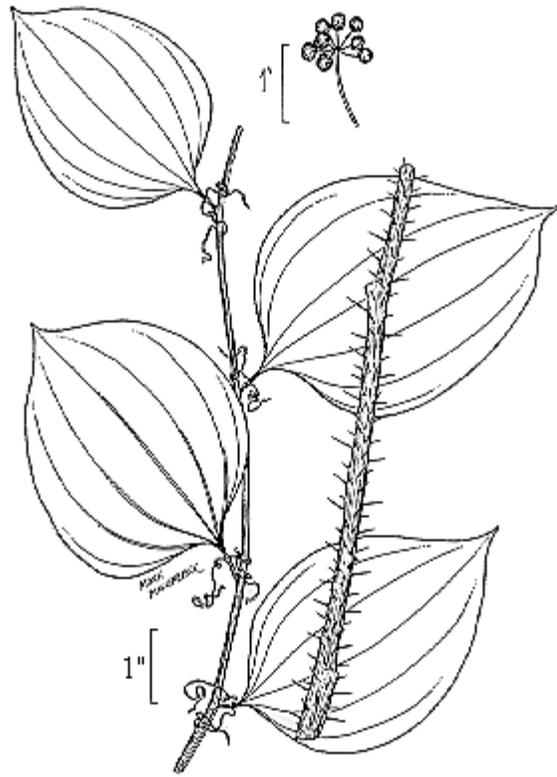
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Bristly Greenbrier
Smilax hispida Muhl.



- **Family:** Lily (Liliaceae)
- **Flowering:** April-May
- **Field Marks:** This woody vine is distinguished by its all-green leaves which are relatively thin and minutely ciliate or toothed and its slender spines which become entirely black at maturity.
- **Habitat:** Rare in uplands; generally along streams, floodplains, and swamps.
- **Habit:** Climbing or trailing woody vine with pairs of thread-like tendrils; rhizomes not tuber-bearing.
- **Stems:** Woody, climbing or trailing, round or slightly angular, smooth or more often with dense, slender spines turning black with age.
- **Leaves:** Alternate, simple, ovate, pointed at the tip, rounded or heart-shaped at the base, thin, smooth except for minute cilia or teeth, up to 5 inches long, up to 5 inches wide; leaf stalks up to 3/4 inch long.
- **Flowers:** Borne in umbels; stalks of the umbels up to 2 inches long, longer than the leaf stalk; stalk of each flower slender, up to 1/4 inch long; male and female flowers borne on separate plants.
- **Perianth:** 6-parted, free from each other, green, up to 1/8 inch long.
- **Stamens:** 6, about as long as the perianth parts.
- **Pistils:** Ovary superior; stigmas 1-3.
- **Fruits:** Berries blue-black, spherical to ellipsoid, up to 1/4 inch in diameter, 1-seeded.
- **Notes:** This species is sometimes known as *Smilax tamnoides*. The leaves rarely are hastate.



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Laurel-leaf Greenbrier

Smilax laurifolia L.



- **Family:** Lily (Liliaceae)
- **Flowering:** July-August
- **Field Marks:** This greenbrier is recognized immediately by its leaves that point directly upward.
- **Habitat:** Swamps, stream banks, thickets, bayheads, low pinelands, flatwoods, bogs, pocosins.
- **Habit:** High-climbing woody vine with thick, tuberous rhizomes.
- **Stems:** Woody, green, smooth except for many stout prickles, the prickles up to 1/2 inch long, or prickles rarely absent.
- **Leaves:** Alternate, simple, twisted, the stalks twisted so the blades point upward, evergreen, leathery, oblong, rounded or pointed at the tip, rounded at the base, without teeth, sometimes revolute, smooth, up to 4 1/2 inches long, up to 2 inches wide.
- **Flowers:** Male and female flowers borne separately on separate plants, in umbels.
- **Perianth:** 6-parted, greenish, free from each other, up to 1/4 inch long, slightly shorter in the female flowers.
- **Stamens:** 6.
- **Pistils:** Ovary superior; stigmas 1 or 2.
- **Fruits:** Berries spherical, blue-black, usually glaucous, up to 1/3 inch in diameter, 1-seeded.
- **Notes:** This vine can form impenetrable thickets. The berries take two years to ripen.



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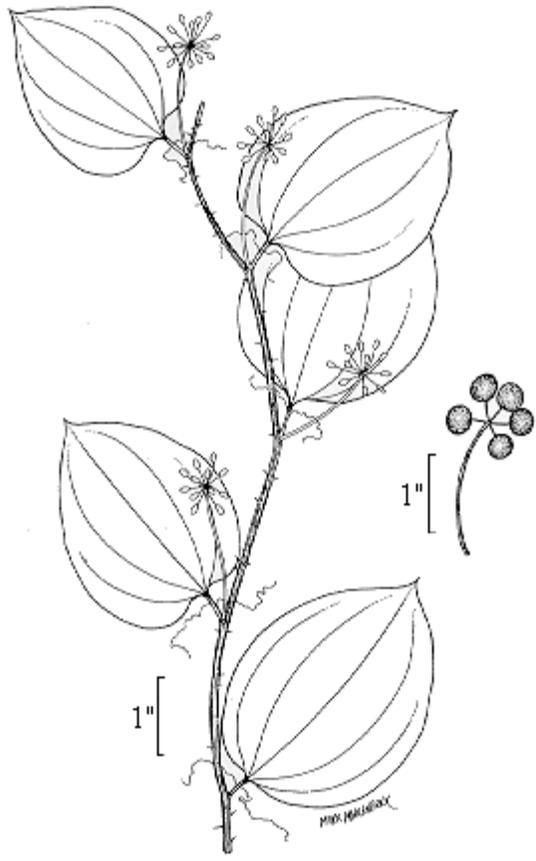
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Common Greenbrier

Smilax rotundifolia L.



- **Family:** Lily (Liliaceae)
- **Flowering:** April-June
- **Field Marks:** This greenbrier is recognized by its leaves green on both sides and the presence of spines that are green or blackened only at the tip.
- **Habitat:** Moist to wet soils in woodlands, fields, fencerows, ditch banks, and cutover areas.
- **Habit:** Climbing or trailing woody vine with pairs of thread-like tendrils; rhizome usually not tuber-bearing.
- **Stems:** Woody, climbing or trailing, usually angular, smooth, usually with stout spines; spines found only on stem angles, green or blackened only at the tip.
- **Leaves:** Alternate, simple, rather thick, shiny, ovate to orbicular, pointed at the tip, rounded at the base, with or without small teeth, smooth, up to 6 inches long, up to 6 inches wide; leaf stalks up to 1 inch long.
- **Flowers:** Borne in umbels; stalks of the umbels up to 3/4 inch long, usually shorter than the leaf stalk, flattened; stalk of each flower slender, up to 1/3 inch long; male and female flowers borne on separate plants.
- **Perianth:** 6-parted, free from each other, green, up to 1/8 inch long.
- **Stamens:** 6, about as long as the perianth parts.
- **Pistils:** Ovary superior; stigmas 1-3.
- **Fruits:** Berries black to blue-black, spherical, up to 1/4 inch in diameter, 2- to 3-seeded.



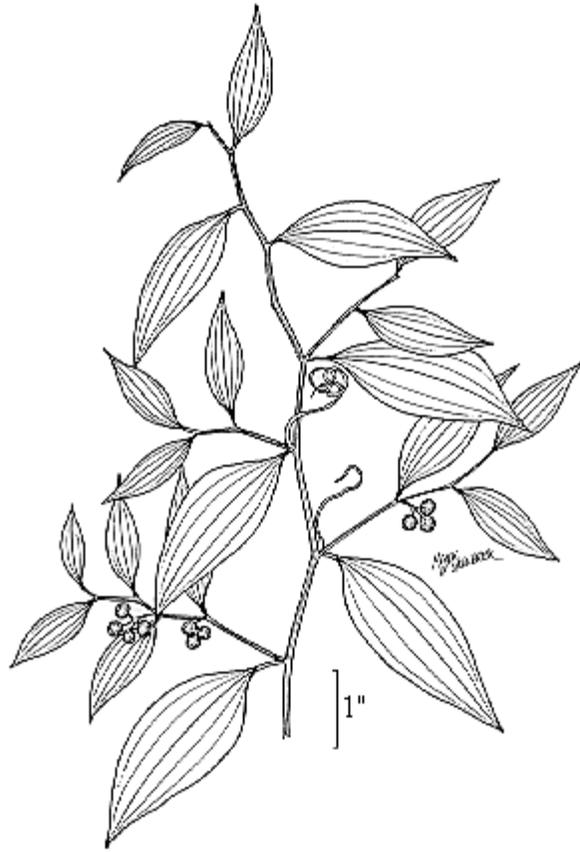
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Lance-leaf Greenbrier *Smilax smallii* Morong



- **Family:** Lily (Liliaceae)
- **Flowering:** June-July
- **Field Marks:** This is the only greenbrier that has lanceolate leaves that are green on the lower surface.
- **Habitat:** Steep ravines, sand hills, high pinelands, hammocks, rich woods, thickets, fencerows, bays.
- **Habit:** High-climbing woody vine with large, thickened rhizomes.
- **Stems:** Woody, green, bearing hard, sharp prickles, or sometimes spineless.
- **Leaves:** Alternate, simple, evergreen, lanceolate, pointed at the tip, tapering or rounded at the base, without teeth, smooth, up to 4 inches long, up to 1 1/2 inches wide, paler but green on the lower surface.
- **Flowers:** Male and female flowers borne separately on separate plants, in umbels.
- **Perianth:** 6-parted, greenish, free from each other, up to 1/4 inch long, slightly shorter in the female flowers.
- **Stamens:** 6.
- **Pistils:** Ovary superior.
- **Fruits:** Berries spherical, black when mature, up to 1/3 inch in diameter, with 1-3 seeds.



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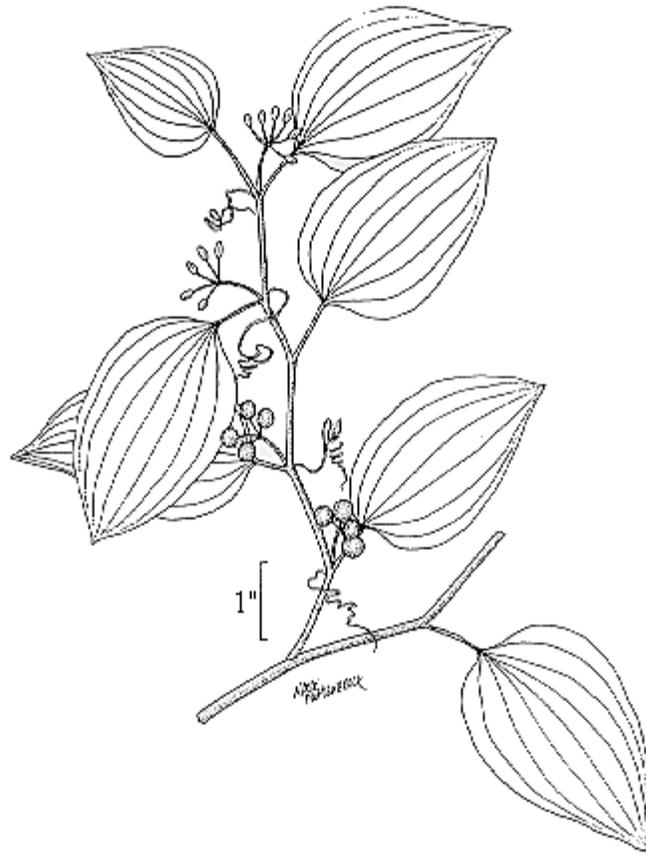
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Coral Greenbrier

Smilax walteri Pursh



- **Family:** Lily (Liliaceae)
- **Flowering:** April-May
- **Field Marks:** This greenbrier can be distinguished from all others by its red berries, ovate leaves that are not auriculate at the base, and the stalks of the flower clusters not longer than the leaf stalks.
- **Habitat:** Low pinelands, swamps, bogs, pond margins, stream banks, alluvial woods, usually in water.
- **Habit:** Woody vine with slender rhizomes.
- **Stems:** Climbing, rather slender, up to 20 feet long, with numerous, green prickles; prickles sometimes dark-tipped.
- **Leaves:** Alternate, simple, ovate, pointed at the tip, more or less rounded or heart-shaped at the base, toothless, smooth, up to 5 inches long, up to 3 1/2 inches wide; leaf stalks about 1/2 inch long.
- **Flowers:** 6-15 in umbels from the axils of the leaves, the stalk of the umbels less than 1/2 inch long; stalk of individual flowers slender, up to 1/4 inch long; male and female flowers borne on separate plants.
- **Perianth:** 6-parted, yellow or brown, free from each other, up to 1/3 inch long.
- **Stamens:** 6.
- **Pistils:** Ovary superior.
- **Fruits:** Berries ellipsoid to spherical, red, up to 1/2 inch long; seeds 2-4.
- **Notes:** The leaves usually fall off prior to the maturing of the berries.



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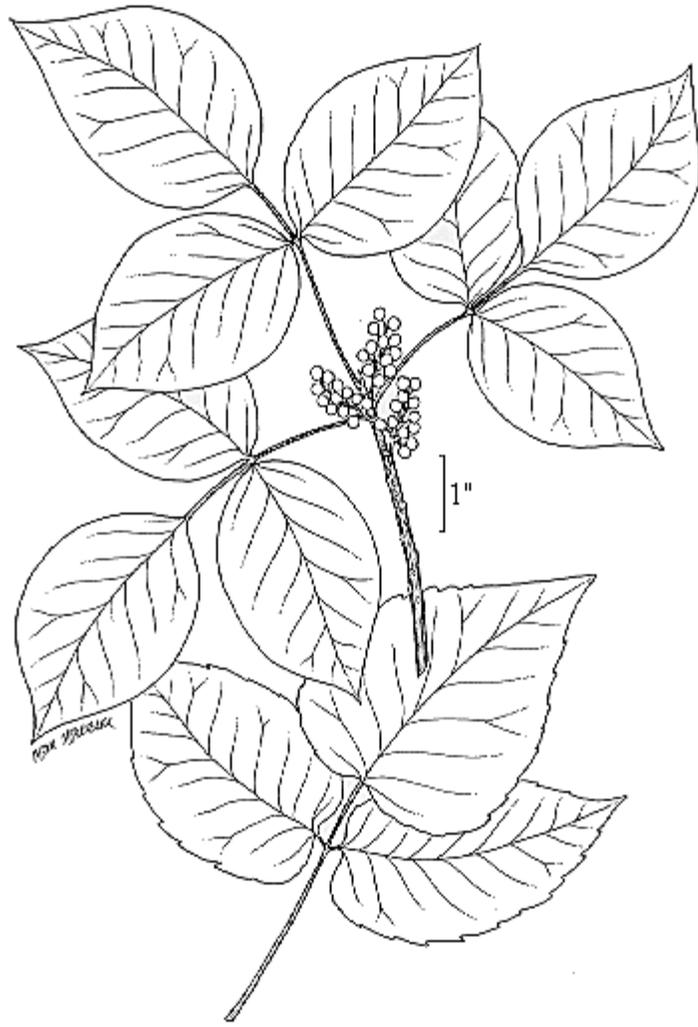
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Poison Ivy

Toxicodendron radicans (L.) Kuntze



- **Family:** Sumac (Anacardiaceae)
- **Flowering:** May-July
- **Field Marks:** This species is distinguished by its 3 leaflets and its usually smooth, non-warty, whitish drupes.
- **Habitat:** In nearly every possible habitat.
- **Habit:** Trailing or climbing woody vine with aerial roots, or erect shrub.
- **Stems:** Woody, trailing, climbing, or erect, smooth or sometimes hairy, up to 4 inches in diameter.
- **Leaves:** Alternate, divided into 3 leaflets, the leaflets extremely variable; leaflets ovate, pointed at the tip, rounded or tapering at the sometimes asymmetrical base, with or without teeth or shallow lobes, smooth or hairy, up to 8 inches long, up to 4 inches wide.
- **Flowers:** Numerous, borne in panicles from the axils of the leaves; panicles up to 3 inches long.
- **Sepals:** 5, green, united at the base.
- **Petals:** 5, green or yellow-green, free from each other, up to 1/12 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes spherical, white to gray-white, usually smooth, up to 1/4 inch in diameter.
- **Notes:** All parts of this plant may be poisonous to susceptible individuals. It is extremely variable in growth form and characteristics of the leaves.



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Summer Grape

Vitis aestivalis Michx.



- **Family:** Grape (Vitaceae)
- **Flowering:** May-June
- **Field Marks:** The distinguishing features of this grape are the cobwebby hairs on the lower surface of the leaves and the branchlets round in cross-section.
- **Habitat:** Moist or dry soils in woods, thickets, floodplains, lowland woods, along streams, thickets, on stabilized dunes.
- **Habit:** Woody vine with tendrils.
- **Stems:** Climbing, round in cross-section, usually hairy; bark at maturity becoming shredded.
- **Leaves:** Alternate, simple, usually 3-, 5-, or 7-lobed, toothed, cobwebby white-hairy on the lower surface, particularly when young, up to 8 inches long, up to 6 inches wide; leaf stalks with cobwebby hairs.
- **Flowers:** Many, small, in narrow panicles up to 6 inches long; some flowers with both stamens and pistils, others with one or the other, sometimes the two sexes on separate plants.
- **Sepals:** 5, united, green, very small.
- **Petals:** 5, free from each other, greenish yellow.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Berries black, spherical, up to 1/2 inch in diameter, containing 2-3 seeds.
- **Notes:** The berries are sweet and edible.



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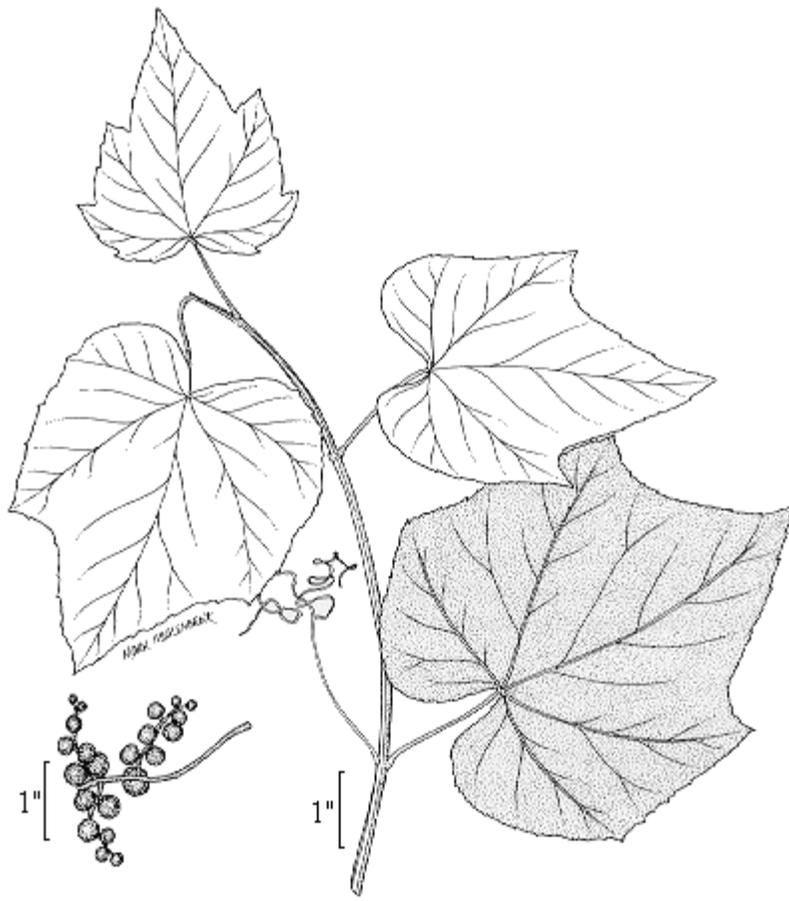
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Pigeon Grape

Vitis cinerea Engelm.



- **Family:** Grape (Vitaceae)
- **Flowering:** May-June
- **Field Marks:** This grape is very similar to *Vitis aestivalis*, which also has cobwebby hairs on the lower surface of the leaves, but differs by its angular branchlets.
- **Habitat:** Low woods, floodplains, along streams, marshes, bottomlands.
- **Habit:** Woody vine with tendrils.
- **Stems:** Climbing, angular, usually hairy; bark at maturity becoming shredded.
- **Leaves:** Alternate, simple, coarsely toothed or 3- to 7-lobed, cobwebby white-hairy on the lower surface, at least when young, up to 10 inches long, up to 8 inches wide; leaf stalks with cobwebby hairs.
- **Flowers:** Many, small, in narrow panicles up to 8 inches long; some flowers with both stamens and pistils, others with one or the other, sometimes the two sexes on separate plants.
- **Sepals:** 5, united, green, very small.
- **Petals:** 5, free from each other, greenish yellow.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Berries black, spherical, up to 1/5 inch in diameter, containing 1-2 seeds.
- **Notes:** The berries, although acidic, are edible.



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Cat Grape

Vitis palmata Vahl



- **Family:** Grape (Vitaceae)
- **Flowering:** June-July
- **Field Marks:** This grape has nearly smooth leaves and reddish branchlets.
- **Habitat:** Wet woods, sloughs, floodplains, swamps, along streams.
- **Habit:** Woody vine with tendrils.
- **Stems:** Climbing, usually slightly angular, smooth, the branchlets reddish; bark at maturity becoming flaky.
- **Leaves:** Alternate, simple, often deeply 3- or 5-lobed, smooth on both surfaces except sometimes for tufts of hairs in the leaf axils on the lower surface, up to 4 inches long, often nearly as wide; leaf stalks smooth, red.
- **Flowers:** Many, small, in panicles up to 6 inches long; some flowers with both stamens and pistils, others with one or the other, sometimes the two sexes on separate plants.
- **Sepals:** 5, united, green, very small.
- **Petals:** 5, free from each other, greenish yellow.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Berries black, shiny, spherical, up to 1/2 inch in diameter, containing 1-2 seeds.
- **Notes:** The berries are edible.



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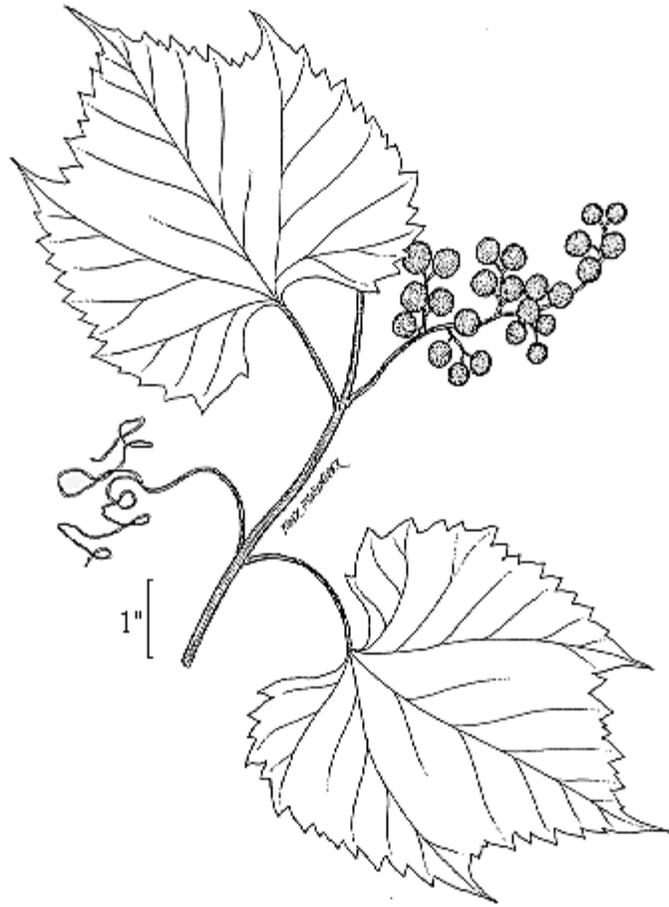
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River-bank Grape

Vitis riparia Michx.



- **Family:** Grape (Vitaceae)
- **Flowering:** May-June
- **Field Marks:** This grape lacks cobwebby hairs on the leaves, has green, gray, or brown branchlets, and usually has three sharply toothed lobes.
- **Habitat:** Along streams, wet woods, damp thickets.
- **Habit:** Woody vine with tendrils, or sometimes trailing on the ground and over low vegetation.
- **Stems:** Climbing or trailing, round in cross-section or slightly angular, smooth, the branchlets green, gray, or brown; bark at maturity becoming flaky.
- **Leaves:** Alternate, simple, usually with 2 sharply toothed lobes on either side of the terminal lobe, smooth except for hairs on the veins of the lower surface, up to 6 inches long, often nearly as wide; leaf stalks smooth, rarely red.
- **Flowers:** Many, small, in panicles up to 6 inches long; some flowers with both stamens and pistils, others with one or the other, sometimes the two sexes on separate plants.
- **Sepals:** 5, united, green, very small.
- **Petals:** 5, free from each other, greenish yellow.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Berries blue-black, glaucous, spherical, up to 1/2 inch in diameter, containing 2-4 seeds.
- **Notes:** The fruits are very acidic.



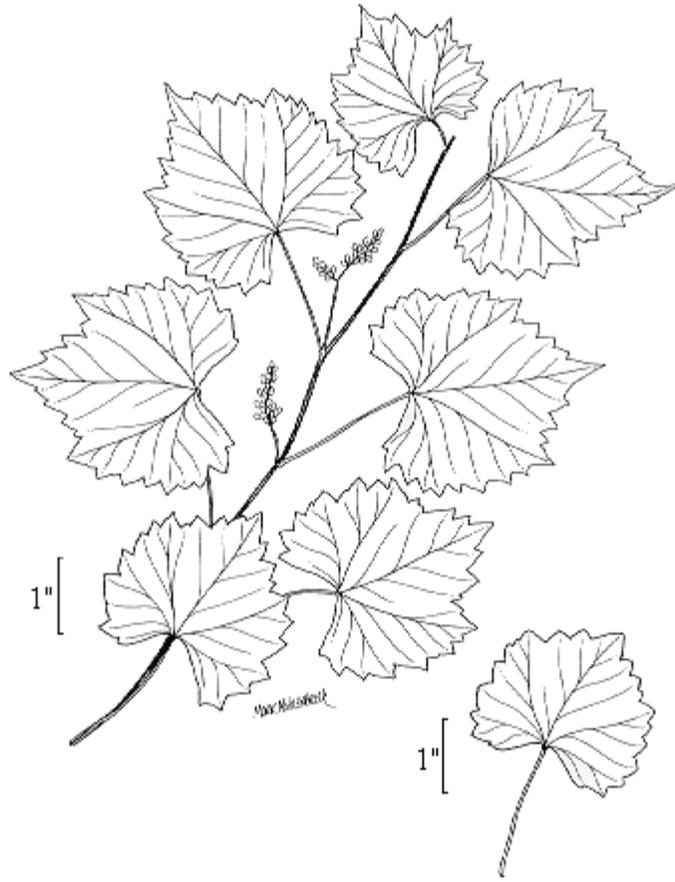
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Muscadine Grape *Vitis rotundifolia* Michx.



- **Family:** Grape (Vitaceae)
- **Flowering:** March-April
- **Field Marks:** This grape differs from all others by its unbranched tendrils and its unpartitioned pith. The leaves are smooth except sometimes for a few hairs on the lower surface.
- **Habitat:** Stream banks, bayheads, hammocks, dunes, fencerows, thickets, swamps, moist or dry soils in woods, bottomlands.
- **Habit:** High-climbing woody vine with unbranched tendrils, the bark not becoming shredded with age.
- **Stems:** Hairy and with conspicuous lenticels when young, becoming smooth when older; pith not partitioned.
- **Leaves:** Alternate, simple, orbicular to ovate in outline, pointed at the tip, heart-shaped at the base, coarsely toothed but rarely lobed, smooth on the upper surface, smooth or sparsely hairy on the lower surface, up to 4 inches long, nearly as wide.
- **Flowers:** Many, small, arranged in short panicles up to 4 inches long; male and female flowers usually separate, usually borne on separate plants.
- **Sepals:** Minute, green, not divided into lobes.
- **Petals:** 4, greenish white, free from each other, although often appearing to be attached at the tip.
- **Stamens:** 3-9.
- **Pistils:** Ovary superior.
- **Fruits:** Berries spherical, purple or black, sometimes nearly up to 1 inch in diameter, usually less than 12 in a cluster; seeds ellipsoid, brown, up to 1/3 inch long.
- **Notes:** The berries are exceptionally sweet and can be eaten in a number of ways. This grape may send out drooping aerial branches when growing in areas that are frequently flooded.



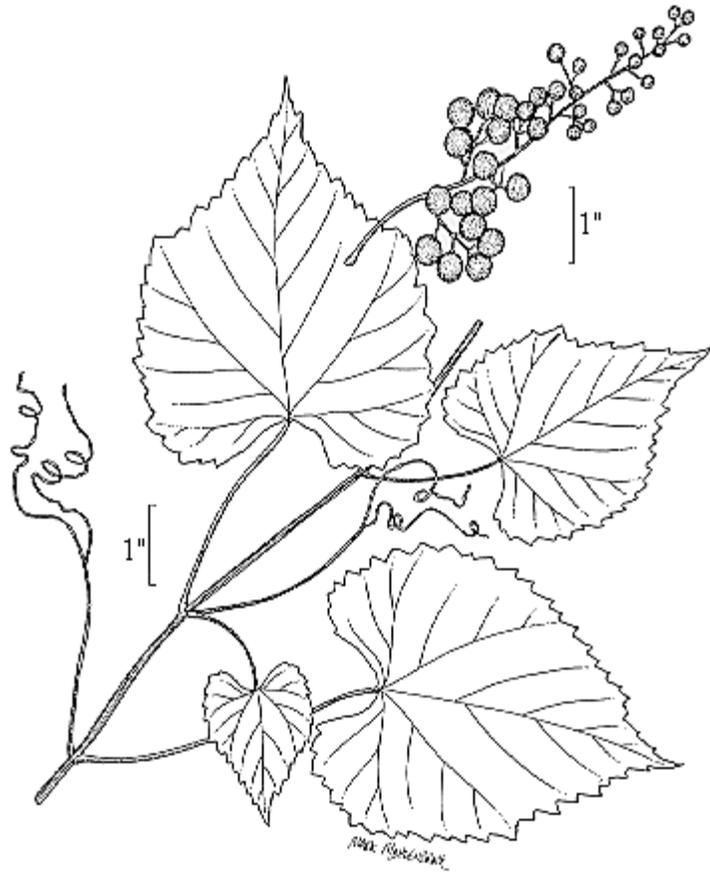
Southern Wetland Flora

Field Office Guide to Plant Species

Frost Grape *Vitis vulpina* L.



- **Family:** Grape (Vitaceae)
- **Flowering:** May-June
- **Field Marks:** This grape, which lacks cobwebby hairs on the leaves, usually has unlobed leaves.
- **Habitat:** Moist or dry soils in woods, thickets, floodplains, along streams, fencerows.
- **Habit:** Woody vine with tendrils.
- **Stems:** Climbing, round in cross-section, smooth, the branchlets green, gray, or brown; bark at maturity becoming flaky.
- **Leaves:** Alternate, simple, coarsely toothed but rarely lobed, smooth or hairy on the lower surface, but the hairs not cobwebby, up to 6 inches long, often nearly as wide; leaf stalks smooth, rarely red.
- **Flowers:** Many, small, in panicles up to 6 inches long; some flowers with both stamens and pistils, others with one or the other, sometimes the two sexes on separate plants.
- **Sepals:** 5, united, green, very small.
- **Petals:** 5, free from each other, greenish yellow.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Berries black, shiny, spherical or flattened, up to 1/2 inch in diameter, containing 1-2 seeds.
- **Notes:** The berries are sweet and edible.



Southern Wetland Flora

Field Office Guide to Plant Species

American Wisteria

Wisteria frutescens (L.) Poir.



- **Family:** Pea (Fabaceae)
- **Flowering:** April-June
- **Field Marks:** This species is distinguished by its alternate, pinnately compound leaves with 9 or more leaflets, and by its dense racemes of purple flowers.
- **Habitat:** Along streams, wet woods, wet thickets, floodplains, bayous.
- **Habit:** Woody vine, without tendrils, climbing high in trees.
- **Stems:** Woody, up to 4 inches in diameter, up to 40 feet long.
- **Leaves:** Alternate, pinnately compound with 9-15 leaflets; leaflets ovate-lanceolate to ovate, pointed at the tip, rounded at the base, without teeth, smooth on the upper surface, smooth or sparsely hairy on the lower surface, up to 2 inches long, up to 1 1/2 inches wide.
- **Flowers:** Many, crowded into racemes up to 8 inches long, each flower up to 3/4 inch long.
- **Sepals:** 5, unequal in size, finely hairy, united below.
- **Petals:** Typically pea-shaped, pale purple.
- **Stamens:** 10, one of them free from the rest.
- **Pistils:** Ovary superior.
- **Fruits:** Pods narrowly oblong, pointed at the tip, smooth, usually constricted between the seeds, up to 3 inches long; seeds brown, up to 2/5 inch long.
- **Notes:** This vine may become aggressive in the wild. It is often used as an ornamental.

