

**Jimmy Carter Plant Materials Center
Americus, Georgia**

GEORGIA NATIVE PLANT MATERIAL GUIDE

FOR

LONGLEAF PINE UNDERSTORY



© Larry Allain

Introduction

Longleaf pine forests and savannas once covered approximately 92 million acres across the Southeast United States. Today, less than 3 percent of the original habitat remains and this remaining habitat is being lost at an estimated rate of 100,000 acres per year. Throughout the historic range, the longleaf pine ecosystem is being impacted by forest conversion, fire suppression, habitat fragmentation, and invasive exotics species.

Longleaf pine habitat can range from mesic to dry, depending on topographic position and soils, and may transition downslope into a wet pine savanna. These habitats are heavily dependent on frequent fire for maintenance.

The longleaf pine ecosystems, including embedded wetlands, contain some of the most biologically diverse natural communities in North America. Mature forests of longleaf pine habitats are characterized by a sparse canopy and a diverse herb layer dominated by native warm season grasses such as wiregrass, little bluestem, big bluestem and Indian grass, along with associated forbs such as partridge pea, legumes and beggarweeds. In addition, these ecosystems support more than 300 globally imperiled species. The steady decline in abundance and health of the longleaf pine habitat is therefore linked with the increasing imperilment of these species.

Since 1936, longleaf pine acreage in Georgia has declined by over 90 percent. Most of the remaining longleaf pine habitat in our state is found on military bases and on large privately owned tracts and quail plantations in the Red Hills and Lower Dougherty Plain.

The Conservation Reserve Program (CRP) practice CP36 was created to restore the longleaf pine ecosystem on cropland that is within the historical range. The practice both restores the longleaf pine as well as the understory plant community. Provisions are also available to control exotic invasive grasses and forbs that will out-compete native plant species that are naturally occurring or planted.

This publication, which was developed by the USDA-NRCS Jimmy Carter Plant Materials Center in Americus, Georgia, contains pictures, line drawings, and descriptions of some commonly encountered native plant species that occur in longleaf pine stands as well as abandoned agricultural fields in the Southeast US especially the Georgia coastal plain. The native warm season grasses, such as big and little bluestems, Indian grass and other native grasses provide the fuel component for prescribe fire while the broadleaf forbs provide a food source for many species of wildlife. These species can occur through natural succession or planting.

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(Cover Photo: Honeybee pollinates flower of littleleaf sensitive-brier, an important viny perennial herbaceous legume in the longleaf pine understory. Photo by Larry Allain USDA-NRCS PLANTS Database.)

Beaked panicgrass

Panicum anceps

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=PAAN>



Ted Bodner @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005. *Forest plants of the southeast and their wildlife uses*. University of Georgia Press., Athens.

Beaked Panicgrass
Panicum anceps



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 1: 142.

DESCRIPTION: Beaked panicum is a warm-season, rhizomatous perennial. Rhizomes are thick and scaly. Beaked panicum ranges in height from 2 to 4 feet. Leaf blade is V-shaped. Seedheads are open panicles 6 to 14 inches long. Seed appear in fruit structure similar to a bird's beak.

Big Bluestem

Andropogon gerardii

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=ANGE>



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Jennifer Anderson @ USDA-NRCS PLANTS Database

Big Bluestem
Andropogon gerardii



USDA-NRCS PLANTS Database / Hitchcock, A.S. (rev. A. Chase). 1950. *Manual of the grasses of the United States*.
USDA Misc. Publ. No. 200. Washington, DC.

DESCRIPTION: Big Bluestem is a warm-season, rhizomatous perennial. Young plants usually have purplish stem bases (round in cross section) covered in fine hairs. Big Bluestem can range from 4 to 6.5 feet tall. Leaf blades are flat about .5 to .25 inches wide with scabrous margins. Seedheads have 2 to 3 racemes (flower stalks) on top of stems, resembling toes of a turkey's foot.

Broomsedge Bluestem

Andropogon virginicus

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=ANVI2>



James H. Miller @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005. *Forest plants of the southeast and their wildlife uses*. University of Georgia Press., Athens.

Broomsedge Bluestem
Andropogon virginicus



USDA-NRCS PLANTS Database / Hitchcock, A.S. (rev. A. Chase). 1950. *Manual of the grasses of the United States*. USDA Misc. Publ. No. 200. Washington, DC.

DESCRIPTION: Broomsedge bluestem is a warm-season, perennial bunch grass. Stem is flattened at base and smooth. Broomsedge bluestem ranges in height from 2 to 4 feet. Leaf blade is flat to partly folded. Seedheads are light and partially enclosed in large straw-colored saclike spathes.

Creeping Lespedeza

Lespedeza repens

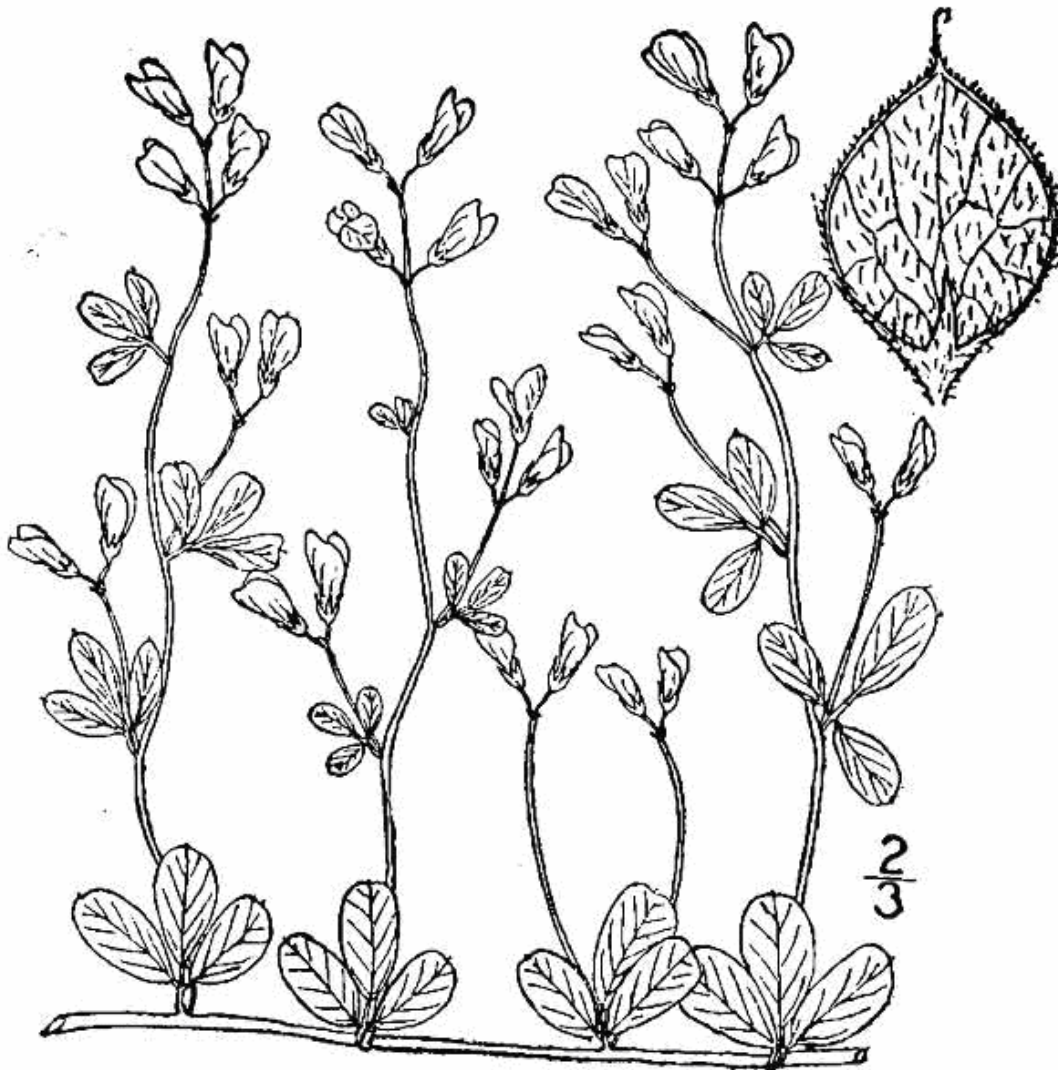
USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=LERE2>



Thomas G. Barnes @ USDA-NRCS PLANTS Database / Barnes, T.G. & S.W. Francis. 2004. *Wildflowers and ferns of Kentucky*. University Press of Kentucky.

James H. Miller @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005. *Forest plants of the southeast and their wildlife uses*. University of Georgia Press., Athens.

Creeping Lespedeza
Lespedeza repens



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 2: 403.

Description: Creeping lespedeza is a viny perennial herbaceous legume. Many hairs grow closely along the stem. Stems of creeping lespedeza can range up to 3 feet long. Leaves are in groups of three. Each leaflet is roundish to elliptic in shape. Small pale pink-purple flowers appear in spring to fall. Flattened seed pods with pointed tip less than .25 inch long contain 1 small seed.

Florida Beggarweed

Desmodium floridanum

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=DEFL3>



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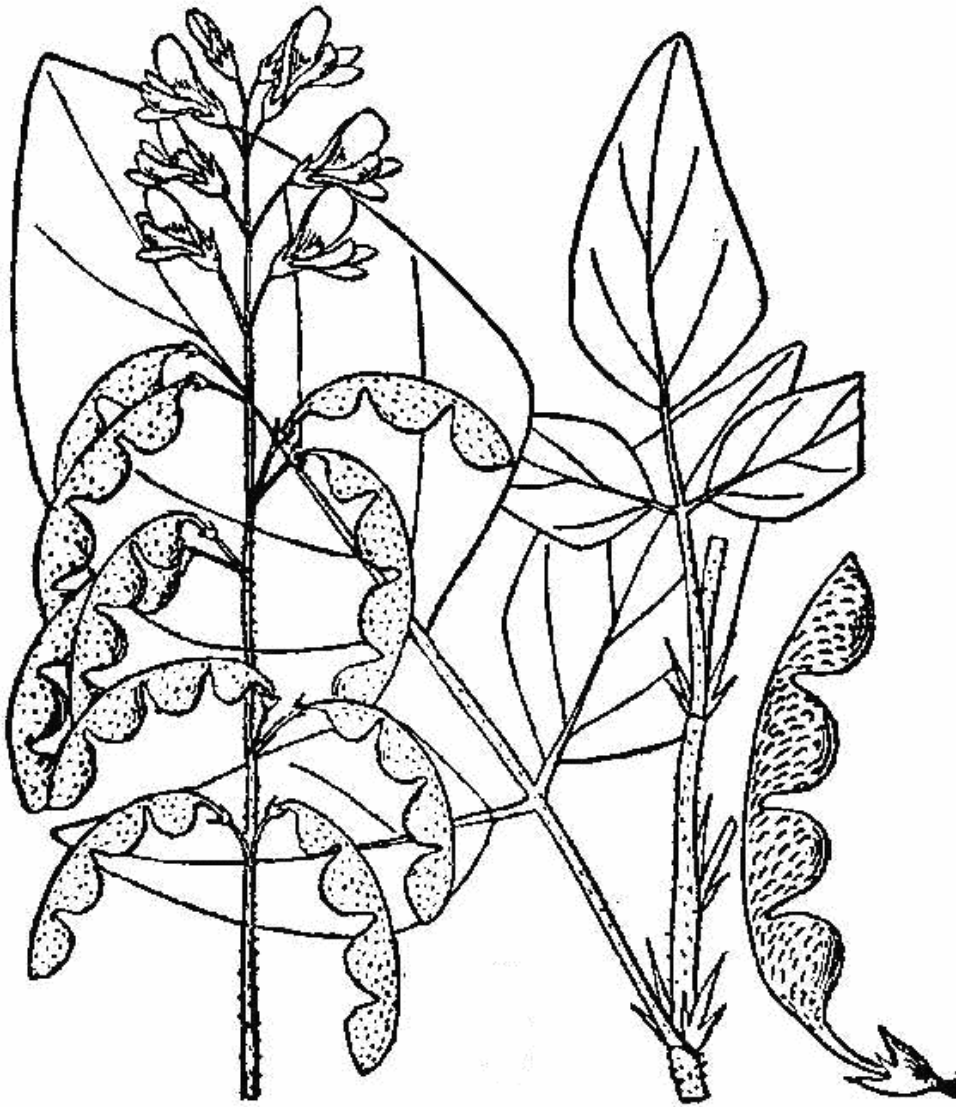


Joel L. Douglas USDA-NRCS



Joseph W Jones Ecological Research Center

Florida Beggarweed
Desmodium floridanum



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 2: 400.

Description: Florida beggarweed is an erect or trailing perennial herbaceous legume. Stems are covered with short hairs which give the plant a rough feel. Florida beggarweed can range up to 3 feet tall. Leaves are in groups of three with many hairs on the surface. Small pink-purple flowers appear in summer and fall. Flattened seed pods .5 to 1 inch long contain 2 to 4 small segmented seed.

Hairy Lespedeza

Lespedeza hirta

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=LEHIH2>



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Ted Bodner @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005. *Forest plants of the southeast and their wildlife uses*. University of Georgia Press., Athens.



Steve Hurst @ USDA-NRCS PLANTS Database

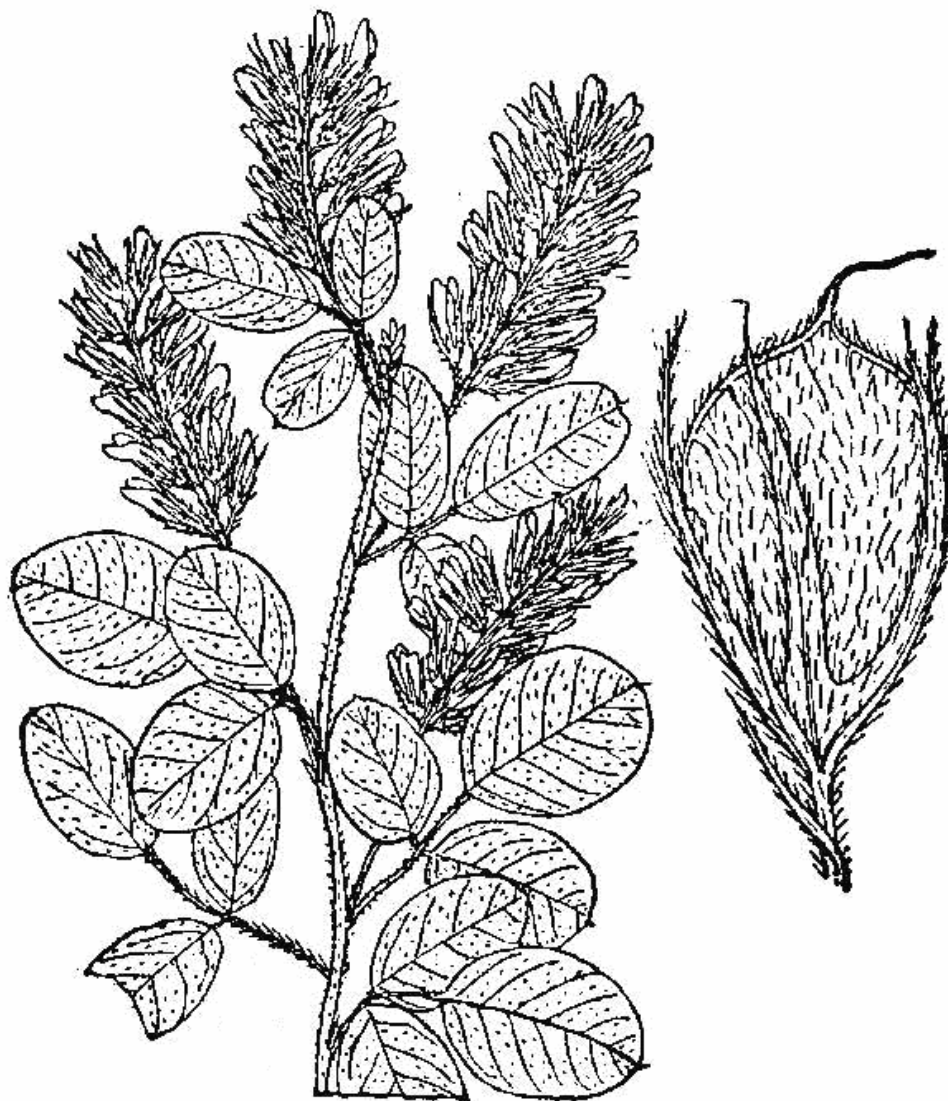


© Thomas G. Barnes

Thomas G. Barnes @ USDA-NRCS PLANTS Database

Hairy Lespedeza

Lespedeza hirta



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 2: 407.

Description: Hairy lespedeza is an erect perennial herbaceous legume. Stems are covered with fine silvery hairs. Hairy lespedeza can range up to 6 feet tall. Leaves are in groups of three. Each leaflet is roundish in shape. Small white-pale yellow flowers appear in summer and fall. Calyx (structure just outside of the white corolla) about equal or longer than fruit pods (flat with pointed tip) . Calyx and fruit pod turning reddish brown with maturity. Flattened seed pods with pointed tip about .25 inch long contain 1 small seed.

Hairy Small-leaf Ticktrefoil

Desmodium ciliare

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=DECI>



Photos courtesy of Joseph W Jones Ecological Research Center

Hairy Small-leaf Ticktrefoil
Desmodium ciliare



Line Drawing: Britton, N.L., and A. Brown. 1913. An Illustrated Flora of the Northern United States and Canada, Second Edition

Description: Hairy small-leaf ticktrefoil is an erect perennial herbaceous legume. Stems are covered with short hooked hairs that give the plant a rough feel. Hairy small-leaf ticktrefoil can range up to 5 feet tall. Leaves are in groups of three with many hooked hairs on the surface. Leaflets are round to elliptic in shape. Small lavender-purple flowers appear in summer and fall. Flattened seed pods .25 to .75 inch long contain 1 to 3 small segmented seed.

Indiangrass

Sorghastrum nutans

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=SONU2>



Ted Bodner @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005. *Forest plants of the southeast and their wildlife uses*. University of Georgia Press., Athens.



Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA SCS. 1991. *Southern wetland flora: Field office guide to plant species*. South National Technical Center, Fort Worth, TX.

Indiangrass
Sorghastrum nutans



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 1: 120.

DESCRIPTION: Indiangrass is a warm-season, rhizomatous perennial. Young plants can be identified by a notch at the tip of the ligule (area between leaf blade and leaf sheath). Indiangrass ranges in height from 3 to 7 feet. Leaf blade is flat and usually 10 to 24 inches long. Seedhead is a panicle 6 to 12 inches long, dense and golden yellow in color.

Little Bluestem

Schizachyrium scoparium

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=SCSC>



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James H. Miller @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005. *Forest plants of the southeast and their wildlife uses*. University of Georgia Press., Athens.

Little Bluestem
Schizachyrium scoparium



USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant species*. USDA Natural Resources Conservation Service.

DESCRIPTION: Little bluestem is a warm-season, perennial bunch grass. In Southern Georgia little bluestem has long, creeping, scaly rhizomes. Young plants have a flattened stem near the surface of the ground. Little bluestem usually ranges from 2 to 4.5 feet in height. Leaf blades are flat 6 to 10 inches long. Seedheads are very light and arranged in a zigzag pattern.

Littleleaf Sensitive-Briar

Mimosa microphylla

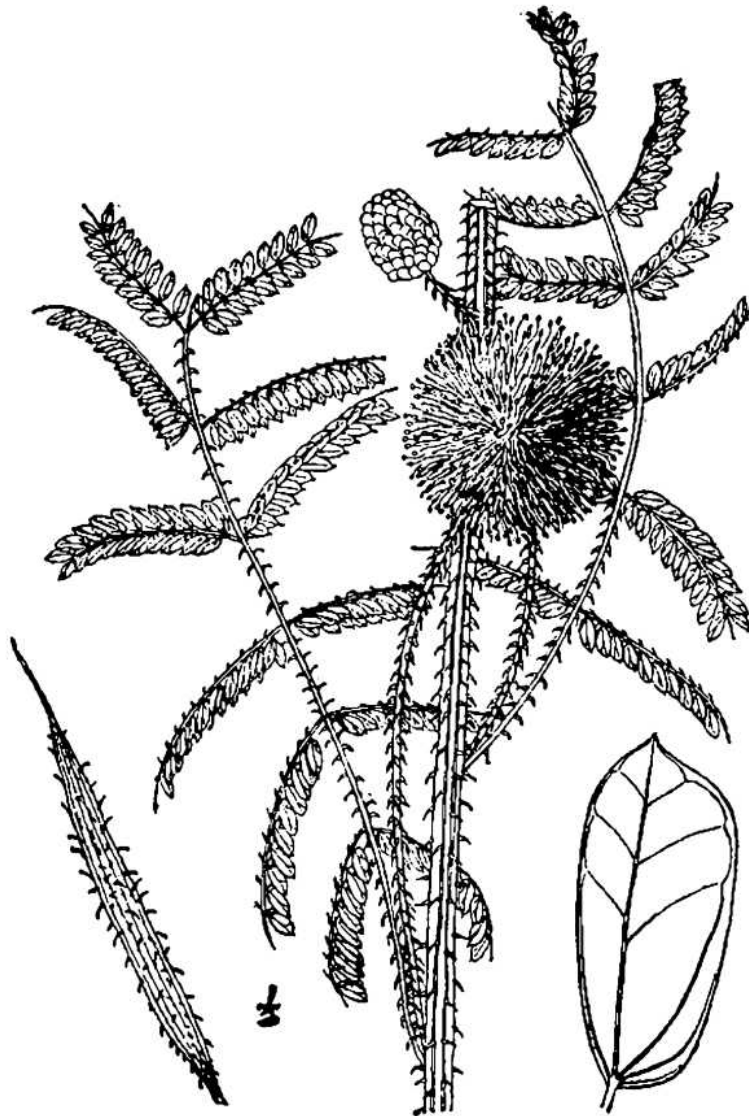
USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=MIMI22>



Photos: Don Kurz



Littleleaf Sensitive-Briar
Mimosa microphylla



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 2: 333.

Description: Littleleaf sensitive-briar is a viny perennial herbaceous legume. Many thorns grow closely along the stem. Stems of sensitive brier can range up to 10 feet long. Leaves are divided into two segments. Each segment can consist of up to 8 pairs. This makes the leaves appear fringed. Large pink flowers up to .75 inch in diameter appear in summer to fall. Linear seed pods 1 to 4 inches long are covered with prickles and contain many small seed.

Narrowleaf Lespedeza

Lespedeza angustifolia

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=LEAN>



<http://tenn.bio.utk.edu/vascular/vascular.html>

Photographer: DNH



<http://tenn.bio.utk.edu/vascular/vascular.html>

Photographer: Otto Hirsch, TNPS

Narrowleaf Lespedeza
Lespedeza angustifolia



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 2: 407.

Description: Narrowleaf lespedeza is an erect perennial herbaceous legume. Stems are covered with fine silvery hairs. Narrowleaf lespedeza can range up to 5 feet tall. Leaves are in groups of three. Each leaflet is narrowly elliptic in shape. Small white to cream flowers with purple centers appear in summer and fall. Flattened seed pods with pointed tip less than .25 inch long contain 1 small seed.

Partridge Pea

Chamaecrista fasciculata

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=CHFA2>



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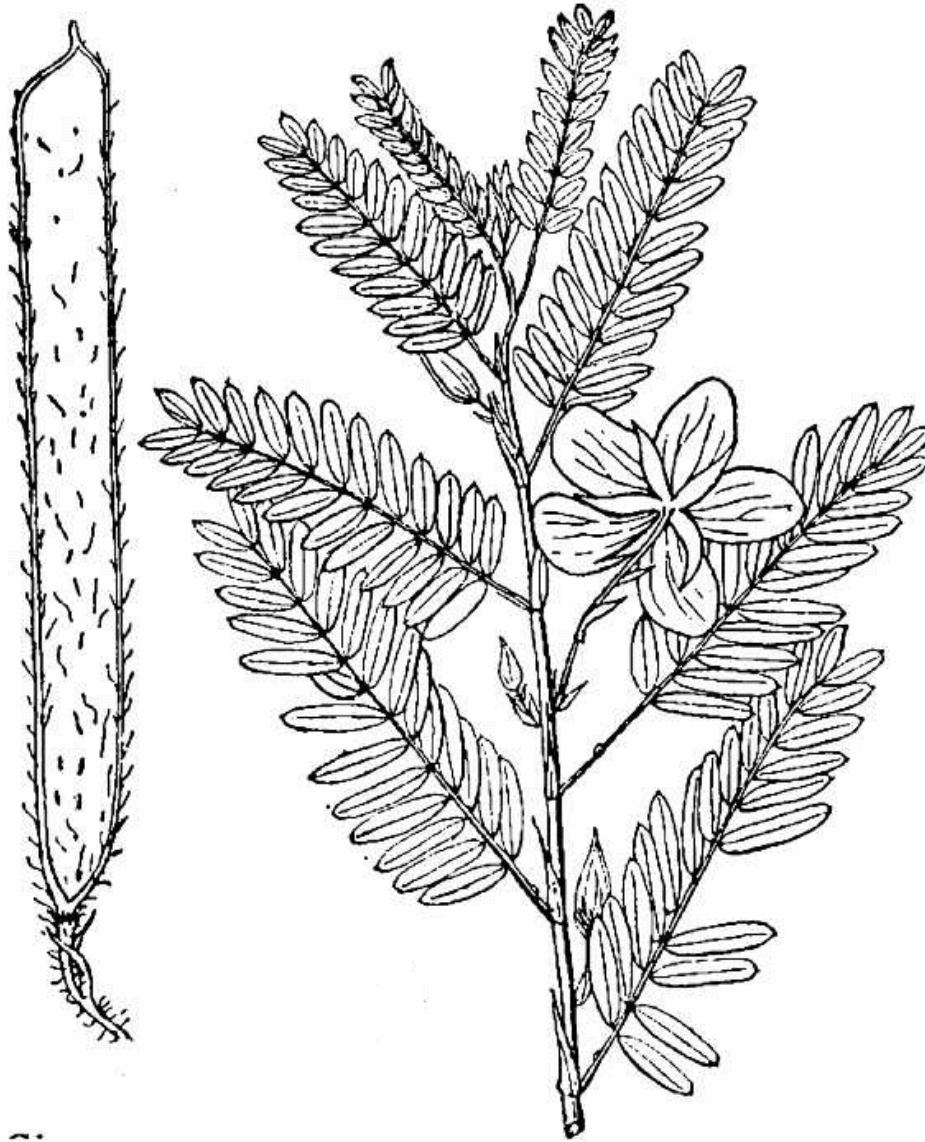
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Partridge Pea
Chamaecrista fasciculata



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 2: 337.

DESCRIPTION: Partridge pea is an annual herbaceous legume. Stem is single branched per plant. Partridge pea can range from 1 to 3 feet tall. Leaves are compound, consisting of many leaflets per leaf. Bright yellow flowers appear in fall. A flattish brown seed pod 1 to 3 inches long contains many black seed.

Ragweed

Ambrosia artemisiifolia

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=AMAR2>



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Ted Bodner @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005. *Forest plants of the southeast and their wildlife uses*. University of Georgia Press., Athens.



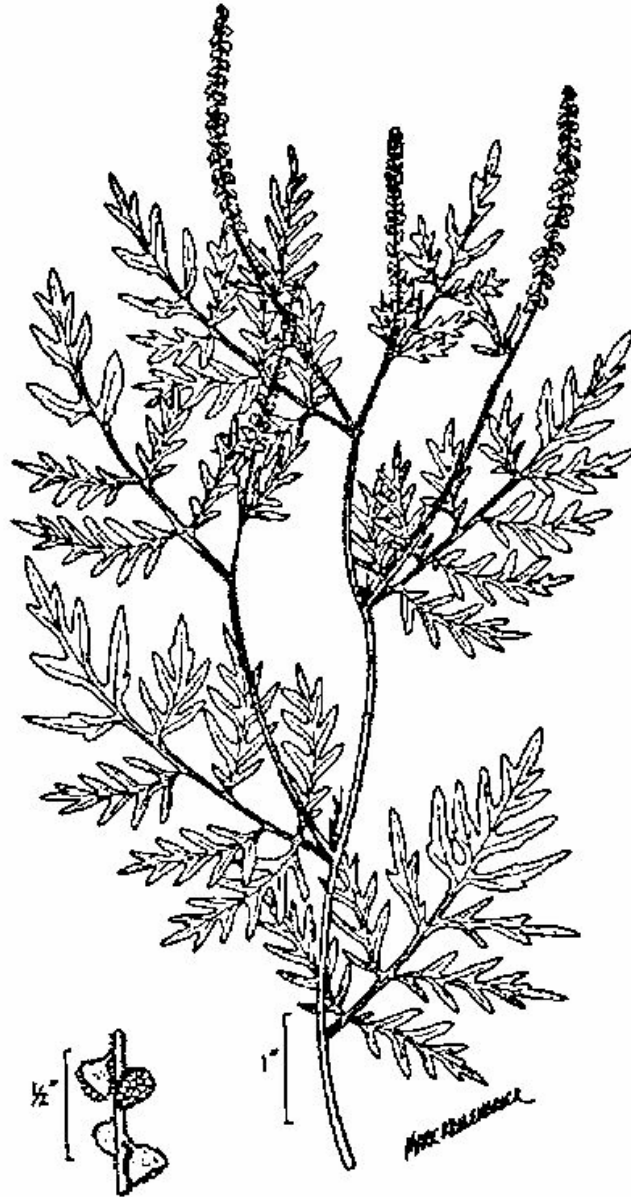
Ted Bodner @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005. *Forest plants of the southeast and their wildlife uses*. University of Georgia Press., Athens.



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Ragweed
Ambrosia artemisiifolia



USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant species.*
USDA Natural Resources Conservation Service.

DESCRIPTION: Ragweed is a weedy annual that can persist longer in our area. It has many branches from a dominant taproot. Leaves are compound and dissected into smaller sections. Leaf pattern is evident in seedling stage. Ragweed can range from 1 to 6 feet tall.

Slender Lespedeza

Lespedeza virginica

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=LEVI7>



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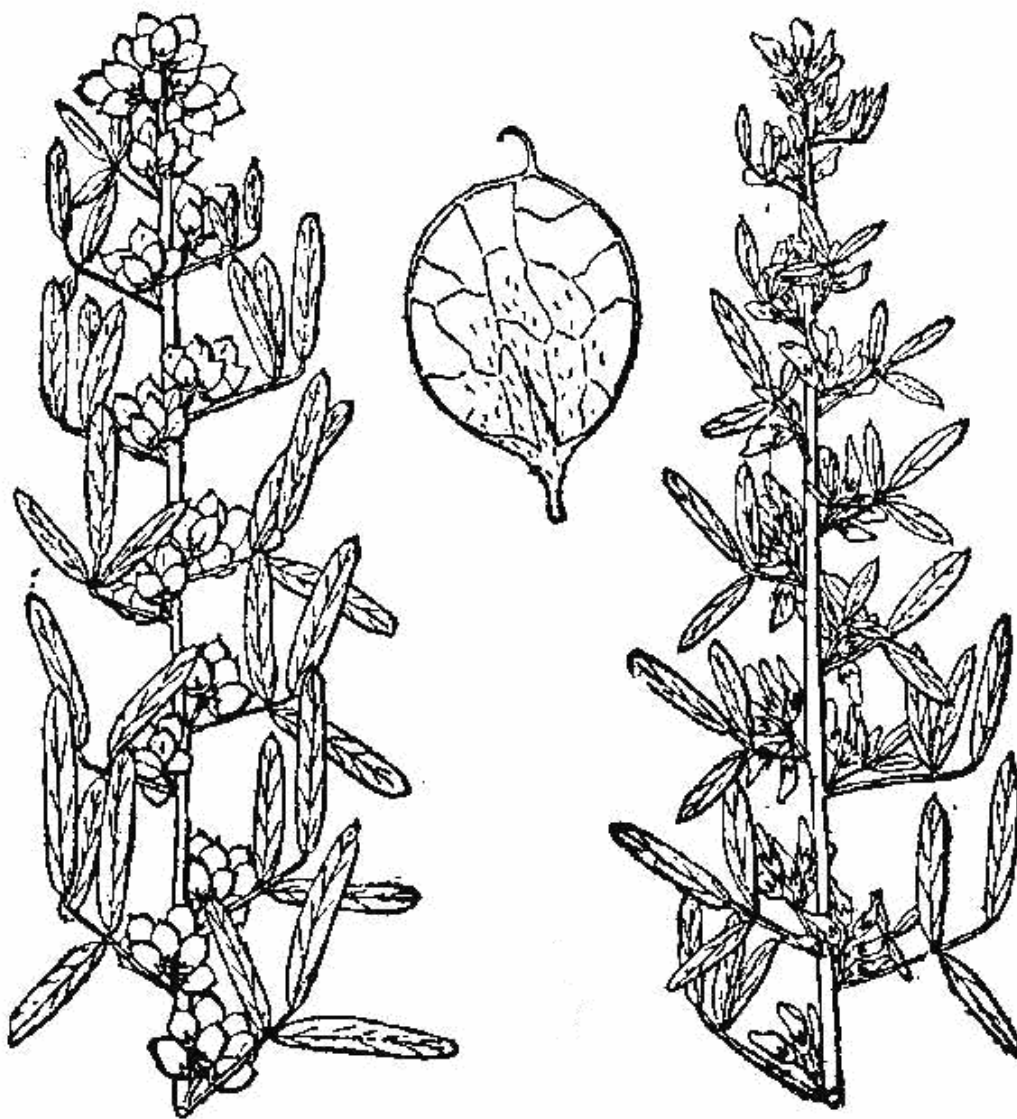
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James H. Miller @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005.
Forest plants of the southeast and their wildlife uses. University of Georgia Press., Athens

Slender Lespedeza

Lespedeza virginica



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 2: 406.

Description: Slender lespedeza is an erect perennial herbaceous legume. Stems are hairy but not giving the plant a rough feel. Slender lespedeza can range up to 2.5 feet tall. Leaves are in groups of three and are quite abundant on the stem. Each leaflet is oblong to linear in shape. Small pink-purple flowers appear in summer and fall. Flattened seed pods with pointed tip less than .25 inch long contain 1 small seed.

Splitbeard Bluestem

Andropogon ternarius

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=ANTE2>



James H. Miller @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005. *Forest plants of the southeast and their wildlife uses*. University of Georgia Press., Athens.



Larry Allain @ USDA-NRCS PLANTS Database



Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA NRCS. 1995. *Northeast wetland flora: Field office guide to plant species*. Northeast National Technical Center, Chester, PA.

Splitbeard Bluestem
Andropogon ternarius



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 1: 117.

DESCRIPTION: Splitbeard bluestem is a warm-season, perennial bunch grass. Stem is slender and erect usually with reddish- purple coloration. Splitbeard bluestem ranges in height from 2 to 4 feet. Leaf blades are usually hairy and curl at maturity. Seedheads develop in pairs each about 2 inches long. Seedheads are covered in long silver hairs.

Spurred Butterfly Pea

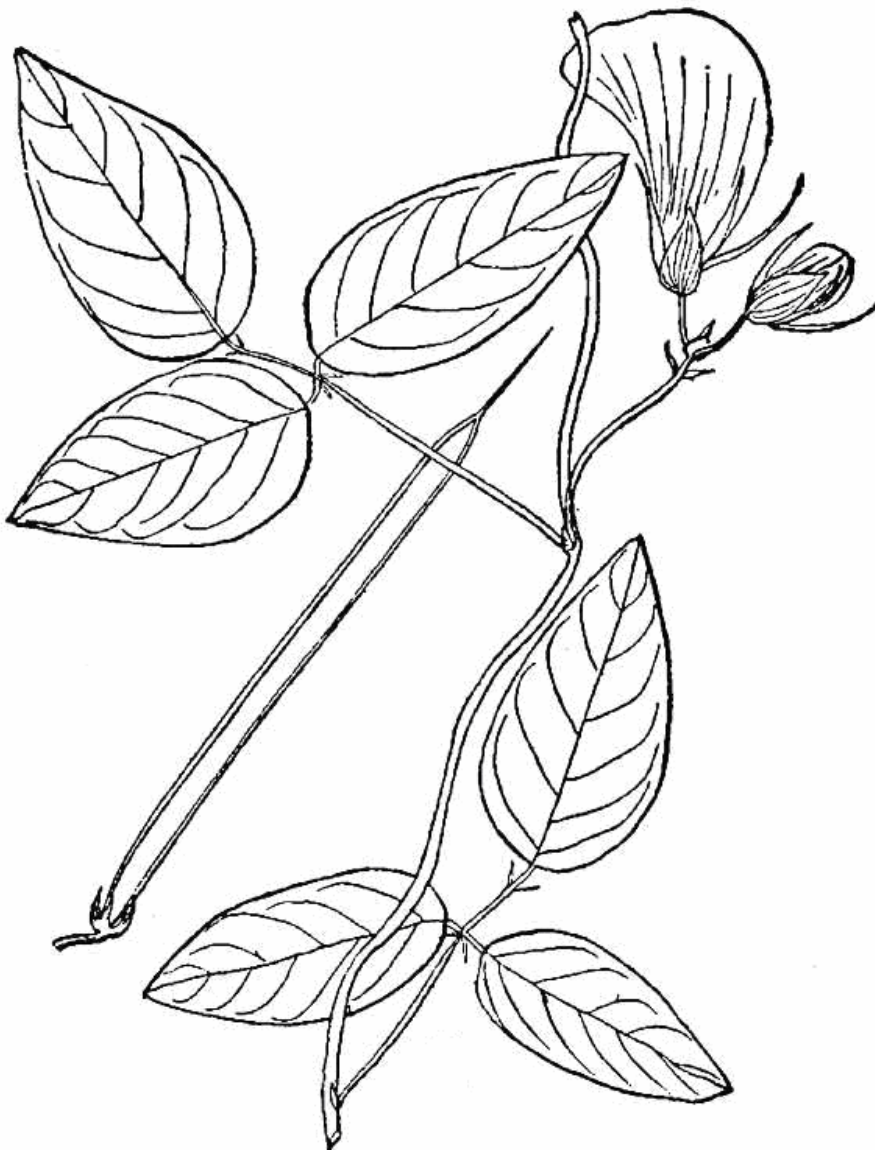
Centrosema virginianum

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=CEVI2>



Photos courtesy of Joseph W Jones Ecological Research Center

Spurred Butterfly Pea
Centrosema virginianum



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 2: 417.

Description: Butterfly pea is a viny perennial herbaceous legume. Stems of butterfly pea can range up to 5 feet long. Leaves are in groups of three. Leaflets are usually lance shaped. Large blue-violet flowers up to 1 inch in diameter appear in summer to fall. Flat linear seed pods up to 5 inches long contain 10-20 seed.

Switchgrass

Panicum virgatum

USDA PLANTS Database Profile: <http://plants.usda.gov/java/profile?symbol=PAVI2>



Ted Bodner @ USDA-NRCS PLANTS Database / James H. Miller and Karl V. Miller. 2005.
Forest plants of the southeast and their wildlife uses. University of Georgia Press.,

Switchgrass
Panicum virgatum



USDA-NRCS PLANTS Database / Hitchcock, A.S. (rev. A. Chase). 1950. *Manual of the grasses of the United States*. USDA Misc. Publ. No. 200. Washington, DC.

DESCRIPTION: Switchgrass is a warm-season, rhizomatous perennial. Young plants usually have a round (cross section) smooth (except for possibly a few hairs) stem. Switchgrass can range from 3 to 6 feet tall. Leaf blades are flat about .5 inches wide and up to 30 inches long at maturity. The ligule (area between leaf blade and leaf sheath) usually has a dense ring of short hairs. Leaf sheath is rounded and smooth. Seedheads are open panicles about 10 to 14 inches long.