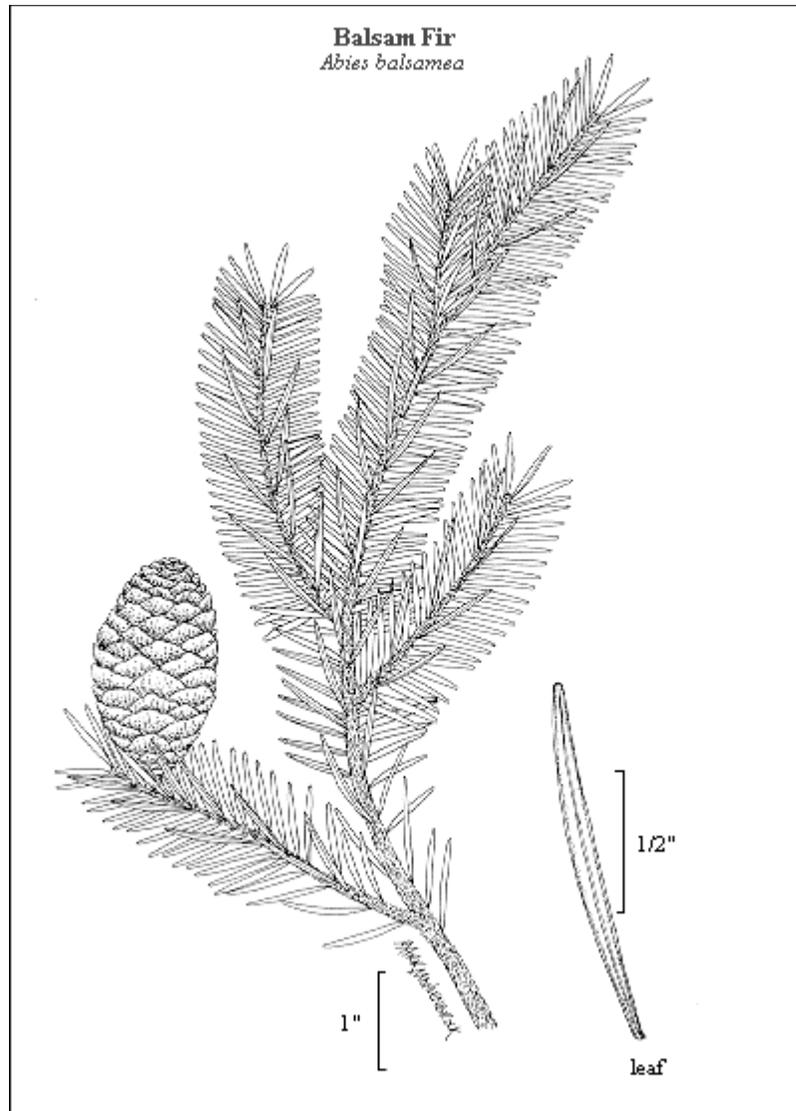


Northeast Wetland Flora

Field Office Guide to Plant Species



USDA - Natural Resource Conservation Service
Northeast National Technical Center
Chester, Pennsylvania

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Northeast Wetland Flora

Introduction

This Field Guide was prepared by Biotic Consultants, Incorporated, of Carbondale, Illinois, under Contract #53-2D81-3-1. All descriptions have been written by Robert H. Mohlenbrock. Mark Mohlenbrock prepared all of the illustrations. All maps were prepared by Trent Mohlenbrock. Beverly Mohlenbrock typed all the drafts of the manuscript and assisted with the photography and field work. Typesetting was provided by Wendy Mohlenbrock Preece. Mark Mohlenbrock and Aart-werk Graphic Design, Incorporated, of Tempe, Arizona, prepared the camera-ready copy for the entire guide. Robert H. Mohlenbrock took the photos except the following: Lee Casebere (*Drosera rotundifolia*, *Geum rivale*, *Melanthium virginicum*, *Zigadenus glaucus*), Kenneth Dritz (*Alnus rugosa*, *Salix lucida*), Rich Dunbar (*Hypericum pyramidatum*), George Folkerts (*Zigadenus glaberrimus*), Lynden Gerdes (*Populus balsamifera*), Mike Homoya (flower of *Cypripedium reginae*, *Goodyera pubescens*), Norman C. Melvin (leaf of *Quercus falcata*), W. Carl Taylor (*Isoetes engelmannii*, *Lycopodium annotinum*), Tom Ulrich (*Cypripedium candidum*), and Edward G. Voss (*Eriophorum spissum*, *E. viridi-carinatum* [habit view], *Potamogeton amplifolius*, *Potamogeton epihydrus*, *Potamogeton gramineus*).

Northeast Wetland Flora

Purpose of the Guide

The swampbuster provision of the Food Security Act of 1985 requires the Natural Resources 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 identify the plants included in this guide.

Three hundred species of vascular plants were chosen for inclusion in this guide by the staff biologist of the Natural Resource Conservation Service Northeast National Technical Center in Chester, Pennsylvania, after consultation with each Natural Resources Conservation Service state biologist in the northeast region.

Norman C. Melvin, State Plant Ecologist, Maryland Natural Resources Conservation Service, and Robert W. Franzen, Wildlife Biologist, Northeast Technical Center, Natural Resources Conservation Service, conducted technical review in all phases of development and publication of this document.

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Organization and Use of this 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: Region 1*, prepared by the United States Fish and Wildlife Service in 1988 (Biological report 88 [26.1]). The scientific name consists of two Latin names. The first is called the genus name, the second is the species name. 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 scientific name. These abbreviated names are referred to as the authority. This is followed by the plant family name and 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 page has a black-and-white illustration of the entire plant and, as needed, a close-up illustration of one or more 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), and fruits. Useful or other features of the plant are included under Notes. Since the most frequently used recent general flora for the northeastern states is *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*, Second Edition, by Gleason and Cronquist (The New York Botanical Garden, 1991), any plant names used in that book that differ from the names used in this manual are given under Notes.

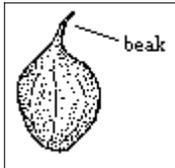
To use the guide, one identifies the plant to group, either with the key or from experience and prior knowledge, and then refers to the plant description. If the plant is not encountered in the descriptions, it is not covered by this guide, and the investigator must consult other references.

Northeast Wetland Flora

Glossary

Achene

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

**Annual**

Living only for one year.

Anther

The pollen-producing part of a stamen.

Arcuate

Curved.

Auricle

An ear-like lobe.

Auriculate

Bearing ear-shaped lobes.

Awn

A bristle-like appendage.

Axil (Axillary)

Referring to the angle formed between any two organs.

Axis

The angle where two structures join; for example, where a leaf joins the stem.

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 leaflike.

Bracteole

A secondary bract.

Bractlet

A small bract.

Bristle

A stiff hair.

Bundle Trace

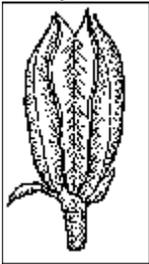
A small scar representing where a vein has broken off in a leaf scar.

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.

Claw

An abrupt, narrow base, such as on a petal.

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.

Dichotomous

Forking regularly in pairs.

Disk (Disc)

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

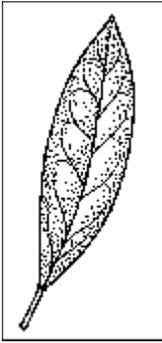
A small drupe.

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**

Peeling off in strips or plats (for example, bark of some trees).

Exserted

Projecting.

Fascicle

A bundle or cluster.

Fibrous

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

Filament

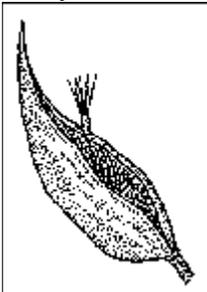
The stalk of a stamen.

Fissured

Grooved.

Follicle

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

**Furrowed**

Grooved.

Fusiform

Spindle-shaped; that is, swollen at the middle and narrowing gradually toward each end.

Gemma (pl., gemmae)

A bud by which some plants propagate.

Glabrous

Without hairs or scales.

Glandular

Bearing swollen structures, or glands, that usually contain a liquid.

Glaucous

Having a white or bluish waxy coating.

Globose

Round.

Glume

A sterile scale found in grasses

Hastate

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

Head

A group of flowers tightly crowded together in a more or less rounded structure.

Hemispherical

Half-round.

Indehiscent

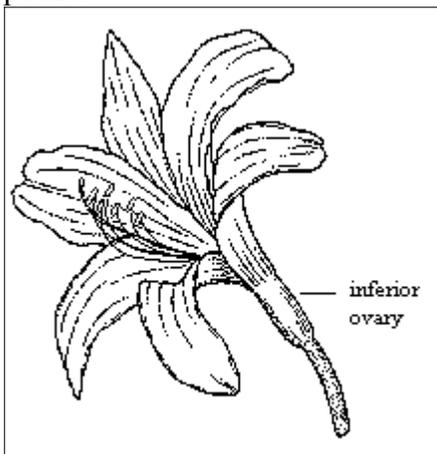
Not splitting open at maturity.

Indusium

The covering over a group of sporangia in ferns.

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.

Internode

The area between two nodes.

Involute

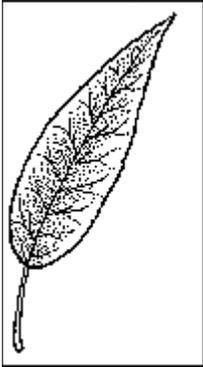
Rolled up lengthwise; inrolled.

Keel

Ridge.

Lanceolate

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

**Lanceoloid**

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

Latex

Milky sap.

Lemma

A fertile scale found in grasses.

Lenticel

A small opening on a stem.

Lenticular

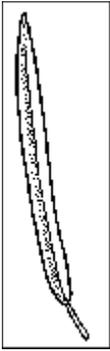
Lens-shaped.

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.

Nerve

Vein.

Node

That place on a stem where leaves and buds arise.

Nutlet

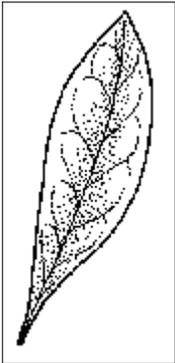
A small nut.

Obconic

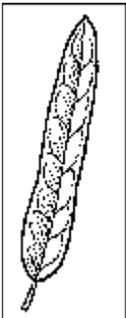
Reverse cone-shaped.

Ob lanceolate

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

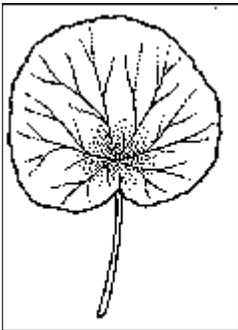
Broadly rounded at the apex, becoming narrowed below.

**Obovoid**

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

Orbicular

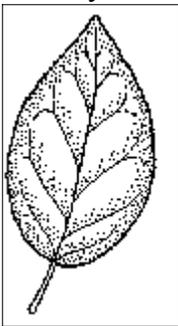
Round.

**Ovary**

That part of the pistil that contains the ovules.

Ovate

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

**Ovoid**

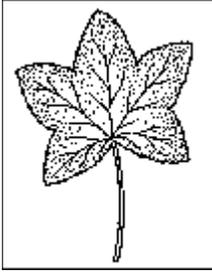
Referring to a solid object that is broadly rounded at the base, becoming narrowed above.

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.

Pedicel

The stalk of a flower.

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, at maturity, the achene in *Carex*.

Petiole

Leaf stalk.

Pinna (pl., **pinnae**)

The primary division of pinnate frond or leaf.

Pinnate

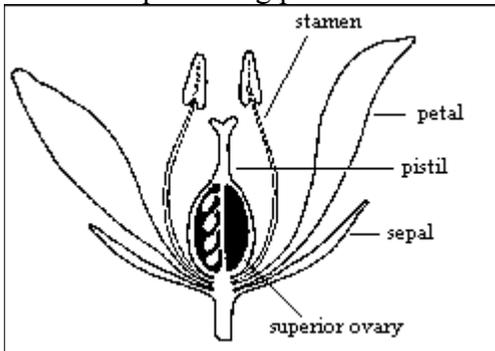
Divided once along an elongated axis into distinct segments.

**Pinnatifid**

Divided nearly to the axis.

Pistil

The ovule-producing part of the flower.

**Pith**

The central, often soft, part of a stem.

Plumose

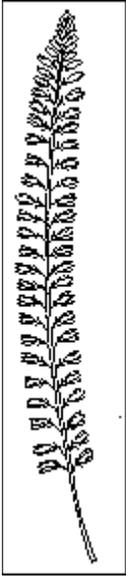
Feathery.

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 or the central stalk of a compound leaf.

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.

Retorse

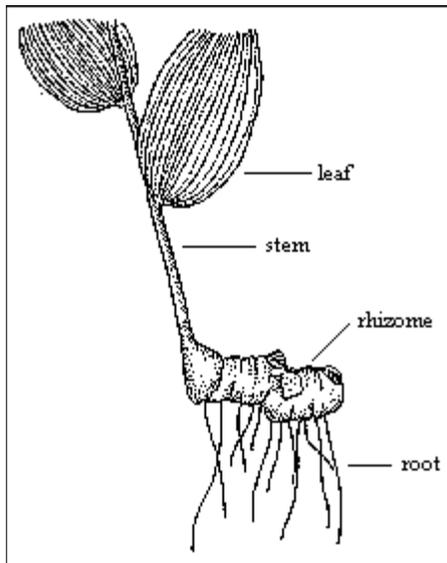
Pointing downward.

Revolute

Turned under along the edges.

Rhizome

An underground, horizontal stem.

**Ribbed**

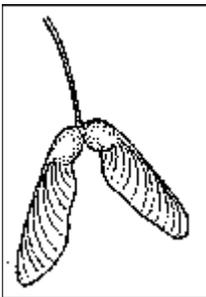
Bearing ridges.

Rosette

A cluster of leaves around the base of the plant.

Samara

An indehiscent winged fruit.

**Scale**

A tiny, usually dry, leaflike structure (for example, the structure that subtends each flower in a grass, sedge, or rush).

Septate

With cross-walls.

Sessile

Without a stalk.

Setose

Bearing bristles.

Sheath

The base of a leaf that encircles the stem.

Smooth

Not rough to the touch.

Sorus (pl., **sori**)

A structure found in ferns that contains the spore-producing sporangia.

Spadix

A fleshy axis in which flowers are embedded.

Spathe

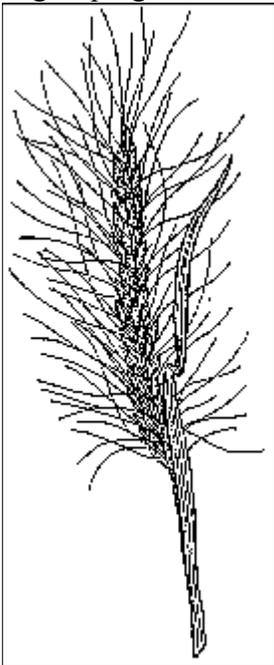
A large bract subtending or sometimes enclosing a cluster of flowers.

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.

Spinule

A small spine.

Spinulose

Bearing small spines.

Sporangia

Structures that bear spores.

Spore

A microscopic reproductive body in ferns and fern allies.

Sporophyll

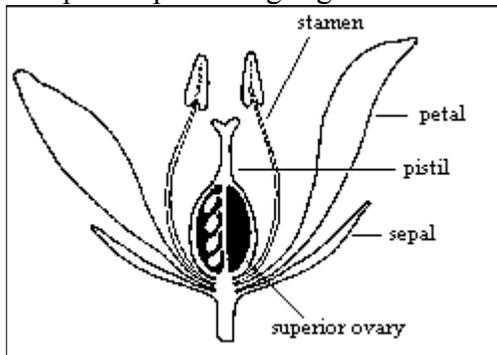
A leaf that bears spores.

Spur

A slender, backward-pointing part of some flowers, or short, stout, spine-like branches.

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.

Striate

With parallel lines.

Style

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

Subglobose

Nearly round, but slightly flattened.

Subtend

To extend under; found at the base of.

Subulate

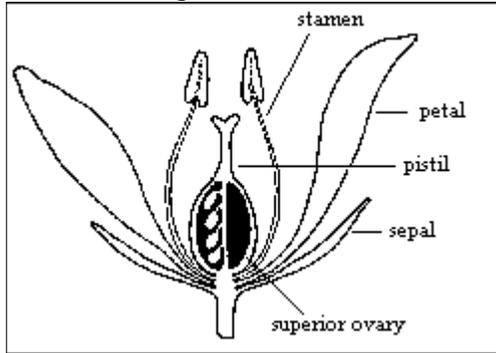
Narrowed to a short point.

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.

Tendrill

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

Terete

Round in cross-section.

Ternate

Divided into 3's.

Thallus

The body of the plant in the family Lemnaceae.

Truncate

Cut straight across.

Tuber

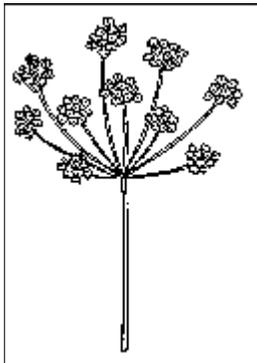
A thickened, underground stem that stores food.

Tubercle

A wart-like structure.

Umbel

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



Undulating

Wavy.

Valvate

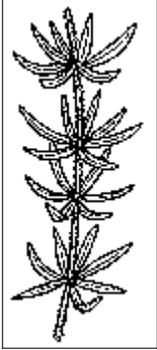
Placed edge to edge.

Valve

The section of a capsule; the wing of the fruit in *Rumex*.

Whorl

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



Northeast Wetland Flora

Key to Groups of Wetland Plants in Northeast

1.	Ferns or related plants, reproducing by spores, not seeds	Group 1
1.	Plants reproducing by flowers and seeds	Go To 2
2.	Plants woody, either trees or shrubs	Group 5
2.	Plants herbaceous, stems not woody	Go To 3
3.	Monocots; leaves usually with parallel veins; petals and sepals, if present, usually in 3's or multiples of 3's	Go To 4
3.	Dicots; leaves usually with net veins; petals and sepals usually in 2's, 4's or 5's or multiples of 4's or 5's	Go To 6
4.	Flowers without sepals and petals; each flower subtended by one or more scales and borne in spikelets	Go To 5
4.	Flowers with sepals and petals (green or brown or black in <i>Juncus</i>), the flowers not arranged in spikelets	Group 4
5.	At least one or more scales at the base of each spikelet not subtending a flower; stems never triangular	Group 2
5.	All the scales of a spikelet subtending a flower; stems usually triangular	Group 3
6.	At least some of the leaves compound; that is, divided into distinct leaflets	Group 6
6.	None of the leaves compound, although they may be deeply divided	Go To 7
7.	Most or all the leaves opposite or whorled	Group 7
7.	Most or all the leaves alternate and/or basal	Group 8

Northeast Wetland Flora

List of Northeastern Wetland Flora in This Project

The 300 Northeastern 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: Region 1* (1998).

Groups

[Group 1](#) -- Ferns and Fern-related Plants

[Group 2](#) -- Grasses

[Group 3](#) -- Sedges

[Group 4](#) -- Other Monocots

[Group 5](#) -- Trees and Shrubs

[Group 6](#) -- Dicot Herbs with Some of the Leaves Compound

[Group 7](#) -- Dicot Herbs with Most or All of the Leaves Simple and Opposite or Whorled

[Group 8](#) -- Dicot Herbs with All the Leaves Simple and Basal and/or Alternate

Group 1. Ferns and Fern-related Plants

[Crested Shield Fern](#) (*Dryopteris cristata* (L.) Gray)

[Water Horsetail](#) (*Equisetum fluviatile* L.)

[Woodland Horsetail](#) (*Equisetum sylvaticum* L.)

[Appalachian Quillwort](#) (*Isoetes engelmannii* A. Braun)

[Stiff Clubmoss](#) (*Lycopodium annotinum* L.)

[Shining Clubmoss](#) (*Lycopodium lucidulum* Michx.)

[Ostrich Fern](#) (*Matteuccia struthiopteris* (L.) Todaro)

[Interrupted Fern](#) (*Osmunda claytoniana* L.)

[Christmas Fern](#) (*Polystichum acrostichoides* (Michx.) Schott)

[Bracken Fern](#) (*Pteridium aquilinum* (L.) Kuhn)

[New York Fern](#) (*Thelypteris noveboracensis* (L.) Nieuwl.)

Group 2. Grasses

[Northern Bentgrass](#) (*Agrostis borealis* Hartm.)

[Brown Bentgrass](#) (*Agrostis canina* L.)

[Winter Bentgrass](#) (*Agrostis hyemalis* (Walter) BSP.)

[Perennial Bentgrass](#) (*Agrostis perennans* (Walter) Tuckerman)

[Rough Bentgrass](#) (*Agrostis scabra* Willd.)

[Spreading Bentgrass](#) (*Agrostis stolonifera* L.)
[Meadow Foxtail](#) (*Alopecurus geniculatus* L.)
[Mouse Foxtail](#) (*Alopecurus myosuroides* Huds.)
[Meadow Foxtail](#) (*Alopecurus pratensis* L.)
[Big Bluestem](#) (*Andropogon gerardii* Vitman)
[Sliver Bluestem](#) (*Andropogon ternarius* Michx.)
[Fringed Brome](#) (*Bromus ciliatus* L.)
[Dudley Brome](#) (*Bromus dudleyi* Fern.)
[Japanese Brome](#) (*Broomus japonicus* Thunb.)
[Earleaf Brome](#) (*Bromus latiglumis* (Shear) Hitchc.)
[Canada Brome](#) (*Bromus purgans* L.)
[Nuttall's Small-reedgrass](#) (*Calamagrostis cinnoides* (Muhl.) Barton)
[Orchard Grass](#) (*Dactylis glomerata* L.)
[Needle-leaf Witchgrass](#) (*Dichantherium aciculare* (Desv. ex Poir.) Gould & C.A. Clark)
[Variable Witchgrass](#) (*Dichantherium commutatum* (J.A. Schultes) Gould)
[Broad-leaf Witchgrass](#) (*Dichantherium latifolium* (L.) Harvill)
[Egg-leaf Witchgrass](#) (*Dichantherium ovale* (Elliott) Gould & C.A. Clark)
[Woolly Panic Grass](#) (*Dichantherium scabriusculum* (Elliott) Gould & C.A. Clark)
[Inland Saltgrass](#) (*Distichlis spicata* (L.) Greene)
[India Goosegrass](#) (*Eleusine indica* (L.) Gaertn.)
[Riverbank Wild-rye](#) (*Elymus riparius* Wiegand)
[Nodding Fescue](#) (*Festuca obtusa* Biehler)
[Red Fescue](#) (*Festuca rubra* L.)
[Canada Manna Grass](#) (*Glyceria canadensis* (Michx.) Trin.)
[Reed Meadowgrass](#) (*Glyceria maxima* (Hartm.) O.R. Holmberg)
[Atlantic Manna Grass](#) (*Glyceria obtusa* (Muhl.) Trin.)
[Long-awn Muhly](#) (*Muhlenbergia capillaris* (Lam.) Trin.)
[Wire-stem Muhly](#) (*Muhlenbergia frondosa* (Poir.) Fernald)
[Marsh Muhly](#) (*Muhlenbergia glomerata* (Willd.) Trin.)
[Mexican Muhly](#) (*Muhlenbergia mexicana* (L.) Trin.)
[Green Muhly](#) (*Muhlenbergia racemosa* (Michx.) BSP.)
[Nimble-will](#) (*Muhlenbergia schreberi* J.F. Gmel.)
[Forest Muhly](#) (*Muhlenbergia sylvatica* Torr. ex Gray)
[Bog Muhly](#) (*Muhlenbergia uniflora* (Muhl.) Fernald)
[Gattinger Panic Grass](#) (*Panicum gattingeri* Nash)
[Maiden-cane](#) (*Panicum hemitomon* J.A. Schultes)
[Warty Panic Grass](#) (*Panicum verrucosum* Muhl.)
[Dallisgrass](#) (*Paspalum dilatatum* Poir.)
[Autumn Bluegrass](#) (*Poa autumnalis* Muhl. ex Elliott)
[Woods Bluegrass](#) (*Poa nemoralis* L.)
[Woodland Bluegrass](#) (*Poa sylvestris* Gray)
[Rough Bluegrass](#) (*Poa trivialis* L.)
[Fox-tail Bristle Grass](#) (*Setaria italica* (L.) Beauv.)
[Bur Bristle Grass](#) (*Setaria verticillata* (L.) Beauv.)

Group 3. Sedges

[Thicket Sedge](#) (*Carex abscondita* Mackenz.)
[Greenish-white Sedge](#) (*Carex albolutescens* Schweinitz)
[Narrow-leaf Sedge](#) (*Carex amphibola* Steud.)
[Water Sedge](#) (*Carex aquatilis* Wahlenb.)
[Prickly Bog Sedge](#) (*Carex atlantica* L.H. Bailey)
[Bailey Sedge](#) (*Carex baileyi* Britt.)
[Bebb's Sedge](#) (*Carex bebbii* (L.H. Bailey) Olney ex Fernald)
[Hair-like Sedge](#) (*Carex capillaris* L.)
[Oval-leaf Sedge](#) (*Carex cephalophora* Muhl. ex Willd.)
[White-edge Sedge](#) (*Carex debilis* Michx.)
[Soft-leaf Sedge](#) (*Carex disperma* Dewey)
[Little Prickly Sedge](#) (*Carex echinata* Murray)
[Graceful Sedge](#) (*Carex gracillima* Schweinitz)
[Bladder Sedge](#) (*Carex intumescens* Rudge)
[Cypress-swamp Sedge](#) (*Carex jorii* L.H. Bailey)
[Lakebank Sedge](#) (*Carex lacustris* Willd.)
[Nerveless Wood Sedge](#) (*Carex leptonevia* Fernald)
[Many-form Sedge](#) (*Carex polymorpha* Muhl.)
[Drooping Sedge](#) (*Carex prasina* Wahlenb.)
[Rough Sedge](#) (*Carex scabrata* Schweinitz)
[Canadian Single-spike Sedge](#) (*Carex scirpoidea* Michx.)
[Bur-reed Sedge](#) (*Carex sparganioides* Muhl. ex Willd.)
[Straw Sedge](#) (*Carex straminea* Willd.)
[Upright Sedge](#) (*Carex stricta* Lam.)
[Twisted Sedge](#) (*Carex torta* Boott)
[Hairy-fruit Sedge](#) (*Carex trichocarpa* Muhl. ex Willd.)
[Three-seed Sedge](#) (*Carex trisperma* Dewey)
[Smooth Sawgrass](#) (*Cladium mariscoides* (Muhl.) Torr.)
[Many-flower Flatsedge](#) (*Cyperus lancastriensis* T. Porter ex Gray)
[Many-spike Flatsedge](#) (*Cyperus polystachyos* Rottb.)
[Thin-leaf Flatsedge](#) (*Cyperus tenuifolius* (Steud.) Dandy)
[Ovate Spikerush](#) (*Eleocharis ovata* (Roth) Roem. & J.A. Schultes)
[Small Spikerush](#) (*Eleocharis parvula* (Roem. & J.A. Schultes) Link ex Bluff & Fingerh.)
[Coldswamp Cotton-grass](#) (*Eriophorum polystachion* L.)
[Hare's-tail](#) (*Eriophorum spissum* Fernald)
[Cleft Cotton-grass](#) (*Eriophorum vaginatum* L.)
[Tawny Cotton-grass](#) (*Eriophorum virgincum* L.)
[Green-keel Cotton-grass](#) (*Eriophorum viridi-carinatum* (Engelm.) Fernald)
[Annual Fimbry](#) (*Frimbristylis annua* (All.) Roem. & J.A. Schultes)
[Dwarf Umbrella-sedge](#) (*Fuirena pumila* Torr.)
[White Beakrush](#) (*Rhynchospora alba* (L.) Vahl)
[Brownish Beakrush](#) (*Rhynchospora capitellata* (Michx.) Vahl)
[Dark-green Bulrush](#) (*Scirpus georgianus* R.M. Harper)

Group 4. Other Monocots

[Sweetflag](#) (*Acorus calamus* L.)

[Subcordate Water-plantain](#) (*Alisma subcordatum* Raf.)
[Swamp Jack-in-the-pulpit](#) (*Arisaema triphyllum* (L.) Schott)
[Blue Beadlily](#) (*Clintonia borealis* (Ait.) Raf.)
[Pink Lady's-slipper](#) (*Cypripedium acaule* Ait.)
[White Lady's-slipper](#) (*Cypripedium candidum* Muhl. ex Willd.)
[Showy Lady's-slipper](#) (*Cypripedium reginae* Walter)
[Broad Water-weed](#) (*Elodea canadensis* Michx.)
[Downy Rattlesnake-plantain](#) (*Goodyera pubescens* (Willd.) R. Br.)
[Kidney-leaf Mud-plantain](#) (*Heteranthera reniformis* Ruiz & Pavon)
[Slender Blue Iris](#) (*Iris prismatica* Pursh)
[Yellow Iris](#) (*Iris pseudacorus* L.)
[Blueflag](#) (*Iris versicolor* L.)
[Virginia Blueflag](#) (*Iris virginica* L.)
[Small Whorled Pogonia](#) (*Isotria medeoloides* (Pursh) Raf.)
[Baltic Rush](#) (*Juncus balticus* Willd.)
[Small-head Rush](#) (*Juncus brachycephalus* (Engelm.) Buchenau)
[Toad Rush](#) (*Juncus bufonius* L.)
[Canada Rush](#) (*Juncus canadensis* J. Gay)
[Grass-like Rush](#) (*Juncus marginatus* Rostk.)
[Big-head Rush](#) (*Juncus megacephalus* M.A. Curt.)
[Flat-leaf Rush](#) (*Juncus platyphyllus* (Weigand) Fernald)
[Secund Rush](#) (*Juncus secundus* Beauv.)
[Woods Rush](#) (*Juncus subcaudatus* (Engelm.) Coville & Blake)
[Lesser Duckweed](#) (*Lemna minor* L.)
[Minute Duckweed](#) (*Lemna perpusilla* Torr.)
[Virginia Bunchflower](#) (*Melanthium virginicum* L.)
[Slender Naiad](#) (*Najas flexilis* (Willd.) Rostk. & W.L.E. Schmidt)
[Brittle Naiad](#) (*Najas minor* All.)
[Northern Green Orchid](#) (*Platanthera hyperborea* (L.) Lindl.)
[Purple Fringeless Orchid](#) (*Platanthera peramoena* Gray)
[Small Solomon's-seal](#) (*Polygonatum biflorum* (Walter) Elliott)
[Great Solomon's-seal](#) (*Polygonatum commutatum* (J.A. & J.H. Schultes) A. Dietr.)
[Pickerel Weed](#) (*Pontederia cordata* L.)
[Large-leaf Pondweed](#) (*Potamogeton amplifolius* Tuckerman)
[Curly Pondweed](#) (*Potamogeton crispus* L.)
[Water-thread Pondweed](#) (*Potamogeton diversifolius* Raf.)
[Ribbon-leaf Pondweed](#) (*Potamogeton epihydrus* Raf.)
[Leafy Pondweed](#) (*Potamogeton foliosus* Raf.)
[Grassy Pondweed](#) (*Potamogeton gramineus* L.)
[Giant Burreed](#) (*Sparganium eurycarpum* Engelm. ex Gray)
[Virginia Spiderwort](#) (*Tradescantia virginiana* L.)
[Common Yellow-eyed-grass](#) (*Xyris difformis* Chapm.)
[Fringed Yellow-eyed-grass](#) (*Xyris fimbriata* Elliott)
[Twisted Yellow-eyed-grass](#) (*Xyris torta* J.E. Smith)
[Atlantic Deathcamas](#) (*Zigadenus glaberrimus* Michx.)
[White Camas](#) (*Zigadenus glaucus* Nutt.)

Group 5. Trees and Shrubs

[Balsam Fir](#) (*Abies balsamea* (L.) Mill.)
[Green Alder](#) (*Alnus crispa* (Dryalnd. in Ait.) Pursh)
[European Alder](#) (*Alnus glutinosa* (L.) Gaertn.)
[Seaside Alder](#) (*Alnus maritima* (Marsh.) Nutt.)
[Speckled Alder](#) (*Alnus rugosa* (DuRoi) Spreng.)
[Oblong-leaf Service-berry](#) (*Amelanchier canadensis* (L.) Medic.)
[Bog Rosemary](#) (*Andromeda polifolia* L.)
[Red Chokeberry](#) (*Aronia arbutifolia* (L.) Elliott)
[Purple Chokeberry](#) (*Aronia prunifolia* (Marsh.) Rehder)
[Yellow Birch](#) (*Betula alleghaniensis* Britton)
[Sweet Birch](#) (*Betula lenta* L.)
[Gray Birch](#) (*Betula populifolia* Marshall)
[Northern Catalpa](#) (*Catalpa speciosa* (Warder ex Barney) Warder ex Engelm.)
[Atlantic White Cedar](#) (*Chamaecyparis thyoides* (L.) BSP.)
[White Fringe Tree](#) (*Chionanthus virginicus* L.)
[Flowering Dogwood](#) (*Cornus florida* L.)
[Common Persimmon](#) (*Diospyros virginiana* L.)
[Black Crowberry](#) (*Empetrum nigrum* L.)
[Eastern Burning-bush](#) (*Euonymus atropurpureus* Jacq.)
[American Beech](#) (*Fagus grandifolia* Ehrh.)
[White Ash](#) (*Fraxinus americana* L.)
[Black Ash](#) (*Fraxinus nigra* Marshall)
[Creeping Snowberry](#) (*Gaultheria hispidula* (L.) Muhl. ex Torr.)
[Teaberry](#) (*Gaultheria procumbens* L.)
[Honey-locust](#) (*Gleditsia triacanthos* L.)
[Shrubby St. John's-wort](#) (*Hypericum prolificum* L.)
[American Holly](#) (*Ilex opaca* Soland. in Ait.)
[Butternut](#) (*Juglans cinerea* L.)
[Black Walnut](#) (*Juglans nigra* L.)
[Sheep-laurel](#) (*Kalmia angustifolia* L.)
[Mountain Laurel](#) (*Kalmia latifolia* L.)
[American Larch](#) (*Larix laricina* (DuRoi) K. Koch)
[Tulip Tree](#) (*Liriodendron tulipifera* L.)
[Eastern Ninebark](#) (*Physocarpus opulifolius* (L.) Maxim.)
[Red Spruce](#) (*Picea rubens* Sarg.)
[Pitch Pine](#) (*Pinus rigida* Mill.)
[Eastern White Pine](#) (*Pinus strobus* L.)
[Balsam Poplar](#) (*Populus balsamifera* L.)
[Eastern Cotton-wood](#) (*Populus deltoides* W. Bartram ex Marshall)
[Swamp Cotton-wood](#) (*Populus heterophylla* L.)
[Quaking Aspen](#) (*Populus tremula* L.)
[Southern Red Oak](#) (*Quercus falcata* Michx.)
[Shingle Oak](#) (*Quercus imbricaria* Michx.)
[Willow Oak](#) (*Quercus phellos* L.)
[Chestnut Oak](#) (*Quercus prinus* L.)
[Post Oak](#) (*Quercus stellata* Wangerh.)
[Alder-leaf Buckthorn](#) (*Rhamnus alnifolia* L'Her)

[Pink Azalea](#) (*Rhododendron periclymenoides* (Michx.) Shinners)
[Old Field Blackberry](#) (*Rubus alumnus* L.H. Bailey)
[Bailey Blackberry](#) (*Rubus baileyanus* Britt.)
[Sand Blackberry](#) (*Rubus cuneifolius* Pursh)
[Enslen Blackberry](#) (*Rubus enslenii* Tratt.)
[Common Red Raspberry](#) (*Rubus idaeus* L.)
[Tall Priarie Willow](#) (*Salix humilis* Marshall)
[Shining Willow](#) (*Salix lucida* Muhl.)
[Silky Willow](#) (*Salix sericea* Marshall)
[Narrow-leaf Meadow-sweet](#) (*Spiraea alba* DuRoi)
[Eastern Hemlock](#) (*Tsuga canadensis* (L.) Carriere)

Group 6. Dicot Herbs with Some of the Leaves Compound

[Tall Hairy Groovebur](#) (*Agrimonia gryposepala* Wallr.)
[Beaked Groovebur](#) (*Agrimonia rostellata* Wallr.)
[Woodland Groovebur](#) (*Agrimonia striata* Michx.)
[Purple-stem Angelica](#) (*Angelica atropurpurea* L.)
[Large-fruit Beggar-ticks](#) (*Bidens coronata* (L.) Britton)
[Swamp Beggar-ticks](#) (*Bidens discoidea* (Torr. & Gray) Britton)
[Small-fruit Beggar-ticks](#) (*Bidens mitis* (Michx.) Sherff)
[Awnless Beggar-ticks](#) (*Bidens polylepis* Blake)
[Common Hornwort](#) (*Ceratophyllum demersum* L.)
[Rough Avens](#) (*Geum laciniatum* Murray)
[Purple Avens](#) (*Geum rivale* L.)
[American Featherfoil](#) (*Hottonia inflata* Elliott)
[Parrot-feather](#) (*Myriophyllum brasiliense* Cambess.)
[Two-leaf Water-milfoil](#) (*Myriophyllum heterophyllum* Michx.)
[Eurasian Water-milfoil](#) (*Myriophyllum spicatum* L.)
[True Water-cress](#) (*Nasturtium officinale* R. Br. in W.T. Ait.)
[Carolina Butter-cup](#) (*Ranunculus carolinianus* DC.)
[Bristly Butter-cup](#) (*Ranunculus hispidus* Michx.)

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

[Sandvine](#) (*Ampelamus albidus* (Nutt.) Britton)
[Leafy-bract Beggar-ticks](#) (*Bidens comosa* (Gray) Wiegand)
[Purple-stem Beggar-ticks](#) (*Bidens connata* Muhl. ex Willd.)
[Smooth Beggar-ticks](#) (*Bidens laevis* (L.) BSP.)
[Three-lobed Beggar-ticks](#) (*Bidens tripartita* L.)
[Larger Water-starwort](#) (*Callitriche hetetophylla* Pursh)
[Red Turtlehead](#) (*Chelone obliqua* L.)
[Canada Bunchberry](#) (*Cornus canadensis* L.)

[Water-purslane](#) (*Didiplis diandra* (Nutt. ex DC.) A. Wood)
[Spotted Joe-pye-weed](#) (*Eupatoriadelphus maculatus* (L.) R.M. King & H. Rob.)
[Sweet Joe-pye-weed](#) (*Eupatoriadelphus purpureus* (L.) R.M. King & H. Rob.)
[Round-leaf Thorough-wort](#) (*Eupatorium rotundifolium* L.)
[Spreading Broomspurge](#) (*Euphorbia humistrata* Engelm.)
[Rough Bedstraw](#) (*Galium asprellum* Michx.)
[Fringe-top Bottle Gentian](#) (*Gentiana andrewsii* Griseb.)
[Closed Gentian](#) (*Gentiana clausa* Raf.)
[Round-fruit Hedgehyssop](#) (*Gratiola virginiana* L.)
[Canadian St. John's-wort](#) (*Hypericum canadense* L.)
[Coppery St. John's-wort](#) (*Hypericum denticulatum* Walter)
[Slender St. John's-wort](#) (*Hypericum mutilum* L.)
[Great St. John's-wort](#) (*Hypericum pyramidatum* Ait.)
[Flax](#) (*Linum striatum* Walt.)
[Four-flower Loosestrife](#) (*Lysimachia quadriflora* Sims)
[Peppermint](#) (*Mentha X piperita* L.)
[Spearmint](#) (*Mentha spicata* L.)
[Narrow-leaf Sundrops](#) (*Oenothera fruticosa* L.)
[Meadow Phlox](#) (*Phlox maculata* L.)
[Narrow-leaf Mountain-mint](#) (*Pycnanthemum flexuosum* (Walter.) BSP.)
[Virginia Meadow-beauty](#) (*Rhexia virginica* L.)
[Bouncing-bet](#) (*Saponaria officinalis* L.)
[Hooded Skullcap](#) (*Scutellaria galericulata* L.)
[Hyssop Skullcap](#) (*Scutellaria integrifolia* L.)

Group 8. Dicot Herbs with All the Leaves Simple and Basal and/or Alternate

[Canada Thimble-weed](#) (*Anemone canadensis* L.)
[White Heath Aster](#) (*Aster ericoides* L.)
[Shining Aster](#) (*Aster lucidulus* (Gray) Wiegand)
[New York Aster](#) (*Aster novi-belgii* L.)
[White Heath Aster](#) (*Aster pilosus* Willd.)
[Crooked-stem Aster](#) (*Aster prenanthoides* Muhl.)
[Swamp Aster](#) (*Aster puniceus* L.)
[Annual Saltmarsh Aster](#) (*Aster subulatus* Michx.)
[Tradescant Aster](#) (*Aster tradescanti* L.)
[Watershield](#) (*Brasenia schreberi* J.F. Gmel.)
[Common Marsh-marigold](#) (*Caltha palustris* L.)
[Marsh Bellflower](#) (*Campanula aparinoides* Pursh)
[Round-leaf Sundew](#) (*Drosera rotundifolia* L.)
[Fireweed](#) (*Epilobium angustifolium* L.)
[Linear-leaf Willow-herb](#) (*Epilobium leptophyllum* Raf.)
[American Burn](#) (*Erechtites hieracifolia* (L.) Raf. ex DC.)
[Floating Penny-wort](#) (*Hydrocotyle ranunculoides* L.f.)
[Virginia Water-leaf](#) (*Hydrophyllum virginianum* L.)
[Purple-Rocket](#) (*Iodanthus pinnatifidus* (Michx.) Steud.)
[Downy Lobelia](#) (*Lobelia puberula* Michx.)

[Narrow-leaf Seedbox](#) (*Ludwigia linearis* Walter)
[Virginia Bluebells](#) (*Mertensia virginica* (L.) Pers.)
[Large-seed Forget-me-not](#) (*Myosotis scorpioides* L.)
[American Lotus](#) (*Nelumbo lutea* (Willd.) Pers.)
[Yellow Cow-lily](#) (*Nuphar luteum* (L.) Sibth. & J.E. Smith)
[White Water-lily](#) (*Nymphaea odorata* Soland. in Ait.)
[Glaucous Grass-of-Parnassus](#) (*Parnassia glauca* Raf.)
[Common Pokeweed](#) (*Phytolacca americana* L.)
[Black-seed Plantain](#) (*Plantago rugelii* Decne.)
[Red Milkwort](#) (*Polygala sanguinea* L.)
[Halberd-leaf Tearthumb](#) (*Polygonum arifolium* L.)
[Prostrate Knotweed](#) (*Polygonum aviculare* L.)
[Dense-flower Smartweed](#) (*Polygonum densiflorum* Meisn.)
[Marshpepper Smartweed](#) (*Polygonum hydropiper* L.)
[Little Water-pepper](#) (*Polygonum opelousanum* Riddell)
[Clustered Dock](#) (*Rumex conglomeratus* Murray)
[Water Pimpernel](#) (*Samolus parviflorus* Raf.)
[Clustered Black-snakeroot](#) (*Sanicula gregaria* Bickn.)
[Wreath Golden-rod](#) (*Solidago caesia* L.)
[Canada Golden-rod](#) (*Solidago canadensis* L.)
[Willow Golden-rod](#) (*Solidago salicina* Ell.)
[Marsh Blue Violet](#) (*Viola cucullata* Ait.)

Northeast Wetland Flora

Field Office Guide to Plant Species

Crested Shield Fern

Dryopteris cristata (L.) Gray



- **Family:** Fern (Polypodiaceae)
- **Spores:** June-August
- **Field Marks:** This fern is distinguished by its 1 1/2-pinnate leaves, the fertile ones much taller than the sterile ones. The spherical sori are borne midway between the edge of the leaf and the midnerve and are covered by a kidney-shaped sheath (indusium). The basal segments of the leaf are much shorter and more triangular in outline than the upper segments.
- **Habitat:** Swamps, wet woods, bogs.
- **Habit:** Rather coarse fern from a stout creeping rhizome, the base of the plant covered by the bases of last year's leaves.
- **Stems:** All underground.
- **Leaves:** Fertile leaves 1 1/2-pinnate, up to 2 feet long, deciduous, with stout stalks bearing cinnamon or pale brown scales; fertile leaves evergreen, longer than sterile leaves, the segments of the fertile leaves triangular-ovate, pointed at the tip, often twisted at the base, coarsely toothed or deeply lobed, up to 3 1/2 inches long.
- **Flowers:** Borne in spherical sori, the sori situated midway between the edge of the leaf and the midnerve, partially covered by a kidney-shaped sheath (indusium).



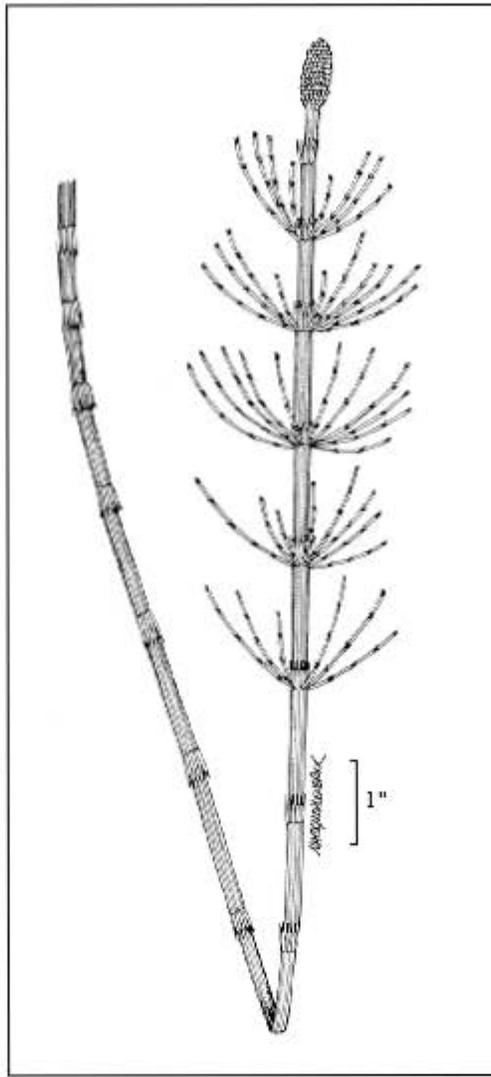
Northeast Wetland Flora

Field Office Guide to Plant Species

Water Horsetail *Equisetum fluviatile* L.



- **Family:** Horsetail (Equisetaceae)
- **Spores:** May-August
- **Field Marks:** This species has tight, persistent sheaths with 15-20 distinct dark brown teeth on its green stems. There are often whorls of short, slender branches which are produced only on the upper half of the main stem.
- **Habitat:** Swamps, along shores, sometimes in shallow, standing water.
- **Habit:** Perennial herb from coarse rhizomes.
- **Stems:** Main stem upright, smooth, jointed, up to 3 feet tall, sometimes unbranched but often with whorls of short, slender branches on the upper 1/2 of the stem.
- **Leaves:** Reduced to form sheaths, the sheaths tight, appressed, with 15-20 distinct, dark brown teeth.
- **Fruiting Cones:** Oblongoid, up to 1 1/2 inches long, early deciduous and usually not observable late in the growing season.
- **Notes:** This species produces both fertile and sterile stems. Except for the reproductive cone produced on the fertile stems, they are similar in appearance.



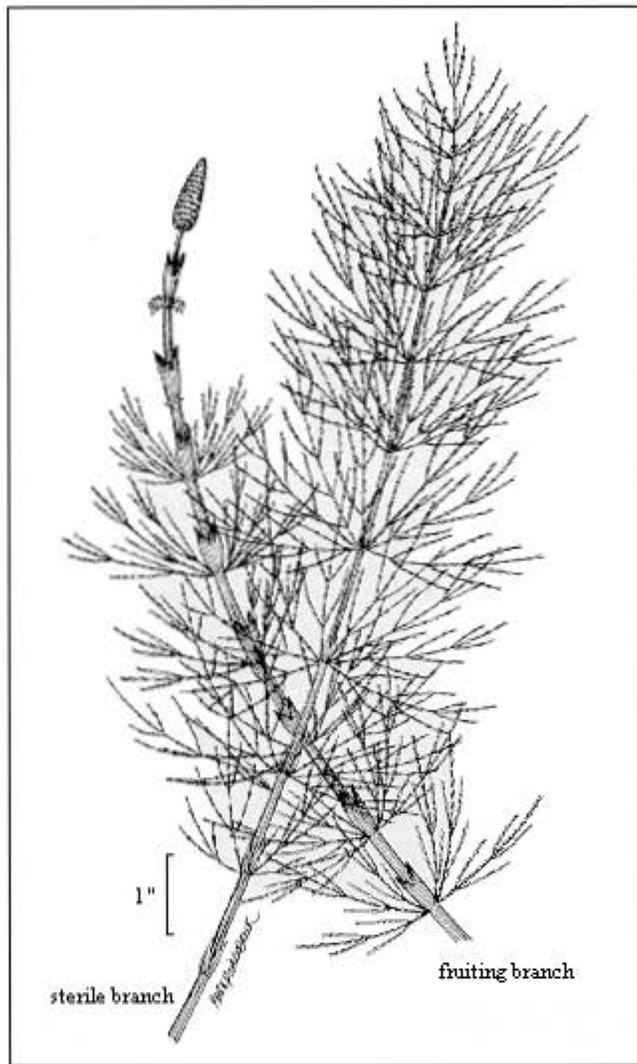
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Field Office Guide to Plant Species

Woodland Horsetail *Equisetum sylvaticum* L.



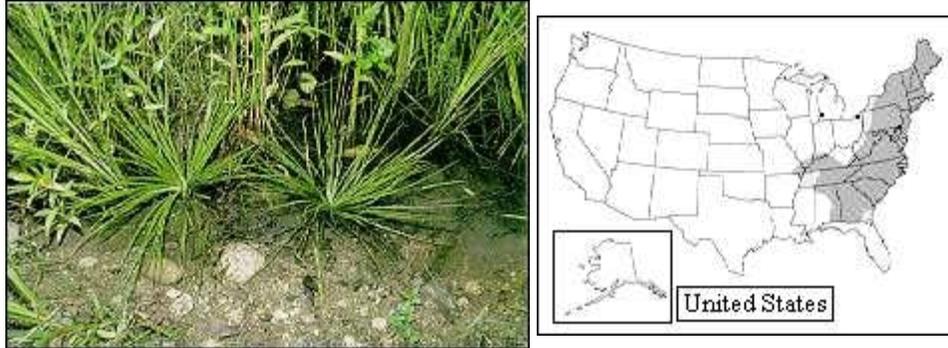
- **Family:** Horsetail (Equisetaceae)
- **Spores:** April-June
- **Field Marks:** This species produces both fertile and sterile stems at the same time. The fertile stem develops both terminal reproductive cones and spreading green branches. The sterile stem produces only spreading green branches. Most of the lateral branches on both stems are doubly or triply branched.
- **Habitat:** Moist woods, damp thickets.
- **Habit:** Perennial herb from creeping, deep rhizomes.
- **Stems:** Of two types: fertile and sterile stems erect, smooth or rough to the touch, jointed, up to 1 1/2 feet tall, bearing whorls of slender, often multi-branched branches, but only the fertile stems producing a reproductive cone at the tip.
- **Leaves:** Reduced and united to form sheaths; sheaths flaring upward, with yellow-brown teeth 3- to 4-lobed, the sheaths up to 1 inch long.
- **Fruiting Cones:** Borne on an elongated stalk, up to 1 inch long.
- **Notes:** These and other horsetails contain silica in the cell walls. This group of plants was used by colonists as an abrasive to scour utensils.



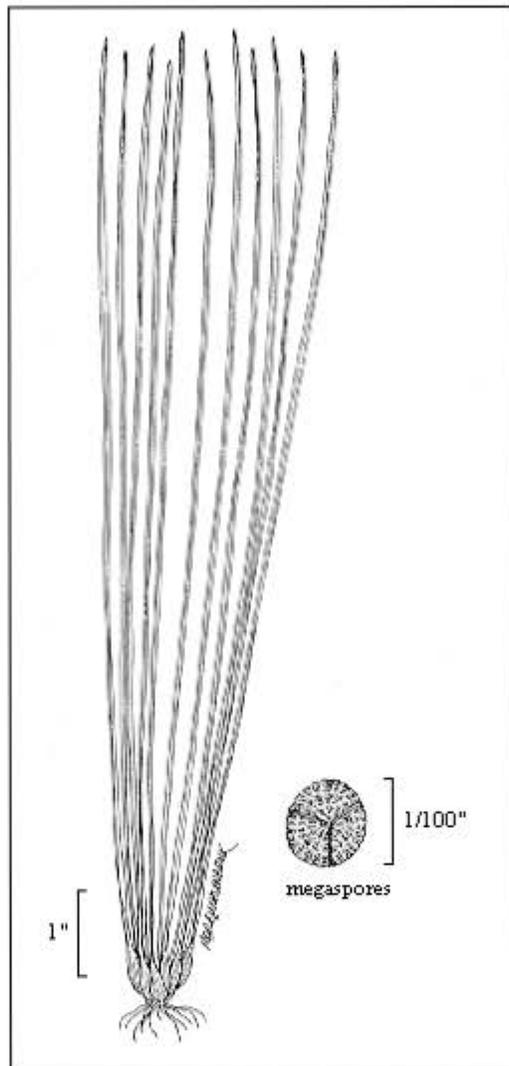
Northeast Wetland Flora

Field Office Guide to Plant Species

Appalachian Quillwort *Isoetes engelmannii* A. Braun



- **Family:** Quillwort (Isoetaceae)
- **Spores:** May-June
- **Field Marks:** This species is distinguished by its numerous leaves, sporangia. up to 1/2 inch long, and its honeycomb-marked megaspores.
- **Habitat:** Ponds, pools, shores, wet ditches.
- **Habit:** Perennial plant with a 2-lobed corm.
- **Stems:** Present as a 2-lobed corm.
- **Leaves:** Elongated, grass-like, 15 or more in number, up to nearly 1 1/2 feet long, smooth, swollen at the base to contain the sporangia.
- **Sporangia:** Male and female borne separately within the swollen, often paler, base of each leaf, up to 1/2 inch long.
- **Spores:** Female spores (megaspores) honeycomb-marked.



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Field Office Guide to Plant Species

Stiff Clubmoss

Lycopodium annotinum L.



- **Family:** Clubmoss (Lycopodiaceae)
- **Spores:** July-October
- **Field Marks:** This clubmoss is distinguished by its terminal sporangia borne in sessile "cones." The main stems lie flat on the ground.
- **Habitat:** Swamps, bogs, wet woods.
- **Habit:** Perennial herb with main stems creeping, becoming upright at the tip.
- **Stems:** Main stems flat on the ground, not branched, becoming upright at the tip, up to 1 foot tall.
- **Leaves:** Whorled, in 8 ranks, stiff, linear-lanceolate, up to 1/2 inch long, spine-tipped, shallowly toothed.
- **Sporangia:** Borne in terminal "cones," the "cones" sessile, cylindrical, yellowish, up to 2 1/4 inches long, up to 1/3 inch thick; sporangia about 1/16 inch wide; spores veiny on the surface.

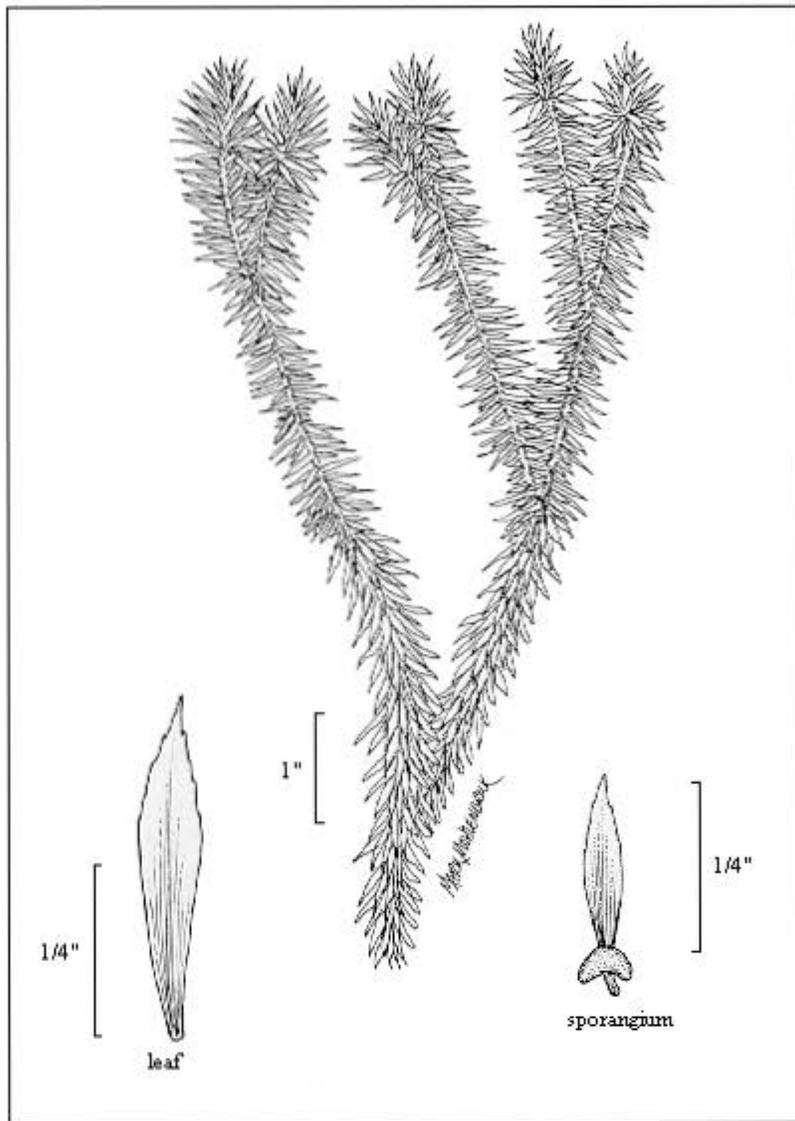
Northeast Wetland Flora

Field Office Guide to Plant Species

Shining Clubmoss *Lycopodium lucidulum* Michx.



- **Family:** Clubmoss (Lycopodiaceae)
- **Spores:** July-September
- **Field Marks:** The sporangia of this clubmoss are borne in the axils of the leaves. The leaves are alternately long and short, on alternating zones of the stem.
- **Habitat:** Damp woods, shaded cliffs.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Weakly to strongly ascending from a creeping base, dichotomously branched, up to 10 inches tall.
- **Leaves:** Alternately long and short in zones along the stem, 6-ranked, oblanceolate, pointed at the tip, more or less truncate and decurrent at the base, broadest along the middle, minutely toothed, shiny, spreading or even drooping, up to 3/4 inch long.
- **Reproductive Structures:** Sporangia borne in the axils of some of the shorter leaves (sporophylls), usually kidney-shaped; spores warty.
- **Notes:** Asexual reproductive bodies, called gemmae, are sometimes formed in the axils of some of the leaves.

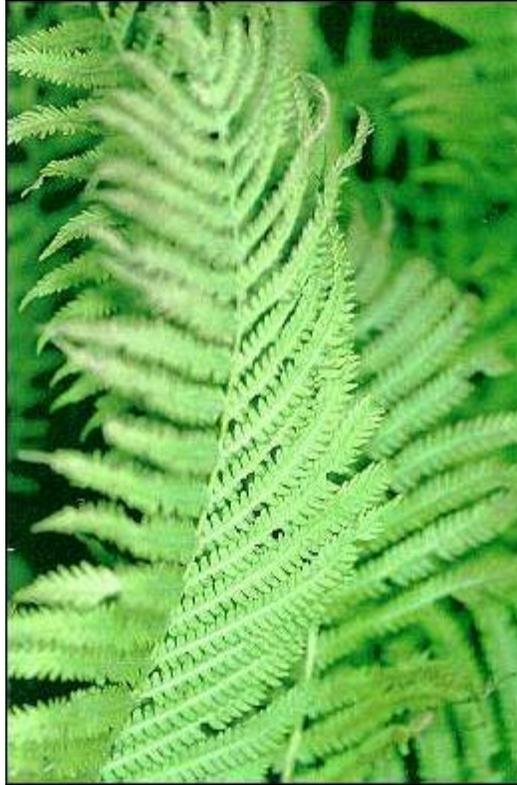


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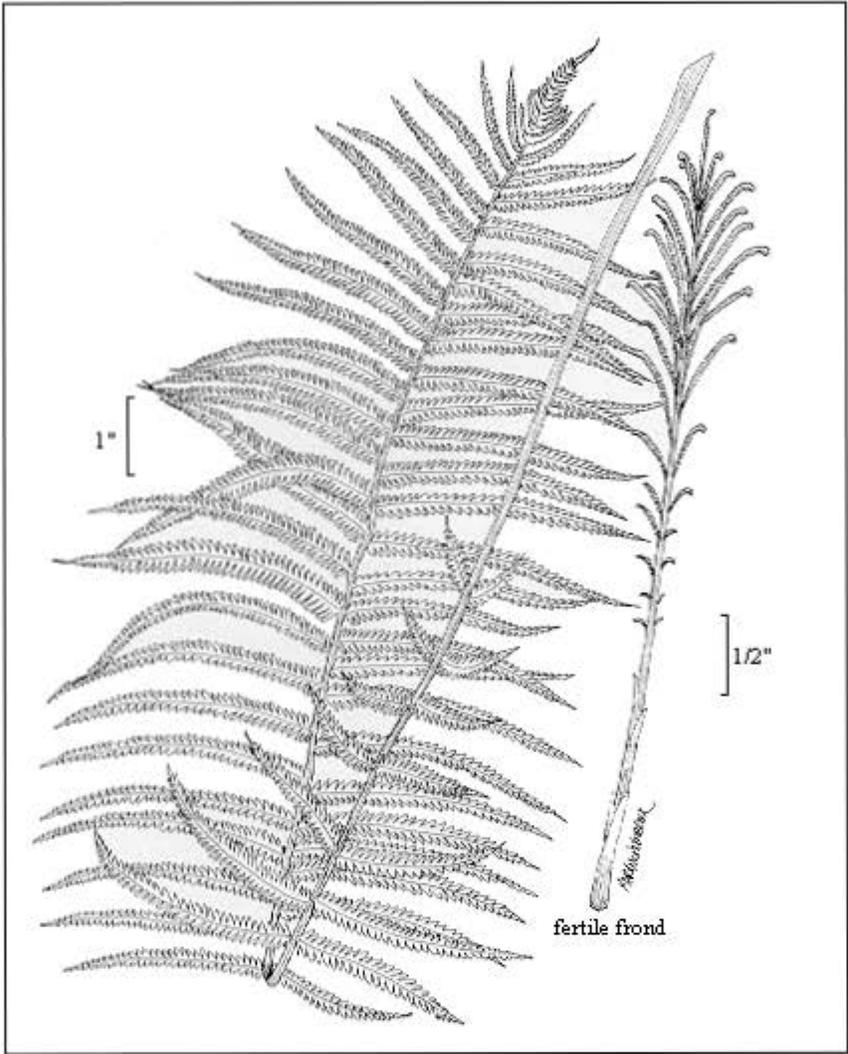
Field Office Guide to Plant Species

Ostrich Fern

Matteuccia struthiopteris (L.) Todaro



- **Family:** Fern (Polypodiaceae)
- **Spores:** July-October
- **Field Marks:** The fertile fronds, which appear in autumn, have no leaf tissue and are completely unlike the leafy sterile fronds. The sterile fronds are often 6 feet tall and have a green, 4-angled stalk.
- **Habitat:** Rich woods, bottomlands.
- **Habit:** Robust perennial fern from stout, scaly, branched rhizomes.
- **Stems:** Underground in the form of rhizomes.
- **Leaves:** Of 2 kinds, the sterile leaf-like, deciduous, forming a circle around the fertile ones, to 6 feet tall, 1 1/2 pinnate, the segments pointed at the tip, smooth, with 4-angled, smooth, green stalks.
- **Reproductive Structures:** Fertile leaves persistent through the winter, stiffly upright, up to 1 1/2 feet tall, dark green to blackish, with twisted, bead-like segments surrounding the sporangia, the stalks brown and shiny.
- **Notes:** This fern is sometimes grown as an ornamental.



Northeast Wetland Flora

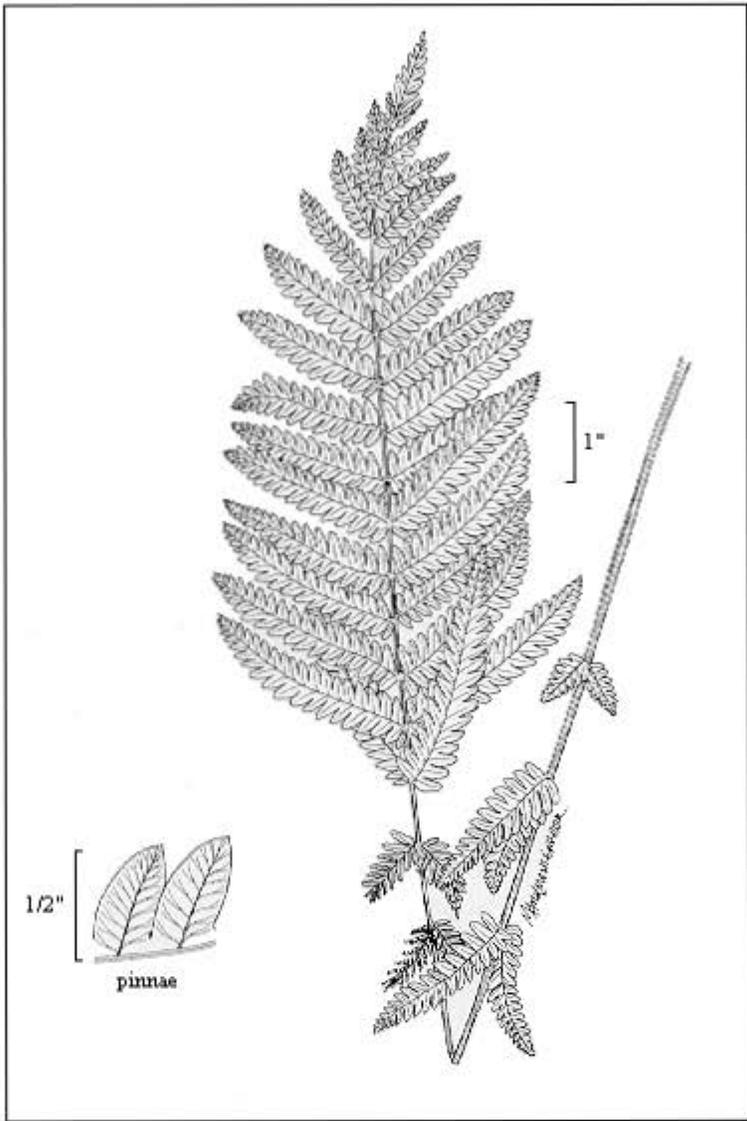
Field Office Guide to Plant Species

Interrupted Fern

Osmunda claytoniana L.



- **Family:** Royal Fern (Osmundaceae)
- **Spores:** Spring and Summer
- **Field Marks:** This species is readily recognized by the reduced fertile leaf segments midway between sterile leaf segments toward the tip and the base of the plant.
- **Habitat:** Wet woods, thickets, swamps, open pastures.
- **Habit:** Perennial fern from thickened rhizomes and fibrous roots.
- **Stems:** Only present as rhizomes.
- **Leaves:** Large, erect, up to 4 feet tall; outer series of leaves sterile, broadest near the middle, with up to 26 pairs of leaflets, each leaflet with up to 20 pairs of lobes, without teeth, hairy when young but smooth at maturity; inner series of leaves either all sterile, or with fertile leaflets midway between lower and upper sterile leaflets; leaf stalks usually woolly at first, becoming smooth.
- **Reproductive Structures:** Fertile leaflets 1-6 pairs, up to 1 3/4 inches long, bearing numerous spherical brown sporangia.



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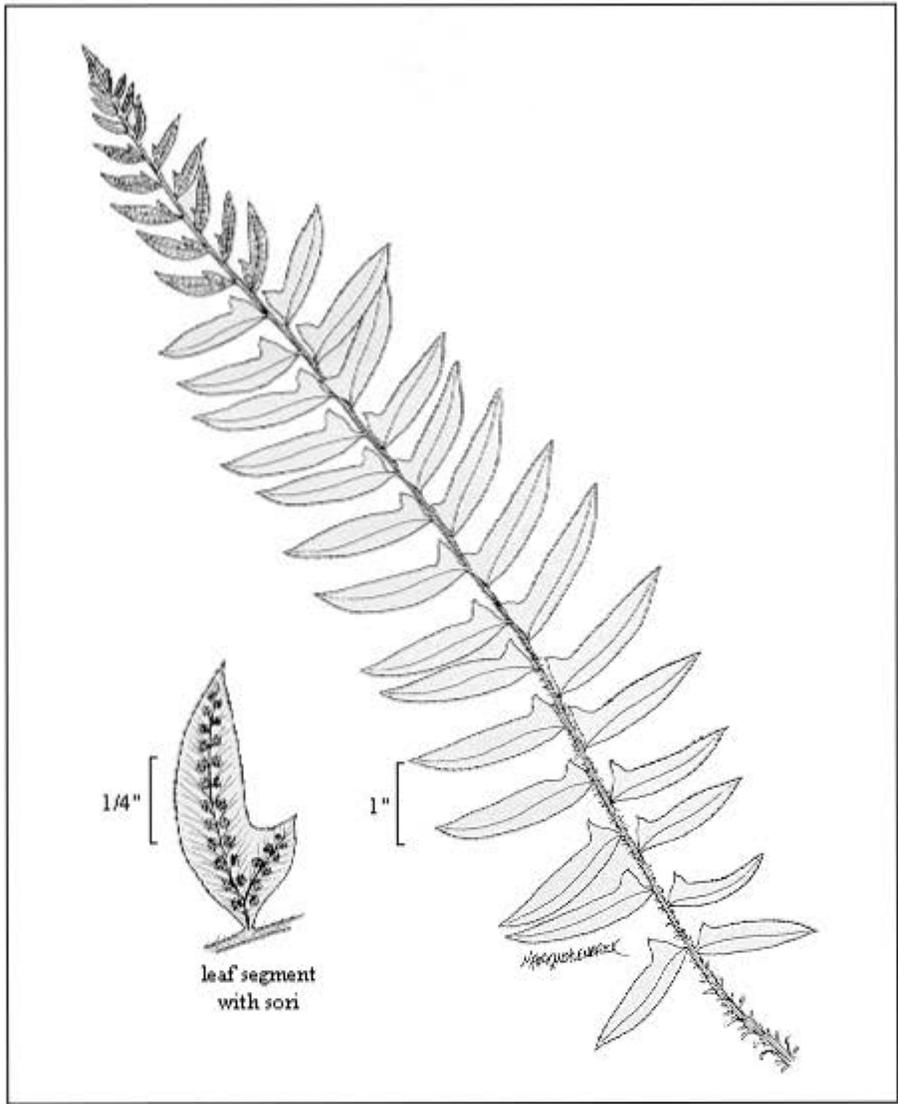
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Christmas Fern

Polystichum acrostichoides (Michx.) Schott



- **Family:** Fern (Polypodiaceae)
- **Spores:** June-October
- **Field Marks:** The fertile leaf segments are much reduced from the sterile segments and are borne at the upper ends of the leaves. Every leaf segment has a lobe (auricle) on the upper inner margin.
- **Habitat:** Woods.
- **Habit:** Perennial fern from thick, scaly rhizomes.
- **Stems:** Present only as rhizomes.
- **Leaves:** Fronds upright, once-pinnate, up to 1 1/2 feet long, with up to 30 or more pairs of segments, each segment lanceolate to oblong, rounded or pointed at the tip, minutely or coarsely toothed, the teeth bristle-tipped, with a basal lobe (auricle) on the upper inner margin; leaf stalks densely scaly.
- **Reproductive Structures:** Sporangia borne on the back of reduced leaf segments at the upper ends of the leaves, the sporangia completely covering the lower surface of the fertile leaf segments.
- **Notes:** The evergreen leaves, particularly in pioneer times, were gathered for winter decorations.



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Field Office Guide to Plant Species

Bracken Fern

Pteridium aquilinum (L.) Kuhn



- **Family:** Fern (Polypodiaceae)
- **Spores:** Summer
- **Field Marks:** This fern is distinguished by its overall triangular leaf shape and its leaf segments folded under along the edges. The sporangia line the edge of the leaf.
- **Habitat:** Old fields, dry woods, edge of prairies.
- **Habit:** Perennial fern from extensively creeping, scaleless rhizomes.
- **Stems:** Present only as underground rhizomes.
- **Leaves:** Triangular in outline, bipinnate-pinnatifid, smooth or finely hairy, up to 3 feet long; leaf stalks stout, smooth or finely hairy near the base.
- **Reproductive Structures:** Sporangia borne in sori, the sori continuous along the edge of the leaf, covered by the folded under leaf edges.
- **Notes:** This fern is frequent in burned over areas.

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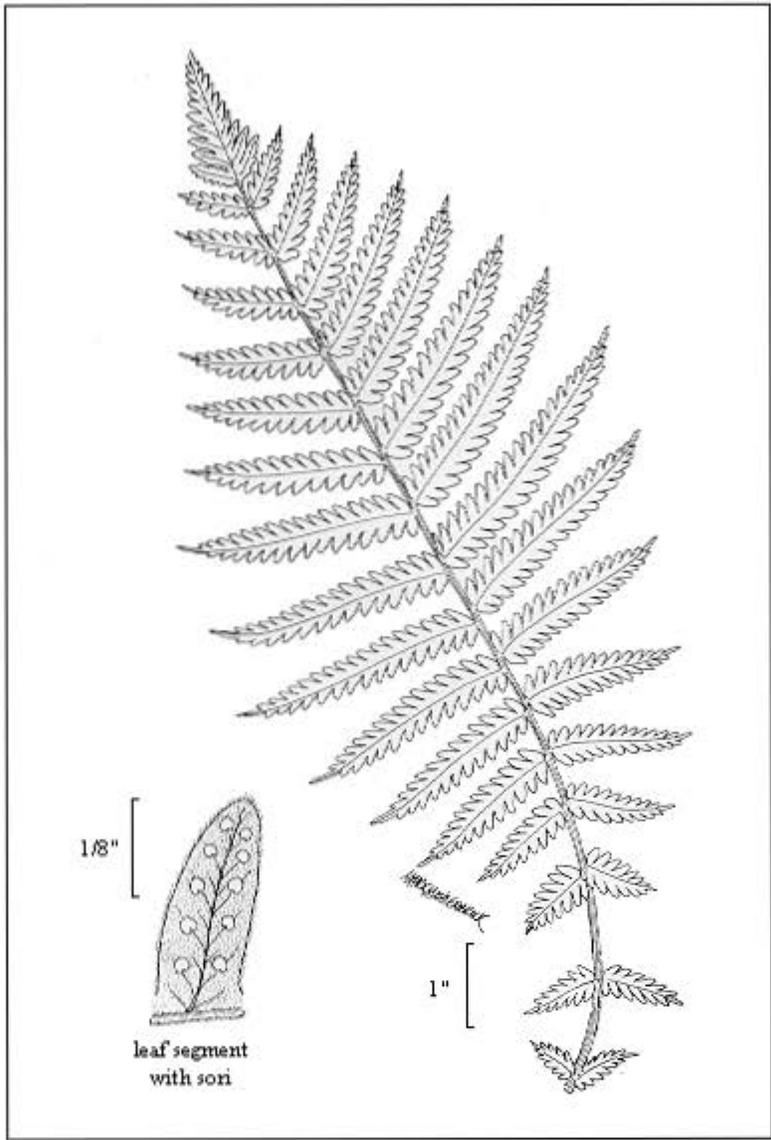
Field Office Guide to Plant Species

New York Fern

Thelypteris noveboracensis (L.) Nieuwl.



- **Family:** Fern (Polypodiaceae)
- **Spores:** June-September
- **Field Marks:** This fern is readily recognized by its pinnate-pinnatifid leaves that are greatly reduced at the base of the fronds.
- **Habitat:** Woods, damp thickets.
- **Habit:** Perennial fern from nearly scaleless, slender rhizomes.
- **Stems:** Present only as underground rhizomes.
- **Leaves:** Tapering to both ends, pinnate-pinnatifid, up to 1 1/2 feet long, with up to 46 pairs of segments, the segments thin, membranous, finely hairy on the lower surface, the lowermost segments greatly reduced; leaf stalk slender, pale, smooth, glossy.
- **Reproductive Structures:** Sori containing the sporangia distinct, spherical, borne on the back of the leaf segments midway between the vein and the margin.



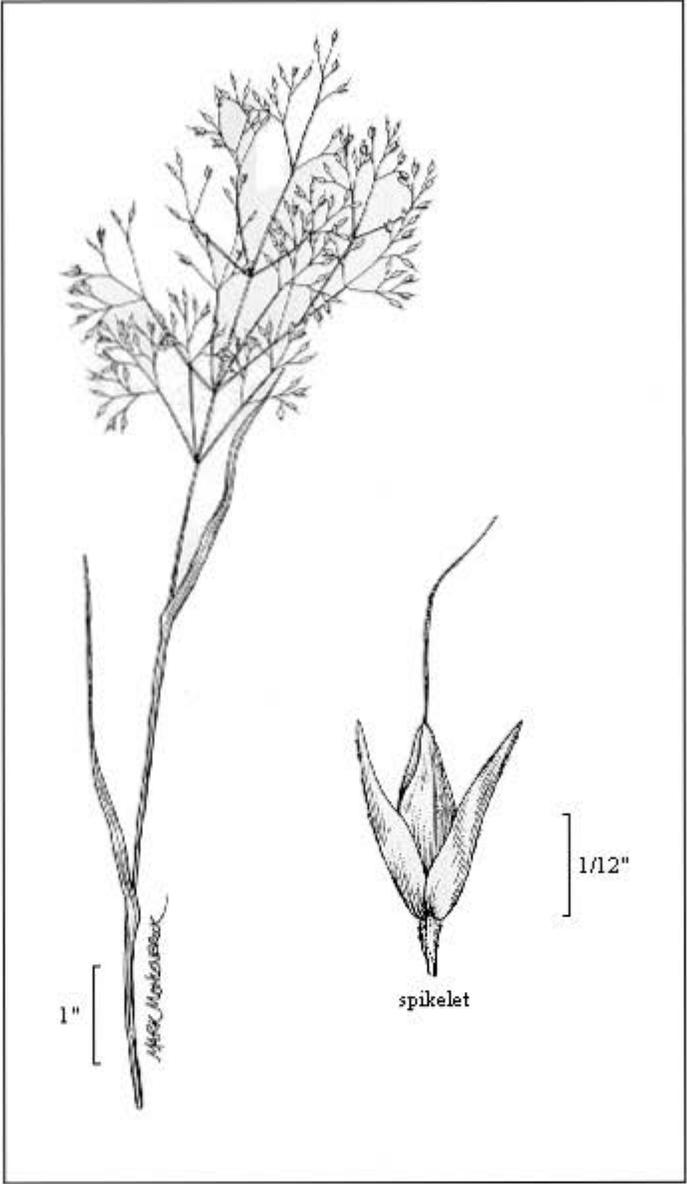
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Field Office Guide to Plant Species

Northern Bentgrass *Agrostis borealis* Hartm.



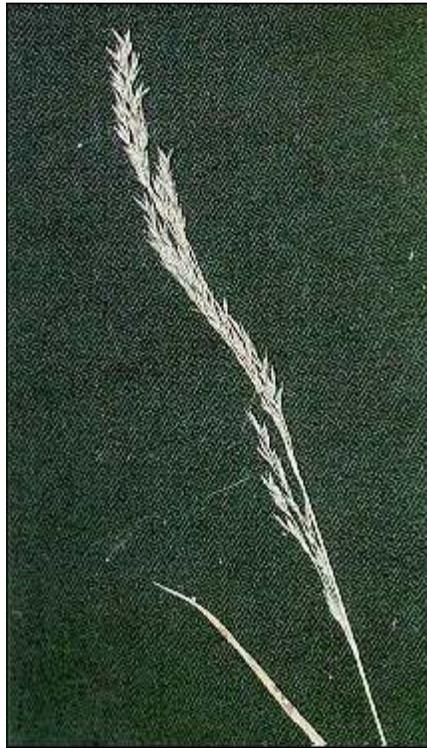
- **Family:** Grass (Gramineae)
- **Flowers:** July-August
- **Field Marks:** This bentgrass may be distinguished by the absence of rhizomes and stolons, the nearly smooth branches of its panicles, and its mostly bronze or purplish spikelets at maturity that are usually 1/10-1/6 inch long.
- **Habitat:** Wet meadows, along streams, rocky soil.
- **Habit:** Tufted perennial grass without rhizomes or stolons.
- **Stems:** Upright, slender, smooth, up to 2 1/4 feet tall.
- **Leaves:** Narrow, elongated, flat or rolled into a hollow cylinder, 2-4 in number, strongly ascending, up to 1/6 inch wide.
- **Flowering:** Borne in spikelets, the spikelets many in an open panicle, bronze or purplish at maturity, the panicle up to 6 inches long, the branches of the panicle smooth.
- **Spikelets:** 1-flowered, 1/10-1/6 inch long, the glumes narrowly ovate, the lemma with a 1/6-1/3 inch long awn.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains narrowly ellipsoid, smooth.
- **Notes:** Gleason and Cronquist call this plant *A. mertensii* of the Poaceae.



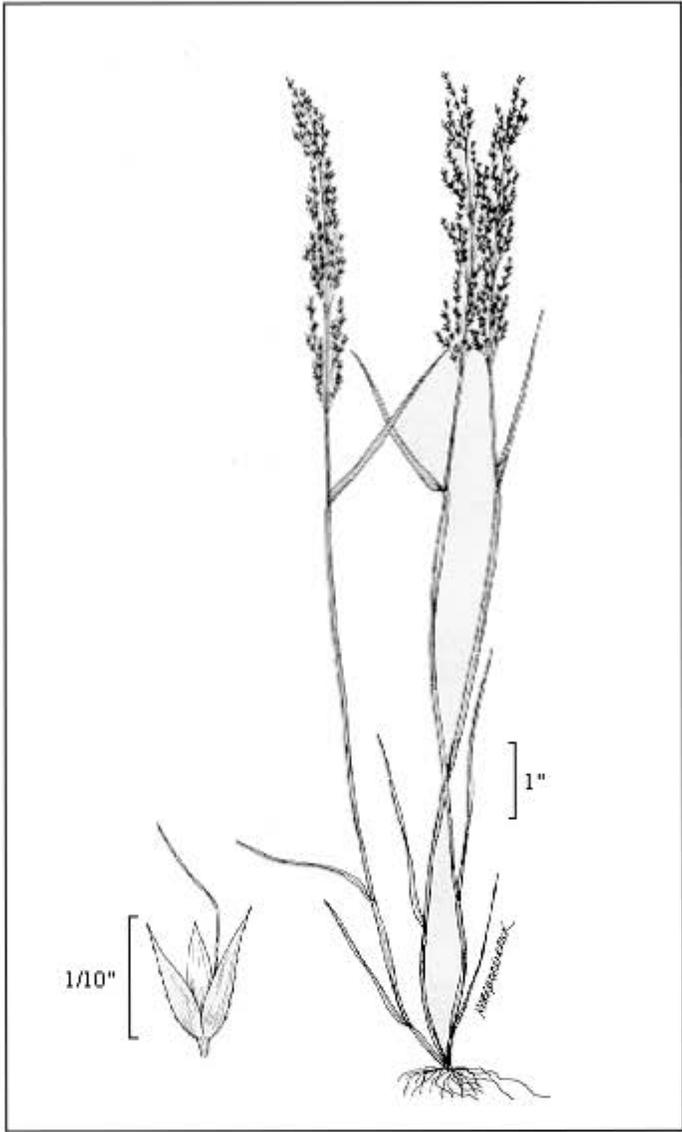
Northeast Wetland Flora

Field Office Guide to Plant Species

Brown Bentgrass *Agrostis canina* L.



- **Family:** Grass (Gramineae)
- **Flowering:** June-July
- **Field Marks:** This bentgrass differs from all others in the genus by the presence of stolons, the nearly smooth panicle branches, the purplish to yellowish panicles, and the 1-flowered spikelets no more than 1/10 inch long.
- **Habitat:** Shores, old fields, pastures.
- **Habit:** Loosely tufted perennial from long, trailing stolons.
- **Stems:** Spreading to ascending, branched, smooth, up to 2 feet long.
- **Leaves:** Elongated, usually densely tufted at the nodes, the basal leaves rolled into a bristle-shaped blade, the stem leaves 2-4, flat, up to 1/10 inch wide; ligules up to 1/4 inch long.
- **Flowers:** Borne in spikelets, with numerous spikelets in a rather narrow panicle up to 6 inches long, the panicle yellowish to purplish, with smooth branchlets; spikelets 1-flowered, no more than 1/10 inch long.
- **Glumes:** Lanceolate, pointed at the tip, more or less the same size, smooth.
- **Lemmas:** Lanceolate, awned or awnless, a little shorter than the first glume, smooth.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, smooth, loosely enclosed in the lemmas.
- **Notes:** This species is introduced from Europe and is sometimes used for lawns. This family is called Poaceae by Gleason and Cronquist.



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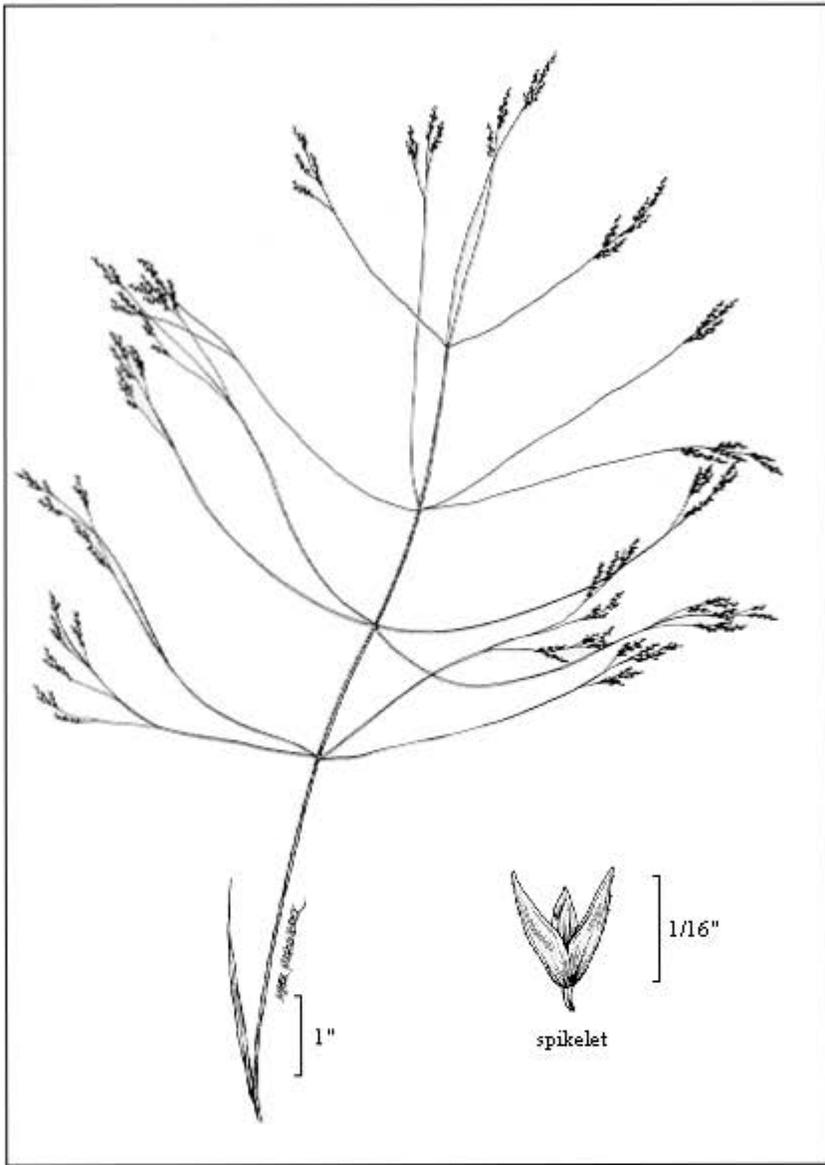
Field Office Guide to Plant Species

Winter Bentgrass

Agrostis hyemalis (Walter) BSP.



- **Family:** Grass (Gramineae)
- **Flowering:** March-June
- **Field Marks:** This species of *Agrostis* is recognized by its roughened panicle branches and its spikelets that are only 1/16-1/8 inch long.
- **Habitat:** Dry or moist soil in woods and fields, bogs, meadows, roadsides.
- **Habit:** Tufted perennial grass with fibrous roots.
- **Stems:** Upright or sometimes spreading, very slender, smooth, up to 2 1/2 feet long.
- **Leaves:** Elongated, flat and thread-like or rolled into a cylinder, ascending, smooth, up to 1/8 inch wide.
- **Flowers:** Borne in spikelets, the spikelets many in a loose panicle, the panicle branches divergent from the main axis, usually purple at maturity, the panicle up to 1 foot long, the branches of the panicle thread-like, rough to the touch.
- **Spikelets:** 1-flowered, 1/16-1/8 inch long, the glumes pointed at the tip; lemma shorter than the glume, blunt at the tip.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** Gleason and Cronquist use Poaceae for the name of this family. This species is sometimes called ticklegrass.



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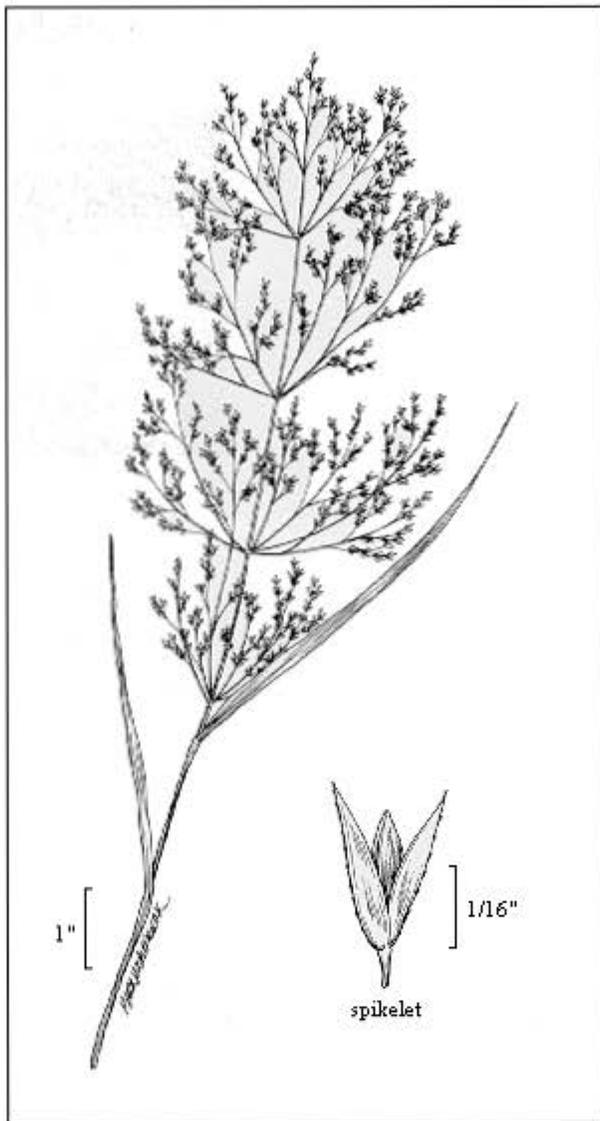
Field Office Guide to Plant Species

Perennial Bentgrass

Agrostis perennans (Walter) Tuckerman



- **Family:** Grass (Gramineae)
- **Flowering:** July-October
- **Field Marks:** This *Agrostis* is distinguished by its smooth panicle branches and its usually green panicle branches with 5-9 whorls of branches.
- **Habitat:** Woods, thickets, open areas, stream banks.
- **Habit:** Tufted perennial grass.
- **Stems:** Upright or sometimes spreading, slender, smooth, up to 3 feet long.
- **Leaves:** Elongated, flat, ascending, rough along the edges, 1/8-1/4 inch wide.
- **Flowers:** Borne in spikelets, the spikelets many in a more or less open panicle, usually green but sometimes bronze-colored, the panicle up to 1 foot long, with 5-9 whorls of branches, the branches smooth to the touch.
- **Spikelets:** 1-flowered, 1/10-1/8 inch long, the glumes pointed, the lemma shorter than the second glume.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** This family is called Poaceae by Gleason and Cronquist.



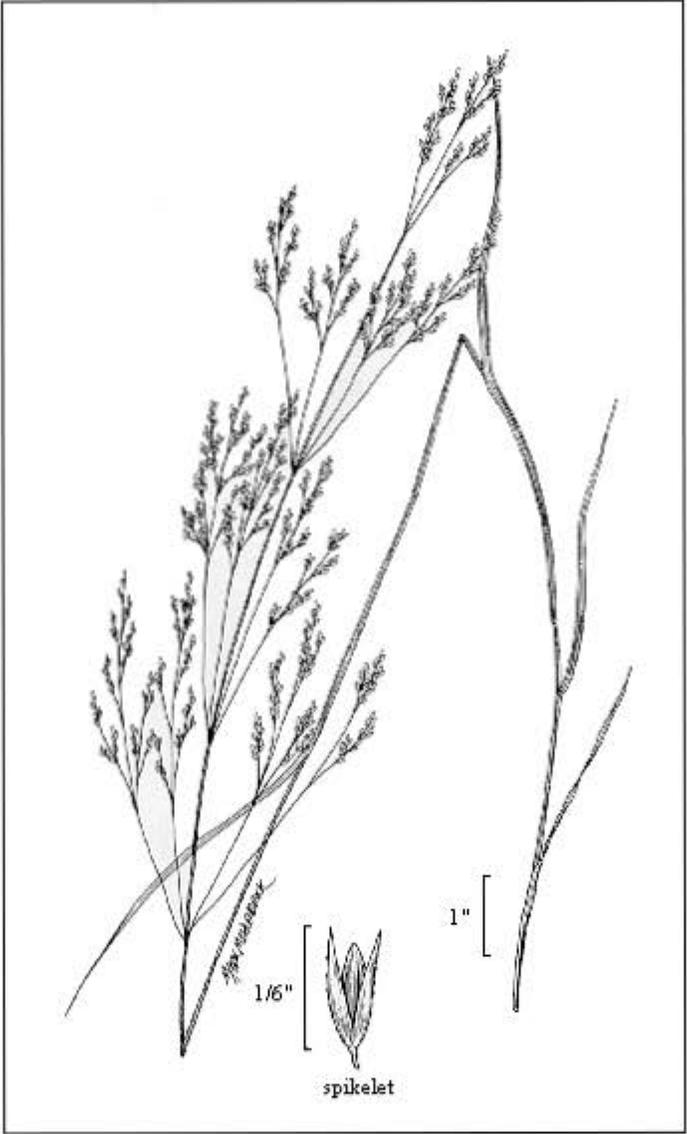
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Field Office Guide to Plant Species

Rough Bentgrass *Agrostis scabra* Willd.



- **Family:** Grass (Gramineae)
- **Flowering:** June-November
- **Field Marks:** The characters that distinguish this species from others in the genus are its rough panicle branches, its panicles at least half the height of the entire plant, and its longer spikelets 1/10-1/6 inch long.
- **Habitat:** Moist or dry open soil.
- **Habit:** Tufted perennial grass without rhizomes or stolons.
- **Stems:** Upright to spreading, very slender, smooth, up to 3 feet long.
- **Leaves:** Elongated, rolled into a narrow cylinder, ascending, up to 1/4 inch wide.
- **Flowers:** Borne in spikelets, the spikelets many in an open panicle, green or purple, the panicle up to 1 1/4 feet long, the very thread-like branches rough to the touch.
- **Spikelets:** 1-flowered, 1/10-1/6 inch long, the glumes very narrowly pointed at the tip, the lemmas with or without a short awn.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 6.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** Gleason and Cronquist call this plant *A. hyemalis* var. *scabra* of the Poaceae. This species is also known as ticklegrass or hairgrass. This species has been introduced from eastern Asia.



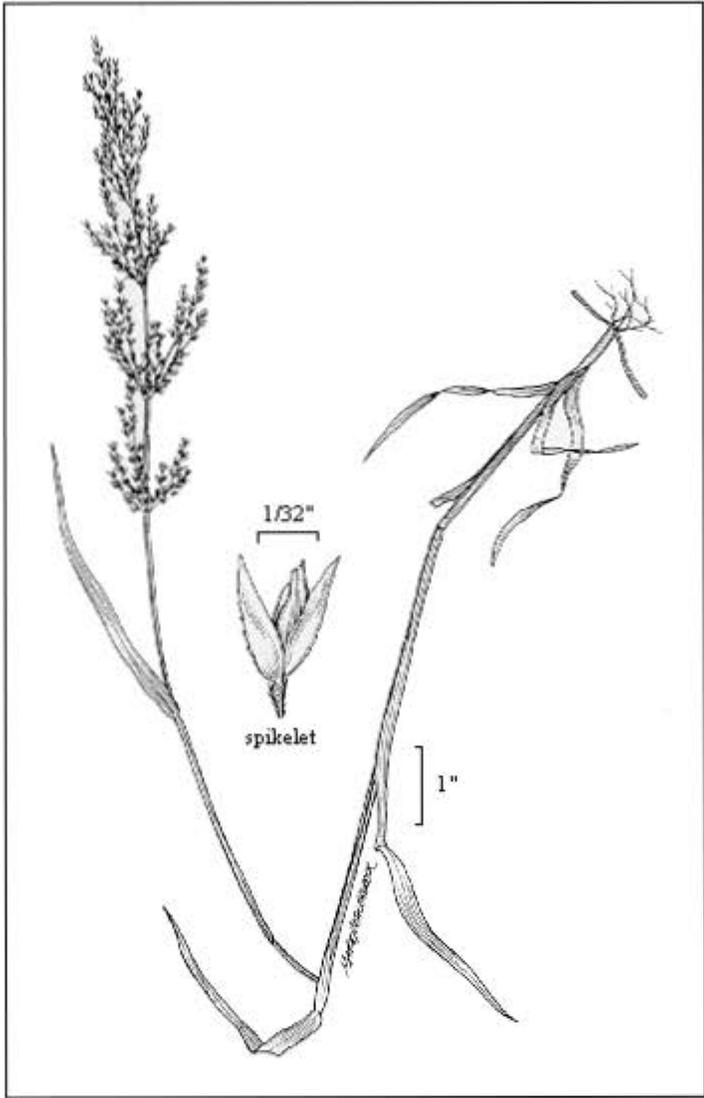
Northeast Wetland Flora

Field Office Guide to Plant Species

Spreading Bentgrass *Agrostis stolonifera* L.



- **Family:** Grass (Gramineae)
- **Flowering:** June-September
- **Field Marks:** Most species of *Agrostis* have thread-like branches that bear the 1-flowered spikelets. This one has leaves 1/4-1/2 inch wide and has slender underground rhizomes.
- **Habitat:** Fields, wet areas, moist meadows, damp thickets.
- **Habit:** Perennial grass with slender rhizomes.
- **Stems:** Spreading, smooth, up to more than 3 feet long.
- **Leaves:** Elongated, flat or sometimes inrolled along the edges, 1/4-1/2 inch wide, smooth; ligules membranous, minutely jagged along the edge.
- **Flowers:** Borne in spikelets in a panicle on thread-like branches, purplish to straw-colored, the 1-flowered spikelets 1/12-1/6 inch long; glumes pointed at the tip; lemmas pointed, about as long as the glumes, awnless.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Oblongoid, smooth.
- **Notes:** This species is variable in that the inflorescence may be purple or straw-colored. The name *Agrostis stolonifera* includes species formerly known as *Agrostis gigantea*, *A. alba*, and *A. palustris*. Gleason and Cronquist call this family Poaceae. This species is used for sod, for golf greens, and as a conservation plant for moist sites.

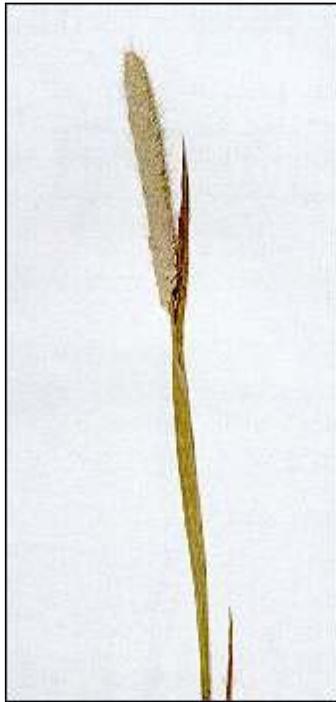


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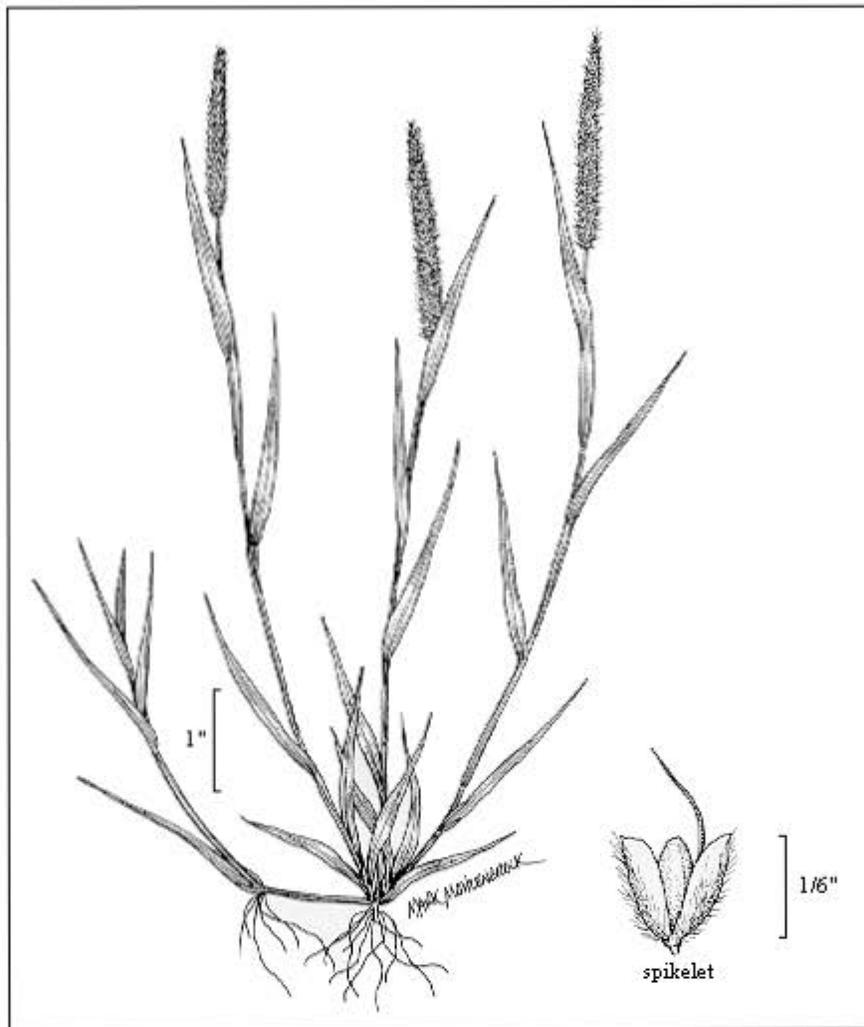
Field Office Guide to Plant Species

Meadow Foxtail

Alopecurus geniculatus L.



- **Family:** Grass (Gramineae)
- **Flowering:** May-August
- **Field Marks:** Species of *Alopecurus* are characterized by many 1-flowered spikelets; crowded into slender, spike-like panicles. This species differs from the others by its perennial habit, its short spikelets 1/10-1/6 inch long, and a bent awn inserted at the base of each lemma.
- **Habitat:** Wet areas, roadside ditches.
- **Habit:** Perennial grass, rooting at the lower nodes.
- **Stems:** Spreading or lying flat but becoming ascending at the tip, smooth, up to 1 1/2 feet long.
- **Leaves:** Elongated, flat, up to 1/6 inch wide, usually rough along the edges.
- **Flowers:** Borne in spikelets, with many spikelets crowded into slender, spike-like panicles, the panicles up to 3 1/2 inches long, up to 1/3 inch thick, sometimes purplish.
- **Spikelets:** 1-flowered, flat, 1/8-1/6 inch long, the glumes rounded at the tip, long-ciliate, the gemma 5-nerved, shorter than the glumes, with a bent awn inserted at the base of the lemma and about twice as long as the glumes.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains narrowly ellipsoid, smooth.
- **Notes:** This family is Poaceae according to Gleason and Cronquist. This is a naturalized introduced species from Europe.

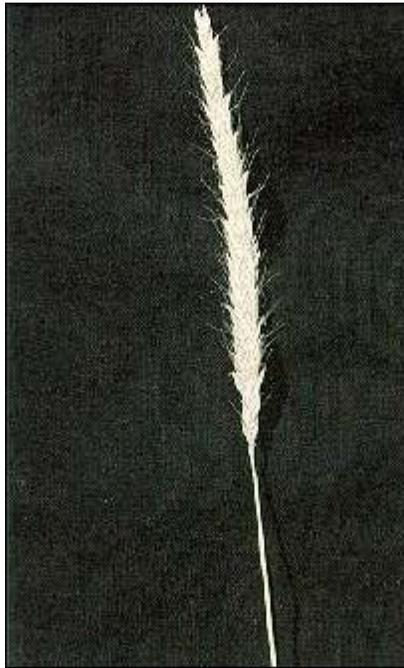


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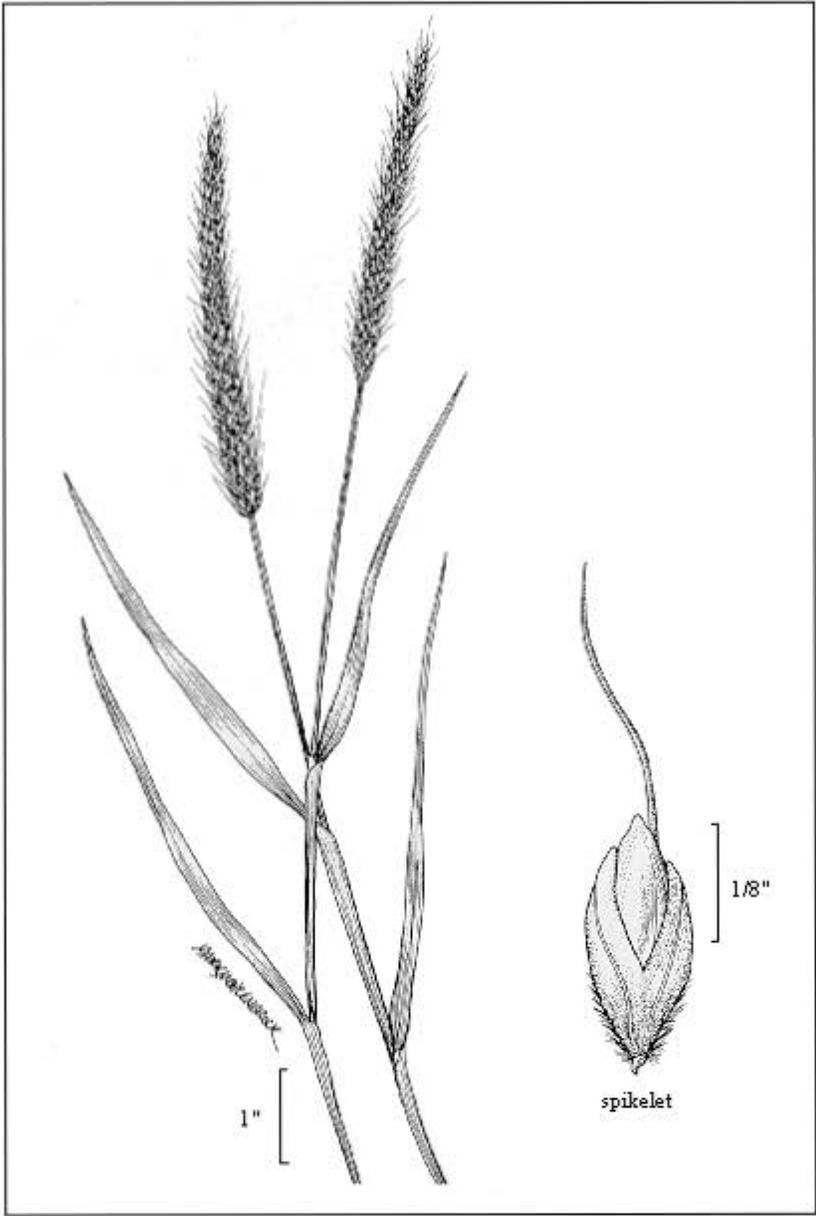
Field Office Guide to Plant Species

Mouse Foxtail

Alopecurus myosuroides Huds.



- **Family:** Grass (Gramineae)
- **Flowering:** May-September
- **Field Marks:** This foxtail differs from all others by its spikelets 1/4-1/3 inch long and the awn of the lemma 1/4-1/3 inch long.
- **Habitat:** Open areas, meadows, pastures, ditches.
- **Habit:** Annual grass with fibrous roots.
- **Stems:** Upright or ascending, slender, somewhat rough to the touch, up to 2 feet tall.
- **Leaves:** Elongated, flat, rough to the touch, 1/10-1/6 inch wide.
- **Flowers:** Borne in spikelets, with many spikelets crowded into slender, spike-like panicles, the panicles up to 4 inches long, up to 1/4 inch thick.
- **Spikelets:** 1-flowered, flat, 1/4-1/3 inch long, the glumes pointed, hairy only on the keel below the middle, the lemma longer than the glumes, with a slightly bent awn inserted near the base of the lemma and about twice as long as the glumes.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains narrowly ellipsoid, smooth.
- **Notes:** Gleason and Cronquist call this family Poaceae. This species is a naturalized introduced species from Europe.

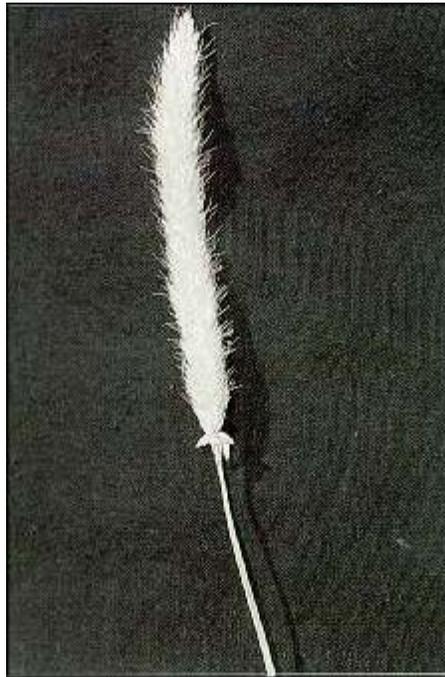


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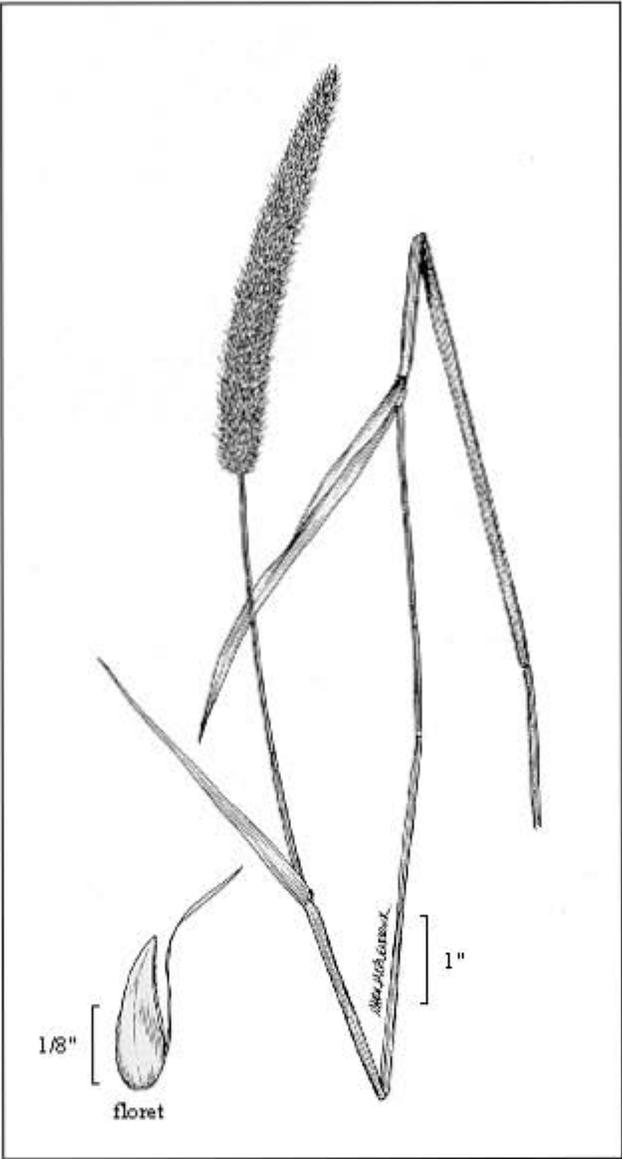
Field Office Guide to Plant Species

Meadow Foxtail

Alopecurus pratensis L.



- **Family:** Grass (Gramineae)
- **Flowering:** May-August
- **Field Marks:** The distinguishing features of this foxtail are its long-ciliate glumes, its spikelets 1/4-1/3 inch long, and its perennial growth form.
- **Habitat:** Moist open areas, meadows, pastures, ditches.
- **Habit:** Perennial grass with creeping rhizomes.
- **Stems:** Upright or ascending, usually somewhat rough to the touch, up to 3 feet tall.
- **Leaves:** Elongated, flat, somewhat rough to the touch, 1/10-1/4 inch wide.
- **Flowers:** Borne in spikelets, with many spikelets crowded into slender, spike-like panicles, the panicles up to 5 inches long, up to 1/2 inch thick.
- **Spikelets:** 1-flowered, flat, 1/4-1/3 inch long, the glumes pointed, long-ciliate, the lemma about as long as the glumes, with a bent awn inserted near the base of the lemma and about twice as long as the glumes.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains narrowly ellipsoid, smooth.
- **Notes:** This family is Poaceae according to Gleason and Cronquist. This species is a naturalized introduction from Europe.



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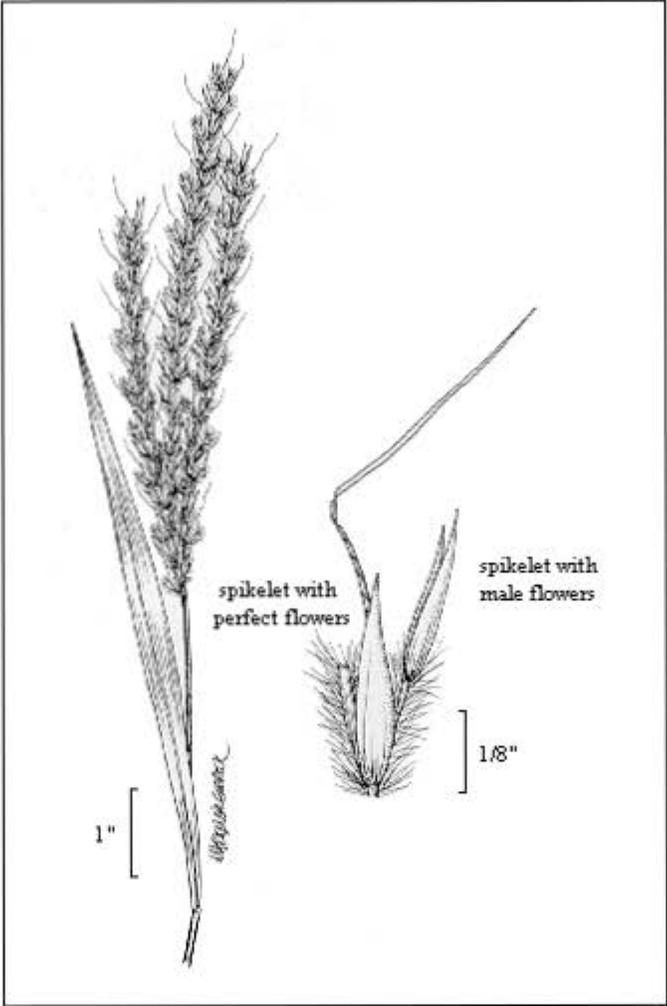
Field Office Guide to Plant Species

Big Bluestem

Andropogon gerardii Vitman



- **Family:** Grass (Gramineae)
- **Flowering:** June-September
- **Field Marks:** The stalked spikelet of each pair only contains male flowers and has both glumes well developed. The spikelets are borne in 2-6 purplish, finger-like racemes.
- **Habitat:** Moist or dry open areas, shores, and a major constituent of prairies.
- **Habit:** Tufted perennial grass from stout rhizomes.
- **Stems:** Upright, stout, smooth, up to 12 feet tall.
- **Leaves:** Elongated, ascending, smooth or with soft white hairs, up to 1/2 inch wide.
- **Flowers:** Borne in 2-6 purplish, spike-like racemes, the racemes up to 6 inches long, slender, with a ciliate axis.
- **Spikelets:** In pairs, the stalked one only with male flowers and awnless, the sessile one with both male and female flowers, the sessile one 1/4-1/2 inch long, bearing a twisted awn on the lemma 1/3-3/4 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 6.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** Gleason and Cronquist use Poaceae for this family.



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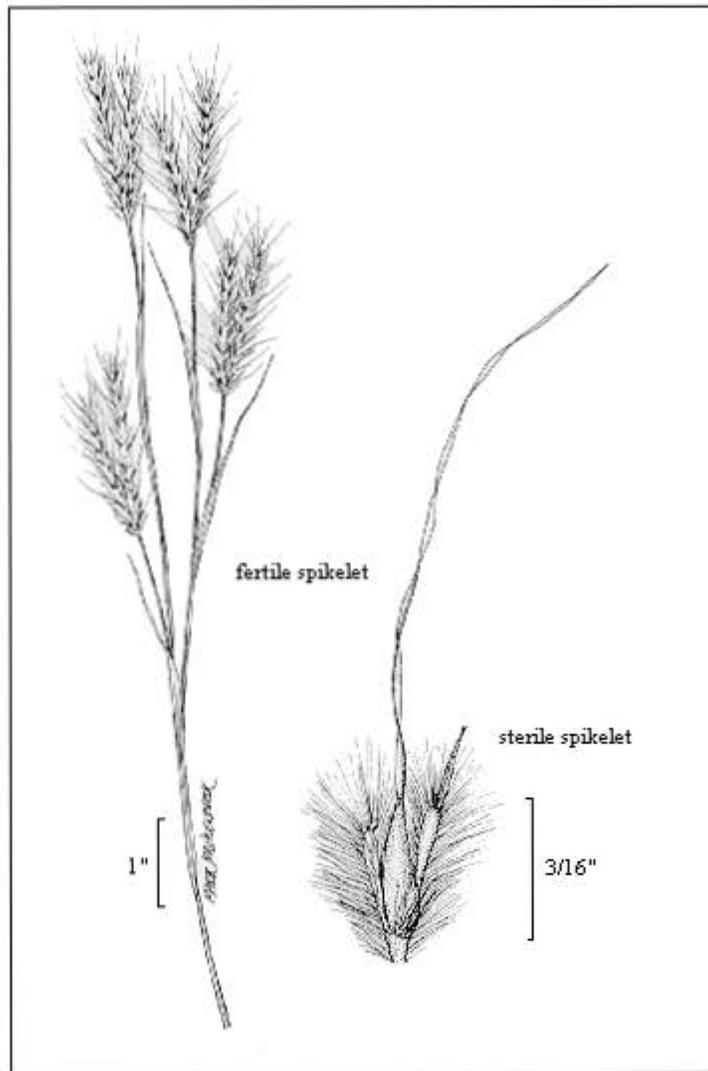
Field Office Guide to Plant Species

Sliver Bluestem

Andropogon ternarius Michx.



- **Family:** Grass (Gramineae)
- **Flowering:** July-October
- **Field Marks:** The sterile spikelet of the pair is absent, represented only by the stalk which is shorter than the sessile spikelet. The rachis and sterile stalk are covered by silvery hairs.
- **Habitat:** Woods, fields, roadsides.
- **Habit:** Tufted perennial grass from rhizomes.
- **Stems:** Upright, smooth, to 4 feet tall, branched above.
- **Leaves:** Elongated, ascending, usually with appressed hairs, up to 1/3 inch wide.
- **Flowers:** Borne in 2-3 erect, spike-like racemes, the racemes up to 2 inches long, silvery.
- **Spikelets:** In pairs, the stalked one reduced to a silvery-hairy stalk, the sessile one with male and female flowers, 1/4-1/3 inch long, hidden by dense silvery hairs, the spiral awn up to 1 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** This family is Poaceae according to Gleason and Cronquist.



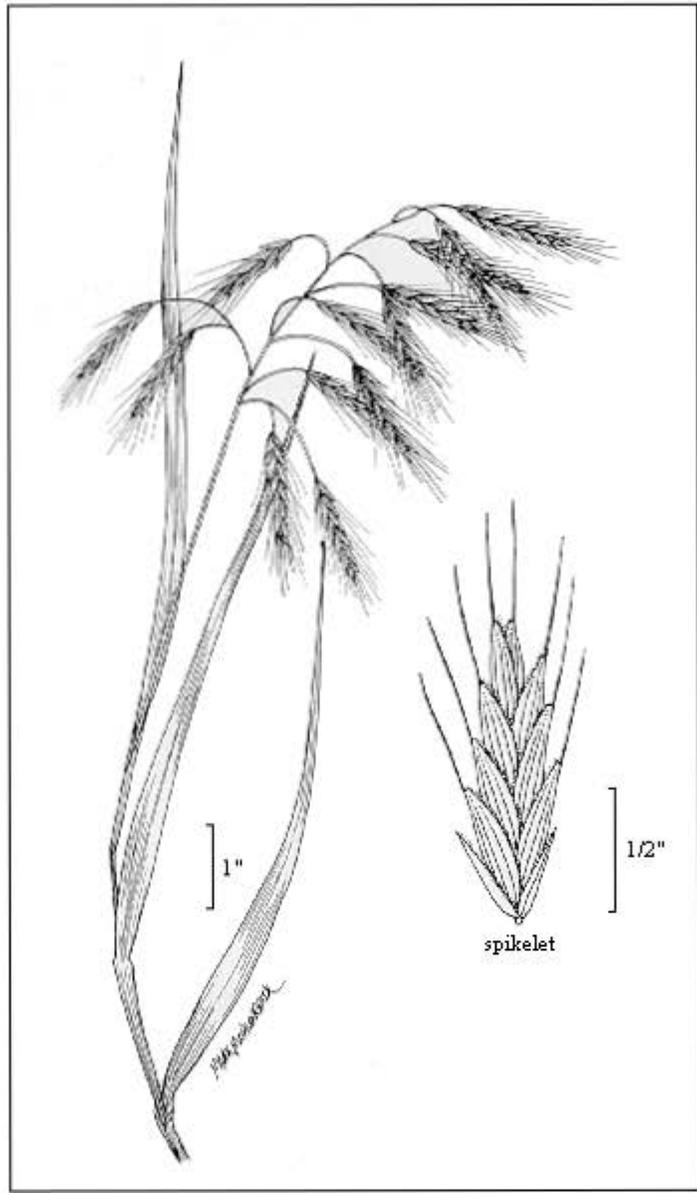
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Fringed Brome *Bromus ciliatus* L.



- **Family:** Grass (Gramineae)
- **Flowering:** June-October
- **Field Marks:** This is the only perennial *Bromus* with strongly folded glumes and lemmas.
- **Habitat:** Moist ground in woods and swamps.
- **Habit:** Perennial grass from rhizomes.
- **Stems:** Upright, branched or unbranched, slender, smooth or sometimes hairy at the nodes, up to 5 feet tall.
- **Leaves:** Elongated, smooth or hairy on both surfaces, up to 3/4 inch wide; sheaths smooth or hairy.
- **Flowers:** Borne in spikelets, with many spikelets in an open, pendulous panicle, the panicle up to 10 inches long.
- **Spikelets:** 3- to 10-flowered, up to 1 1/2 inches long; glumes folded, the first one 1-nerved and 1/4-1/3 inch long, the second one 3-nerved and 1/3-1/2 inch long; lemmas folded, 5- to 7-nerved, about 1/2 inch long, hairy, with an awn up to 1/4 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** Gleason and Cronquist use the name Asteraceae for this family. When the spikelets are mature, the rachis between the lemmas is sometimes exposed. The spikelets occasionally become purplish at maturity. The grains are eaten by wild birds.



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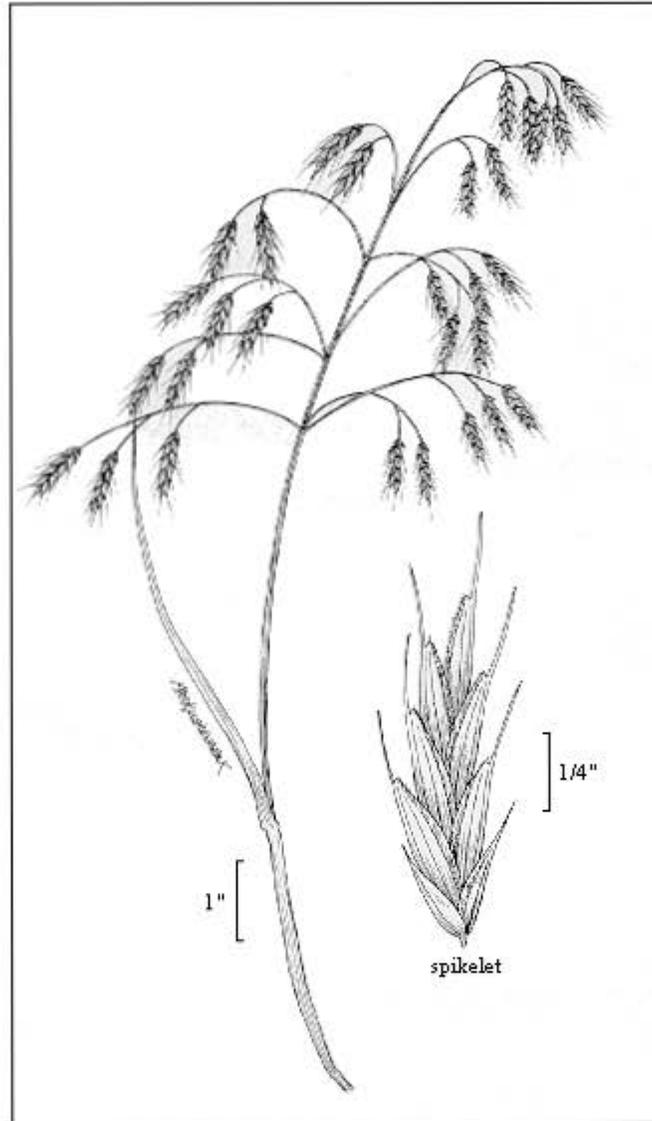
Field Office Guide to Plant Species

Dudley Brome
Bromus dudleyi Fern.



- **Family:** Grass (Gramineae)
- **Flowering:** June-August
- **Field Marks:** The features that distinguish this brome from all others are the perennial growth form, the spreading or drooping panicle branches, the nodes not completely covered by the leaf sheaths, and the flat or convex lemmas with hairs confined to two marginal rows.
- **Habitat:** Wet meadows, damp thickets.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, branched or unbranched, up to 4 feet tall, smooth.
- **Leaves:** Elongated, flat, smooth or sometimes hairy on the upper surface, usually smooth on the lower surface, up to 1/2 inch across; sheaths smooth or hairy, shorter than the internodes.
- **Flowers:** Several in open panicles up to 2 feet long, the branches spreading to drooping; spikelets 4- to 7-flowered, green, purplish, or bronze, up to 1 1/4 inches long, up to 1/2 inch wide.
- **Glumes:** Flat or convex, the first 1-nerved, the second 3-nerved, usually with some hairiness, tapering to a pointed tip.
- **Lemmas:** Flat or convex, narrowly oblong, 3- to 5-nerved, with 2 rows of marginal hairs, up to 1/2 inch long, with an awn 1/10-1/5 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains oblongoid to lanceoloid, smooth.

- **Notes:** This plant is considered to be the same as *B. ciliatus* by Gleason and Cronquist. They call the family Poaceae. The grains are eaten by waterfowl.



Northeast Wetland Flora

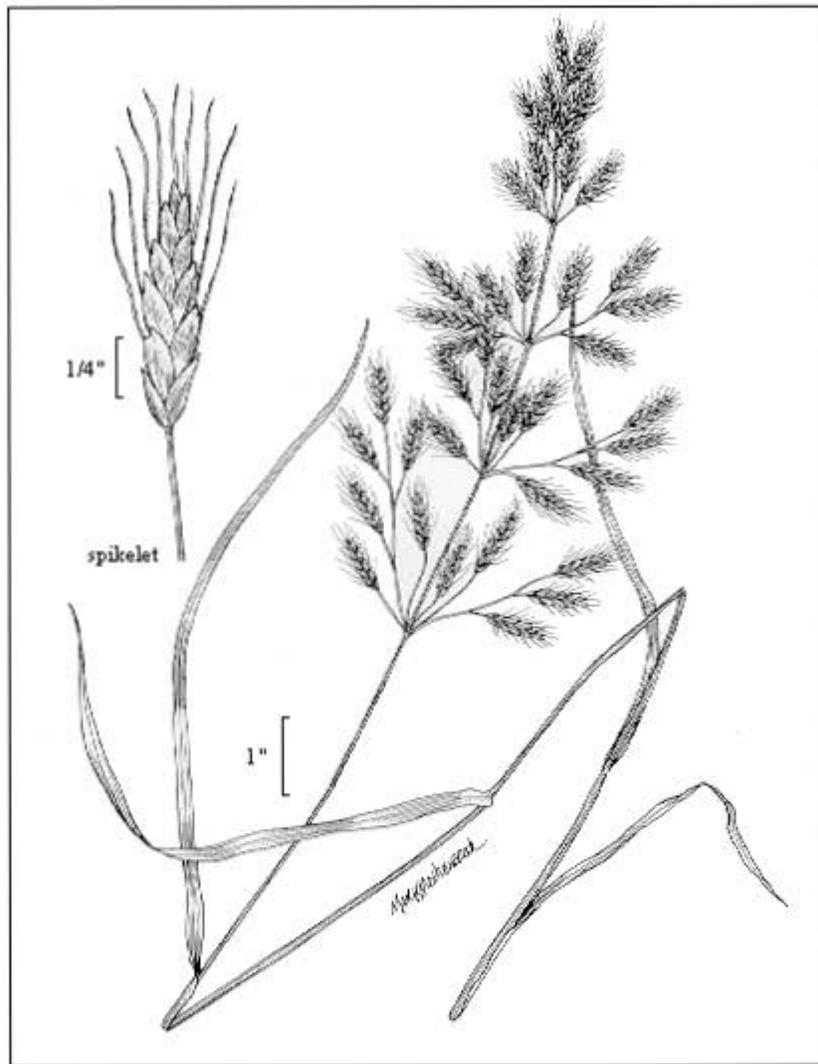
Field Office Guide to Plant Species

Japanese Brome

Bromus japonicus Thunb.



- **Family:** Grass (Gramineae)
- **Flowering:** May-July
- **Field Marks:** This is the only annual *Bromus* that has a spreading or drooping inflorescence and a slightly twisted awn 1/3-1/2 inch long.
- **Habitat:** Fields, disturbed areas.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, unbranched, up to 2 1/2 feet tall, densely hairy.
- **Leaves:** Elongated, flat, 1/12-1/6 inch wide, soft-hairy on both surfaces; ligules membranous.
- **Flowers:** Borne in spikelets in a spreading or drooping inflorescence, 4-8 inches long; spikelets 7- to 10-flowered, 1-1 1/4 inches long; glumes smooth, pointed at the tip; lemmas rounded at the tip, but with a slightly twisted awn 1/3-1/2 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Oblongoid, smooth.
- **Notes:** This family is called Poaceae by Gleason and Cronquist. This is an introduced, naturalized species.



Northeast Wetland Flora

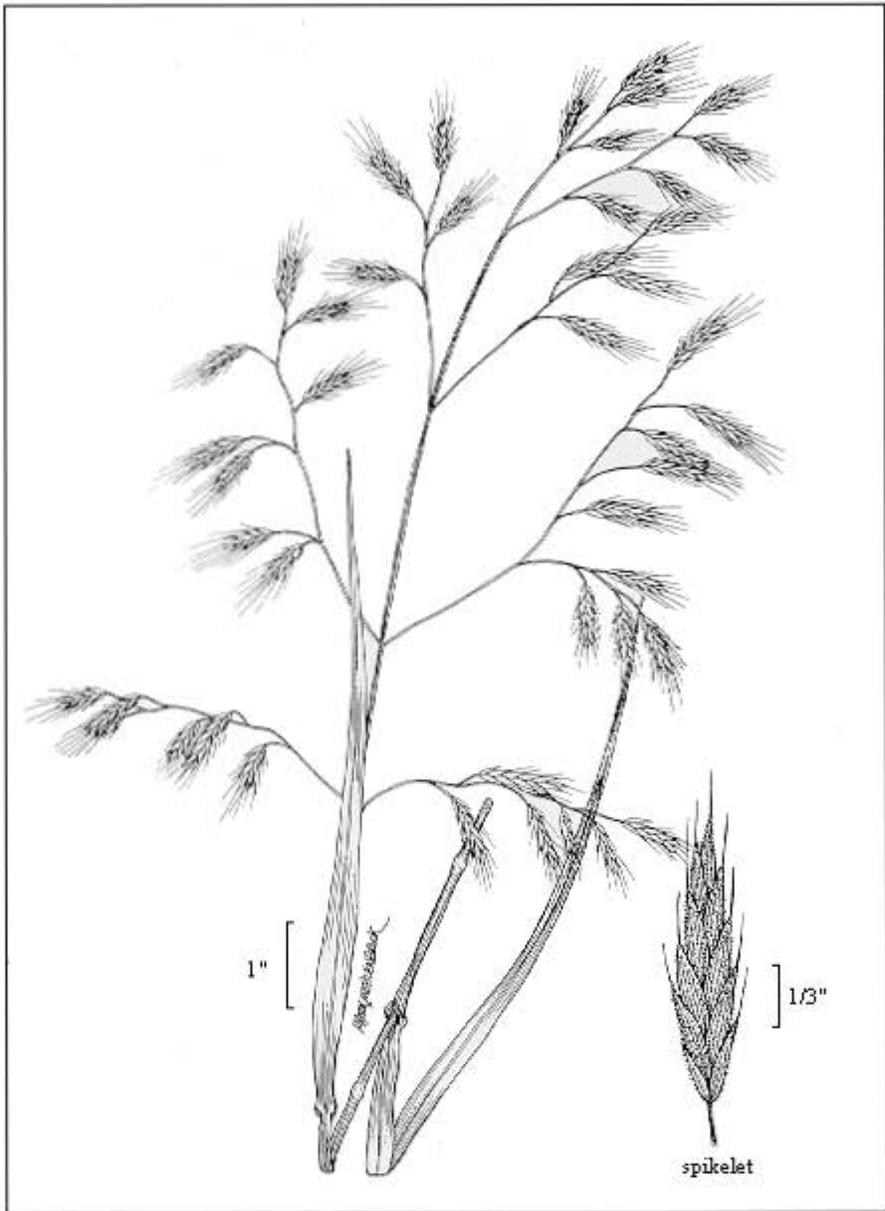
Field Office Guide to Plant Species

Earleaf Brome

Bromus latiglumis (Shear) Hitchc.



- **Family:** Grass (Gramineae)
- **Flowering:** August-September
- **Field Marks:** This perennial brome differs from others by the leaf sheaths that have ear-like lobes, are densely hairy at the top, and cover all the nodes on the stem.
- **Habitat:** Rich woods.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, usually branched, smooth, up to 6 feet tall.
- **Leaves:** Elongated, ascending, smooth or hairy, usually prolonged into ear-like lobes at the base of the blade, and a hairy ring at the top, with a white midvein, up to 3/4 inch wide; sheaths covering all the nodes.
- **Flowers:** Arranged in spikelets, with many spikelets in a loose panicle up to 1 foot long, most of the branches paired, the lowest often drooping.
- **Spikelets:** 3- to 8-flowered, lanceolate to elliptic, up to 1 2/3 inches long, up to 1/2 inch wide; glumes smooth or hairy; lemmas 5- to 7-nerved, usually silky-hairy, with an awn up to 1/3 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** Gleason and Cronquist call this plant *B. altissimus* in the Poaceae.



Northeast Wetland Flora

Field Office Guide to Plant Species

Canada Brome *Bromus purgans* L.



- **Family:** Grass (Gramineae)
- **Flowering:** June-September
- **Field Marks:** This native, perennial species of brome differs by its drooping panicles and its 10-20 leaves on the stem.
- **Habitat:** Moist, open woods, thickets.
- **Habit:** Perennial with slender rhizomes.
- **Stems:** Upright, to 5 feet tall, with 10-20 leaves.
- **Leaves:** Elongated, flat, 1/4-3/4 inch wide, smooth or sparsely hairy, with short-hairy or smooth sheaths.
- **Flowers:** Borne in spikelets in a panicle on drooping branches; spikelets 3- to 8-flowered, 3/4-1 3/4 inches long; glumes slender pointed; lemmas smooth or with silky hairs at base, each with an awn up to 1/3 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Oblongoid, smooth.
- **Notes:** Gleason and Cronquist call this species *B. pubescens* in the Poaceae.



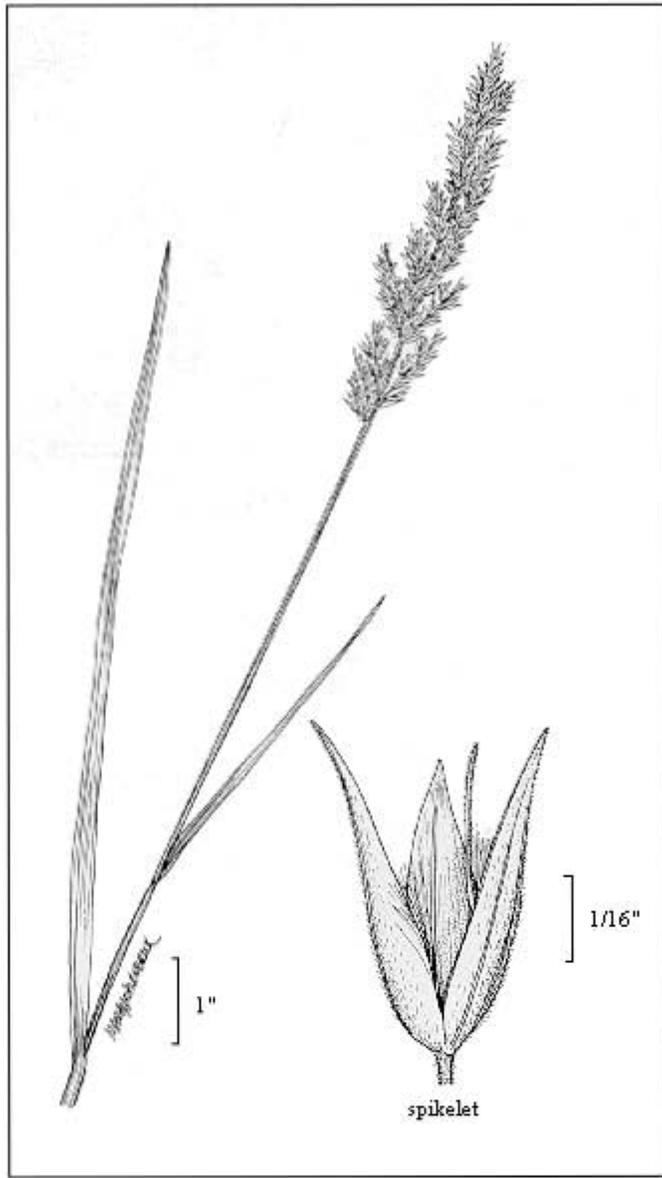
Northeast Wetland Flora

Field Office Guide to Plant Species

Nuttall's Small-reedgrass
Calamagrostis cinnoides (Muhl.) Barton



- **Family:** Grass (Gramineae)
- **Flowering:** July-October
- **Field Marks:** This species has contracted, spike-like panicles, spikelets about 1/3 inch long and tinged with purple, lemmas with short, straight awns, and awnless glumes which are longer than the lemma.
- **Habitat:** Bogs, wet meadows, sometimes in saline areas.
- **Habit:** Perennial grass from thickened rootstocks.
- **Stems:** Upright, stout, usually unbranched, smooth, up to 5 feet tall, glaucous or bluish green.
- **Leaves:** Elongated, ascending, up to 1/2 inch wide, rough to the touch.
- **Flowers:** Borne in spikelets, with numerous spikelets in contracted, spike-like panicles, the panicles erect, up to 8 inches long, up to 2 inches wide, purplish.
- **Spikelets:** 1-flowered, about 1/3 inch long; glumes tapering to a short awnless point; lemma pointed at the tip, with a straight awn, shorter than the glumes, densely hairy at the base, with a straight awn.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, hairy at the tip.
- **Notes:** This family is Poaceae according to Gleason and Cronquist.



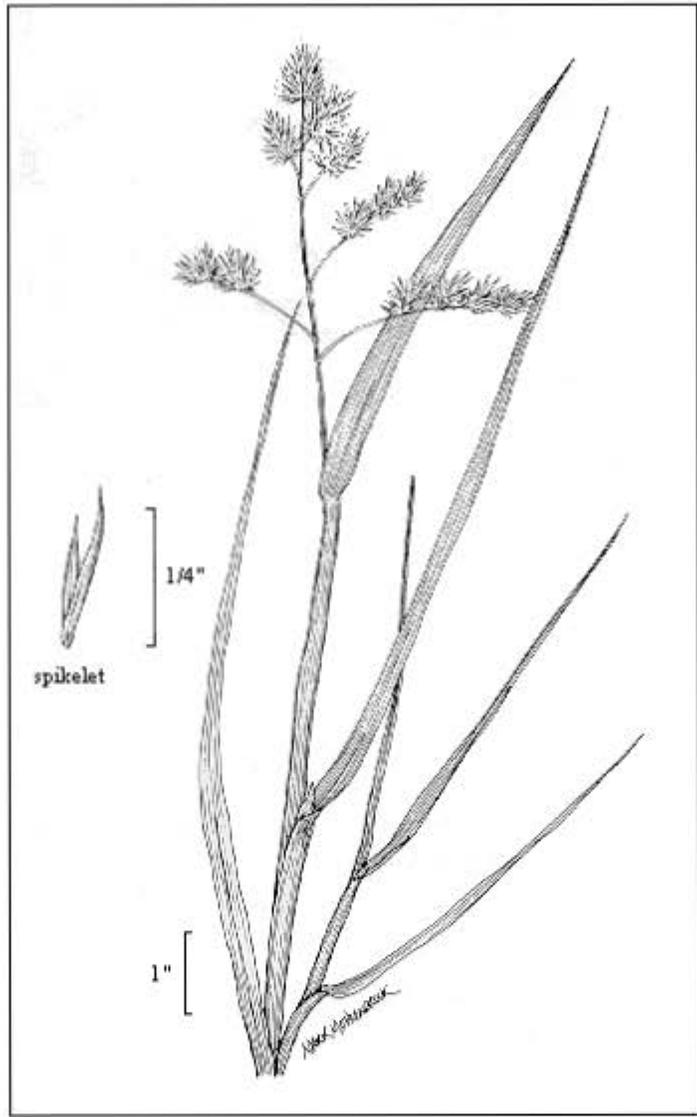
Northeast Wetland Flora

Field Office Guide to Plant Species

Orchard Grass *Dactylis glomerata* L.



- **Family:** Grass (Gramineae)
- **Flowering:** May-July
- **Field Marks:** This grass is distinguished by its many-flowered spikelets and pointed lemmas that are ciliate along the keel. The spikelets are crowded in 1-sided panicles.
- **Habitat:** Disturbed areas, fields, roadsides, meadows.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, up to 4 feet tall, usually slightly rough to the touch.
- **Leaves:** Elongated, flat, 1/10-1/3 inch wide, rough to the touch; ligules membranous, 1/4-1/3 inch long.
- **Flowers:** Borne in spikelets arranged in 1-sided panicles 2 1/2-8 inches long; spikelets 3- to 6-flowered, crowded; glumes pointed and unequal in length; lemmas pointed, ciliate along the keel, awnless or with an awn up to 1/10 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Ellipsoid, smooth.
- **Notes:** This family is Poaceae according to Gleason and Cronquist. This species is sometimes cultivated as a pasture grass or for hay. This is a European introduction that is now widely naturalized.

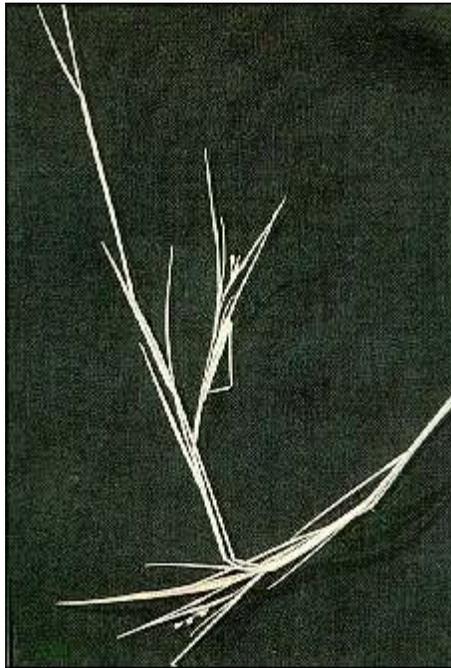


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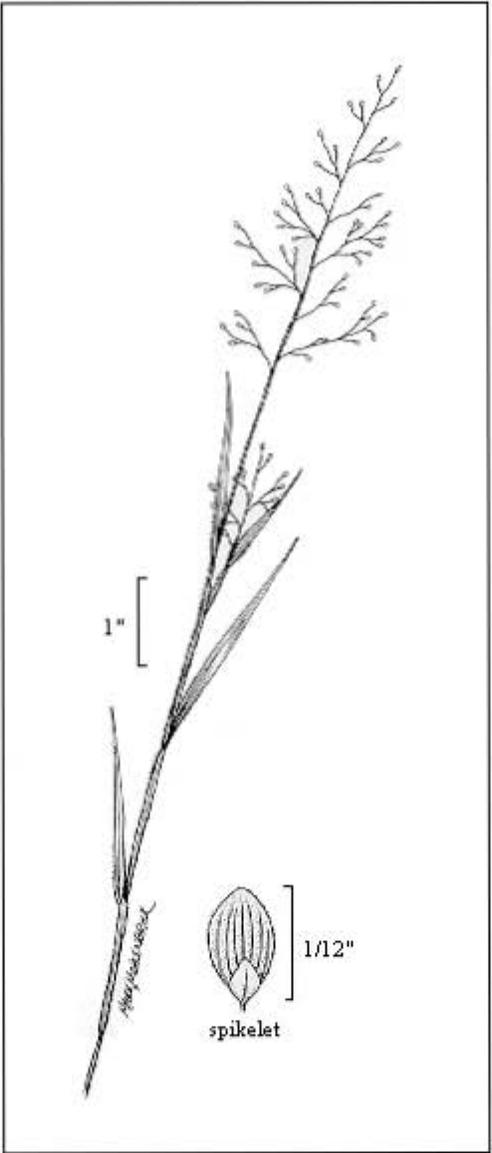
Field Office Guide to Plant Species

Needle-leaf Witchgrass

Dichanthelium aciculare (Desv. ex Poir.) Gould & C.A. Clark



- **Family:** Grass (Gramineae)
- **Flowering:** May-October
- **Field Marks:** This species differs from all others in the genus by the minutely hairy lower part of the stems, its hairy, tiny spikelets about 1/12 inch long, and its firm, long-pointed, narrow leaves.
- **Habitat:** Dry sandy soil.
- **Habit:** Densely tufted perennial grass from thickened rootstocks and with winter rosettes of leaves.
- **Stems:** Spreading to upright, slender, stiff, minutely hairy at least on the lower parts, gray-green, up to 2 feet long.
- **Leaves:** Elongated, firm, sharp-pointed at the tip, smooth on the upper surface, often long-hairy on the lower surface and ciliate towards the base, up to 3 inches long, up to 1/4 inch wide; lowest sheaths appressed-hairy, the upper ones without hairs.
- **Flowers:** Borne in spikelets arranged in panicles, the spikelets 1-flowered, obovoid, minutely hairy, about 1/12 inch long, the first glume about 1/4 as long as the spikelet.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grain obovoid, smooth.
- **Notes:** This species is called *Panicum aciculare* of the Poaceae by Gleason and Cronquist. The autumnal phase of this grass is bushy-branched and matted, and the curved leaves are inrolled into a tube.



Northeast Wetland Flora

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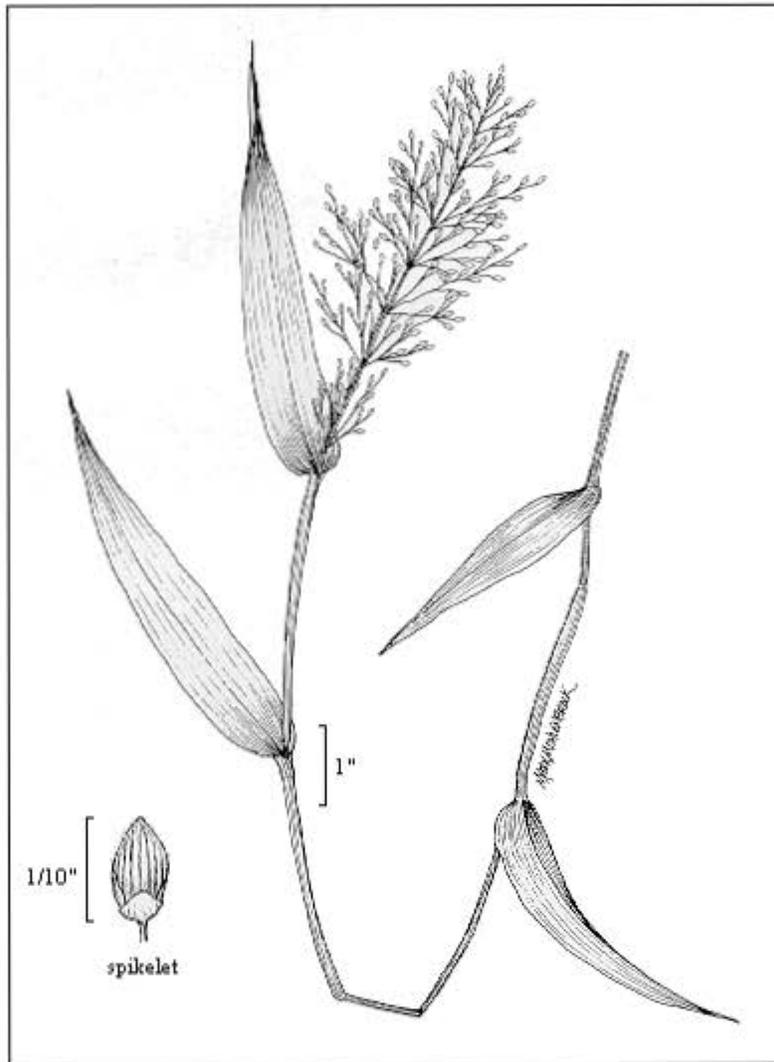
Variable Witchgrass

Dichanthelium commutatum (J.A. Schultes) Gould



- **Family:** Grass (Gramineae)
- **Flowering:** May-September
- **Field Marks:** This witchgrass differs from all other species of *Dichanthelium* that have leaves about one inch wide by its short-hairy spikelets about 1/10 inch long, its extremely short ligules, and the absence of swollen-based hairs on the leaf sheaths.
- **Habitat:** Mostly dry woods, clearings, less commonly in swamps.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, unbranched, up to 2 feet tall, smooth or soft-hairy, green to purplish.
- **Leaves:** Elongated, flat, up to 1 1/4 inches wide, smooth or short-hairy, ciliate near base; sheaths smooth or short-hairy; ligule about 1/20 inch long.
- **Flowers:** Borne in spikelets in panicles up to 6 inches long; spikelets 1-flowered, oblongoid, more or less rounded at the tip, about 1/10 inch long, short-hairy.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Ellipsoid, with a minute point at the tip.
- **Notes:** Gleason and Cronquist call this species *Panicum commutatum* in the Poaceae. This grass has different

vernal and autumnal phases. The vernal phase is described above. The autumnal phase has its primary panicle usually deciduous, and the much branched stem gives the plant a bushy appearance.



Northeast Wetland Flora

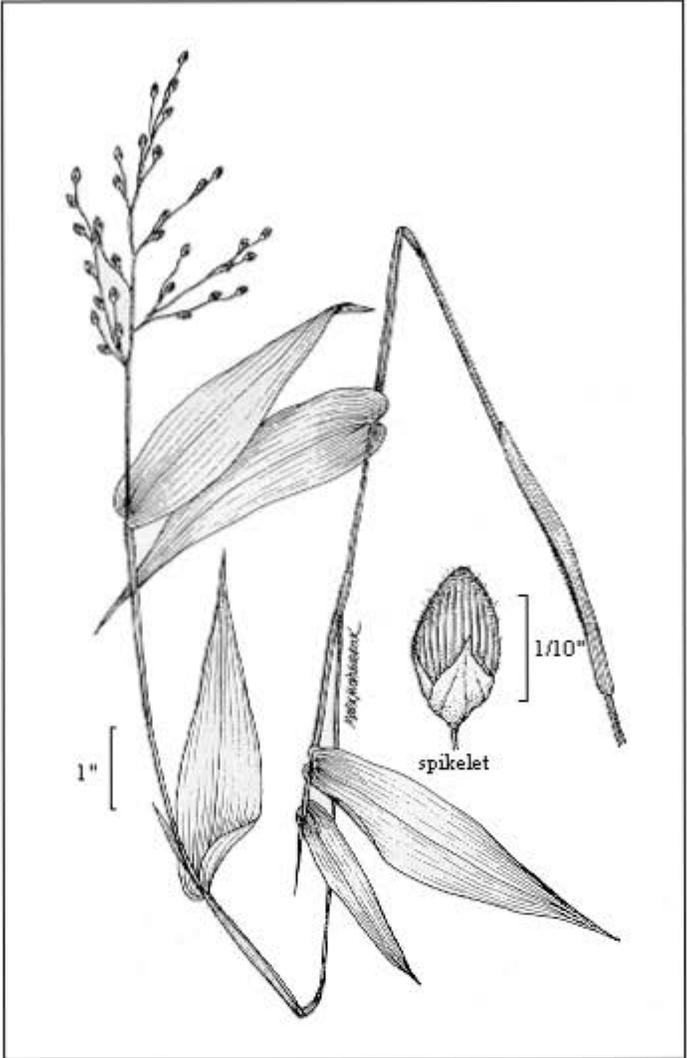
Field Office Guide to Plant Species

Broad-leaf Witchgrass

Dichanthelium latifolium (L.) Harvill



- **Family:** Grass (Gramineae)
- **Flowering:** May-September
- **Field Marks:** Of all the species of this genus with leaves at least one inch wide, this is the only one with large, hairy spikelets at least 1/6 inch long and with hairs without swollen bases on the leaf sheaths.
- **Habitat:** Dry, often rocky woods.
- **Habit:** Perennial herb from a thickened crown.
- **Stems:** Upright, unbranched, up to 3 feet tall, smooth or sparsely hairy.
- **Leaves:** Elongated, flat, up to 1 3/4 inches wide, usually smooth except for cilia near the base; sheaths smooth or sparsely hairy; ligules minute.
- **Flowers:** Borne in spikelets in panicles up to 6 inches long; spikelets 1-flowered, ovoid, rounded to slightly pointed at the tip, about 1/6 inch long, sparsely hairy.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Ellipsoid, with a minute point at the tip.
- **Notes:** Gleason and Cronquist call this species *Panicum latifolium* in the Poaceae. This grass has distinct vernal and autumnal phases. The vernal phase is described above. The autumnal phase has the panicles either completely or partially hidden.



Northeast Wetland Flora

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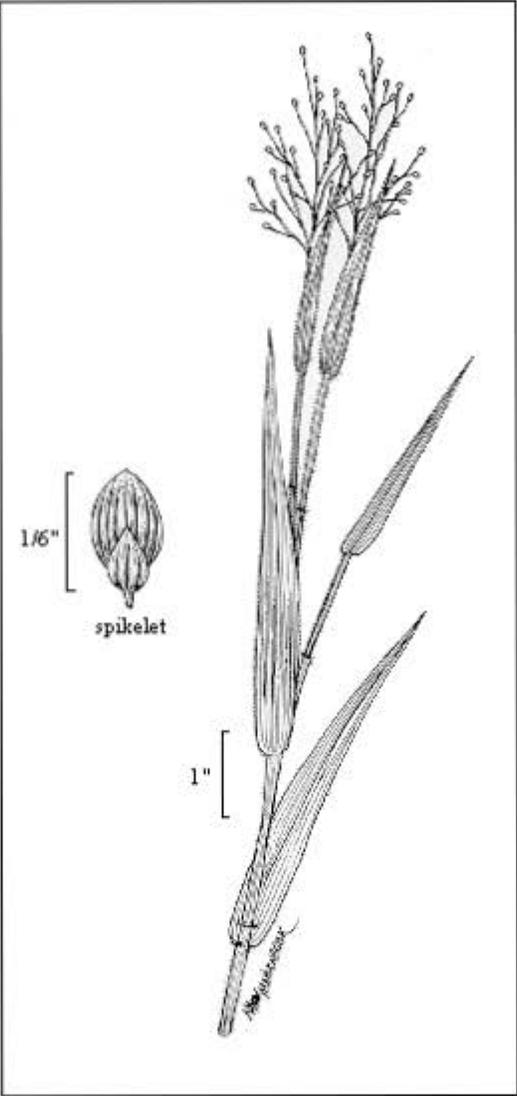
Egg-leaf Witchgrass

Dichanthelium ovale (Elliot) Gould & C.A. Clark



- **Family:** Grass (Gramineae)
- **Flowering:** May-July
- **Field Marks:** The characteristics of this species are the smooth, ellipsoid spikelets 1/8-1/6 inch long and the ligule about 1/6 inch long and which has a double row of hairs, one row a dense band of short hairs, the other a thin line of long hairs.
- **Habitat:** Dry woods, sandy woods.
- **Habit:** Densely tufted perennial herb with thickened rootstocks; autumnal phase with a rosette of basal leaves.
- **Stems:** Upright, branched or unbranched, up to 1 1/2 feet tall, with appressed hairs, the nodes conspicuously hairy.
- **Leaves:** Elongated, flat, smooth on the upper surface, appressed-hairy on the lower surface, rough along the margins, ciliate at the base; sheaths appressed-hairy; ligule about 1/6 inch long with two rows of hairs, one with short hairs and the other with long hairs.
- **Flowers:** Borne in spikelets arranged in panicles up to 3 inches long, the branches of the panicle usually with a few bristles; spikelets 1-flowered, ellipsoid, 1/8-1/6 inch long, smooth.
- **Glumes:** First glume lanceolate, pointed at the tip, smooth; second glume rounded at the tip, smooth.
- **Lemmas:** Rounded at the tip, smooth, about 1/6 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** Gleason and Cronquist call this family Poaceae. They refer to this species as *Panicum commonsianum*,

and include *P. ovale* as a southern range variant. There is a distinct autumnal phase in which a distinct basal rosette of leaves is present.



Northeast Wetland Flora

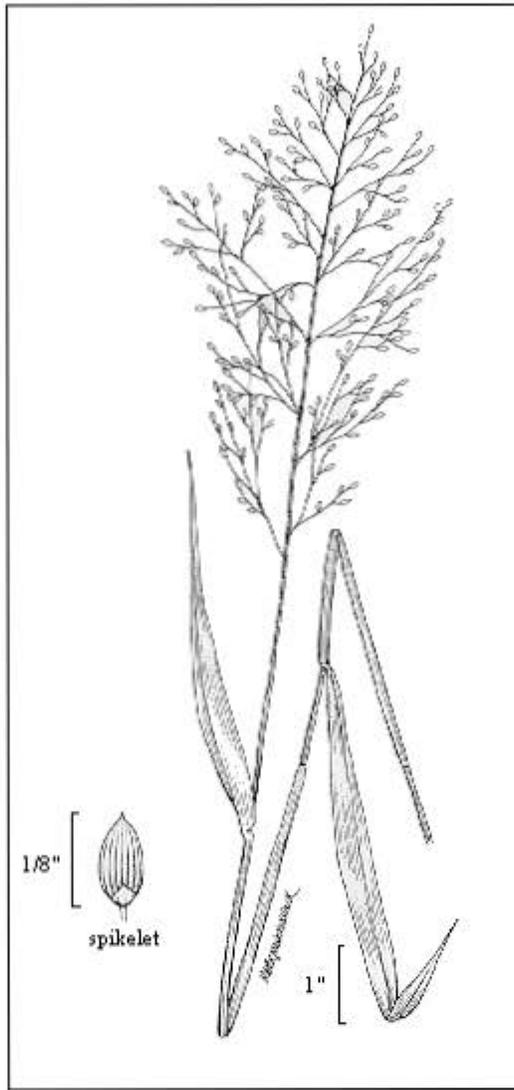
Field Office Guide to Plant Species

Woolly Panic Grass

Dichanthelium scabriusculum (Elliot) Gould & C.A. Clark



- **Family:** Grass (Gramineae)
- **Flowering:** May-November
- **Field Marks:** The characters that distinguish this grass from others in the genus are the roughened stems only at the nodes and the spikelets about 1/8 inch long with the first glume only 1/6 as long as the spikelet.
- **Habitat:** Common in marshy substrates, wet woods, depressions, shores of ponds, lakes, and ditches.
- **Habit:** Rather stout perennial herb with thickened rootstocks.
- **Stems:** Upright, stiff, stout, smooth except for the rough nodes, up to 4 1/2 feet tall.
- **Leaves:** Elongated, stiff, flat, sharp-pointed at the tip, smooth or rough to the touch on the upper surface, usually hairy on the lower surface, up to 3/4 inch wide.
- **Flowers:** Borne in spikelets arranged in panicles, the spikelets 1-flowered, ovoid, pointed at the tip, smooth or minutely hairy, purplish, about 1/8 inch long, with the first glume 1/6 as long as the spikelet.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grain obovoid, smooth.
- **Notes:** This species is called *Panicum scabriusculum* of the Poaceae by Gleason and Cronquist. The autumnal phase of this species has leaf and stem characters which differ from the summer, flowering growth. Autumnal phase bears branches which are densely tufted and with very hairy leaf sheaths.



Northeast Wetland Flora

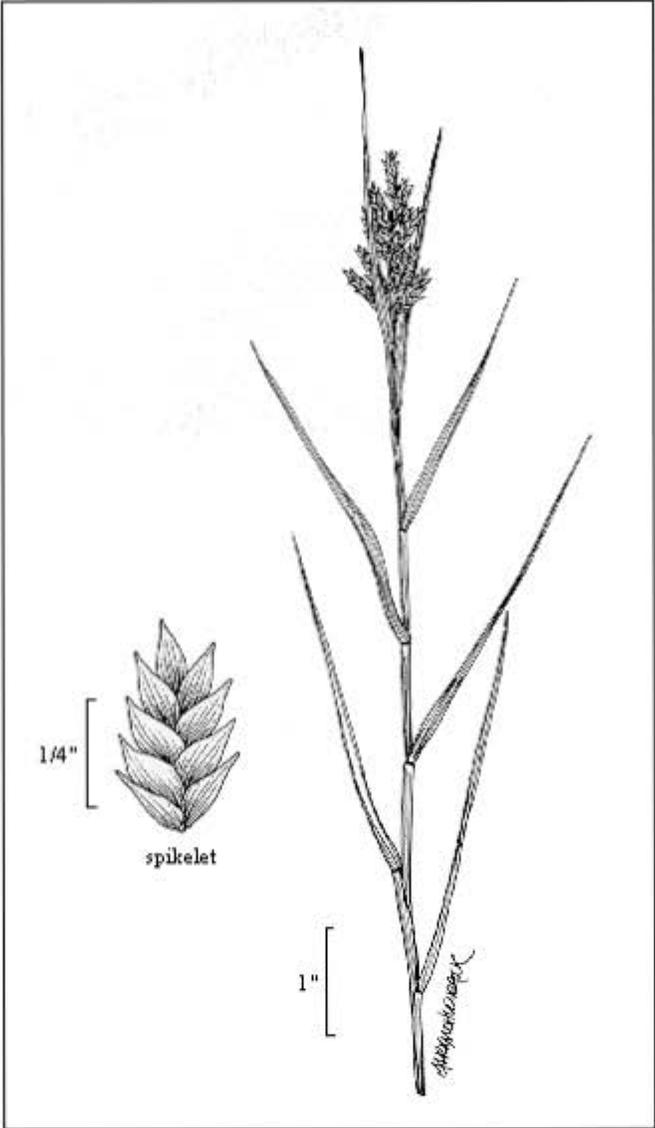
Field Office Guide to Plant Species

Inland Saltgrass

Distichlis spicata (L.) Greene



- **Family:** Grass (Gramineae)
- **Flowering:** August-October
- **Field Marks:** This grass is distinguished by its relatively short stature, its colonial habit, its male and female flowers borne on separate plants, its several-flowered spikelets, and its 2-ranked, stiff, inrolled leaves.
- **Habitat:** Salt marshes, brackish marshes.
- **Habit:** Perennial from slender, creeping rhizomes, often covering extensive expanses of land.
- **Stems:** Upright, branched or unbranched, smooth, pale green or glaucous, up to 1 1/2 feet tall.
- **Leaves:** Elongated, rigid, inrolled, smooth, strongly 2-ranked, up to 4 inches long.
- **Flowers:** Borne in spikelets, the male and female spikelets in panicles on separate plants, the panicles ovoid, up to 2 1/2 inches long; male spikelets 8- to 12-flowered, up to 1/2 inch long; female spikelets 4- to 9-flowered, up to 1/2 inch long.
- **Glumes:** Lanceolate, pointed at the tip, smooth, up to 1/6 inch long, 3- to 7-nerved.
- **Lemmas:** Lanceolate, pointed at the tip, smooth, up to 1/6 inch long, 3- to 7-nerved.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid, up to 1/12 inch long, smooth.
- **Notes:** This family is called Poaceae by Gleason and Cronquist. They list an additional variety, *D. spicata* var. *stricta*, which occurs on saline or alkaline soils within the interior of the United States and Canada. In tidal shoreline restorations and natural salt marshes, this species is located above the tide behind the *Spartina patens* (salt hay) zone.

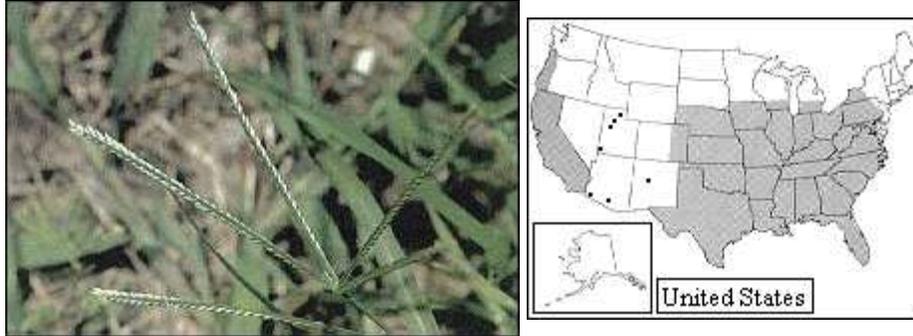


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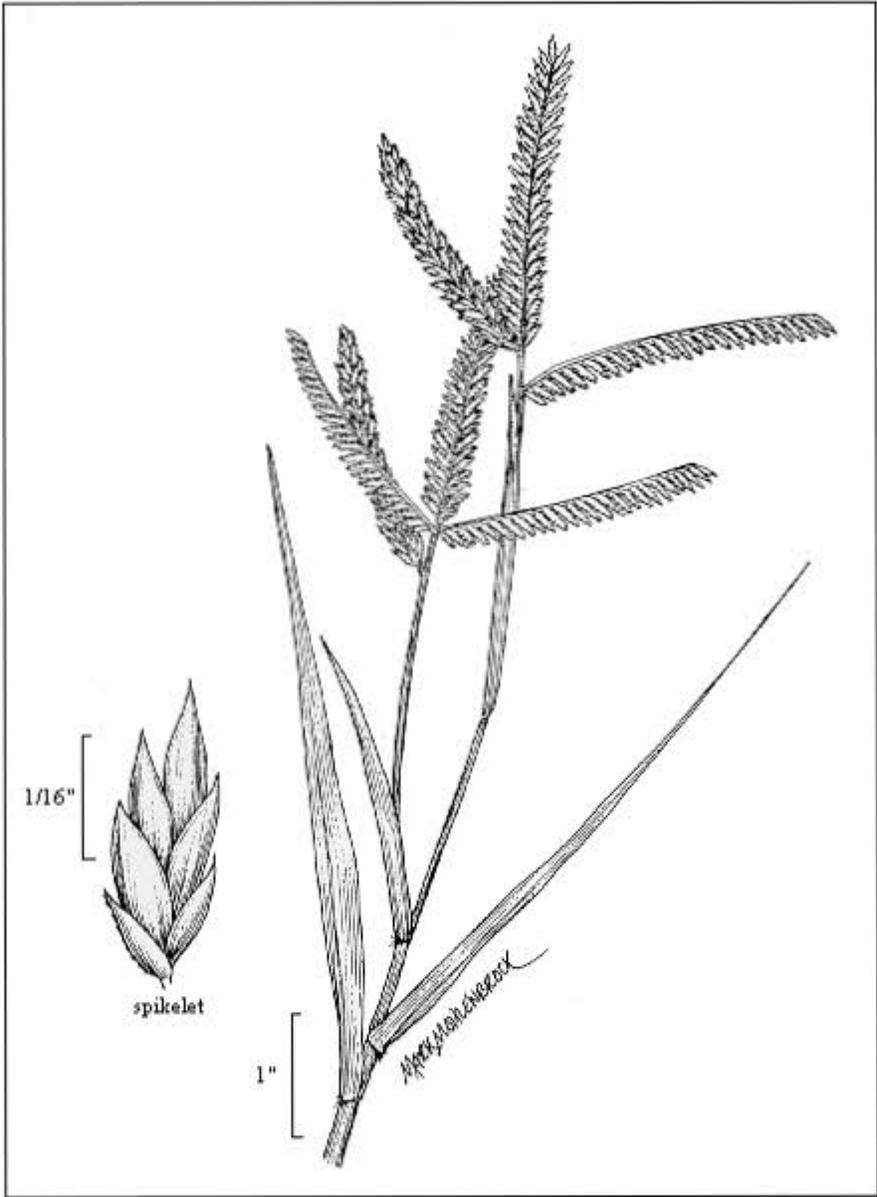
Field Office Guide to Plant Species

India Goosegrass

Eleusine indica (L.) Gaertn.



- **Family:** Grass (Gramineae)
- **Flowering:** July-October
- **Field Marks:** This grass is distinguished by its appressed, 3- to 5-flowered spikelets arranged in 2-10 finger-like spikes.
- **Habitat:** Disturbed soil.
- **Habit:** Tufted annual grass with fibrous roots.
- **Stems:** Spreading or ascending, branched from near the base, flattened, smooth, up to 1 1/2 feet tall.
- **Leaves:** Elongated, flat or folded, mostly smooth, up to 1/3 inch wide.
- **Flowers:** Borne in spikelets, the spikelets arranged on one side of finger-like spikes; spikes 2-10, up to 4 cm long; spikelets flattened, 3- to 6-flowered; glumes broadly lanceolate, rough on the keel; lemmas lanceolate to ovate, short-pointed at the tip, up to 1/6 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, up to 1/8 inch long, black.
- **Notes:** According to Gleason and Cronquist, this family is Poaceae. This tough-stemmed grass is difficult to eradicate from lawns and gardens. This grass has been naturalized from Europe and Asia.



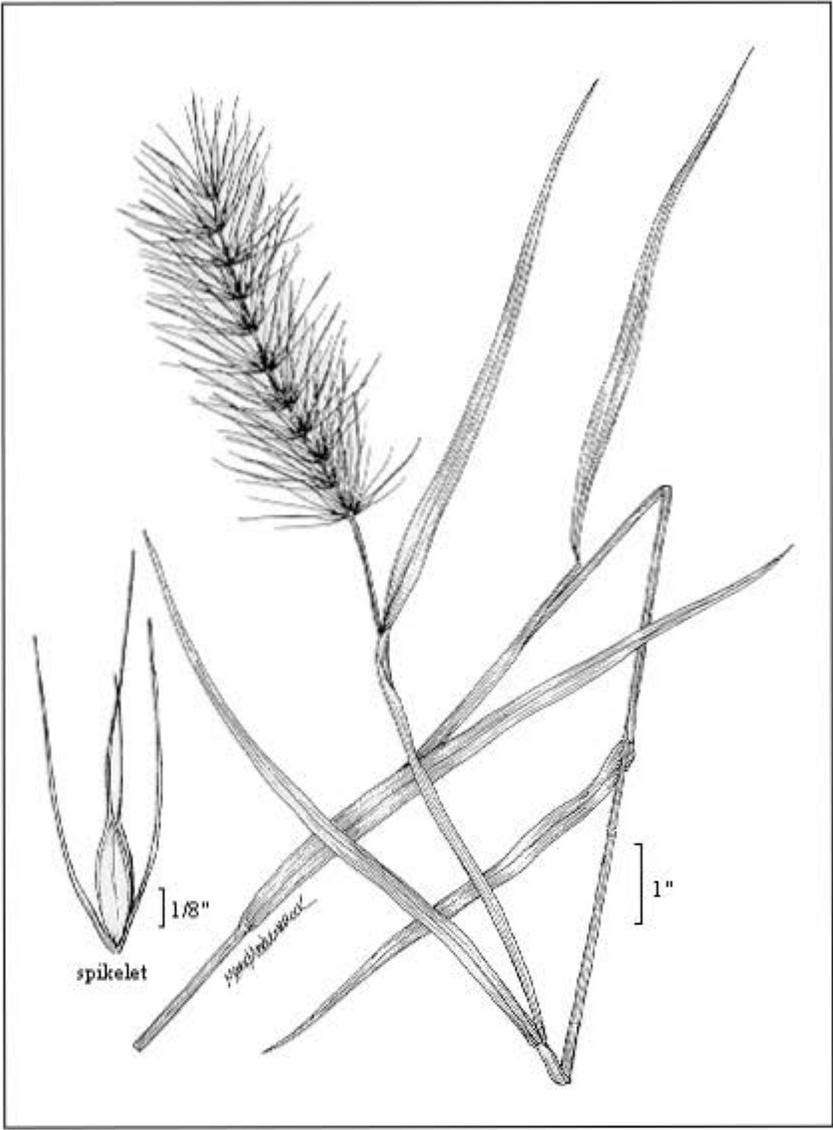
Northeast Wetland Flora

Field Office Guide to Plant Species

Riverbank Wild-rye *Elymus riparius* Wiegand



- **Family:** Grass (Gramineae)
- **Flowering:** July-September
- **Field Marks:** Species of *Elymus* are distinguished by spikes with stiff awns and persistent glumes. This one differs from the others by its hairless or rough leaves 1/2-1 inch wide.
- **Habitat:** Woods, borders of streams.
- **Habit:** Clump-forming perennial grass without rhizomes.
- **Stems:** Upright, usually unbranched, slender, up to 4 1/2 feet tall, smooth.
- **Leaves:** Elongated, flat, 1/2-1 inch wide, hairless or slightly rough to the touch; sheaths smooth or slightly rough to the touch; ligules membranous, jagged at the tip.
- **Flowers:** Borne in spikelets, the spikelets often paired and forming a slightly nodding spike up to 8 inches long and 2 inches wide; spikelets 2- to 4-flowered, 3/4-1 1/2 inches long; glumes very narrow, less than 1/20 inch wide.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Narrowly oblongoid, more or less smooth.
- **Notes:** This family is Poaceae according to Gleason and Cronquist. This genus has thin, very long glumes that are persistent on the spike providing a characteristic bottlebrush appearance.

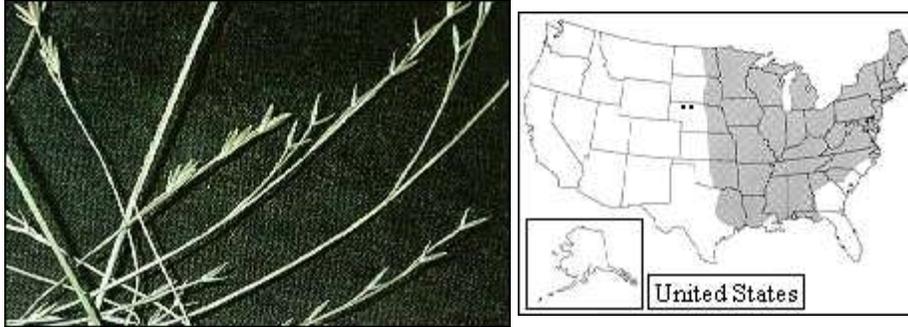


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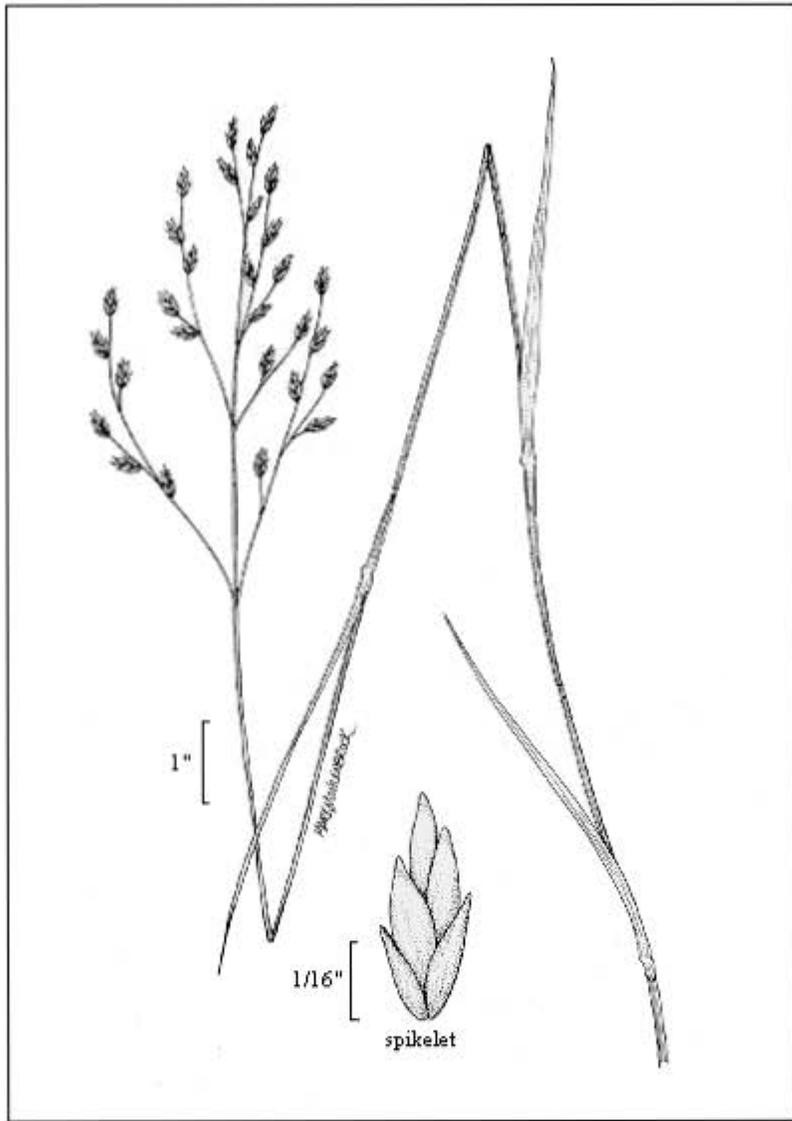
Field Office Guide to Plant Species

Nodding Fescue

Festuca obtusa Biehler



- **Family:** Grass (Gramineae)
- **Flowering:** May-July
- **Field Marks:** This fescue differs from all others by its flat leaf blades, lemmas less than 1/6 inch long, and inflorescences that are spreading or nodding at maturity.
- **Habitat:** Moist woods.
- **Habit:** Tufted perennial herb with fibrous roots.
- **Stems:** Upright, unbranched, to 3 feet tall, smooth or very short-hairy.
- **Leaves:** Elongated, flat, 1/8-1/2 inch wide, smooth except for the rough veins; sheaths smooth or short-hairy; ligules membranous, short, jagged along the top edge.
- **Flowers:** Borne in spikelets in a branched, spreading or nodding inflorescence 5-10 inches long; spikelets 2- to 5-flowered, 1/6-1/3 inch long; awns none.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Ellipsoid, smooth.
- **Notes:** According to Gleason and Cronquist the name of this plant is *F. subverticillata* in the Poaceae.



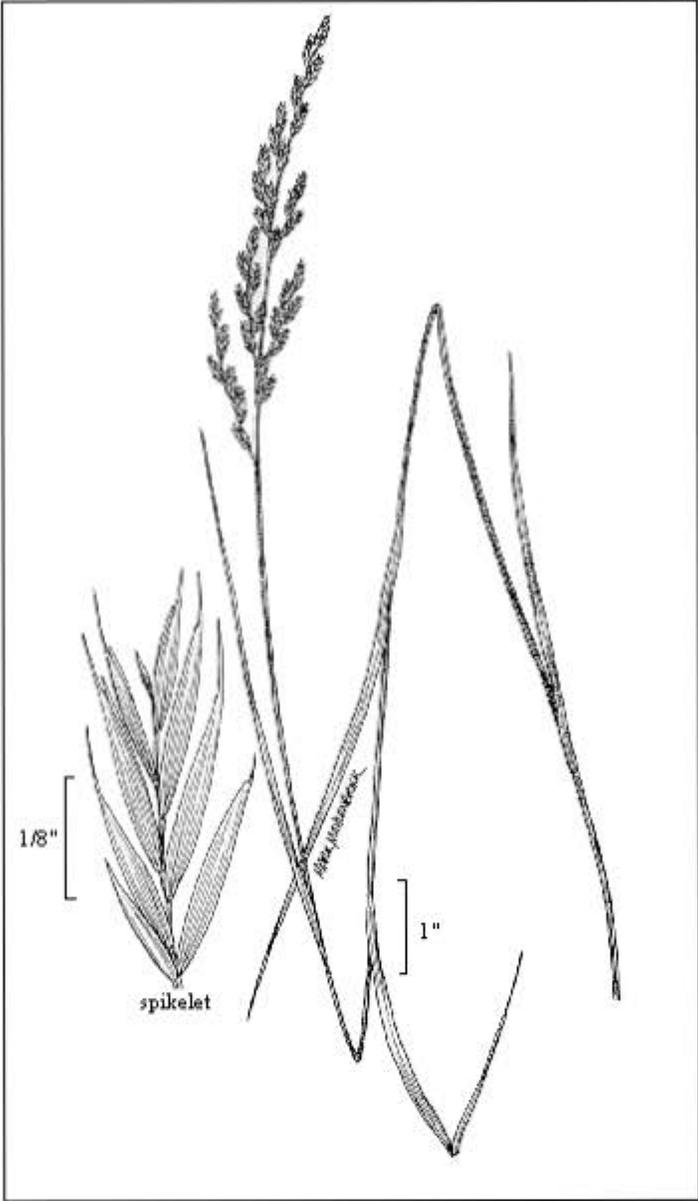
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Red Fescue *Festuca rubra* L.



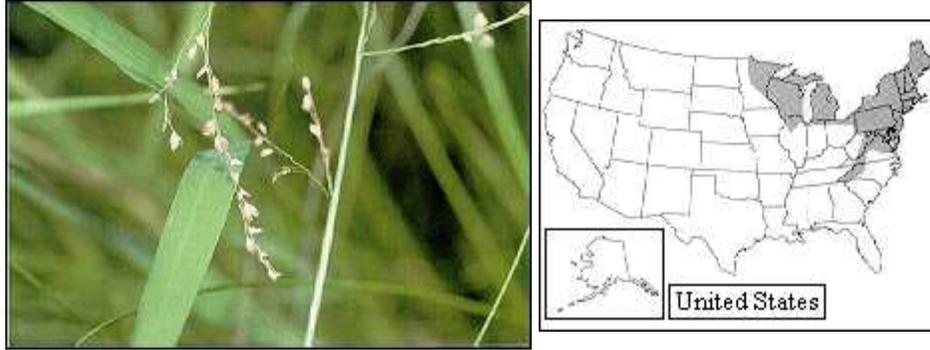
- **Family:** Grass (Gramineae)
- **Flowering:** June-July
- **Field Marks:** This fescue is characterized by its very narrow leaves about 1/20 inch wide, its lower leaf sheaths brown, yellow, or purple, soon disintegrating into short-awned lemmas.
- **Habitat:** Disturbed soils, meadows, bogs, marshes, sometimes in brackish areas.
- **Habit:** Tufted perennial grass with creeping rootstocks.
- **Stems:** Spreading to ascending to upright, sometimes rooting at the lower nodes, smooth, up to 3 feet tall.
- **Leaves:** Elongated, thread-like to rolled into a slender tube, about 1/20 inch wide, smooth or short-hairy; lower sheaths brown, yellow, or purple, soon disintegrating into fibers.
- **Flowers:** Borne in spikelets, with many flowers in a narrow panicle up to 8 inches long.
- **Spikelets:** 4- to 7-flowered, 1/3-1/2 inch long; glumes linear to narrowly lanceolate, smooth or slightly rough; lemmas lanceolate, 3- to 5-nerved, with an awn up to 1/6 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** This family is Poaceae according to Gleason and Cronquist. The grains are eaten by wild birds. This species is a widely used turf and conservation plant. It is somewhat shade-tolerant and is an excellent soil binder which is used for stabilizing waterways, banks, slopes, and as an orchard cover crop. The upright variety *commutata* is commonly referred to as Chewing's fescue, while the prostrate variety *rubra* is called creeping red fescue.



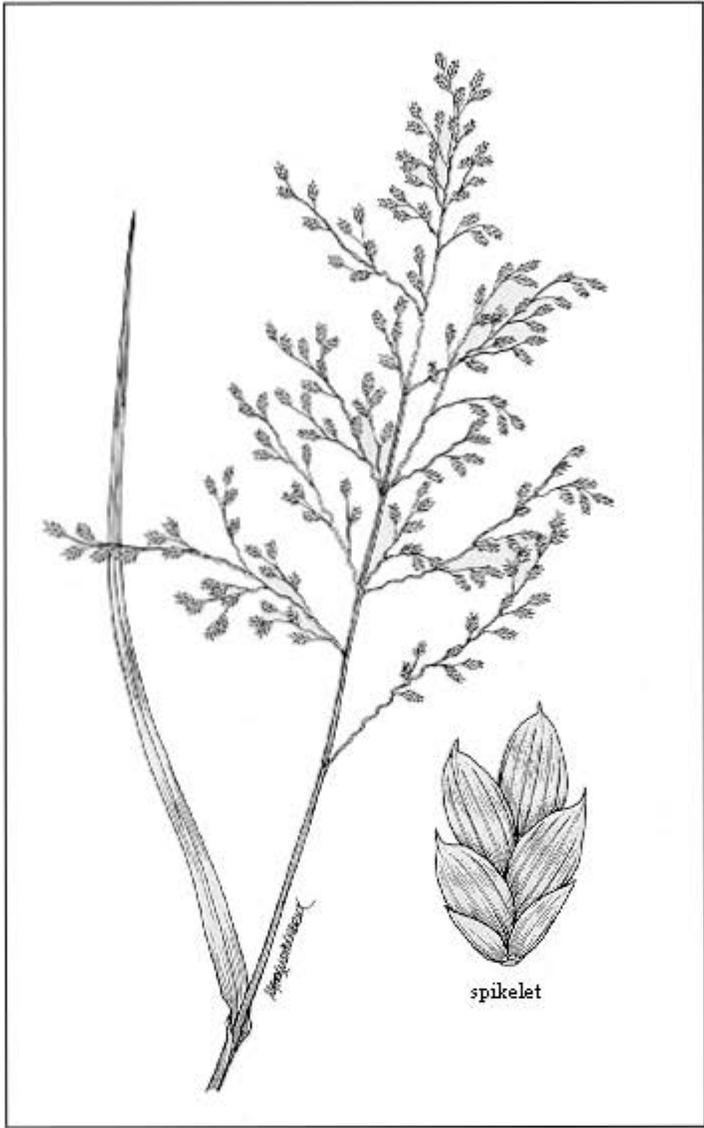
Northeast Wetland Flora

Field Office Guide to Plant Species

Canada Manna Grass *Glyceria canadensis* (Michx.) Trin.



- **Family:** Grass (Gramineae)
- **Flowering:** June-August
- **Field Marks:** The distinguishing characteristics of this species are the open panicles with spikelets 1/6-1/4 inch long and 4- to 10-flowered.
- **Habitat:** Marshes, bogs.
- **Habit:** Single-stemmed or tufted perennial grass with a thickened rootstock.
- **Stems:** Upright, smooth, up to 3 feet tall.
- **Leaves:** Elongated, rough to the touch, up to 1/2 inch wide.
- **Flowers:** Borne in spikelets, with numerous spikelets arranged in open panicles up to 1 foot long, the branches of the panicle thread-like, spreading or drooping; spikelets 4- to 10-flowered, ovate, 1/6-1/4 inch long; lemmas 7-nerved, with a clear tip.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grain ellipsoid, smooth.
- **Notes:** This family is Poaceae according to Gleason and Cronquist.



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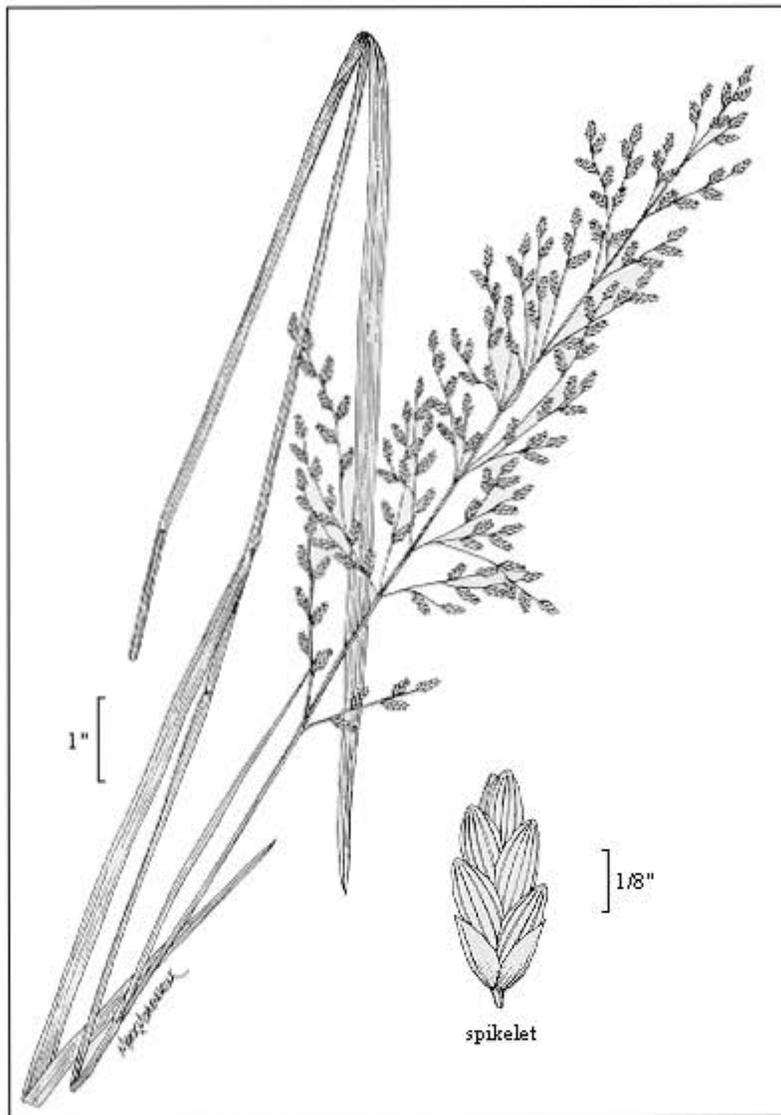
Field Office Guide to Plant Species

Reed Meadowgrass

Glyceria maxima (Hartm.) O.R. Holmberg



- **Family:** Grass (Gramineae)
- **Flowering:** June-August
- **Field Marks:** The distinguishing features of this meadowgrass are the spikelets up to 1/3 inch long, the inflorescence up to 1 1/2 feet long, and the sharply nerved lemmas.
- **Habitat:** Wet ditches, wet meadows, stream banks.
- **Habit:** Tufted perennial from thickened rootstocks.
- **Stems:** Upright, branched or unbranched, smooth, up to 5 feet tall.
- **Leaves:** Elongated, flat, smooth or rough to the touch, up to 3/4 inch wide; sheaths closed and fused, more or less smooth.
- **Flowers:** Borne in spikelets arranged in a much branched panicle up to 1 1/2 feet long; spikelets 4- to 8-flowered, purplish or yellowish, up to 1/2 inch long.
- **Glumes:** Lanceolate, pointed at the tip, whitish and sometimes membranaceous, up to 1/8 inch long.
- **Lemmas:** Narrowly ovate, purplish, rounded at the tip, sharply nerved, a little longer than the glumes.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** In the past this species has usually been considered a part of *Glyceria grandis* and still appears as this in some recent texts including Gleason and Cronquist. Gleason and Cronquist call this family Poaceae. The grains are eaten by waterfowl.



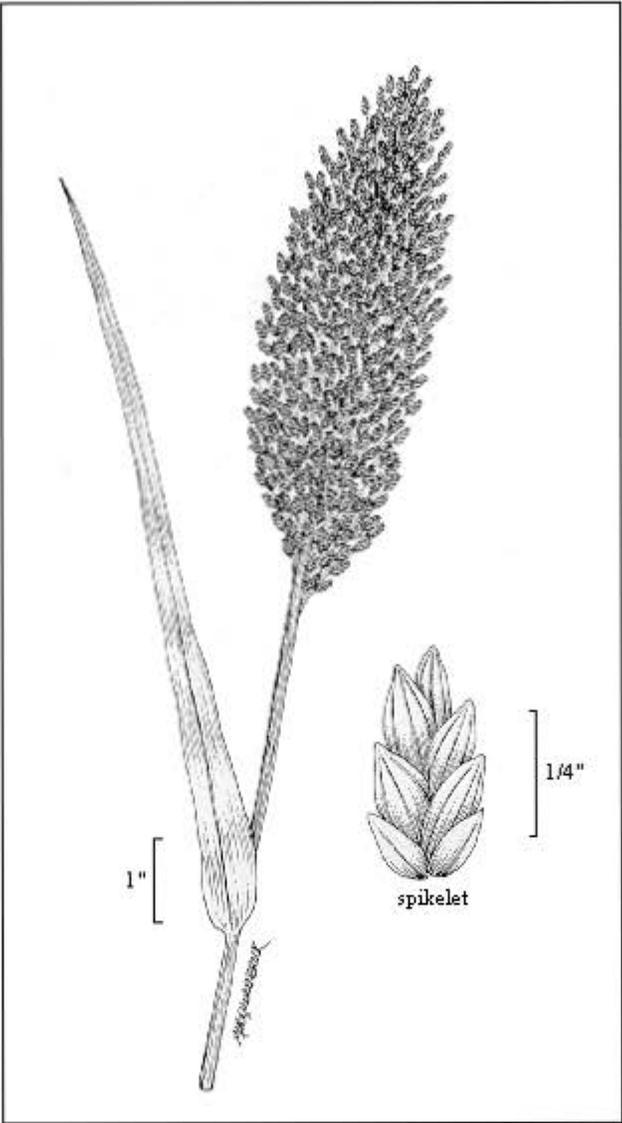
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Field Office Guide to Plant Species

Atlantic Manna Grass
Glyceria obtusa (Muhl.) Trin.



- **Family:** Grass (Gramineae)
- **Flowering:** July-September
- **Field Marks:** The characteristics that distinguish this species of *Glyceria* from the others are the very dense panicles, the 4- to 7-flowered spikelets 1/6-1/3 inch long, and the leaves rough on the upper surface.
- **Habitat:** Wet soil; sometimes in shallow standing water.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright but often prostrate at the base, usually unbranched, stiff, smooth, up to 4 feet tall.
- **Leaves:** Elongated, flat or folded, up to 1/3 inch wide, rough on the upper surface, smooth on the lower surface; sheaths closed and fused.
- **Flowers:** Borne in spikelets, with many spikelets crowded into dense ellipsoid to cylindrical panicles up to 8 inches long; spikelets 4- to 7-flowered, 1/6-1/3 inch long, green or tan.
- **Glumes:** Broadly lanceolate, the first somewhat shorter than the second, pointed or somewhat rounded at the tip, whitish-margined, up to 1/8 inch long, smooth, conspicuously nerved.
- **Lemmas:** Broadly elliptic to obovate, rounded at the tip, up to 1/6 inch long, smooth, conspicuously nerved.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains broadly ellipsoid, smooth.
- **Notes:** This family is called Poaceae by Gleason and Cronquist. The grains are eaten by waterfowl.

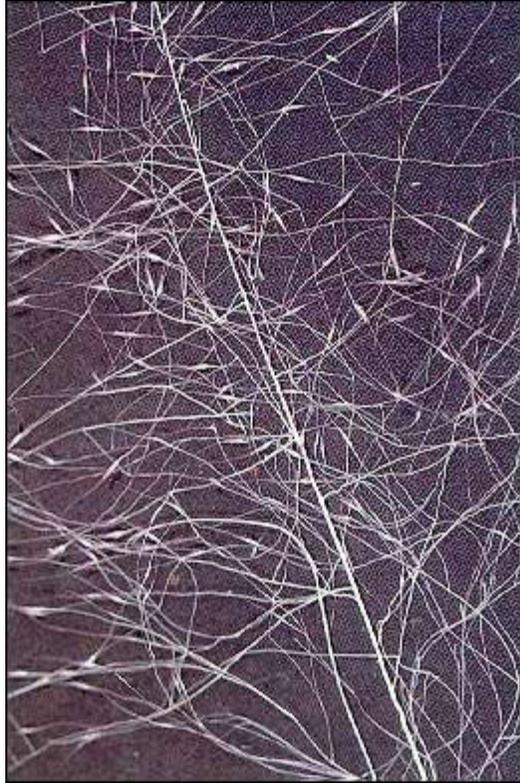


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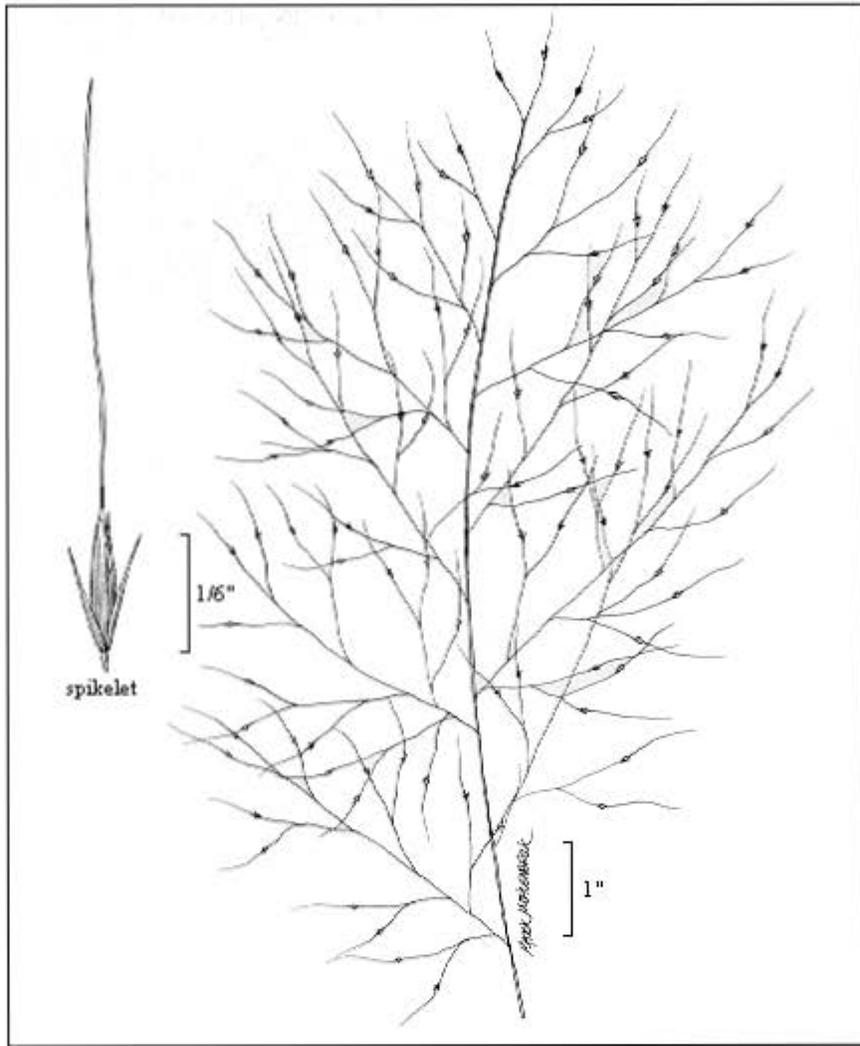
Field Office Guide to Plant Species

Long-awn Muhly

Muhlenbergia capillaris (Lam.) Trin.



- **Family:** Grass (Gramineae)
- **Flowering:** September-October
- **Field Marks:** This muhly grass is readily recognized by its widely open panicle and its awned lemmas.
- **Habitat:** Rocky woods, clearings.
- **Habit:** Tufted perennial without rhizomes.
- **Stems:** Upright, branched or unbranched, slender, smooth, up to 3 feet tall.
- **Leaves:** Elongated, rolled inward, up to 1/6 inch wide, smooth or rough to the touch; sheaths smooth or slightly rough to the touch.
- **Flowers:** Many borne in a widely spreading panicle up to 1 1/2 feet long, the branches of the panicle thread-like; spikelets 1-flowered, purplish, up to 1/5 inch long; stalks much longer than the spikelets.
- **Glumes:** Ovate-lanceolate, pointed at the tip, up to 1/6 inch long.
- **Lemmas:** Narrow, rough to the touch, up to 1/5 inch long, with a thread-like awn up to 1 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains narrowly ellipsoid, smooth.
- **Notes:** This family is called Poaceae by Gleason and Cronquist. Some authors ascribe three varieties to this species and it appears in several recent texts.



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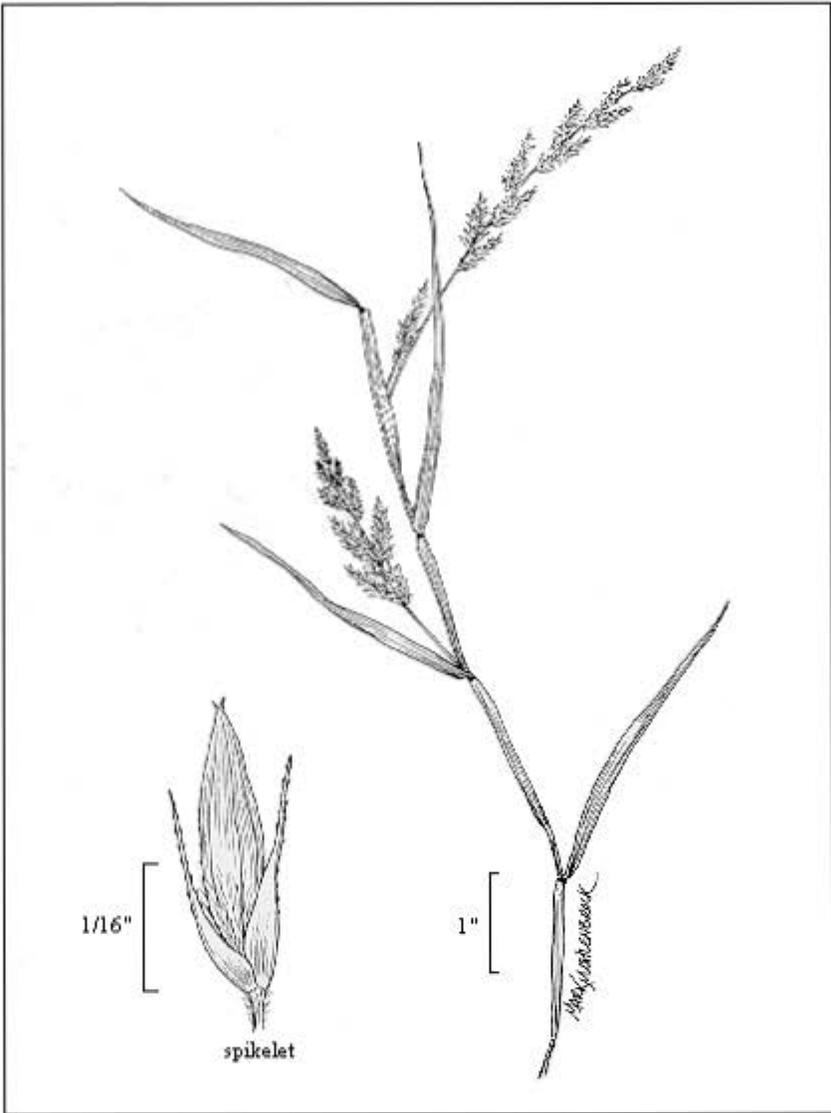
Field Office Guide to Plant Species

Wire-stem Muhly

Muhlenbergia frondosa (Poir.) Fernald



- **Family:** Grass (Gramineae)
- **Flowering:** August-October
- **Field Marks:** This species differs from all other species of *Muhlenbergia* by its loose and often open panicles, narrow, pointed glumes, bearded lemmas, and hairless internodes.
- **Habitat:** Moist woods, thickets, moist disturbed areas.
- **Habit:** Perennial herb from thick, scaly rhizomes.
- **Stems:** Sprawling to upright, much branched, often rooting at the lower nodes, up to 3 feet long, with hairless internodes.
- **Leaves:** Elongated, flat, smooth, up to 1/3 inch wide.
- **Flower:** Borne in slender loose and often open panicles, terminal and axillary, the panicles up to 4 inches long, up to 3/4 inch thick; spikelets 1-flowered, green to purplish, up to 1/6 inch long.
- **Glumes:** Lance-subulate, smooth, toothed along the keel, tapering to a slender point at the tip, slightly unequal in size, up to 1/8 inch long.
- **Lemmas:** Lanceolate, long-pointed to awned at the tip, longer than the glumes, hairy at the base, obscurely 3- to 5-nerved; awn when present 1/6-1/2 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains about 1/10 inch long, smooth, more or less enclosed by the lemmas.
- **Notes:** This family is called Poaceae by Gleason and Cronquist.



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Marsh Muhly

Muhlenbergia glomerata (Willd.) Trin.



- **Family:** Grass (Gramineae)
- **Flowering:** August-October
- **Field Marks:** This species is distinguished by its thick, spike-like, usually purplish panicles, its linear nearly equal glumes, and its finely hairy internodes.
- **Habitat:** Wet meadows, bogs, fens, along shores.
- **Habit:** Perennial herb from thick, scaly rhizomes.
- **Stems:** Upright, branched, up to 3 1/2 feet long, with finely hairy internodes.
- **Leaves:** Elongated, flat, rough at least along the edges, up to 1/4 inch wide.
- **Flowers:** Borne in narrow, thickened, spike-like panicles, the panicles usually purplish, up to 4 inches long, up to 3/4 inch thick; spikelets 1-flowered, purplish, 1/6-1/3 inch long.
- **Glumes:** Linear-subulate, awned, up to 1/3 inch long, smooth, nearly equal in size.
- **Lemmas:** Lanceolate, pointed at the tip, awnless, about 1/6 inch long, hairy at the base.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains 1/10-1/8 inch long, smooth, more or less enclosed by the lemmas.
- **Notes:** Gleason and Cronquist call this family Poaceae.

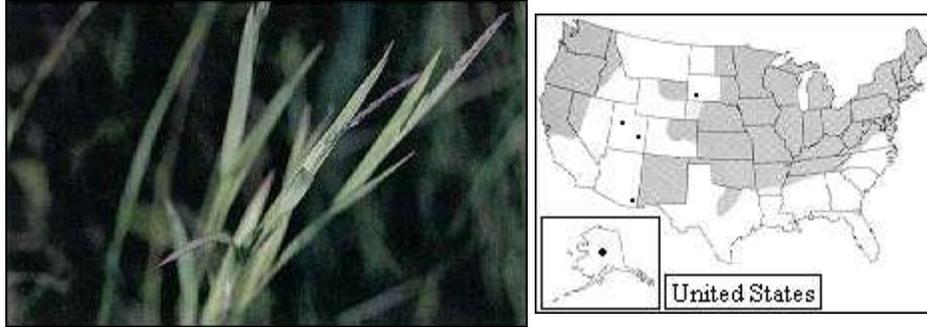


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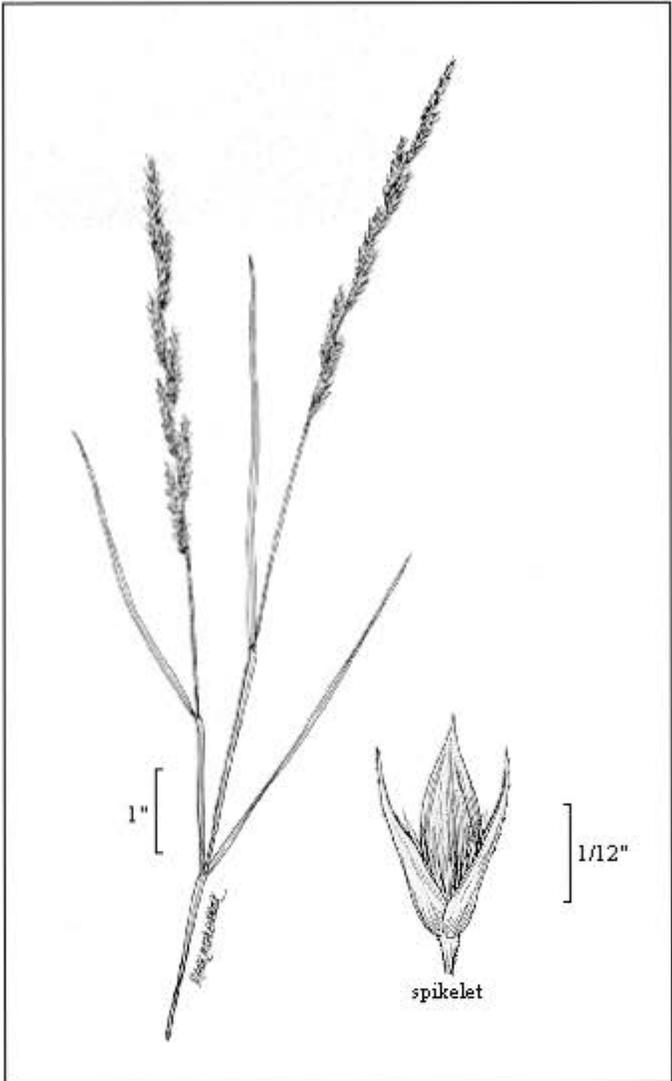
Field Office Guide to Plant Species

Mexican Muhly

Muhlenbergia mexicana (L.) Trin.



- **Family:** Grass (Gramineae)
- **Flowering:** August-October
- **Field Marks:** This muhly is distinguished by its stiff, narrowly cylindrical spike-like panicles, its hairy lemmas, its finely hairy internodes, and its often purplish spikelets.
- **Habitat:** Moist soil, along shores, fens.
- **Habit:** Perennial herb from scaly rhizomes.
- **Stems:** Spreading to upright, much branched, rooting at the lower nodes, up to 3 feet tall, with finely hairy internodes.
- **Leaves:** Elongated, flat, up to 1/3 inch wide, smooth.
- **Flowers:** Borne in slender, contracted panicles, the panicles up to 10 inches long, up to 1/2 inch thick, green or purplish; spikelets 1-flowered, often purplish, up to 1/6 inch long (excluding the awn).
- **Glumes:** Narrowly lanceolate, tapering to an awn-like tip, smooth, nearly equal, up to 1/6 inch long.
- **Lemmas:** Lanceolate, tapering to a point at the tip, or with an awn up to 1/2 inch long, hairy at the base.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains about 1/16 inch long, smooth, tightly enclosed by the lemmas.
- **Notes:** Gleason and Cronquist call this family Poaceae.



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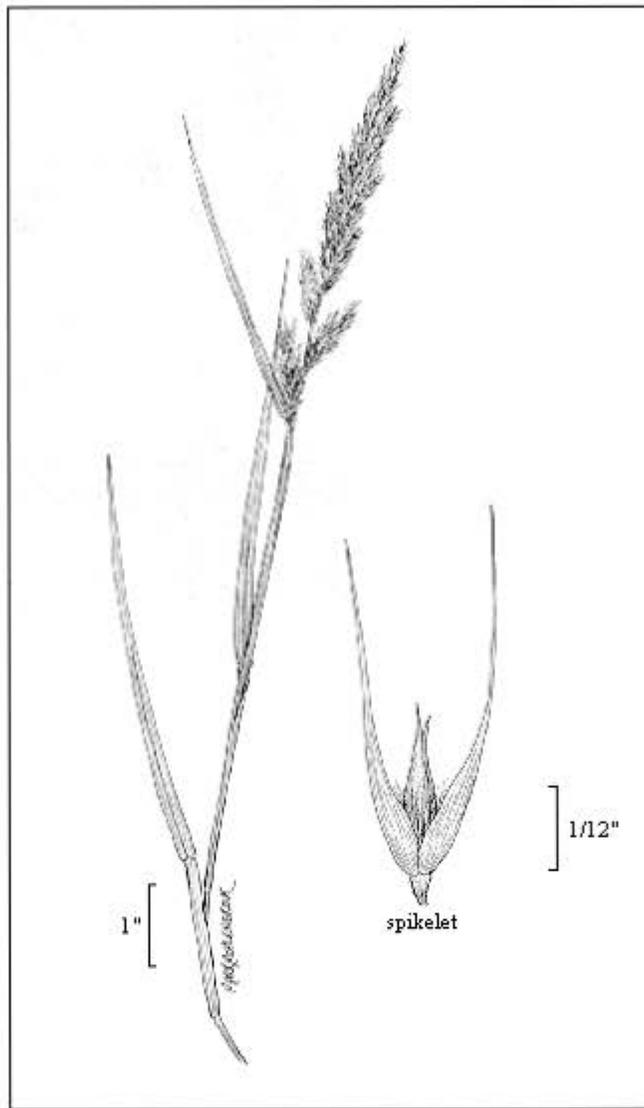
Field Office Guide to Plant Species

Green Muhly

Muhlenbergia racemosa (Michx.) BSP.



- **Family:** Grass (Gramineae)
- **Flowering:** August-October
- **Field Marks:** The features that differentiate this muhly from others in the genus are the contracted, spike-like panicles, the awned glumes, and the hairless internodes.
- **Habitat:** Prairies, rocky woods.
- **Habit:** Perennial herb from scaly rhizomes.
- **Stems:** Spreading to upright, sometimes branched, up to 3 1/2 feet tall, with hairless internodes.
- **Leaves:** Elongated, flat, rough along the edges, up to 1/3 inch wide.
- **Flowers:** Borne in narrow, contracted panicles, the panicles up to 6 inches long, up to 3/4 inch thick, green or purplish; spikelets 1-flowered, 1/6-1/3 inch long.
- **Glumes:** Linear-subulate, roughened, up to 1/3 inch long, awned at the tip.
- **Lemmas:** Lanceolate, pointed at the tip, awnless, up to 1/6 inch long, hairy at the base.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains about 1/10 inch long, smooth, tightly enclosed by the lemmas.
- **Notes:** Gleason and Cronquist call this family Poaceae.



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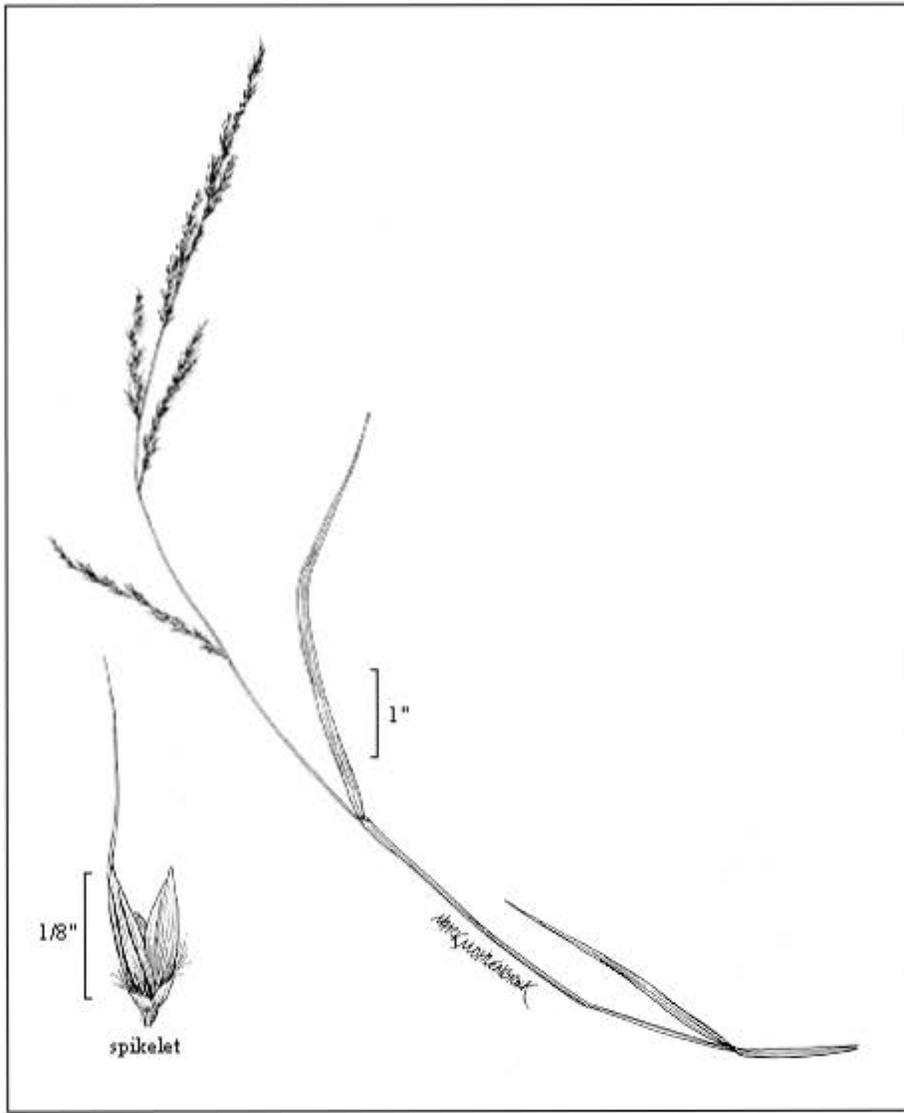
Field Office Guide to Plant Species

Nimble-will

Muhlenbergia schreberi J.F. Gmel.



- **Family:** Grass (Gramineae)
- **Flowering:** July-November
- **Field Marks:** This muhly is distinguished by its sprawling, mat-like growth form, its lemmas with awns as long as or twice as long as the body, and its glumes much shorter than the lemma.
- **Habitat:** Disturbed soil, swamps.
- **Habit:** Perennial herb without rhizomes.
- **Stems:** Sprawling and rooting at the nodes, except for the ascending tips, branched, up to 2 feet long, with hairless internodes.
- **Leaves:** Elongated, flat, smooth, up to 1/6 inch wide.
- **Flowers:** Borne in slender, contracted, spike-like panicles, the panicles up to 8 inches long, up to 1/3 inch thick, usually greenish; spikelets 1-flowered, about 1/8 inch long.
- **Glumes:** First glume reduced or obsolete, the second glume small, much shorter than the lemma, ovate to orbicular, rounded at the shallowly jagged-toothed tip, smooth, about 1/36 inch long.
- **Lemmas:** Lanceolate to elliptic, up to 1/8 inch long, hairy at the base, with an awn up to 1/6 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains about 1/20 inch long, smooth, loosely enclosed by the lemmas.
- **Notes:** This grass may sometimes be a troublesome weed in lawns. This family is called Poaceae by Gleason and Cronquist.

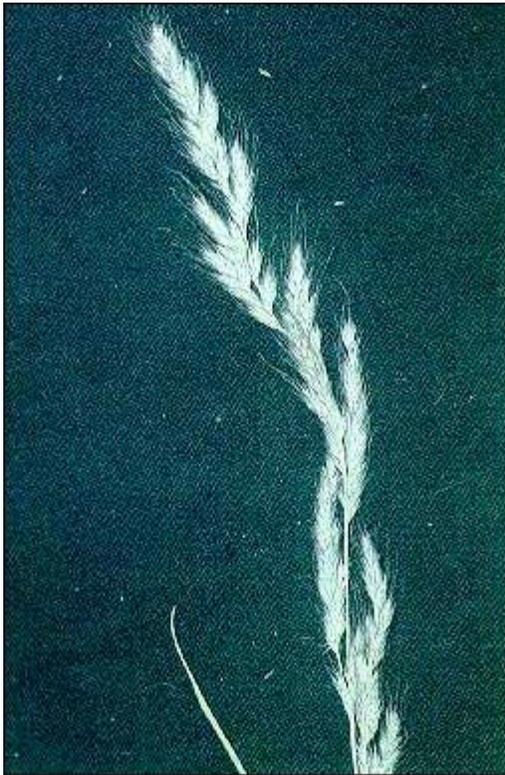


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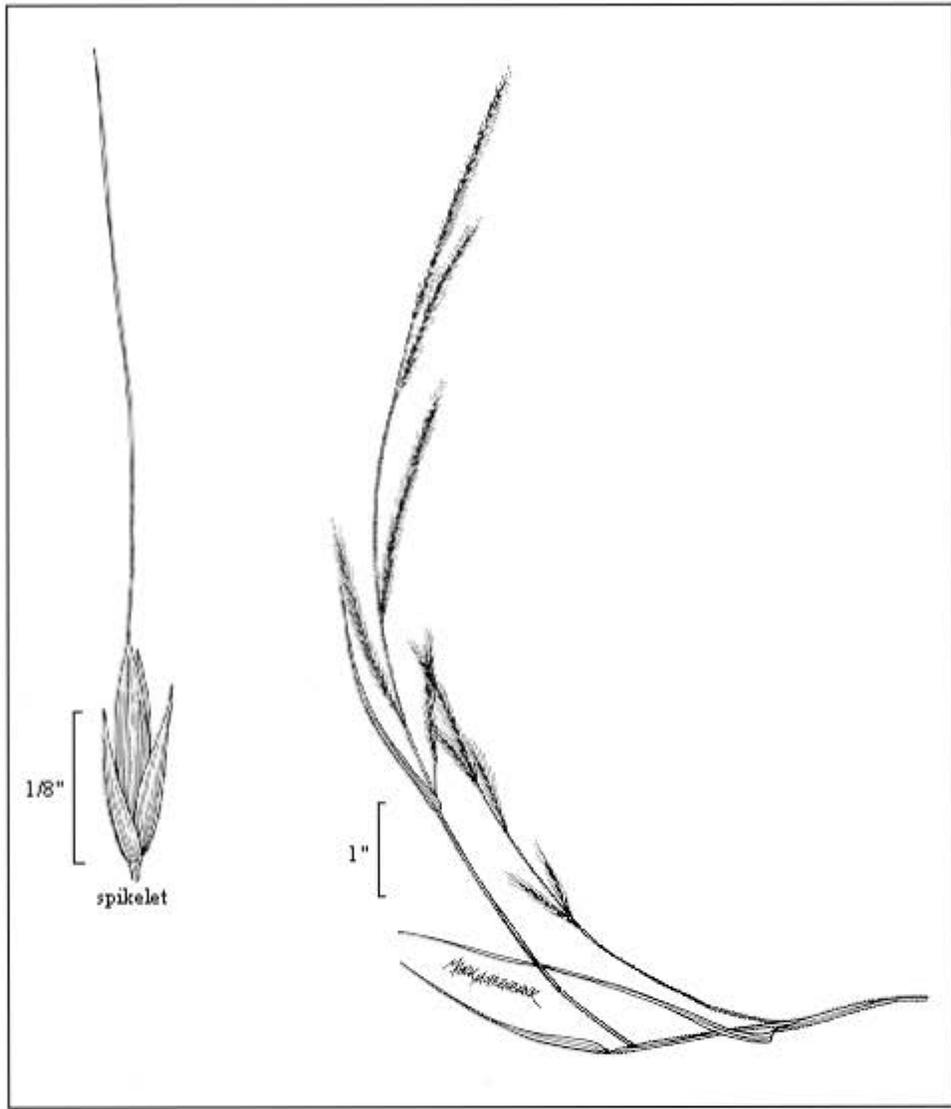
Field Office Guide to Plant Species

Forest Muhly

Muhlenbergia sylvatica Torr. ex Gray



- **Family:** Grass (Gramineae)
- **Flowering:** July-October
- **Field Marks:** This muhly differs by its narrow panicles, its finely hairy stems on the upper one-half of each internode, its lemmas hairy at the base, and its narrowly lanceolate, silvery or whitish glumes.
- **Habitat:** Rocky woods, stream banks.
- **Habit:** Perennial herb from scaly rhizomes.
- **Stems:** Upright, branched or unbranched, up to 3 feet tall, finely hairy, especially on the upper one-half of each internode.
- **Leaves:** Elongated, flat, up to 1/3 inch wide, more or less smooth; sheaths smooth except for the often finely hairy base.
- **Flowers:** Many borne in narrow panicles up to 9 inches long, upright to drooping; spikelets 1-flowered, up to 1/6 inch long.
- **Glumes:** Narrowly lanceolate, one slightly shorter than the other, pointed at the tip, silvery or whitish, up to 1/8 inch long.
- **Lemmas:** Narrowed to the tip, up to 1/6 inch long, hairy at the base, with an awn up to 3/4 inch long, or awnless.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid, smooth, about 1/12 inch long, nearly free from the lemmas.
- **Notes:** Gleason and Cronquist call this family Poaceae.

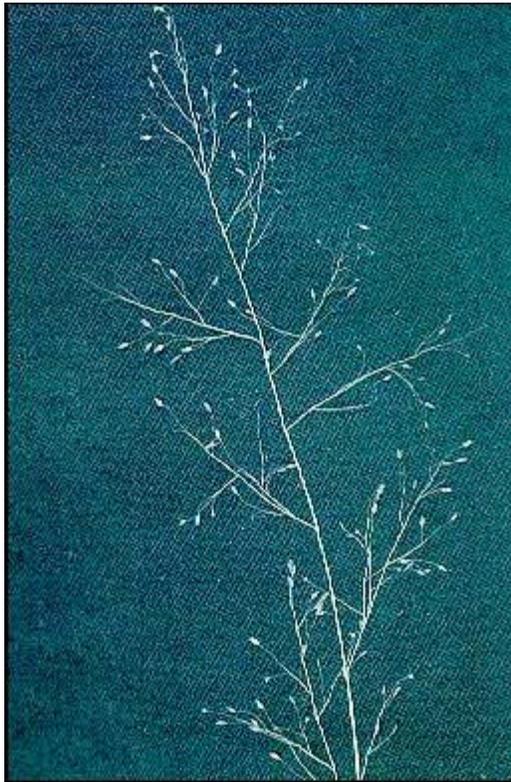


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Bog Muhly

Muhlenbergia uniflora (Muhl.) Fernald



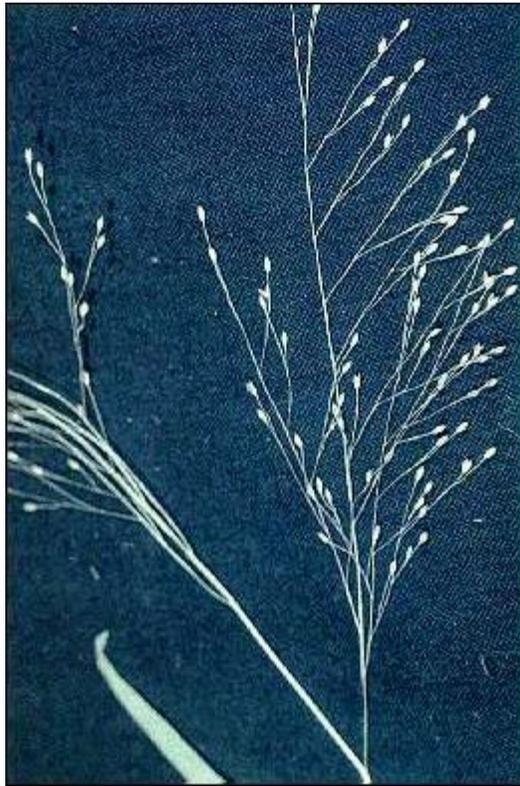
- **Family:** Grass (Gramineae)
- **Flowering:** July-October
- **Field Marks:** This *Muhlenbergia* differs by its open panicles, the very slender stems that arise from the base of last year's stems, and the very short glumes in relation to the lemma.
- **Habitat:** Bogs, wet shores.
- **Habit:** Matted perennial herb from thickened rootstocks, without rhizomes, arising from the base of last year's stems.
- **Stems:** Very slender, decumbent, rooting at the nodes, matted, up to 1 1/4 feet tall, smooth.
- **Leaves:** Elongated, flat, smooth, 1/12-1/10 inch wide.
- **Flowers:** Several in a widely branching panicle, the panicle up to 8 inches long and up to 3 inches wide, the branches very slender to nearly thread-like; spikelets usually 1-flowered, purplish, up to 1/10 inch long, on thread-like stalks much longer than the spikelets.
- **Glumes:** Ovate to lanceolate, rounded or pointed at the tip, subequal in length, smooth, about 1/2 as long as the lemma.
- **Lemmas:** Lanceolate, rounded at the tip, smooth, up to 1/10 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid.
- **Notes:** Gleason and Cronquist call this family Poaceae.

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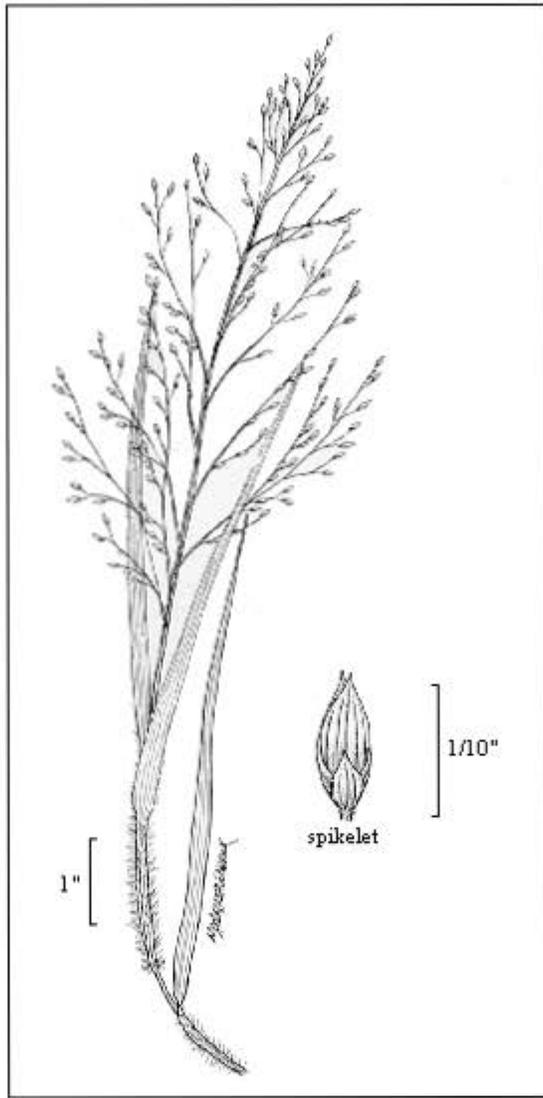
Field Office Guide to Plant Species

Gattinger Panic Grass

Panicum gattingeri Nash



- **Family:** Grass (Gramineae)
- **Flowering:** August-October
- **Field Marks:** This *Panicum* differs by its smooth spikelets up to 1/10 inch long, its sheaths with swollen-based hairs, its panicle occupying about 1/3 the length of the plant, and its straw-colored grains.
- **Habitat:** Fields, roadsides, shorelines.
- **Habit:** Annual herb with fibrous roots, usually rooting at the nodes.
- **Stems:** Prostrate at first and rooting at the nodes, becoming upright, stout, usually branched, up to 3 feet tall, with hairs swollen at the base.
- **Leaves:** Elongated, smooth or hairy on both surfaces, up to 1/2 inch across; sheaths with hairs swollen at the base.
- **Flowers:** Several in spikelets in terminal and axillary panicles, the panicles up to 6 inches long, occupying up to 1/3 the length of the plant; spikelets 1-flowered, smooth, up to 1/10 inch long, ellipsoid.
- **Glumes:** Lanceolate, pointed or rounded at the tip, the lower one 2/5 as long as the spikelet.
- **Lemmas:** Ovate, short-beaked at the tip, smooth, up to 1/10 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains straw-colored, ellipsoid, pointed at the tip, about 1/12 inch long.
- **Notes:** Gleason and Cronquist consider this species to be the same as *P. capillare*. Some authors, such as Brown and Brown, call this *P. capillare* var. *campestre*. This family is referred to as Poaceae by Gleason and Cronquist.



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Maiden-cane

Panicum hemitomom J.A. Schultes



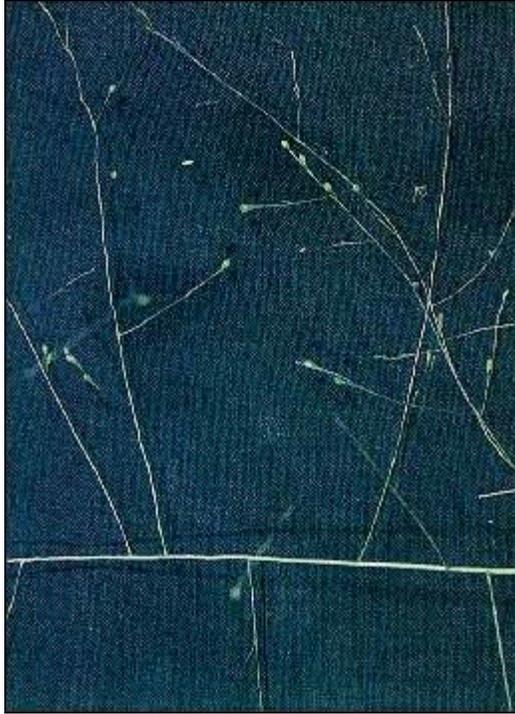
- **Family:** Grass (Gramineae)
- **Flowering:** June-July
- **Field Marks:** This *Panicum* differs by its nearly sessile, lanceolate spikelets that are pointed at the tip. The plants have long-creeping rhizomes and leaves about 1/2 inch wide.
- **Habitat:** Wet shores, swamps, sometimes in water.
- **Habit:** Perennial herb from extensive rhizomes.
- **Stems:** Spreading and rooting at the lowest nodes to upright, rather stout, up to 5 feet tall.
- **Leaves:** Elongated, flat, up to 3/4 inch wide, ciliate near base, rough on the upper surface; sheaths smooth or hairy, sometimes overlapping.
- **Flowers:** Borne in spikelets in slender panicles up to 8 inches long; spikelets 1-flowered, usually borne on one side of the panicle branches; spikelets lanceolate, pointed at the tip, short-stalked, up to 1/6 inch long, about 1/20 inch wide.
- **Glumes:** First glume pointed at the tip, 1/2 as long as the second glume; both glumes smooth.
- **Lemmas:** Sharply nerved, smooth.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** This species may become very aggressive, sometimes filling in shallow necks of lakes. This family is called Poaceae by Gleason and Cronquist.



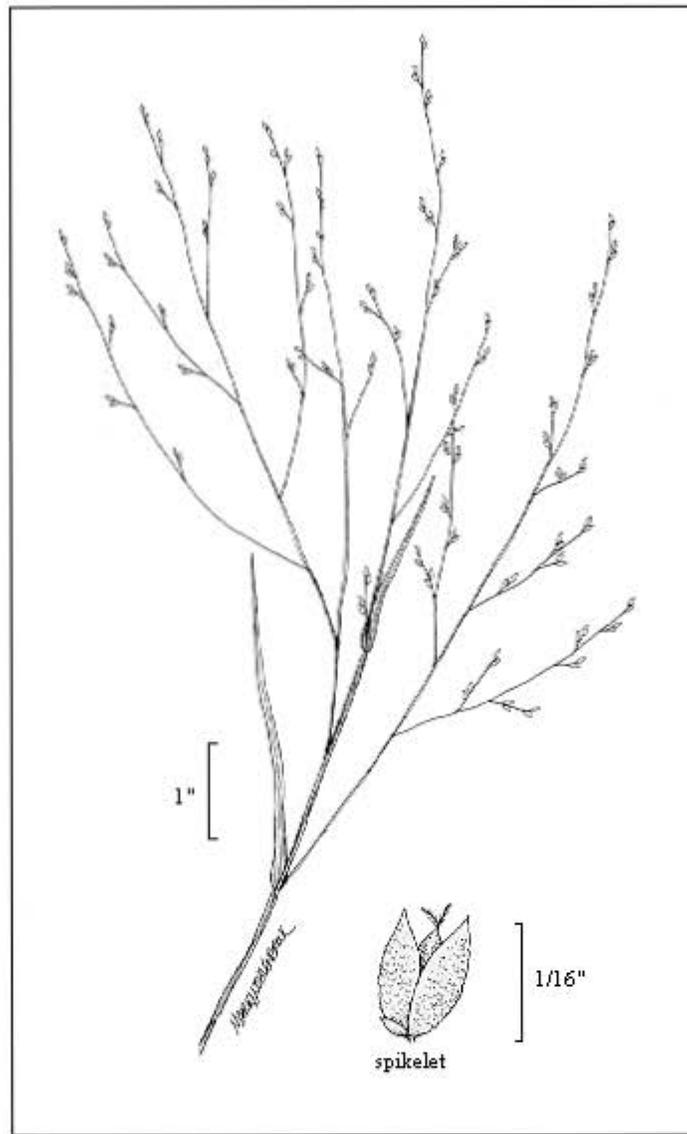
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Warty Panic Grass *Panicum verrucosum* Muhl.



- **Family:** Grass (Gramineae)
- **Flowering:** August-October
- **Field Marks:** This annual grass differs from all other species of *Panicum* by the warty second glume and sterile lemma.
- **Habitat:** Wet soil.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, slender, usually branched, sometimes rooting at the lower nodes, smooth, up to 3 feet tall.
- **Leaves:** Elongated, flat, up to 1/2 inch wide, slightly rough to the touch.
- **Flowers:** Borne in spikelets in open panicles, the branches of the panicle very slender, smooth, with few spikelets; spikelets 1-flowered, ovoid, 1/12-1/10 inch long.
- **Glumes:** First glume triangular, 1/4 as long as second glume, both glumes smooth, faintly nerved; second glume warty.
- **Lemmas:** Warty, faintly nerved.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Ellipsoid with a minute point at the tip, smooth.
- **Notes:** Gleason and Cronquist call this family Poaceae.



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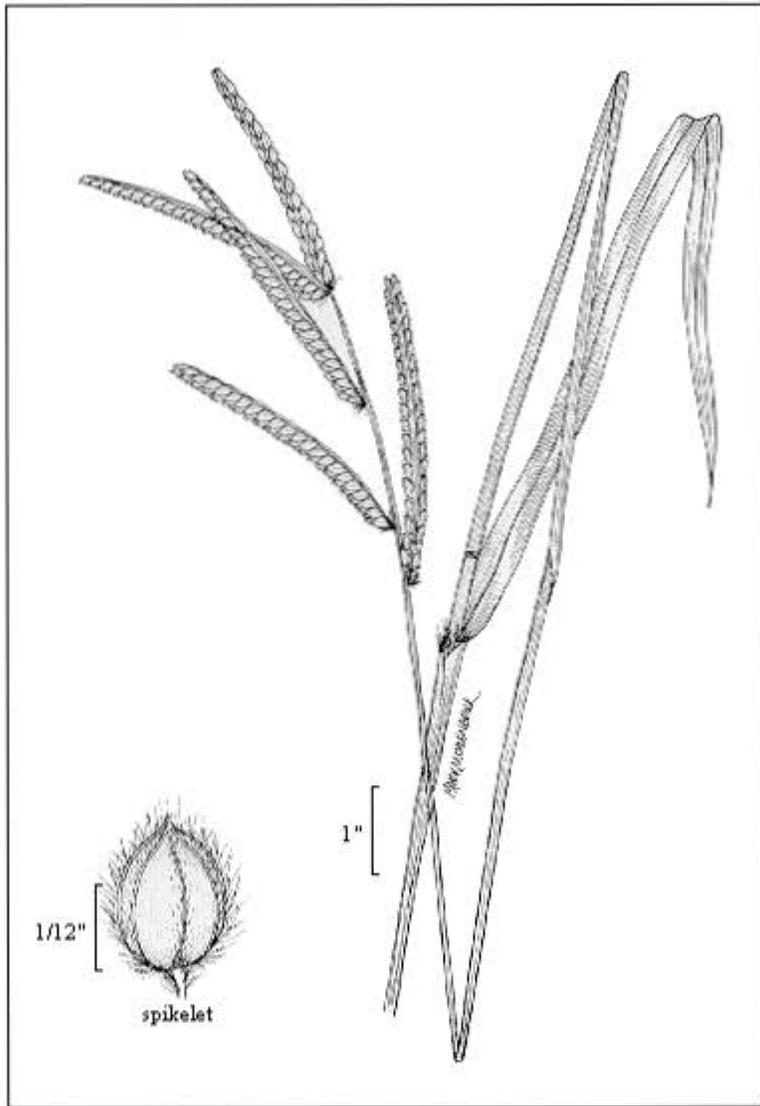
Field Office Guide to Plant Species

Dallisgrass

Paspalum dilatatum Poir.



- **Family:** Grass (Gramineae)
- **Flowering:** May-October
- **Field Marks:** The characteristics that distinguish this *Paspalum* from all others are the long-hairy, pointed spikelets borne in 3-6 racemes.
- **Habitat:** Wet ditches, disturbed soil.
- **Habit:** Perennial herb from short rhizomes.
- **Stems:** Upright, usually unbranched, stout, up to 5 feet tall, smooth.
- **Leaves:** Elongated, flat, up to 1/2 inch wide, smooth; sheaths smooth or finely hairy, while the base of the blades are skily-hairy.
- **Flowers:** Borne in 1-flowered spikelets in 3-6 racemes, each raceme ascending or spreading, hairy at the base, up to 4 inches long, each spikelet ovoid, pointed at the tip, up to 1/6 inch long.
- **Glumes:** 3- to 5-nerved, silky-hairy, particularly along the edges.
- **Lemmas:** 3- to 5-nerved, silky-hairy.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ovoid, shorter than the lemmas.
- **Notes:** This species is an introduction from the tropics. Gleason and Cronquist call this family Poaceae.



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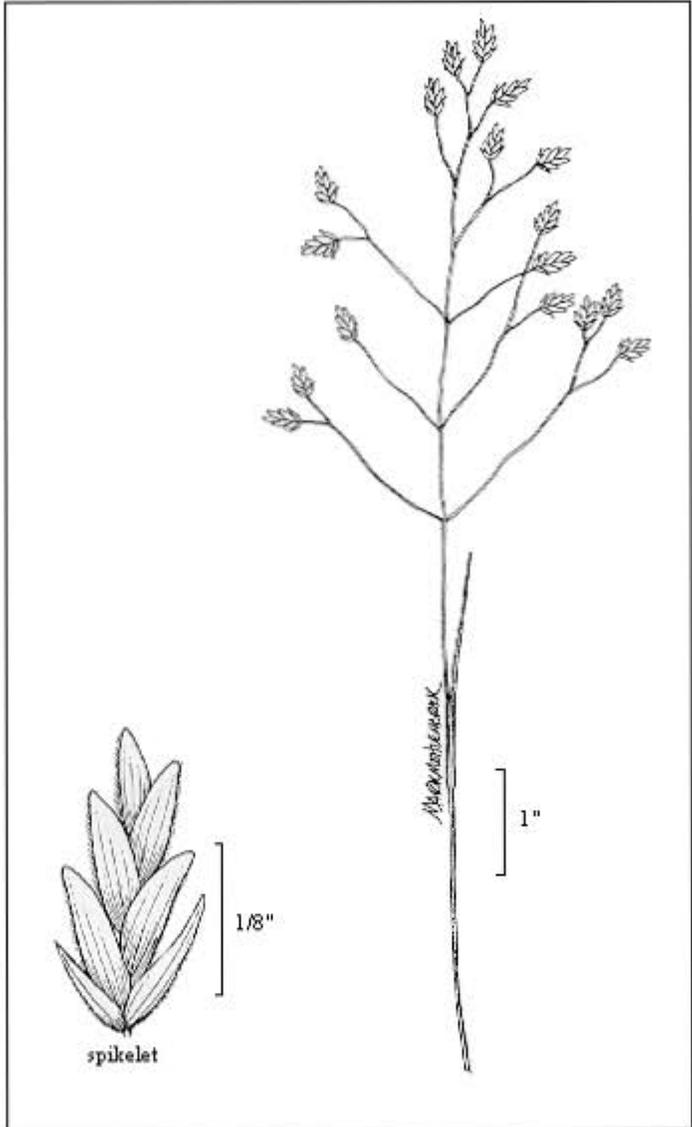
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Autumn Bluegrass

Poa autumnalis Muhl. ex Elliott



- **Family:** Grass (Gramineae)
- **Flowering:** March-July
- **Field Marks:** This bluegrass differs by its 5-nerved lemmas that are not webbed at the base, its spikelets on stalks at least as long as the spikelets, and the absence of rhizomes.
- **Habitat:** Rich woods.
- **Habit:** Tufted perennial herb without rhizomes.
- **Stems:** Upright, mostly unbranched, smooth, up to 2 feet tall.
- **Leaves:** Elongated, flat, up to 1/8 inch wide; sheaths smooth.
- **Flowers:** Borne in spikelets, the spikelets arranged in panicles, the panicles up to 8 inches long with thread-like branches; spikelets 3- to 6-flowered, up to 1/3 inch long.
- **Glumes:** First glume lanceolate, second glume ovate, unequal in length, pointed at the tip, smooth, up to 1/6 inch long.
- **Lemmas:** Oblong, up to 1/4 inch long, rounded at the tip, 5-nerved, hairy but without a cobwebby tuft of hairs at the base.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** This family is referred to as Poaceae by Gleason and Cronquist.



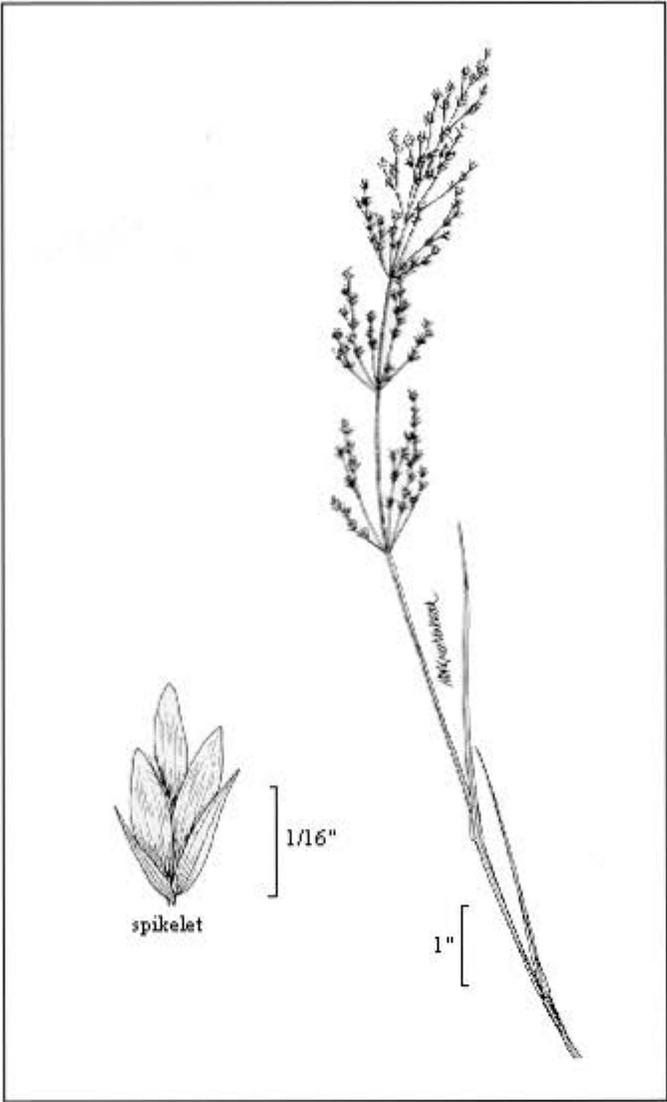
Northeast Wetland Flora

Field Office Guide to Plant Species

Woods Bluegrass *Poa nemoralis* L.



- **Family:** Grass (Gramineae)
- **Flowering:** June-September
- **Field Marks:** The distinguishing features of this bluegrass are the lemmas with cobwebby hairs at the base and with hairs only on the marginal nerves, the smooth leaf sheaths, and the absence of rhizomes.
- **Habitat:** Woods, shores.
- **Habit:** Tufted perennial herb with a thickened rootstock but without rhizomes.
- **Stems:** Upright, slender, often unbranched, smooth, up to 3 feet tall.
- **Leaves:** Elongated, flat, up to 1/6 inch wide, smooth; sheaths smooth.
- **Flowers:** Borne in spikelets, the spikelets arranged in open, lax panicles up to 8 inches long; spikelets 2- to 5-flowered, up to 1/4 inch long.
- **Glumes:** Lanceolate, pointed at the tip, with a slightly whitened margin, up to 1/8 inch long.
- **Lemmas:** Lanceolate to narrowly ovate, pointed at the tip, up to 1/6 inch long, with 3 distinct, hairy marginal nerves and 2 obscure, smooth nerves, with a tuft of cobwebby hairs at the base.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** Gleason and Cronquist call this family Poaceae. This species is introduced from Europe into Canada, and is now spreading southward.



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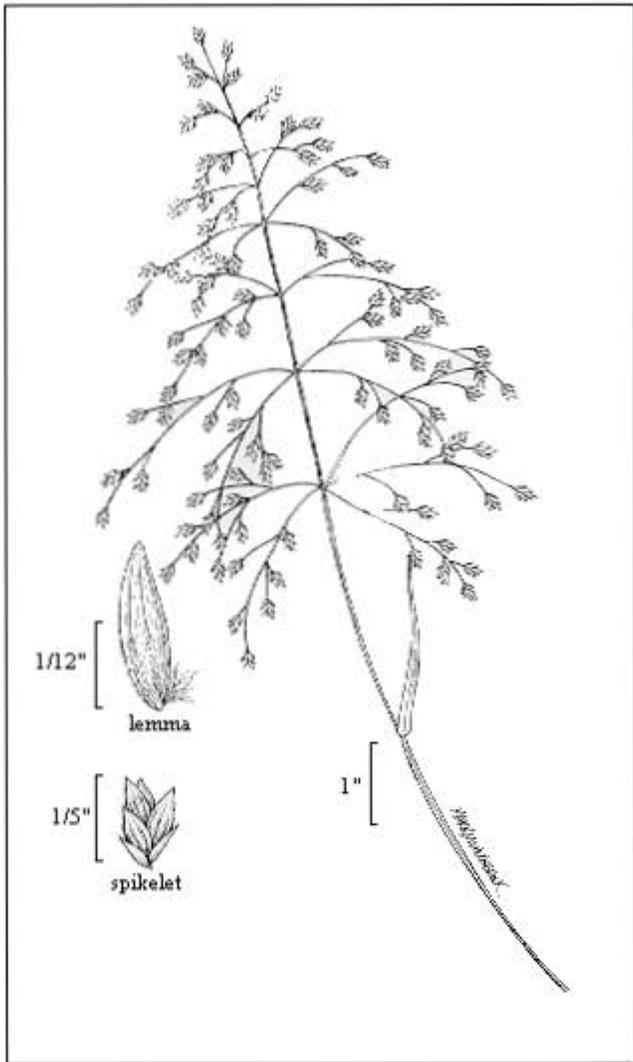
Field Office Guide to Plant Species

Woodland Bluegrass

Poa sylvestris Gray



- **Family:** Grass (Gramineae)
- **Flowering:** April-June
- **Field Marks:** The distinguishing features of this bluegrass are the cobwebby hairs on the lemmas, the 5-nerved lemmas, and the absence of rhizomes. In addition to the cobwebby hairs, the veins of the lemmas are finely hairy.
- **Habitat:** Rich woods.
- **Habit:** Tufted perennial with fibrous roots.
- **Stems:** Upright, unbranched, up to 3 feet tall, smooth.
- **Leaves:** Elongated, flat, soft, up to 1/4 inch wide; sheaths smooth, or the lowest somewhat rough.
- **Flowers:** Borne in spikelets, the spikelets arranged in open, spreading or reflexed panicles up to 8 inches long; spikelets 2- to 5-flowered, up to 1/5 inch long.
- **Glumes:** Lanceolate to ovate, pointed at the tip, smooth, the first glume 1-nerved, the second glume 3-nerved, up to 1/6 inch long.
- **Lemmas:** Broadly lanceolate, rounded to obscurely pointed at the tip, 5-nerved, hairy on the veins, with a tuft of hairs at the base, up to 1/6 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Grains ellipsoid, smooth.
- **Notes:** The seeds are eaten by wildlife. Gleason and Cronquist call this family Poaceae.



Northeast Wetland Flora

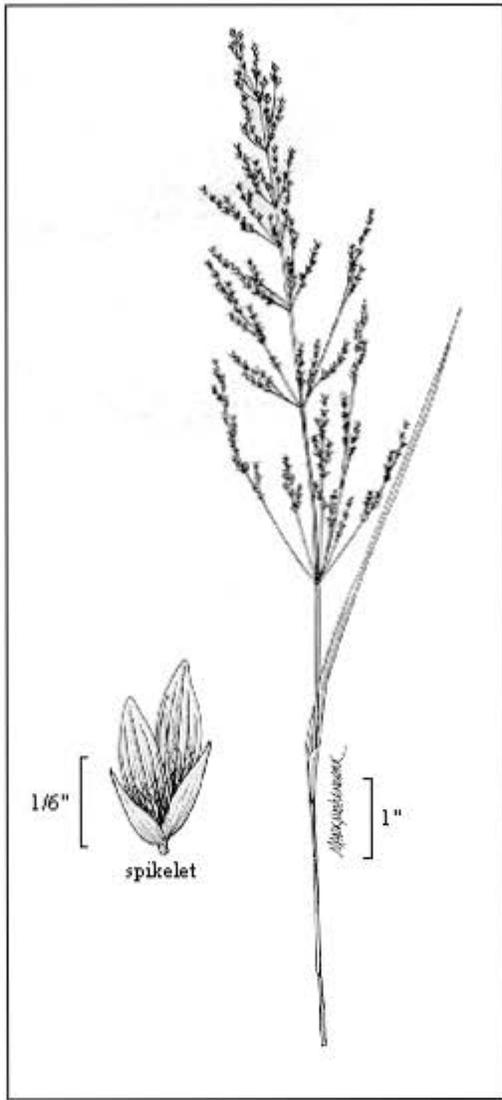
Field Office Guide to Plant Species

Rough Bluegrass

Poa trivialis L.



- **Family:** Grass (Gramineae)
- **Flowering:** June-August
- **Field Marks:** This bluegrass is characterized by its lemmas which are cobwebby at the base and hairy on the keel, but smooth on the nerves. The stem beneath the panicle is rough to the touch.
- **Habitat:** Damp soil.
- **Habit:** Tufted perennial herb with thickened rootstocks but without rhizomes.
- **Stems:** Upright or spreading at the base and rooting at the nodes, weak, usually unbranched, rough to the touch, at least below the panicle, up to 3 1/2 feet tall.
- **Leaves:** Elongated, flat, up to 1/4 inch wide, smooth or rough to the touch; sheaths rough to the touch.
- **Flowers:** Borne in spikelets, the spikelets arranged in panicles up to 8 inches long; spikelets 2- to 3-flowered, up to 1/4 inch long, on rough stalks.
- **Glumes:** Lanceolate, pointed at the tip, smooth, up to 1/6 inch long.
- **Lemmas:** Narrowly ovate, pointed at the tip, up to 1/6 inch long, hairy on the keel but not on the nerves, cobwebby hairy at the base.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ellipsoid to obovoid, smooth.
- **Notes:** Gleason and Cronquist call this family Poaceae.



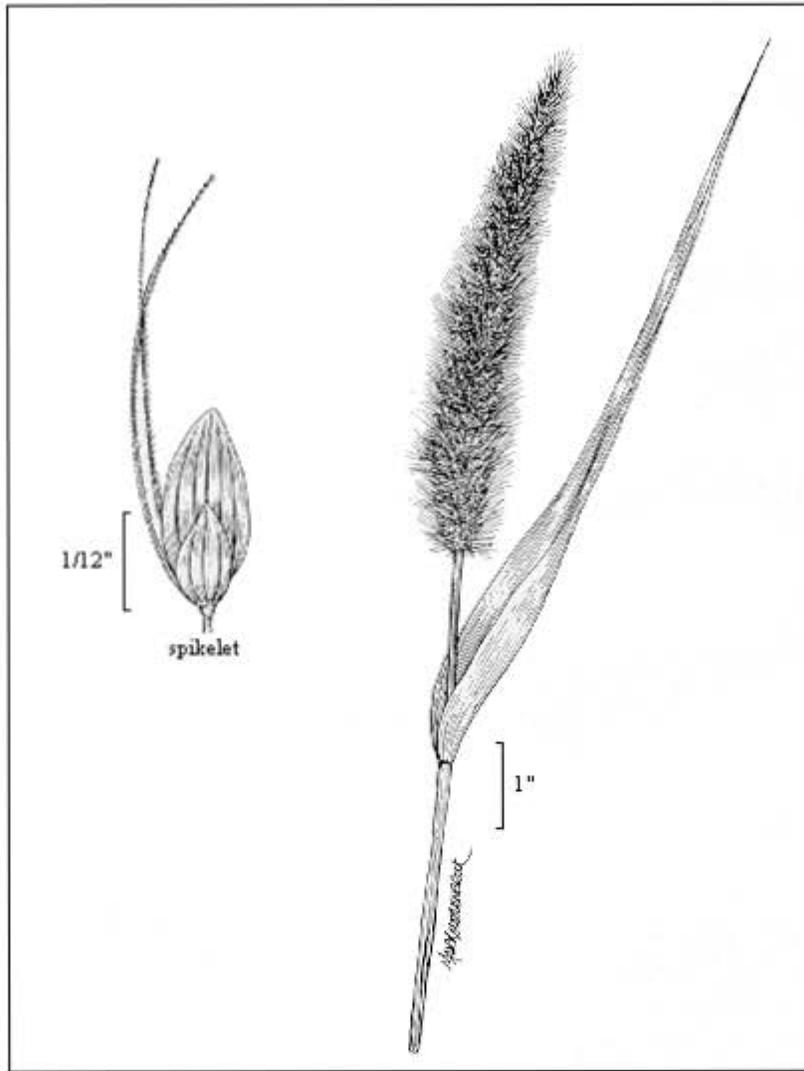
Northeast Wetland Flora

Field Office Guide to Plant Species

Fox-tail Bristle Grass *Setaria italica* (L.) Beauv.



- **Family:** Grass (Gramineae)
- **Flowering:** June-October
- **Field Marks:** This species differs from all other species of *Setaria* by its large, lobed, spike-like panicles with yellow, red, or blackish grains.
- **Habitat:** Disturbed areas.
- **Habit:** Coarse annual herb with fibrous roots.
- **Stems:** Upright, usually unbranched, often rather stout, smooth, up to 5 feet tall.
- **Leaves:** Elongated, flat, usually smooth, up to 1 1/2 inches wide.
- **Flowers:** Borne in spikelets arranged in a spike-like, bristly panicle, the panicle often lobed, upright or arching, up to 1 foot long, up to 1 3/4 inches thick; stem just beneath the panicle often rough to the touch; spikelets 1-flowered, up to 1/8 inch long, subtended by 1-3 green, brown, or purplish bristles; bristles up to 1/2 inch long, with upward pointing hairs.
- **Glumes:** Pointed, smooth, up to 1/8 inch long.
- **Lemmas:** Ovate, pointed at the tip, smooth, up to 1/8 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ovoid, smooth or wrinkled, yellow, red, or blackish.
- **Notes:** Gleason and Cronquist refer to this family as Poaceae.

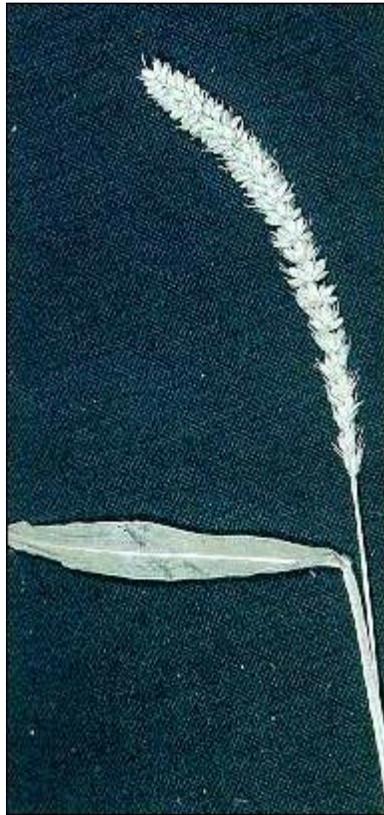


Northeast Wetland Flora

Field Office Guide to Plant Species

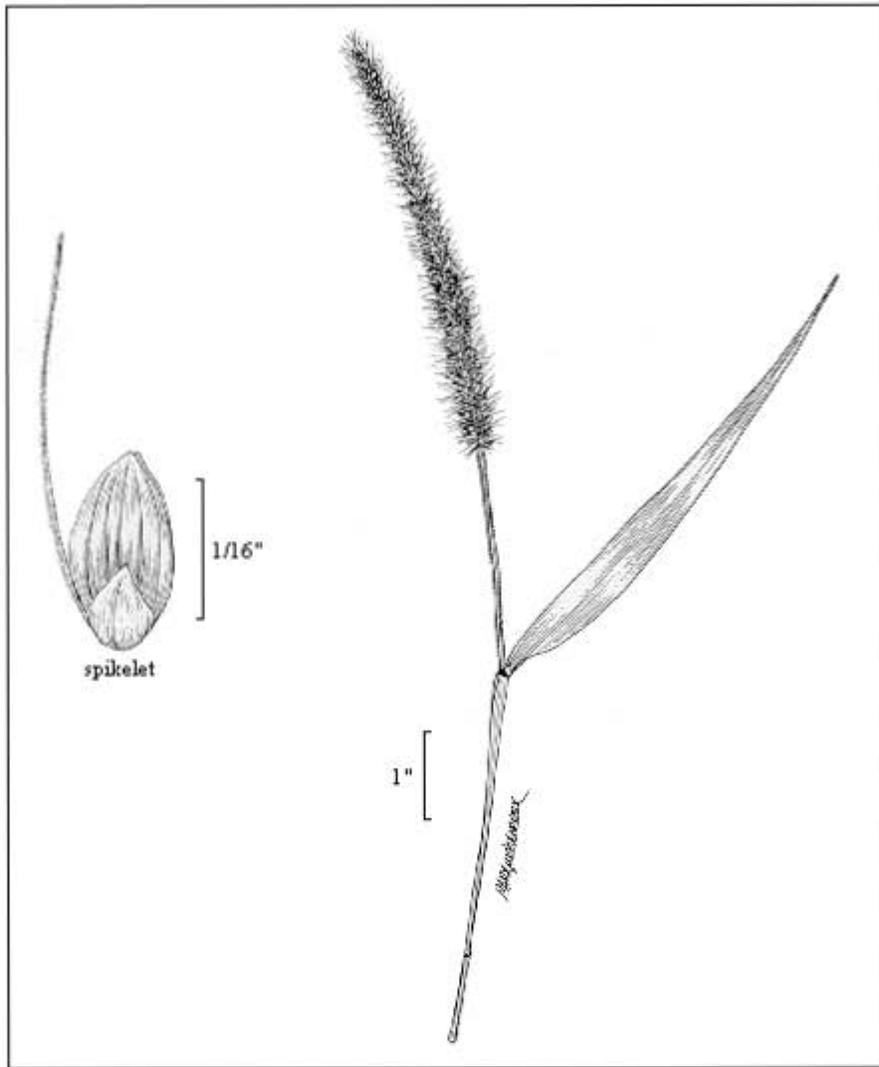
Bur Bristle Grass

Setaria verticillata (L.) Beauv.



- **Family:** Grass (Gramineae)
- **Flowering:** July-October
- **Field Marks:** The distinguishing feature of this *Setaria* is that the top of the stalk bearing the spike-like panicle is rough to the touch with downward pointing hairs. The green spike is frequently lobed.
- **Habitat:** Disturbed areas.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Ascending to upright, branched, up to 2 feet tall, smooth.
- **Leaves:** Elongated, flat, blue-green, more or less short-hairy, rough to the touch, 1/4-3/4 inch wide.
- **Flowers:** Borne in spikelets in a spike-like, bristly panicle, the panicle often lobed, upright, up to 6 inches long, up to 1/2 inch thick; stem just below the panicle rough to the touch with downward pointing hairs; spikelets 1-flowered, 1/12-1/10 inch long, subtended by 1 purple or tawny bristle; bristle up to 1/3 inch long, with downward pointing hairs.
- **Glumes:** Broadly lanceolate, pointed or rounded at the tip, 1-nerved, smooth, 1/32 inch long, about 1/3 the length of the lemma.
- **Lemmas:** Ovate, pointed at the tip, wrinkled, up to 1/10 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Grains ovoid, greenish.

Notes: This grass has been introduced from Europe and Asia. Gleason and Cronquist call this family Poaceae.



Northeast Wetland Flora

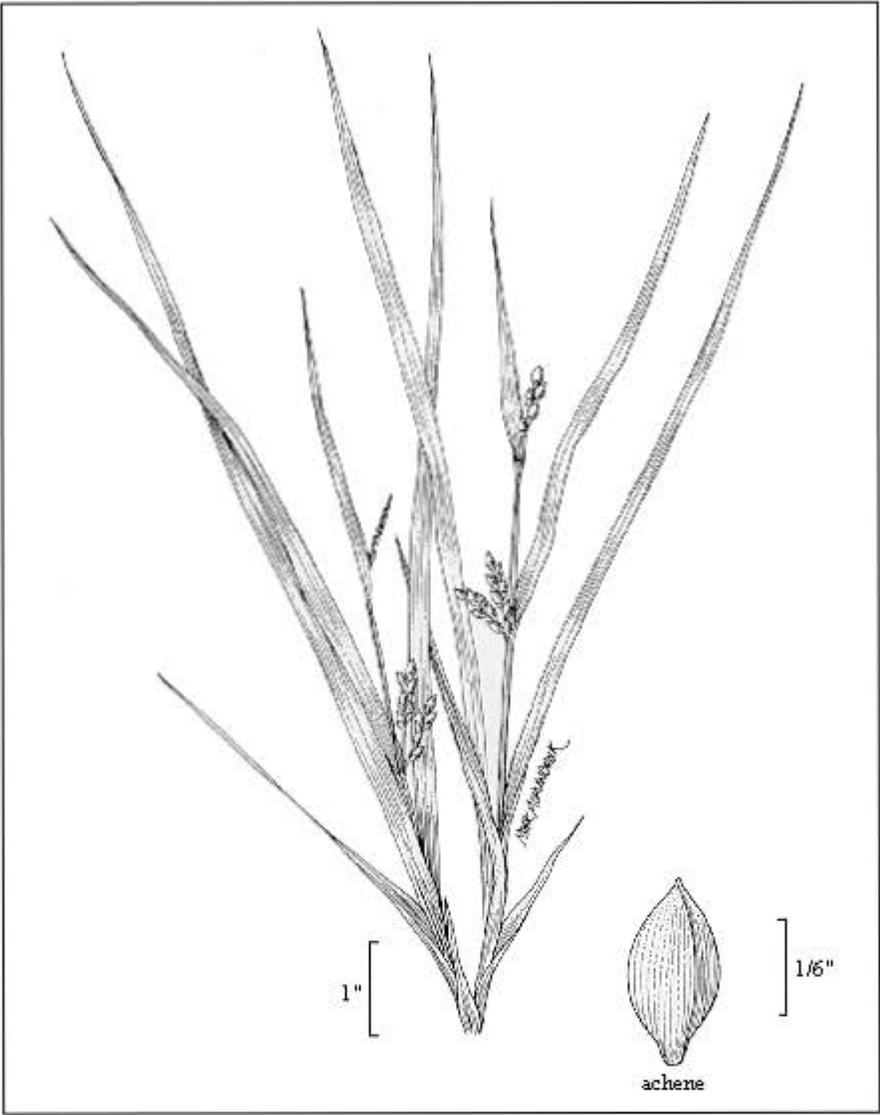
Field Office Guide to Plant Species

Thicket Sedge

Carex abscondita Mackenz.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-July
- **Field Marks:** This species is readily recognized by its short flowering stems often hidden by the longer leaves, its sharply triangular perigynia with round-tipped female scales, and its separate male spike about equalling the upper female spike.
- **Habitat:** Dry or occasionally moist woods.
- **Habit:** Tufted perennial from short rootstocks.
- **Stems:** Upright, unbranched, smooth or slightly rough, up to 8 inches tall, usually hidden by the long leaves, brown-tinged at the base.
- **Leaves:** Elongated, flat, pale green to glaucous, smooth or slightly roughened, up to 1/2 inch wide.
- **Flowers:** Male and female borne in separate spikes; male spike solitary, terminal, sessile, up to 1/2 inch long, not surpassing the uppermost female spike; female spikes 2-3, stalked, oblong-cylindric, up to 3/4 inch long, surpassed by the leaf-like bracts.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Enclosed in a perigynium, with 3-10 perigynia per spike, the perigynia ovoid, smooth, sharply triangular, many-nerved, tawny, up to 1/6 inch long, short-beaked or beakless; female scales ovate, rounded at the tip, about half as long as the perigynium; stigmas 3.
- **Fruits:** Achenes triangular, brownish, short-pointed at the tip, about 1/8 inch long.



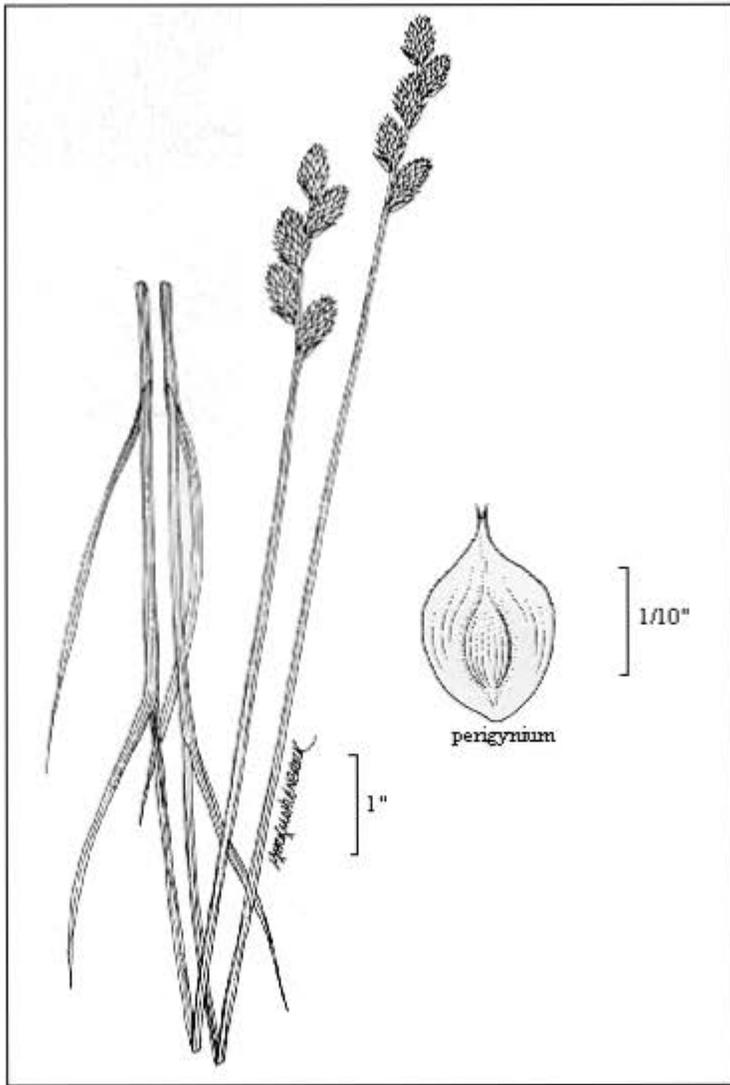
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Greenish-white Sedge *Carex albolutescens* Schweinitz



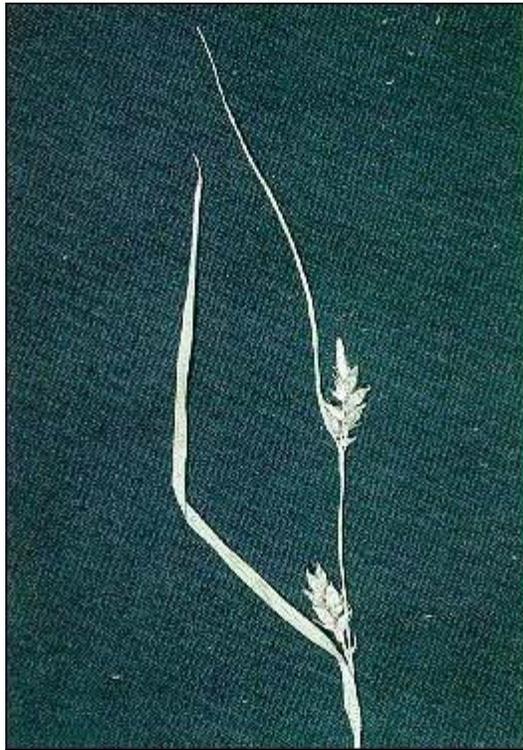
- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-August
- **Field Marks:** The distinguishing characteristics of this sedge are the interrupted cluster of ovoid spikes, the very narrow perigynia about 1/12 inch wide, and the female scales with pointed tips.
- **Habitat:** Wet woods, swamps, bogs, sometimes in brackish water.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Tufted, upright, unbranched, rough only below the spikes, triangular, up to 3 1/2 feet tall.
- **Leaves:** Elongated, flat, smooth, pale green, up to 1/6 inch wide.
- **Flowers:** Borne in spikelets, the spikelets crowded into somewhat interrupted ovoid spikes, up to 1/2 inch long, the male flowers at the base of the female flowers in the same spike; female scales ovate, pointed at the tip, about as long as the perigynia but narrower.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia obovate to nearly spherical, appressed, pale brown to greenish, nerved on both faces, up to 1/5 inch long, about 1/12 inch wide, abruptly narrowed to a short beak; stigmas 2.
- **Fruits:** Achenes lenticular, ellipsoid, smooth.
- **Notes:** The achenes are eaten by waterfowl.



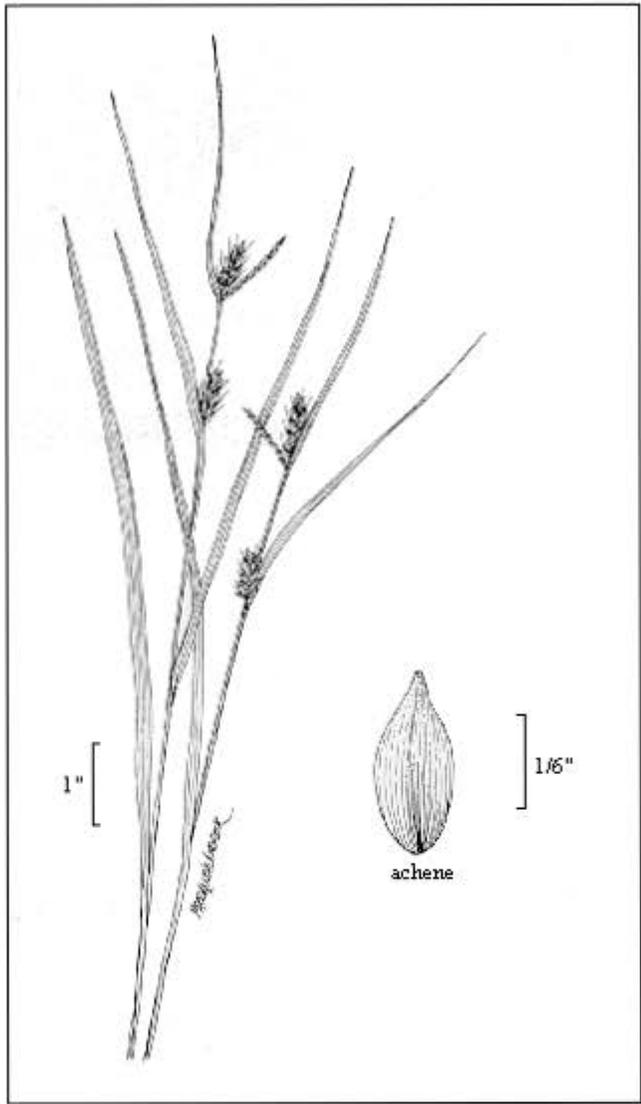
Northeast Wetland Flora

Field Office Guide to Plant Species

Narrow-leaf Sedge *Carex amphibola* Steud.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-July
- **Field Marks:** This species differs by its separate male and female spikes, its bluntly angled perigynia, its often awned female scales, and its leaves up to 2/5 inch wide.
- **Habitat:** Rich woods, bottomland forests, wet meadows.
- **Habit:** Tufted perennial from short rootstocks.
- **Stems:** Upright, unbranched, slender, smooth, up to 1 1/2 feet tall, purple-tinged at the base.
- **Leaves:** Elongated, flat, green or glaucous, rough on the margins, up to 2/5 inch wide.
- **Flowers:** Male and female borne in separate spikes; male spike located at the end of the stem immediately below the terminal female spike, up to 1 1/2 inches long, sessile or on a rough stalk; female spikes 3-5, up to 1 1/4 inches long, up to 1/6 inch wide, subtended by leaf-like bracts.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Enclosed in a perigynium, with 4-12 perigynia per spike, the perigynia ellipsoid to obovoid, bluntly angled, up to 1/4 inch long, smooth, conspicuously grooved, beakless, pale green to yellow-brown; female scales usually awned at the tip, with white sides and a green midvein, yellow-brown; stigmas 3.
- **Fruits:** Achenes more or less triangular, yellow-brown, short-pointed at the tip, about 1/8 inch long.



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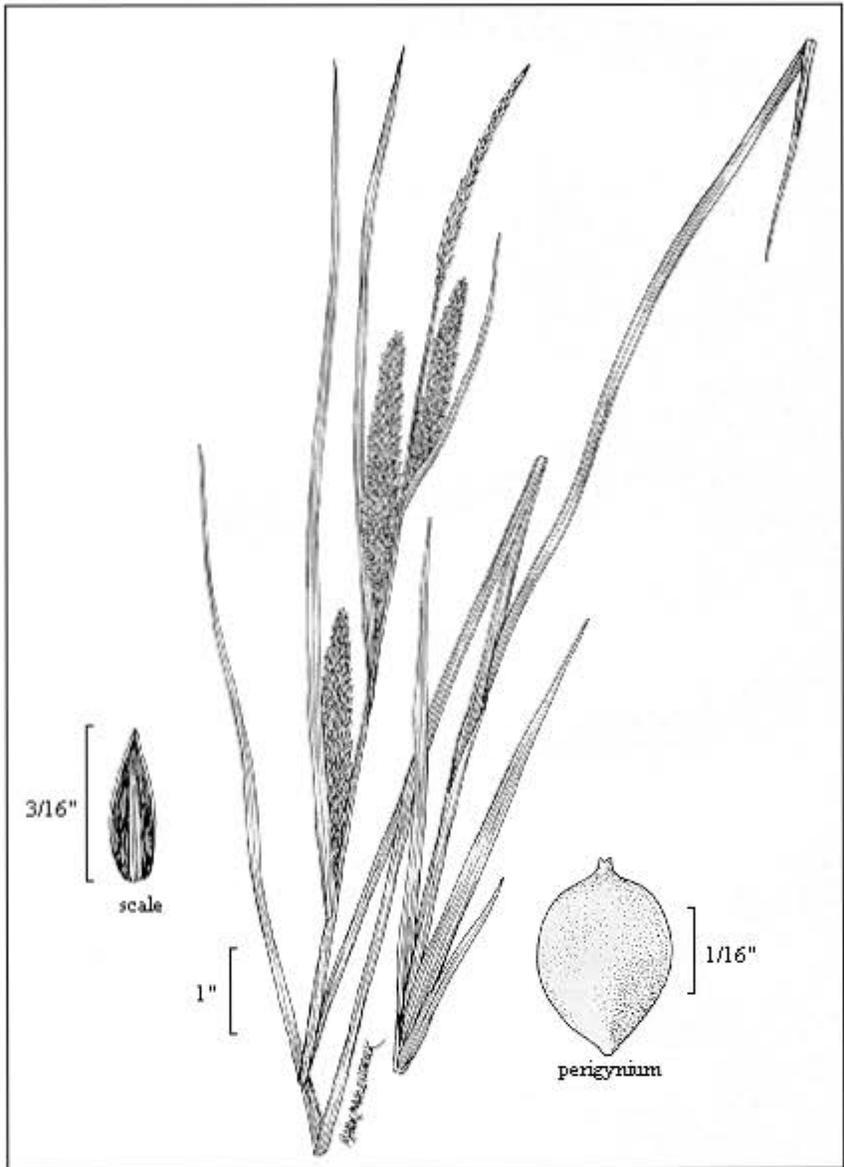
Field Office Guide to Plant Species

Water Sedge

Carex aquatilis Wahlenb.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-August
- **Field Marks:** This species is distinguished by its 2 or more separate male spikes, its obscurely nerved, nearly beakless perigynia, and its leafy stems up to 5 feet tall.
- **Habitat:** Around ponds, in pools, marshes, often in standing water.
- **Habit:** Tufted perennial herb from slender stolons, forming large clumps or a turf.
- **Stems:** Upright, triangular, up to 5 feet tall, smooth or rough to the touch, usually glaucous, often with dried leaf bases from the previous year's growth.
- **Leaves:** Elongated, flat or channeled, sometimes rough to the touch on the margins and the midvein, glaucous, up to 1/3 inch wide, as long as or longer than the stems.
- **Flowers:** Borne in spikes, the male spikes 2-5, separate from the 3-5 female spikes that have some male flowers at the tip; male spikes slender, up to 2 inches long; female spikes cylindrical, upright, up to 4 inches long, up to 1/3 inch thick; female scales usually purplish, rounded or pointed at the tip, shorter or longer than the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia flat, elliptic to narrowly obovate, up to 1/6 inch long, scarcely nerved, with a very minute beak; styles 2.
- **Fruits:** Achenes lenticular.
- **Notes:** The achenes are eaten by waterfowl.

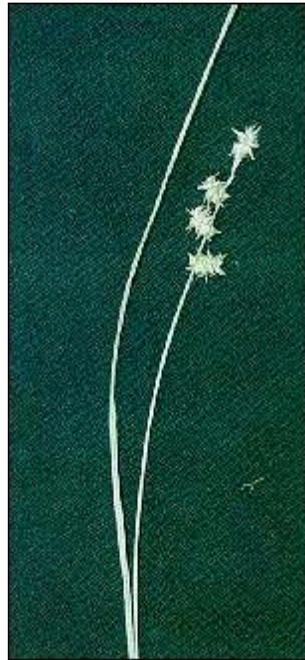


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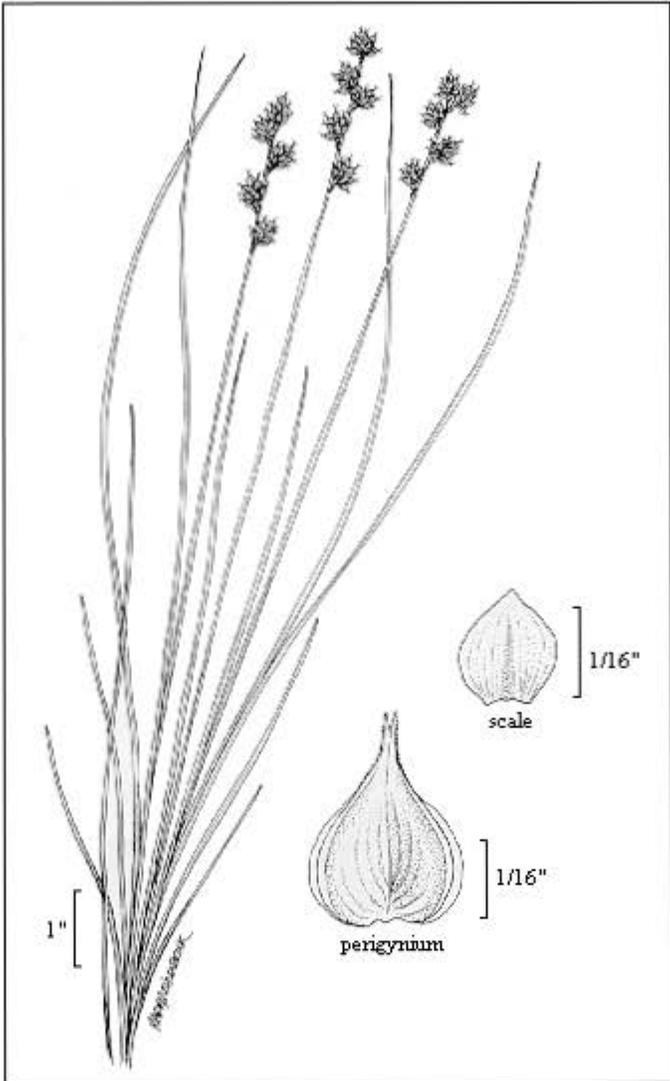
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Prickly Bog Sedge

Carex atlantica L.H. Bailey



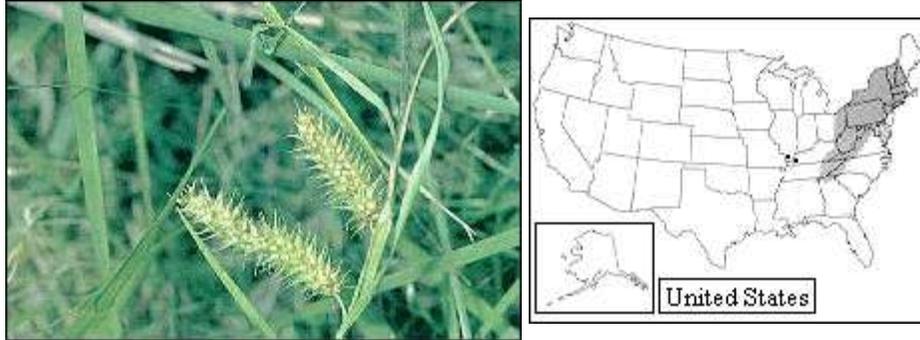
- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-August
- **Field Marks:** The spikes of this species are all alike, with 8-40 female flowers at the top and the few male flowers at the bottom. The perigynia are spreading at maturity with beaks conspicuously 2-toothed at tip. The midnerve of the female scales does not reach the tip of the scale.
- **Habitat:** Bogs, swamps, wet woods.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, unbranched, rather stout, triangular, up to 1 1/4 feet tall, rough to the touch, at least beneath the spikes.
- **Leaves:** Elongated, pale green, up to 1/6 inch wide, rough to the touch.
- **Flowers:** Borne in spikes, the 3-6 spikes arranged in a more or less interrupted head up to 3 inches long, each spike 1/3-1/2 inch long, with 8-40 spreading perigynia at the top and fewer male flowers at the bottom; female scales pale brown or even whitish, rounded or pointed at the tip, the midnerve not reaching the tip, about 1/2 as long as the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia spreading, smooth, green to yellow, ovoid to triangular, spongy at the base, strongly nerved front and back, 1/8-1/6 inch long, tapering to a 2-toothed beak; styles 2.
- **Fruits:** Achenes lenticular.
- **Notes:** The achenes are eaten by waterfowl.



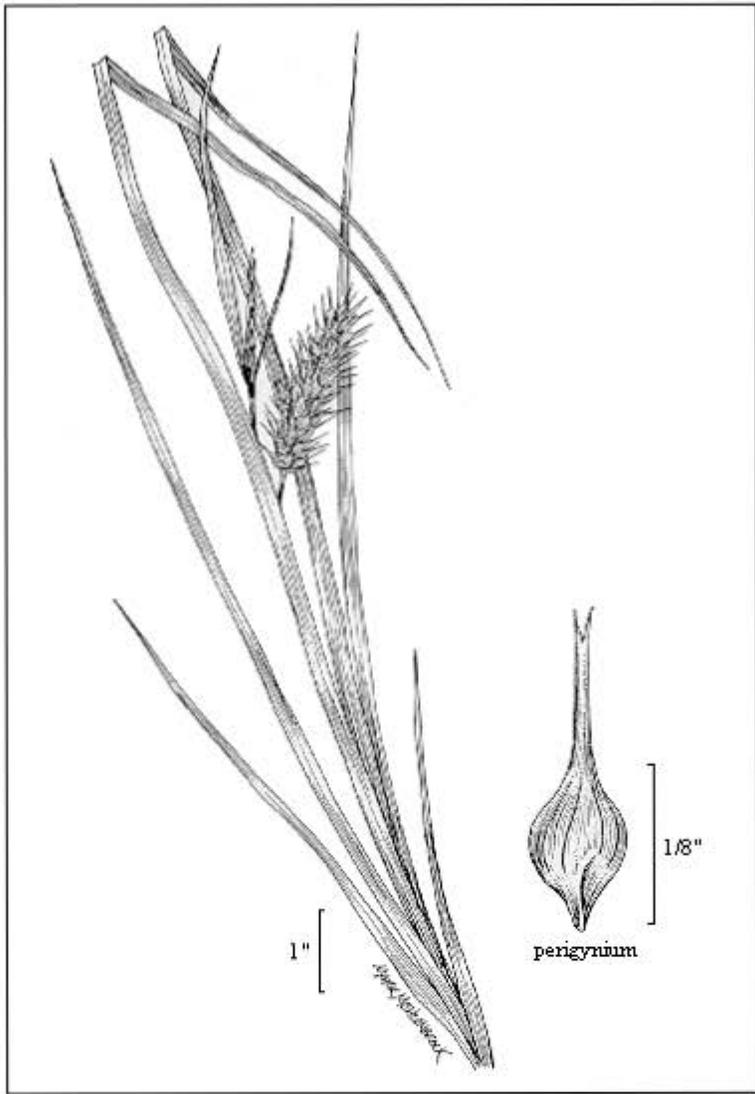
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Bailey Sedge *Carex baileyi* Britt.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-September
- **Field Marks:** The distinguishing characteristics of this sedge are the separate male and female spikes, the beaked perigynia with the beak as long as or longer than the body, the female spikes only 1/3-1/2 inch thick, and the narrow leaves up to 1/6 inch wide.
- **Habitat:** Wet woods, wet meadows.
- **Habit:** Tufted perennial herb with thickened rootstocks.
- **Stems:** Upright, usually unbranched, sharply 3-angled, smooth, up to 2 feet tall.
- **Leaves:** Elongated, rough to the touch, at least along the edges, up to 1/6 inch wide.
- **Flowers:** Borne in spikelets, the spikelets congregated into spikes, the male spike separate from the female ones but on the same plant, all subtended by leafy bracts, the male spike solitary, slender, erect, up to 2 inches long, the female spikes 2-4, ascending, up to 1 3/4 inches long, 1/3-1/2 inch thick.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in a perigynium, the perigynium with a nearly spherical body and a slender beak as long as or longer than the body, smooth, conspicuously nerved, 1/4-1/3 inch long, about 1/10 inch thick, each perigynium subtended by lanceolate scales shorter than the perigynium; stigmas 3.
- **Fruits:** Achenes triangular, obovoid, up to 1/6 inch long.
- **Notes:** The achenes are eaten by waterfowl.

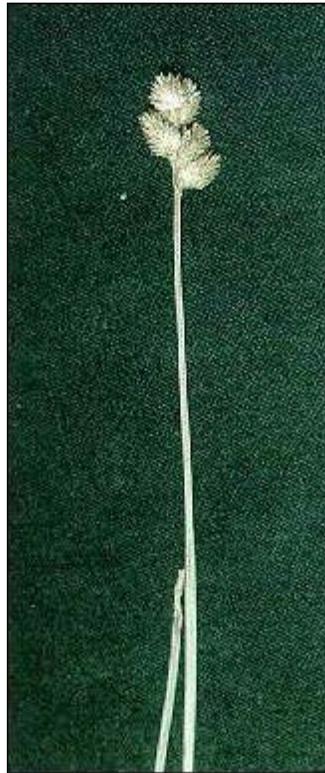


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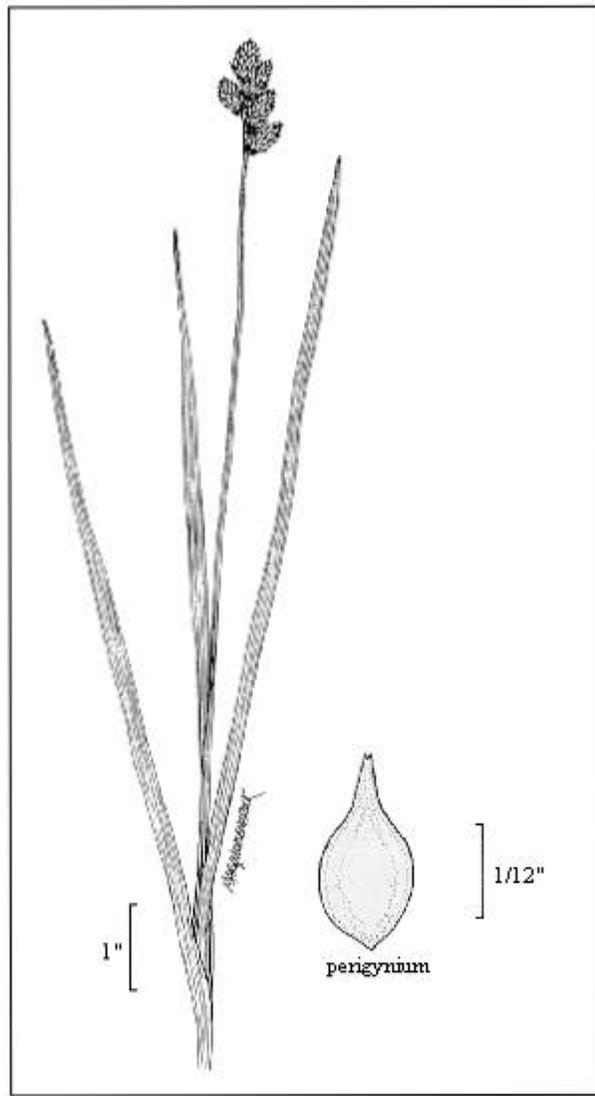
Field Office Guide to Plant Species

Bebb's Sedge

Carex bebbii (L.H. Bailey) Olney ex Fernald



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-August
- **Field Marks:** This sedge is distinguished by its crowded, ovoid spikes that have the male flowers at the base, and the ovate perigynia with the inner face nerveless.
- **Habitat:** Wet meadows.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Densely tufted, upright, unbranched, rough only below the spikes, triangular, up to 2 1/2 feet tall.
- **Leaves:** Elongated, flat, smooth, up to 1/4 inch wide.
- **Flowers:** Borne in spikelets, the spikelets crowded into ovoid spikes up to 1/2 inch long, the male flowers at the base of the female flowers in the same spike; female scales narrowly ovate, pointed at the tip, slightly longer than the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia narrowly ovate, up to 1/6 inch long, 1/12-1/10 inch wide, nerveless on the inner face; stigmas 2.
- **Fruits:** Achenes lenticular, narrowed at each end, smooth.
- **Notes:** The achenes are eaten by waterfowl.



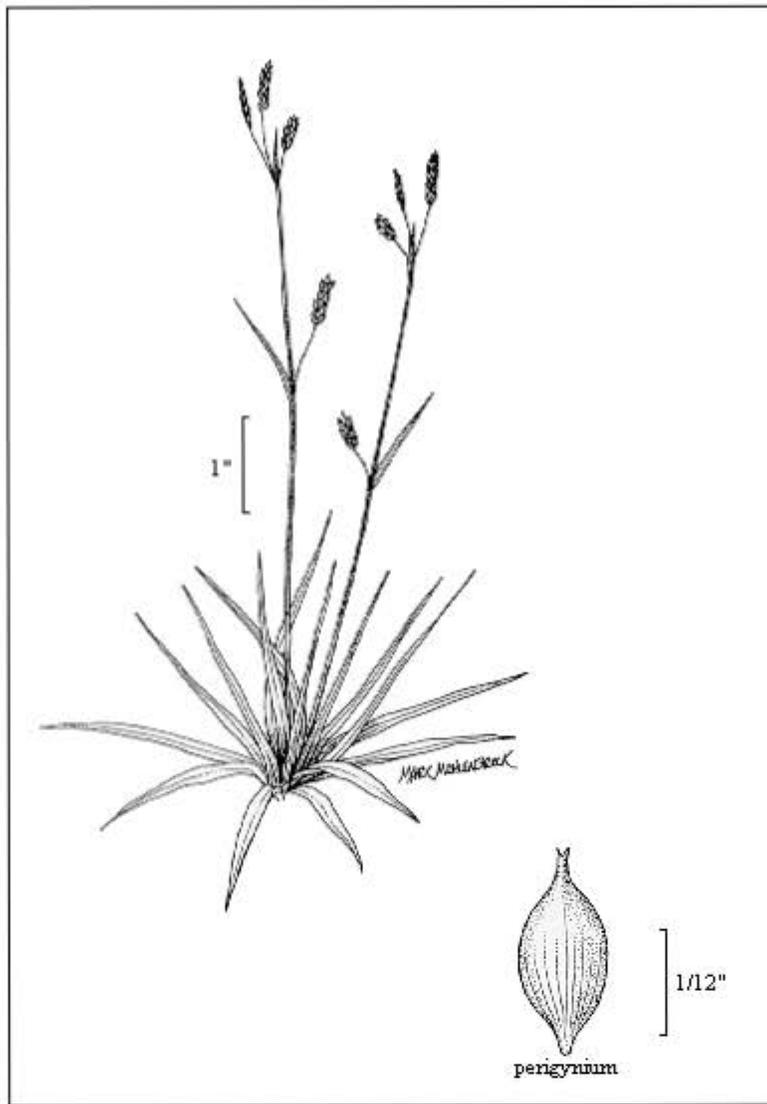
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Hair-like Sedge *Carex capillaris* L.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-August
- **Field Marks:** This species is identified by its thread-like stems, very narrow, mostly basal, flat leaves, one separate male spike and 1-3 female spikes on thread-like stalks, and a long-beaked perigynium.
- **Habitat:** Wooded swamps, bogs, fens.
- **Habit:** Densely tufted perennial herb from thickened rootstocks.
- **Stems:** Upright, thread-like, up to 20 inches tall, smooth or slightly rough to the touch.
- **Leaves:** Elongated, flat or becoming rolled into a tube, up to 1/12 inch wide, smooth, shorter than the stems, usually brownish at the base.
- **Flowers:** Borne in spikes, the male spike 1, the female spikes 1-3, exceeding the male spike; male spike up to 1/2 inch long, pale brown, sometimes with a few female flowers, on a thread-like stalk; female spikes oblong, up to 1/2 inch long, up to 1/6 inch thick, on slender, nodding stalks; female scales ovate, rounded or short-pointed at the tip, pale, shorter than the perigynia
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia 3-angled, narrowly ovoid, olive-green, shiny, faintly nerved, up to 1/6 inch long, with a slender beak at the tip; styles 3.
- **Fruits:** Achenes 3-angular.
- **Notes:** The achenes are eaten by waterfowl.



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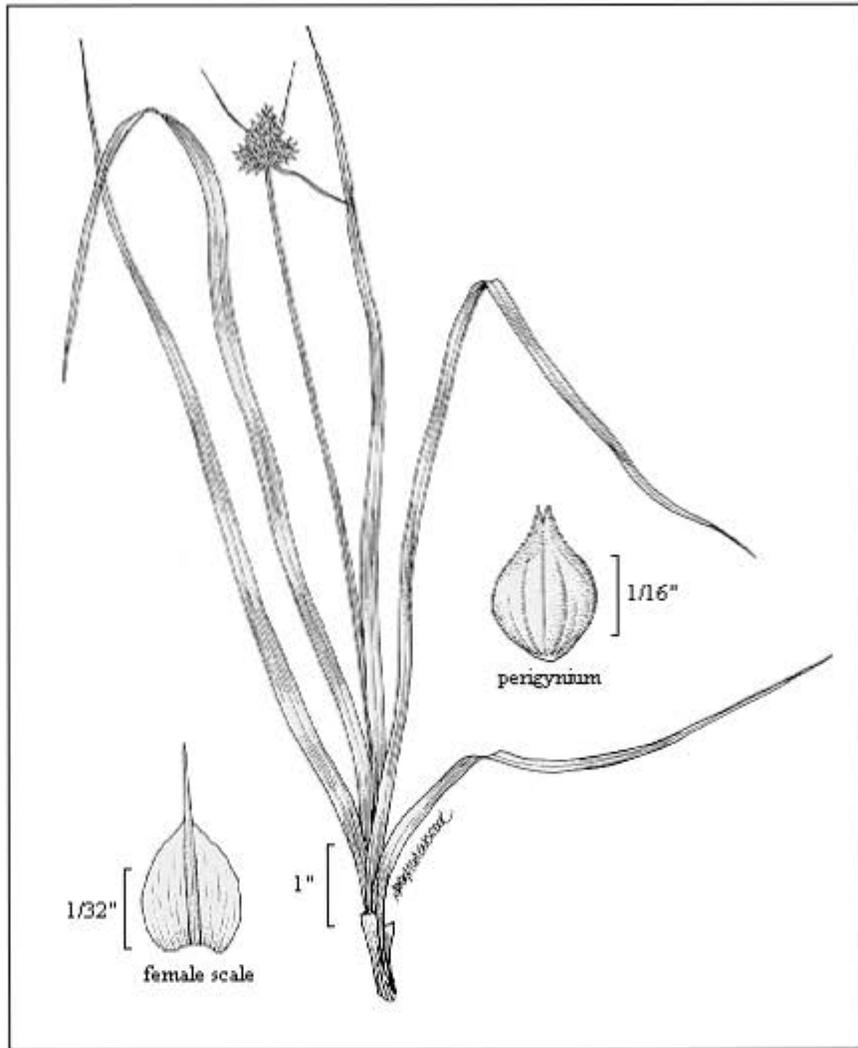
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Oval-leaf Sedge

Carex cephalophora Muhl. ex Willd.



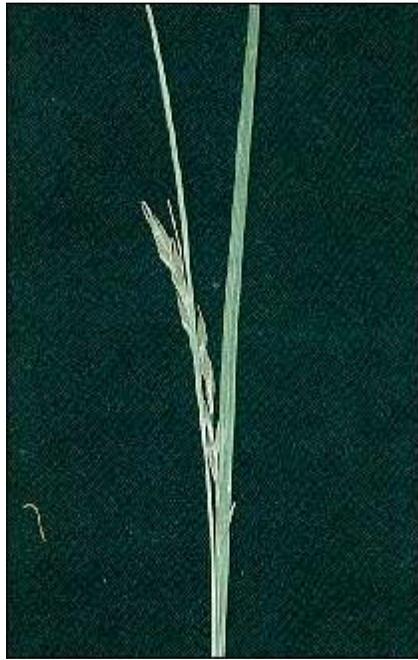
- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-July
- **Field Marks:** This species is distinguished by its perigynia in spikes that are crowded to form a single head. The male flowers are formed at the tip of each spikelet.
- **Habitat:** Dry woods, fields.
- **Habit:** Perennial herb from a short, knotty, brown rootstock.
- **Stems:** Upright, unbranched, triangular, up to 1 1/2 feet tall, smooth or rough to the touch near the head of spikes.
- **Leaves:** Several, elongated, flat, 1/12-1/6 inch wide, not hairy but with rough edges.
- **Flowers:** Borne in spikelets, with the male flowers crowded at the tip of each spikelet; spikelets 3-7, crowded into a single head 1/3-1 inch long, subtended by thread-like bracts.
- **Scales:** Pale brown, ovate-lanceolate, rough-awned, 3/4 as long as to equalling the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Enclosed in a perigynium; each perigynium green to buff, 1/10-1/8 inch long, flattened on one face, rounded on the other, lanceolate, broadest at or just below the middle, with a minutely toothed beak; styles 2.
- **Fruits:** Achenes lenticular, up to 1/16 inch long.
- **Notes:** The achenes are eaten by waterfowl.



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White-edge Sedge
Carex debilis Michx.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-August
- **Field Marks:** This *Carex* is distinguished by its very slender perigynia which taper to points at each end. There is a separate slender male spike.
- **Habitat:** Swamps, low woods, open woods, meadows.
- **Habit:** Tufted perennial herb with a thickened rootstock.
- **Stems:** Upright, unbranched, triangular, up to 3 feet tall, smooth, purple at the base.
- **Leaves:** Several, elongated, flat, 1/10-1/3 inch wide, smooth.
- **Flowers:** Borne in spikelets, the male arranged in a single slender spike up to 2 inches long, the female in 2-4 very slender, stalked spikes up to 3 inches long, with uncrowded flowers; bracts leaf-like, often longer than the inflorescence.
- **Scales:** Oblong to obovate, pale brown with a green center, about 1/2 as long as the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Enclosed in a perigynium; each perigynium narrowly lanceoloid, more or less triangular, up to 1/3 inch long, narrowed at both ends, with 2 prominent veins; styles 3.
- **Fruits:** Achenes very narrow, somewhat triangular, borne on a short stalk.
- **Notes:** The achenes are eaten by waterfowl. This is a variable species with several recognized varieties.



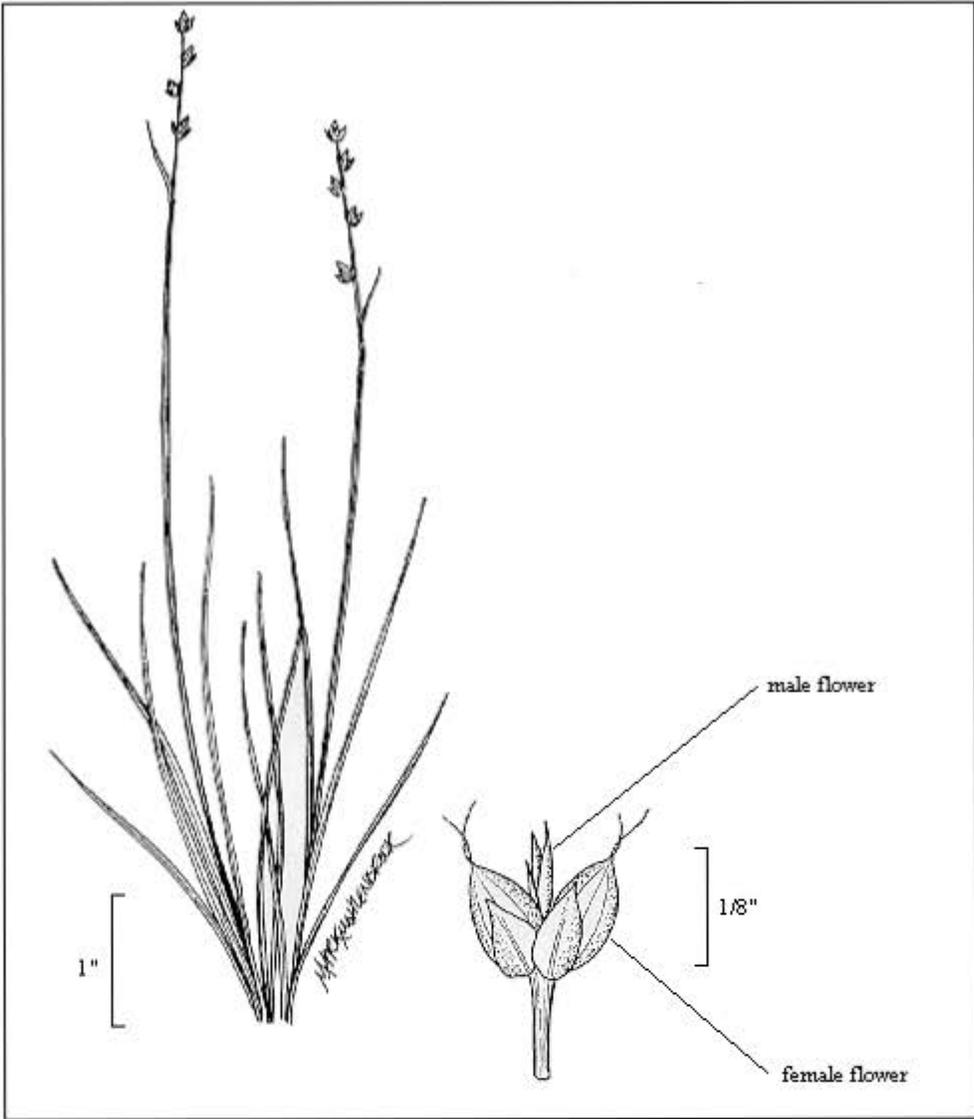
Northeast Wetland Flora

Field Office Guide to Plant Species

Soft-leaf Sedge *Carex disperma* Dewey



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-August
- **Field Marks:** This very slender sedge has only 1-3 perigynia per spike, nearly terete perigynia, and white female scales.
- **Habitat:** Wet woods, bogs.
- **Habit:** Perennial herb with fibrous roots and slender stolons.
- **Stems:** Very slender, ascending to upright, unbranched, up to 1 1/2 feet tall, smooth.
- **Leaves:** Elongated, flat, 1/12-1/10 inch wide, smooth, shorter than the stems.
- **Flowers:** Borne in spikelets, with a few male flowers at the top and usually 1-3 female flowers below, with or without very short bracts; female scales white, lanceolate.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in a perigynium, each perigynium plump, ellipsoid-ovoid, terete, shiny, rounded at the tip except for a minute beak, finely nerved, 1/10-1/8 inch long.
- **Fruits:** Achenes lenticular, thick, ellipsoid in overall outline, nearly black.
- **Notes:** The achenes are eaten by waterfowl.



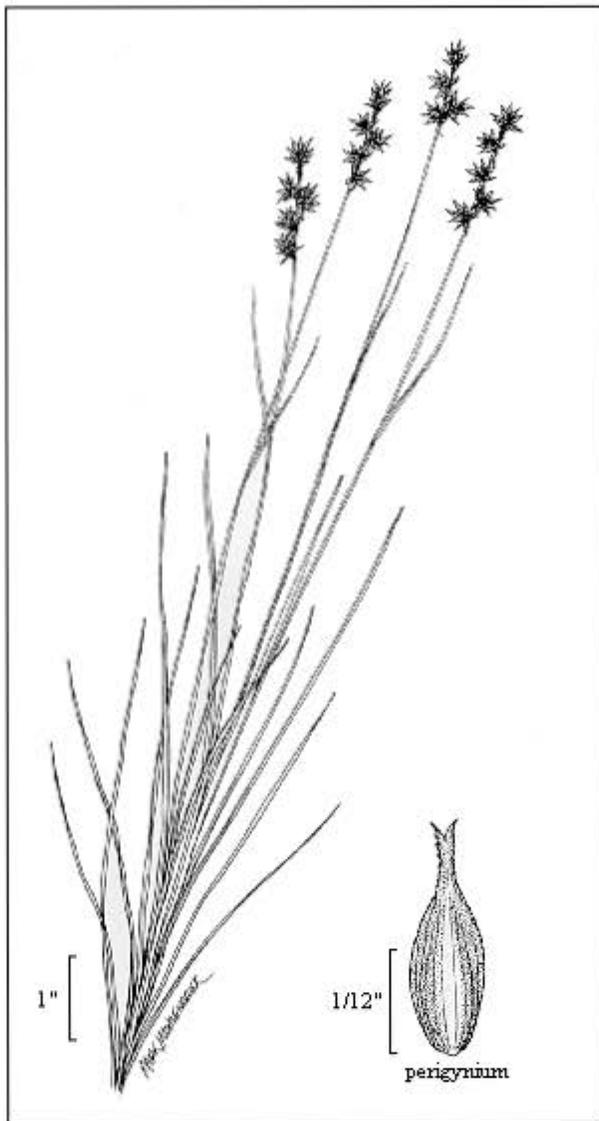
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Field Office Guide to Plant Species

Little Prickly Sedge *Carex echinata* Murray



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-September
- **Field Marks:** This sedge has all spikes alike, with the female at the top and the male at the bottom, or sometimes all but the uppermost spike entirely female. The perigynia are spreading. The stems are nearly thread-like.
- **Habitat:** Wet soil, often in peat.
- **Habit:** Tufted perennial herb from thickened rootstocks.
- **Stems:** Upright, nearly thread-like, triangular, up to 1 1/2 feet tall, smooth except just beneath the spikes.
- **Leaves:** Elongated, flat or sometimes folded, usually smooth, up to 1/6 inch wide, shorter than the stems.
- **Flowers:** Borne in spikes, with 2-5 spikes arranged in a more or less interrupted head up to 1 1/2 inches long, each spike up to 1/4 inch long, with spreading perigynia at the tip and very few male flowers at the bottom, or all but the uppermost spikelet entirely female; female scales pale brown, rounded at the tip, about 1/2 as long as the perigynia, the midnerve not reaching the tip of the scale.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia spreading, smooth, green to brown, ovoid to triangular, nerved on the outer face, 1/8-1/6 inch long, tapering to a 2-toothed beak; styles 2.
- **Fruits:** Achenes lenticular.
- **Notes:** The achenes are eaten by waterfowl.



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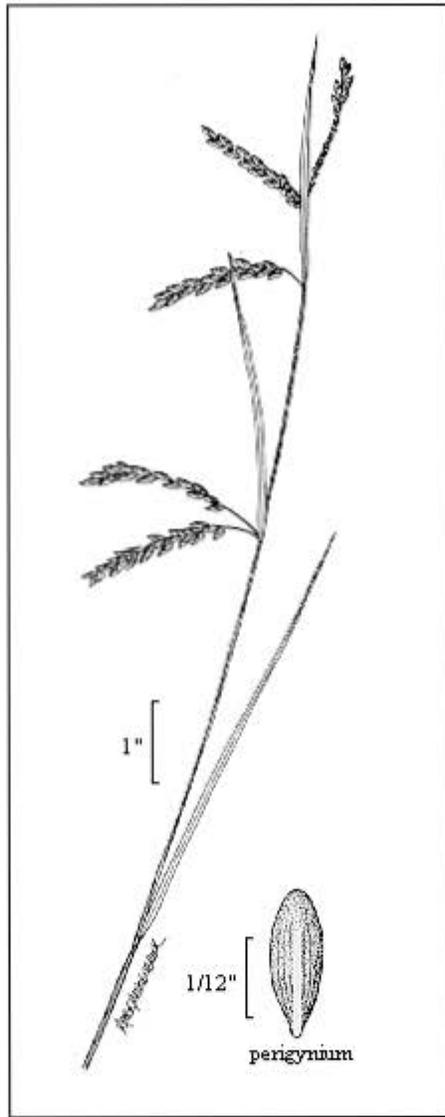
Field Office Guide to Plant Species

Graceful Sedge

Carex gracillima Schweinitz



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-August
- **Field Marks:** This slender species is recognized by its terminal spike which is male except for a few female flowers at the tip, and its 2-4 slender lateral female spikes on drooping stalks.
- **Habitat:** Meadows, moist woods.
- **Habit:** Tufted perennial herb from thickened rootstocks.
- **Stems:** Upright, slender, smooth, up to 3 feet tall, usually purplish at the base.
- **Leaves:** Elongated, dark green, flat, up to 1/3 inch wide, smooth, shorter than the stems.
- **Flowers:** Borne in spikes, the terminal spike narrowly cylindrical, up to 2 inches long, mostly male with a few female flowers at the tip; lateral spikes 2-4, narrowly cylindrical, up to 3 inches long, on slender, drooping stalks; female scales ovate to oblong, mostly rounded at the tip, whitish, about half as long as the perigynia; styles 3.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia appressed-ascending, narrowly ellipsoid, smooth, few-nerved, 3-angled, not shiny, not tapering to a distinct beak, up to 1/6 inch long.
- **Fruits:** Achenes triangular.
- **Notes:** The achenes are eaten by waterfowl.



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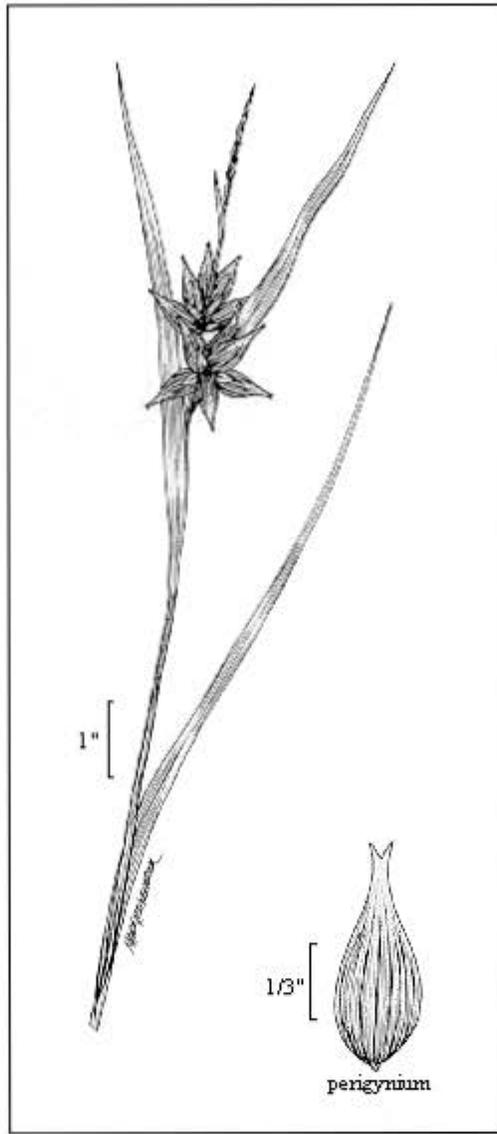
Field Office Guide to Plant Species

Bladder Sedge

Carex intumescens Rudge



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-September
- **Field Marks:** This species differs by its solitary male spike and its 1-3 nearly round female spikes, each with 2-12 inflated perigynia 1/2-1 inch long and widest below the middle, tapering to a beak.
- **Habitat:** Moist woods, meadows, swampy woods, bogs.
- **Habit:** Tufted perennial herb from a thickened rootstock.
- **Stems:** Upright, rather slender, triangular, up to 3 feet tall, smooth.
- **Leaves:** Elongated, dark green, up to 1/3 inch wide, usually somewhat rough along the edges.
- **Flowers:** Borne in spikes, with usually 1 male spike and 1-3 female spikes; male spike slender, long-stalked and extending above the female spikes; female spikes round, up to 1 1/2 inches across, with 2-12 perigynia; female scales lanceolate, awn-tipped or sometimes merely rounded at the tip, about 1/2 as long as the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia inflated, ovoid, smooth, shiny, many-nerved, 1/2-1 inch long, tapering to a 2-toothed beak; styles 3.
- **Fruits:** Achenes triangular, up to 1/4 inch long, with flat or concave sides.
- **Notes:** The achenes are eaten by wildlife.



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Cypress-swamp Sedge
Carex jorii L.H. Bailey



- **Family:** Sedge (Cyperaceae)
- **Flowering:** August-October
- **Field Marks:** This sedge differs by its glaucous leaves, stems, and perigynia, its separate male and female spikes, and its inflated, obovoid to rhomboid perigynia with a short, straight beak.
- **Habitat:** Swamps, bottomland forests.
- **Habit:** Clump-forming perennial from rather stout rhizomes.
- **Stems:** Upright, unbranched, rough, at least near the inflorescence, usually glaucous, distinctly triangular, up to 5 feet tall.
- **Leaves:** Elongated, pale green to usually glaucous, inrolled and rough along the edges, 1/4-1/2 inch wide.
- **Flowers:** Borne in separate male and female spikes; male spike usually 1, up to 2 1/2 inches long, on a roughened stalk; female spikes 3-6, cylindrical, sometimes with a few male flowers at the tip, up to 2 1/2 inches long, up to 1/2 inch thick, glaucous; female scales ovate to oblong, short-awned, extending beyond the perigynia, reddish brown with a green midvein.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in a perigynium, each perigynium rhomboid to obovoid, inflated, usually glaucous, several-nerved, smooth, up to 1/4 inch long, with a straight beak about 1/24 inch long.
- **Fruits:** Achenes obovoid, about 1/6 inch long, smooth.
- **Notes:** Waterfowl eat the achenes.



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Lakebank Sedge *Carex lacustris* Willd.



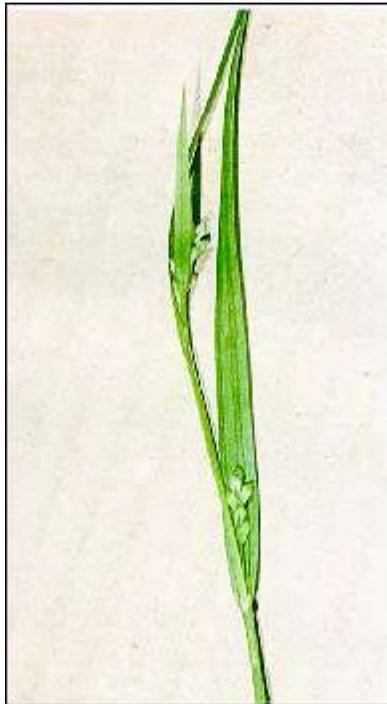
- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-August
- **Field Marks:** This coarse sedge is distinguished by its 2-4 separate male spikes and 2-4 separate, short-stalked female spikes, and its many-nerved, beaked perigynia up to 1/3 inch long.
- **Habitat:** Swamps, shallow standing water.
- **Habit:** Coarse perennial herb from creeping rhizomes.
- **Stems:** Upright, stout, triangular, rough to the touch or sometimes smooth except near the tip, up to 4 feet tall, usually purplish or reddish at base.
- **Leaves:** Elongated, glaucous, rough to the touch, up to 3/4 inch wide, longer than the stems.
- **Flowers:** Borne in spikes, with 2-4 separate male spikes and 2-4 separate female spikes, sometimes with a few male flowers toward the top; male spikes slender, brownish, up to 3 inches long; female spikes oblong-cylindrical, up to 4 inches long, up to 3/4 inch wide, all but the lowest upright; female scales lanceolate, rounded or awned at the tip, as long as or shorter than the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia lance-ovoid, smooth, many-nerved, up to 1/3 inch long, tapering to an outwardly curved, 2-toothed beak; styles 3.
- **Fruits:** Achenes triangular.
- **Notes:** The achenes are eaten by waterfowl.



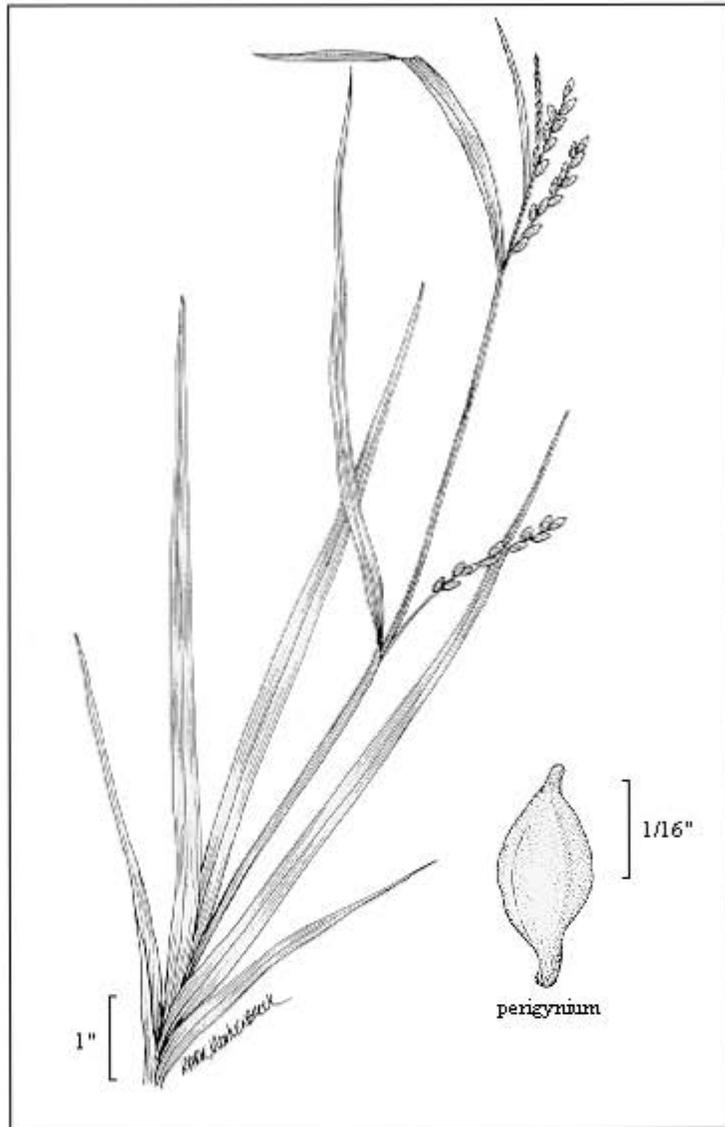
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Nerveless Wood Sedge
Carex leptonevria Fernald



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-July
- **Field Marks:** The distinguishing characteristics of this sedge are the separate male spikes and several ascending female spikes and the narrowly obovoid perigynia which are nerveless or with a few fine nerves, and a slightly bent beak.
- **Habitat:** Low woods, rich woods, moist thickets.
- **Habit:** Perennial herb with thickened rootstocks.
- **Stems:** Upright, branched or unbranched, slender, usually rough to the touch, triangular, up to 2 1/2 feet tall.
- **Leaves:** Elongated, those in basal rosettes up to 1/2 inch wide, others on the stem up to 1/3 inch wide, rough to the touch; sheaths rough on the angles.
- **Flowers:** Borne in spikelets, the spikelets congregated into spikes, the male spike separated from the female ones but on the same plant, all of them surpassed by leaf-like bracts, the male spike solitary, usually sessile and sometimes partially hidden among the female spikes, up to 1 inch long, the female spikes 2-7, the uppermost crowded, the lower remote, narrowly cylindrical, up to 1 1/2 inches long, up to 1/6 inch thick.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in a perigynium, the perigynium narrowly obovoid, 1/6-1/4 inch long, about 1/12 inch thick, smooth, faintly few-nerved, the short terminal beak usually slightly bent; each perigynium subtended by oblong to obovate scales shorter than the perigynium.
- **Fruits:** Achenes triangular, obovoid, up to 1/6 inch long.
- **Notes:** The achenes are eaten by wild birds.



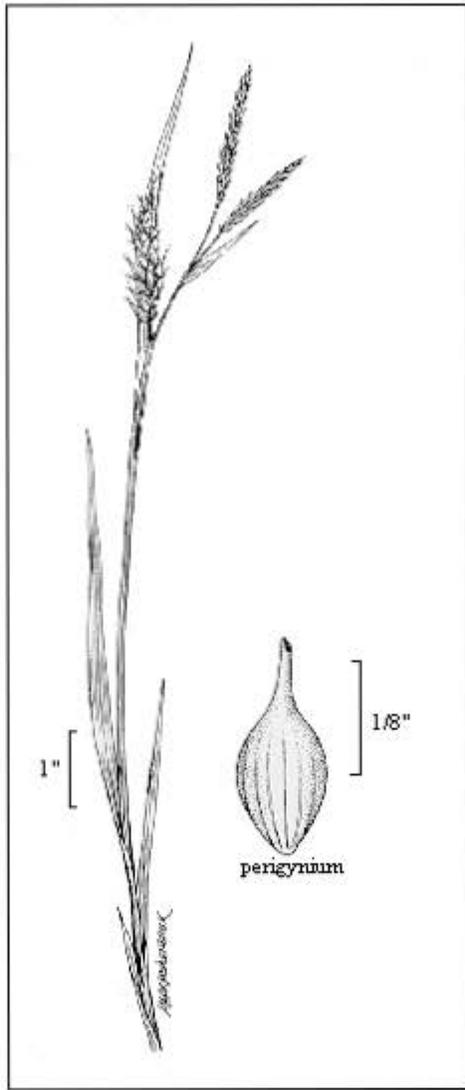
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Field Office Guide to Plant Species

Many-form Sedge *Carex polymorpha* Muhl.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-August
- **Field Marks:** This sedge differs by its perigynia with long, straight beaks, stiffly erect spikes, basal leaves reduced to bladeless sheaths, and stout rhizomes.
- **Habitat:** Dry woods, fields.
- **Habit:** Tufted perennial herb from stout rhizomes.
- **Stems:** Upright, rather stout, up to 2 feet tall, smooth or nearly so, purplish at base.
- **Leaves:** Elongated, flat but becoming inrolled, up to 1/4 inch wide, the basal leaves reduced to bladeless sheaths.
- **Flowers:** Borne in spikes, the 1-2 male spikes separate from the 1-2 female spikes; male spikes narrow oblong, short-stalked, often purplish; female spikes upright, many-flowered, up to 2 1/2 inches long, up to 1/2 inch thick; female scales ovate, rounded at the tip, reddish brown, shorter than the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia ovoid, triangular, smooth, to 1/4 inch long, obscurely nerved, with a long, straight beak about half as long as the body; styles 3.
- **Fruits:** Achenes triangular.
- **Notes:** The achenes are eaten by wildlife.



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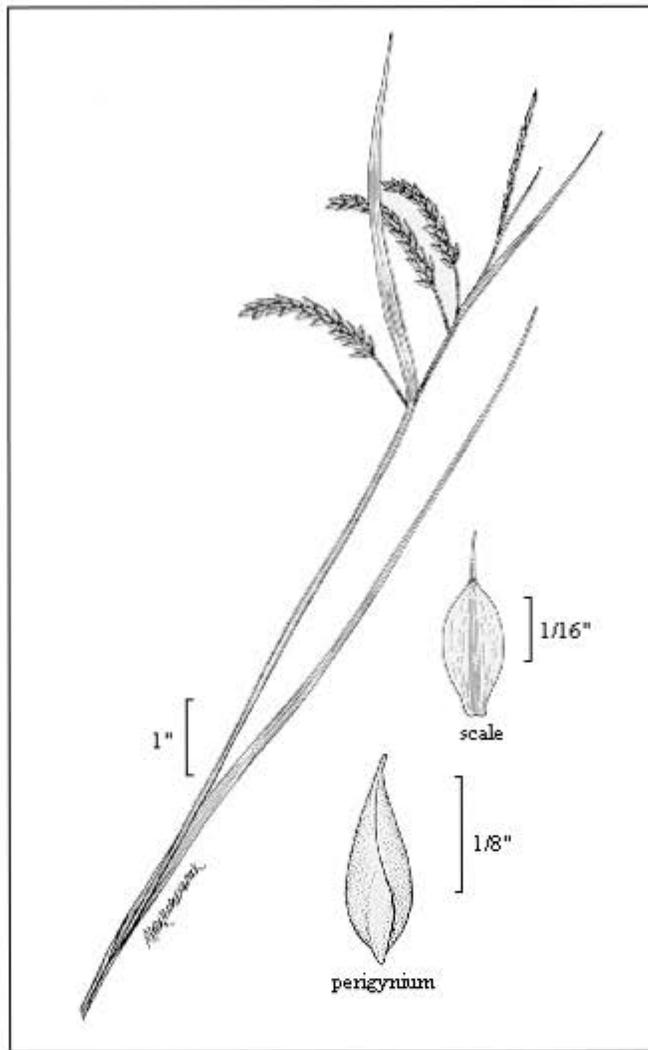
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Drooping Sedge

Carex prasina Wahlenb.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-June
- **Field Marks:** The distinguishing features of this species are its separate male spike, its drooping female spikes, its slenderly ellipsoid perigynia, and its awned female scales.
- **Habitat:** Rich woods, moist meadows.
- **Habit:** Tufted perennial herb from thickened rootstocks.
- **Stems:** Upright, slender, triangular, up to 2 1/2 feet tall, smooth except near the tip, brownish at the base.
- **Leaves:** Elongated, pale green, weak, rough to the touch, up to 1/4 inch wide.
- **Flowers:** Borne in spikes, the male spike one, the female spikes 2-4; male spike slender, short-stalked, sometimes with female flowers at the tip; female spikes narrowly cylindrical, pale green, up to 3 inches long, on arching or drooping stalks; female scales ovate, awned, pale with a green midvein, shorter than the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia slenderly ellipsoid, triangular, pale green, few-nerved, up to 1/4 inch long, tapering to a curved beak; styles 3.
- **Fruits:** Achenes triangular.
- **Notes:** The achenes are eaten by waterfowl.

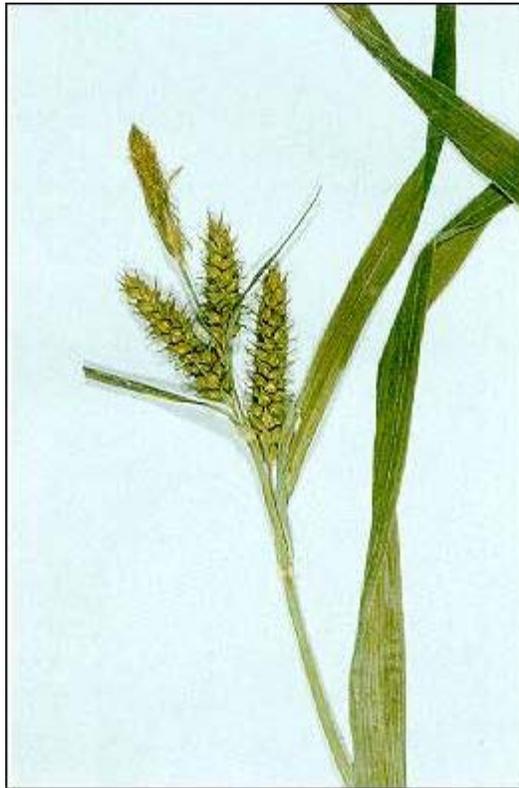


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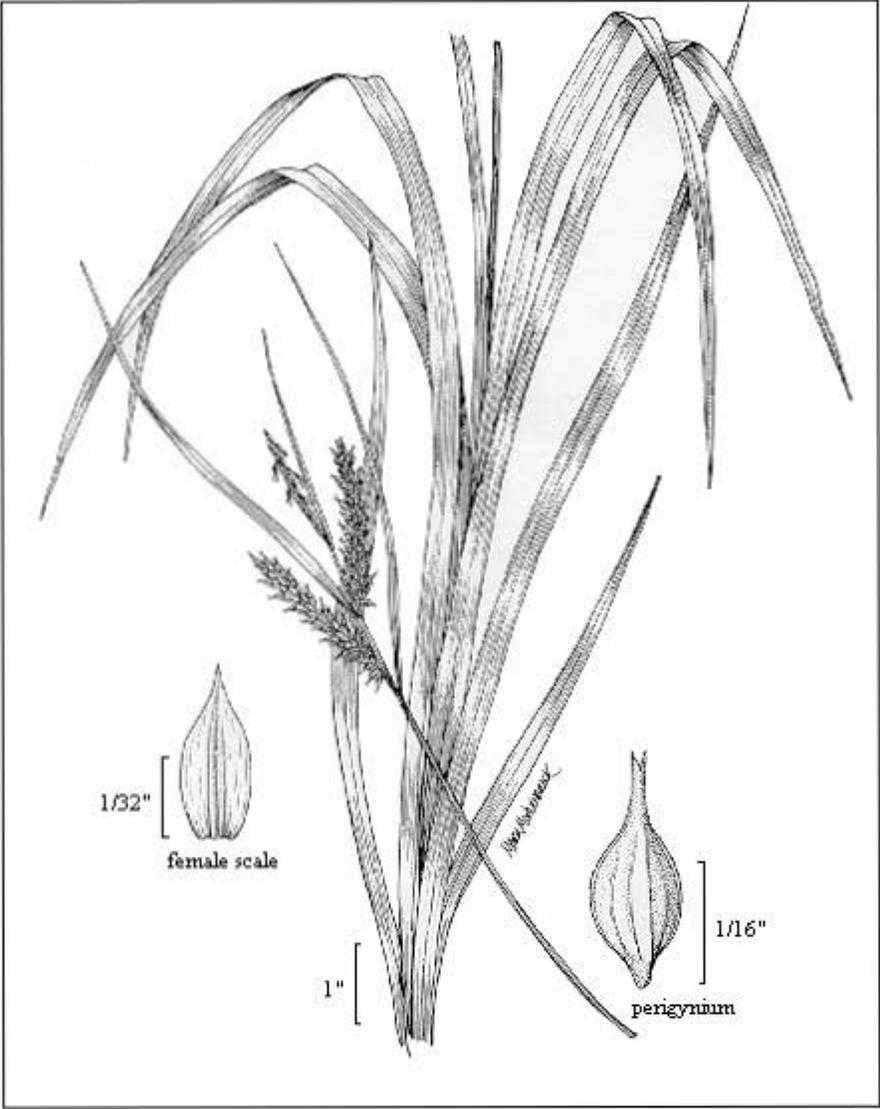
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Rough Sedge

Carex scabrata Schweinitz



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-August
- **Field Marks:** This *Carex* has a solitary male spike and 4-8 female spikes. The green perigynium has a roughened surface and a curved beak nearly as long as the body.
- **Habitat:** Wet woods, wet meadows, glades, swamps.
- **Habit:** Tufted perennial herb from slender rhizomes.
- **Stems:** Upright, unbranched, triangular, up to 1 1/2 feet tall, not hairy but very rough to the touch.
- **Leaves:** Several, elongated, ribbon-like, flat, up to 3/4 inch wide, not hairy but rough along the edges.
- **Flowers:** Borne in spikelets, the male arranged in a single, terminal spike up to 2 inches long, the female in 4-8 upright, cylindrical spikes up to 2 inches long; bracts leaf-like.
- **Scales:** Lanceolate, pale but with green veins, about as long as the body of the perigynium.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Enclosed in a perigynium; each perigynium obovoid, triangular, green, with a rough surface, up to 1/4 inch long, with conspicuous veins, narrowed above to a curved beak nearly as long as the body; styles 3.
- **Fruits:** Achenes 3-sided, up to 1/8 inch long.
- **Notes:** The achenes are eaten by waterfowl.



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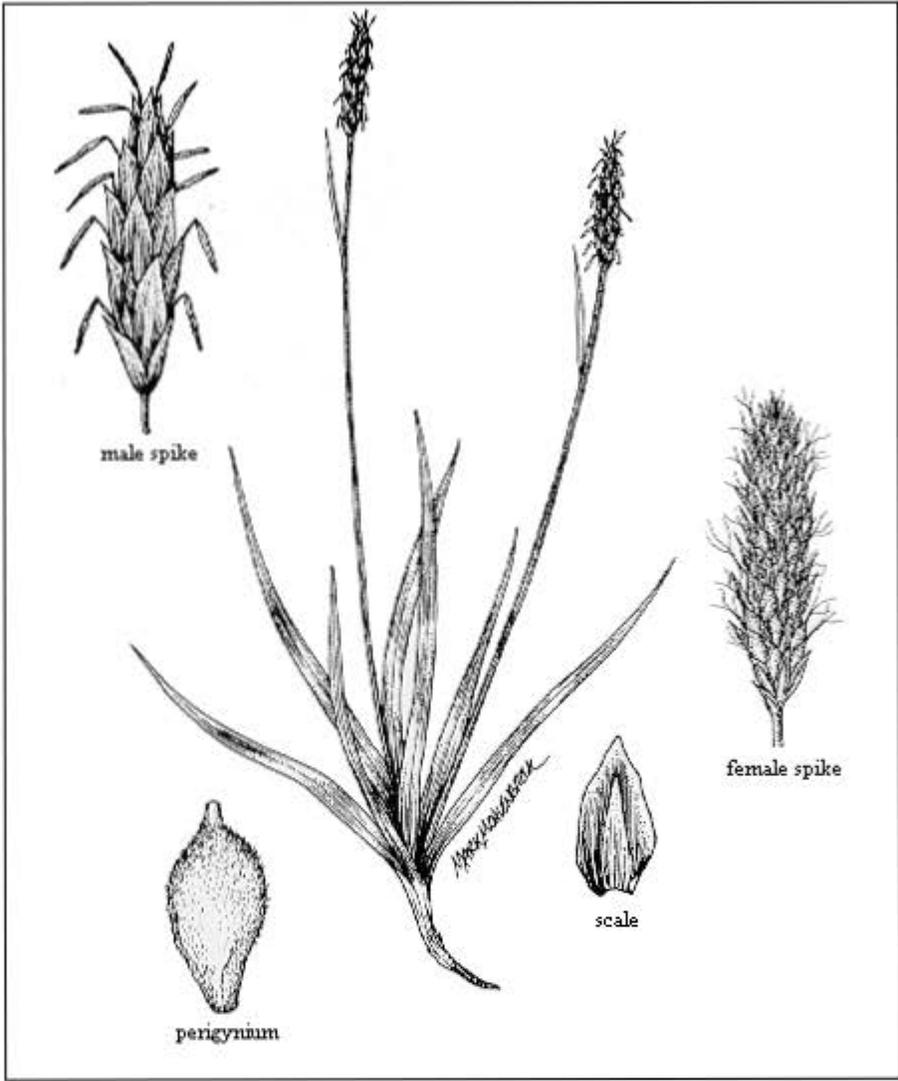
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Canadian Single-spike Sedge

Carex scirpoidea Michx.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-August
- **Field Marks:** This sedge is distinguished by its solitary spike that is either all male or all female, with only one type of flower per plant. The perigynia are covered with short hairs and subtended by dark brown or black scales.
- **Habitat:** Usually dry soil.
- **Habit:** Perennial herb from creeping rhizomes, usually with last year's leaves persisting.
- **Stems:** Upright, branched or unbranched, rough to the touch, stiff, purple-red at base, up to 15 inches tall, usually with a small bract about 1/3 inch below the spike.
- **Leaves:** Mostly near base of stems, flat, rather stiff, pale green, rough on the edges, 1/8-1/6 inch wide; sheaths usually short-hairy.
- **Flowers:** Male and female borne in separate spikes on separate plants, the spikes solitary, up to 1 1/2 inches long, up to 1/4 inch thick, usually subtended by a short, narrow bract; female scales lanceolate, pointed or rounded at the tip, dark brown to black, slightly shorter or slightly longer than the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in a perigynium, the perigynia more or less triangular, short-hairy, 2-ribbed, straw-colored with a reddish brown tinge, 1/8-1/6 inch long, with a distinct but very short, entire beak; stigmas 3.
- **Fruits:** Achenes triangular, 1/16-1/12 inch long, yellow-brown, short-stalked at the base.
- **Notes:** Waterfowl eat the achenes.



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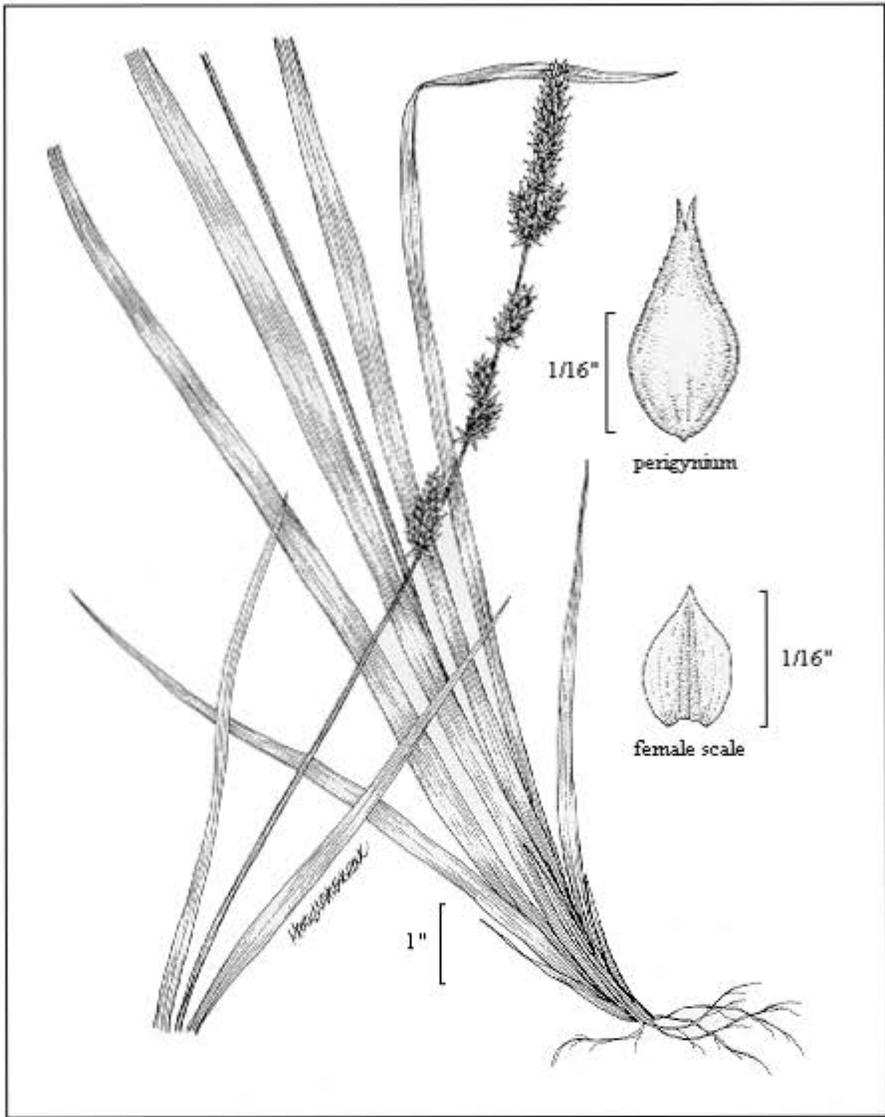
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Bur-reed Sedge

Carex sparganioides Muhl. ex Willd.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-July
- **Field Marks:** The field marks of this *Carex* are the 6-15 spikelets separated in an elongated inflorescence. The perigynia are narrowly winged to the base. Male flowers are borne at the tip of each spikelet.
- **Habitat:** Rich woods, thickets.
- **Habit:** Perennial herb from elongated, woody rootstocks.
- **Stems:** Upright, unbranched, rather stout, sharply triangular, not hairy but rough to the touch, longer than the leaves, up to 3 feet tall.
- **Leaves:** Several, elongated, flat, up to 1/3 inch wide, not hairy but rough along the edges, with conspicuous cross-markings at right angles to the veins.
- **Flowers:** Borne in spikelets, with the male flowers crowded at the tip of each spikelet; spikelets 6-9, not continuous, forming an inflorescence up to 3 1/2 inches long, subtended by thread-like bracts.
- **Scales:** Ovate-lanceolate, whitish with a green center, pointed at the tip, about 1/2 as long as the perigynia and narrower than the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Enclosed in a perigynium; each perigynium green, becoming yellowish, 1/6 inch long, flattened on one face, rounded on the other, ovate-lanceolate, the margin narrow and wing-like all the way to the base, very short-beaked at the tip; styles 2.
- **Fruits:** Achenes lenticular, up to 1/10 inch long, yellow-green.



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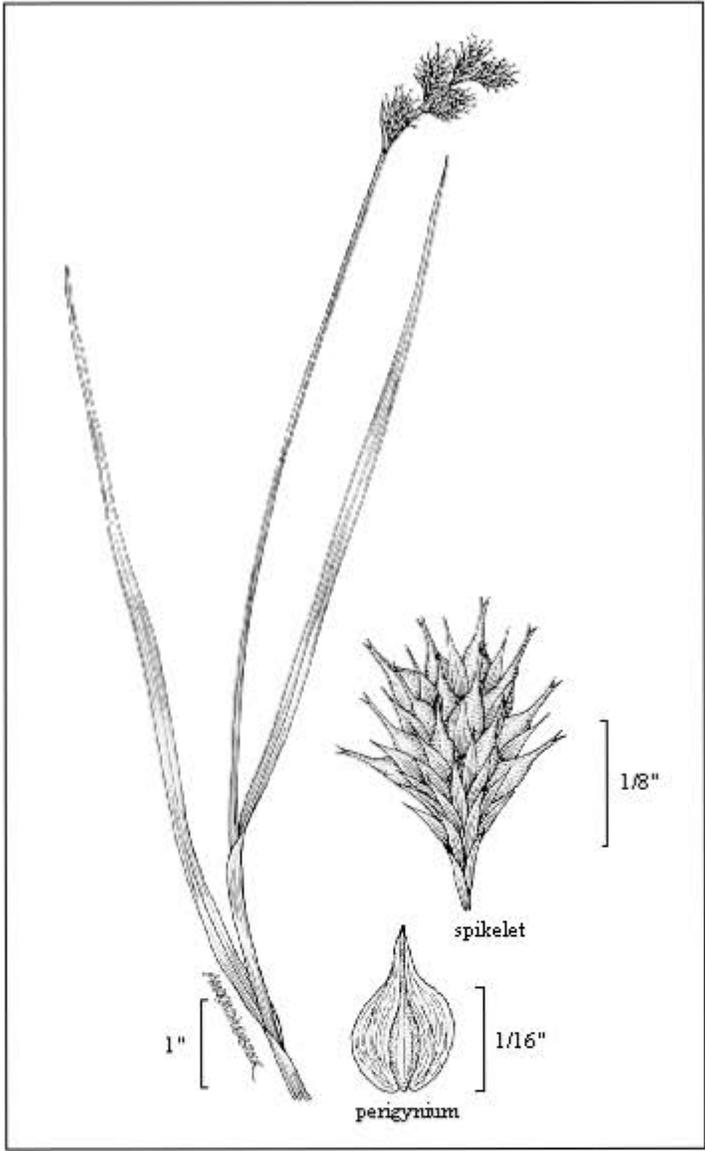
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Straw Sedge

Carex straminea Willd.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-July
- **Field Marks:** The male flowers are borne at the base of the female spikes. The perigynia are longer than the awn-tipped scales. The spikes are more or less rounded at the top.
- **Habitat:** Wet meadows, swamps.
- **Habit:** Densely tufted herb with thickened rootstocks.
- **Stems:** Upright, usually unbranched, smooth except at upper end, sharply triangular, slender, up to 3 feet tall, longer than the leaves.
- **Leaves:** Elongated, mostly smooth, up to 1/6 inch wide.
- **Flowers:** Male and female borne in the same spike, the male flowers at the base; spikes 3-8, more or less separated from each other, brown, nearly spherical, rounded at the top, up to 3/4 inch long, at least the lowermost subtended by a slender bract.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in a perigynium, the perigynium broadly ovate to nearly round, abruptly tapered to a short beak, distinctly nerved, 1/4-1/3 inch long; each perigynium subtended by lanceolate, awn-tipped scales shorter than the perigynium; stigmas 2.
- **Fruits:** Achenes lenticular, about 1/6 inch long.
- **Notes:** The achenes are eaten by waterfowl.



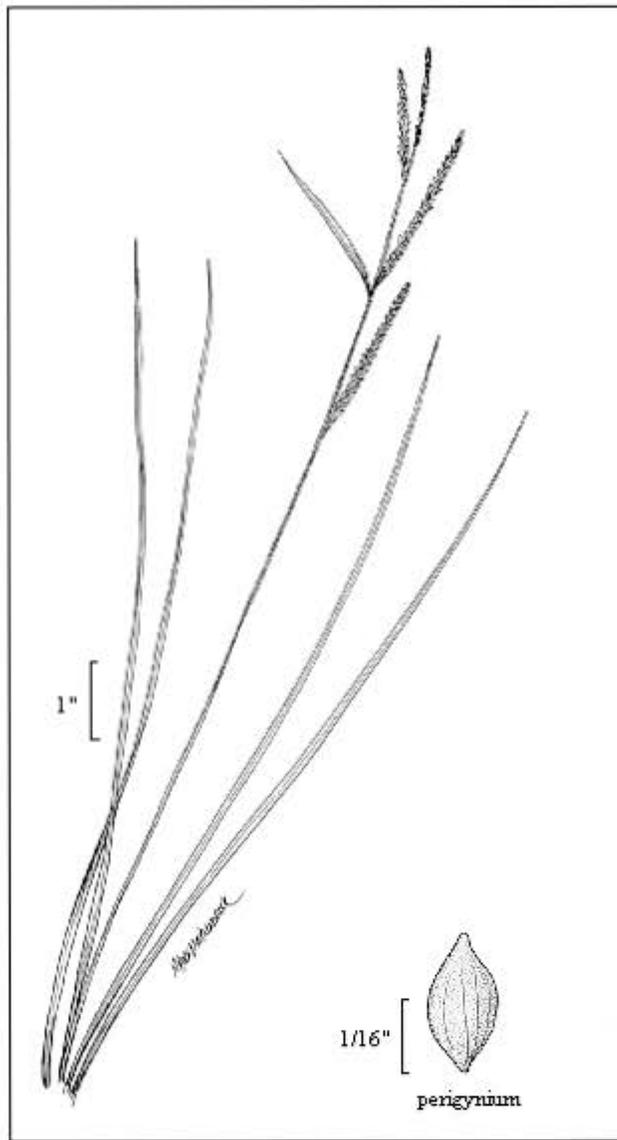
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Upright Sedge *Carex stricta* Lam.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-August
- **Field Marks:** The spikes of this sedge are stiffly erect. The plants grow in very dense clumps with the flowering stems longer than the leaves. The lowest sheaths on the stem become shredded into fibers.
- **Habitat:** Low woods, swamps.
- **Habit:** Densely clumped perennial herb from relatively few horizontal stolons.
- **Stems:** Upright, numerous, slender but stiff, triangular, up to 4 feet tall, rough at least above, the lowest sheaths becoming shredded into fibers.
- **Leaves:** Elongated, flat or somewhat folded, rough along the edges, up to 1/4 inch wide, shorter than the flowering stems.
- **Flowers:** Borne in spikes, with one male spike separate from the 1-4 female spikes; male spike cylindrical, up to 4 inches long, short-stalked, sometimes with 1-2 small, sessile, male spikes near base; female spikes cylindrical, up to 5 inches long, upright, sometimes with a few male flowers at the tip; female scales oblong to lanceolate, rounded or pointed at the tip, reddish brown with a pale midnerve, shorter to slightly longer than the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia biconvex, ovate to elliptic, appressed, up to 1/8 inch long, few-nerved, with a minute beak; styles 2.
- **Fruits:** Achenes lenticular.
- **Notes:** The achenes are eaten by waterfowl.



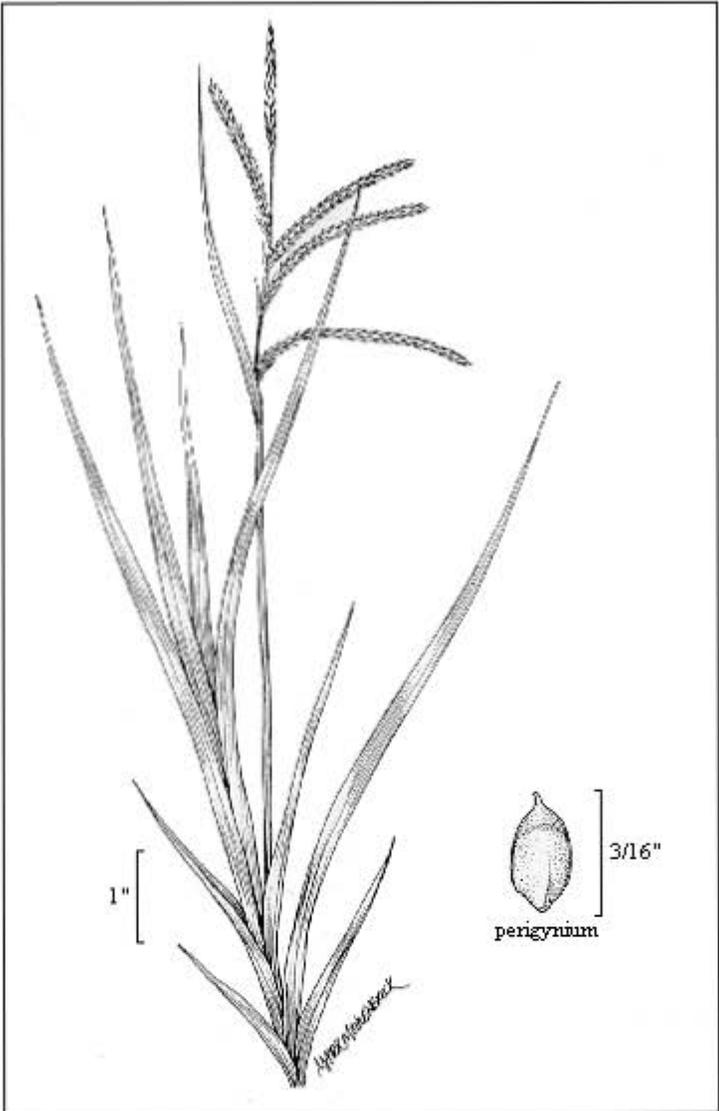
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Field Office Guide to Plant Species

Twisted Sedge *Carex torta* Boott



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-July
- **Field Marks:** The field marks of this sedge are the separate slender male and female spikes, the purple-margined female scales, and the twisted perigynia.
- **Habitat:** In flowing streams.
- **Habit:** Perennial herb from thickened rhizomes, forming dense clumps.
- **Stems:** Upright, branched or unbranched, slender, sharply triangular, smooth except near the top, up to 3 feet tall.
- **Leaves:** Elongated, deep green, flat, soft, up to 1/4 inch across.
- **Flowers:** Male and female borne in separate spikes, the male spike usually solitary, slender, to 2 inches long, the female spikes 2-6, crowded to remote, up to 4 inches long, up to 1/3 inch thick, the lowermost sometimes on drooping stalks.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in a perigynium, the perigynium narrowly ovoid, up to 1/6 inch long, usually twisted in the upper half, smooth, tapering to a short beak; each perigynium subtended by a round-tipped scale purple on the sides and green in the center; stigmas 2.
- **Fruits:** Achenes lenticular, about 1/8 inch long.
- **Notes:** The achenes are eaten by waterfowl.

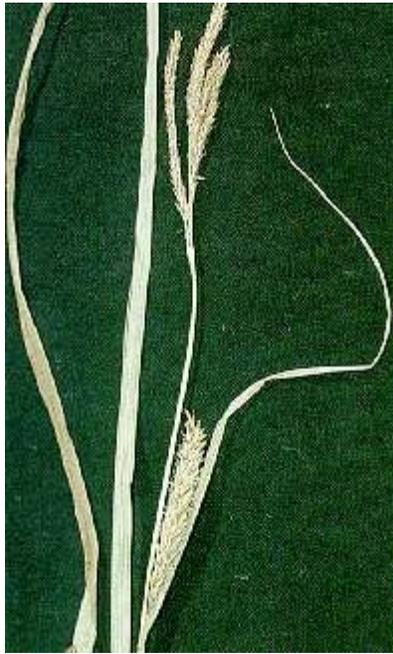


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Hairy-fruit Sedge

Carex trichocarpa Muhl. ex Willd.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-August
- **Field Marks:** This sedge is readily identified by its separate male and female spikes, its cylindrical female spikes, and its hairy perigynia with two long, terminal teeth.
- **Habitat:** Marshes, wet meadows.
- **Habit:** Tufted perennial herb from creeping rhizomes.
- **Stems:** Upright, slender, up to 4 feet tall, usually rough in the upper portion.
- **Leaves:** Elongated, rough along the edges, up to 1/3 inch wide, at least some of them overtopping the flowering stems.
- **Flowers:** Borne in spikes, the male spikes 2-6, the female spikes 2-4; male spikes slender, short-stalked; female spikes cylindrical, up to 4 inches long, up to 2/3 inch in diameter, the uppermost short-stalked and upright, the lower sessile; female scales lanceolate to ovate, pointed at the tip, shorter than the perigynia.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in perigynia, the perigynia ovoid, hairy, strongly nerved, up to 1/2 inch long, tapering to a long, 2-toothed beak; styles 3.
- **Fruits:** Achenes triangular.
- **Notes:** The achenes are eaten by waterfowl.

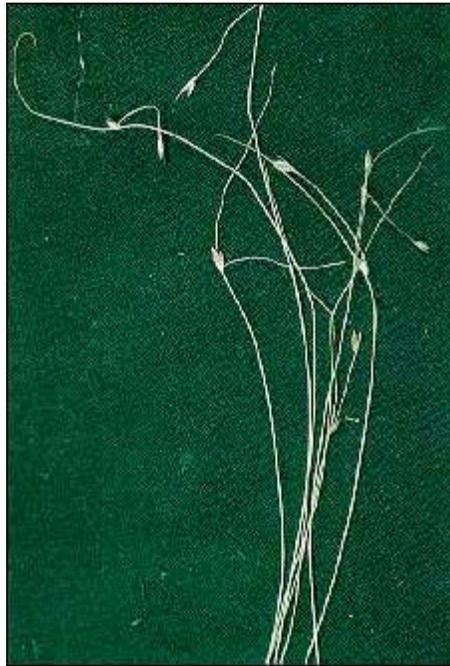


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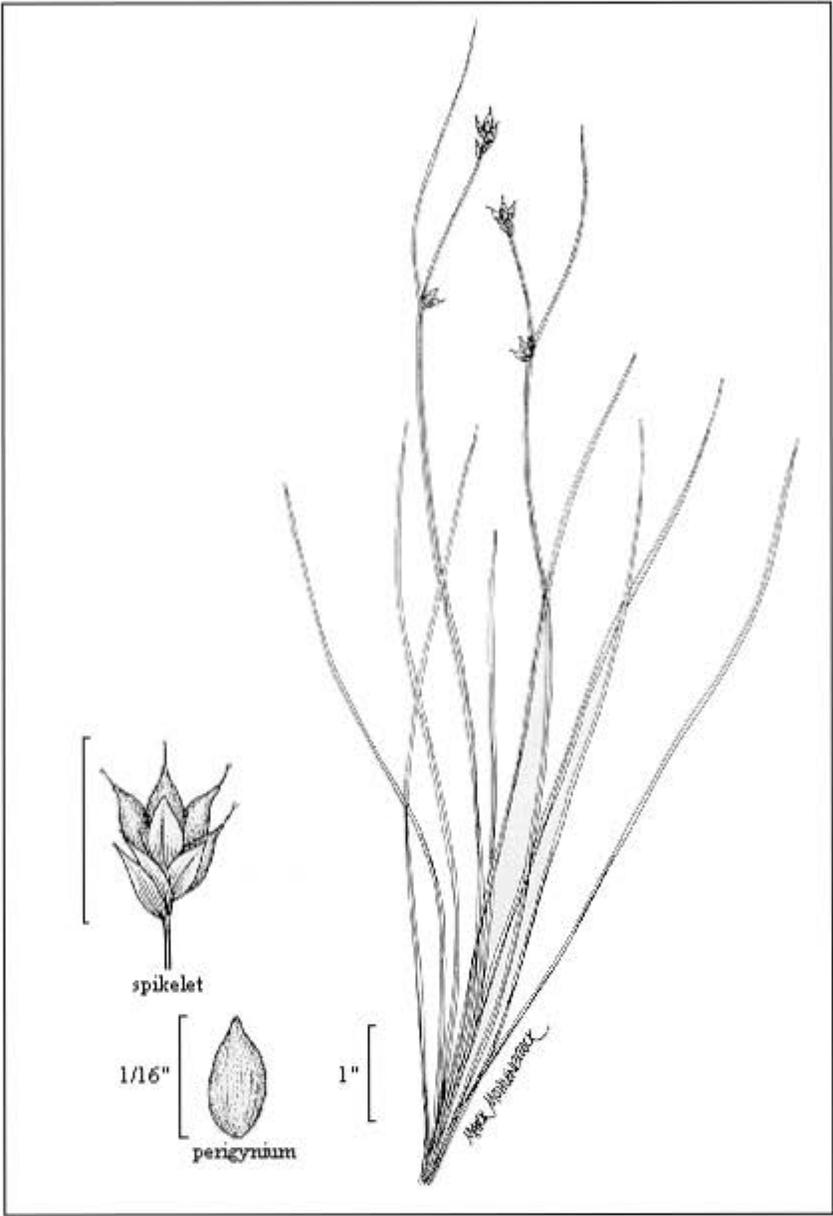
Field Office Guide to Plant Species

Three-seed Sedge

Carex trisperma Dewey



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-August
- **Field Marks:** This species is distinguished by its 2 or 3 spikes, each with only 2-5 female flowers, the lowest spike subtended by a long, slender bract.
- **Habitat:** Bogs, swampy woods.
- **Habit:** Tufted perennial from slender stolons.
- **Stems:** Sprawling, very weak, thread-like, up to 4 feet long, much longer than the leaves.
- **Leaves:** Elongated, soft, flat, up to 1/10 inch wide.
- **Flowers:** Male and female borne in the same spike, the male flowers at the base; spikes 2-3, each with 2-5 female flowers, the lowermost subtended by a very long, slender bract.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Borne in a perigynium, the perigynium elliptic to oblong, very short-beaked, finely nerved, smooth, 1/6-1/4 inch long; each perigynium subtended by ovate-oblong scales equal to or shorter than the perigynium; stigmas 2.
- **Fruits:** Achenes lenticular, about 1/8 inch long.



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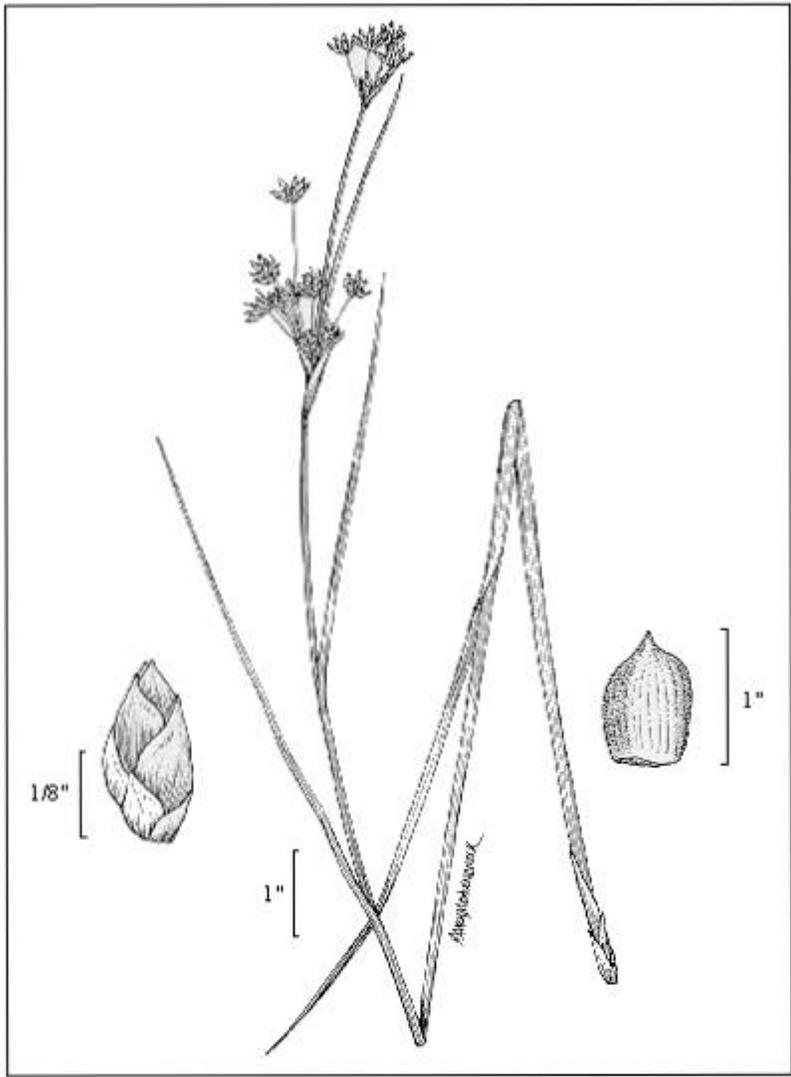
Field Office Guide to Plant Species

Smooth Sawgrass

Cladium mariscoides (Muhl.) Torr.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** Although this sedge superficially resembles species of beak rush (*Rhynchospora*), it differs by having no beak on the achene.
- **Habitat:** Marshes, swamps, usually in calcareous or saline areas.
- **Habit:** Perennial herb from slender stolons.
- **Stems:** Upright, slender, obscurely triangular, up to 3 feet tall.
- **Leaves:** Elongated, flat except for the inrolled tip, rough along the edges, up to 1/8 inch wide.
- **Flowers:** Borne in spikelets, with the spikelets in slender panicles up to 1 foot long; spikelets clustered in heads, oblong to lanceolate, up to 1/4 inch long, dark brown, the upper flowers with both stamens and pistils, the middle flowers only with stamens, the lowest scales empty; scales dark brown.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary superior; styles 2 or 3.
- **Fruits:** Achenes ovoid, flanged at the base, without a beak, dull brown, up to 1/6 inch long.
- **Notes:** The achenes are eaten by waterfowl.



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Many-flower Flatsedge

Cyperus lancastrimensis T. Porter ex Gray

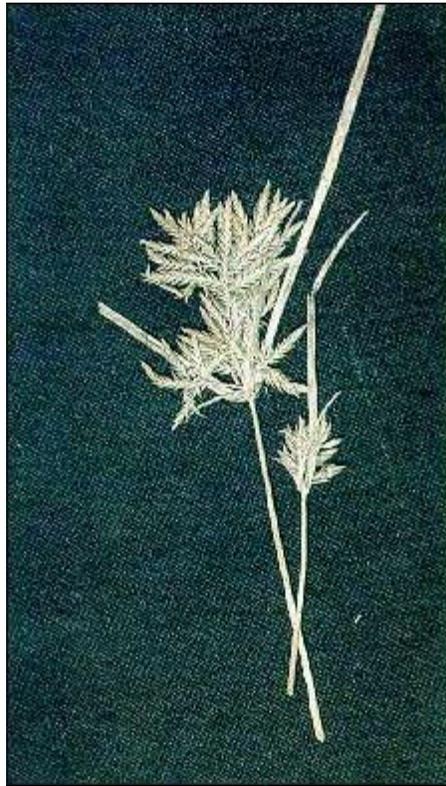


- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** The distinctive features of this flatsedge are the linear, pointed, 3- to 10-flowered, 50 to 100 or more yellow-brown spikelets that are crowded into dense spikes.
- **Habitat:** Meadows, woods, fields, not particularly moist.
- **Habit:** Perennial herb from a thickened crown and a short rhizome.
- **Stems:** Upright, triangular, usually smooth, up to 3 feet tall, mostly longer than the leaves.
- **Leaves:** Elongated, smooth or sometimes rough along the edges, up to 1/2 inch wide.
- **Flowers:** Borne in spikelets, with the spikelets arranged in spikes, with several spikes forming a 6- to 9- rayed umbel, the umbel subtended by 4-7 leaf-like bracts; each spike oval, with the spikelets radiating in all directions; spikelets linear, pointed, 3- to 10-flowered, up to 1/2 inch long, yellow-brown.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes narrowly oblong, rounded at the tip, up to 1/8 inch long.
- **Notes:** The achenes are eaten by wildlife.

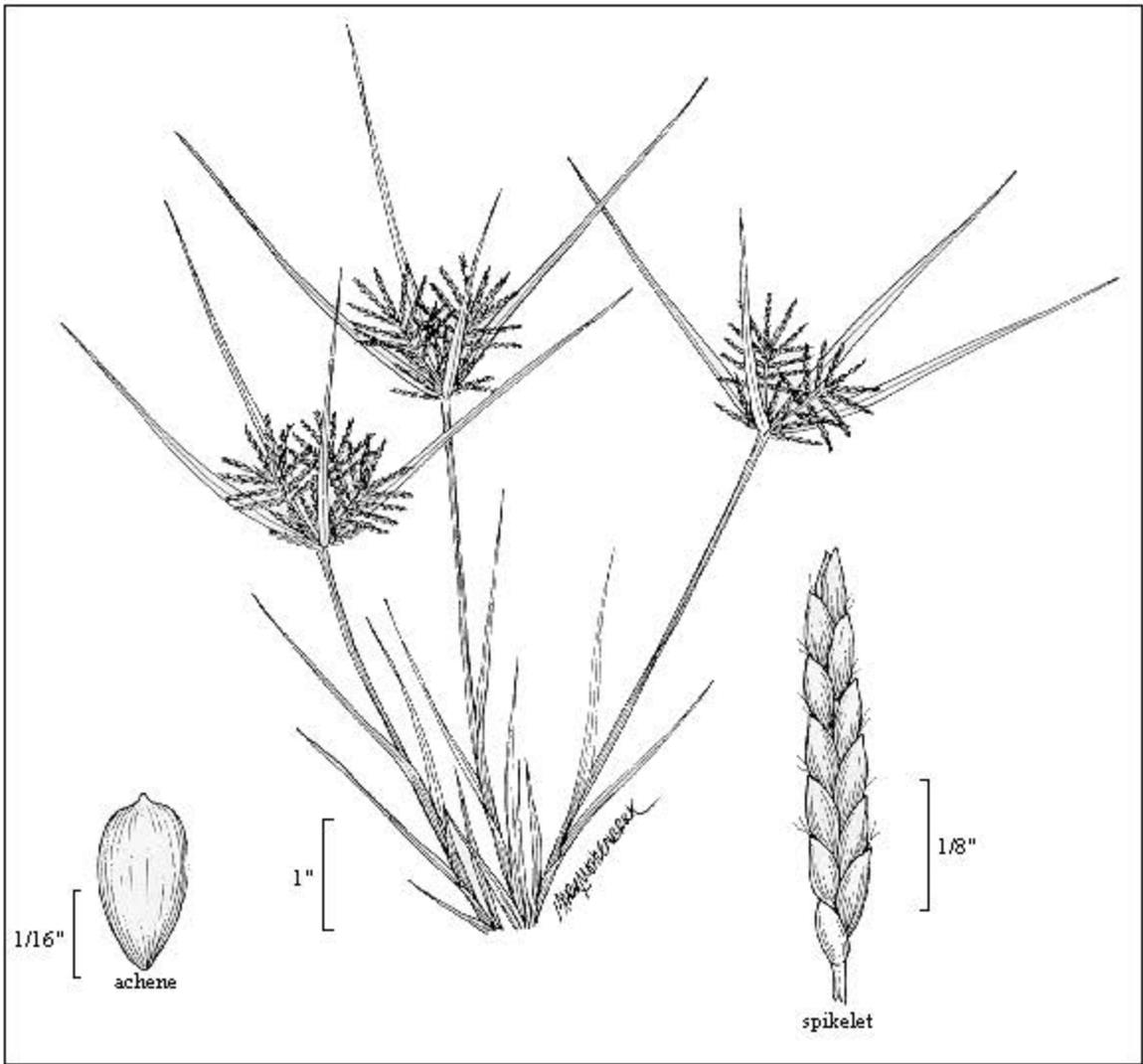
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Field Office Guide to Plant Species

Many-spike Flatsedge *Cyperus polystachyos* Rottb.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** This annual or sometimes perennial flatsedge is distinguished by its lenticular, oblongoid achenes, 2-cleft style, more or less rounded scales, and linear spikelets only 1/12-1/10 inch wide.
- **Habitat:** Wet soil, shores, wet pine woods.
- **Habit:** Annual or perennial herb with fibrous roots.
- **Stems:** Sprawling and matted to upright, smooth, up to 1 1/2 feet tall.
- **Leaves:** Elongated, smooth, 1/8-1/6 inch wide, shorter than the stems.
- **Flowers:** Borne in spikelets, the spikelets arranged in an umbel subtended by 1-4 leaf-like bracts; spikelets flattened, several-flowered, yellowish to rusty, linear, up to 1 inch long, 1/12-1/10 inch wide; scales narrowly ovate to elliptic, 1/12-1/10 inch long, more or less rounded at the tip.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary superior; styles deeply 2-cleft.
- **Fruits:** Achenes lenticular, oblongoid, pale brown, only about 1/24 inch long.
- **Notes:** The minute seeds are eaten by waterfowl. In our range, all the individuals of this species are considered to be of the var. *texensis*.



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Field Office Guide to Plant Species

Thin-leaf Flatsedge

Cyperus tenuifolius (Steud.) Dandy



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** This species is readily distinguished by its sweet fragrance and its 1-flowered spikelets.
- **Habitat:** Wet soil.
- **Habit:** Tufted annual with fibrous roots, strongly sweet-scented, particularly when crushed.
- **Stems:** Upright, unbranched, very slender, smooth, up to 1 foot tall.
- **Leaves:** Elongated, soft, flat, linear, up to 1/10 inch wide, with rough margins.
- **Flowers:** Borne in spikelets, the spikelets in a cluster of 2-3 sessile, rounded heads sometimes giving the appearance of being lobed, up to 1/3 inch across, subtended by 1-5 (usually 3) leaf-like bracts; spikelets flattened, 1-flowered, 1/12-1/10 inch long; scales ovate, pointed at the tip, keeled.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary superior; styles 2.
- **Fruits:** Achenes lenticular, ellipsoid, rounded at the tip, 1/12-1/10 inch long.
- **Notes:** Waterfowl eat the tiny achenes.

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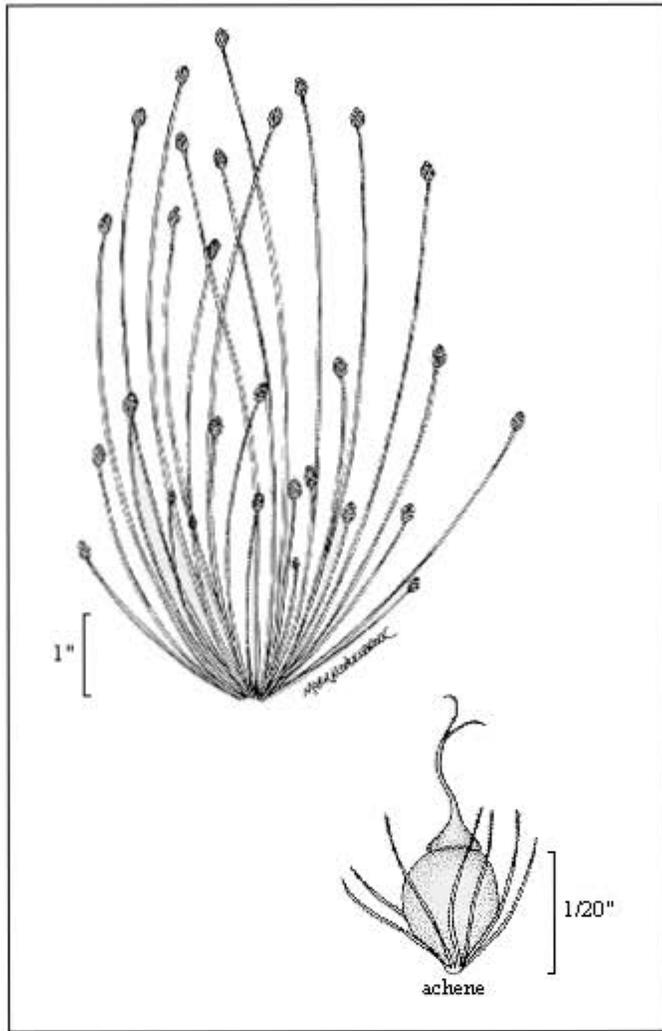
Field Office Guide to Plant Species

Ovate Spikerush

Eleocharis ovata (Roth) Roem. & J.A. Schultes



- **Family:** Sedge (Cyperaceae)
- **Flowering:** August-October
- **Field Marks:** This species is distinguished by its ovoid spike that is pointed at the tip and the tubercle of the achene 1/2-2/3 the width of the achene.
- **Habitat:** Wet ground.
- **Habit:** Tufted annual herb with fibrous roots.
- **Stems:** Upright, unbranched, rather slender, inconspicuously 3-angled, smooth, up to 1 1/2 feet tall, each bearing a terminal spike.
- **Leaves:** Reduced to basal sheaths, the sheaths red, brown, or straw-colored.
- **Flowers:** Crowded into a terminal spike, the spike ovoid, pointed at the tip, up to 1/2 inch long, up to 1/4 inch thick; scales appressed, narrowly ovate to oblong, rounded at the tip, sometimes purplish.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; styles 2.
- **Fruits:** Achenes obovoid in overall outline but lens-shaped (flattened) laterally, yellow to deep brown, smooth, about 1/20 inch long, with a terminal tubercle; tubercle 1/2-2/3 the width of the achene, sometimes 2- or 3-parted at the tip; bristles longer than the achene, or lacking.
- **Notes:** The achenes are eaten by waterfowl.



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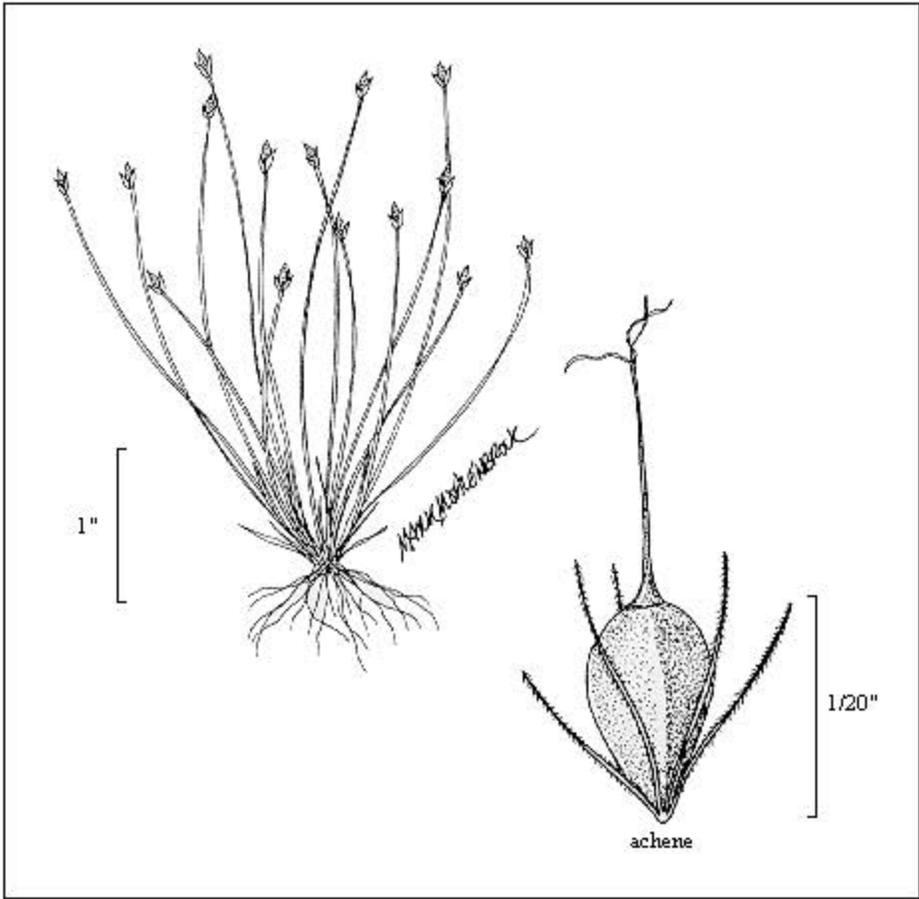
Field Office Guide to Plant Species

Small Spikerush

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



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** This mat-forming tiny perennial is distinguished by its often thread-like stems, its flattened, ovate spikelets up to 1/6 inch long, and its tiny, pale brown achene with a triangular tubercle.
- **Habitat:** Wet soil, usually in brackish or saline areas.
- **Habit:** Tufted perennial herb from thread-like stolons, with brown or purple tubers up to 1/4 inch long.
- **Stems:** Often thread-like, smooth, sometimes spongy, up to 3 inches tall, bearing a single spike at the tip.
- **Leaves:** Reduced to basal sheaths.
- **Flowers:** Crowded into a terminal spike, the spike flattened, ovate, up to 1/6 inch long, 2- to 9-flowered; scales ovate, rounded at the tip, green to pale brown, about 1/10 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; styles usually 3.
- **Fruits:** Achenes triangular, obovoid, pale brown, about 1/20 inch long, with a minute, terminal tubercle; tubercle triangular; bristles about as long as the achene, or longer, usually retrorsely barbed, or even absent.
- **Notes:** The entire plant is sometimes eaten by waterfowl.



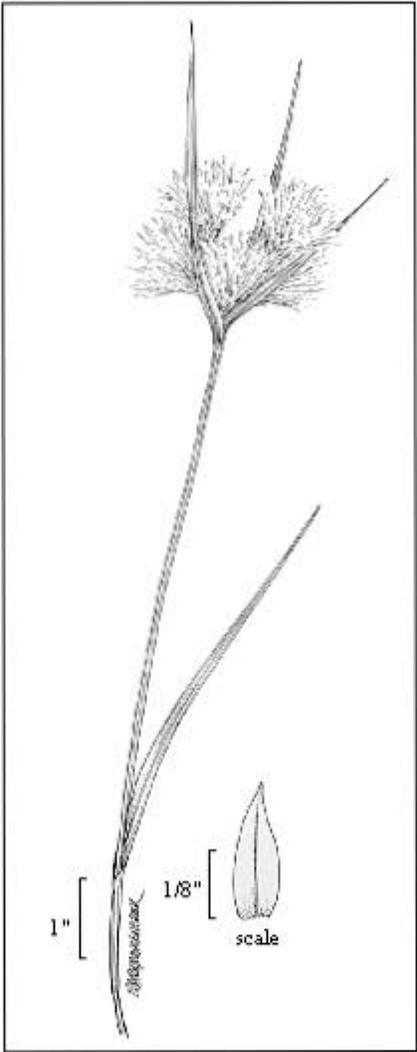
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Field Office Guide to Plant Species

Coldswamp Cotton-grass *Eriophorum polystachion* L.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-August
- **Field Marks:** This sedge differs by its broad leaves 1/6-1/3 inch wide and the chestnut-colored scales with only 1 prominent vein that does not extend to the tip.
- **Habitat:** Bogs.
- **Habit:** Tufted perennial herb with fibrous roots.
- **Stems:** Upright, slender, somewhat triangular, up to nearly 3 feet tall.
- **Leaves:** Elongated, flat, rough along the edges, 1/6-1/3 inch wide.
- **Flowers:** Borne in spikelets, with many spikelets crowded into an umbel, the rays of the umbel very slender and rough, the umbel subtended by 2-3 leaf-like bracts, the spikelets oblongoid to ovoid; scales chestnut-colored, 1-nerved.
- **Sepals:** 0, but represented by numerous, elongated bristles that give the inflorescence a "cotton ball" appearance.
- **Petals:** 0, but represented by numerous, elongated bristles that give the inflorescence a "cotton ball" appearance.
- **Stamens:** 3.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes triangular, up to 1/6 inch long, with bright white to creamy bristles.
- **Notes:** The achenes are eaten by waterfowl.



Northeast Wetland Flora

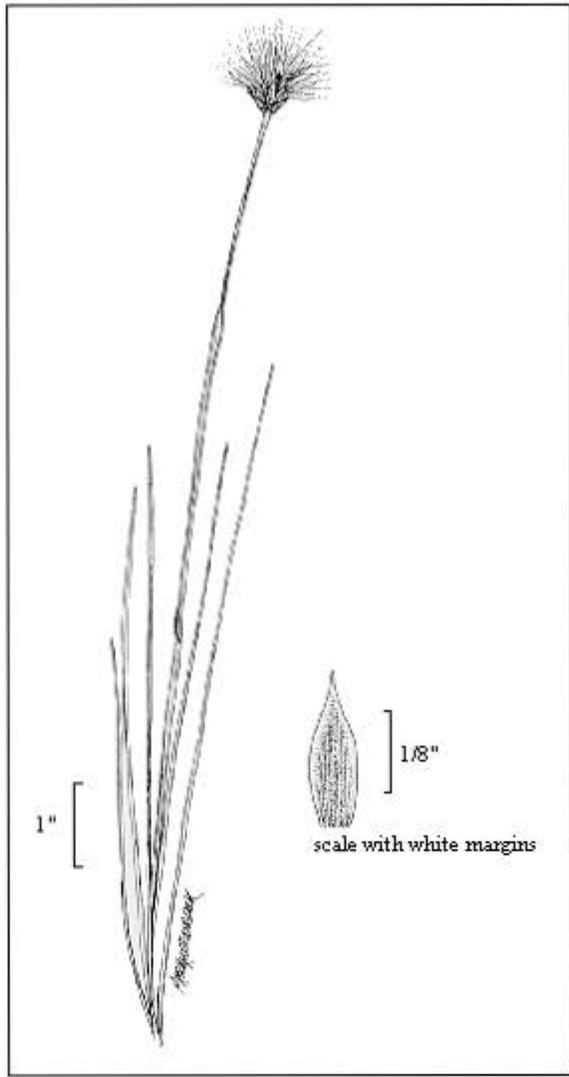
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Hare's-tail

Eriophorum spissum Fernald



- **Family:** Sedge (Cyperaceae)
- **Flowering:** April-July
- **Field Marks:** This species differs by having one spikelet per stem and conspicuous white-bordered scales. The stems are also stiffer than in *E. vaginatum*.
- **Habitat:** Bogs, fens.
- **Habit:** Densely tufted perennial with thickened rootstocks but without stolons.
- **Stems:** Upright, unbranched, stiff, rough at least near the tip, triangular, up to 2 1/4 feet tall.
- **Leaves:** Mostly near the base of the plant, elongated, triangular in cross-section, rough to the touch; upper leaves reduced to sheaths.
- **Flowers:** Several crowded into a solitary spikelet, the spikelet obovoid to nearly spherical, up to 3/4 inch high; scales obovate to broadly lanceolate, long-pointed at the tip, dark but with a white border, the lowest 10-15 scales empty.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; styles 3-cleft.
- **Fruits:** Achenes narrowly obovoid, 1/5-1/4 inch long, subtended by many bright white hairs.
- **Notes:** Gleason and Cronquist do not differentiate this species from *E. vaginatum*, but do consider all the individuals in our range the var. *spissum*. The achenes are eaten by waterfowl.



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Cleft Cotton-grass
Eriophorum vaginatum L.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** April-July
- **Field Marks:** The distinguishing characteristics of the cotton-grass are the solitary spikelet, the tufted growth form, and the absence of conspicuous white borders on the scales. The spikelets have fewer empty scales at the base than in *E. spissum*.
- **Habitat:** Bogs, fens.
- **Habit:** Densely tufted perennial with thickened rootstocks but without stolons.
- **Stems:** Upright, unbranched, somewhat rough near the tip, triangular, up to 2 feet tall.
- **Leaves:** Mostly near the base of the plant, elongated, rough to the touch; upper leaves reduced to sheaths.
- **Flowers:** Several crowded into a solitary spikelet, the spikelet obovoid, up to 1 inch high; scales narrowly ovate, pointed at the tip, dark brown, without a white border, the lower 8-12 scales empty.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; styles 3-cleft.
- **Fruits:** Achenes narrowly obovoid, about 1/4 inch long, subtended by numerous white hairs.
- **Notes:** Gray's Manual considers this species and *E. spissum* the same. The achenes are eaten by waterfowl.



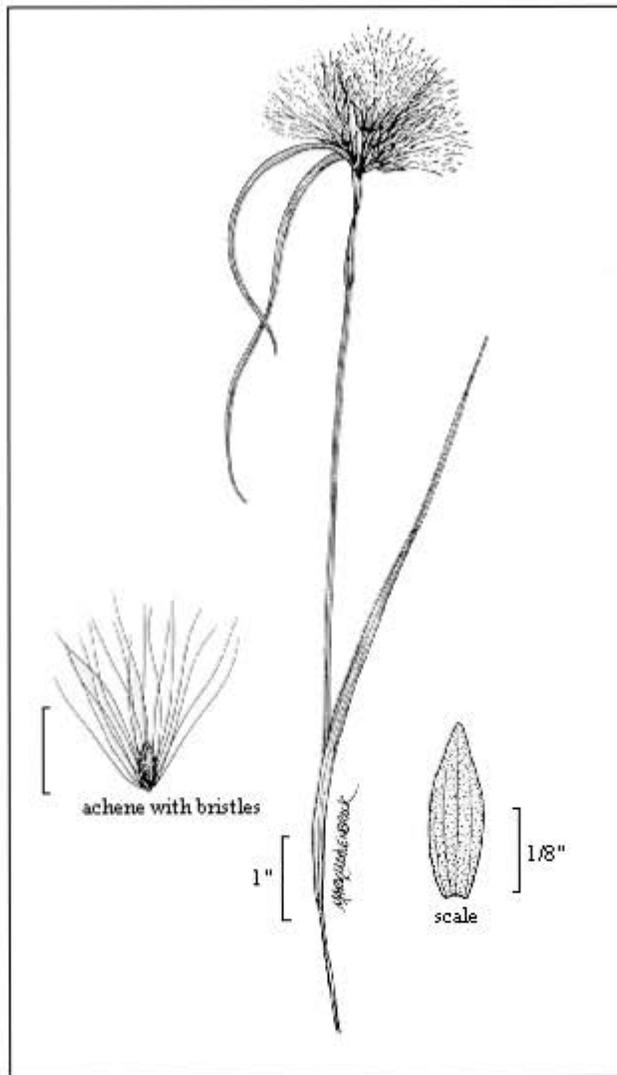
Northeast Wetland Flora

Field Office Guide to Plant Species

Tawny Cotton-grass *Eriophorum virginicum* L.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** August-October
- **Field Marks:** The distinguishing features of this sedge are the densely woolly crowded spikelets that appear as brownish "cotton balls" subtended by 2-5 bracts, the flat leaves up to 1/6 inch wide, and the scales of the spikelets with several nerves.
- **Habitat:** Bogs, wet meadows.
- **Habit:** Tufted perennial herb with fibrous roots.
- **Stems:** Upright, slender, smooth, up to 4 feet tall.
- **Leaves:** Elongated, flat except at the tip, smooth, up to 1/6 inch wide.
- **Flowers:** Borne in spikelets, with many spikelets crowded into dense brownish "cotton balls" up to 2 1/2 inches across, the clusters subtended by 2-5 leaf-like bracts, each spikelet ellipsoid, up to 1/2 inch long; scales several-nerved.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary superior; styles 3-cleft.
- **Fruits:** Achenes triangular, up to 1/6 inch long, subtended by many white or tawny bristles much longer than the achenes.
- **Notes:** The achenes are eaten by waterfowl.

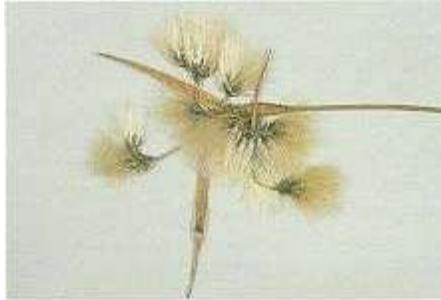


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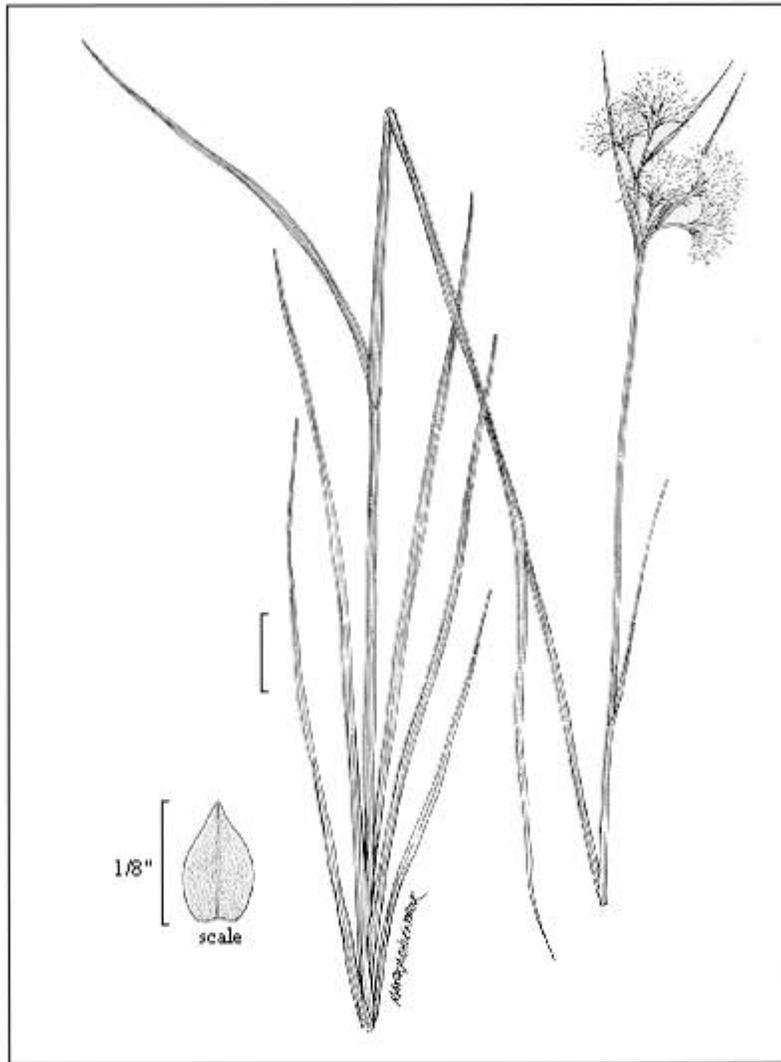
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Green-keel Cotton-grass

Eriophorum viridi-carinatum (Engelm.) Fernald



- **Family:** Sedge (Cyperaceae)
- **Flowering:** May-August
- **Field Marks:** This cotton-grass is recognized by its 3-30 spikelets subtended by 2-4 bracts, its leaves 1/4-1/3 inch wide, and the greenish scales with a midvein prominent all the way to the tip.
- **Habitat:** Wet meadows, swampy woods, bogs, fens.
- **Habit:** Tufted perennial from thickened rootstocks.
- **Stems:** Slender, tufted, triangular, smooth, up to 3 feet tall.
- **Leaves:** Elongated, flat, smooth, 1/4-1/3 inch wide, the basal leaves numerous, the leaves on the stem few.
- **Flowers:** Crowded into 3-30 spikelets, the spikelets oblongoid to ovoid, up to 1 1/2 inches long, subtended by 2-4 foliaceous bracts; scales greenish to lead-colored, lanceolate, with the midvein paler in color and prominent to the tip.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; styles 3-cleft.
- **Fruits:** Achenes obovoid, smooth, short-pointed at the tip, 1/10-1/6 inch long, subtended by numerous cream-colored hairs.
- **Notes:** Waterfowl eat the achenes.

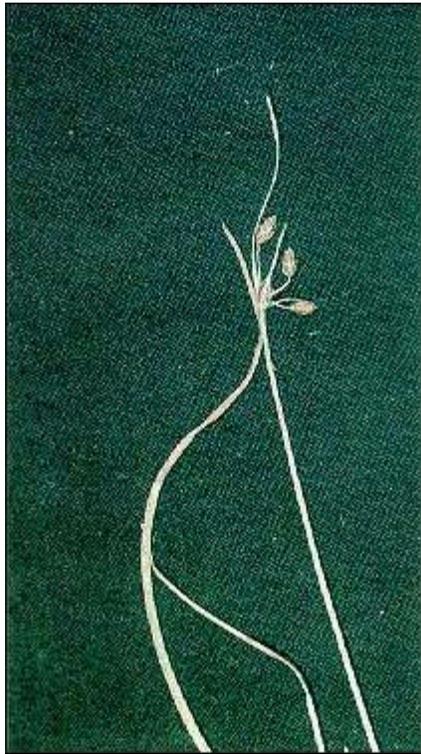


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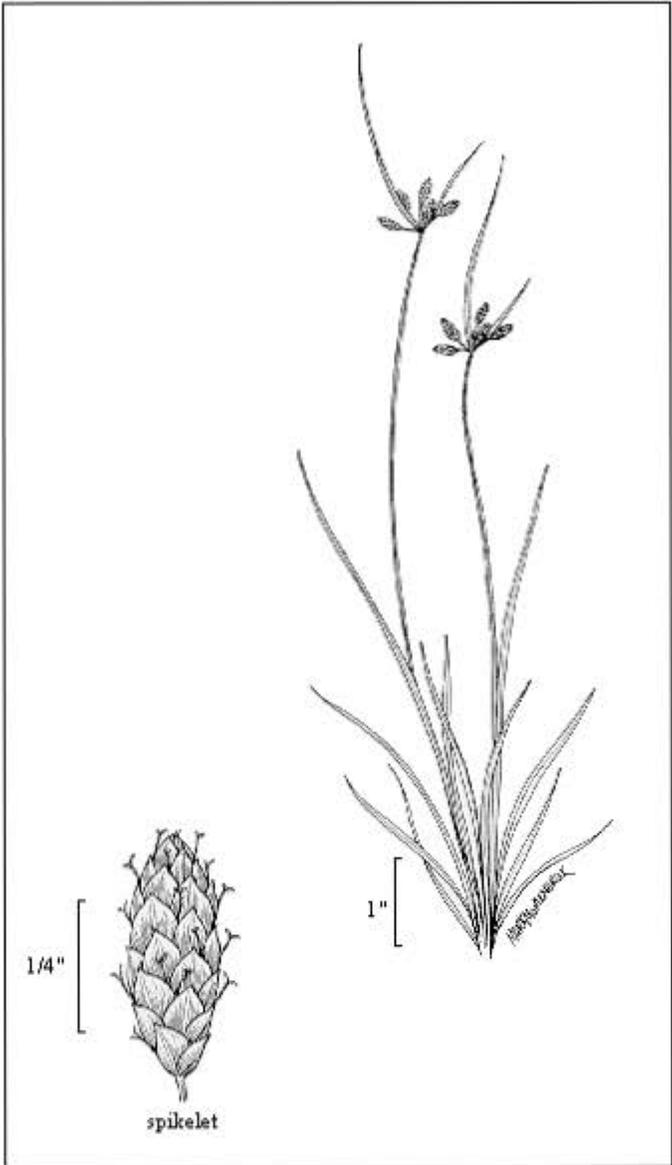
Field Office Guide to Plant Species

Annual Fimbry

Frimbristylis annua (All.) Roem. & J.A. Schultes



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** This is the only annual fimbry that has an open umbel of spikelets and ciliate styles.
- **Habitat:** Wet or dry soil.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched or unbranched, slender, flattened, grooved, up to 15 inches tall.
- **Leaves:** Elongated, flat, linear, sometimes glaucous, up to 1/10 inch wide, smooth except for the ciliate edges.
- **Flowers:** Several in spikelets, the spikelets solitary or several in an open umbel; bracts thread-like.
- **Spikelets:** Ovoid, up to 1/2 inch long, stalked; scales ovate, rounded or slightly pointed at the tip, brown, smooth.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary superior; styles ciliate.
- **Fruits:** Achenes obovoid, gray to straw-colored, up to 1/16 inch long, warty.
- **Notes:** The achenes are eaten by waterfowl.



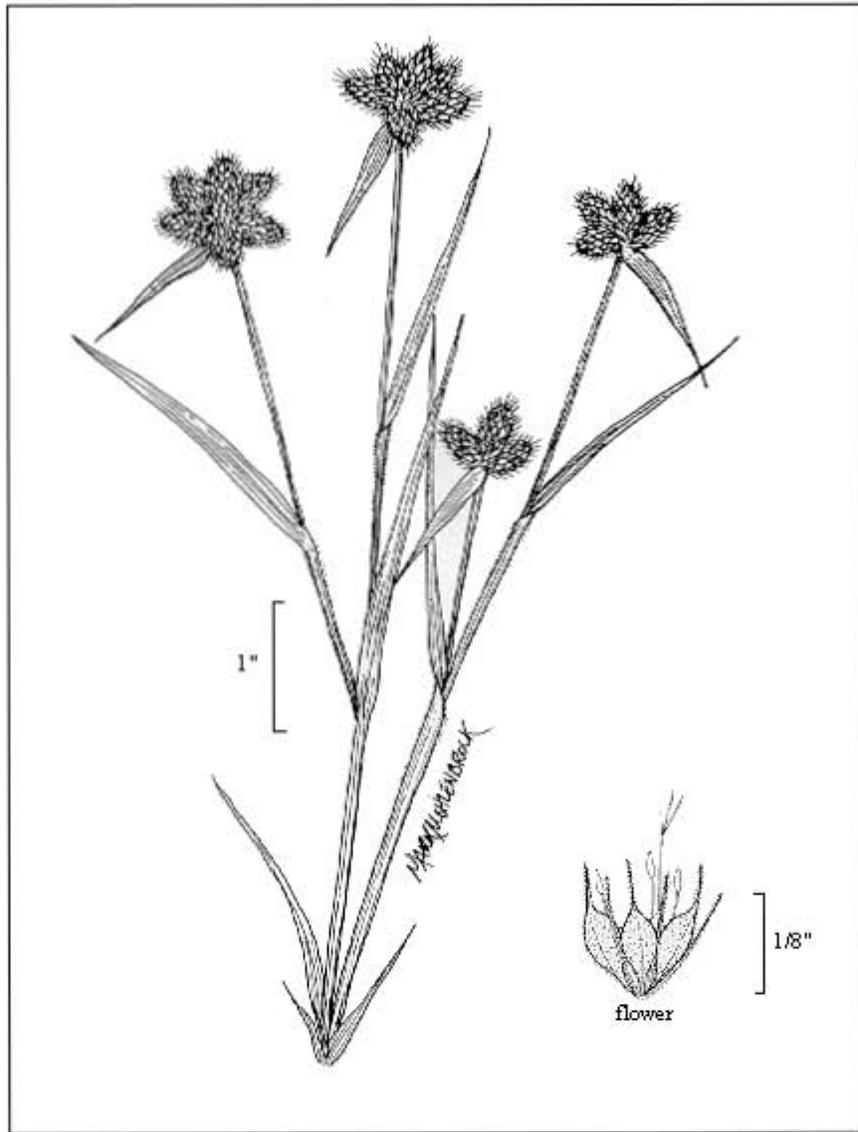
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Dwarf Umbrella-sedge *Fuirena pumila* Torr.



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** This species of *Fuirena* differs from all others by its annual growth form, its hispid leaf sheaths, and its yellow-brown achenes.
- **Habitat:** Bogs, wet shores.
- **Habit:** Tufted annual with fibrous roots.
- **Stems:** Upright, smooth, slender, up to 1 1/2 feet tall.
- **Leaves:** Elongated, flat, up to 1/12 inch wide, smooth; sheaths hispid.
- **Flowers:** Borne in spikelets arranged in 2-8 crowded heads, each head subtended by leaf-like bracts; spikelets several-flowered, the scales with spreading or recurved awns at the tip, olive-green, oblong to ovate, finely nerved.
- **Sepals:** Reduced to 3 long-stalked scales, oblong to ovate, with a retrorse bristly awn.
- **Petals:** Reduced to retrorsely barbed bristles.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Achenes yellow-brown, shiny, short-pointed at the tip, smooth, shorter than the subtending bristles.
- **Notes:** The achenes are eaten by waterfowl.

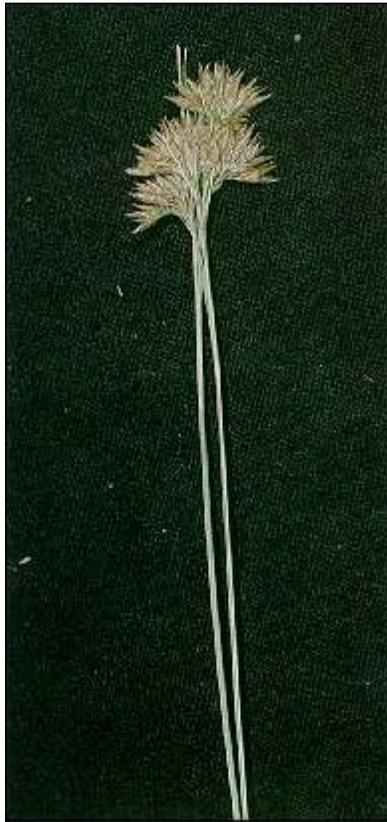


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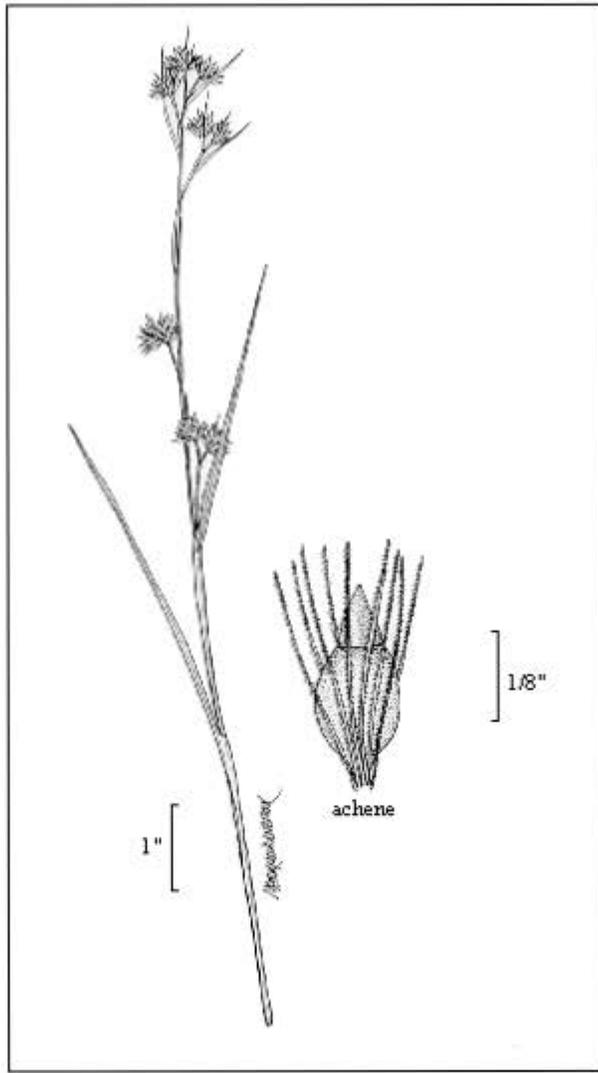
Field Office Guide to Plant Species

White Beakrush

Rhynchospora alba (L.) Vahl



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-September
- **Field Marks:** This species differs from other species of slender *Rhynchospora* by its slightly wrinkled achenes with retrorsely hairy bristles that are just barely longer than the achenes.
- **Habitat:** Bogs, fens.
- **Habit:** Tufted perennial herb with slender rootstocks.
- **Stems:** Upright, unbranched, very slender, smooth, up to 1 1/2 feet tall.
- **Leaves:** Elongated, thread-like to linear, up to 1/8 inch wide, smooth, the upper ones very short and inconspicuous.
- **Flowers:** Borne in spikelets arranged in dense clusters up to 3/4 inch across, whitish to light brown; spikelets lanceolate-ovoid, sessile, 2- to 3-flowered; scales broadly lanceolate, tapering to a point, smooth.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1-3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Achenes obovoid, slightly wrinkled, short-stalked, shiny, up to 1/10 inch long, with an elongate-triangular beak about half as long and half as broad as the body of the achenes; bristles 10-14, retrorsely hairy, about as long as the achenes.



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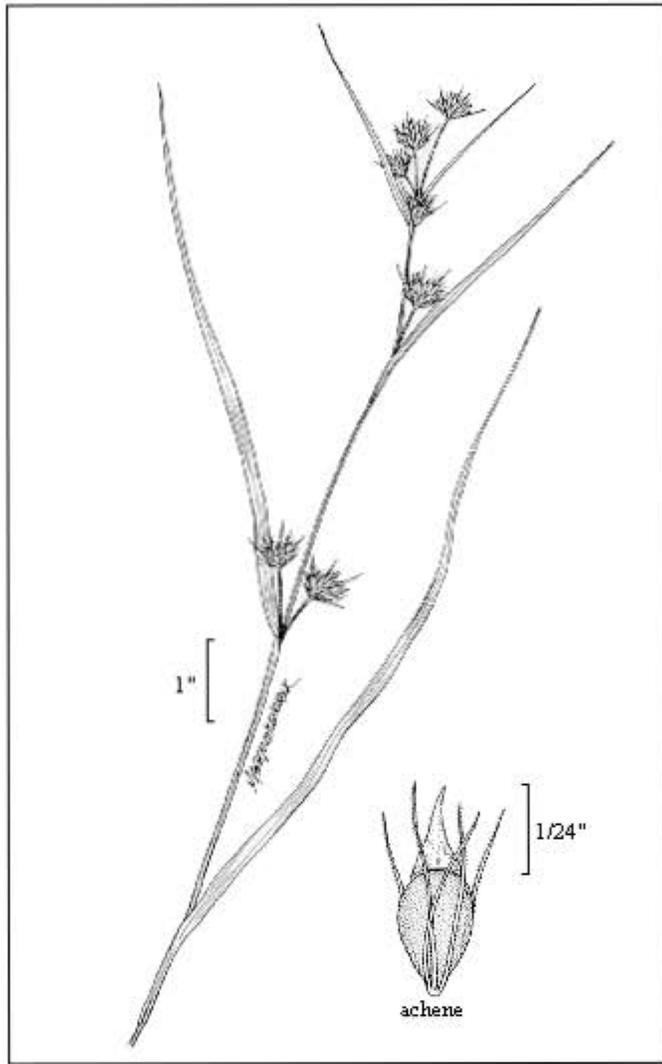
Field Office Guide to Plant Species

Brownish Beakrush

Rhynchospora capitellata (Michx.) Vahl



- **Family:** Sedge (Cyperaceae)
- **Flowering:** July-October
- **Field Marks:** The distinguishing features of this beakrush are the more than 1-flowered spikelet, the downwardly barbed bristles that subtend the achene, and the very narrow, non-conspicuous margins of the achenes.
- **Habitat:** Wet ground, bogs, fens.
- **Habit:** Tufted perennial herb with fibrous roots.
- **Stems:** Upright, branched or unbranched, smooth, slender, up to 3 feet tall.
- **Leaves:** Elongated, flat, smooth, up to 1/6 inch wide.
- **Flowers:** Borne in spikelets, with several spikelets clustered in a cyme, the cyme up to 2 feet long.
- **Spikelets:** 2- to 5-flowered, up to 1/4 inch long, brown; scales lanceolate, pointed at the tip, falling away early.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior; style 2-parted.
- **Fruits:** Achenes obovoid, dark brown, about 1/24 inch long, with a triangular, long-pointed tubercle up to 1/24 inch long, subtended by 5-6 downwardly barbed bristles.
- **Notes:** Waterfowl eat the achenes.

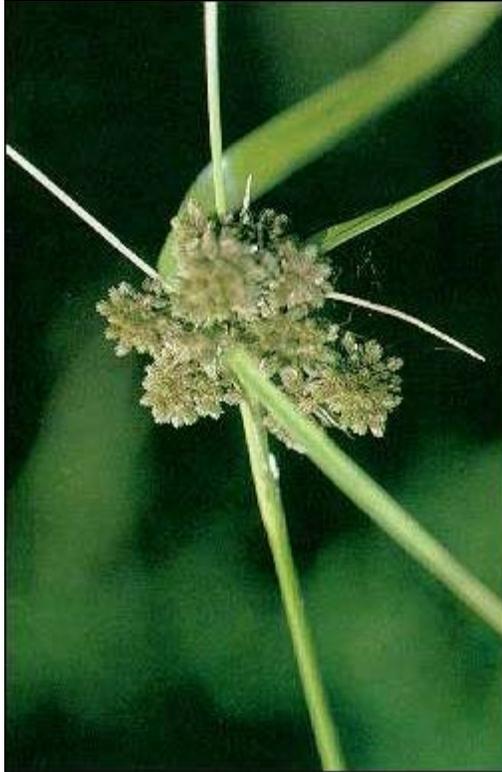


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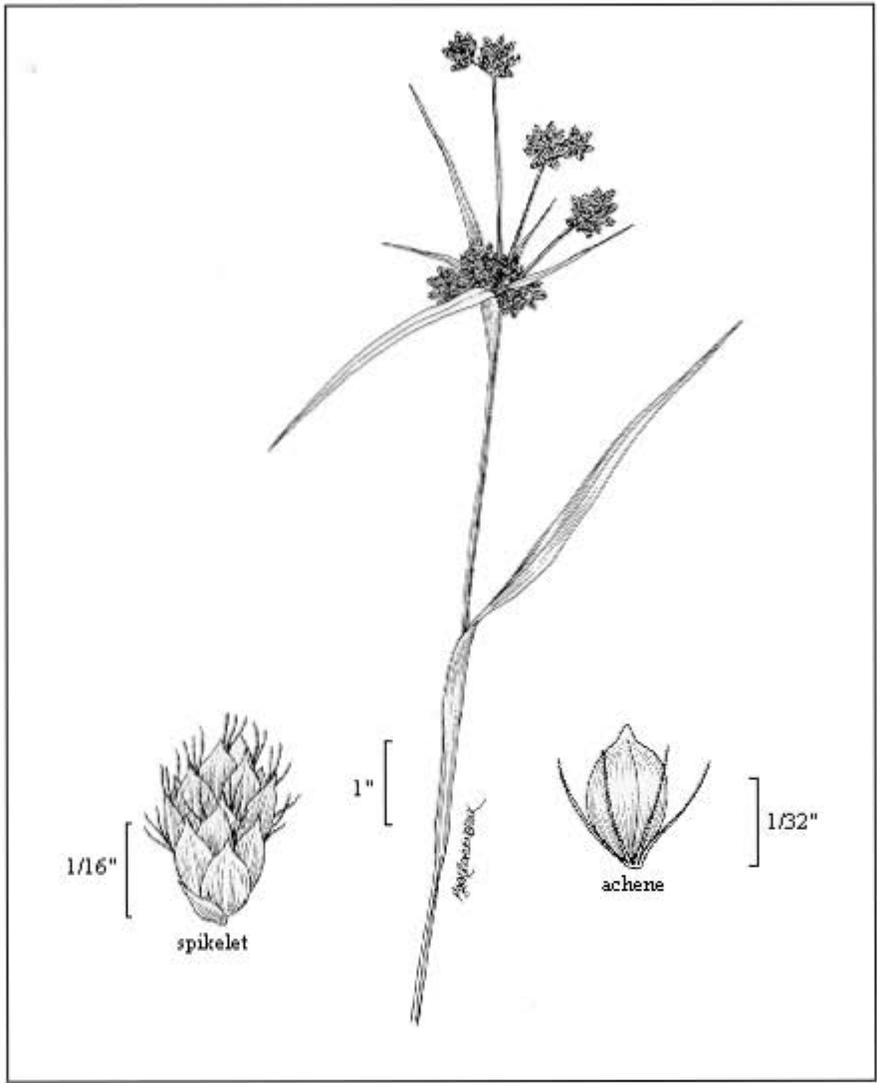
Field Office Guide to Plant Species

Dark-green Bulrush

Scirpus georgianus R.H. Harper



- **Family:** Sedge (Cyperaceae)
- **Flowering:** June-September
- **Field Marks:** This bulrush is distinguished by its brownish spikelets up to 1/6 inch long, its uneven length of the inflorescence rays, and the bristles shorter than the achenes or even lacking. The leaf sheaths are usually not septate.
- **Habitat:** Wet meadows, bogs, along streams.
- **Habit:** Perennial herb from short rhizomes.
- **Stems:** Upright, unbranched, smooth, up to 6 feet tall.
- **Leaves:** Elongated, flat, up to 1 inch wide; sheaths usually not septate.
- **Flowers:** Borne in spikelets, the spikelets usually on rays of unequal length; spikelets narrowly ovoid, brownish, many-flowered, up to 1/6 inch long; scales elliptic to obovate, rounded at the tip except for a short point, about 1/12 inch long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth; styles 3.
- **Fruits:** Achenes triangular, about 1/24 inch long, ellipsoid to obovoid, smooth, subtended by 1-3 bristles shorter than the achenes, or bristles absent.
- **Notes:** Gleason and Cronquist and most all recent authors consider this species to be part of *S. atrovirens*. The achenes are eaten by waterfowl.



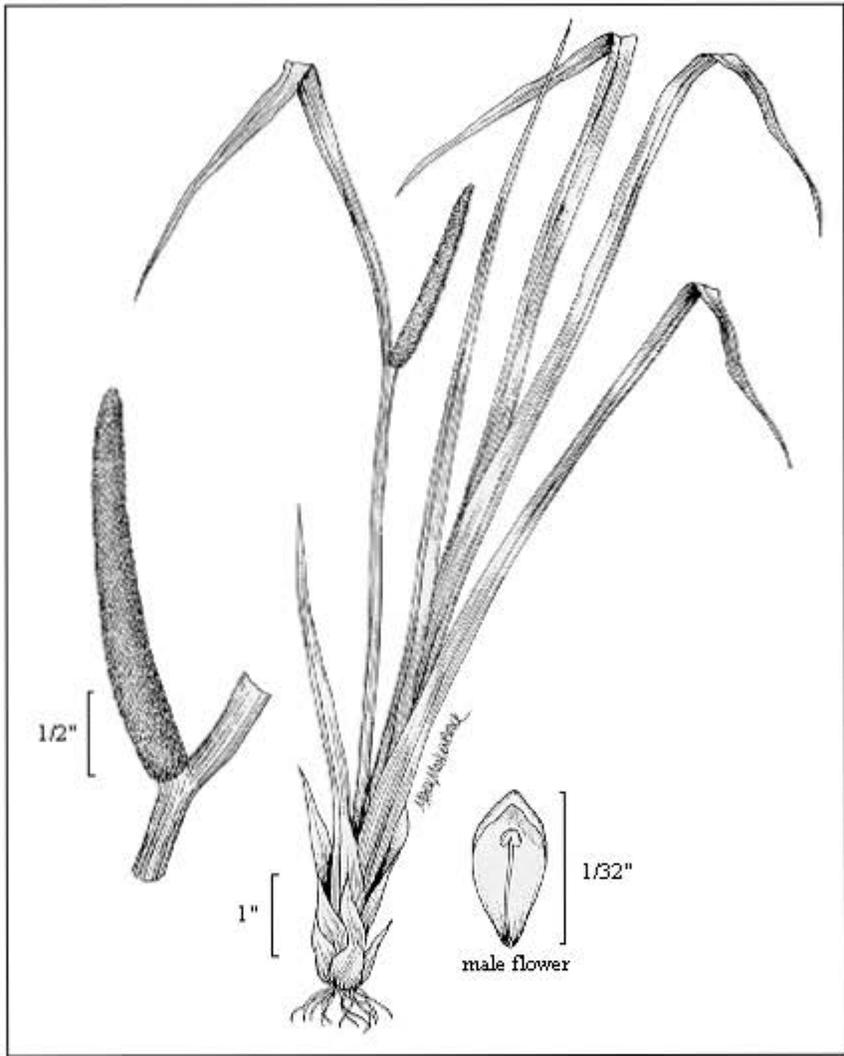
Northeast Wetland Flora

Field Office Guide to Plant Species

Sweetflag
Acorus calamus L.



- **Family:** Aroid (Araceae)
- **Flowering:** May-August
- **Field Marks:** The distinguishing features of this species are its iris-like flattened leaves, leaf midvein off-centered on the blade, sweet-smelling rhizomes and leaves, and its single spike of flowers borne partway up the flat stem.
- **Habitat:** Wet areas.
- **Habit:** Perennial herb from sweet-smelling rhizomes.
- **Stems:** Upright, leaf-like, flattened, smooth, up to 3 feet tall, without leaves but bearing a single spike part-way up.
- **Leaves:** Basal, linear, flat, iris-like, smooth, sweet-smelling, up to 3 feet long, up to 1 inch broad, with the midvein off-centered.
- **Flowers:** Numerous, crowded in an elongated spike (spadix), the spike up to 4 inches long, up to 3/4 inch thick, borne part-way up the leaf-like stem.
- **Sepals:** 3, small, brownish yellow, concave.
- **Petals:** 3, small, brownish yellow, concave.
- **Stamens:** 6.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Numerous in a spike, crowded, dry, but containing gelatinous pulp and 1-3 seeds.
- **Notes:** The sweet-smelling rhizomes have reputed medicinal properties. Gleason and Cronquist place this species in the Acoraceae.



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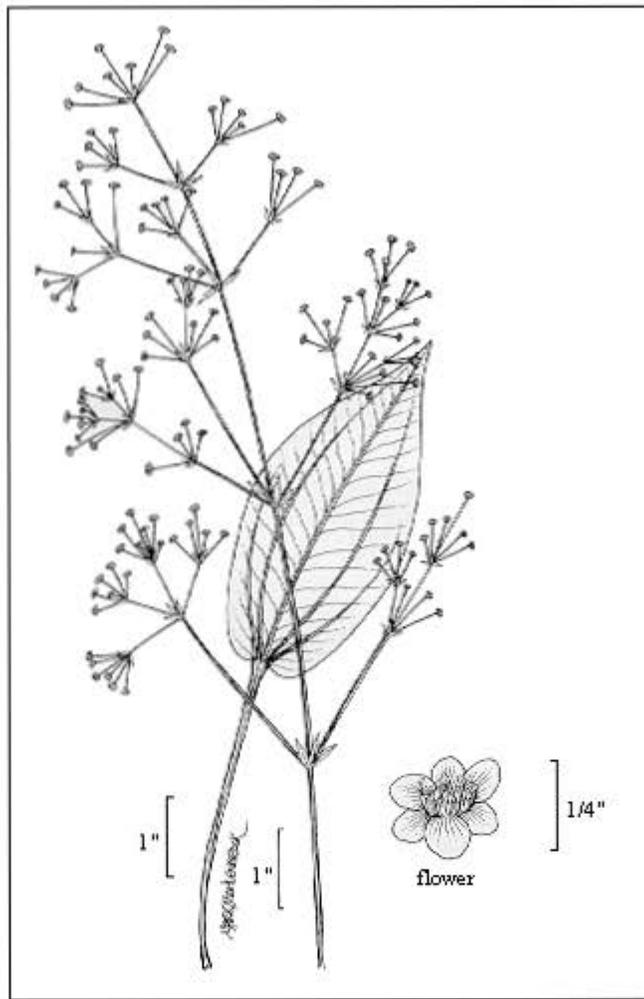
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Subcordate Water-plantain

Alisma subcordatum Raf.



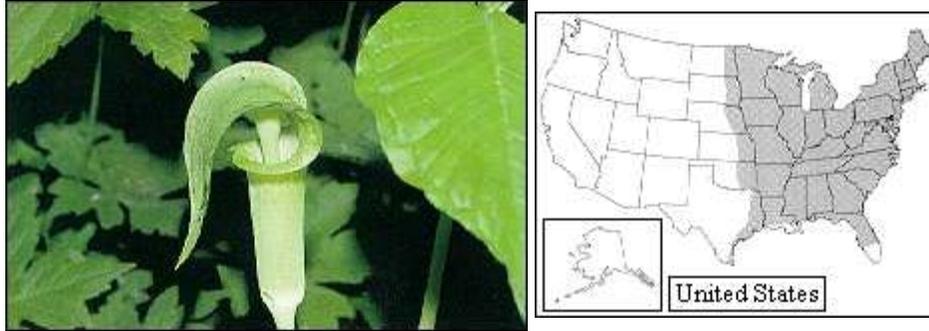
- **Family:** Water-plantain (Alismataceae)
- **Flowering:** June-September
- **Field Marks:** The features that distinguish this water-plantain from others are the tiny petals less than 1/10 inch long and the elliptic to ovate leaves.
- **Habitat:** Wet areas, often in standing water.
- **Habit:** Perennial herb with tufts of fibrous roots.
- **Stems:** Upright, unbranched except in the inflorescence, smooth, up to 2 feet tall, bearing a panicle of flowers but no leaves.
- **Leaves:** Basal, elliptic to ovate, more or less pointed at the tip, slightly heart-shaped to tapering at the base, without teeth, smooth, up to 4 inches long, up to 2 inches wide; leaf stalks longer than the blades.
- **Flowers:** Numerous, in terminal panicles on a leafless stem, the panicle up to 1 foot long, the branches subtended by bracts; bracts lanceolate.
- **Sepals:** 3, green, free from each other, rounded at the tip, up to 1/8 inch long.
- **Petals:** 3, white, free from each other, up to 1/8 inch long.
- **Stamens:** 6-9.
- **Pistils:** 10-25 per flower, free from each other, arranged in a single ring.
- **Fruits:** Achenes several in a small ring, flattened, up to 1/10 inch long, the ring of achenes up to 1/6 inch across.
- **Notes:** The achenes are eaten by waterfowl.



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Field Office Guide to Plant Species

Swamp Jack-in-the-pulpit *Arisaema triphyllum* (L.) Schott



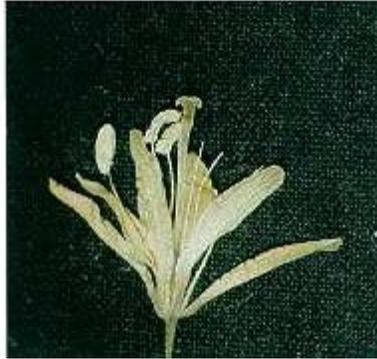
- **Family:** Aroid (Araceae)
- **Flowering:** April-July
- **Field Marks:** This species is readily distinguished by its leaves with 3 leaflets and its spike of flowers protected by an arching spathe.
- **Habitat:** Rich woods, wet woods, swamps, damp thickets.
- **Habit:** Perennial herb from a spherical tuber.
- **Stems:** Upright, smooth, up to 3 feet tall, bearing a single spike (spadix) and overarching sheath but no leaves.
- **Leaves:** Arising from the base of the plant, divided into 3 leaflets, the leaflets broadly elliptic to ovate, pointed at the tip, tapering to the often asymmetrical base, smooth, toothless, pinnately veined, up to 10 inches long.
- **Flowers:** Male and female borne separately but crowded on the same spike (spadix), the male flowers at the upper end of the spike, the female flowers near the lower end, the spike up to 3 inches long, blunt at the tip, sterile at the base; spike protected by an arching spathe, the spathe up to 4 inches long, up to 3 inches wide, green or purple-striped or purple.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 2-5.
- **Pistils:** Ovary superior.
- **Fruits:** Many berries in a conical head up to 3 inches long, the berries bright red, spherical, up to 1/3 inch in diameter, containing 1-3 seeds.
- **Notes:** This is a most variable species with regard to size of the plants and coloration of the spathes. The underground tuber is extremely sharp to the taste and irritating to mouth tissue, although it can be eaten after being boiled several times.

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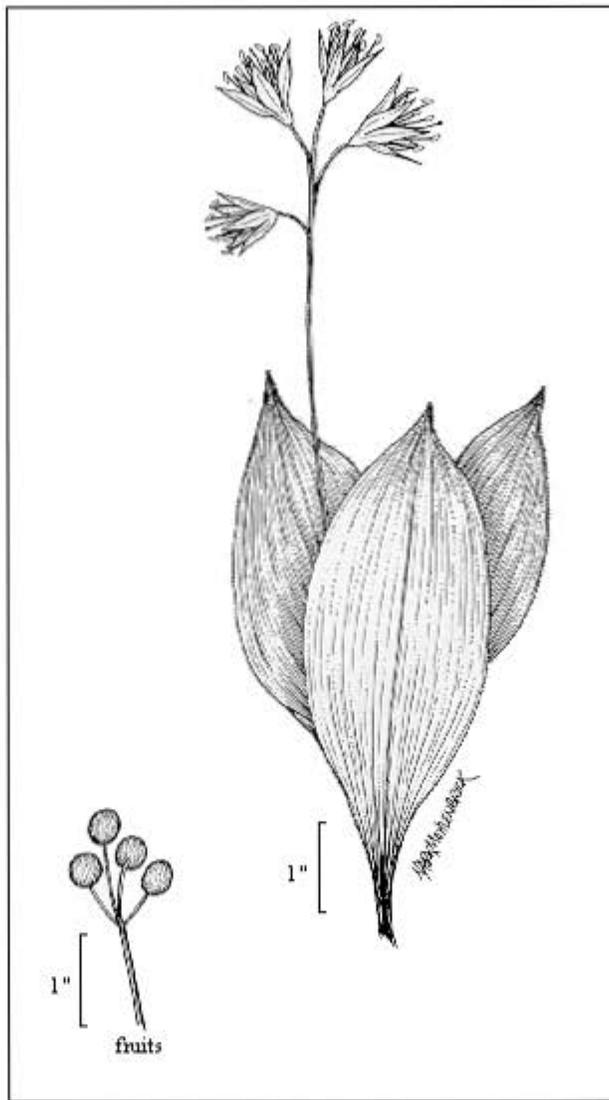
Field Office Guide to Plant Species

Blue Beadlily

Clintonia borealis (Ait.) Raf.



- **Family:** Lily (Liliaceae)
- **Flowering:** May-August
- **Field Marks:** This species is distinguished by its umbel of greenish yellow flowers on a leafless stalk, its 2-4 large oval leaves, and its blue berries.
- **Habitat:** Woods.
- **Habit:** Perennial herb with slender rhizomes.
- **Stems:** Upright, unbranched, without leaves, smooth, up to 1 foot tall, bearing an umbel of flowers at the tip.
- **Leaves:** 2-4, all basal, leathery, up to 1 foot long, ciliate.
- **Flowers:** 2-8 in a terminal umbel, up to nearly 1 inch long, greenish yellow.
- **Sepals and Petals:** 6, united to form a small bell, greenish yellow, up to nearly 1 inch long, soft-hairy on the outer surface.
- **Stamens:** 6.
- **Pistils:** Ovary superior.
- **Fruits:** Berries blue, ovoid.



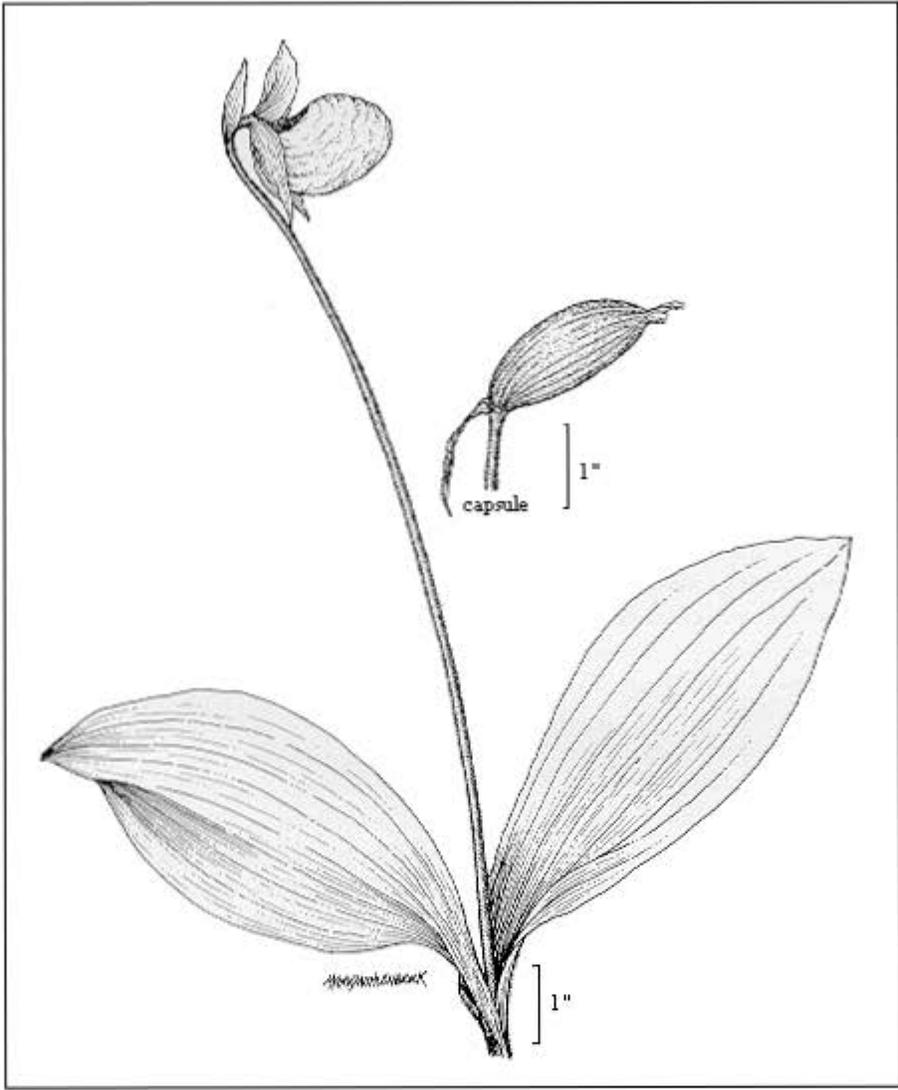
Northeast Wetland Flora

Field Office Guide to Plant Species

Pink Lady's-slipper
Cypripedium acaule Ait.



- **Family:** Orchid (Orchidaceae)
- **Flowering:** April-July
- **Field Marks:** This is the only lady's-slipper orchid that has a leafless flowering stalk with 2 leaves at the base of the plant and a rosy-pink lip petal.
- **Habitat:** Bogs, wet woods, acid woodlands.
- **Habit:** Perennial herb with thick, fibrous roots.
- **Stems:** Upright, unbranched, leafless, up to 1 1/2 feet tall, glandular-hairy.
- **Leaves:** 2, basal, broadly elliptic, up to 10 inches long, up to 6 inches wide, glandular-hairy, strongly veiny.
- **Flowers:** Borne singly at the tip of the leafless stem, up to 3 inches long.
- **Sepals:** 3, united, unlike, the upper one narrowly lanceolate, greenish brown to greenish purple, up to 2 inches long, up to 3/4 inch wide, the lateral two up to 1 3/4 inches long, up to 1 1/4 inches wide, greenish brown to greenish purple.
- **Petals:** 3, unequal, the 2 lateral ones lanceolate, greenish brown, hairy on the inner face, scarcely twisted, up to 2 1/2 inches long, up to 3/4 inch wide; lip petal pouch-shaped, drooping, pink or rose, up to 3 inches long, with a deep cleft down the middle.
- **Stamens:** 2.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsule ellipsoid, up to 2 1/2 inches long.



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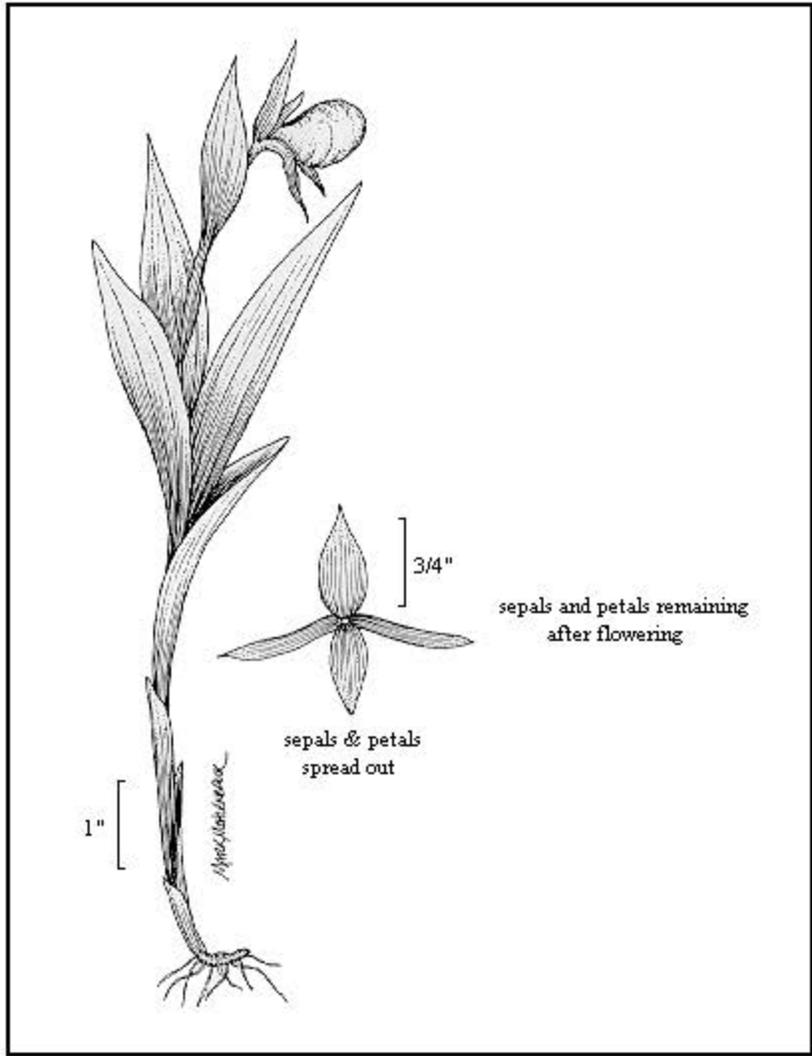
Field Office Guide to Plant Species

White Lady's-slipper

Cypripedium candidum Muhl. ex Willd.



- **Family:** Orchid (Orchidaceae)
- **Flowering:** May-June
- **Field Marks:** This orchid has a single, terminal flower borne on a leafy stem. The white lip petal has a waxy appearance. The interior of the flower is distinctly yellow.
- **Habitat:** Bogs, swamps, fens, wet prairies.
- **Habit:** Perennial herb with thick, fibrous roots.
- **Stems:** Upright, unbranched, up to 1 1/2 feet tall, glandular-hairy, bearing several leaves.
- **Leaves:** Several, alternate, lanceolate to elliptic, pointed at the tip, up to 6 inches long, up to 1 3/4 inches wide.
- **Flowers:** Borne singly at the tip of a leafy stem, up to 2 1/2 inches long, white with a yellow interior, slightly fragrant, subtended by an upright, leaf-like bract.
- **Sepals:** 3, united, greenish yellow striped with purple, narrowly lanceolate, long-tapering at the tip, up to 1 3/4 inches long, up to 1/2 inch wide.
- **Petals:** 3, unequal, the 2 lateral ones greenish yellow striped with purple, linear-lanceolate, long-tapering at the tip, twisted, up to 2 1/2 inches long, about 1/4 inch wide; lip petal pouchshaped, white striped with purple, waxy, up to 1 1/4 inches long.
- **Stamens:** 2.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsule ellipsoid, erect, up to 1 1/2 inches long.



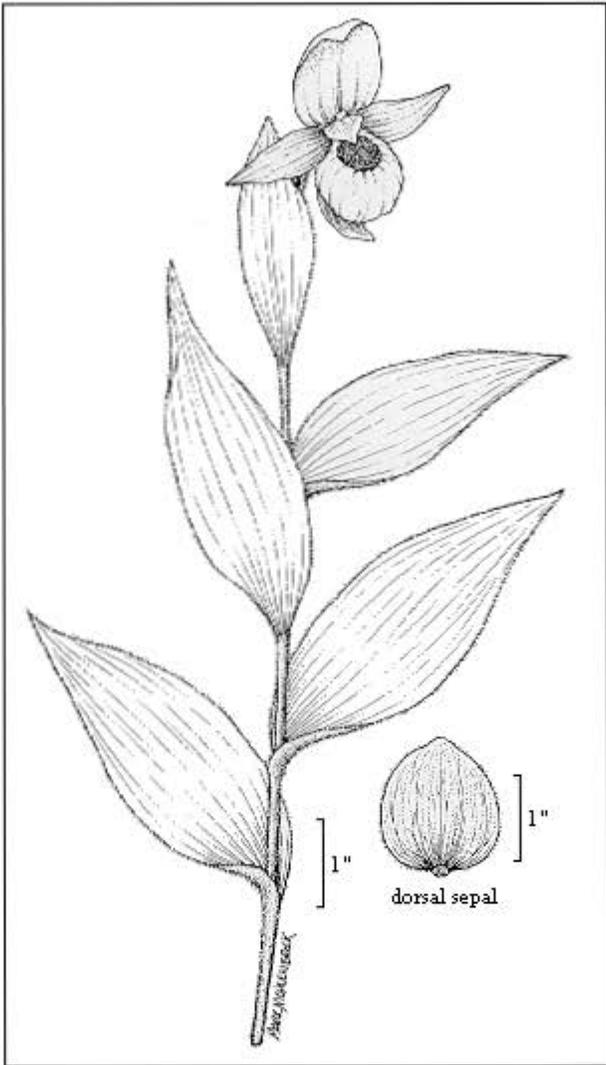
Northeast Wetland Flora

Field Office Guide to Plant Species

Showy Lady's-slipper *Cypripedium reginae* Walter



- **Family:** Orchid (Orchidaceae)
- **Flowering:** May-August
- **Field Marks:** This lady's-slipper differs by its white sepals and petals and its white lip often tinged with pink or rose.
- **Habitat:** Bogs, fens, swamps.
- **Habit:** Perennial herb with thick, fibrous roots.
- **Stems:** Upright, unbranched, up to 2 1/2 feet tall, with short, stiff, spreading hairs, bearing several leaves.
- **Leaves:** Several, alternate, broadly elliptic to ovate, short-pointed at the tip, up to 1 foot long, up to 6 inches wide, hairy, strongly veiny.
- **Flowers:** 1-3 borne at the tip of a leafy stem, up to 2 1/4 inches long, subtended by a leaf-like bract up to 3 inches long.
- **Sepals:** 3, united, unlike, white, waxy, rounded at the tip, the upper one nearly spherical, up to 2 1/2 inches long, at maturity arching over the lip, the other 2 narrower.
- **Petals:** 3, unequal, the lateral 2 white, rounded at the tip, oblong, flat, up to 1 3/4 inches long; lip petal pouch-shaped, white but strongly marked with pink or rose, 1 1/4-2 1/4 inches long.
- **Stamens:** 2.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsule ellipsoid, up to 2 1/4 inches long.
- **Notes:** The hairs of the fresh foliage may cause serious eczema.



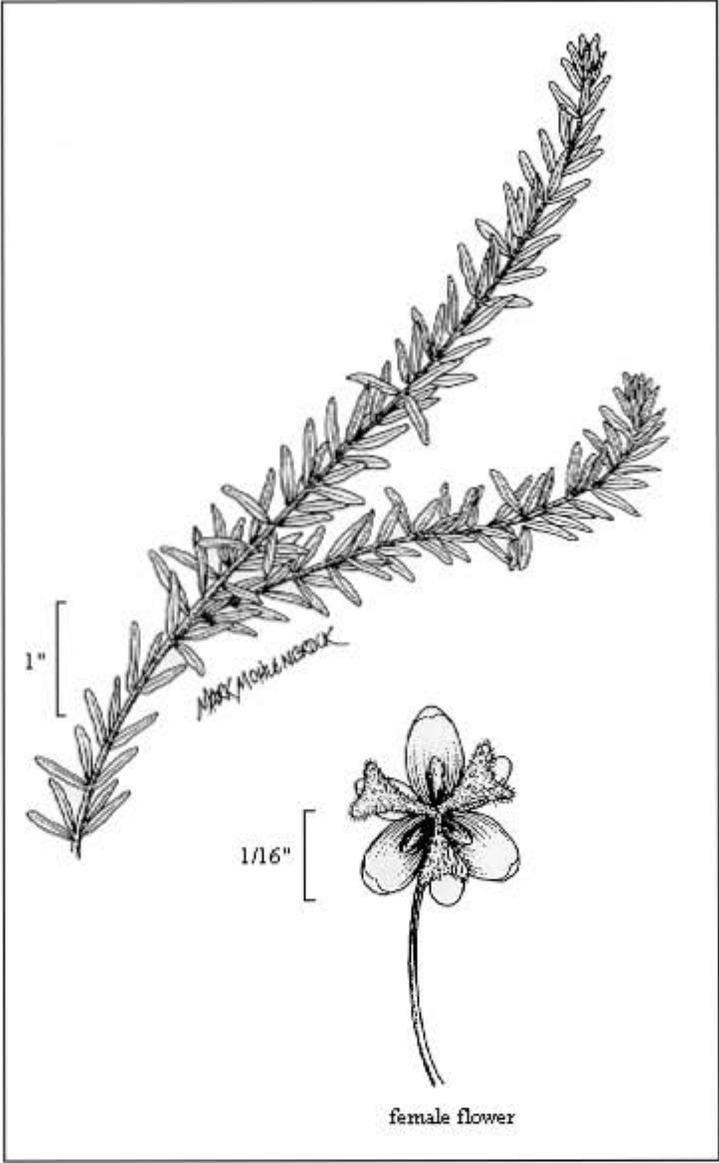
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Field Office Guide to Plant Species

Broad Water-weed *Elodea canadensis* Michx.



- **Family:** Frog-bit (Hydrocharitaceae)
- **Flowering:** July-September
- **Field Marks:** This *Elodea* has most leaves at least 1/10 inch wide and male flowers borne on stalks.
- **Habitat:** Quiet water.
- **Habit:** Aquatic perennial herb with thread-like stolons and either male or female flowers.
- **Stems:** Slender, smooth, with equal branching.
- **Leaves:** Upper and middle leaves in whorls of 3, the lower opposite, those of the male plants linear or linear-lanceolate, pointed at the tip, up to 1/2 inch long, up to 1/6 inch wide, those of the female plants broadly lanceolate, rounded or slightly pointed at the tip, up to 5/8 inch long, up to 1/4 inch wide.
- **Flowers:** Male and female flowers borne on separate plants from the axils of the leaves; male flowers: sepals 3, green, up to 1/4 inch long; petals 3, white, up to 1/4 inch long; stamens 9; female flowers: sepals 3, united at base to form a tube, green, up to 1/10 inch long; petals 3, united at base to form a tube, white, up to 1/8 inch long; ovary inferior; stigmas 3.
- **Fruits:** Ovoid, smooth, up to 1/4 inch long.
- **Notes:** The tube of the female flowers becomes elongated so that the lobes of the sepals and petals reach the surface of the water. This is a widely used aquarium and laboratory plant.



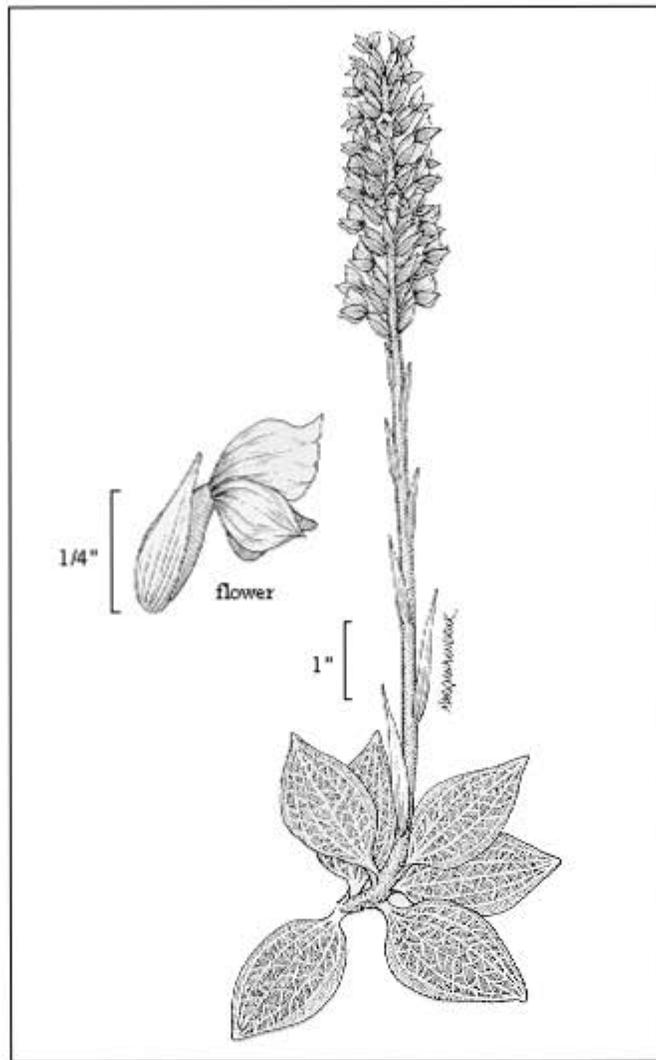
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Field Office Guide to Plant Species

Downy Rattlesnake-plantain *Goodyera pubescens* (Willd.) R. Br.



- **Family:** Orchid (Orchidaceae)
- **Flowering:** July-September
- **Field Marks:** This orchid is distinguished by its green-and-white mottled leaves, its densely flowered racemes, and its blunt-tipped lip of the flower.
- **Habitat:** Woods.
- **Habit:** Perennial herb from a creeping rhizome and fleshy roots.
- **Stems:** Upright, unbranched, up to 1 1/2 feet tall, densely glandular-hairy, bearing a raceme of flowers and 5-10 scales, but no broad leaves.
- **Leaves:** All basal, ovate-lanceolate to ovate, more or less pointed at the tip, rounded or tapering to the base, dark green but mottled with a network of white veins, up to 1 1/4 inches long.
- **Flowers:** Several borne in a densely crowded, terminal raceme up to 4 inches long; each flower greenish white, up to 1/3 inch long, short-stalked or sessile.
- **Sepals:** 3, greenish white, ovate, the two lateral ones free, the third one united to the petals forming a hood over the lip petal, up to 1/3 inch long.
- **Petals:** 3, greenish white, united to one of the sepals to form a hood over the lip petal, up to 1/3 inch long; lip petal rounded at the tip.
- **Stamens:** 1.
- **Pistils:** Ovary inferior, finely hairy.
- **Fruits:** Capsules ellipsoid, up to 1/2 inch long; seeds numerous, minute.



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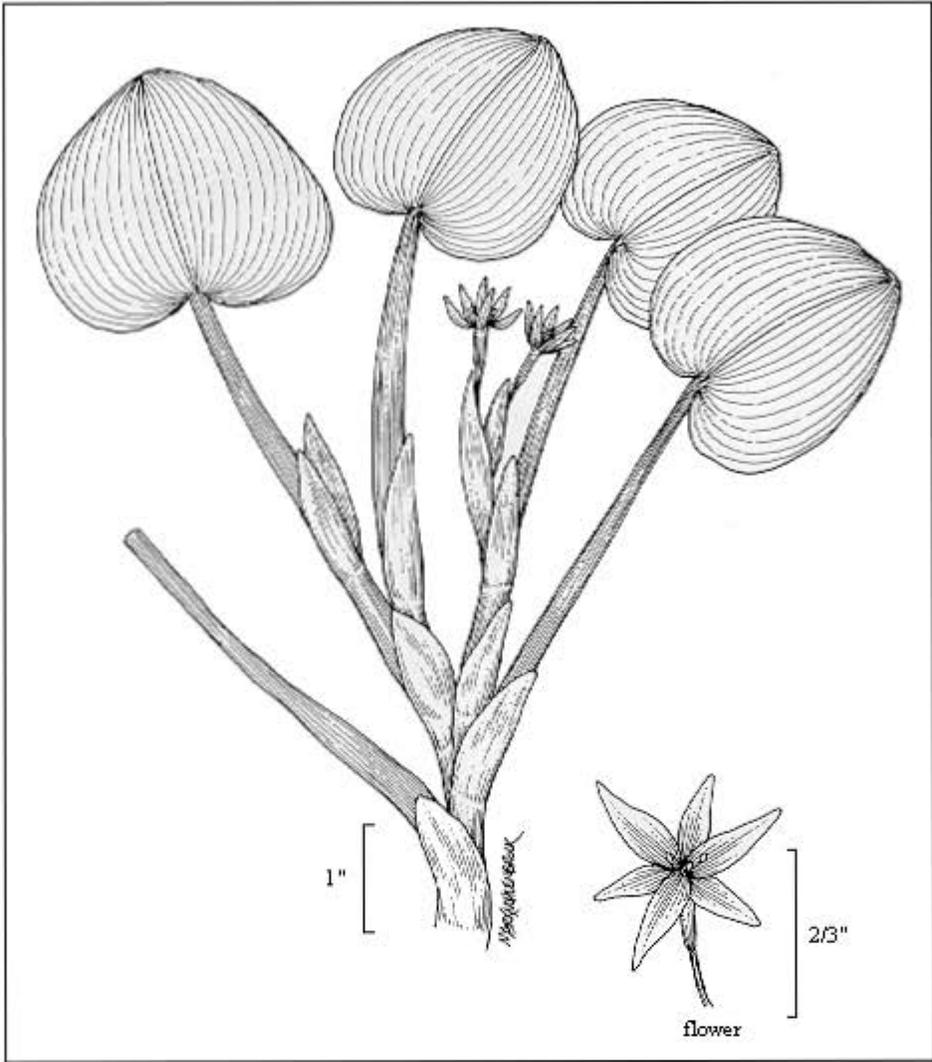
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Kidney-leaf Mud-plantain

Heteranthera reniformis Ruiz & Pavon



- **Family:** Pickerelweed (Pontederiaceae)
- **Flowering:** August-October
- **Field Marks:** This species is distinguished by its heart-shaped leaves and its 3-parted flowers borne within a sheathing spathe.
- **Habitat:** Shallow water, muddy shores.
- **Habit:** Creeping or floating perennial herb with thickened fibrous roots and slender rhizomes.
- **Stems:** Spreading to upright, smooth.
- **Leaves:** Alternate, simple, heart-shaped, rounded at the tip, smooth, on stalks up to 4 inches long.
- **Flowers:** 1-few in a spathe near the base of the plant.
- **Sepals:** 3, united with the petals to form a tube up to 1/3 inch long, white or pale blue.
- **Petals:** 3, united with the sepals to form a tube up to 1/3 inch long, white or pale blue.
- **Stamens:** 3, borne on the tube of the flowers.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules ovoid, smooth, containing many seeds.



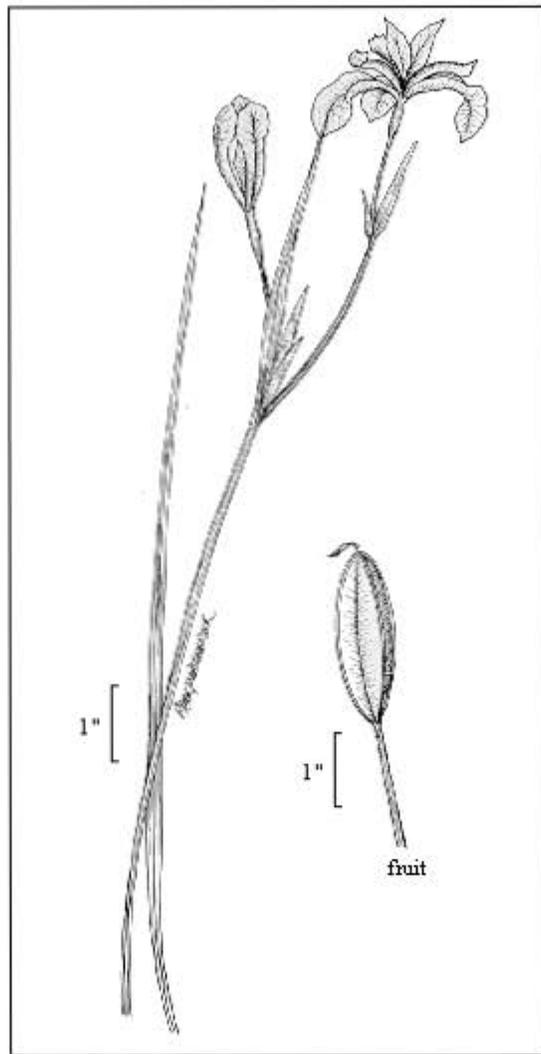
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Slender Blue Iris *Iris prismatica* Pursh



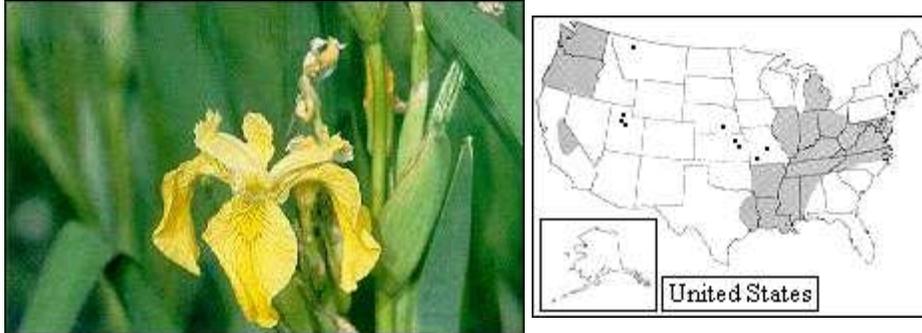
- **Family:** Iris (Iridaceae)
- **Flowering:** May-July
- **Field Marks:** The distinguishing features of this iris are the leaves on the flowering stem that are only about 1/3 inch wide.
- **Habitat:** Brackish or freshwater marshes, wet meadows.
- **Habit:** Perennial herb from rhizomes and stolons.
- **Stems:** Underground except for the flowering stems, the flowering stems terete, smooth, very slender, to 2 1/2 feet tall, with the remains of fibrous old leaves at the base.
- **Leaves:** Those from the stolons in reddish-based tufts, each leaf up to 1/4 inch wide, those on the flowering stem erect, up to 1/3 inch wide.
- **Flowers:** 1-few, blue to violet, up to 3 1/2 inches across, borne on pedicels longer than the bracts.
- **Sepals:** 3, spreading or turned downward, with dark purple veins and greenish at the base.
- **Petals:** 3, erect, obovate, purple or violet.
- **Stamens:** 3, attached to the base of the sepals.
- **Pistils:** Ovary inferior; styles petal-like, arching over the stamens.
- **Fruits:** Capsules narrowly oblongoid, beaked at the tip, up to 3 inches long.



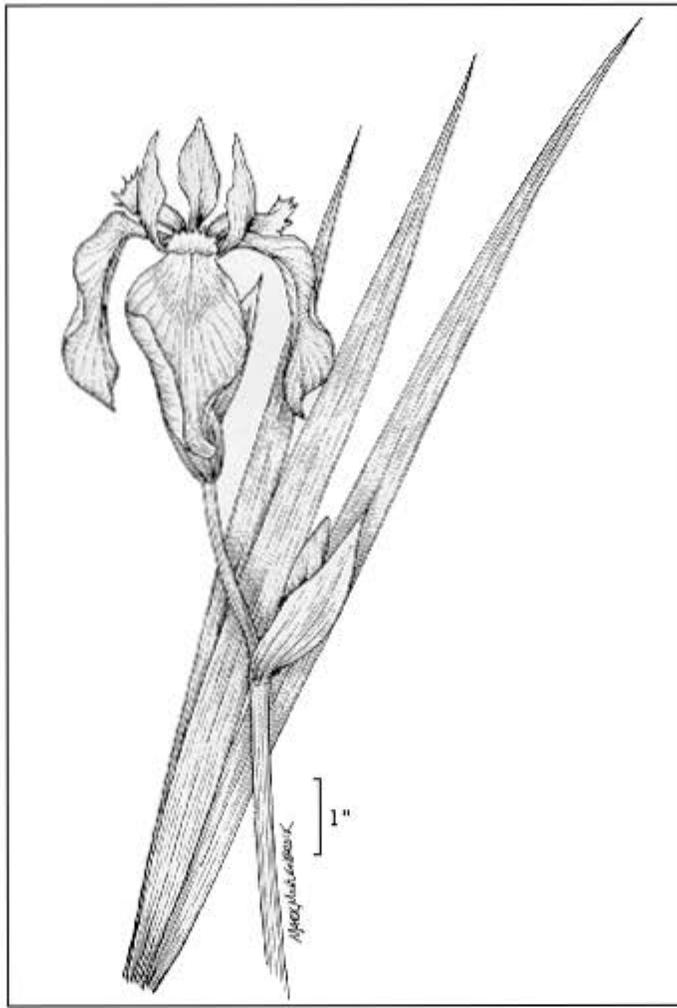
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Yellow Iris *Iris pseudacorus* L.



- **Family:** Iris (Iridaceae)
- **Flowering:** June-August
- **Field Marks:** This wild iris is distinguished by its yellow flower.
- **Habitat:** Marshes, meadows, along streams.
- **Habit:** Perennial herb from stout rhizomes.
- **Stems:** Upright, branched or unbranched, up to 2 feet tall, smooth, flattened at base.
- **Leaves:** Elongated, up to 3 feet long, up to 3/4 inch wide, smooth.
- **Flowers:** 1-several in a cluster, subtended by spathe-like bracts, yellow, up to 4 inches across.
- **Sepals:** 3, obovate, up to 3 inches long, yellow with dark brown markings, narrowed to a claw at the base, spreading.
- **Petals:** 3, yellow, much shorter than the sepals, spreading or ascending.
- **Stamens:** 3, attached to the base of the sepals, concealed by the styles.
- **Pistils:** Ovary inferior, 3- or 6-angled; styles petal-like, arching, yellow.
- **Fruits:** Capsules sharply 6-angled, 2-3 1/2 inches long, ovoid to ellipsoid.
- **Notes:** This is a popular species in gardens, but it has a tendency to become established in moist areas in the wild. It is a native of Europe.



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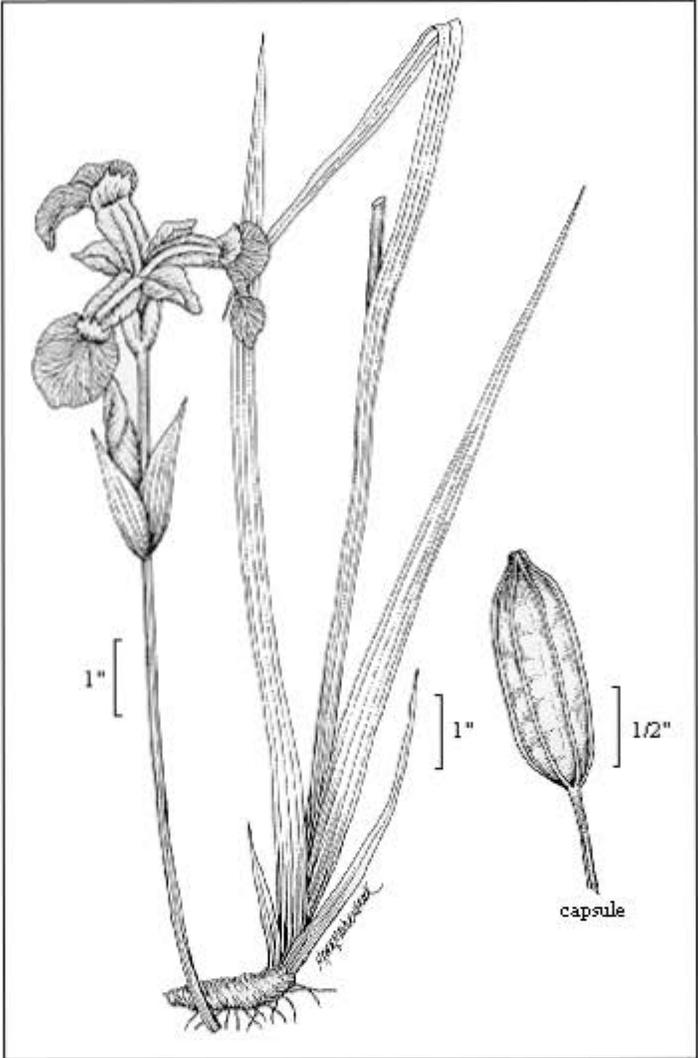
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Blueflag

Iris versicolor L.



- **Family:** Iris (Iridaceae)
- **Flowering:** May-August
- **Field Marks:** The distinguishing features of this erect, blue-flowering iris are the sepals with a greenish-yellow basal blotch and the tuft of fresh leaves that are purple.
- **Habitat:** Deep to shallow marshes, often in standing water, meadows, wet ditches.
- **Habit:** Perennial herb from a stout rhizome.
- **Stems:** Upright, branched or unbranched, up to 3 feet tall, smooth, flattened at base.
- **Leaves:** Elongated, up to 3 feet long, up to 1 1/2 inches wide, smooth, purple at base when first appearing.
- **Flowers:** 1-several in a cluster, subtended by spathe-like bracts, blue, up to 3 inches across.
- **Sepals:** 3, spatula-shaped, up to 3 inches long, blue with a greenish yellow blotch near base, narrowed to a claw at the base, recurved.
- **Petals:** 3, blue, 1/2-2/3 as long as the sepals and more upright or spreading.
- **Stamens:** 3, attached to the base of the sepals, concealed by the styles.
- **Pistils:** Ovary inferior, 3-angled; styles petal-like, arching, 2-lobed, blue.
- **Fruits:** Capsules 3-angled, up to 3 inches long, ovoid to ellipsoid, the inner surface appearing to be varnished.
- **Notes:** The distribution map also includes var. *shrevei*.



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Virginia Blueflag

Iris virginica L.



- **Family:** Iris (Iridaceae)
- **Flowering:** May-June
- **Field Marks:** This iris differs from other erect, blue-flowering species by the bright yellow blotch at the base of each sepal and by the pale brown base of the fresh tufts of leaves.
- **Habitat:** Bottomland woods, marshes, wet savannas, sometimes in standing water.
- **Habit:** Perennial herb from stout rhizomes.
- **Stems:** Upright, branched or unbranched, up to 3 feet tall, smooth, flattened at base.
- **Leaves:** Elongated, up to 3 feet long, up to 1 1/2 inches wide, smooth, pale brown at base when first appearing.
- **Flowers:** 1-several in a cluster, subtended by spathe-like bracts, blue, up to 4 inches across.
- **Sepals:** 3, spatula-shaped, up to 4 inches long, blue with a bright yellow blotch near base, narrowed to a claw at the base, recurved.
- **Petals:** 3, blue, a little shorter than the sepals and more erect to spreading.
- **Stamens:** 3, attached to the base of the sepals, concealed by the styles.
- **Pistils:** Ovary inferior, 3-angled; styles petal-like, arching, 2-lobed, blue.
- **Fruits:** Capsules 3-angled, 2 1/2-3 1/2 inches long, ovoid to ellipsoid.
- **Notes:** This attractive species is often grown as an ornamental.



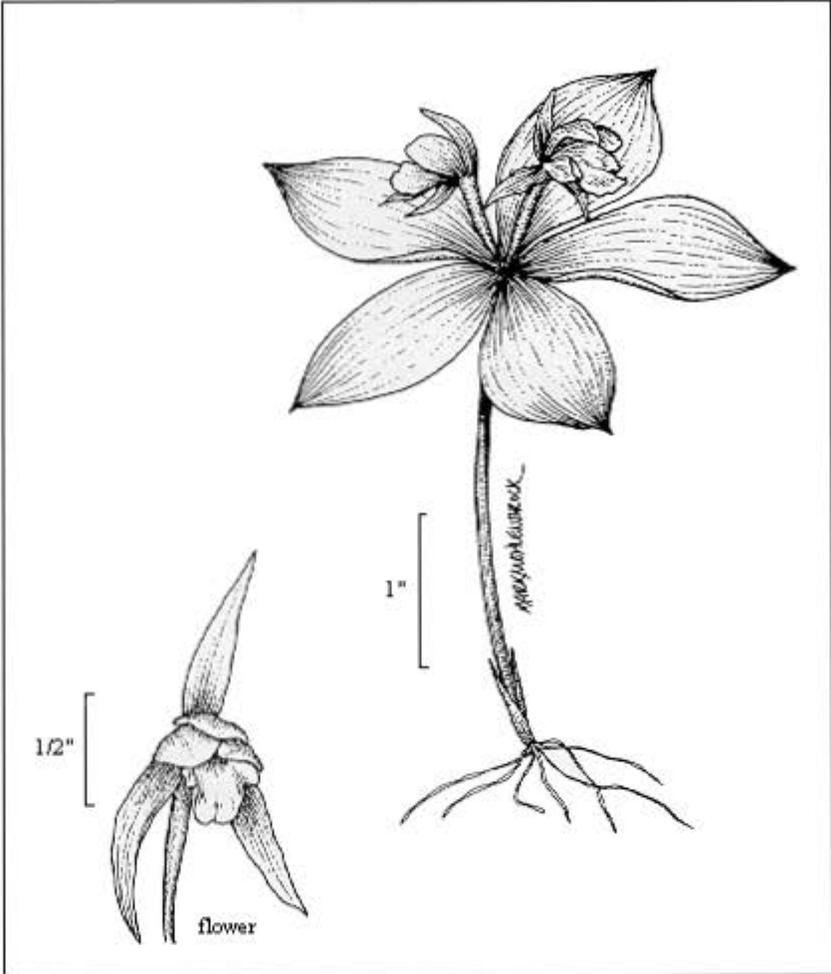
Northeast Wetland Flora

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Small Whorled Pogonia *Isotria medeoloides* (Pursh) Raf.



- **Family:** Orchid (Orchidaceae)
- **Flowering:** May-July
- **Field Marks:** This small orchid is distinguished by its whorl of leaves and its 1-2 flowers with a pale green lip.
- **Habitat:** Dry woods.
- **Habit:** Perennial herb with cord-like roots.
- **Stems:** Upright, unbranched, up to 4 inches tall.
- **Leaves:** 3-5 in a single whorl, elliptic, up to 2 1/2 inches long, smooth.
- **Flowers:** 1-2 on short upright stalks, up to 1 1/2 inches long.
- **Sepals:** 3, arching, very narrow, up to 1 inch long, greenish yellow.
- **Petals:** 3, unequal, the 2 lateral ones narrow, greenish yellow, shorter than the sepals; lip petal 3-lobed, pale green, shorter than the sepals.
- **Stamens:** 1.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsule elongated, up to 1 inch long, a little longer than its stalk.
- **Notes:** This is a Federally endangered species.

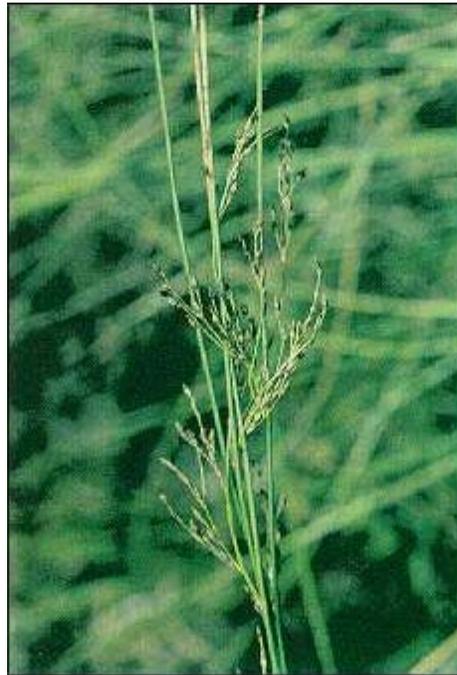


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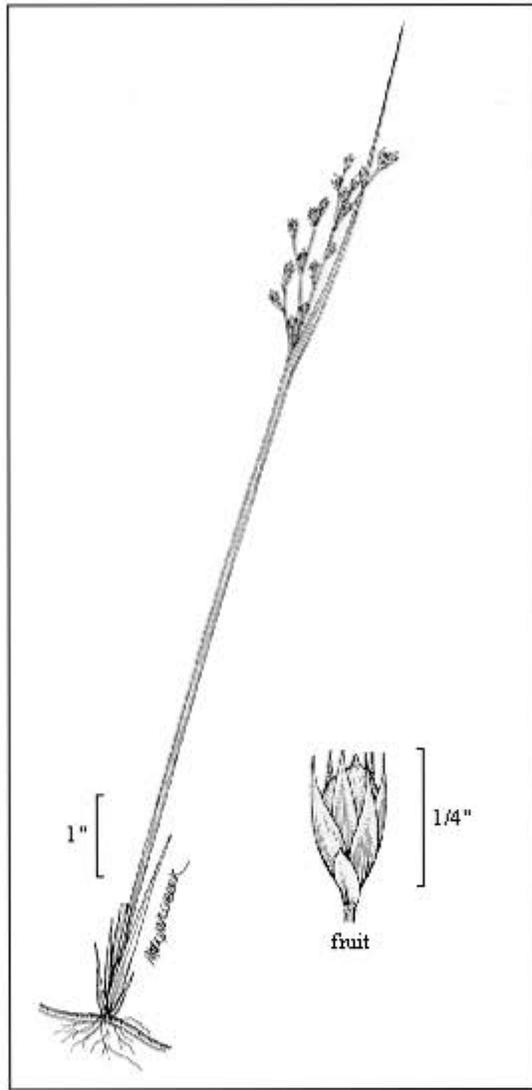
Field Office Guide to Plant Species

Baltic Rush

Juncus balticus Willd.



- **Family:** Rush (Juncaceae)
- **Flowering:** May-September
- **Field Marks:** The distinguishing features of this rush are the lateral inflorescence, the absence of leaves, and the absence of longitudinal furrows on the stems.
- **Habitat:** Brackish or freshwater meadows and shores.
- **Habit:** Perennial herb from extensive forking rhizomes.
- **Stems:** Upright, smooth, slender, terete, not furrowed, up to 3 feet tall.
- **Leaves:** Reduced to sheaths at the base of the stems, the sheaths up to 5 inches long.
- **Flowers:** Many borne in clusters from the side of the stem, the stem appearing to continue beyond the inflorescence.
- **Sepals:** 3, chestnut-brown, lanceolate, free from each other, up to 1/4 inch long.
- **Petals:** 3, chestnut-brown, lanceolate, free from each other, up to 1/4 inch long.
- **Stamens:** 6.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules ovoid to lanceoloid, triangular, short-pointed at the tip, about as long as or slightly longer than the sepals and petals.
- **Notes:** The seeds are eaten by waterfowl. Some recent authors refer to this species as *J. arcticus*.

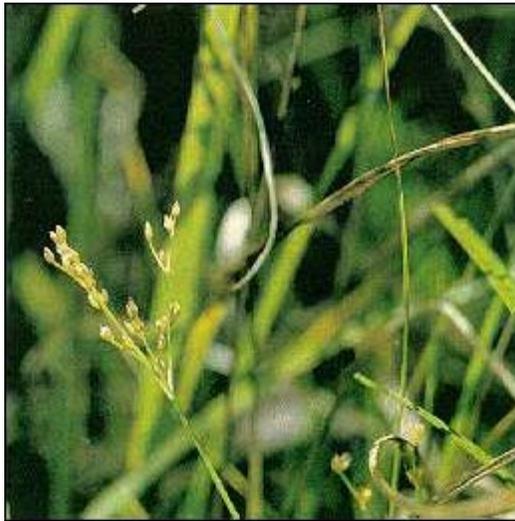


Northeast Wetland Flora

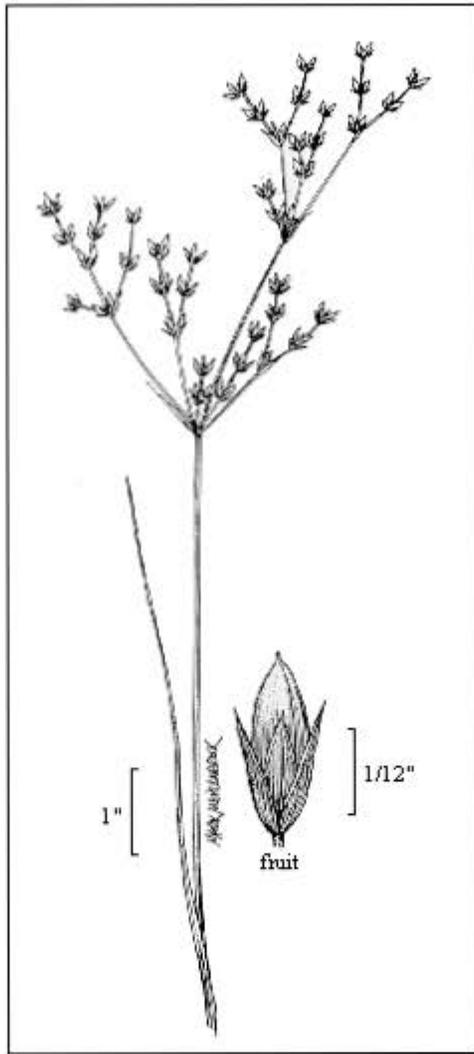
Field Office Guide to Plant Species

Small-head Rush

Juncus brachycephalus (Engelm.) Buchenau



- **Family:** Rush (Juncaceae)
- **Flowering:** July-September
- **Field Marks:** This rush is distinguished by its terete leaves, its seeds with tail-like tips at both ends, and round-tipped petals with transparent edges.
- **Habitat:** Marshes, wet fields.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, smooth, slender, up to 2 1/2 feet tall.
- **Leaves:** Terete, ribbed, up to 1/10 inch in diameter.
- **Flowers:** 3-5 in small heads, the heads borne in a sparse cyme.
- **Sepals:** 3, greenish to light brown, pointed at the tip, shorter than the petals, up to 1/6 inch long.
- **Petals:** 3, greenish to light brown, rounded at the tip, up to 1/4 inch long, with transparent edges.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules angular, with a short beak, brown, up to 1/6 inch long; seeds with a short tail at both ends.
- **Notes:** The seeds are eaten by waterfowl.



Northeast Wetland Flora

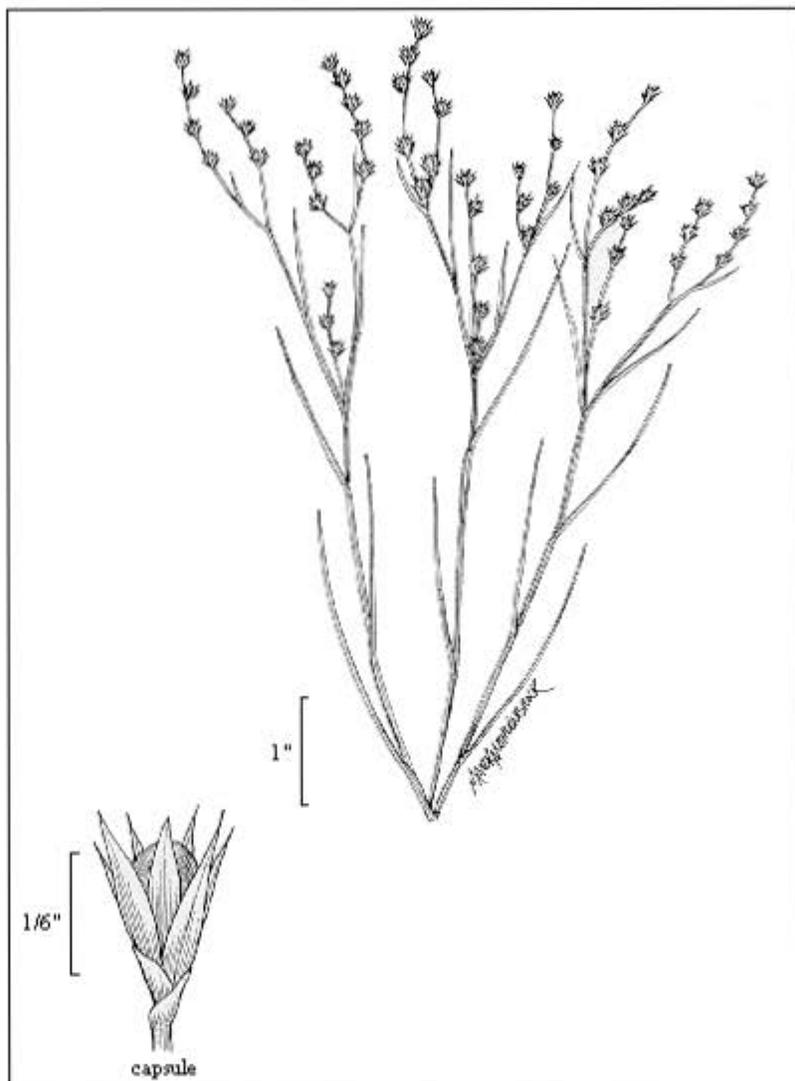
Field Office Guide to Plant Species

Toad Rush

Juncus bufonius L.



- **Family:** Rush (Juncaceae)
- **Flowering:** June-November
- **Field Marks:** This rush differs by its annual growth form and its inflorescence at least 1/4 the length of the entire plant.
- **Habitat:** Wet soil.
- **Habit:** Annual with fibrous roots.
- **Stems:** Single, usually branching at the base, up to 1 foot tall, slender, smooth.
- **Leaves:** 1-4, elongated, flat or capillary and rolled under along the edges, up to 1/20 inch wide, smooth.
- **Flowers:** Several in cymes, the cymes at least 1/4 the length of the entire plant or longer, the cymes subtended by short, leaf-like bracts; flowers mostly on one side of the branches of the cyme, sessile or on very short stalks.
- **Sepals:** 3, free from each other, lanceolate, long-pointed at the tip, green or brownish, up to 1/3 inch long.
- **Petals:** 3, free from each other, lanceolate, long-pointed at the tip, green or brownish, up to 1/4 inch long.
- **Stamens:** 3 or 6.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules obovoid, rounded or truncate at the tip but with a short point, green to redbrown, up to 1/6 inch long; seeds oblongoid to ovoid, minute, minutely pointed at both ends.
- **Notes:** Waterfowl eat the seeds.



Northeast Wetland Flora

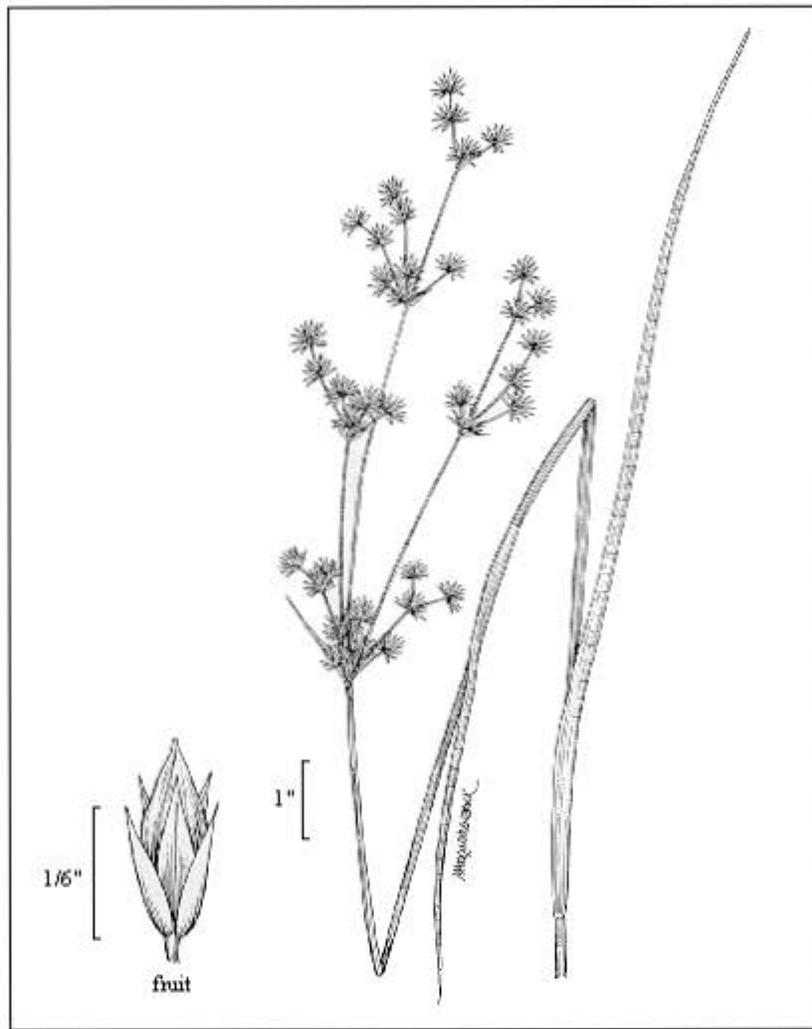
Field Office Guide to Plant Species

Canada Rush

Juncus canadensis J. Gay



- **Family:** Rush (Juncaceae)
- **Flowering:** July-October
- **Field Marks:** This rush is distinguished by its strongly ribbed leaves, its hemispherical flower clusters, and its seeds with tails at both ends that are 2/3 as long as the body of the seeds.
- **Habitat:** Marshes, wet soils.
- **Habit:** Perennial herb from a thickened rootstock.
- **Stems:** Upright, usually rather stout, smooth, up to 4 feet tall.
- **Leaves:** Terete, ribbed with septations, up to 5 inches long.
- **Flowers:** Variable number of 5-40 crowded into hemispherical heads, the heads borne in cymes up to 1 1/2 feet long, subtended by a short bract.
- **Sepals:** 3, lanceolate, green, free from each other, up to 1/6 inch long.
- **Petals:** 3, lanceolate, green, free from each other, up to 1/6 inch long.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules lanceoloid, reddish brown, somewhat triangular, a little longer than the sepals and petals; seeds with a tail at both ends, the tails 2/3 as long as the body of the seeds.
- **Notes:** The seeds are eaten by waterfowl.



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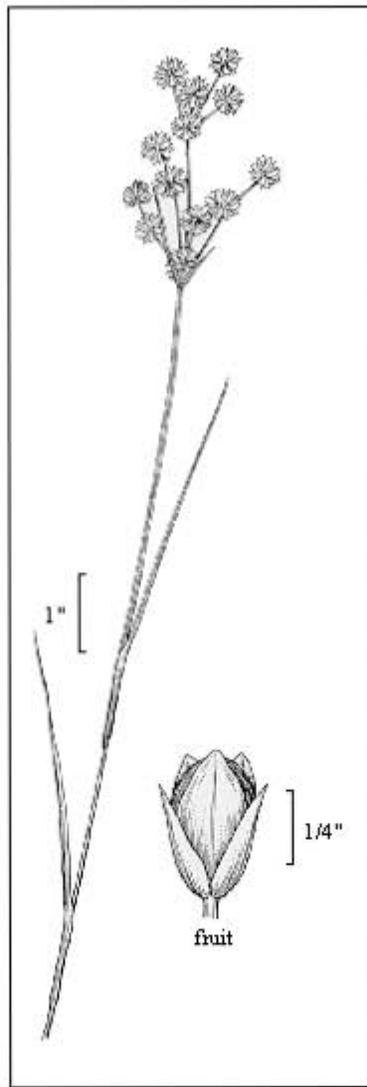
Field Office Guide to Plant Species

Grass-like Rush

Juncus marginatus Rostk.



- **Family:** Rush (Juncaceae)
- **Flowering:** June-September
- **Field Marks:** The distinguishing features of this rush are the flat leaves, the knotty rhizomes, and the clump-forming habit.
- **Habitat:** Marshes, wet meadows, shorelines.
- **Habit:** Perennial herb from knotty rhizomes, forming clumps.
- **Stems:** Upright, slender, smooth, up to 2 1/2 feet long.
- **Leaves:** Elongated, flat, soft, up to 1/6 inch wide, smooth.
- **Flowers:** 2-12 crowded into nearly spherical heads, the heads borne in a cyme up to 4 inches long.
- **Sepals:** 3, narrowly lanceolate, pointed at the tip, reddish brown, slightly keeled, up to 2/5 inch long, slightly shorter than the petals.
- **Petals:** 3, narrowly lanceolate, pointed at the tip, reddish brown, slightly keeled, up to 1/2 inch long, slightly longer than the sepals.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules obovoid, rounded at the tip, about 2/5 inch long; seeds pointed at both ends.
- **Notes:** The seeds are eaten by waterfowl.

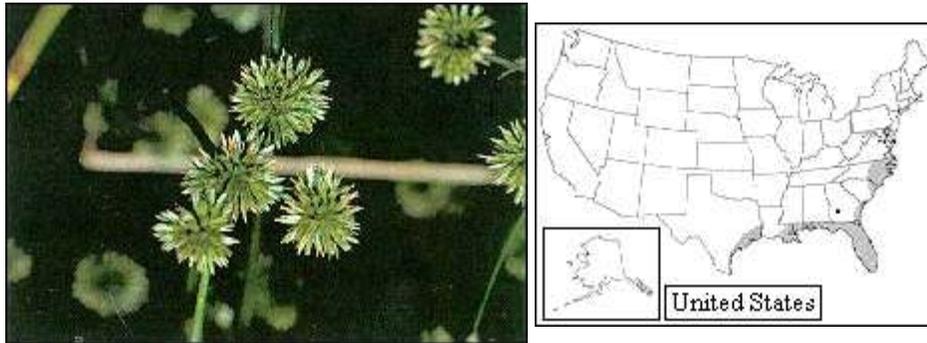


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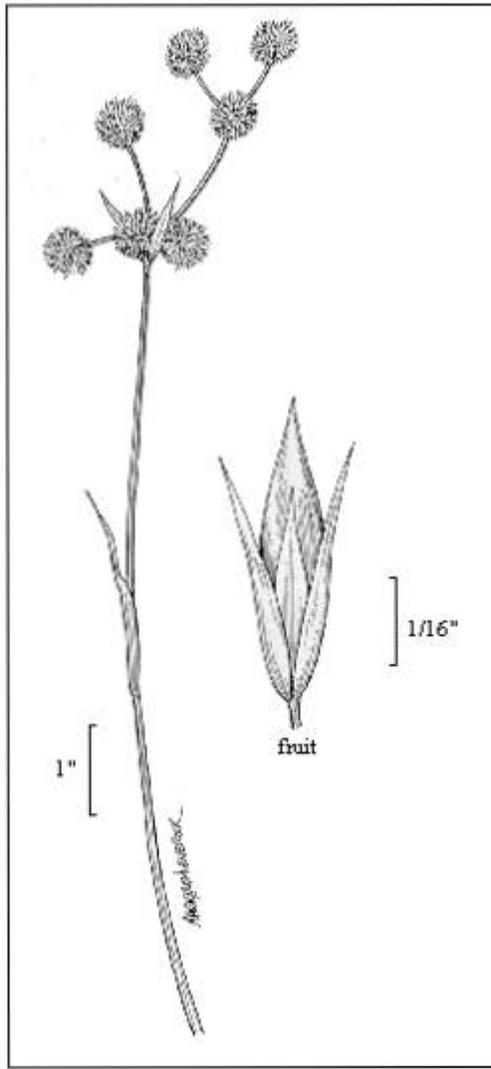
Field Office Guide to Plant Species

Big-head Rush

Juncus megacephalus M.A. Curt.



- **Family:** Rush (Juncaceae)
- **Flowering:** June-August
- **Field Marks:** This rush is distinguished by its ribbed leaves, its uppermost leaf with the blade much shorter than the sheath, and its large, reddish brown, spherical heads usually at least 1/2 inch in diameter.
- **Habitat:** Brackish or fresh-water marshes.
- **Habit:** Perennial herb from rather thick rhizomes.
- **Stems:** Upright, rather stout, smooth, up to 3 feet tall.
- **Leaves:** Terete, ribbed, smooth.
- **Flowers:** Up to 40, crowded into spherical heads at least 1/2 inch in diameter, with a short bract at the base.
- **Sepals:** 3, lanceolate, reddish brown, free from each other, up to 1/4 inch long, longer than the petals.
- **Petals:** 3, lanceolate, reddish brown, free from each other, less than 1/4 inch long, shorter than the sepals.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules ellipsoid, pointed at the tip, somewhat triangular, about 1/4 inch long, slightly longer than the perianth; seeds pointed at both ends.
- **Notes:** The seeds are eaten by waterfowl.



Northeast Wetland Flora

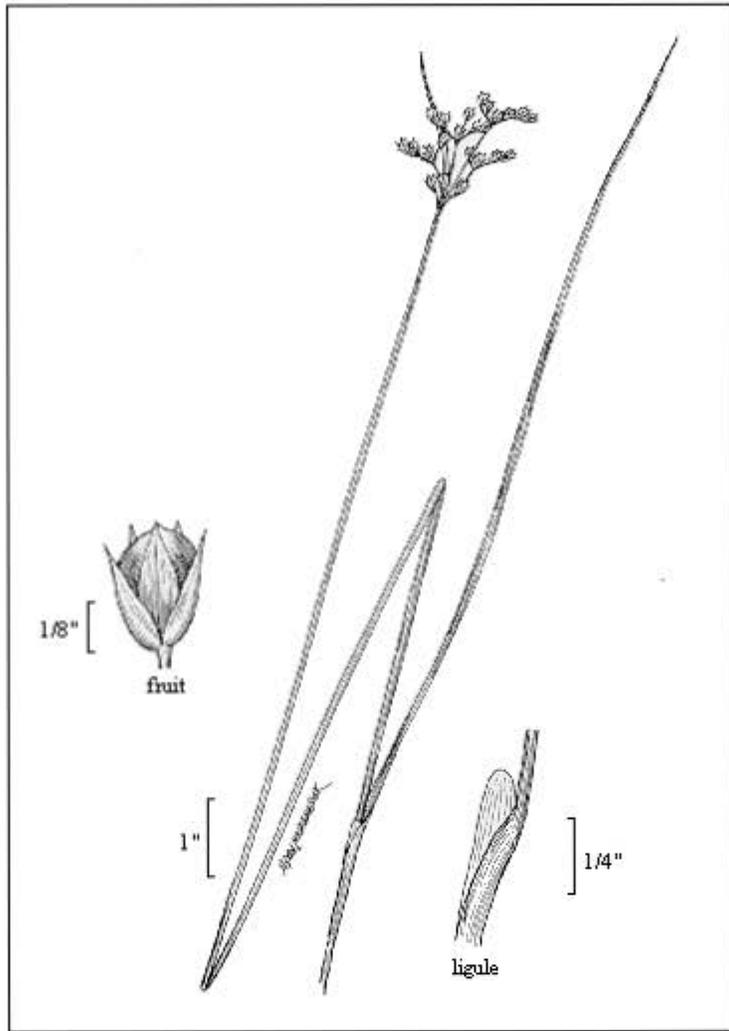
Field Office Guide to Plant Species

Flat-leaf Rush

Juncus platyphyllus (Wiegand) Fernald



- **Family:** Rush (Juncaceae)
- **Flowering:** June-September
- **Field Marks:** The distinguishing features of this rush are the flat leaves, purplish leaf sheaths, and long, firm auricles of the leaf sheath.
- **Habitat:** Marshes.
- **Habit:** Perennial herb from knotty rhizomes, in dense clumps.
- **Stems:** Upright, smooth, up to 3 feet tall.
- **Leaves:** Elongated, flat, but becoming rolled into a tube when dry, up to 1/4 inch wide; sheaths purplish; auricles of the sheaths much prolonged, firm.
- **Flowers:** 2-6 in a head, with several heads forming a cyme up to 5 inches long, subtended by a bract longer than the cyme.
- **Sepals:** 3, pale brown, lanceolate, erect, free from each other, up to 1/4 inch long.
- **Petals:** 3, pale brown, lanceolate, erect, free from each other, up to 1/4 inch long.
- **Stamens:** 6.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules ovoid, brown, up to 1/4 inch long.
- **Notes:** Gleason and Cronquist call this plant *J. tenuis* var. *dichotomus*. *Juncus platyphyllus* has firm, drab to grayish green, round-tipped auricles on the leaf sheath, while *J. tenuis* has thin, whitish, lance-oblong auricles. The seeds are eaten by waterfowl.

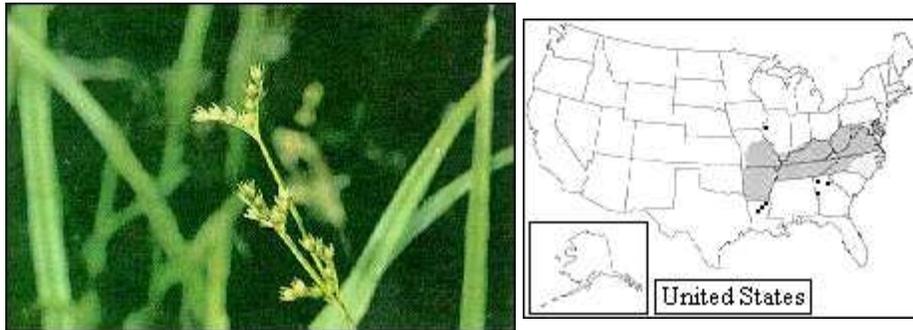


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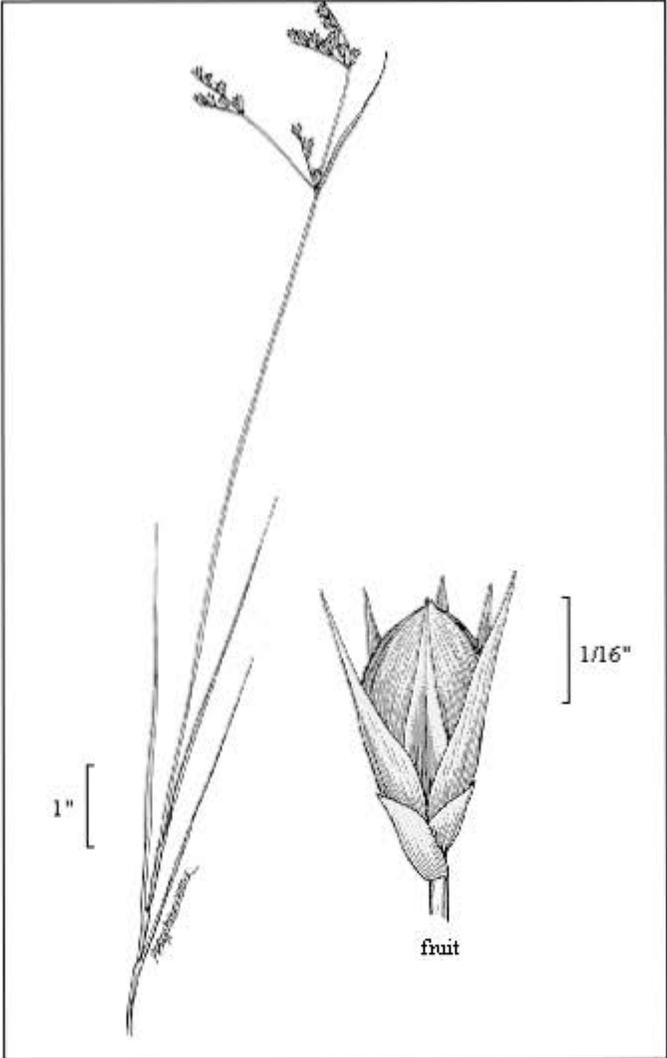
Field Office Guide to Plant Species

Secund Rush

Juncus secundus Beauv.



- **Family:** Rush (Juncaceae)
- **Flowering:** June-October
- **Field Marks:** This rush is distinguished by its flowers borne on one side of the inflorescence branches and its flat basal leaves which are generally 1/2 the length of the stem.
- **Habitat:** Dry soil, rocky bluffs, clearings.
- **Habit:** Tufted perennial with fibrous roots.
- **Stems:** Upright, unbranched, smooth, up to 16 inches tall.
- **Leaves:** Elongated, flat, smooth, up to 6 inches long, about 1/20 inch wide, up to nearly half as long as the stem.
- **Flowers:** Borne on the inner side of the curved inflorescence branches, the inflorescence up to 6 inches long, subtended by 2 leaf-like bracts that are usually shorter than the inflorescence.
- **Sepals:** 3, free from each other, lanceolate, up to 1/6 inch long, pointed at the tip.
- **Petals:** 3, free from each other, lanceolate, usually slightly shorter than the sepals, pointed at the tip.
- **Stamens:** 6.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules ovoid, more or less triangular, rounded at the tip except for a small point, about 1/6 inch long; seeds oblongoid, about 1/40 inch long, pointed at each end.
- **Notes:** The seeds are eaten by wildlife.



Northeast Wetland Flora

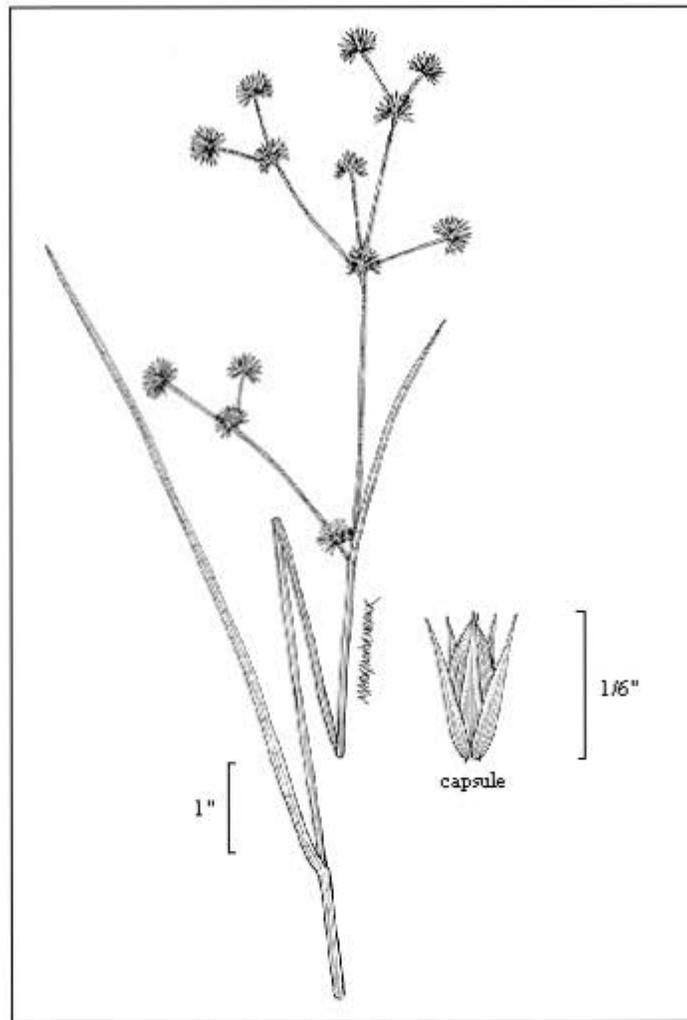
Field Office Guide to Plant Species

Woods Rush

Juncus subcaudatus (Engelm.) Coville & Blake



- **Family:** Rush (Juncaceae)
- **Flowering:** July-October
- **Field Marks:** The distinguishing features of this rush are the septate, cylindrical leaves, the flowers in hemispherical heads, the pointed sepals and petals, and the seeds with tails on each end only about 1/3 as long as the body of the seeds.
- **Habitat:** Bogs, wet woods.
- **Habit:** Densely tufted perennial with thickened rootstocks.
- **Stems:** Upright, branched or unbranched, sometimes sprawling, smooth, up to nearly 3 feet tall.
- **Leaves:** Elongated, cylindrical, septate, about 1/20 inch in diameter.
- **Flowers:** Borne in heads in loose, open cymes, the cymes up to 10 inches long, with very slender branches, the heads hemispherical, 5- to 20-flowered; flowers greenish, sessile or nearly so.
- **Sepals:** 3, free from each other, greenish, lanceolate, pointed at the tip, up to 1/6 inch long.
- **Petals:** 3, free from each other, greenish, lanceolate, pointed at the tip, up to 1/4 inch long.
- **Stamens:** 3 or 6.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules lanceoloid, brown, up to 1/6 inch long, pointed at the tip, smooth, shorter than or equalling the sepals and petals; seeds narrowly elliptical, about 1/20 inch long, with a white tail at each end about 1/3 as long as the body of the seed.
- **Notes:** Waterfowl eat the seeds.



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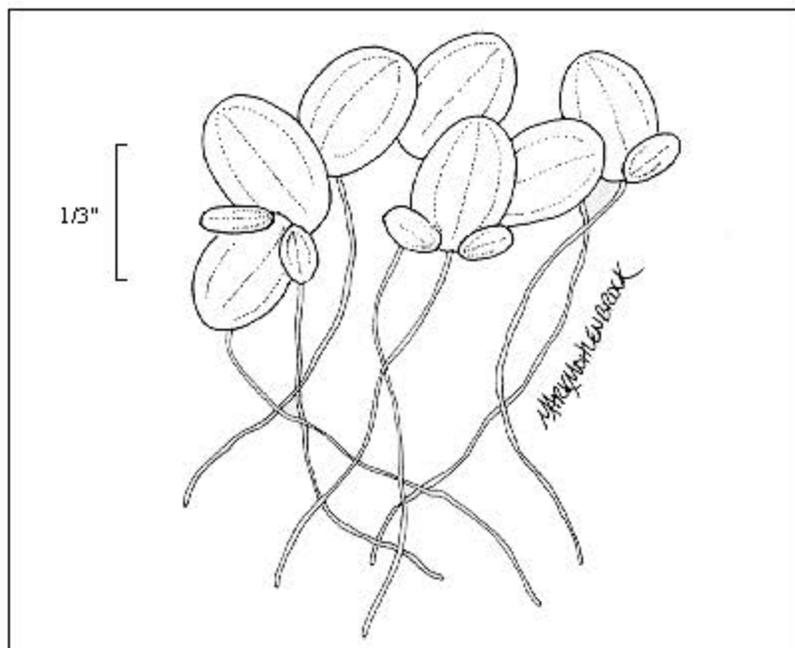
Field Office Guide to Plant Species

Lesser Duckweed

Lemna minor L.



- **Family:** Duckweed (Lemnaceae)
- **Flowering:** July-August
- **Field Marks:** This duckweed has broadly oblong to nearly spherical bodies that are obscurely 3-nerved. The tip of the rootlet is rounded.
- **Habitat:** Quiet water, ponds.
- **Habit:** Tiny floating aquatic without true stems and leaves; tip of solitary rootlet rounded.
- **Leaves:** Body (thallus or frond) obovate to elliptic, up to 1/3 inch long, nearly as wide, symmetrical or slightly asymmetrical, flattened to weakly inflated, obscurely 3-nerved; upper surface usually slightly convex; lower surface flattened or weakly to moderately convex, pale green or occasionally reddish purple.
- **Flowers:** Microscopic, borne singly in pouches.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** 1.
- **Fruits:** Symmetrical, broadly ovoid; seeds longitudinally ribbed.
- **Notes:** The plant may be solitary or more commonly remaining attached in groups of 2-4.



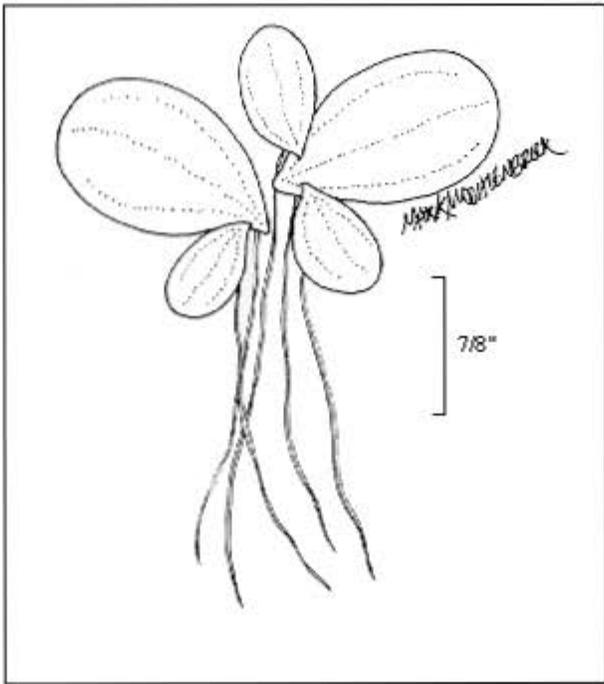
Northeast Wetland Flora

Field Office Guide to Plant Species

Minute Duckweed *Lemna perpusilla* Torr.



- **Family:** Duckweed (Lemnaceae)
- **Flowering:** March-November
- **Field Marks:** The characteristics of this duckweed are the slightly asymmetrical bodies with 3 rather inconspicuous nerves and the winged sheaths of the root.
- **Habitat:** Shallow water.
- **Habit:** Tiny floating aquatic without true stems and leaves; solitary rootlet with a winged sheath; plant solitary or commonly remaining attached in groups of 2-3.
- **Leaves:** Body (thallus or frond) obovate to ovate, variable, asymmetrical, up to 1/8 inch long, about 1/2 as wide, inflated, obscurely 3-nerved, the upper surface weakly convex.
- **Flowers:** Microscopic, borne singly in pouches.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** 1.
- **Fruits:** Asymmetrical, ovoid to oblongoid, with a prominent persistent style.
- **Notes:** Duckweed bodies are eaten by waterfowl.



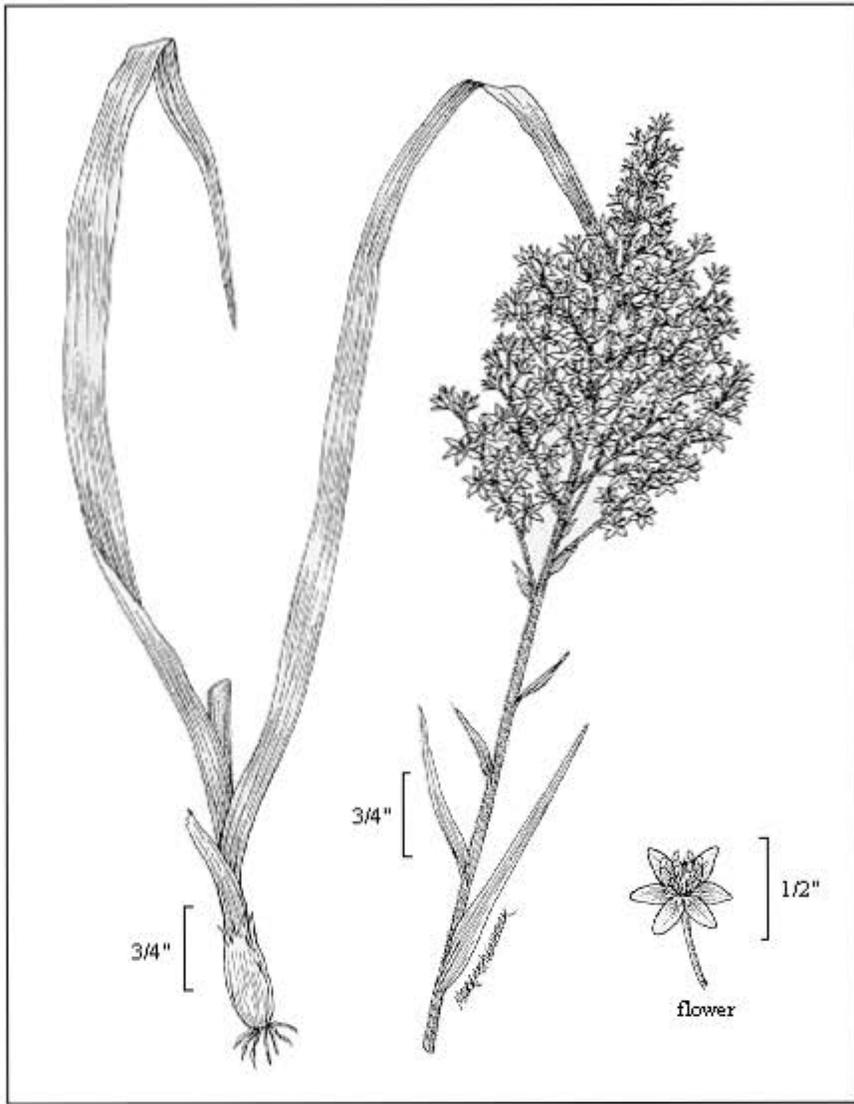
Northeast Wetland Flora

Field Office Guide to Plant Species

Virginia Bunchflower *Melanthium virginicum* L.



- **Family:** Lily (Liliaceae)
- **Flowering:** June-July
- **Field Marks:** The Virginia bunchflower is distinguished by its 6 free sepals and petals that have a pair of glands at the base of each, its hairy stems, and its broadly winged, flat seeds.
- **Habitat:** Wet meadows, savannas, wet prairies.
- **Habit:** Perennial herb from thick rhizomes.
- **Stems:** Upright, stout, branched or unbranched, hairy, up to 5 feet tall.
- **Leaves:** Alternate, simple, elongated, broadly linear, pointed at the tip, tapering to the base, without teeth, smooth, up to 1 1/2 inches wide, the uppermost progressively smaller.
- **Flowers:** Many in an open panicle, the panicle up to 1 1/2 feet long; flowers creamy, but often becoming greenish or purplish, short-stalked.
- **Sepals:** 3, creamy, becoming greenish or purplish, free from each other, oblong to ovate, up to 1/3 inch long, with a pair of dark glands at the base.
- **Petals:** 3, creamy, becoming greenish or purplish, free from each other, oblong to ovate, up to 1/3 inch long, with a pair of dark glands at the base.
- **Stamens:** 6, shorter than the sepals and petals.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Capsules ovoid, grooved, up to 3/4 inch long, with 3 beaks; seeds whitish, obovate, up to 1/3 inch long.
- **Notes:** This is a poisonous perennial herb.

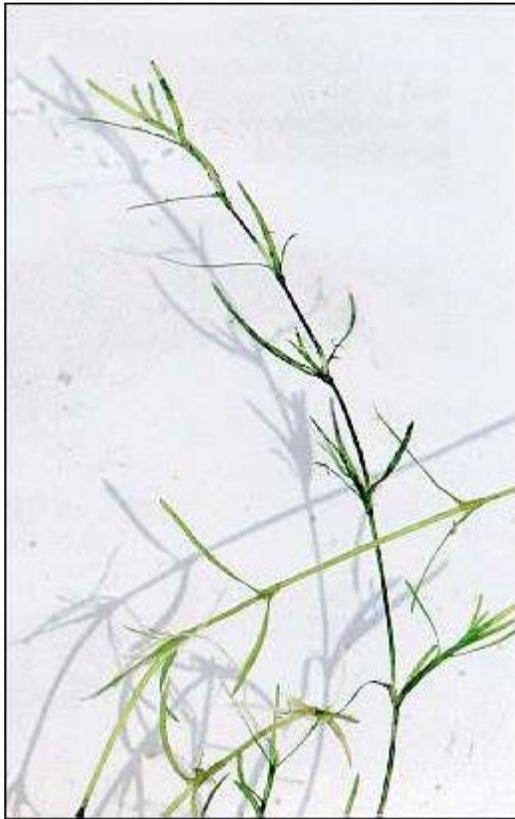


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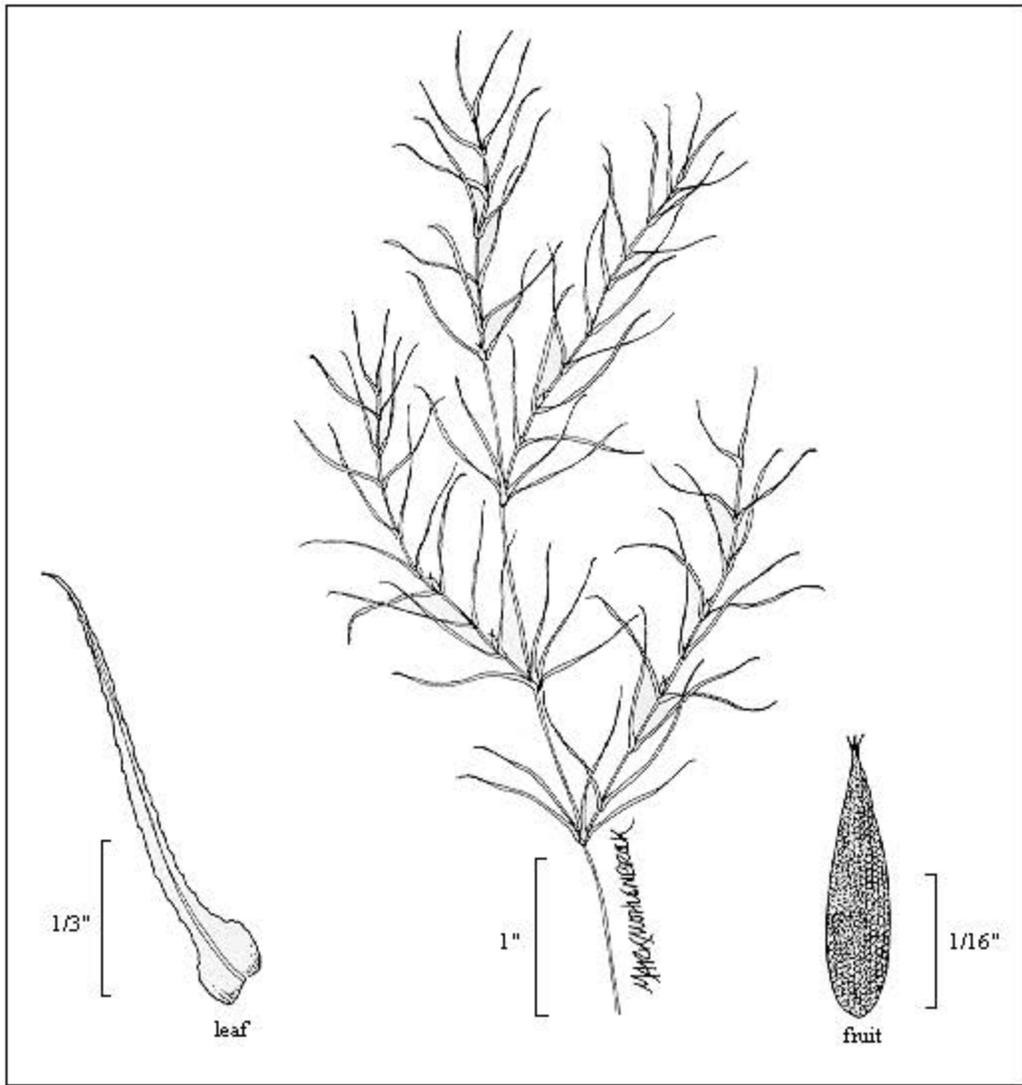
Field Office Guide to Plant Species

Slender Naiad

Najas flexilis (Willd.) Rostk. & W.L.E. Schmidt



- **Family:** Naiad (Najadaceae)
- **Flowering:** July-October
- **Field Marks:** The margin of each leaf has 20-40 minute spinules on each side of the leaf (not including the basal sheath). The pale green leaves often have enrolled margins and a recurved tip.
- **Habitat:** In fresh or brackish water.
- **Habit:** Annual aquatic herb.
- **Stems:** Submerged, much branched, smooth, the terminal nodes crowded, the internodes dark green to light yellow to reddish.
- **Leaves:** Opposite, simple, linear to very narrowly lanceolate, up to 1 1/4 inches long, up to 1/16 inch wide, the tip usually recurved, gradually tapering to the base, each leaf margin with 20-40 minute spinules on each side of the leaf (not including the basal sheath).
- **Flowers:** Male and female borne separately in the axils of the leaves but on the same plant.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary superior; stigmas 2.
- **Fruits:** Ellipsoid, slender, shiny, up to 1/8 inch long, 1/3 as thick as long, marked with 30-40 longitudinal rows of hexagonal areas, covered by a yellow to purplish coat.
- **Notes:** The minute seeds are eaten by waterfowl.



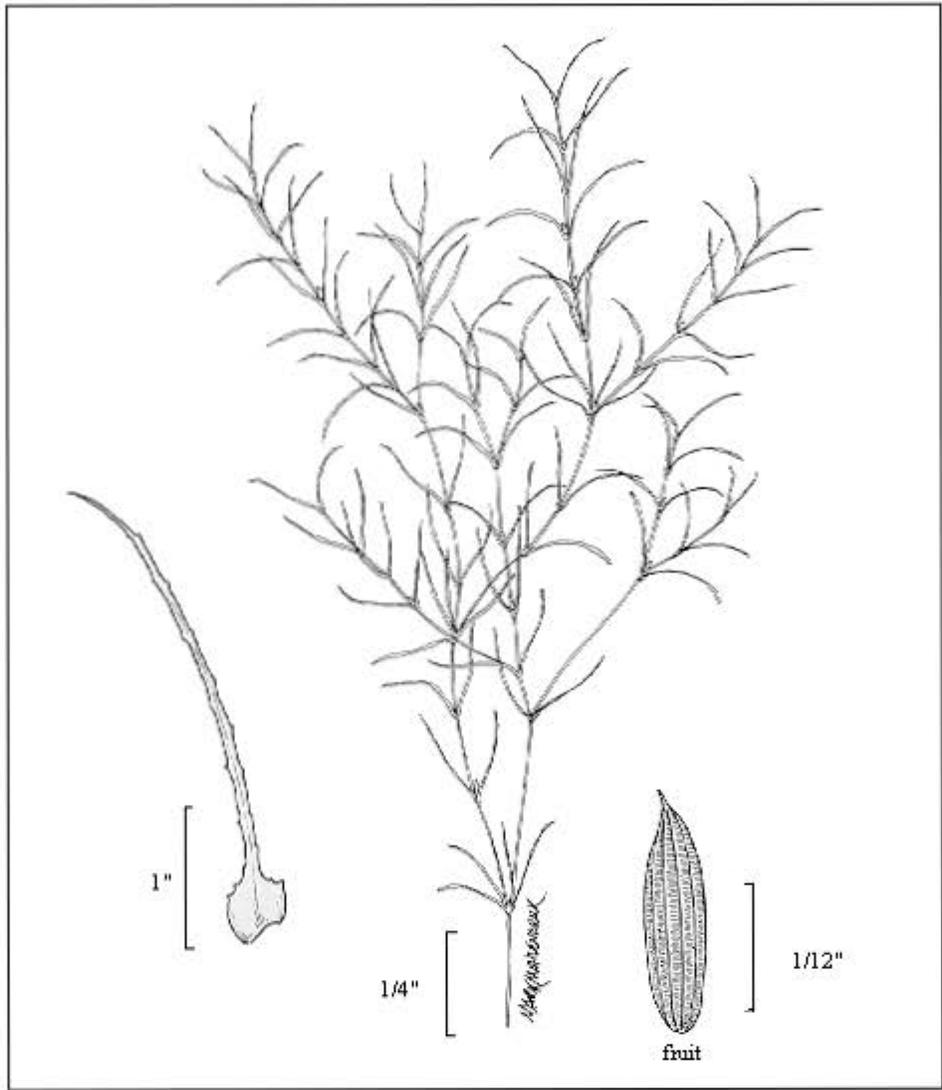
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Brittle Naiad
Najas minor All.



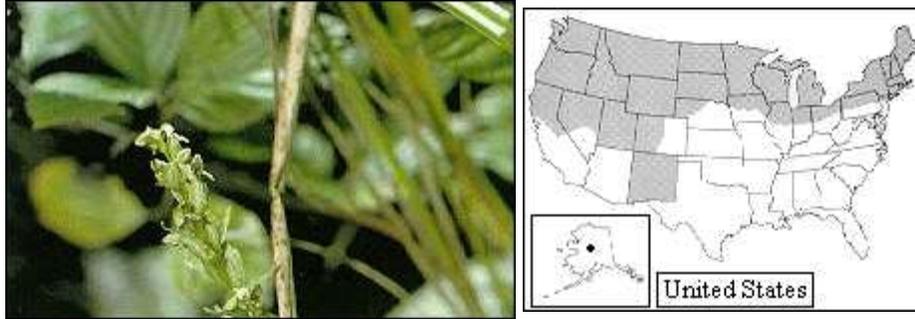
- **Family:** Naiad (Najadaceae)
- **Flowering:** August-October
- **Field Marks:** This naiad differs from all others by having 6-15 minute spinules on each side of the leaf (not including the basal, broadened, leaf sheath) and by the seeds with ladder-like markings.
- **Habitat:** Quiet water.
- **Habit:** Annual aquatic herb.
- **Stems:** Submerged, much branched, smooth, the terminal nodes crowded, the internodes lime-green.
- **Leaves:** Opposite, simple, thread-like, lime-green, up to 1 3/4 inches long, recurved and minutely spiny at the top, tapering to a broadened leaf sheath at the base, each leaf margin with 6-15 minute spinules on each side of the leaf (not including those on the sheath).
- **Flowers:** Male and female borne separately in the axils of the leaves but on the same plant.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary superior; stigmas 2.
- **Fruits:** Narrow, slightly curved, up to 1/6 inch long, 1/4 as thick as long, marked with 10-18 longitudinal ribs of broad, rectangular areas, resembling a ladder.
- **Notes:** This species has been introduced from Europe. The seeds are eaten by waterfowl.



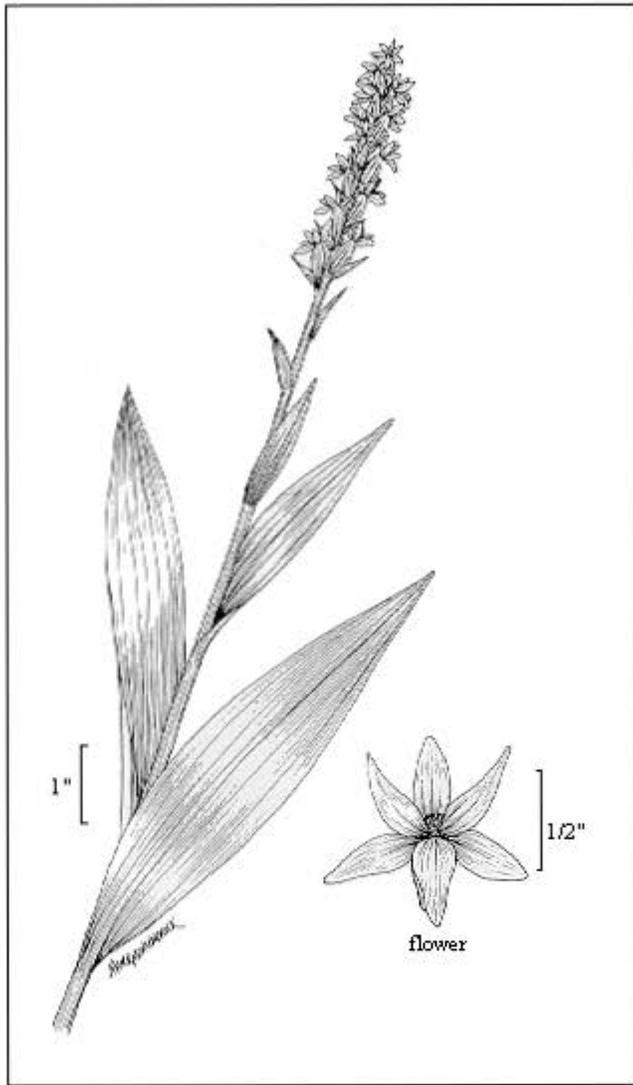
Northeast Wetland Flora

Field Office Guide to Plant Species

Northern Green Orchid *Platanthera hyperborea* (L.) Lindl.



- **Family:** Orchid (Orchidaceae)
- **Flowering:** May-August
- **Field Marks:** This orchid differs by the unfringed lip of the flowers and the greenish or greenish white sepals and petals.
- **Habitat:** Bogs, woods, swampy areas.
- **Habit:** Perennial herb from tuberous roots.
- **Stems:** Upright, unbranched, smooth, usually somewhat fleshy, up to 2 1/2 feet tall.
- **Leaves:** Alternate, simple, lanceolate to oblanceolate, up to 10 inches long, smooth, without teeth, the upper leaves progressively smaller.
- **Flowers:** Several in an open to dense cylindrical spike, the spike up to 1 foot long, each flower faintly aromatic, subtended by a bract.
- **Sepals:** 3, greenish to greenish white, up to 1/2 inch long, up to 1/6 inch wide.
- **Petals:** 3, greenish to greenish white, slightly shorter than the sepals, the lip petal lanceolate, more or less pointed at the tip, up to 1/2 inch long, neither toothed nor fringed, the spur 1/4-1/3 inch long.
- **Stamens:** 1.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules broadly ellipsoid, smooth, up to 3/4 inch long.
- **Notes:** Gleason and Cronquist refer to this species as *Habenaria hyperborea*.



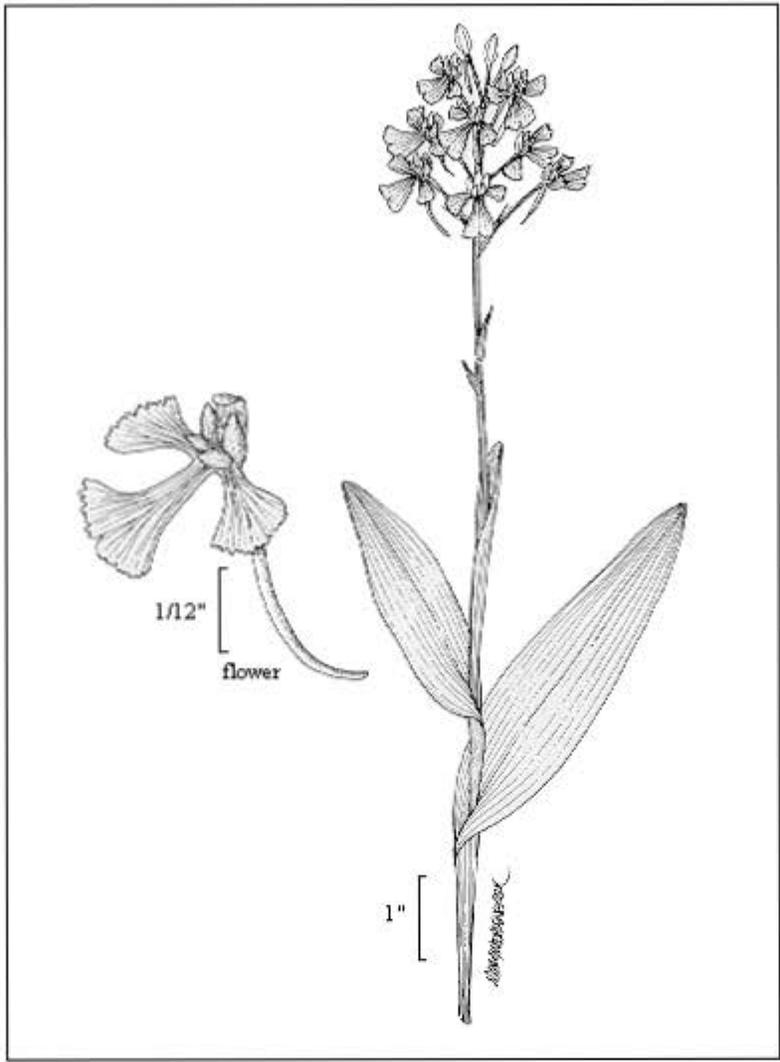
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Field Office Guide to Plant Species

Purple Fringeless Orchid
Platanthera peramoena Gray



- **Family:** Orchid (Orchidaceae)
- **Flowering:** June-August
- **Field Marks:** The lip of the rose-purple flowers is merely toothed, not fringed.
- **Habitat:** Bogs, wet meadows, low woods, wet fields.
- **Habit:** Perennial herb with slender rhizomes.
- **Stems:** Upright, unbranched, up to 2 feet tall, smooth.
- **Leaves:** Alternate, simple, 2-4 in number, oblong to ovate, pointed at the tip, tapering to the base, toothless, smooth, up to 8 inches long, up to 1 3/4 inches wide.
- **Flowers:** Several crowded into a cylindrical spike up to 6 inches long, up to 2 1/2 inches thick; flowers rose-purple.
- **Sepals:** 3, spreading, rose-purple, broadly ovate, up to 1/2 inch long.
- **Petals:** 3, rose-purple, broadly ovate, the lateral two up to 1/2 inch long, the lip petal 3-lobed, up to 1 inch long, toothed along the margin, the lowest lobe with one notch; spur up to 1 1/2 inches long.
- **Stamens:** 1.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules oblongoid, up to 1 inch long.
- **Notes:** This species is called *Habenaria peramoena* by Gleason and Cronquist as well as other recent authors.

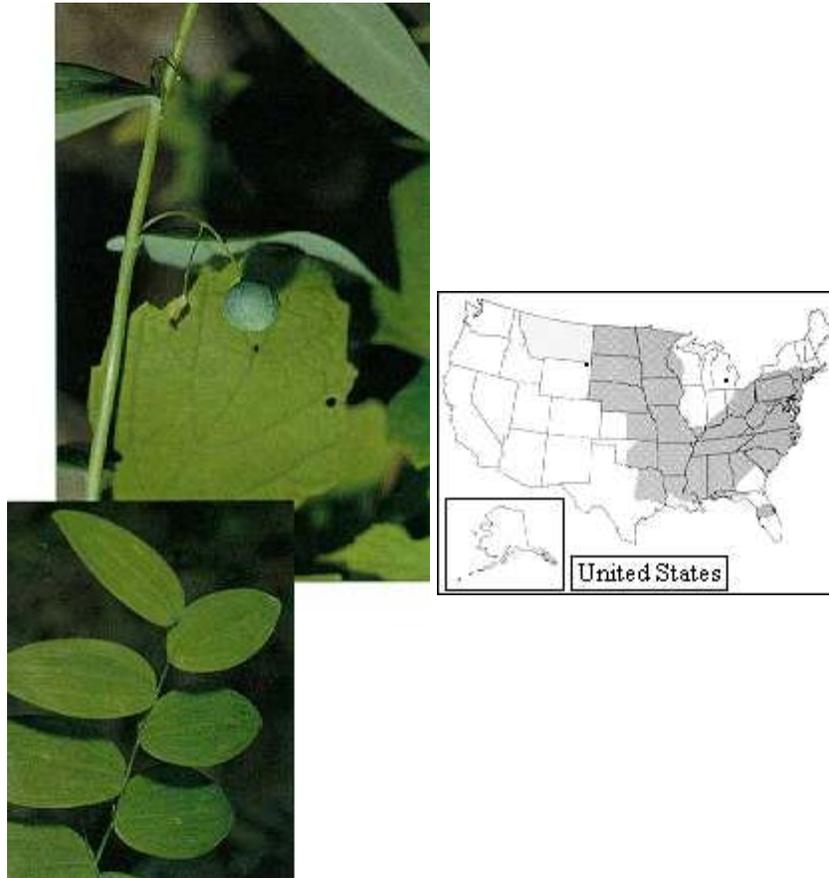


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Field Office Guide to Plant Species

Small Solomon's-seal

Polygonatum biflorum (Walter) Elliott



- **Family:** Lily (Liliaceae)
- **Flowering:** May-June
- **Field Marks:** This small Solomon's-seal has slender stems and only 1-3 flowers in each axil of the leaves. The flower stalks are terete.
- **Habitat:** Woods.
- **Habit:** Perennial herb from slender rhizomes.
- **Stems:** Upright, unbranched, slender, smooth, up to 2 1/2 feet tall.
- **Leaves:** Alternate, simple, elliptic-lanceolate to rarely ovate, slightly pointed at the tip, rounded or tapering to the sessile base, without teeth, flat, smooth on both sides, sometimes glaucous beneath, up to 5 inches long, up to 2 1/4 inches
- **Flowers:** 1-3 drooping from the axils of the leaves, on terete stalks up to 1 3/4 inches long.
- **Sepals:** 3, united with the petals to form a tube up to 3/4 inch long, the lobes up to 1/5 inch long, greenish white.
- **Petals:** 3, united with the sepals to form a tube up to 3/4 inch long, the lobes up to 1/5 inch long, greenish white.
- **Stamens:** 6, not exerted beyond the sepals and petals.
- **Pistils:** Ovary superior; style 1.
- **Fruits:** Berries spherical, blue, glaucous, up to 1/3 inch in diameter; seeds pale brown, up to 1/6 inch in diameter.

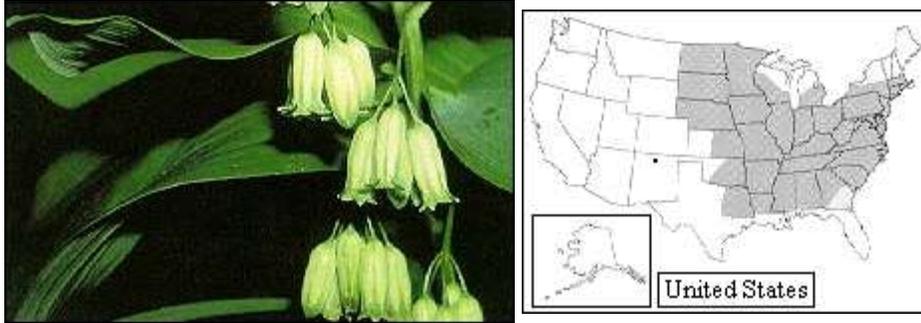


Northeast Wetland Flora

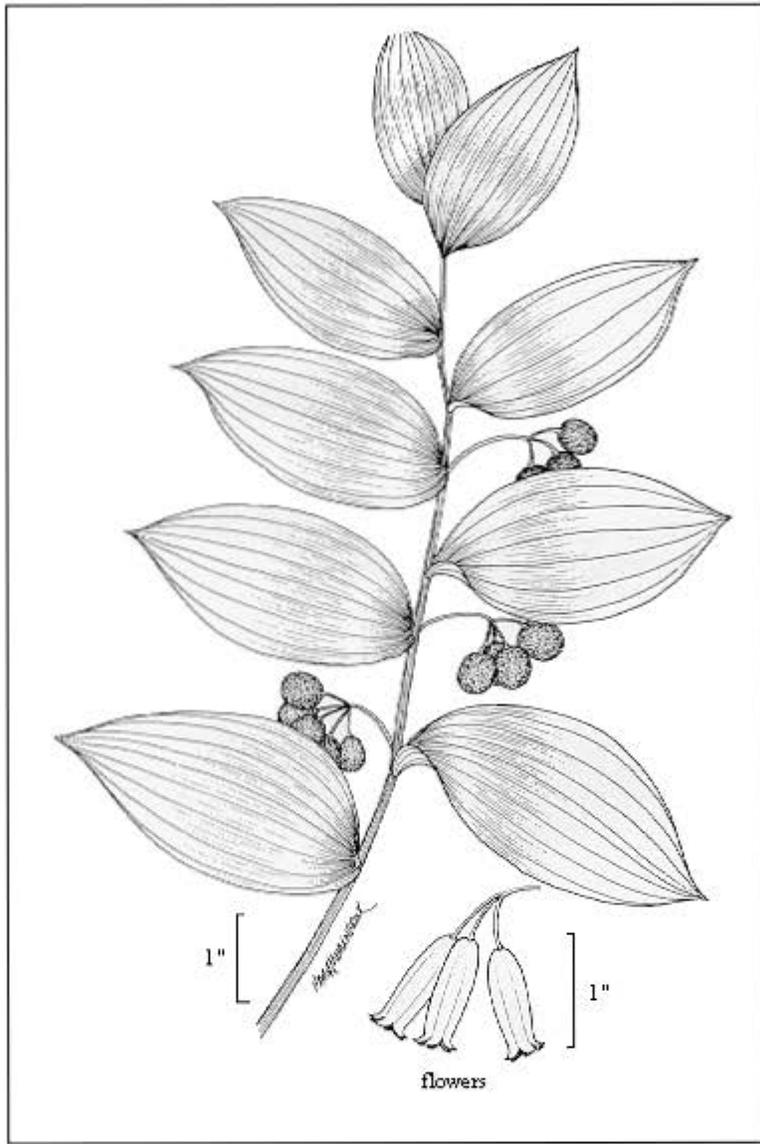
Field Office Guide to Plant Species

Great Solomon's-seal

Polygonatum commutatum (J.A. & J.H. Schultes) A. Dietr.



- **Family:** Lily (Liliaceae)
- **Flowering:** May-June
- **Field Marks:** The great Solomon's-seal has stout stems and usually more than 2 flowers in a cluster from the axils of some of the leaves. The flower stalks are flattened.
- **Habitat:** Rich woods.
- **Habit:** Perennial herb from stout rhizomes.
- **Stems:** Upright, unbranched, stout, smooth, up to 6 feet tall.
- **Leaves:** Alternate, simple, broadly elliptic to oval to nearly spherical, rounded or slightly pointed at the tip, rounded at the sessile and sometimes more or less clasping base, without teeth, often wrinkled near the margins, smooth and green on both sides, up to 8 inches long, up to 6 inches wide.
- **Flowers:** 2-10 drooping from the axils of the leaves, on flattened stalks up to 3 1/2 inches long.
- **Sepals:** 3, united with the petals to form a tube up to 1 inch long, the lobes up to 1/3 inch long, greenish white.
- **Petals:** 3, united with the sepals to form a tube up to 1 inch long, the lobes up to 1/3 inch long, greenish white.
- **Stamens:** 6, not exerted beyond the sepals and petals.
- **Pistils:** Ovary superior; style 1.
- **Fruits:** Berries spherical, blue, glaucous, up to 1/2 inch in diameter; seeds angular, smooth, up to 1/6 inch in diameter.
- **Notes:** This species is considered by Gleason and Cronquist to be the same as *P. biflorum*, only more robust and a more numerous flowering form. *Polygonatum canaliculatum* is a synonym for this species and appears in older texts.



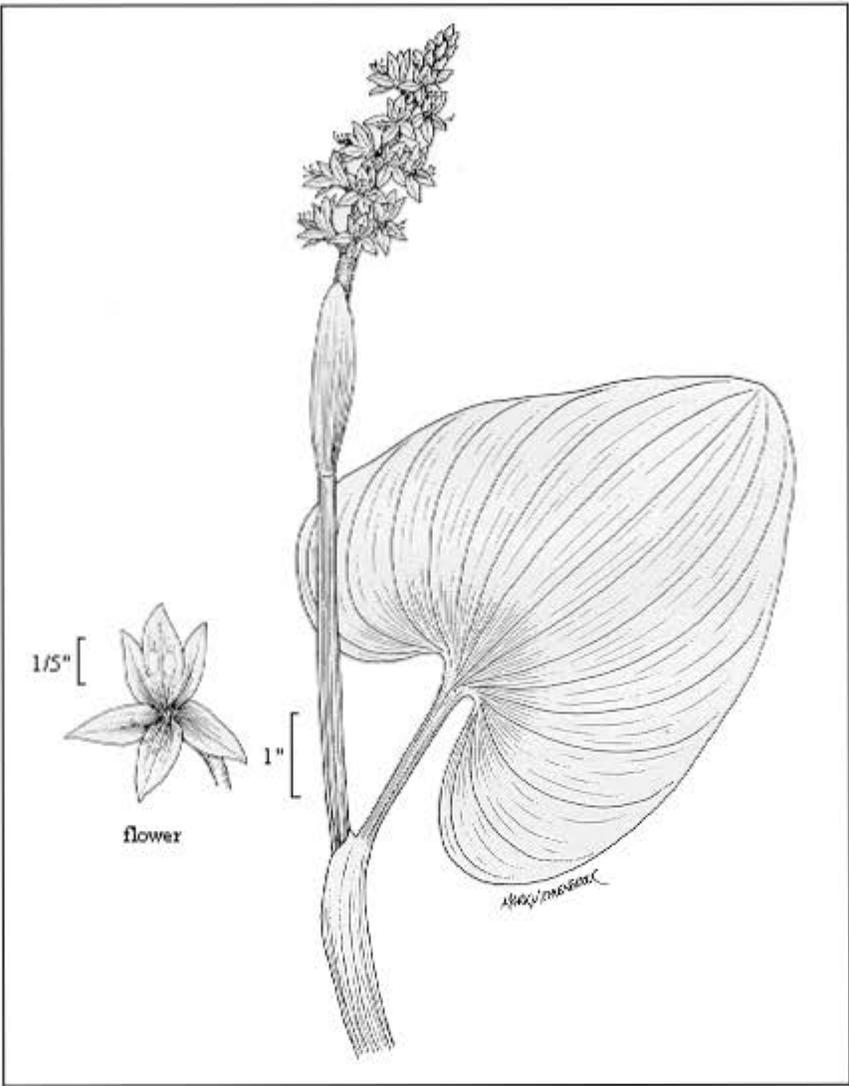
Northeast Wetland Flora

Field Office Guide to Plant Species

Pickerel Weed
Pontederia cordata L.



- **Family:** Pickerel Weed (Pontederiaceae)
- **Flowering:** June-November
- **Field Marks:** This species is recognized by its leaves with a heart-shaped base and the spike-like panicle of showy purple flowers.
- **Habitat:** Shores, often in shallow standing water, and in fresh water tidal areas.
- **Habit:** Perennial herb from thick, widely creeping rhizomes.
- **Stems:** Upright, smooth, stout, with 1 leaf and a terminal spike-like panicle.
- **Leaves:** Basal as well as one on the stem, ovate to narrowly lanceolate, rounded or pointed at the tip, heart-shaped at the base, smooth, without teeth but sometimes wavy-edged, up to 8 inches long; leaf stalks rather stout, smooth, up to 3 1/2 inches long.
- **Flowers:** Many crowded into a terminal, spike-like panicle up to 8 inches long, the panicle subtended by a leafless sheath; flowers 2-lipped, white-hairy, at least when young.
- **Sepals and Petals:** 6, united below to form a tube 1/4-1/3 inch long, the lobes 1/4-1/2 inch long, forming 3 lips, the upper 3 lobes ovate, purple, with 2 yellow spots, the lower 3 lobes narrow and spreading, purple.
- **Stamens:** 6, attached to the sepals and petals but at different levels.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Ellipsoid, with 6 toothed ridges at the top, up to 1/2 inch long, enclosed by the base of the sepals and petals, 1-seeded; seeds 1/6-1/4 inch long.
- **Notes:** There is considerable variation in leaf shape, from broadly ovate to narrowly lanceolate. Some recent authors define these variations as varieties. *Pontederia cordata* var. *cordata* has strongly heart-shaped leaves, while *P. cordata* var. *lanceolata* has more lanceolate leaves.

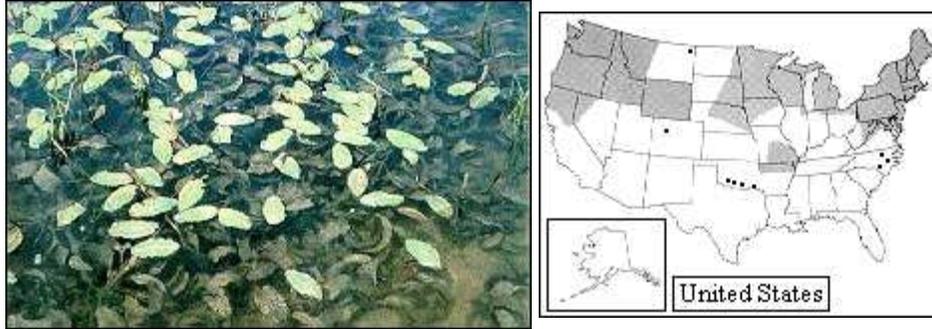


Northeast Wetland Flora

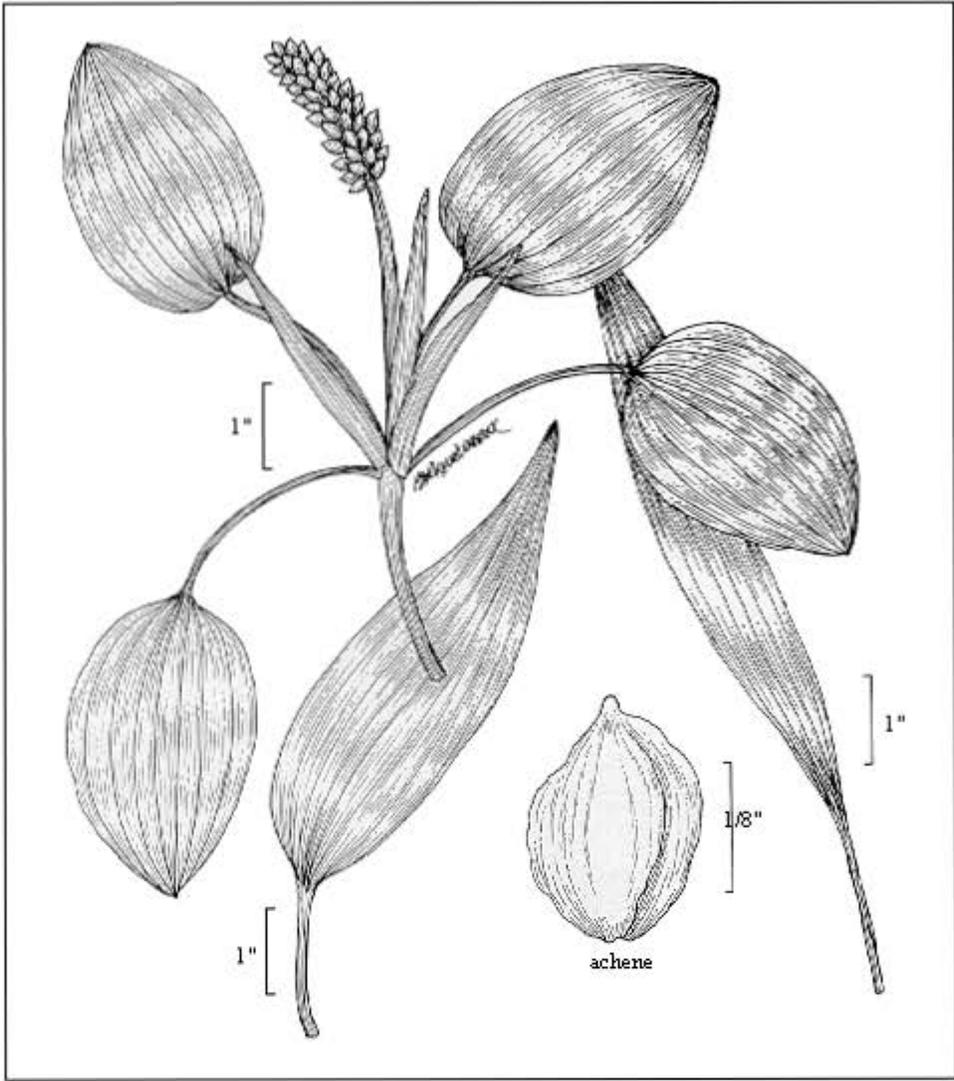
Field Office Guide to Plant Species

Large-leaf Pondweed

Potamogeton amplifolius Tuckerman



- **Family:** Pondweed (Potamogetonaceae)
- **Flowering:** July-September
- **Field Marks:** This pondweed is characterized by its broad submersed leaves up to 3 1/2 inches wide, its fruiting spikes 1/2-3/4 inch thick, and its prominent beaks on the achenes.
- **Habitat:** Lakes, streams.
- **Habit:** Perennial aquatic herb from whitened or reddish rhizomes.
- **Stems:** Branched or unbranched, smooth, not as large in diameter as the rhizomes.
- **Leaves:** Of three kinds: floating leaves ovate to elliptic, rounded but sometimes with a short point at the tip, tapering or rounded at the base, leathery, up to 4 inches long, up to 2 inches wide, on a stalk up to 8 inches long; submersed leaves on lower part of stem lanceolate, rounded or somewhat pointed at the tip, up to 8 inches long, up to 3 inches wide; submersed leaves on upper part of stem broadly lanceolate to ovate, rounded or somewhat pointed at the tip, up to 8 inches long, up to 3 inches wide.
- **Flowers:** Crowded into axillary spikes, the spikes up to 3 inches long, 1/2-3/4 inch thick; flowers sessile.
- **Sepals:** 4, free from each other, green, nearly spherical, up to 1/6 inch across.
- **Petals:** 0.
- **Stamens:** 4.
- **Pistils:** 4, free from each other, smooth.
- **Fruits:** Achenes obovoid, rounded and usually prominently keeled on the back, up to 1/4 inch long, with a prominent beak about 1/20 inch long.
- **Notes:** The achenes are eaten by waterfowl.



Northeast Wetland Flora

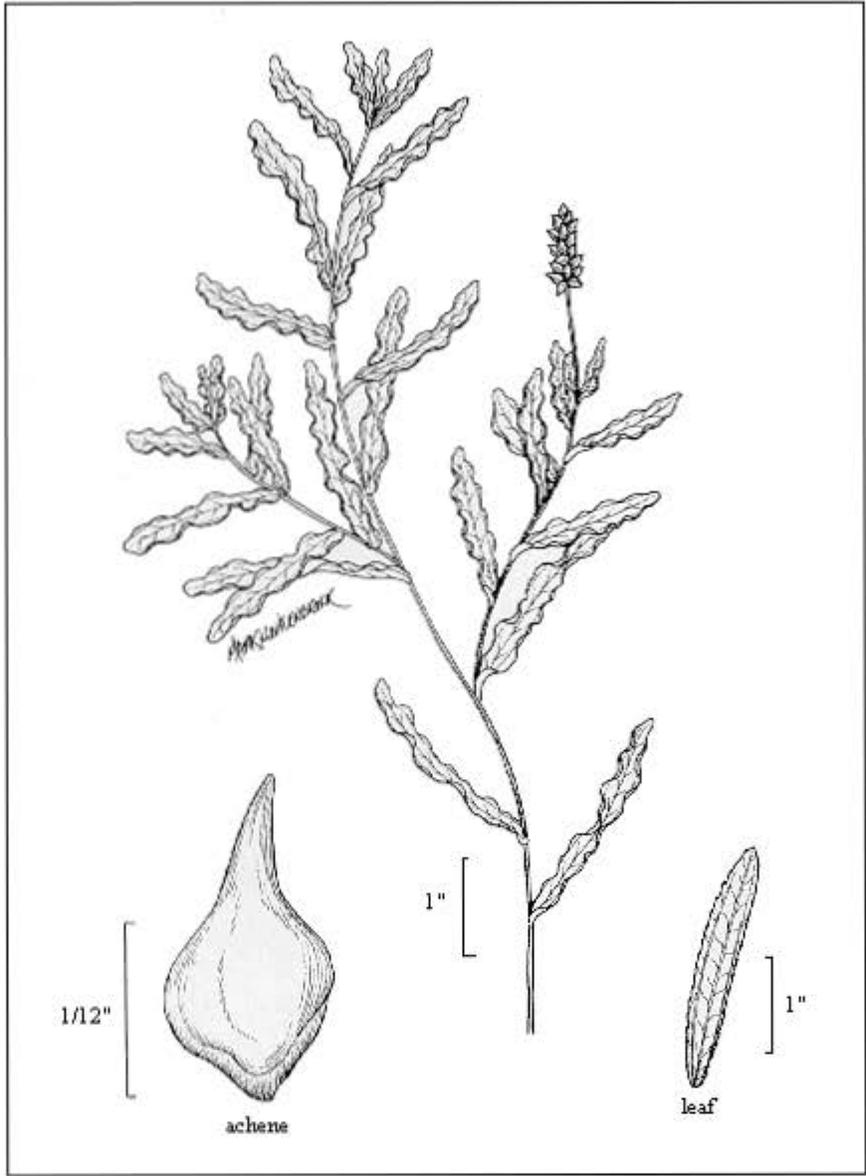
Field Office Guide to Plant Species

Curly Pondweed

Potamogeton crispus L.



- **Family:** Pondweed (Potamogetonaceae)
- **Flowering:** May-September
- **Field Marks:** This species is readily identified by its wavy-edged leaves that are sharply fine-toothed.
- **Habitat:** Fresh or brackish ponds and streams.
- **Habit:** Perennial aquatic herb from stout, creeping rhizomes.
- **Stems:** Flattened, usually branched, up to 1/8 inch in diameter, smooth.
- **Leaves:** Alternate, simple, all alike, submerged, broadly linear to oblong, rounded to somewhat pointed at the tip, tapering to the nearly clasping base, up to 4 inches long, up to 1/2 inch wide, reddish green, the margins wavy and finely and irregularly toothed, 3- to 5-nerved.
- **Flowers:** Several loosely arranged in spikes, the spikes cylindrical, up to nearly 1 inch long, on stalks up to 2 1/2 inches long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 4.
- **Pistils:** 4, free from each other, the ovary superior.
- **Fruits:** Achenes ovoid, strongly and obtusely keeled with a small tooth near the base, 1/10-1/6 inch long, with a straight or incurved beak 1/10-1/5 inch long, greenish or brownish.
- **Notes:** This species is an introduction from Europe. Waterfowl eat the achenes.



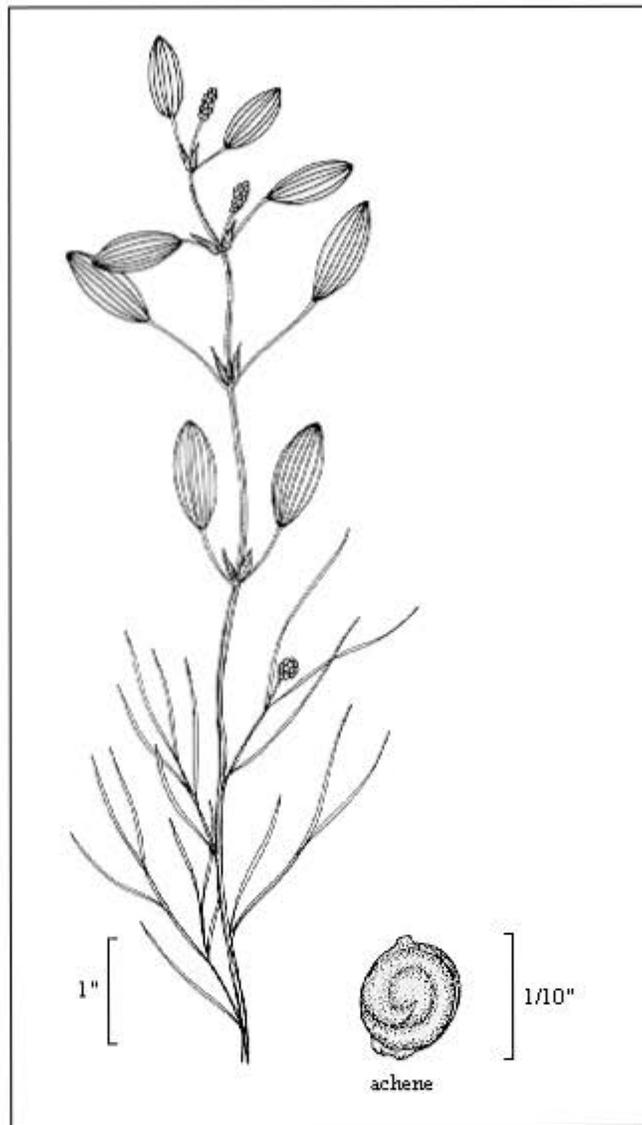
Northeast Wetland Flora

Field Office Guide to Plant Species

Water-thread Pondweed *Potamogeton diversifolius* Raf.



- **Family:** Pondweed (Potamogetonaceae)
- **Flowering:** June-September
- **Field Marks:** The distinguishing features of this pondweed are its submersed leaves up to 1/10 inch wide, its floating leaves elliptic to oval, and two kinds of spikes. The spikes in the axils of the submersed leaves are nearly spherical, while those in the axils of the floating leaves are elongated.
- **Habitat:** Ponds, streams.
- **Habit:** Aquatic perennial from slender, fibrous rootstocks.
- **Stems:** Much branched, slender, smooth.
- **Leaves:** Of 2 kinds: floating leaves elliptic to oval, broadly rounded at both ends, up to 3 1/2 inches long, up to 3/4 inch wide, with a flattened stalk up to 1 inch long; submersed leaves linear, rounded or slightly pointed at the tip, narrowed to the base, up to 2 inches long, up to 1/10 inch wide, sessile.
- **Flowers:** Crowded into spikes of two kinds, the spikes in the axils of the submersed leaves nearly spherical, those in the axils of the floating leaves elongated.
- **Sepals:** 4, free from each other, green, nearly spherical, about 1/20 inch across.
- **Petals:** 0.
- **Stamens:** 4.
- **Pistils:** 4, free from each other, smooth.
- **Fruits:** Spherical to kidney-shaped, smooth but keeled, up to 1/10 inch in diameter, green to greenish brown, with a minute beak.
- **Notes:** Waterfowl eat the achenes.



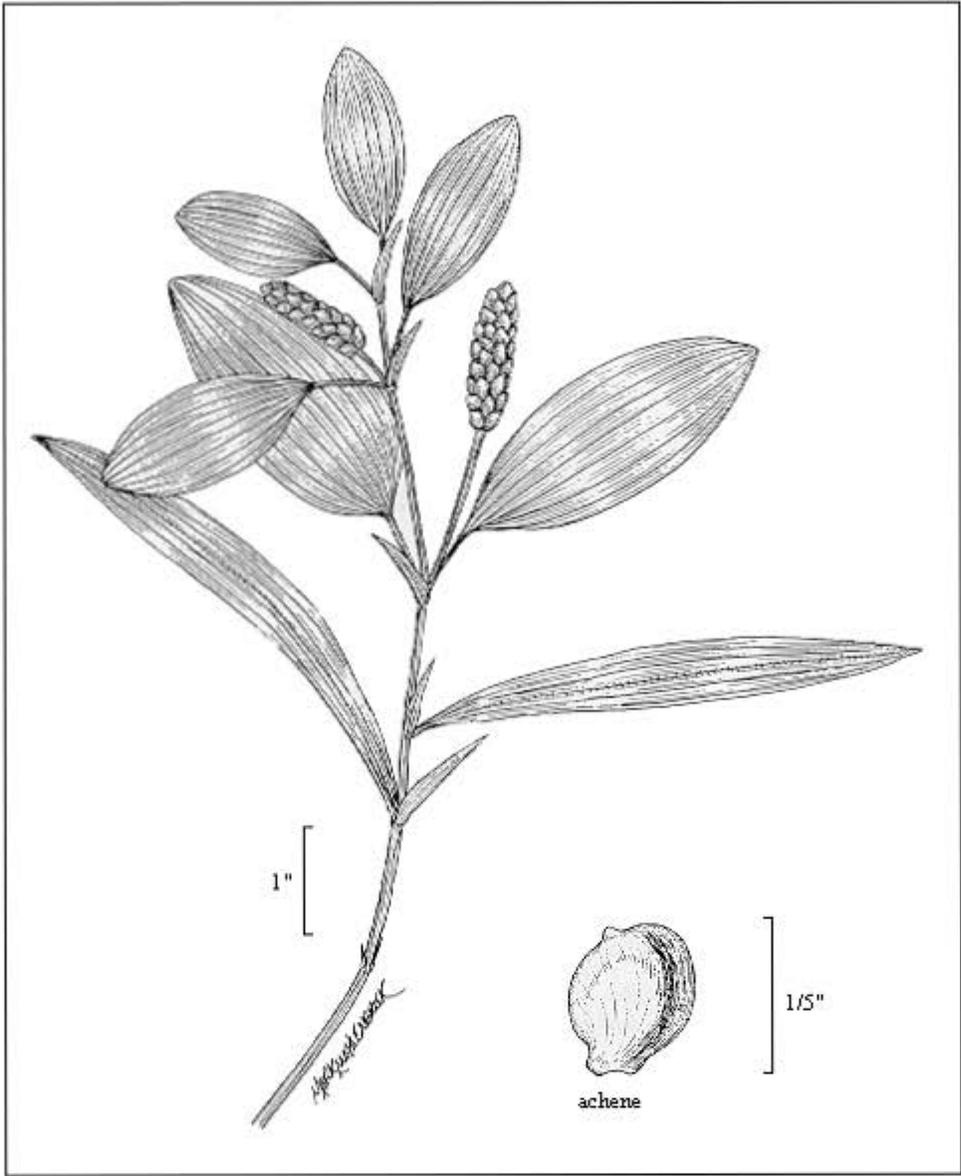
Northeast Wetland Flora

Field Office Guide to Plant Species

Ribbon-leaf Pondweed *Potamogeton epihydrus* Raf.



- **Family:** Pondweed (Potamogetonaceae)
- **Flowering:** July-September
- **Field Marks:** The distinguishing characters of this species are the flattened stems, the submersed leaves 1/4-1/2 inch wide, and the tooth-like beak of the achene.
- **Habitat:** Lakes and streams.
- **Habit:** Aquatic perennial with slender, creeping rhizomes.
- **Stems:** Flattened, sparsely branched or unbranched, smooth.
- **Leaves:** Of 2 kinds: floating leaves usually opposite, stalked, elliptic to oblong-lanceolate, rounded or sometimes short-pointed at the tip, up to 3 1/2 inches long, up to 1 3/4 inches wide, leathery, with flattened stalks; submersed leaves linear-elongate, alternate, stalkless, and with a netted appearance along the midvein, up to 8 inches long, up to 1/2 inch wide.
- **Flowers:** Crowded into spikes, the spikes cylindrical, up to 2 inches long; flowers sessile.
- **Sepals:** 4, green, free from each other, about 1/6 inch long.
- **Petals:** 0.
- **Stamens:** 4.
- **Pistils:** 4, free from each other, smooth.
- **Fruits:** Achenes obovoid, flattened laterally, 3-keeled, about 1/5 inch long, with a tooth-like beak.
- **Notes:** The achenes are eaten by waterfowl.



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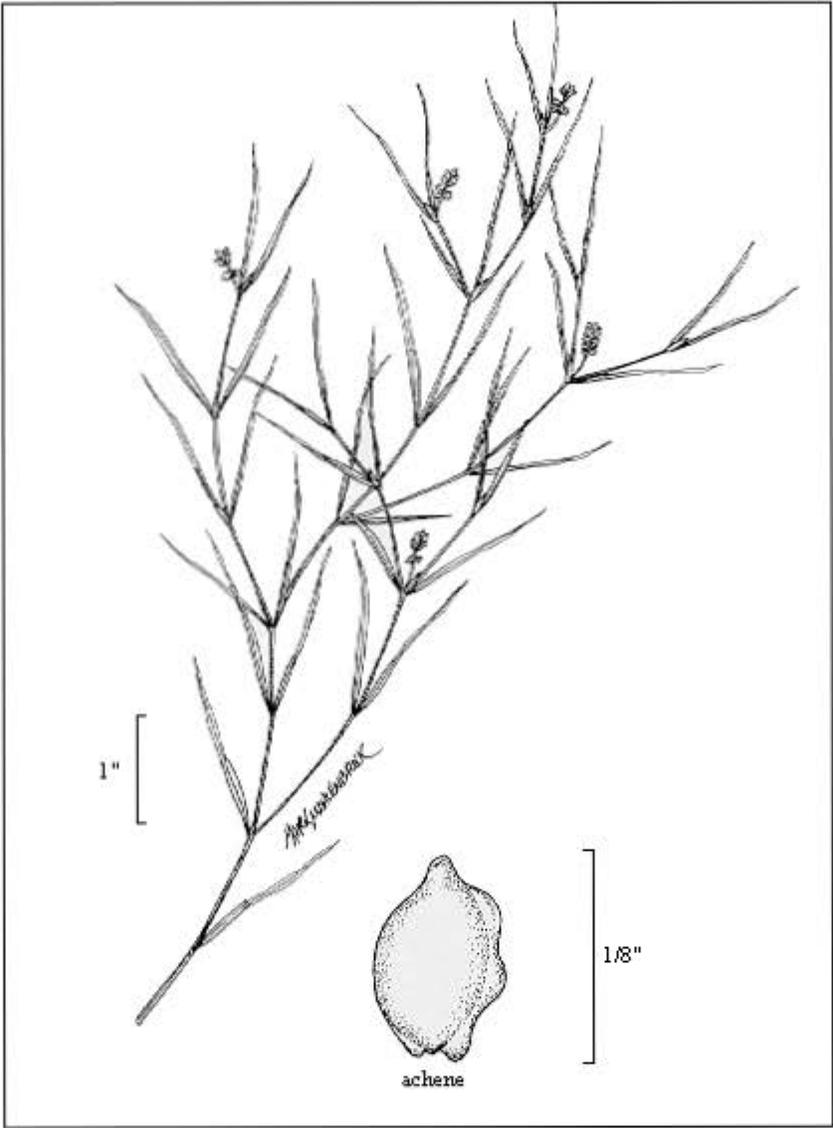
Field Office Guide to Plant Species

Leafy Pondweed

Potamogeton foliosus Raf.



- **Family:** Pondweed (Potamogetonaceae)
- **Flowering:** July-October
- **Field Marks:** This species is distinguished by its few-flowered, subcapitate spikes and its tiny fruits which are toothed along the back.
- **Habitat:** Streams and takes, sometimes in brackish water.
- **Habit:** Aquatic perennial from thread-like rhizomes, sometimes rooting at the nodes.
- **Stems:** Thread-like, flattened, unbranched to much branched, smooth.
- **Leaves:** All alike, submersed, alternate or opposite, elongated, linear, more or less pointed at the tip, tapering to the base, up to 5 inches long, up to 1/8 inch wide, green or bronze.
- **Flowers:** Crowded into spikes, the spikes subcapitate, cylindrical, up to 1/4 inch long, sometimes nearly as thick; flowers sessile.
- **Sepals:** 4, green or brownish, free from each other, about 1/20 inch long.
- **Petals:** 0.
- **Stamens:** 4.
- **Pistils:** 4, free from each other, smooth.
- **Fruits:** Achenes obovoid, flattened, greenish brown, toothed down the back, up to 1/8 inch long, nearly as broad, with a minute beak.
- **Notes:** The achenes are eaten by waterfowl.

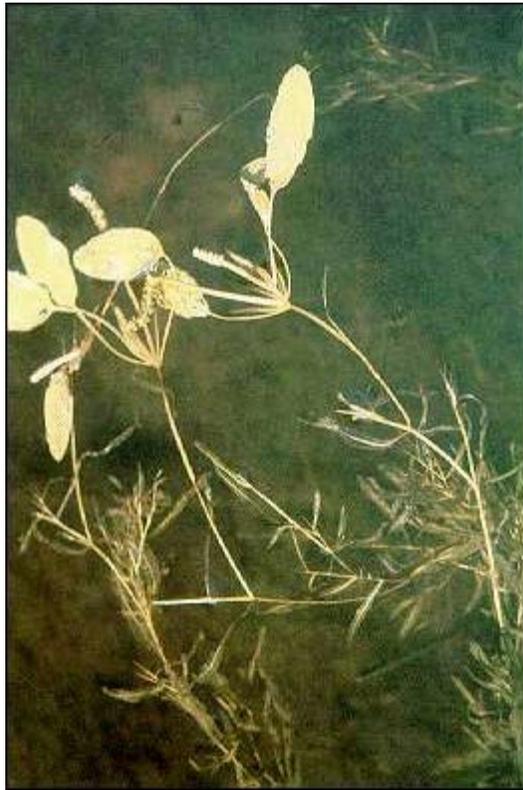


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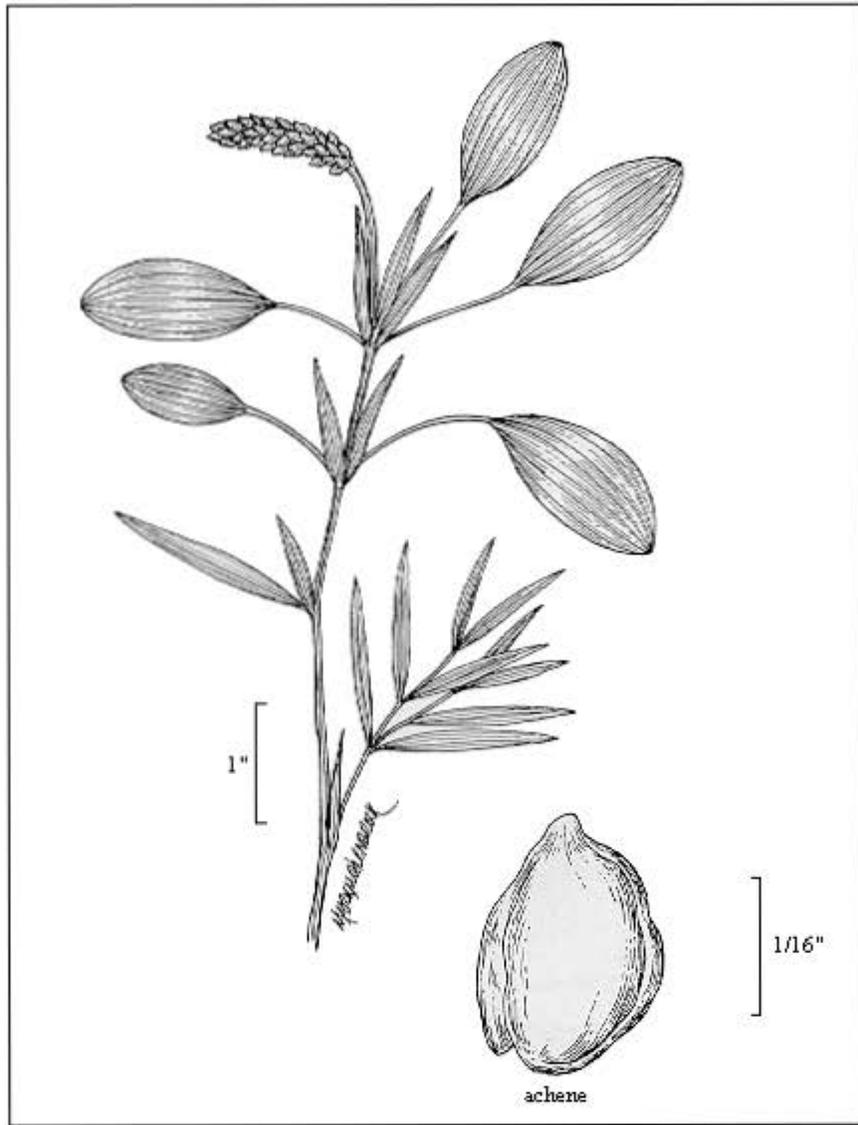
Field Office Guide to Plant Species

Grassy Pondweed

Potamogeton gramineus L.



- **Family:** Pondweed (Potamogetonaceae)
- **Flowering:** July-September
- **Field Marks:** The floating leaves of this species are elliptic to ovate and rounded at the tip, while the submersed leaves are narrowly elliptic to oblanceolate and pointed at the tip. The obovoid fruits are strongly keeled.
- **Habitat:** Ponds, lakes, streams.
- **Habit:** Aquatic perennial from red-spotted rootstocks.
- **Stems:** Much branched, very slender, smooth.
- **Leaves:** Of 2 kinds: floating leaves elliptic to ovate, rounded at the tip, tapering or rounded at the base, leathery, up to 2 1/2 inches long, up to 1 1/2 inches wide, with a stalk up to 6 inches long; submersed leaves narrowly elliptic to oblanceolate, pointed at the tip, tapering to the sessile base, finely toothed, up to 2 1/2 inches long, up to 1/3 inch wide.
- **Flowers:** Crowded into spikes, the spikes up to 1 1/2 inches long, 1/4-1/2 inch thick; flowers sessile or very short-stalked.
- **Sepals:** 4, green, free from each other, up to 1/8 inch long.
- **Petals:** 0.
- **Stamens:** 4.
- **Pistils:** 4, free from each other, smooth.
- **Fruits:** Achenes obovoid, prominently keeled, greenish, up to 1/8 inch long, with a short, curved beak.
- **Notes:** Waterfowl eat the achenes.



Northeast Wetland Flora

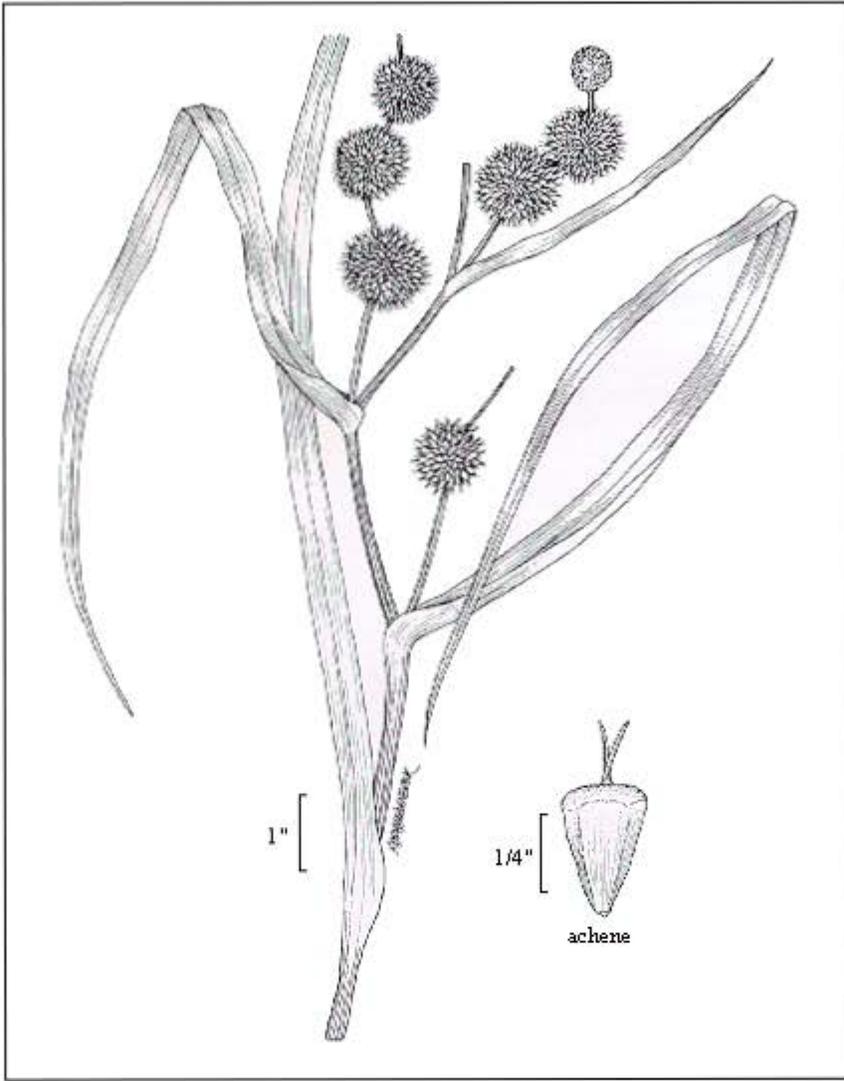
Field Office Guide to Plant Species

Giant Burreed

Sparganium eurycarpum Engelm. ex Gray



- **Family:** Burreed (Sparganiaceae)
- **Flowering:** July-October
- **Field Marks:** This burreed is readily identified by its sessile achenes with the remnants of 2 styles remaining as a cleft beak.
- **Habitat:** Swamps, often in shallow standing water.
- **Habit:** Perennial herb from thickened rhizomes.
- **Stems:** Stout, smooth, upright, unbranched, up to 5 feet tall.
- **Leaves:** Elongated, stiff, keeled, smooth, up to 1/2 inch wide.
- **Flowers:** Male and female borne separately but on the same plant, the male in small spherical heads, the female in large spherical heads up to 3/4 inch in diameter, all the heads sessile.
- **Sepals:** 3 or 6, spatulate, green, failing away early.
- **Petals:** 0.
- **Stamens:** 3.
- **Pistils:** Ovary superior, smooth; styles 2.
- **Fruits:** Several achenes borne in spherical clusters up to 1 3/4 inches in diameter; each achene sessile, obpyramidal, truncate at the summit, smooth, dull brown, the body up to 1/2 inch long, the cleft beak up to 1/6 inch long.
- **Notes:** The achenes are eaten by waterfowl.



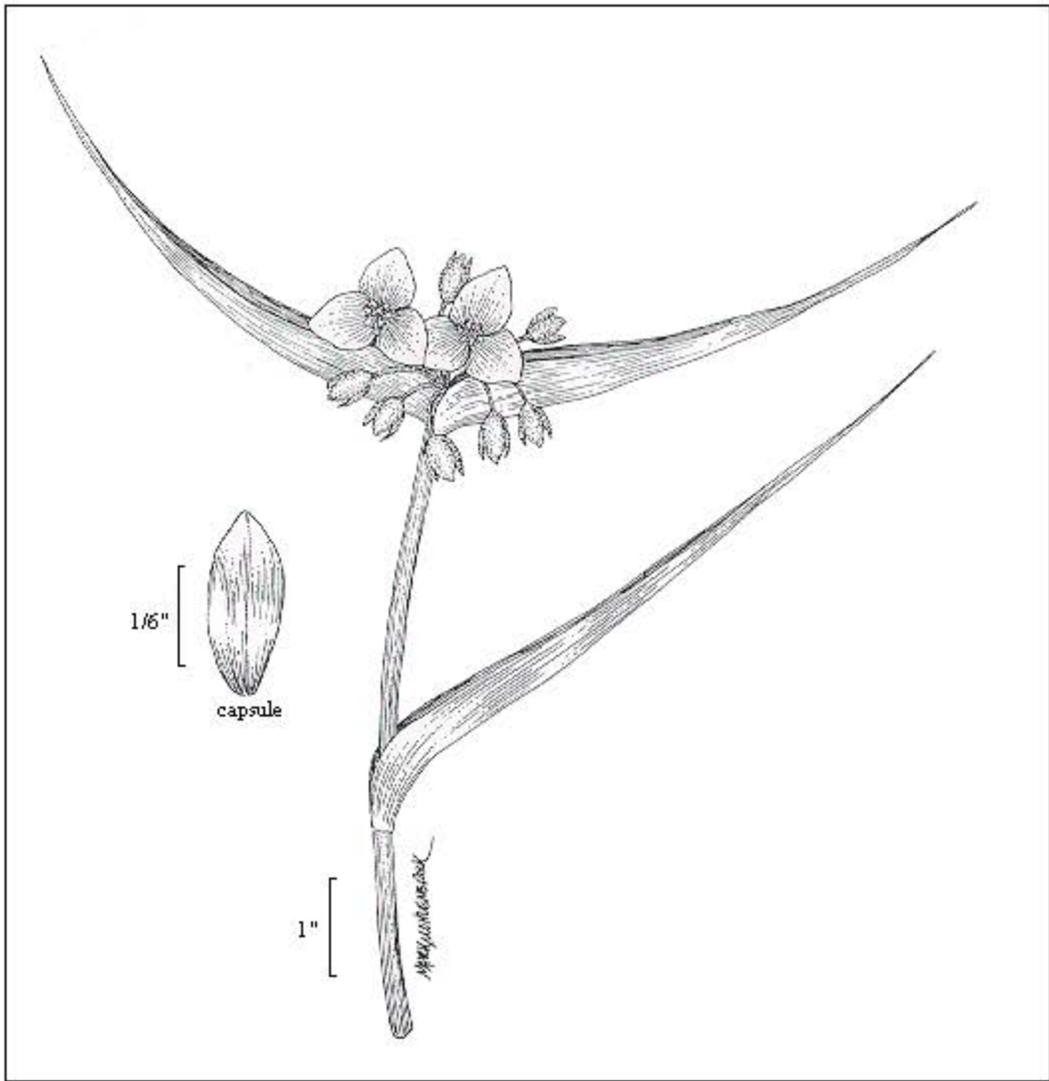
Northeast Wetland Flora

Field Office Guide to Plant Species

Virginia Spiderwort *Tradescantia virginiana* L.



- **Family:** Day-flower (Commelinaceae)
- **Flowering:** April-July
- **Field Marks:** The characters that differentiate this spider-wort are the smooth stems, smooth leaves, and hairy but not glandular sepals.
- **Habitat:** Woods, prairies, meadows, roadsides.
- **Habit:** Perennial herb from fleshy roots and with mucilaginous sap.
- **Stems:** Upright, usually unbranched, green, usually smooth, up to 1 1/2 feet tall.
- **Leaves:** Alternate, elongated, linear-lanceolate, long-pointed at the tip, tapering to the base, smooth or nearly so, without teeth, 1/4-3/4 inch wide.
- **Flowers:** Few to several in a solitary, terminal cyme subtended by bracts usually wider and shorter than the leaves; flower stalks up to 1 3/4 inches long, hairy but not glandular.
- **Sepals:** 3, green, free from each other, hairy but not glandular, 1/2-3/4 inch long.
- **Petals:** 3, blue to rose, rarely white, 1/2-3/4 inch long, withering quickly.
- **Stamens:** 6, with densely hairy stalks.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules obovoid to nearly spherical, 3-lobed, smooth, 1/6-1/3 inch long, with 3-6 seeds.



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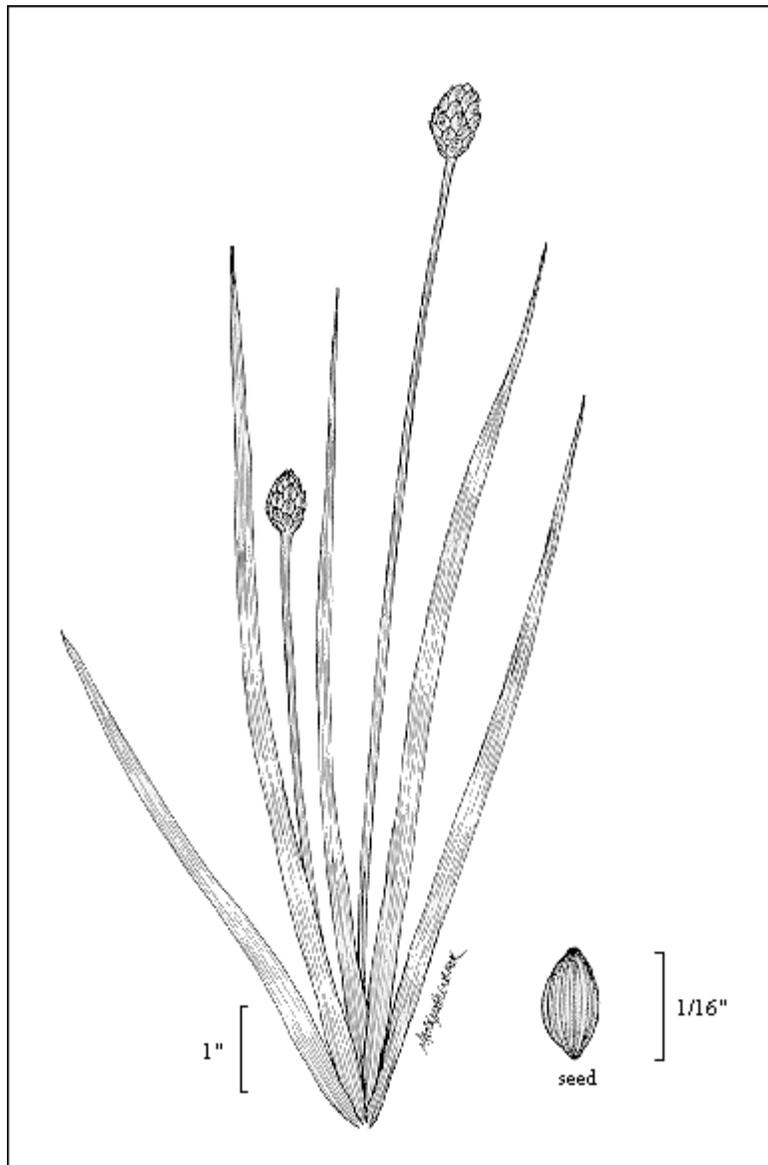
Field Office Guide to Plant Species

Common Yellow-eyed-grass *Xyris difformis* Chapm.



- **Family:** Yellow-eyed-grass (Xyridaceae)
- **Flowering:** July-October
- **Field Marks:** The tips of the 2 lateral sepals are shorter than the bracts and the lateral sepals have a toothed keel. The leaves are 1/4-3/4 inch wide. The seeds have about 25 ribs.
- **Habitat:** Wet soil.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, smooth, flattened at the base and at the top, 2- or 3-ribbed above, up to 2 1/2 feet tall, bearing no leaves but only a solitary, terminal head.
- **Leaves:** All basal, upright, linear-lanceolate to lanceolate, pointed at the tip, tapering to the base, widest about the middle, smooth, 1/4-3/4 inch wide.
- **Flowers:** Several crowded into a head, the head solitary, terminal, ovoid to nearly spherical, rounded at the tip, 1/2-1 inch long, each flower subtended by a leathery scale (bract).
- **Sepals:** 3, the 2 lateral ones with a toothed keel, up to 1/4 inch long, shorter than the bracts and smaller than the third thin sepal.
- **Petals:** 3, united below to form a narrow tube, yellow, the lobes all equal.
- **Stamens:** 3, attached to the tube of the petals.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Capsules ellipsoid, smooth, containing many seeds; seeds with about 25 ribs.
- **Notes:** The seeds are eaten by waterfowl. Two varieties of this species occur. Var. *curtissii* is shorter in height and occurs throughout the Great Lakes and eastern coastal regions into Florida and Texas. Var. *floridana* occurs

on the Atlantic and Gulf Coastal Plain.



[Previous Species](#) -- Virginia Spiderwort (*Tradescantia virginiana*)

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[Next Species](#) -- Fringed Yellow-eyed-grass (*Xyris fimbriata*)

Northeast Wetland Flora

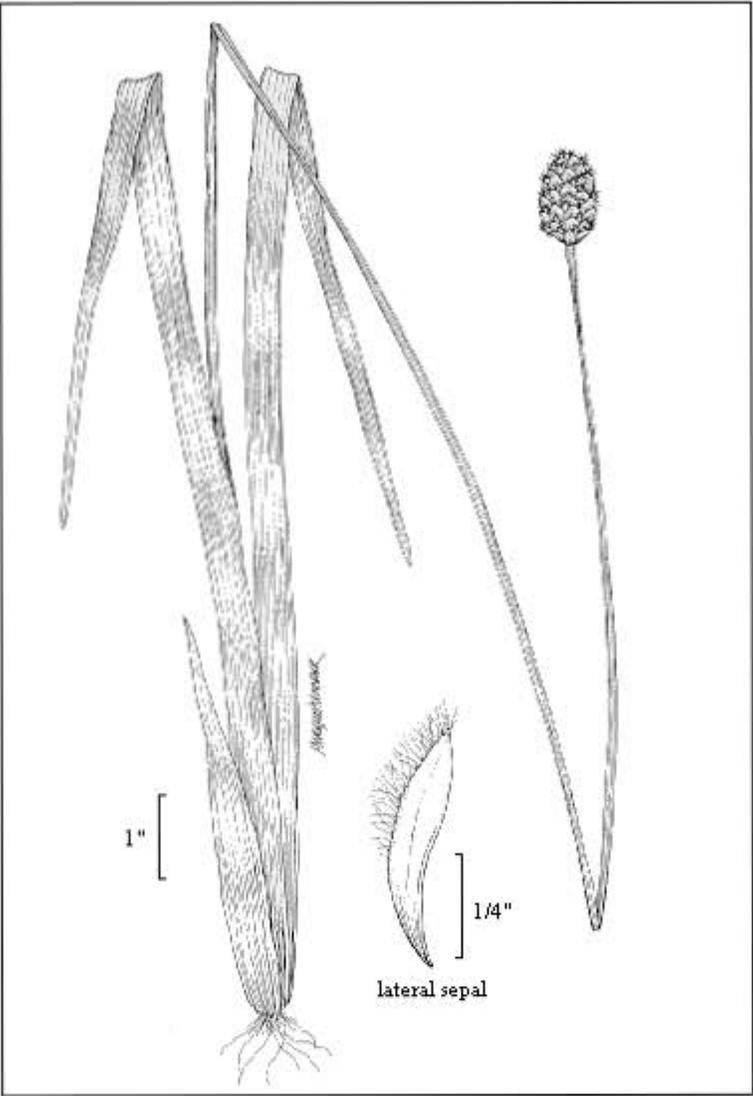
Field Office Guide to Plant Species

Fringed Yellow-eyed-grass

Xyris fimbriata Elliott



- **Family:** Yellow-eyed-grass (Xyridaceae)
- **Flowering:** July-September
- **Field Marks:** The 2 lateral sepals are larger than the subtending bracts. The keel of the 2 lateral sepals is fringed, and the leaves are 1/4-1/2 inch wide.
- **Habitat:** Swamps, shores of ponds.
- **Habit:** Perennial herb with shallow, fibrous roots.
- **Stems:** Upright, smooth, coarse, usually 3-ribbed, up to 3 feet tall, bearing no leaves but only a solitary, terminal head.
- **Leaves:** All basal, upright, leathery, strap-shaped, pointed at the tip, tapering to the base, smooth, 1/4-1/2 inch wide, broadest at base and overlapping in two ranks.
- **Flowers:** Several crowded into a head, the head solitary, terminal, ovoid, 1/2-1 1/4 inches long, about 1/2 inch thick; each flower subtended by a scale (bract), the bracts obovate, about 1/3 inch long, straw-colored to brownish.
- **Sepals:** 3, the 2 lateral ones longer than the bracts, with a fringed keel, 1/3-1/2 inch long shorter than the third sepal.
- **Petals:** 3, united below to form a narrow tube, yellow, the lobes all equal.
- **Stamens:** 3, attached to the tube of the petals.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Capsules ellipsoid, smooth, containing many seeds.
- **Notes:** The seeds are eaten by waterfowl.

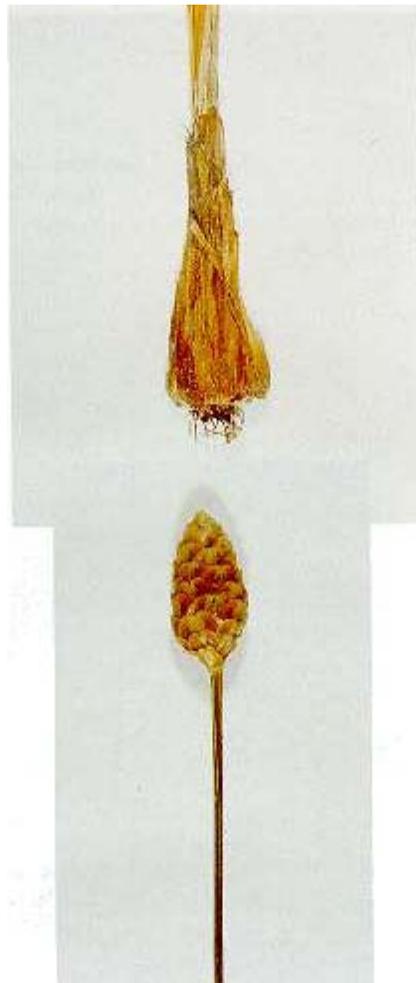


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Field Office Guide to Plant Species

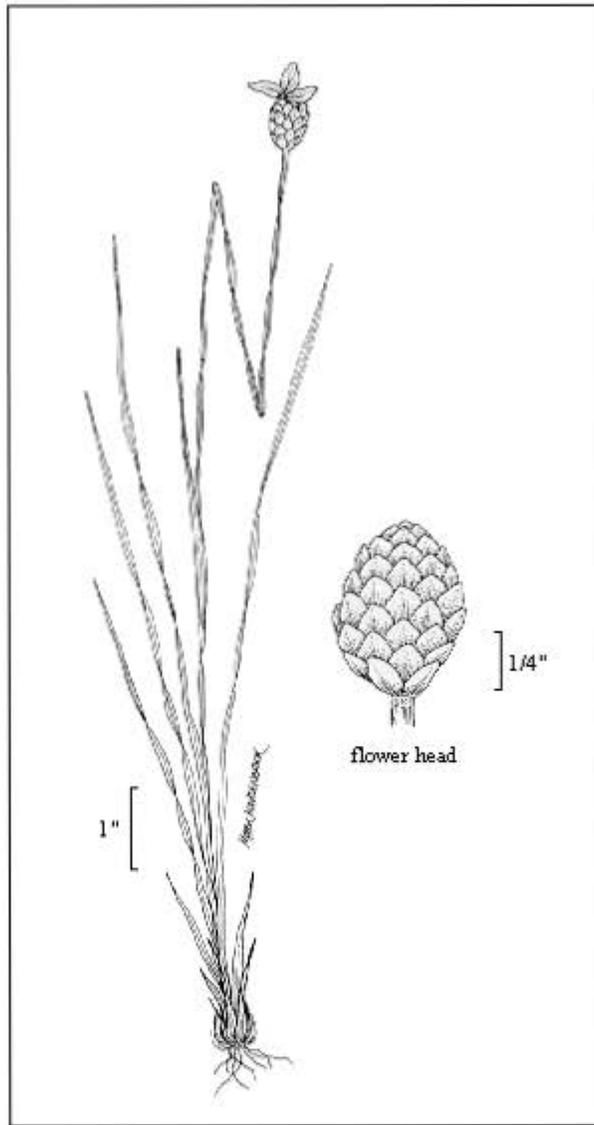
Twisted Yellow-eyed-grass

Xyris torta J.E. Smith



- **Family:** Yellow-eyed-grass (Xyridaceae)
- **Flowering:** July-September
- **Field Marks:** This species is recognized by its distinctly twisted stem and its bulbs.
- **Habitat:** Bogs, shores, wet woods.
- **Habit:** Perennial herb from bulbs, the bulbs several, pale brown, up to 1/2 inch thick.
- **Stems:** Upright, smooth, slender, distinctly twisted, 2-ribbed, up to 2 feet tall, bearing no leaves but only a solitary, terminal head.
- **Leaves:** All basal, upright, linear, stiff, pointed at the tip, tapering to the base, smooth, twisted, up to 12 inches long and 1/6 inch wide, developing from hard, brown bulbs.
- **Flowers:** Several crowded into a head, the head solitary, terminal, ovoid to spherical, rounded at the tip, 1/4-3/4 inch long, each flower subtended by a scale (bract), the bracts obovate, brown, longer than the lateral sepals.
- **Sepals:** 3, the 2 lateral ones with a minutely hairy keel, up to 1/6 inch long, smaller than the third sepal.
- **Petals:** 3, united below to form a narrow tube, yellow, the lobes all equal.
- **Stamens:** 3, attached to the tube of the petals.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Capsules ellipsoid, smooth, containing minute, elongated seeds.

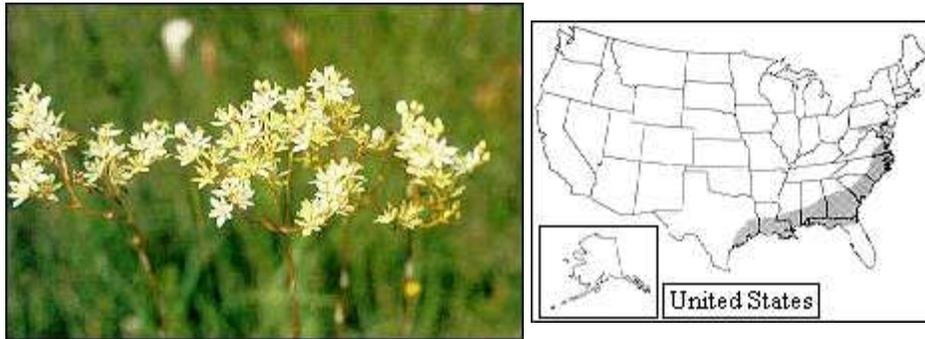
- **Notes:** The seeds are eaten by waterfowl.



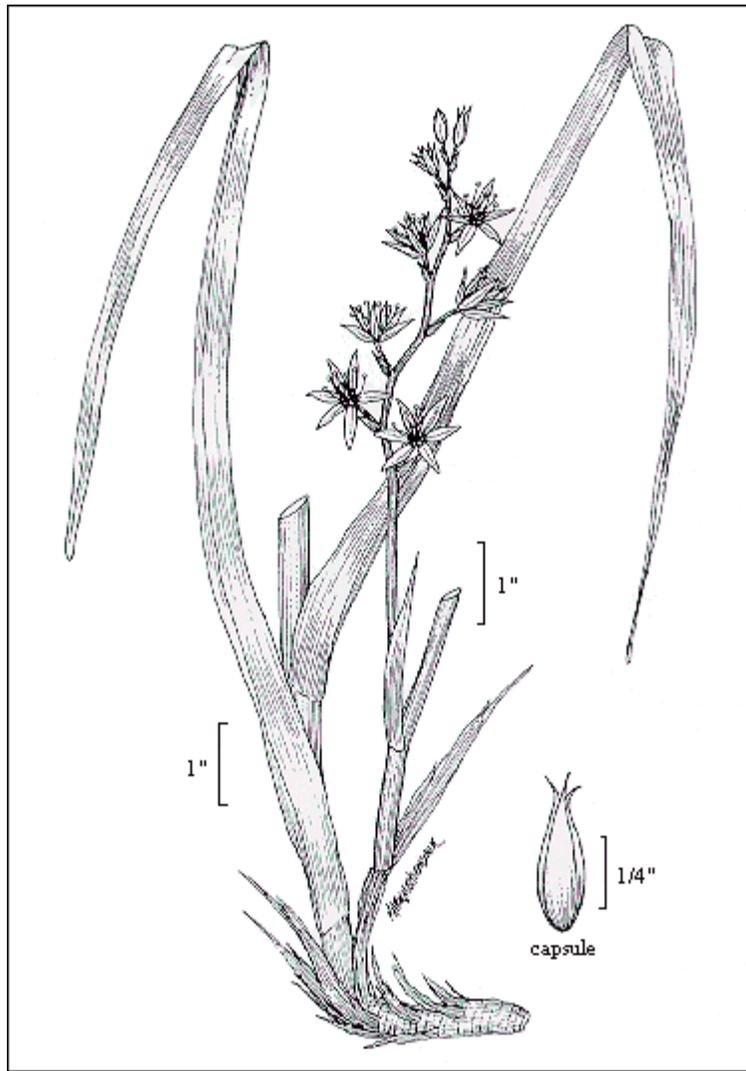
Northeast Wetland Flora

Field Office Guide to Plant Species

Atlantic Deathcamas *Zigadenus glaberrimus* Michx.



- **Family:** Lily (Liliaceae)
- **Flowering:** July-September
- **Field Marks:** This is the only *Zigadenus* with thick, creeping rhizomes with persistent leaf bases. The base of each sepal and petal has 2 yellowish glands.
- **Habitat:** Savannas, wet pinelands.
- **Habit:** Perennial herb from woody, blackish rhizomes.
- **Stems:** Upright, usually unbranched, smooth, up to 3 1/2 feet tall, obscurely triangular.
- **Leaves:** Both basal and alternate on the stem, elongated, linear, keeled on the back, pointed at the tip, smooth, up to 1 inch wide.
- **Flowers:** Several in a much branched panicle up to 1 1/2 feet long; bracts up to 1/2 inch long; flowers white; flower stalks up to 3/4 inch long.
- **Sepals:** 3, free from each other, lanceolate to elliptic-lanceolate, up to 3/4 inch long, about 1/4 inch wide, pointed at the tip, white, each with 2 yellowish glands at the base.
- **Petals:** 3, free from each other, lanceolate to elliptic-lanceolate, up to 3/4 inch long, about 1/4 inch wide, pointed at the tip, clawed at the base, white, each with 2 yellowish glands at the base.
- **Stamens:** 6.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ovoid, 1/2-3/4 inch long, smooth; seeds up to 1/4 inch long.



[Previous Species](#) -- Twisted Yellow-eyed-grass (*Xyris torta*)

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[Next Species](#) -- White Camas (*Zigadenus glaucus*)

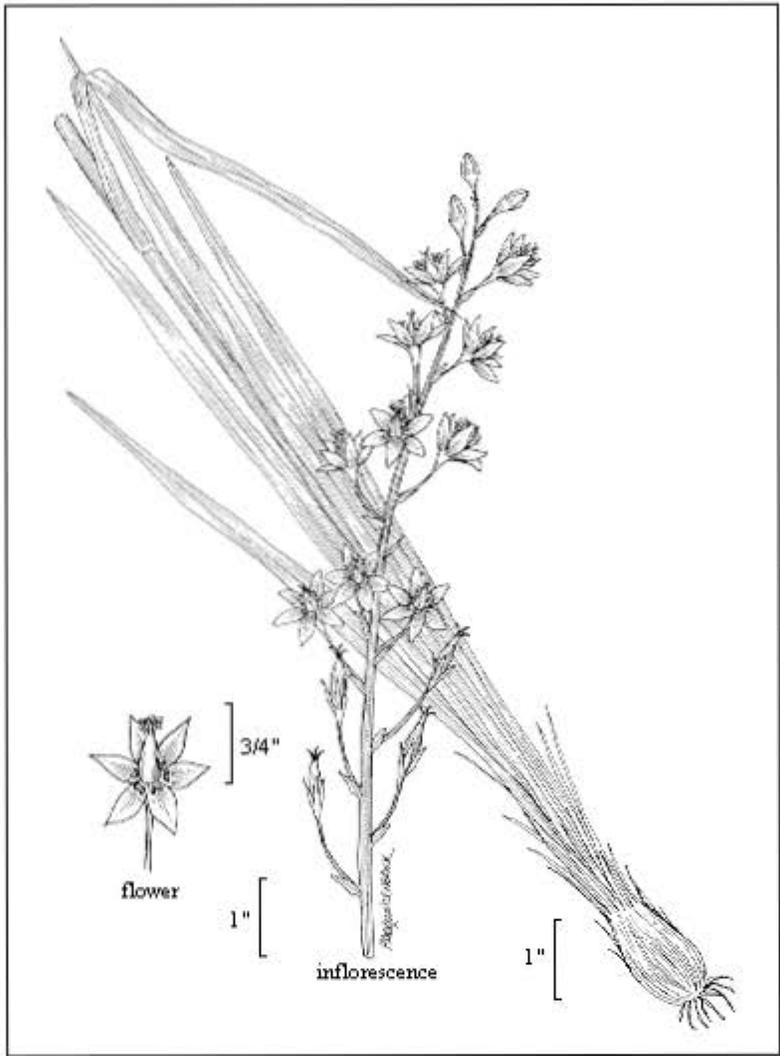
Northeast Wetland Flora

Field Office Guide to Plant Species

White Camas
Zigadenus glaucus Nutt.



- **Family:** Lily (Liliaceae)
- **Flowering:** July-September
- **Field Marks:** This poisonous member of the lily family has a bulbous base and sepals and petals that are creamy-white but with green or bronze or purplish markings on the back.
- **Habitat:** Bogs, fens, shores.
- **Habit:** Perennial herb from fibrous, glaucous bulbs.
- **Stems:** Upright, smooth, up to nearly 3 feet tall.
- **Leaves:** Mostly all basal, elongated, linear, grooved, leathery, rounded or slightly pointed at the tip, up to 1 inch wide; leaves on the stem few, similar but much smaller.
- **Flowers:** Several in a little branched panicle or sometimes few in a raceme, subtended by short-pointed, linear bracts.
- **Sepals and Petals:** 6, all similar, elliptic-oblong to narrowly ovate or obovate, attached to the base of the ovary, creamy-white, with green or bronze or purplish markings on the back, up to 3/4 inch long, with conspicuous green glands on the inside base of each segment.
- **Stamens:** 6, free from the sepals and petals.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Capsules ovoid, up to 3/4 inch long, with recurved beaks; seeds oblanceolate, about 1/4 inch long.
- **Notes:** This and many other species of the genus are poisonous and have been given another common name of death camas. Some recent authors regard this species as an eastern variety of *Z. elegans*.



Northeast Wetland Flora

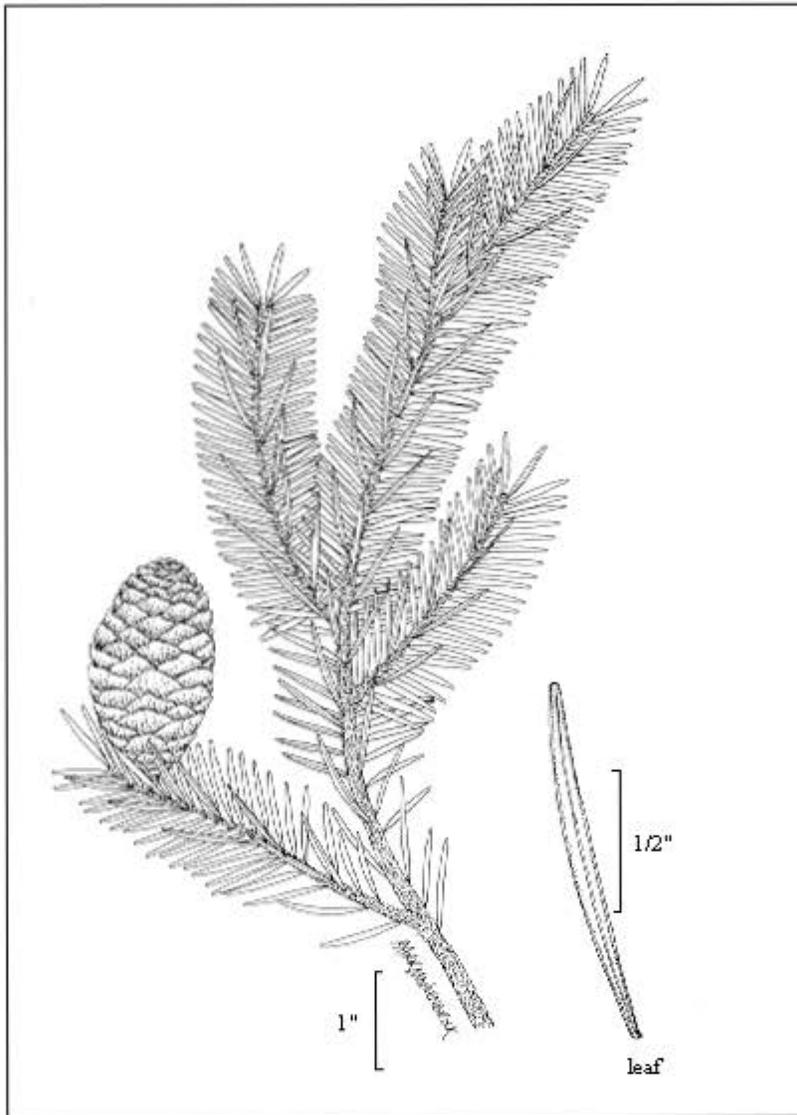
Field Office Guide to Plant Species

Balsam Fir

Abies balsamea (L.) Mill.



- **Family:** Pine (Pinaceae)
- **Fruiting Cones:** May-June
- **Field Marks:** The apparent 2-ranked leaves give the branches a flattened appearance. The flat leaves are whitened on the lower surface, and the cones are borne in an upright position.
- **Habitat:** Moist woods, swamps.
- **Habit:** Tree to 90 feet tall, with the crown tapering to a point; trunk up to 1 1/2 feet in diameter, with brown, scaly bark.
- **Twigs:** Slender, horizontal, pale green to gray, reddish, or purplish, minutely hairy; winter buds spherical, 1/6-1/3 inch in diameter, with orange-green scales.
- **Leaves:** Needles narrowly linear, flat, rounded at the tip but sometimes with a short point, sessile, dark green above, whitened below, 1-nerved, up to 1 1/2 inches long on sterile branches, shorter on cone-bearing branches.
- **Reproductive Structures:** Pollen-producing structures crowded in a spike; female structures arranged in a cone, each subtended by a bract.
- **Fruits:** Cones upright, cylindrical, rounded at the tip, up to 4 inches long, up to 1 1/4 inches thick, borne in rows on the upper side of the branches, purplish when young.
- **Notes:** The light weight wood is of little commercial value, but the trees are sold as Christmas trees and the resin produced by the tree is the source of Canada balsam.



Northeast Wetland Flora

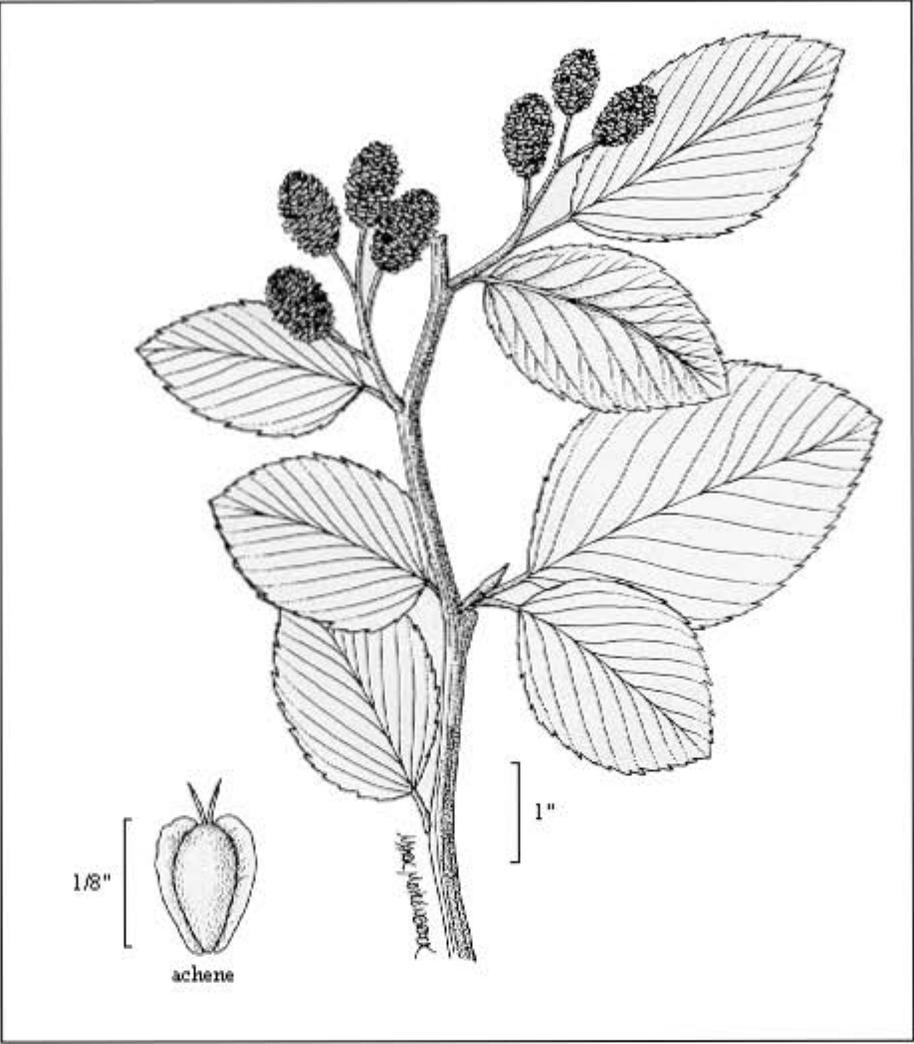
Field Office Guide to Plant Species

Green Alder

Alnus crispa (Dryand. in Ait.) Pursh



- **Family:** Birch (Betulaceae)
- **Flowering:** June-August
- **Field Marks:** This species differs from other alders by its conspicuous winged nutlets and its sessile winter buds.
- **Habitat:** Shores, bogs, usually in mountainous areas.
- **Habit:** Much branched shrub to 10 feet tall.
- **Stems:** Slender to stout, smooth or densely soft-hairy; winter buds sessile, tapering to a long point at the tip.
- **Leaves:** Alternate, simple, ovate to oval, pointed at the tip, usually slightly heart-shaped at the base, irregularly fine-toothed, smooth or densely soft-hairy, up to 5 inches long, with a stalk up to 1 inch long.
- **Flowers:** Male and female flowers borne separately but on the same plant, the male flowers 3 in a cluster and subtended by 4 or 5 bractlets, all in a slender spike up to 3 inches long, the female in 2-10 ovoid spikes in a cluster, each spike up to 1 inch long, with every two flowers subtended by a fleshy bract.
- **Sepals:** 3-5, minute, green, united to each other, or absent.
- **Petals:** 0.
- **Stamens:** 3-5.
- **Pistils:** Ovary inferior.
- **Fruits:** Many nutlets aggregated into a "cone," with each nutlet subtended by a woody bract, the nutlets conspicuously winged, 1/12-1/10 inch long.
- **Notes:** This species is called *A. viridis* by Gleason and Cronquist. The young flowers are concealed by the winter buds prior to the year they open. There is considerable variation in the amount of hairiness on the leaves and young twigs.

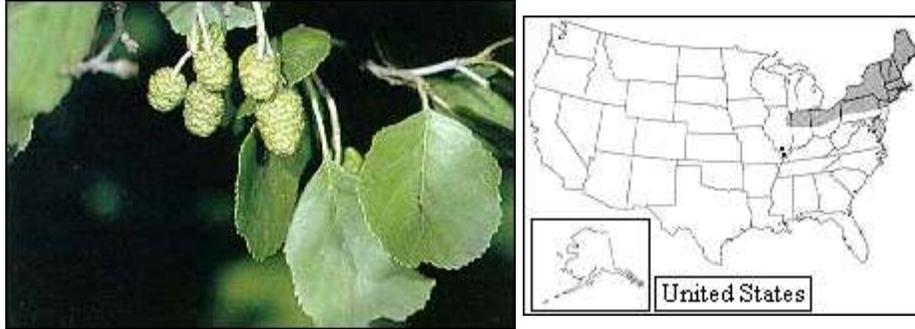


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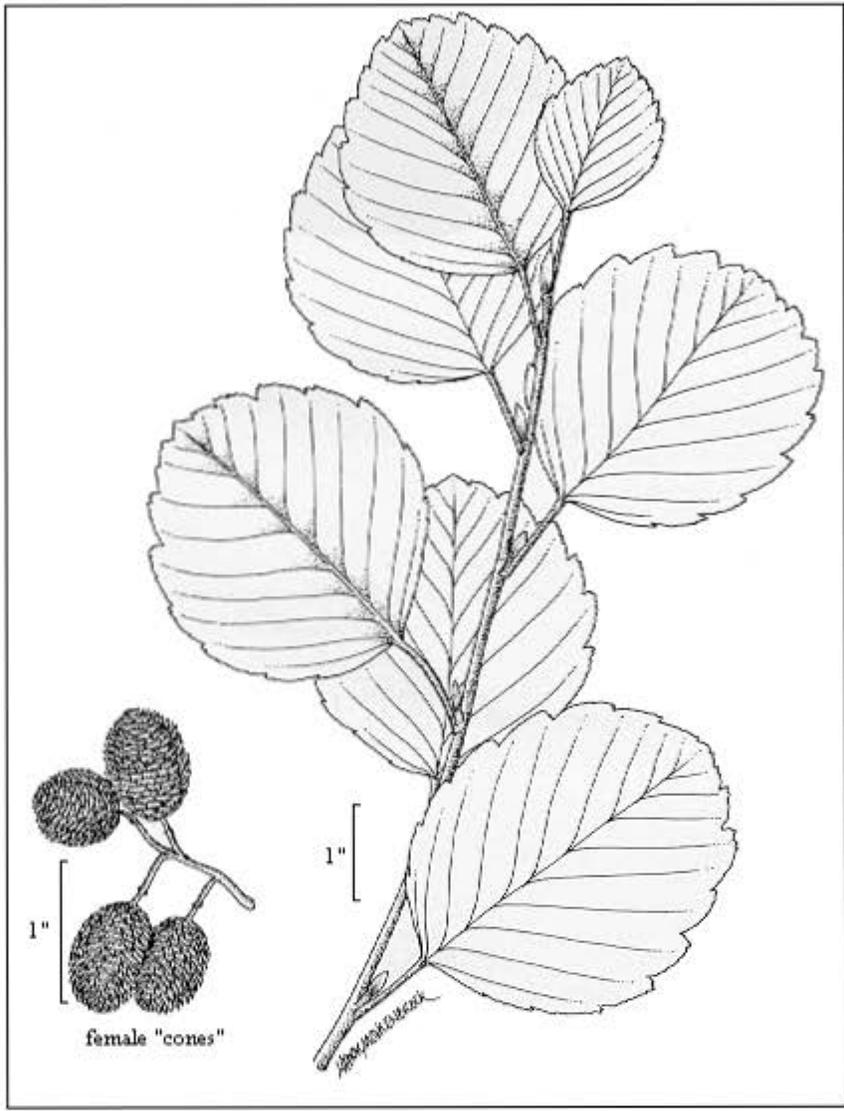
Field Office Guide to Plant Species

European Alder

Alnus glutinosa (L.) Gaertn.



- **Family:** Birch (Betulaceae)
- **Flowering:** March-May
- **Field Marks:** This alder is a tree with 1-5 female spikes in a cluster, the flowers blooming in the spring. The young twigs and fruiting spikes are very sticky. It differs from the seaside alder in having straight rather than curved veins.
- **Habitat:** A variety of habitats, often along roadsides.
- **Habit:** Tree up to 100 feet tall (at least in its native Europe), with a broadly rounded crown, the trunk straight, eventually with dark brown bark.
- **Twigs:** Without hairs but sticky, particularly when young; buds short-stalked.
- **Leaves:** Alternate, simple, dark green, ovate to nearly spherical, rounded at the tip, rounded or somewhat tapering to the base, finely or coarsely toothed, without hairs, up to 6 inches long, sometimes nearly as broad, with a stalk up to 1 inch long.
- **Flowers:** Male and female flowers borne separately but on the same plant, the male flowers 3 in a cluster and subtended by 4-5 bractlets, all in a slender spike up to 3 inches long, the female in 1-5 ovoid spikes in a cluster, each spike up to 1 inch long and sticky, borne on long stalks.
- **Sepals:** 3-5, minute, green, united to each other, or absent.
- **Petals:** 0.
- **Stamens:** 3-5.
- **Pistils:** Ovary inferior.
- **Fruits:** Many nutlets aggregated into a "cone," with each nutlet subtended by a woody bract, the nutlets nearly spherical, unwinged, 1/10-1/8 inch in diameter.
- **Notes:** This species, a native of Europe, is sometimes called black alder.



Northeast Wetland Flora

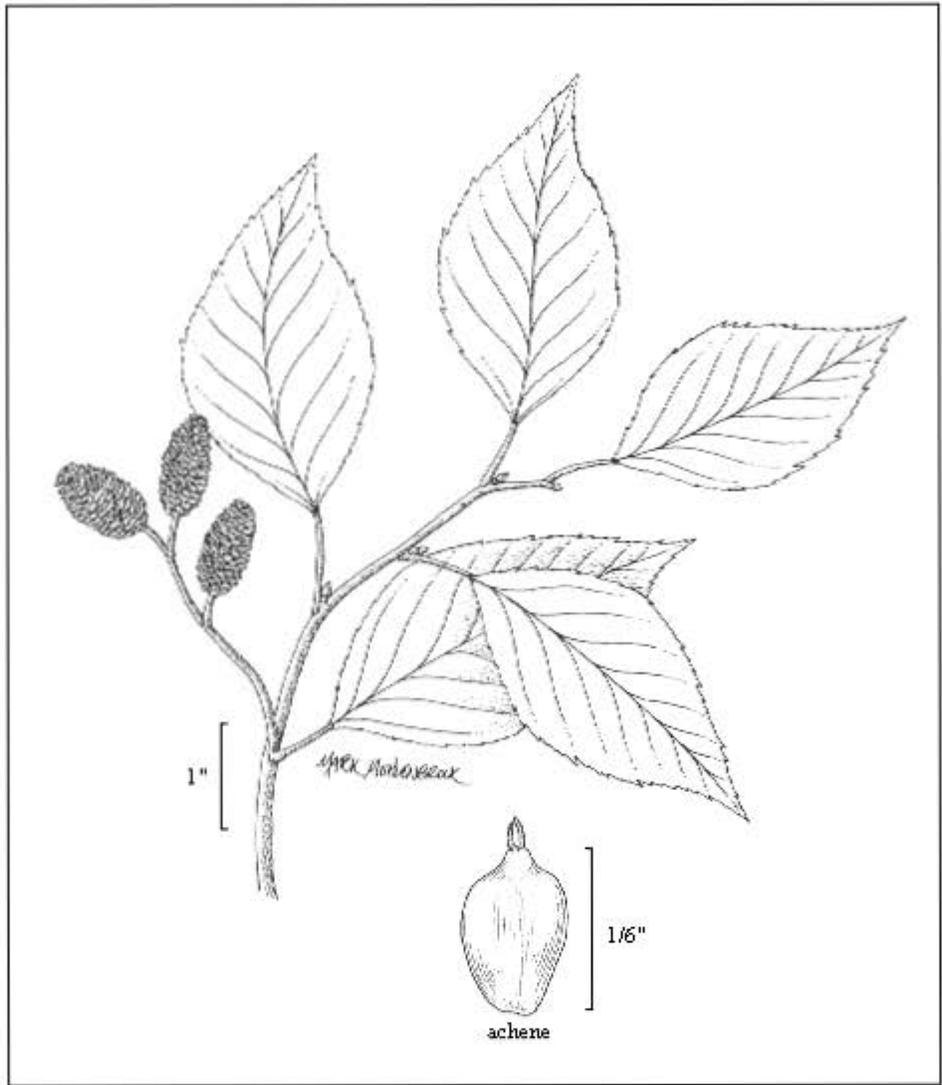
Field Office Guide to Plant Species

Seaside Alder

Alnus maritima (Marsh.) Nutt.



- **Family:** Birch (Betulaceae)
- **Flowering:** August-September
- **Field Marks:** This species flowers in the autumn. The "cones" are 1-1 1/2 inches long, borne on stalks at least as long.
- **Habitat:** Along streams, around ponds.
- **Habit:** Shrub or small tree to 30 feet tall, the bark usually reddish brown at maturity.
- **Twigs:** Reddish brown, with orange lenticels, hairy when young but becoming smooth; buds short-stalked.
- **Leaves:** Alternate, simple, dark green, oblong to ovate, tapering to a point at the tip, rounded or tapering to the base, remotely fine-toothed, glandular-dotted on the lower surface, not hairy, up to 4 inches long with curved veins, with a stalk nearly 1 inch long.
- **Flowers:** Male and female flowers borne separately, but on the same plant, the male flowers 3 in a cluster and subtended by 4-5 bractlets, all in a slender spike up to 3 inches long, the female in 2-3 ovoid spikes in a cluster, each spike up to 1 inch long, borne on long stalks.
- **Sepals:** 3-5, minute, green, united to each other, or absent.
- **Petals:** 0.
- **Stamens:** 3-5.
- **Pistils:** Ovary inferior.
- **Fruits:** Many nutlets aggregated into a "cone," with each nutlet subtended by a woody bract, the nutlets very narrowly winged, ovoid, 1/8-1/6 inch long.
- **Notes:** Gleason and Cronquist report this species from Oklahoma, as well.

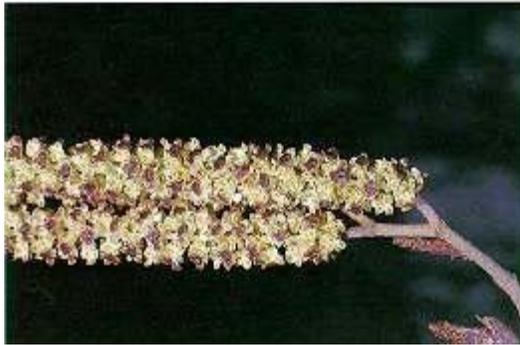


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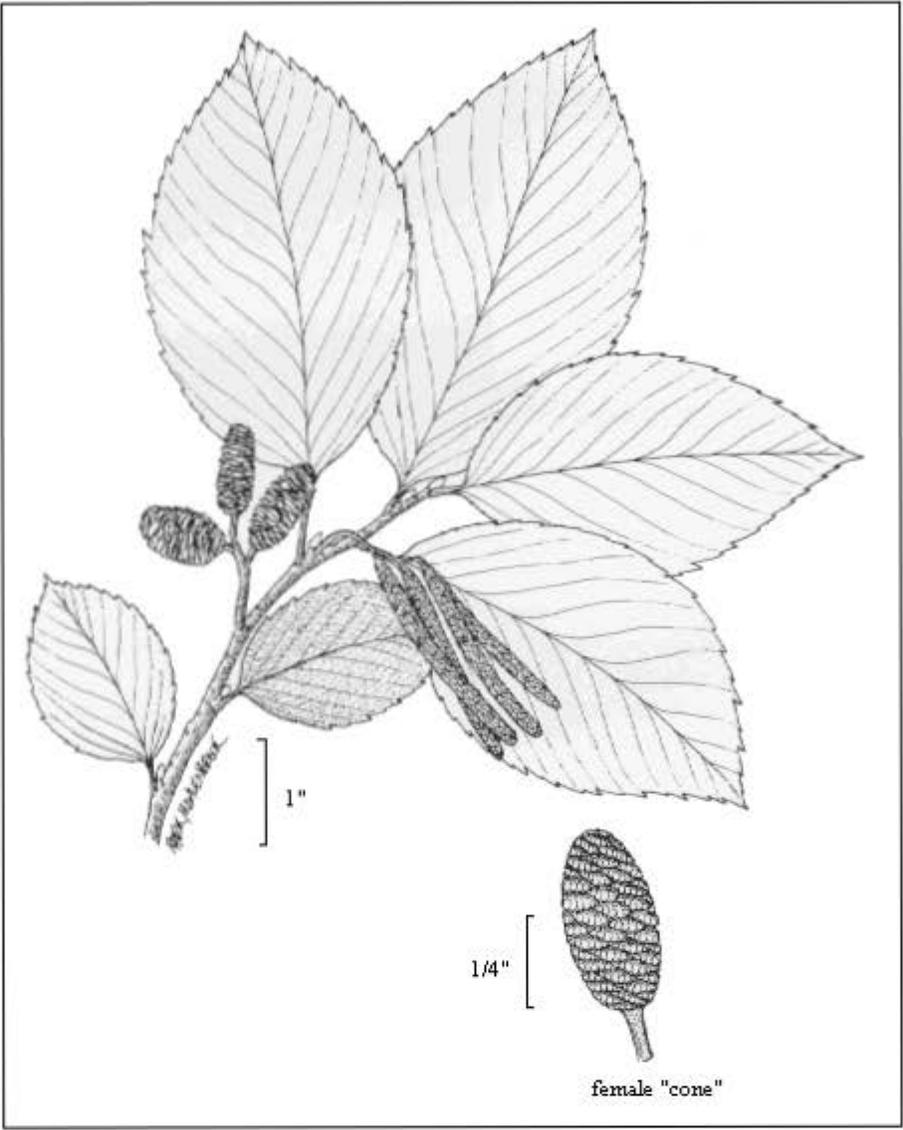
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Speckled Alder

Alnus rugosa (DuRoi) Spreng.



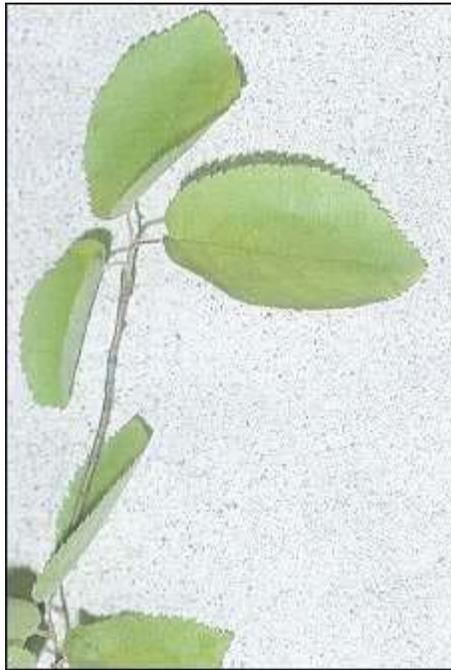
- **Family:** Birch (Betulaceae)
- **Flowering:** March-May
- **Field Marks:** The distinguishing features of this alder are the conspicuous white lenticels on the trunk and on the twigs, the short, thick stalks of the "cones," and the conspicuous net venation of the leaves. In winter the immature female spikes hang down.
- **Habitat:** Along streams, in swamps.
- **Habit:** Shrub to 20 feet tall, with dark gray bark speckled with white lenticels.
- **Stems:** Twigs reddish brown, smooth; buds sessile, pointed, sticky.
- **Leaves:** Alternate, simple, dark green on the upper surface, paler or sometimes whitish on the lower surface, oval to ovate, rounded or pointed at the tip, rounded or tapering to the base, toothed or doubly toothed, smooth or hairy, conspicuously net-veined, up to 5 inches long, with a stalk up to 1/2 inch long.
- **Flowers:** Male and female flowers borne separately, but on the same plant, the male flowers 3 in a cluster and subtended by 4-5 bractlets, all in a slender spike up to 2 inches long, the female in a few ovoid spikes up to 3/4 inch long, on short stalks or sessile.
- **Sepals:** 3-5, minute, green, united to each other.
- **Petals:** 0.
- **Stamens:** 3-5.
- **Pistils:** Ovary inferior.
- **Fruits:** Many nutlets aggregated into a "cone," with each nutlet subtended by a woody bract, the nutlets narrowly winged, ovoid to nearly spherical, 1/10-1/6 inch long.
- **Notes:** This species is called *A. incana* by Gleason and Cronquist. This is a variable species with regard to leaf color, leaf shape, and hairiness.



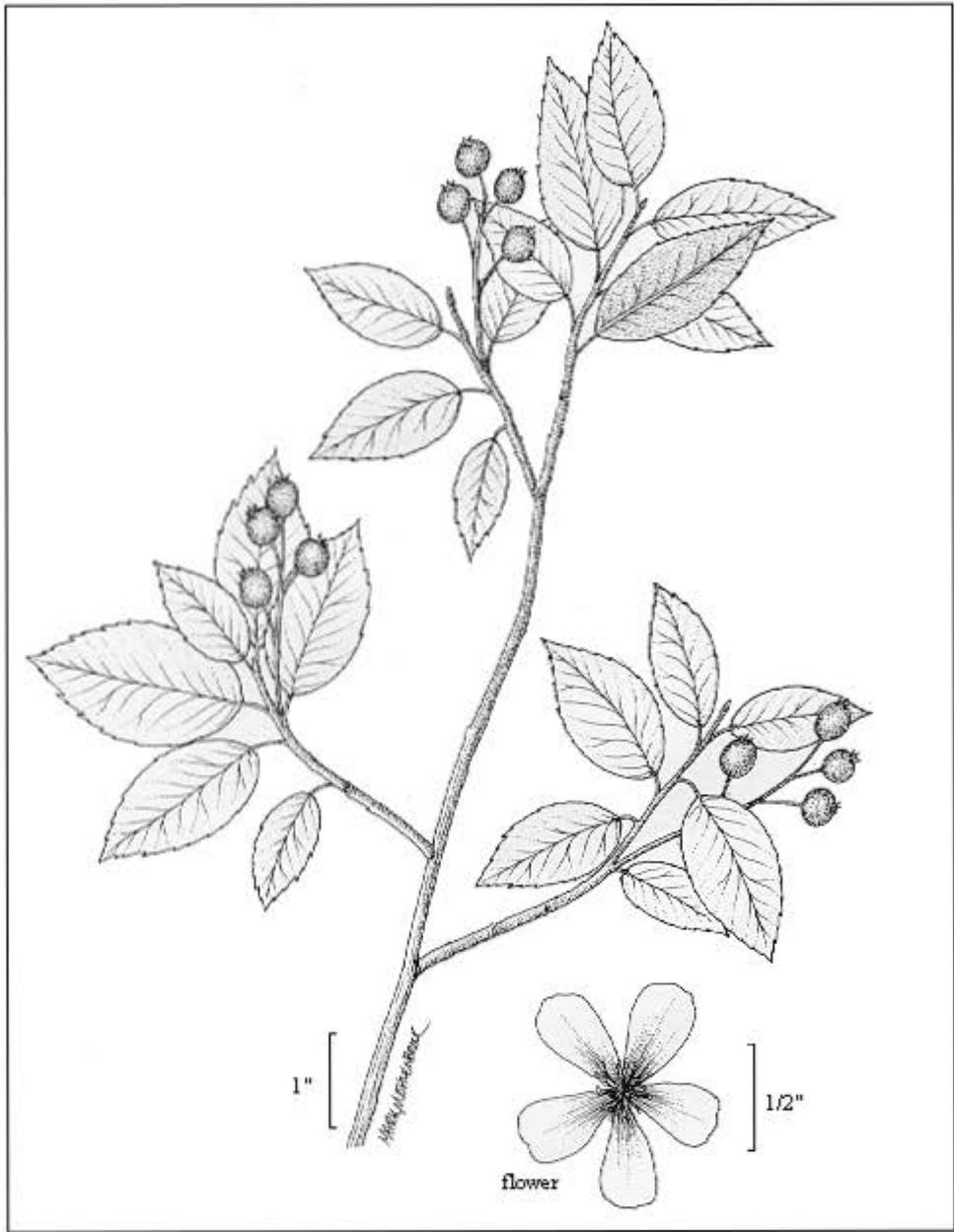
Northeast Wetland Flora

Field Office Guide to Plant Species

Oblong-leaf Service-berry
Amelanchier canadensis (L.) Medic.



- **Family:** Rose (Rosaceae)
- **Flowering:** March-June
- **Field Marks:** The flowering racemes of this shrub are ascending rather than pendulous, the young leaves are densely white-hairy, and the sepals of the flowers are densely hairy.
- **Habitat:** Wet woods, swamps, damp thickets.
- **Habit:** Shrub to 25 feet tall, usually with multiple trunks, with smooth, gray bark.
- **Stems:** Slender, gray or red-brown, hairy at first, becoming smooth; buds brown or greenish brown, smooth, the terminal one up to 1/2 inch long.
- **Leaves:** Alternate, simple, oval to oblong, rounded or short-pointed at the tip, rounded or sometimes heart-shaped at the base, finely toothed, densely white-hairy when young, becoming smooth; leaf stalks 1/2-3/4 inch long, smooth or hairy.
- **Flowers:** Several in dense, ascending racemes, the racemes up to 3 inches long, each flower on a densely hairy stalk.
- **Sepals:** 5, united below, the lobes about 1/6 inch long, green, erect or spreading, densely hairy.
- **Petals:** 5, free, white, linear to oblong, up to 1/2 inch long.
- **Stamens:** About 20.
- **Pistils:** Ovary inferior, smooth or sparsely hairy.
- **Fruits:** Apple-like, spherical, black or dark purple, sweet, juicy, 1/4-1/3 inch in diameter.
- **Notes:** The fruits are edible and are eaten by a number of wild species. This plant is also known as shadbush and juneberry.



Northeast Wetland Flora

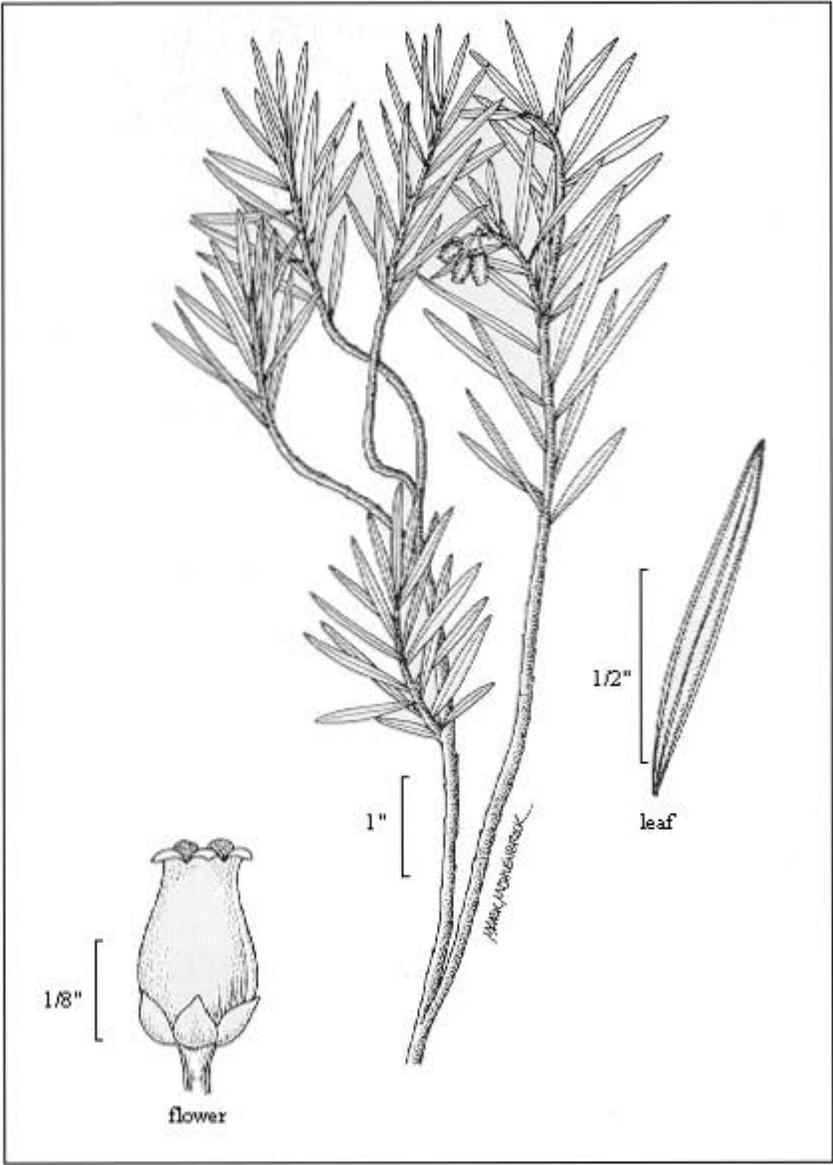
Field Office Guide to Plant Species

Bog Rosemary

Andromeda polifolia L.



- **Family:** Heath (Ericaceae)
- **Flowering:** May-July
- **Field Marks:** Bog Rosemary is distinguished by its needle-like, evergreen leaves which are turned under along the edges, its vase-shaped, drooping pink flowers about 1/4 inch long, and its more or less upright, spherical capsule that is depressed at the tip. It differs from *A. glaucophylla* in having leaves less whitened on the undersurface.
- **Habitat:** Bogs.
- **Habit:** Evergreen shrub, creeping at the base but with upright flowering stems.
- **Stems:** Wiry, glaucous, up to 1 1/2 feet tall.
- **Leaves:** Alternate, simple, evergreen, needle-like, leathery, usually becoming turned under at the sides, green on the upper surface, pale green to whitish and minutely hairy on the lower surface, up to 2 inches long.
- **Flowers:** Drooping in umbels from the axils of the uppermost leaves, about 1/4 inch long.
- **Sepals:** 5, green to whitish, free, spreading at maturity, broadly ovate, 1/10 inch long.
- **Petals:** 5, pink, united to form a vase, up to 1/4 inch long.
- **Stamens:** 10.
- **Pistils:** Ovary superior.
- **Fruits:** Capsule nearly spherical but depressed at top, upright, glaucous, up to 1/4 inch in diameter.
- **Notes:** Persons believing this plant to be different from the European species call it *A. glaucophylla*.

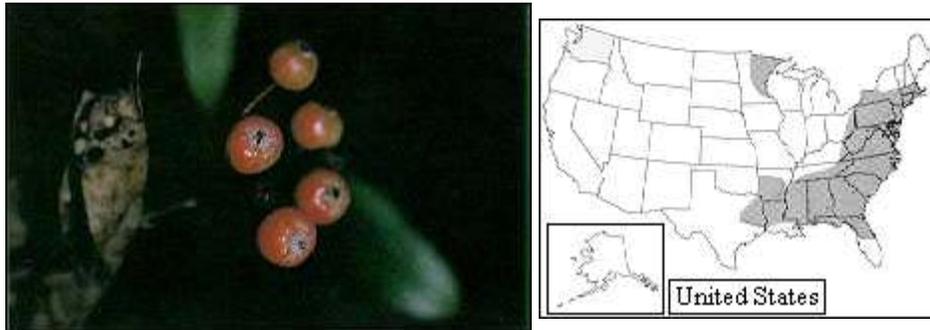


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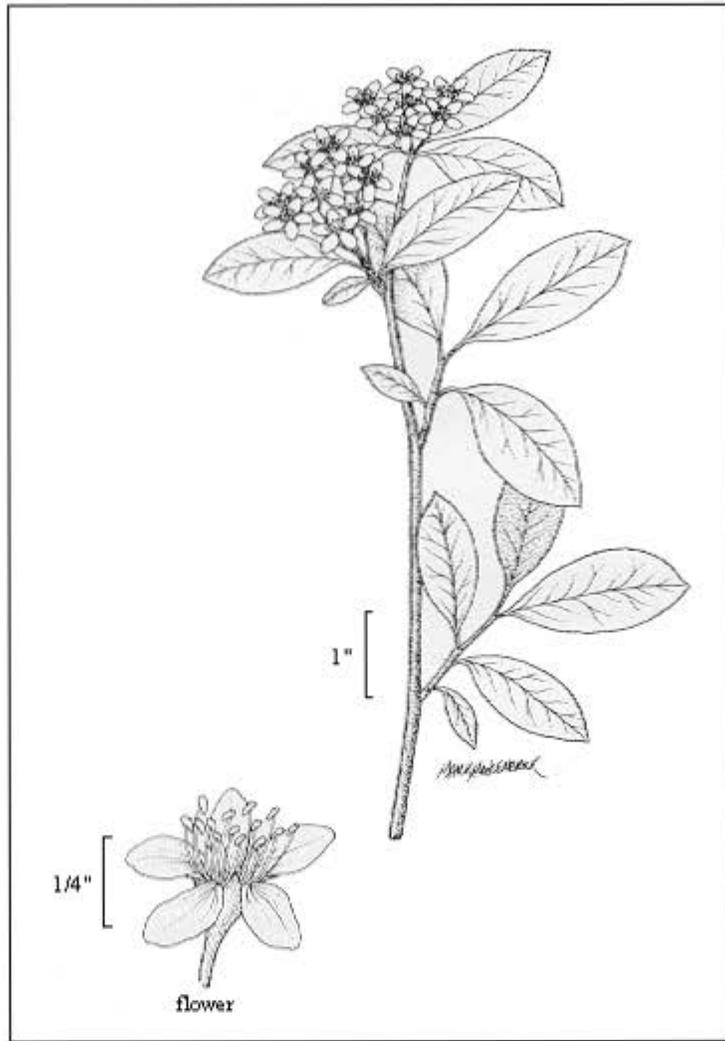
Field Office Guide to Plant Species

Red Chokeberry

Aronia arbutifolia (L.) Elliott



- **Family:** Rose (Rosaceae)
- **Flowering:** April-July
- **Field Marks:** This chokeberry is recognized by its leaves that are glandular along the midvein on the upper surface and that are soft-hairy on the lower surface. The fruit is red, and the sepals are glandular-hairy.
- **Habitat:** Swamps, low woods, pine barrens, damp thickets.
- **Habit:** Shrub up to 12 feet tall, spreading by basal offshoots, usually forming colonies; bark nearly black, smooth.
- **Stems:** Twigs reddish, gray- or white-hairy, slender; buds oblongoid, tapering to a sharp point, up to 1/4 inch long, reddish, hairy.
- **Leaves:** Alternate, simple, oblanceolate to oblong to obovate, short-pointed at the tip, tapering to the base, glandular-toothed, the upper surface green and smooth except for the glands along the midvein, the lower surface gray or white, soft-hairy, up to 4 inches long, up to 2 inches wide; leaf stalks up to 1/2 inch long, hairy.
- **Flowers:** Several in a terminal cyme, the cyme up to 3 inches across; each flower white or pink- or purple-tinged, up to 1/2 inch across, on slender, hairy stalks.
- **Sepals:** 5, green, united below to form a cup, glandular-hairy.
- **Petals:** 5, white or pink- or purple-tinged, free from each other, up to 1/4 inch long.
- **Stamens:** Numerous.
- **Pistils:** Ovary inferior; styles 2-5.
- **Fruits:** Pomes red, nearly spherical to obovoid, up to 1/3 inch in diameter.
- **Notes:** The fruits are eaten by birds and other animals.



Northeast Wetland Flora

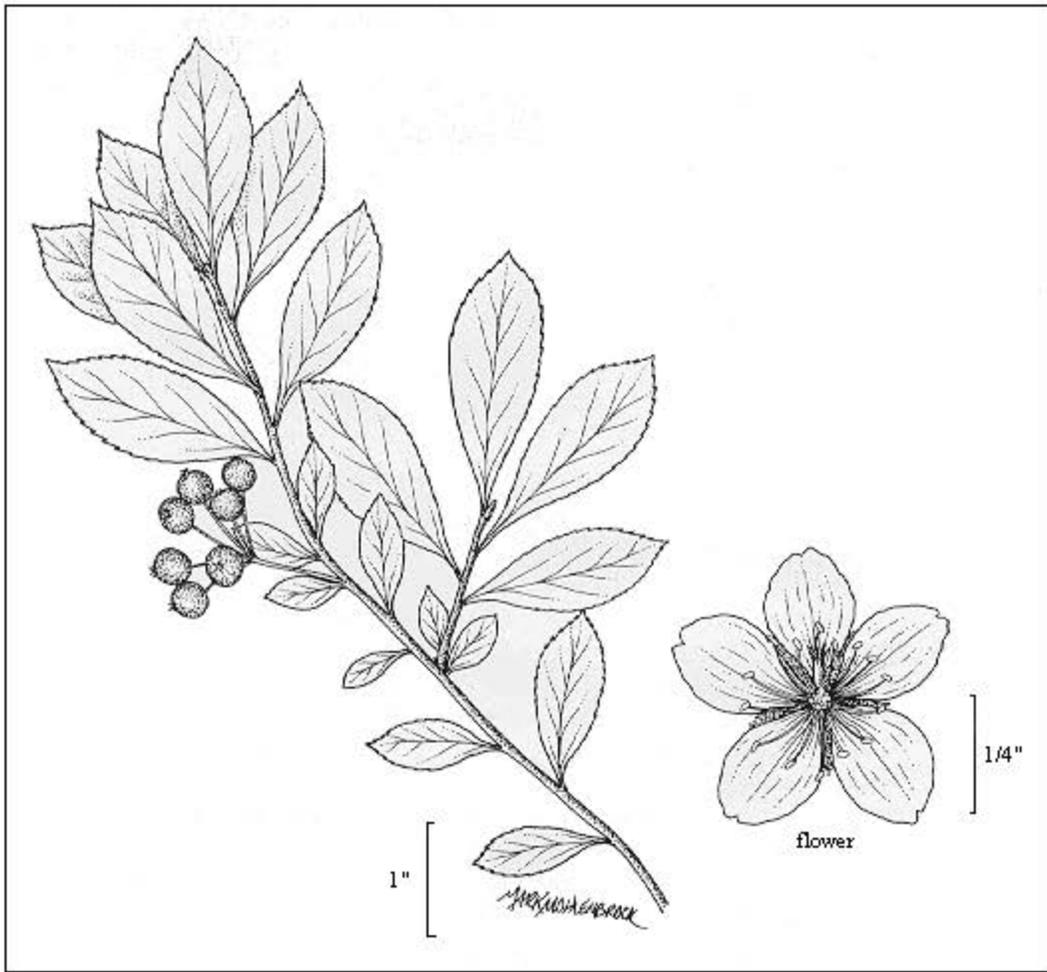
Field Office Guide to Plant Species

Purple Chokeberry

Aronia prunifolia (Marsh.) Rehder



- **Family:** Rose (Rosaceae)
- **Flowering:** April-July
- **Field Marks:** This shrub is distinguished by its leaves that are glandular on the midvein, on the upper surface, the hairy lower surface of the leaves, and the dark purple fruits.
- **Habitat:** Swamps, bogs, wet woods.
- **Habit:** Shrub to 10 feet tall.
- **Stems:** Twigs slender, hairy at least when young; buds lanceoloid, deep red.
- **Leaves:** Alternate, simple, oblanceolate to obovate, pointed at the tip, rounded or tapering to the base, finely toothed, dark green and smooth on the upper surface, paler and hairy on the lower surface, glandular on the midvein on the upper surface, up to 3 1/2 inches long; leaf stalks up to 1/2 inch long.
- **Flowers:** Few in a branched cluster, white, up to 1/2 inch across.
- **Sepals:** 5, green, united below to form a cup, more or less hairy.
- **Petals:** 5, white, obovate, up to 1/4 inch long.
- **Stamens:** About 20.
- **Pistils:** Ovary superior, woolly, located at the base of the cup formed by the sepals.
- **Fruits:** Dark purple, spherical, 1/3-1/2 inch in diameter.
- **Notes:** The fruits are eaten by wildlife. This plant may be a hybrid between *A. arbutifolia* and *A. melanocarpa*.

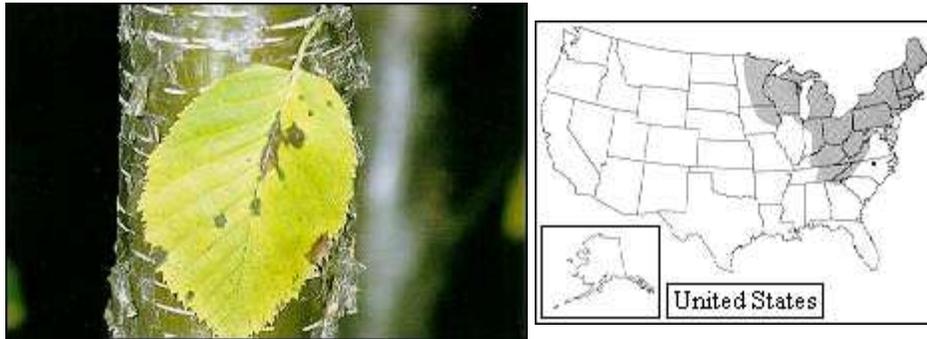


Northeast Wetland Flora

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Yellow Birch

Betula alleghaniensis Britton



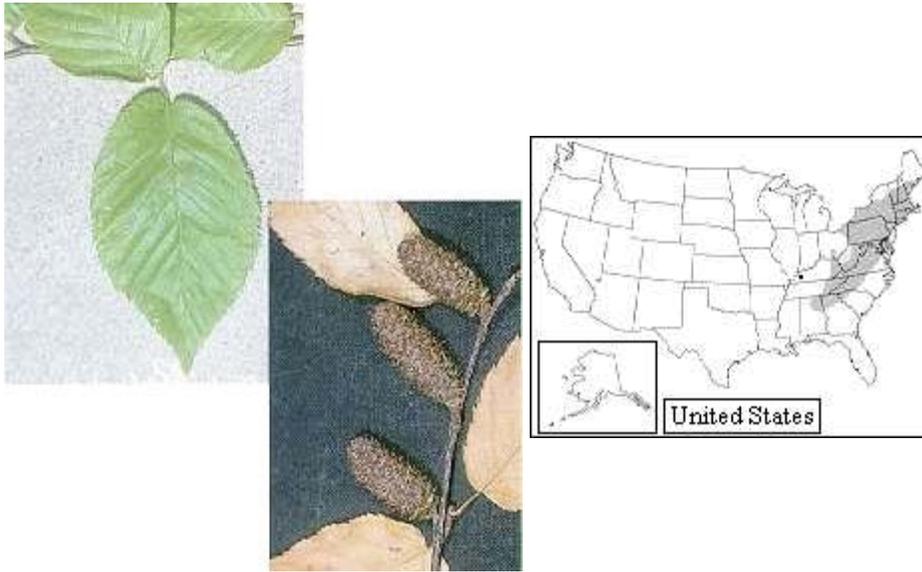
- **Family:** Birch (Betulaceae)
- **Flowering:** May-June
- **Field Marks:** This birch is recognized by its wintergreen scent and its gray, yellow, or bronze bark.
- **Habitat:** Rich woods.
- **Habit:** Tree to 90 feet tall; bark gray, yellow, or bronze, often shiny, separating into thin layers.
- **Twigs:** Gray-brown, slender, with the scent of wintergreen, smooth or sparsely hairy; buds ovoid, brown, hairy, about 1/3 inch long.
- **Leaves:** Alternate, simple, ovate to broadly oblong, pointed at the tip, rounded or rarely slightly heart-shaped at the base, finely double-toothed, soft hairy on the veins beneath, up to 4 inches long, up to 2 inches wide; leaf stalks up to 1/2 inch long.
- **Flowers:** Male and female flowers borne separately but on the same tree, the male flowers crowded into slender spikes up to 3 1/2 inches long, the female flowers crowded into ovoid to nearly spherical spikes about 3/4 inch long, the latter with hairy scales subtending each flower.
- **Sepals:** 1 in the male flowers, 0 in the female flowers.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary inferior; styles 2.
- **Fruits:** Many nutlets in an ovoid "cone," consisting of winged nutlets subtended by 3-lobed scales.
- **Notes:** This species used to be known as *B. lutea*. The wood of this species is important in making cabinets. Sweet birch (*Betula lenta*) has an even stronger wintergreen scent to the twigs and inner bark.



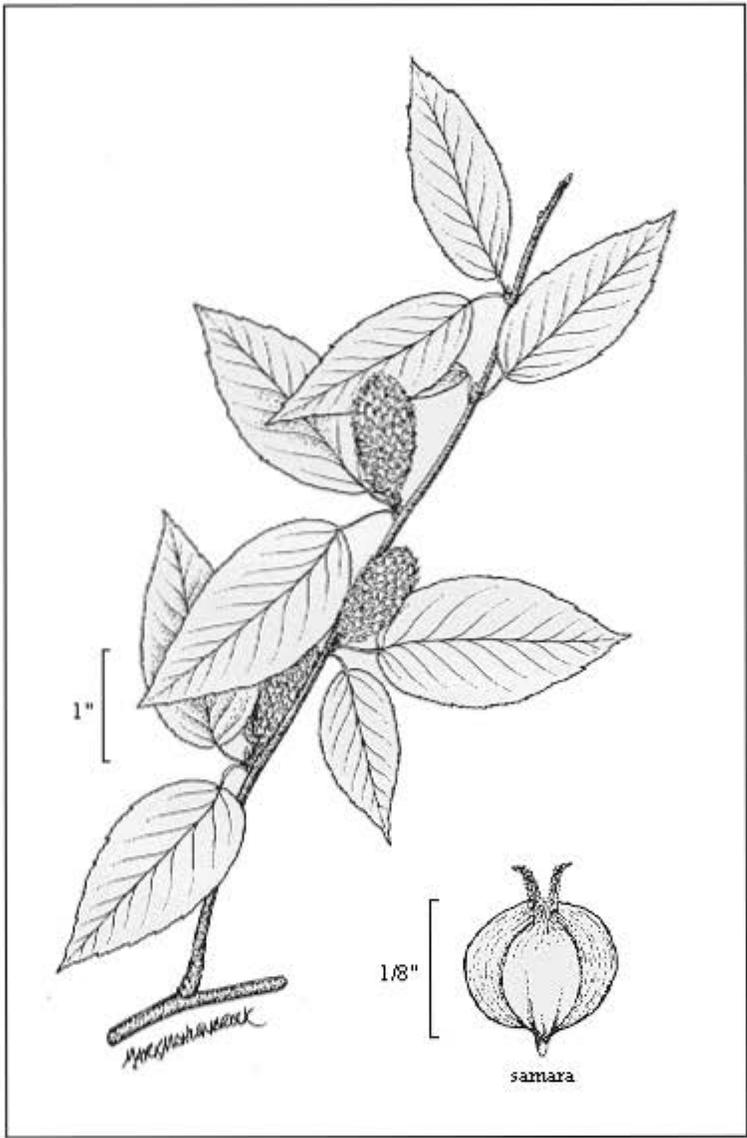
Northeast Wetland Flora

Field Office Guide to Plant Species

Sweet Birch *Betula lenta* L.



- **Family:** Birch (Betulaceae)
- **Flowering:** April-May
- **Field Marks:** This birch is distinguished by its cherry-like bark, its wintergreen scent and taste, and its smooth scales that subtend each samara.
- **Habitat:** Rich, moist woods.
- **Habit:** Tree up to 75 feet tall, with a slender crown; trunk up to 2 feet in diameter.
- **Bark:** Dark brown and smooth at first, becoming ashy-gray and furrowed at maturity, resembling that of a cherry tree; inner bark when scratched has strong scent of wintergreen.
- **Twigs:** Slender, reddish brown to ashy gray, with the scent and taste of wintergreen; leaf scars alternate.
- **Leaves:** Alternate, simple, ovate to broadly oblong, pointed at the tip, rounded to heart-shaped at the base, sharply double-toothed, up to 4 inches long, up to 2 1/2 inches wide, hairy on the veins on the lower surface, with 9-12 pairs of veins; leaf stalks short.
- **Flowers:** Male and female borne separately on the same tree, the male in elongated spikes that form during the summer, remaining on the tree during the winter, and opening in early spring, the female in ovoid, erect, sessile spikes.
- **Sepals:** Minute, 4-parted, with one segment usually larger than the others, subtended by scales, the male scales more or less rounded, the female scales 3-lobed.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary inferior; stigmas 2.
- **Fruits:** Many samaras crowded in a short-cylindric spike 3/4-1 1/4 inches long, each samara subtended by a smooth, 3-lobed scale.
- **Notes:** This species has ornamental value. In earlier days, this species was the source of oil of wintergreen. Birch beer is made from the sap of this tree. Grouse eat the flowering spikes, buds, and seeds of this species, while several kinds of mammals browse on twigs and young leaves.

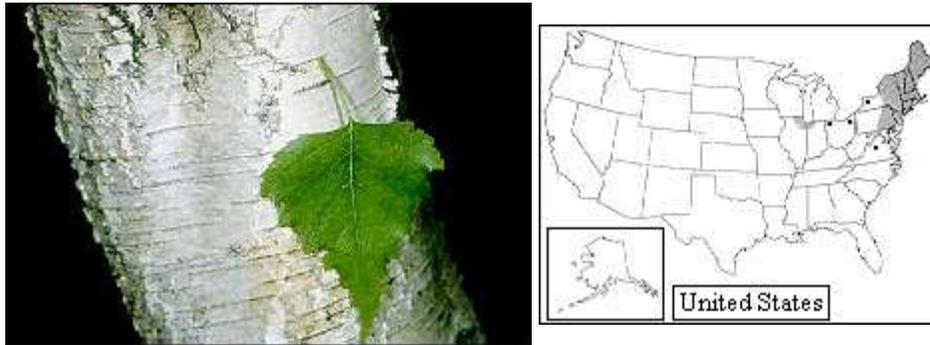


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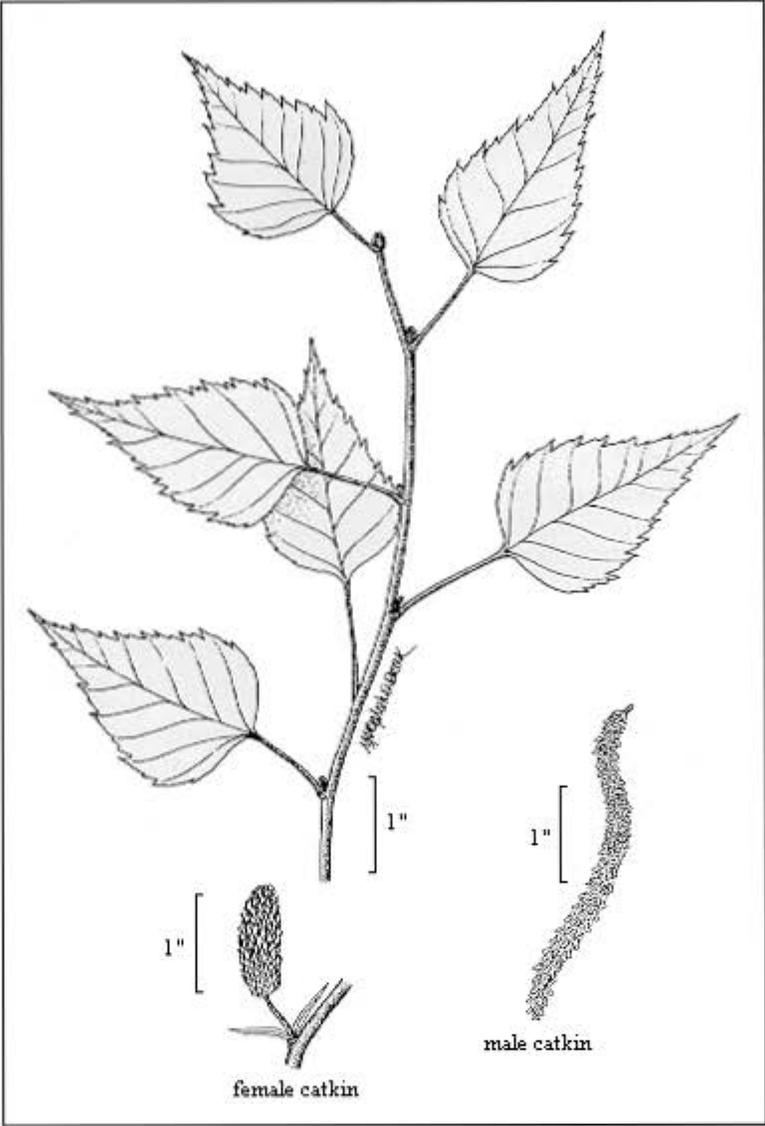
Field Office Guide to Plant Species

Gray Birch

Betula populifolia Marshall



- **Family:** Birch (Betulaceae)
- **Flowering:** April-May
- **Field Marks:** This birch is distinguished by its long-pointed triangular leaves and its smooth white or bronze bark which peels in thin layers on old trunks.
- **Habitat:** Moist or dry woods.
- **Habit:** Tree to 45 feet tall, often sprouting from the base, trunk diameter up to 1 1/2 feet; bark white or bronze, smooth, eventually peeling off into sheets, and with blackish horizontal markings.
- **Twigs:** Slender, reddish, warty but without hairs.
- **Leaves:** Alternate, simple, triangular, long-pointed at the tip, truncate at the base, shiny, smooth, irregularly toothed, up to 2 1/2 inches long, up to 2 inches wide; leaf stalks slender, up to 1/2 inch long.
- **Flowers:** Male and female borne separately but on the same plant, both short-stalked, the male crowded into slender spikes up to 3 inches long, the female crowded into short-cylindric spikes.
- **Sepals:** 1 in the male flower, 0 in the female flower.
- **Petals:** 0.
- **Stamens:** 4.
- **Pistils:** Ovary inferior.
- **Fruits:** "Cones" short-cylindric, stalked, up to 1 1/4 inches long, composed of horizontal, minutely hairy bracts and broadly winged nuts.
- **Notes:** The leaves quake with the lightest breeze.



Northeast Wetland Flora

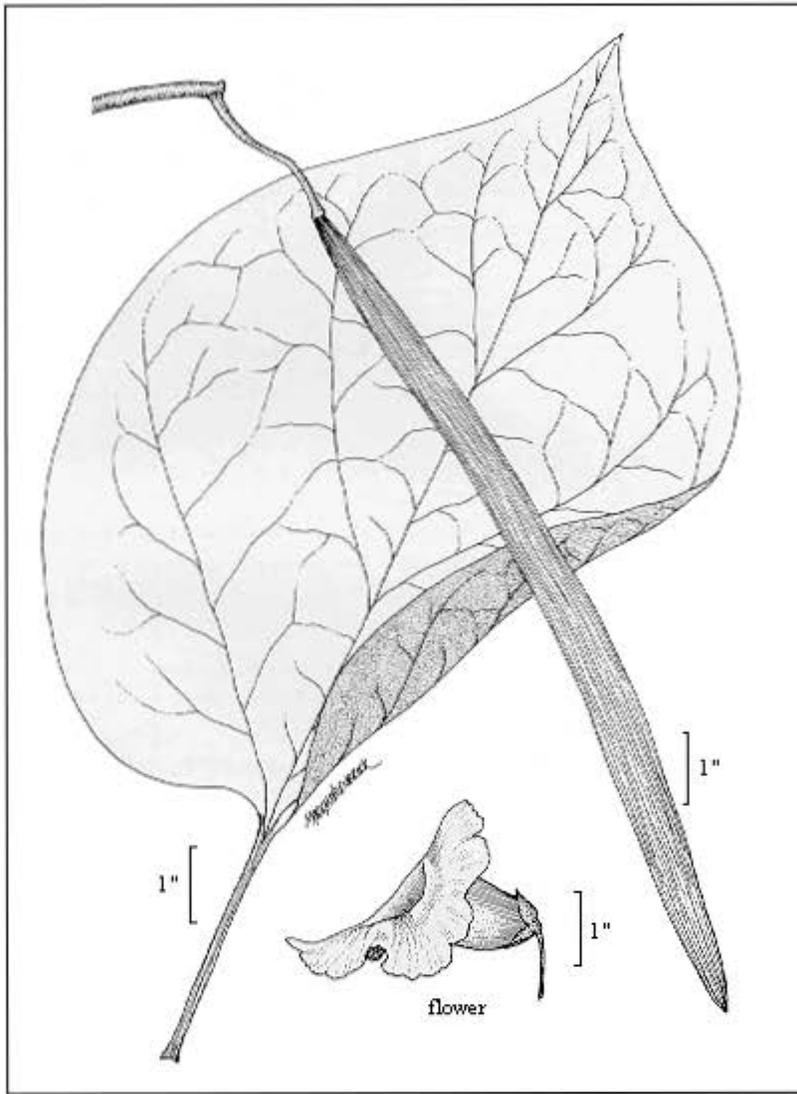
Field Office Guide to Plant Species

Northern Catalpa

Catalpa speciosa (Warder ex Barney) Warder ex Engelm.



- **Family:** Trumpet-creeper (Bignoniaceae)
- **Flowering:** May-June
- **Field Marks:** Catalpas are the only trees with whorled leaves that are large and toothless. This species differs from other catalpas by its leaves that do not have a bad odor when crushed. The flowers of this species have two rows of yellow blotches on the petals.
- **Habitat:** Low woods, swamps; frequently planted and sometimes escaped from cultivation.
- **Habit:** Medium tree up to 60 feet tall; trunk diameter up to 3 feet; crown broad, widely spreading.
- **Bark:** Light or dark brown or black with rather deep furrows at maturity.
- **Twigs:** Stout, smooth, brown, with conspicuous lenticels; leaf scars in whorls of 3; bundle traces 12 or more; buds round, very small, brown or black.
- **Leaves:** Whorled, simple, ovate, long-pointed at the tip, often heart-shaped at the base, up to 1 foot long, about 2/3 as broad, smooth along the edges, soft-hairy on the lower surface; leaf stalks stout, up to 6 inches long.
- **Flowers:** Large, showy, several in an elongated cluster up to 6 inches long.
- **Sepals:** 5, purple.
- **Petals:** 5, attached to each other to form a broad tube, white with two rows of yellow blotches on the lower petals and scattered purple lines inside the tube, up to 2 1/2 inches long.
- **Stamens:** 5, with two functional and three reduced non-functional ones.
- **Pistils:** Ovary superior, elongated, smooth.
- **Fruits:** Elongated capsules up to 1 1/2 feet long and 3/4 inch thick, brown at maturity, splitting into 2 parts to reveal several winged, hairy seeds about 1 inch long.
- **Notes:** This tree is often planted as an ornamental because of its large, attractive flowers. Its native range is essentially in the Upper Mississippi Valley. The wood can be used in interior finishing.



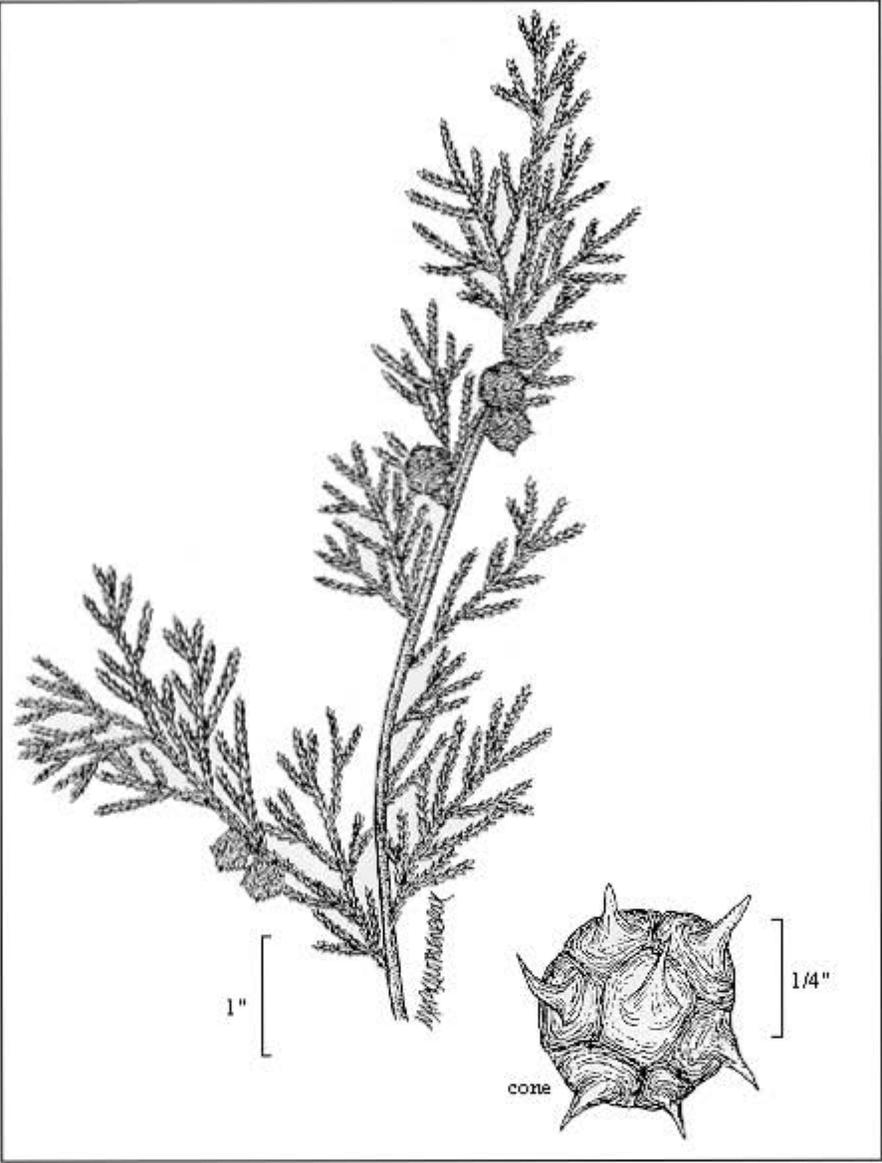
Northeast Wetland Flora

Field Office Guide to Plant Species

Atlantic White Cedar *Chamaecyparis thyoides* (L.) BSP.



- **Family:** Cypress (Cupressaceae)
- **Fruits:** July-October
- **Field Marks:** This evergreen tree differs by its scale-like leaves forming a flattened, fan-like spray and its small, nearly spherical cones with thick polygonal-shaped scales and slightly winged seeds.
- **Habitat:** Swamps, along streams.
- **Habit:** Evergreen tree to 75 feet tall, with a thick, tapering crown; bark of trunk shaggy, gray, divided into flat ridges; trunk up to 3 feet in diameter.
- **Twigs:** Mostly horizontal, gray, 4-sided, flattened, with the leaves forming a fan-like spray.
- **Leaves:** Mostly opposite, acute, scale-like, appressed, sometimes with a small gland on the back; leaves of two types, those on the flattened side of the twig are flat and acute, those on the sides are folded and acute.
- **Reproductive Structures:** Male and female borne separately on separate branches of the same tree, in small, terminal spikes; male flowers composed of a scale and 2-4 pollen-bearing structures; female flowers consisting of paired polygonal scales bearing 1-4 immature seeds.
- **Sepals:** 0.
- **Petals:** 0.
- **Fruits:** Female cones greenish with a heavy white waxy coating, nearly spherical, less than 1/2 inch in diameter, usually smaller, bearing slightly winged seeds.
- **Notes:** The wood of this tree is used for furniture, shingles, and fences. This species is also planted as an ornamental.



Northeast Wetland Flora

Field Office Guide to Plant Species

White Fringe Tree *Chionanthus virginicus* L.



- **Family:** Ash (Oleaceae)
- **Flowering:** May-June
- **Field Marks:** This species is distinguished by its toothless, opposite, simple leaves and its numerous flowers with 4 narrow white petals.
- **Habitat:** Moist woods, thickets, along streams.
- **Habit:** Shrub or small tree to 30 feet tall.
- **Twigs:** Slender, gray to brownish; leaf scars opposite.
- **Leaves:** Opposite, simple, narrowly elliptic to oblong to ovate, more or less pointed at the tip, tapering to the base, up to 6 inches long, smooth, without teeth; leaf stalks slender, smooth.
- **Flowers:** Numerous in loose, drooping panicles up to 8 inches long, white, up to 1 1/4 inches long, fragrant.
- **Sepals:** 4, united at base, green, minute.
- **Petals:** 4, united at base, white, linear, pointed at the tip, up to 1 1/4 inches long.
- **Stamens:** 2, attached to the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Drupes ovoid to ellipsoid, purple, with a whitish waxy coat, 1/2-3/4 inch long.
- **Notes:** Many species of wildlife eat the fruits of this species. White fringe tree is a beautiful ornamental.



Northeast Wetland Flora

Field Office Guide to Plant Species

Flowering Dogwood

Cornus florida L.



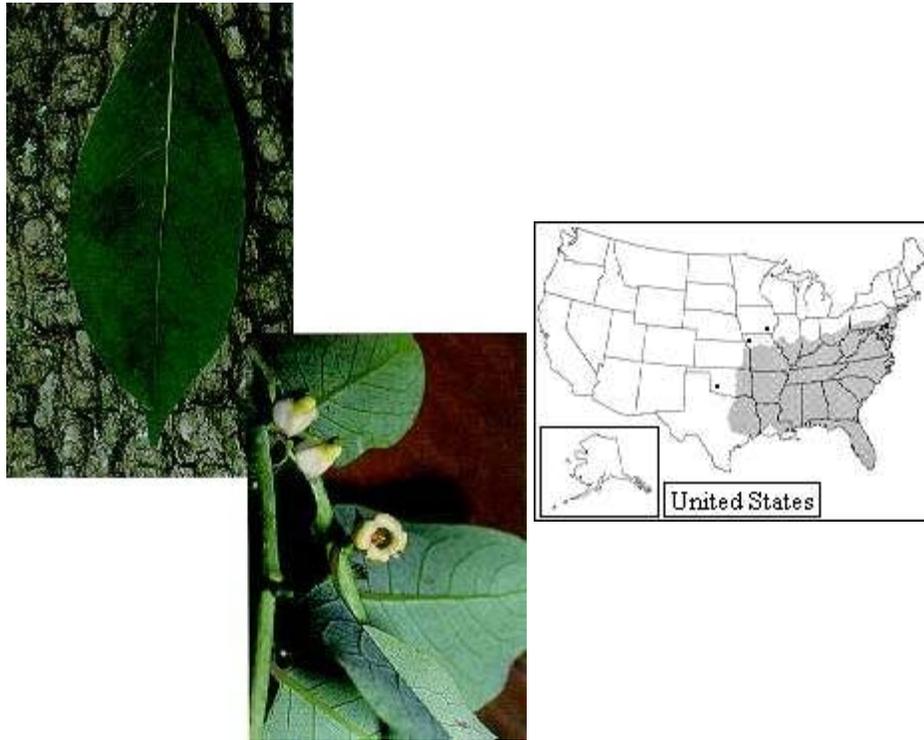
- **Family:** Dogwood (Cornaceae)
- **Flowering:** April-May
- **Field Marks:** The flowers of this dogwood are subtended by four large, white, notched bracts. The opposite leaves may be as much as 6 inches long.
- **Habitat:** Woods.
- **Habit:** Small to medium tree to 40 feet tall; trunk diameter rarely more than 2 feet; crown rounded.
- **Bark:** Brown, divided into squarish plates at maturity.
- **Twigs:** Slender, greenish to light brown, smooth, often curving upward at the tip; leaf scars opposite; bundle traces 3; leaf buds slender and pointed; flower buds flat and biscuit-shaped.
- **Leaves:** Opposite, simple, elliptic to ovate, pointed at the tip, tapering or rounded at the base, up to 6 inches long, the veins deeply impressed, the edges without teeth, pale and usually finely hairy on the lower surface; leaf stalks up to 3/4 inch long.
- **Flowers:** Several crowded together in a yellow-green cluster, each cluster subtended by 4 large, white, petal-like bracts notched at the tip.
- **Sepals:** 4, green, minute.
- **Petals:** 4, yellow-green, free from each other, minute, up to 1/4 inch long.
- **Stamens:** 4.
- **Pistils:** Ovary inferior, smooth.
- **Fruits:** Berries ovoid, bright red, shiny, up to 1/2 inch long, with mealy flesh and 1-2 seeds.
- **Notes:** Flowering dogwood is a popular ornamental because of its showy bracts. The fruits are eaten by squirrels and raccoons, although they are poisonous to humans. In the past, the bark has been used for fevers. A virus, as yet uncontrollable, is devastating to this species.



Northeast Wetland Flora

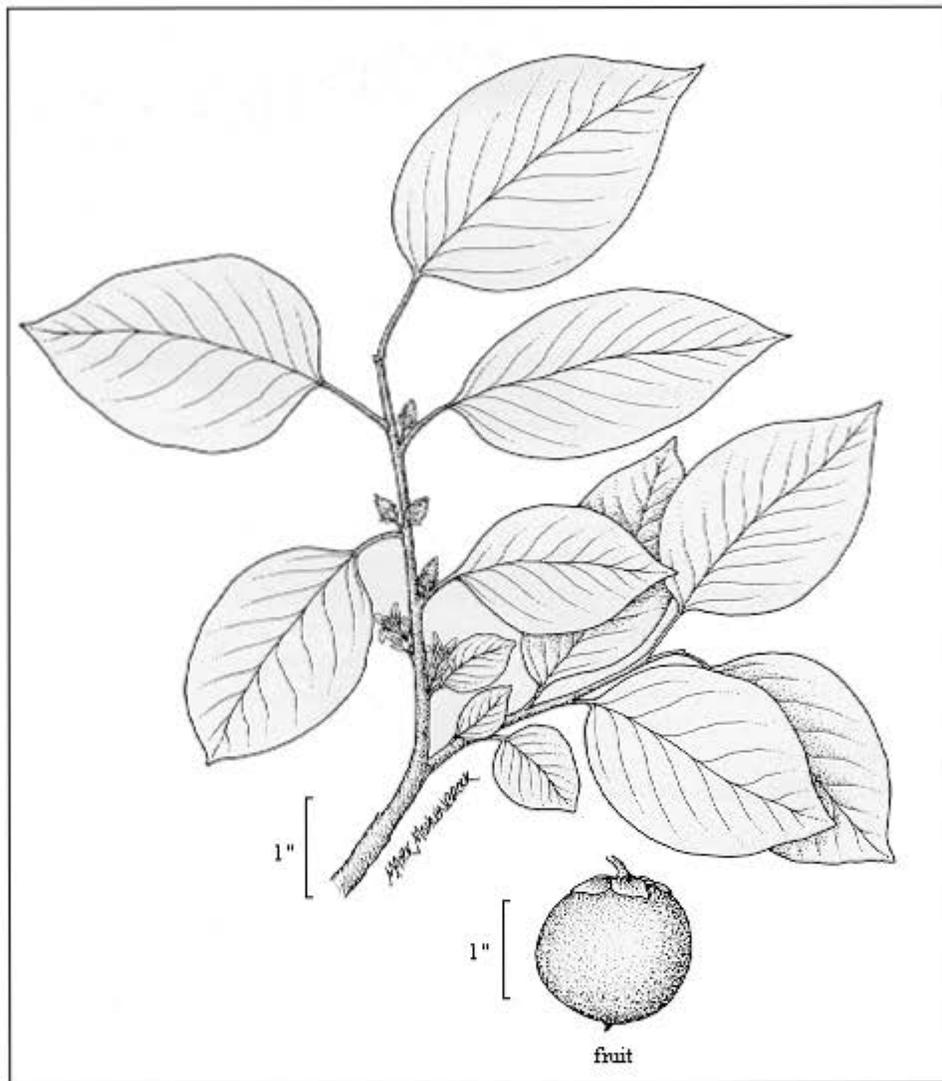
Field Office Guide to Plant Species

Common Persimmon *Diospyros virginiana* L.



- **Family:** Ebony (Ebenaceae)
- **Flowering:** April-May
- **Field Marks:** This species has alternate toothless leaves with a distinct pattern of dark, net venation visible on its paler lower leaf surfaces. The orange fruits may be as much as 2 inches in diameter.
- **Habitat:** Dry woods, rich bottomland woods, edge of fields, fence rows.
- **Habit:** Medium tree up to 50 or more feet tall; trunk diameter up to 1 foot or more; crown broad and rounded or flattened.
- **Bark:** Dark gray to black, broken into squarish plates at maturity.
- **Twigs:** Slender, brown, smooth or hairy, usually with lenticels; leaf scars alternate; bundle trace 1; buds red-brown to black, triangular, up to 1/8 inch long.
- **Leaves:** Alternate, simple, elliptic to oval, pointed at the tip, tapering or rounded at the base, up to 5 inches long, about half as broad, without teeth, dark green above, paler beneath with a distinct pattern of black net venation, smooth; leaf stalks up to 1 inch long.
- **Flowers:** Male and female usually borne on separate trees, the male in clusters of 2-3, up to 1/2 inch long, the female solitary, 1/2-3/4 inch long.
- **Sepals:** 4, united at base, green.
- **Petals:** 4, united at base, pale yellow, rather thick.
- **Stamens:** 8-16.
- **Pistils:** Ovary superior; styles 4.
- **Fruits:** Fleshy, with orange pulp, spherical to flattened-spherical, but with the greenish sepals persistent at one end, yelloworange to orange, up to 2 inches in diameter, enclosing few, large, flat, light brown seeds.
- **Notes:** The fruits, ripening after frost, are edible to humans, and are also eaten by deer, foxes, raccoons, skunks,

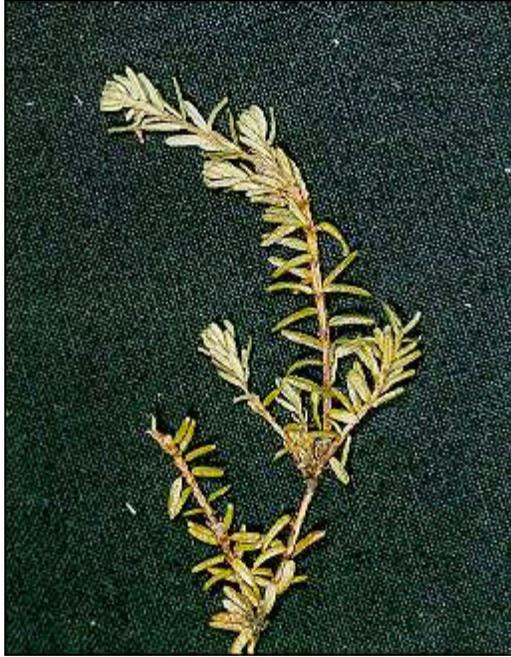
many other mammals, and some birds.



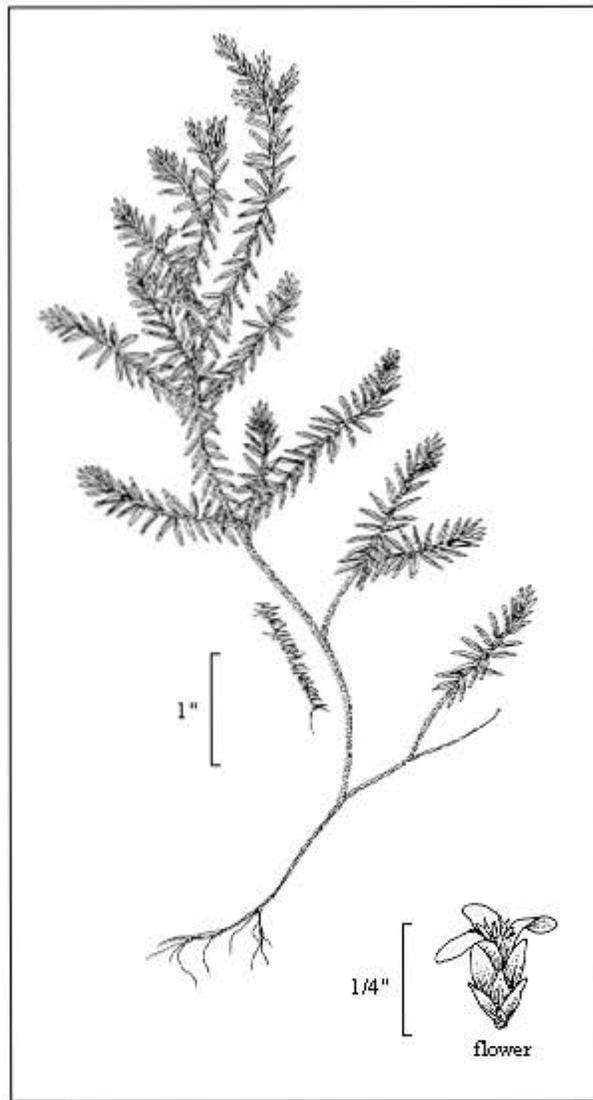
Northeast Wetland Flora

Field Office Guide to Plant Species

Black Crowberry *Empetrum nigrum* L.



- **Family:** Crowberry (Empetraceae)
- **Flowering:** July-November
- **Field Marks:** This species is distinguished by its low, shrubby growth form, its numerous stiff, evergreen, reflexed, linear leaves, and its black fruits.
- **Habitat:** Bogs, fens.
- **Habit:** Low evergreen shrub from tough rootstocks.
- **Stems:** Spreading or prostrate, the lower branches creeping; branchlets slender, smooth or sometimes with glandular hairs and therefore sticky.
- **Leaves:** Alternate, simple, evergreen, numerous, linear to narrowly elliptic, toothless, smooth or glandular hairy, up to 1/3 inch long, stiff, soon reflexed.
- **Flowers:** Male and female flowers borne separately but on the same plant in the axils of the leaves.
- **Sepals:** Usually 3, petal-like, free from each other.
- **Petals:** Usually 3, free from each other.
- **Stamens:** 3.
- **Pistils:** Ovary superior; stigmas 6-9.
- **Fruits:** Drupes black, often glaucous, spherical, up to 1/4 inch in diameter.



Northeast Wetland Flora

Field Office Guide to Plant Species

Eastern Burning-bush *Euonymus atropurpureus* Jacq.



- **Family:** Bittersweet (Celastraceae)
- **Flowering:** June-July
- **Field Marks:** This species is characterized by its green twigs and four-lobed, rose-colored fruits that split open to reveal seeds with a bright red covering.
- **Habitat:** Moist woods, thickets.
- **Habit:** Shrub or small tree to about 25 feet tall.
- **Stems:** Twigs greenish, smooth, with opposite leaf scars.
- **Leaves:** Opposite, simple, elliptic to narrowly ovate, pointed at the tip, rounded or tapering to the base, finely toothed, smooth on the upper surface, hairy on the lower surface, up to 4 inches long, up to 2 1/2 inches wide; leaf stalks up to 1/6 inch long.
- **Flowers:** Borne in axillary clusters on stalks longer than the leaf stalks, purplish, up to 1/3 inch across.
- **Sepals:** 4, green, united at the base.
- **Petals:** 4, purple, free from each other, up to 3/4 inch long.
- **Stamens:** 4, attached to a disk that covers the ovary.
- **Pistils:** Ovary superior; stigma 3- to 5-lobed.
- **Fruits:** Capsule irregularly 4-lobed, pink or rose, smooth, up to 3/4 inch in diameter; seeds brown, but covered by a bright red, fleshy structure.
- **Notes:** This plant is also called wahoo. Stems and young leaves are browsed by deer, and seeds are eaten by birds.

Northeast Wetland Flora

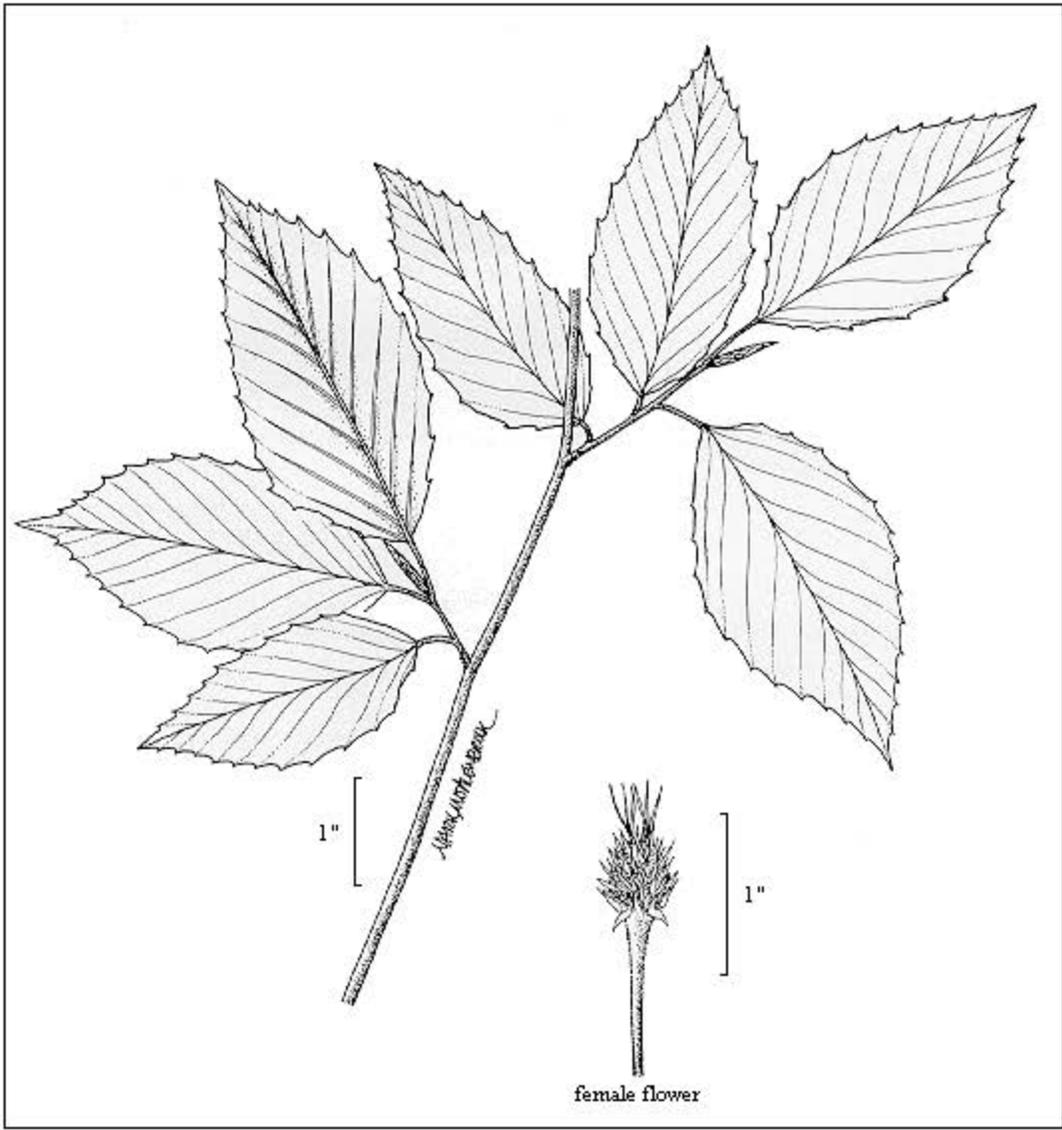
Field Office Guide to Plant Species

American Beech

Fagus grandifolia Ehrh.



- **Family:** Beech (Fagaceae)
- **Flowering:** April-May
- **Field Marks:** This tree is distinguished by its smooth gray trunk, its long-pointed winter buds, and its soft prickly fruits containing 1-3 triangular nuts.
- **Habitat:** Rich woods, less common in drier woods.
- **Habit:** Tree up to 100 feet tall, the trunk up to 4 feet in diameter, with a broad, widely spreading, rounded crown; bark smooth, gray, thin.
- **Twigs:** Gray or yellowish, slender, smooth, more or less zigzag; leaf scars half round, alternate, with 3 bundle scars; buds slender, narrow, long-pointed, smooth, reddish brown, up to 3/4 inch long.
- **Leaves:** Alternate, simple, obovate to oblong, pointed at the tip, rounded or tapering to the asymmetrical base, coarsely toothed along the edges, up to 4 inches long, up to 2 1/2 inches wide, smooth and shiny on the upper surface, smooth or slightly hairy on the lower surface; leaf stalk very short.
- **Flowers:** Male and female borne separately on the same tree, appearing after the leaves have unfolded, the male in numerous, small, spherical, pendulous heads, the female in groups of 2.
- **Sepals:** 4-8, united below, minute.
- **Petals:** 0.
- **Stamens:** 8-16.
- **Pistils:** Ovary inferior.
- **Fruits:** Soft-spiny burs up to 3/4 inch long, reddish brown, containing 1-3 triangular nuts.
- **Notes:** The wood may be used for fuel, chairs, and tool handles. The nuts are edible by humans and wild animals. In the northeastern states this species is under attack by a fungus. The American beech variety *caroliniana* has a wetter indicator status.



Northeast Wetland Flora

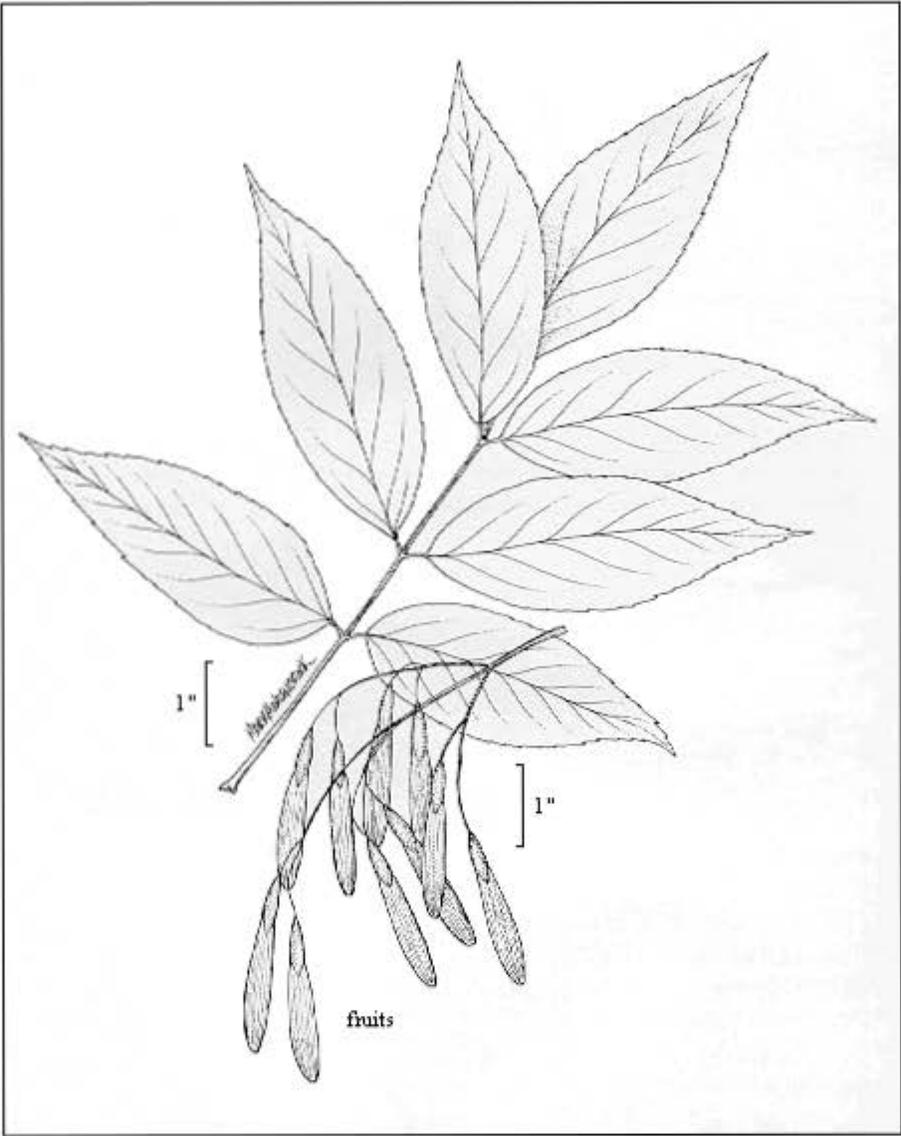
Field Office Guide to Plant Species

White Ash

Fraxinus americana L.



- **Family:** Ash (Oleaceae)
- **Flowering:** March-April
- **Field Marks:** The leaf scars on the twigs of this species are more or less concave along the top, rather than straight across as they are in the similar green ash (*Fraxinus pennsylvanica*).
- **Habitat:** Bottomlands, wooded slopes.
- **Habit:** Large tree up to 100 feet tall; trunk diameter up to 4 feet; crown pyramidal or ovoid.
- **Bark:** Light or dark gray, with diamond-shaped furrows between flat-topped, sometimes scaly, ridges.
- **Twigs:** Slender, gray or brown, sometimes hairy but usually smooth; leaf scars opposite; bundle traces forming a half-moon; buds rounded, dark brown, finely hairy.
- **Leaves:** Opposite, pinnately compound, with 5-9 leaflets; leaflets lance-shaped to lance-ovate, often curved, pointed at the tip, rounded or tapering to the base, up to 5 inches long, about half as broad, shallowly toothed, pale and smooth or hairy on the lower surface, stalk of leaflets short.
- **Flowers:** Male and female borne on separate trees before the leaves begin to expand, minute, purplish, in crowded clusters.
- **Sepals:** Small, 4-parted.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Paddle-shaped, winged, up to 2 1/2 inches long and 1/4 inch wide, several in a cluster, 1-seeded at the base.
- **Notes:** The leaves often turn yellowish or a shade of maroon in the autumn. The hard wood is used in making furniture, baseball bats, snowshoes, and for interior finishing. The seeds are an important source of food for squirrels, rodents, and many kinds of birds.



Northeast Wetland Flora

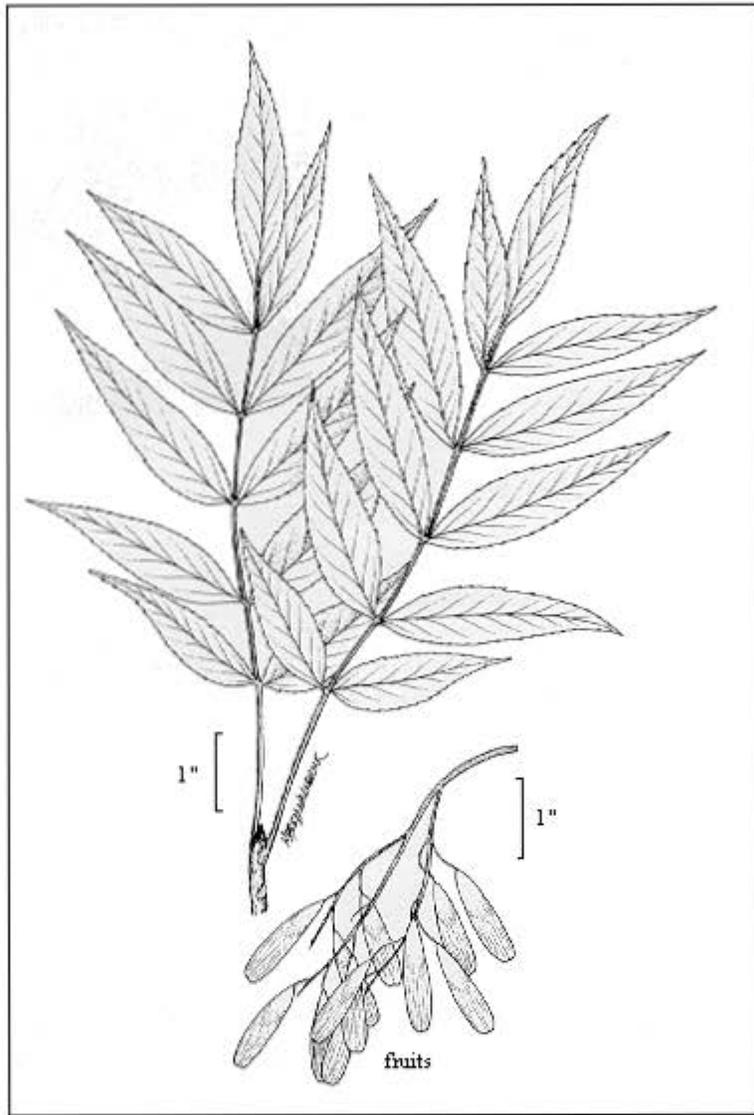
Field Office Guide to Plant Species

Black Ash

Fraxinus nigra Marshall



- **Family:** Ash (Oleaceae)
- **Flowering:** May-June
- **Field Marks:** This ash is distinguished by its leaflets which lack stalks and its fruits that are blunt and notched at the end.
- **Habitat:** Swamps, swampy woods, sometimes in standing water.
- **Habit:** Medium tree up to 70 feet tall; trunk diameter up to 2 feet; crown broadly rounded.
- **Bark:** Light gray, scaly.
- **Bark:** Stout, gray or brown, smooth; leaf scars opposite; bundle traces forming a half moon; buds conical, blue-black, finely hairy.
- **Leaves:** Opposite, pinnately compound, with 7-11 leaflets; leaflets without stalks, except for the terminal one, lance-shaped, long-pointed at the tip, tapering or rounded at the somewhat asymmetrical base, up to 6 inches long, less than half as wide, toothed, paler on the lower surface with rusty hairs on the veins.
- **Flowers:** Small, in elongated clusters, purplish, some with both stamens and pistils, some only with stamens, some only with pistils.
- **Sepals:** Small, 4-cleft.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Oblong, winged fruits, rounded at the base, blunt and notched at the tip, up to 1 1/2 inches long, up to 1/2 inch broad, with a single seed at the base.
- **Notes:** The leaflets turn reddish brown in the autumn. Deer and moose browse the twigs and young leaves, while birds and many species of animals eat the seeds. The wood of black ash is used for cabinets and furniture.



Northeast Wetland Flora

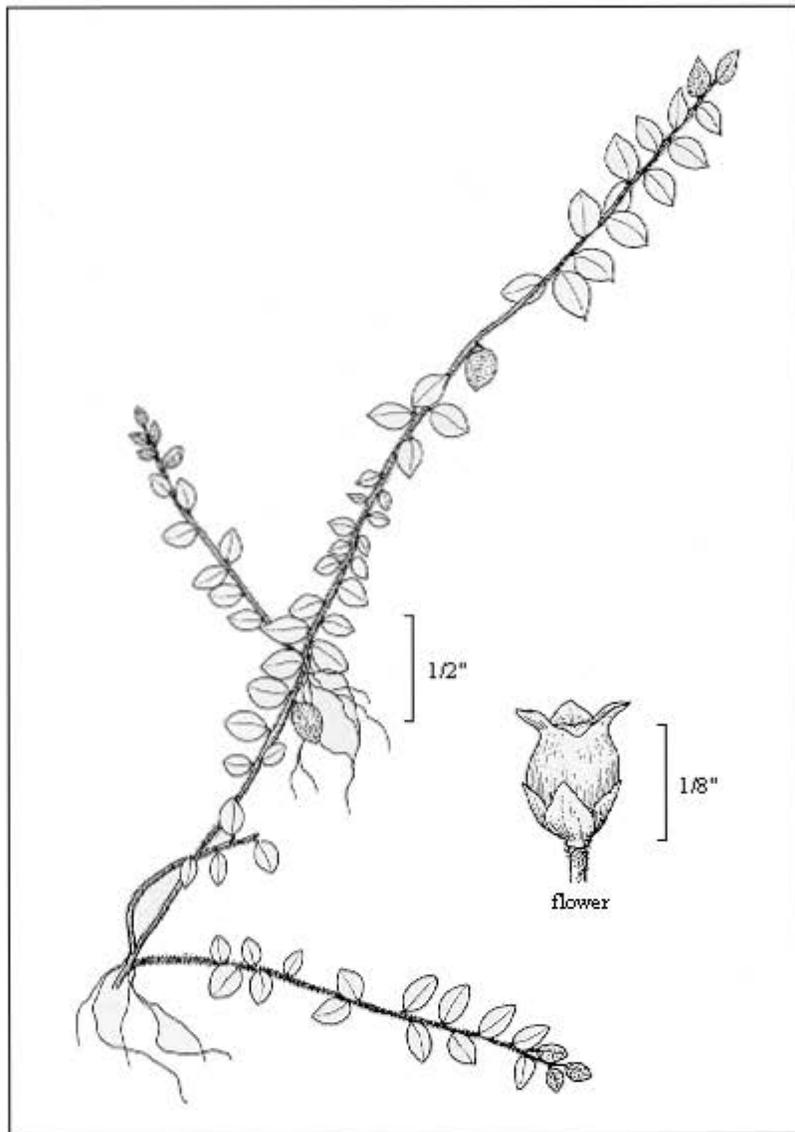
Field Office Guide to Plant Species

Creeping Snowberry

Gaultheria hispidula (L.) Muhl. ex Torr.



- **Family:** Heath (Ericaceae)
- **Flowering:** April-June
- **Field Marks:** This evergreen low shrub is distinguished by its creeping habit, its numerous small ovate leaves, and its solitary, axillary, 4-parted flowers.
- **Habitat:** Bogs, fens, coniferous forests.
- **Habit:** Creeping evergreen shrub from slender rhizomes.
- **Stems:** Creeping, scarcely woody, with bristly hairs, up to 14 inches long.
- **Leaves:** Alternate, simple, numerous, evergreen, ovate, pointed at the tip, rounded at the short-stalked base, the edges rolled under, with bristly hairs on the lower surface, to 1/2 inch long.
- **Flowers:** Solitary in the axils of the leaves, drooping, bell-shaped, white, about 1/12 inch across, on recurved stalks about 1/20 inch long, closely subtended by a small pair of sepal-like bracts.
- **Sepals:** 4, green, united below to form a small bell, smooth or sparsely hairy.
- **Petals:** 4, white, united for 2/3 the length, 1/10-1/8 inch long.
- **Stamens:** 8.
- **Pistils:** Ovary half-inferior, smooth.
- **Fruits:** Berries bright white, 1/4-1/2 inch long, surrounded at base by the persistent sepals.
- **Notes:** The berry has a mild wintergreen odor when crushed.



Northeast Wetland Flora

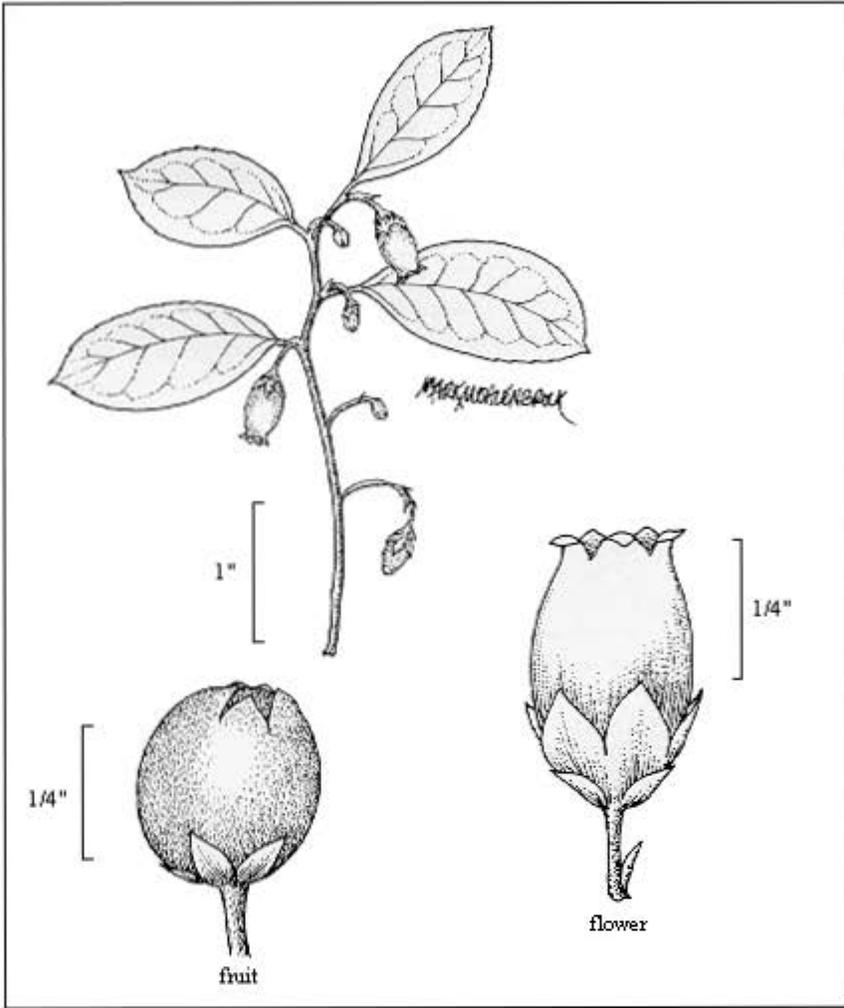
Field Office Guide to Plant Species

Teaberry

Gaultheria procumbens L.



- **Family:** Heath (Ericaceae)
- **Flowering:** July-August
- **Field Marks:** This creeping shrublet is distinguished by its small elliptic, leathery leaves, its wintergreen odor, and its red fruits.
- **Habitat:** Woods.
- **Habit:** Creeping shrublet with ascending flowering branches.
- **Stems:** Flowering branches ascending, smooth, slender, up to 6 inches tall.
- **Leaves:** Alternate, simple, evergreen, leathery, elliptic, tapering or rounded at the tip, tapering to the base, minutely toothed near the tip, up to 2 1/2 inches long, scented with wintergreen.
- **Flowers:** Solitary or in short racemes from the axils of the leaves, nodding, more or less white, each flower subtended by a pair of small bracts which are appressed to the sepals and another solitary bract elsewhere on the flower stalk.
- **Sepals:** 5, white, united at the base to form a saucer.
- **Petals:** 5, white, bell-shaped, up to 1/2 inch long.
- **Stamens:** 8 or 10, not exerted beyond the petals.
- **Pistils:** Ovary superior or partly inferior.
- **Fruits:** Berry-like capsule surrounded by the fleshy sepals, soft, red, up to 1/2 inch in diameter, tasting of wintergreen.
- **Notes:** This species was the original source of wintergreen. The fruits are eaten by wild turkey and ruffed grouse, while the young branchlets and leaves are eaten by deer and black bear.



Northeast Wetland Flora

Field Office Guide to Plant Species

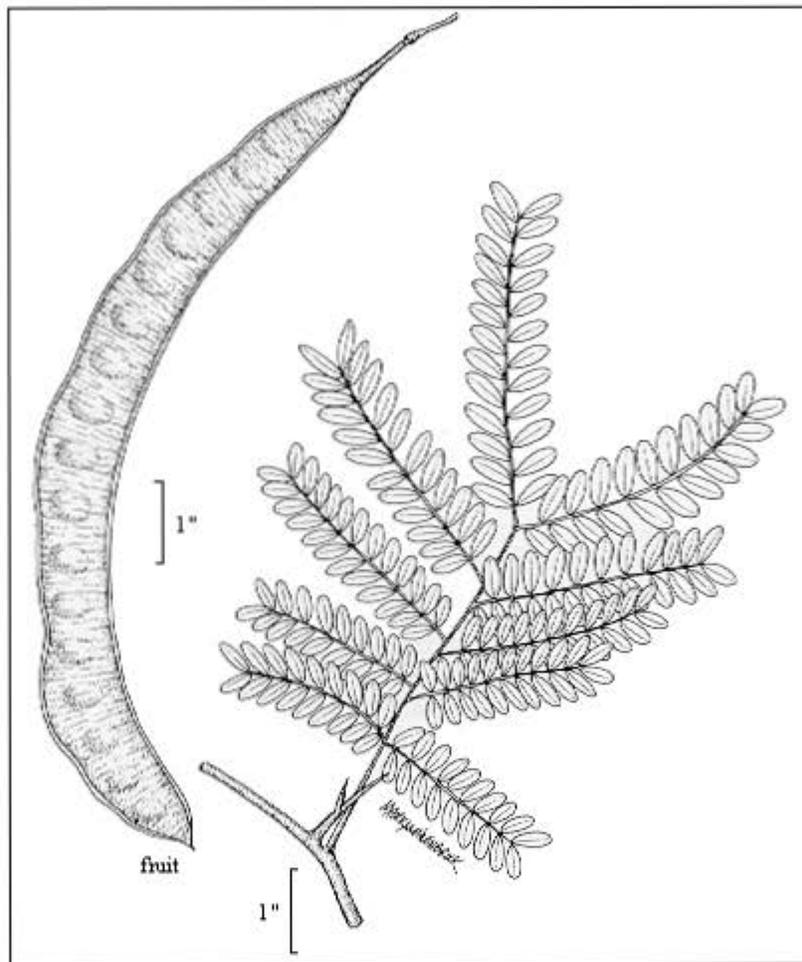
Honey-locust

Gleditsia triacanthos L.



- **Family:** Pea (Leguminosae)
- **Flowering:** May-June
- **Field Marks:** Honey-locust is distinguished by having both once-pinnate and twice-pinnate leaves on the same tree, by its flat, twisted fruits more than 1 foot long, and by its large, often multi-branched thorns.
- **Habitat:** Moist, wooded ravines, thickets.
- **Habit:** Medium tree to 70 feet tall; trunk diameter up to 3 feet; crown broadly rounded; trunk usually with large, purple-brown, multi-branched thorns up to 6 inches long.
- **Bark:** Dark brown, deeply furrowed and scaly at maturity.
- **Twigs:** Slender, angular, reddish brown, smooth, zigzag, with 3-parted or unbranched thorns; leaf scars alternate; bundle traces 3; buds rounded, nearly hidden beneath the leaf scars, dark brown.
- **Leaves:** Alternate, often doubly pinnately compound, with many leaflets; leaflets oblong to oblong-lanceolate, rounded or slightly pointed at the tip, rounded at the slightly asymmetrical base, minutely toothed, smooth except for some hairs along the veins, up to 1 1/2 inches long, less than half as wide.
- **Flowers:** Some flowers with both stamens and pistils, others with only one or the other, in elongated clusters up to 3 inches long, yellowish, small.
- **Sepals:** Very short, 3- to 5-parted, green.
- **Petals:** 3-5, free from each other, about as long as the sepals.
- **Stamens:** 3-10.
- **Pistils:** Ovary superior, elongated, smooth.
- **Fruits:** Elongated pods up to 1 1/2 feet long and up to 2 inches wide, flat, often twisted or curved, purple-brown, containing several oval seeds embedded in a thick pulp.
- **Notes:** Gleason and Cronquist place this species in the Caesalpinaceae. The pulp within the young pods is very

sweet. Many wild animals eat the fruits. This tree is sometimes grown as an ornamental.



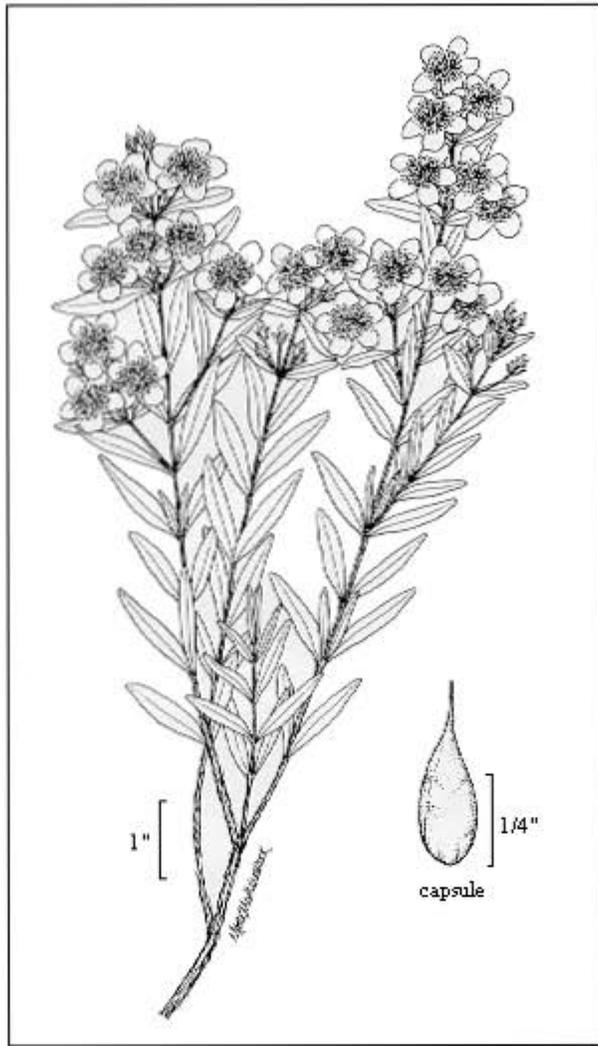
Northeast Wetland Flora

Field Office Guide to Plant Species

Shrubby St. John's-wort
Hypericum prolificum L.



- **Family:** St. John's-wort (Guttiferae)
- **Flowering:** July-September
- **Field Marks:** This species is distinguished by its shrubby habit, its flowers about 1 inch across, and its numerous stamens.
- **Habitat:** Swamps, damp thickets, pastures.
- **Habit:** Shrub up to 8 feet tall, the bark shredding when old.
- **Stems:** Much branched, distinctly 2-edged, smooth.
- **Leaves:** Opposite, simple, linear to oblong, rounded at the tip, tapering to the base, without teeth, smooth, up to 2 1/2 inches long, up to 3/4 inch wide; leaf stalk very short.
- **Flowers:** Few to several in cymes yellow, each flower up to 1 inch across.
- **Sepals:** 5, green, free from each other, smooth, lanceolate, pointed at the tip, up to 1/3 inch long.
- **Petals:** 5, yellow, free from each other, striate, up to 1/2 inch long.
- **Stamens:** Numerous and almost completely overlapping the petals, creating a powder-puff appearance.
- **Pistils:** Ovary superior; styles 3-4, united at first but separating as the fruit opens.
- **Fruits:** Capsules ovoid, elongated, up to 3/4 inch long, up to 1/4 inch wide, smooth, containing numerous seeds.
- **Notes:** Gleason and Cronquist call this family Clusiaceae..



Northeast Wetland Flora

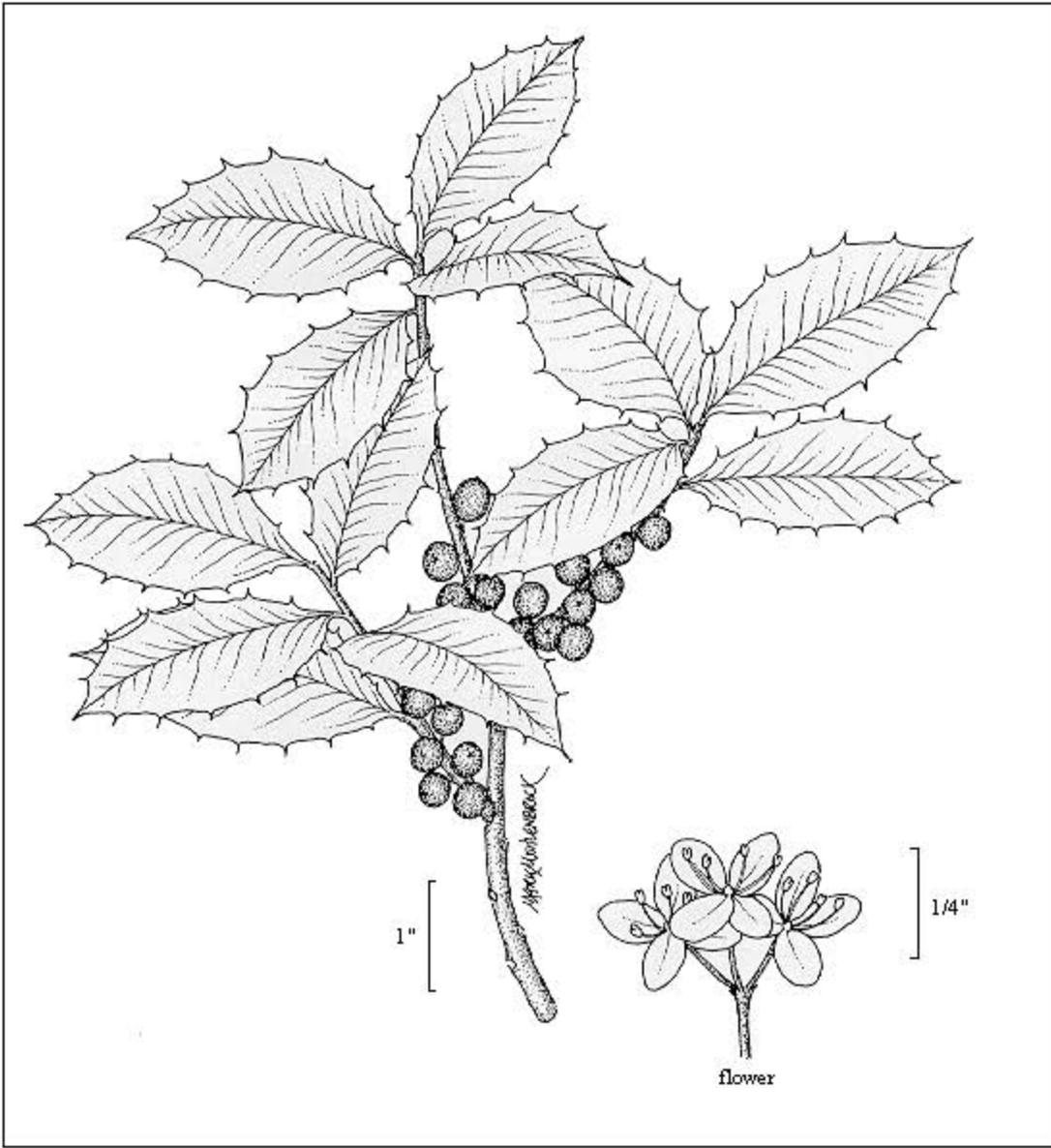
Field Office Guide to Plant Species

American Holly

Ilex opaca Soland. in Ait.



- **Family:** Holly (Aquifoliaceae)
- **Flowering:** May-June
- **Field Marks:** This tree is readily recognized by its prickly-edged, evergreen, leathery leaves.
- **Habitat:** Moist woods.
- **Habit:** Tree to 60 feet tall, with a trunk diameter up to 2 1/2 feet; bark light gray, pebbly.
- **Twigs:** Pale brown, minutely hairy when young, becoming smooth; buds round-tipped or pointed, with brown, hairy scales.
- **Leaves:** Alternate, simple, evergreen, leathery, oval to elliptic, spiny toothed, dark green above, paler below, up to 4 inches long, up to 2 inches wide.
- **Flowers:** Male and female borne separately, usually on separate trees, the male 3-10 in a stalked cluster, the female usually solitary.
- **Sepals:** 4, green, united below.
- **Petals:** 4, greenish white, free from each other.
- **Stamens:** 4.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Drupes red, spherical, up to 1/2 inch in diameter, persisting throughout the winter.
- **Notes:** The leaves and berries are used for Christmas decorations. The plant is grown extensively as an ornamental. The wood can be used to make furniture.



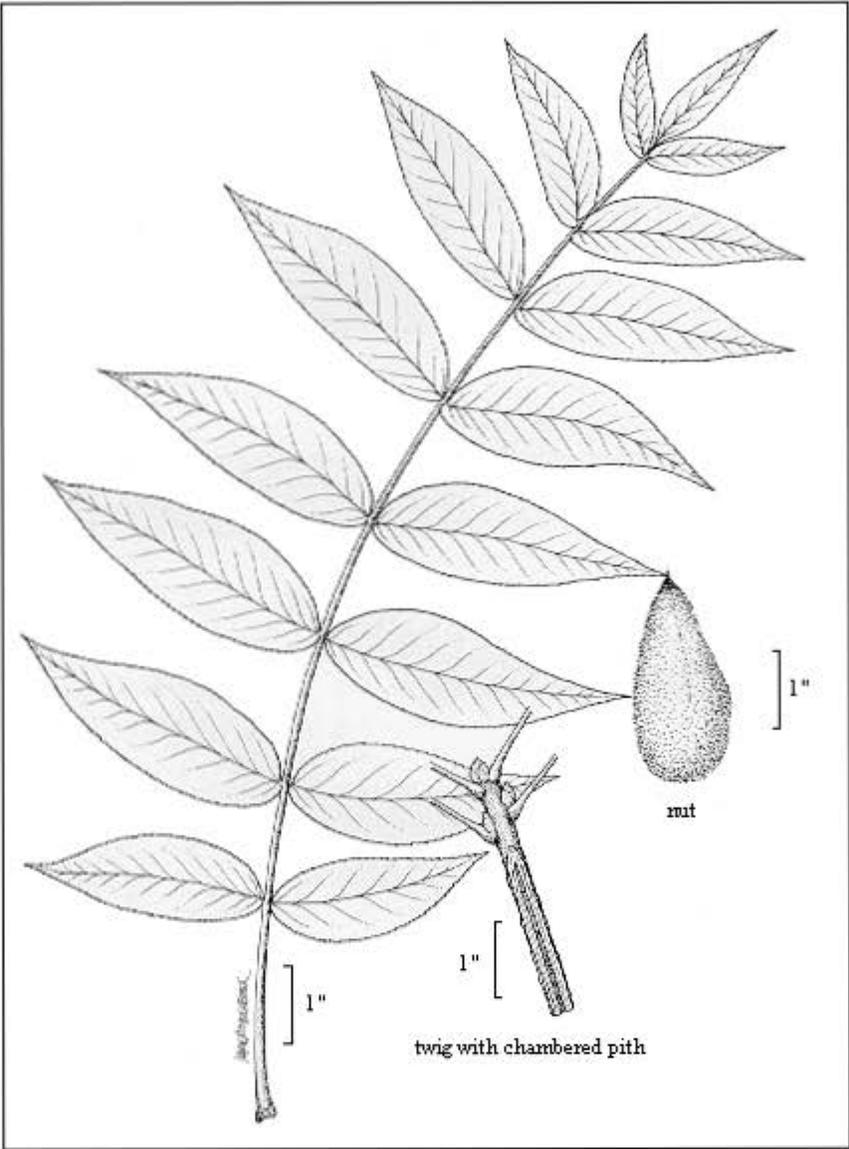
Northeast Wetland Flora

Field Office Guide to Plant Species

Butternut *Juglans cinerea* L.



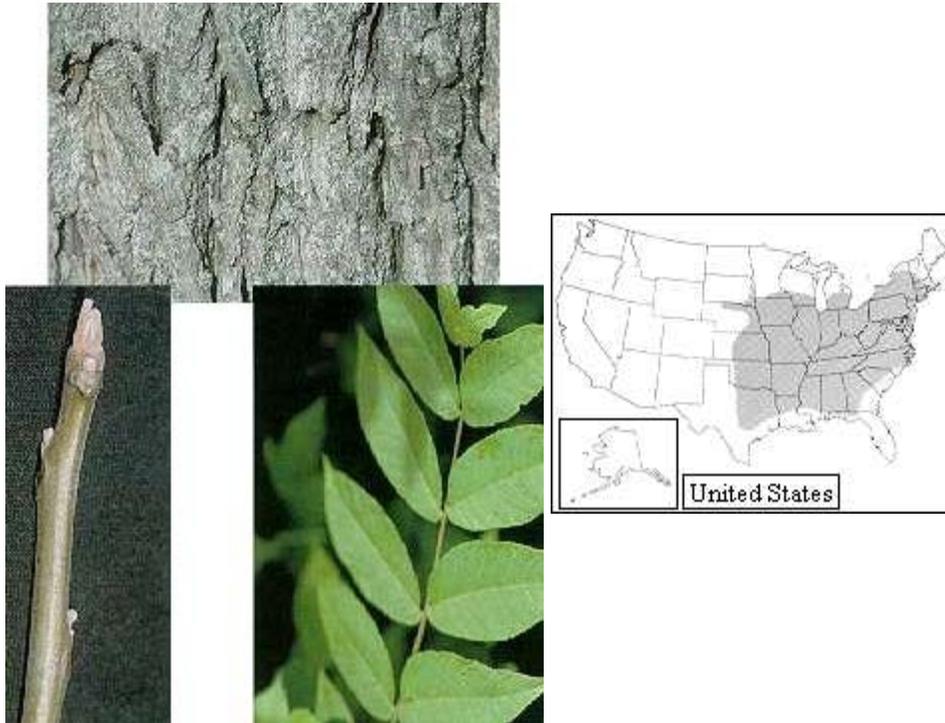
- **Family:** Walnut (Juglandaceae)
- **Flowering:** April-May
- **Field Marks:** Species of *Juglans* are distinguished by their pinnately compound leaves with many leaflets and by their partitioned pith. Butternut differs from the other species of *Juglans* by its ovoid-oblong fruits covered by a sticky-hairy husk.
- **Habitat:** Bottomland woods, river terraces.
- **Habit:** Medium to large tree up to 90 feet tall; trunk diameter up to 3 feet; crown flat to broadly rounded.
- **Bark:** Light gray, divided by deep furrows into broad, scaly ridges.
- **Twigs:** Stout, greenish to orange-brown to gray, smooth or hairy, usually shiny, with white lenticels; pith chocolate-colored, divided by partitions; leaf scars alternate; bundle traces 3; buds blunt at the tip, whitish, hairy, up to 1/2 inch long.
- **Leaves:** Alternate, pinnately compound, with up to 17 leaflets; leaflets up to 3 inches long and 2 inches wide, broadly lance-shaped, pointed at the tip, rounded at the asymmetrical base, finely toothed, yellow-green on the upper surface, paler on the lower surface, softly hairy and sometimes sticky.
- **Flowers:** Borne separately but on the same tree, the male several in thick, yellow-green spikes, the female much fewer in reduced spikes.
- **Sepals:** Usually 4, often reduced to teeth.
- **Petals:** 0.
- **Stamens:** 8-40.
- **Pistils:** Ovary inferior.
- **Fruits:** In groups of 2-5, ovoid-oblong, up to 2 1/2 inches long, sticky-hairy, the husk thick, the nut pointed at one end, pale brown.
- **Notes:** The nuts are rich in fats and very tasty. This species is rapidly disappearing because of an uncontrollable disease.



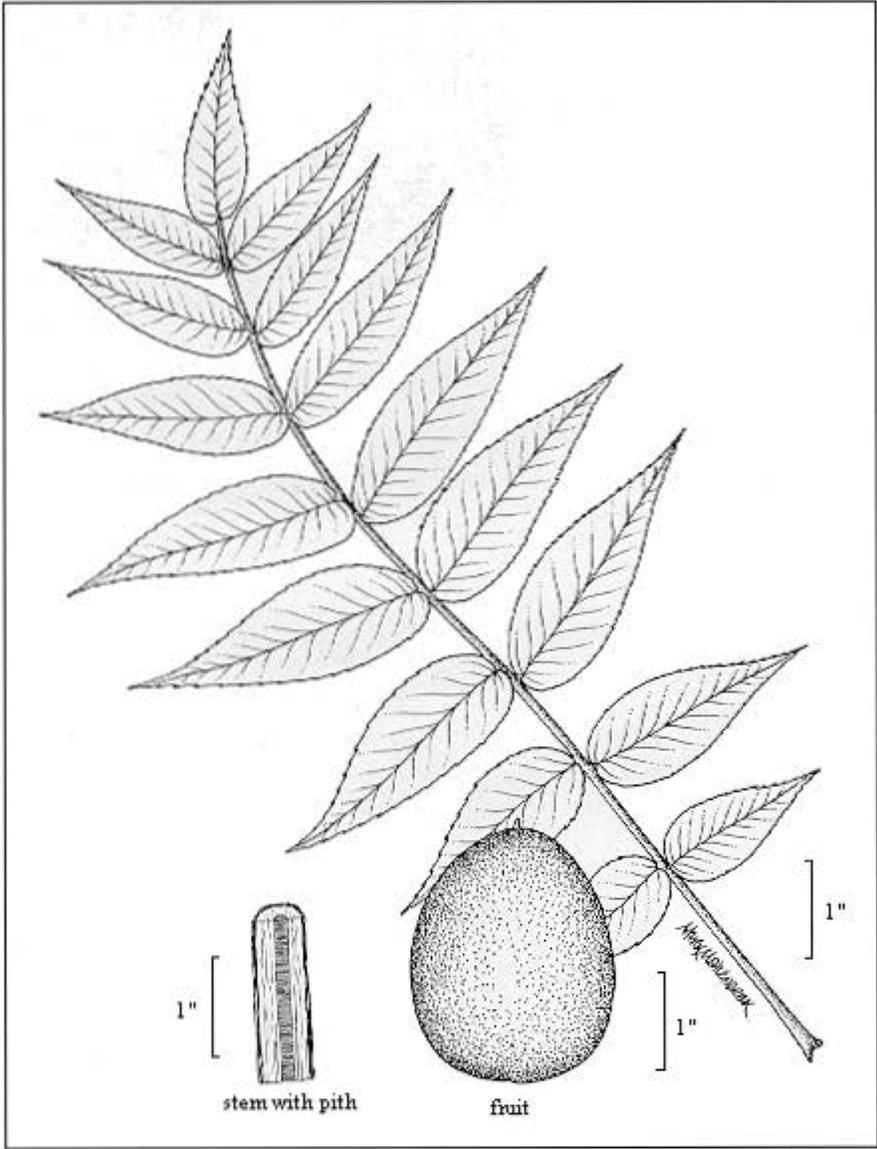
Northeast Wetland Flora

Field Office Guide to Plant Species

Black Walnut *Juglans nigra* L.



- **Family:** Walnut (Juglandaceae)
- **Flowering:** April-June
- **Field Marks:** This species is recognized by its soft-hairy buds, its tan-colored chambered pith, its distinct aroma, and its fruits.
- **Habitat:** Rich woods.
- **Habit:** Large tree up to 150 feet tall, with a trunk diameter up to 5 feet; crown broadly rounded; bark black, thick, deeply furrowed.
- **Twigs:** Stout, greenish or orange-brown, hairy or smooth; pith tan to light brown, divided by partitions; leaf scars alternate, shield-shaped, with 3 bundle traces; buds soft-hairy, up to 1/2 inch long.
- **Leaves:** Alternate on the stem, pinnately compound, with 15-23 leaflets; leaflets opposite or subopposite on the rachis, up to 3 1/2 inches long and 1 1/2 inches wide, broadly lanceolate, pointed at the tip, rounded at the asymmetrical base, toothed, yellow-green and smooth above, paler and hairy below.
- **Flowers:** Borne separately but on the same tree, appearing when the leaves are partly grown, the male several in thick, yellow-green, hairy spikes, the female much fewer in small spikes.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary inferior.
- **Fruits:** In groups of 1 or 2, spherical, up to 2 inches in diameter, green or yellow-green, slightly roughened, the husk thick, the nut very hard, oval, dark brown, deeply ridged, the seed sweet.
- **Notes:** The nut is edible and used for flavoring, including ice cream. The wood is extremely valuable for making furniture, interior finishing, gun stocks, and cabinets. The fruit husks were used by Indians and colonists as a dye. The plant contains allelopathic chemical compounds which restrict the growth of many plants.



Northeast Wetland Flora

Field Office Guide to Plant Species

Sheep-laurel *Kalmia angustifolia* L.



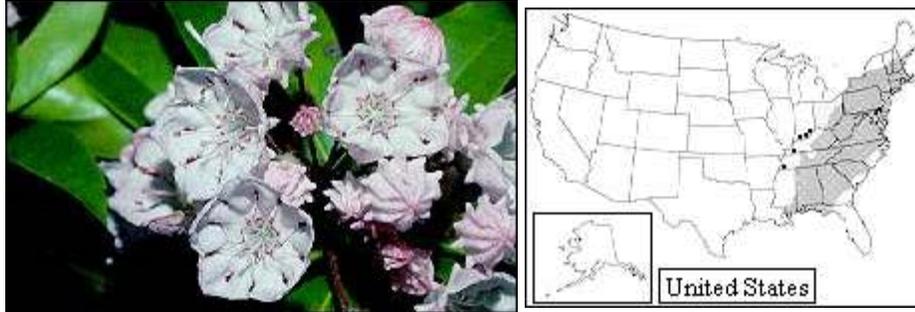
- **Family:** Heath (Ericaceae)
- **Flowering:** May-August
- **Field Marks:** This slender shrub is distinguished by glandular-hairy flower stalks, flat evergreen leaves, and flowers only about 1/2 inch across.
- **Habitat:** Pastures, barrens, dry or wet soil, swamps, fields.
- **Habit:** Slender shrub to 4 1/2 feet tall.
- **Stems:** Erect, slender; twigs terete, more or less smooth; buds very small; leaf scars with 1 bundle trace.
- **Leaves:** Opposite or sometimes whorled, evergreen but rather thin, oblong to elliptic-lanceolate, pointed to more or less rounded at the tip, tapering to the base, pale on the lower surface, minutely hairy on the lower surface, at least when young, up to 3 inches long, with a short stalk.
- **Flowers:** Usually borne in axillary clusters, each flower about 1/2 inch across, borne on a slightly glandular-hairy stalk.
- **Sepals:** 5, united to each other, green, persistent on the fruit.
- **Petals:** 5, united to each other, rose pink to purple.
- **Stamens:** 10, releasing the pollen at maturity when barely touched.
- **Pistils:** Ovary superior, smooth; style 1, up to 1/3 inch long.
- **Fruits:** Capsules more or less spherical but depressed at the top, 1/6-1/4 inch in diameter, with many minute seeds.
- **Notes:** Two varieties of this species occur throughout its range. The southern variety, *carolina*, is usually taller and permanently velvety-hairy on the leaf undersurfaces. Both varieties contain a compound called andromedotoxin which is toxic to livestock and wildlife.



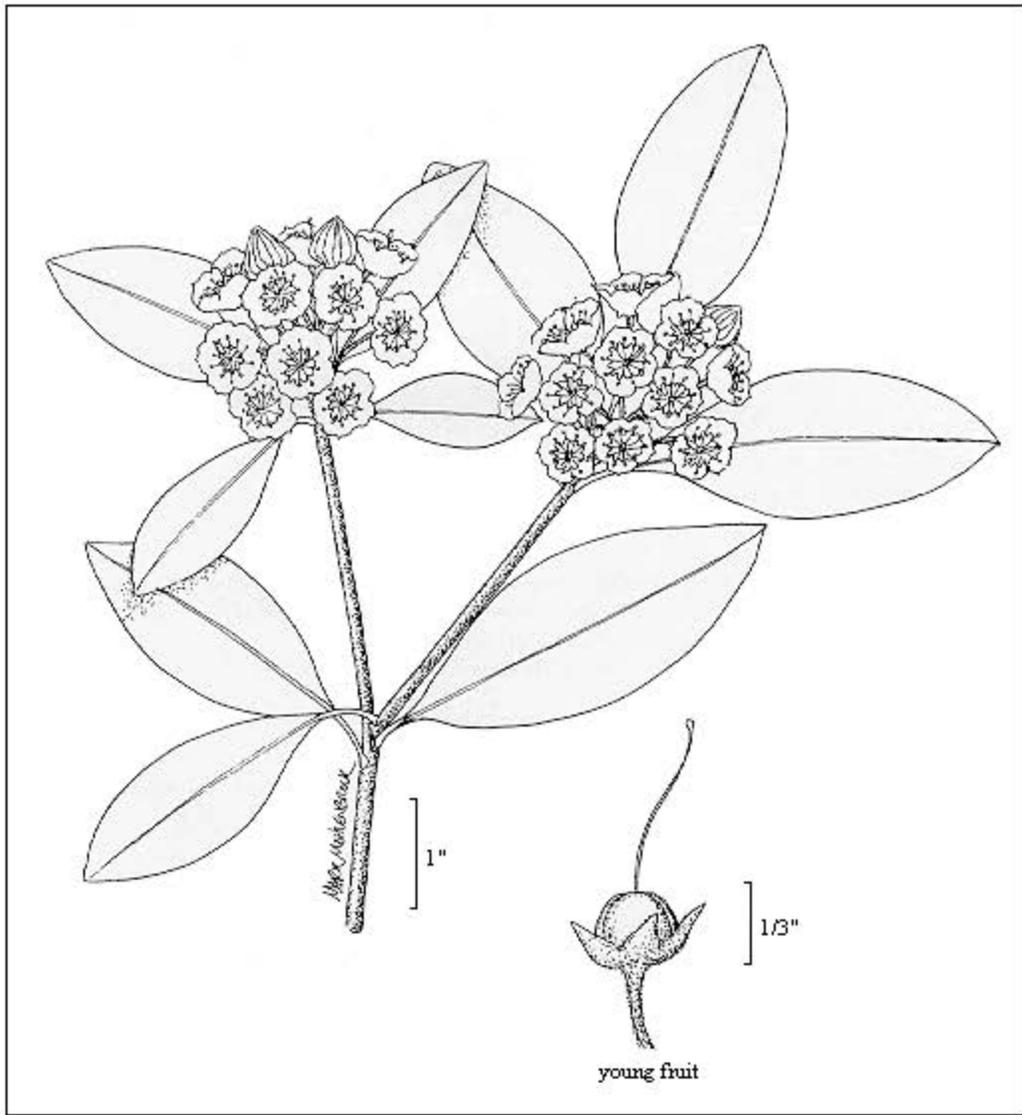
Northeast Wetland Flora

Field Office Guide to Plant Species

Mountain Laurel *Kalmia latifolia* L.



- **Family:** Heath (Ericaceae)
- **Flowering:** May-July
- **Field Marks:** The distinguishing features of this small tree are the pink flowers 1/2-1 inch across, the sticky sepals, and the flat evergreen leaves. In winter, the terminal buds are flat.
- **Habitat:** Woods, clearings, swamps.
- **Habit:** Shrub or small tree to 30 feet tall.
- **Stems:** Twigs sometimes angular, usually smooth; buds very small; leaf scars with 1 bundle trace.
- **Leaves:** Alternate but often crowded, evergreen, thick, broadly elliptic, pointed at the tip, tapering to the base, yellow-green on the lower surface, usually smooth, at least at maturity, up to 3 1/2 inches long; stalks up to nearly 1 inch long.
- **Flowers:** Several in terminal clusters, each flower 1/2-1 inch across, borne on glandular-sticky stalks.
- **Sepals:** 5, united to each other, green, sticky, persistent on the fruit.
- **Petals:** 5, united to each other, pink or white, often with purple spots.
- **Stamens:** 10, the anthers within pockets on the petals and releasing the pollen at maturity when barely touched.
- **Pistils:** Ovary superior, smooth; style 1, up to nearly 1 inch long.
- **Fruits:** Capsules spherical but depressed at the top, 1/4-1/3 inch in diameter, with many minute seeds.
- **Notes:** Because of the attractive nature of mountain laurel, it is often grown as an ornamental. This species contains the toxic compound andromedotoxin which can kill livestock and wildlife if eaten.



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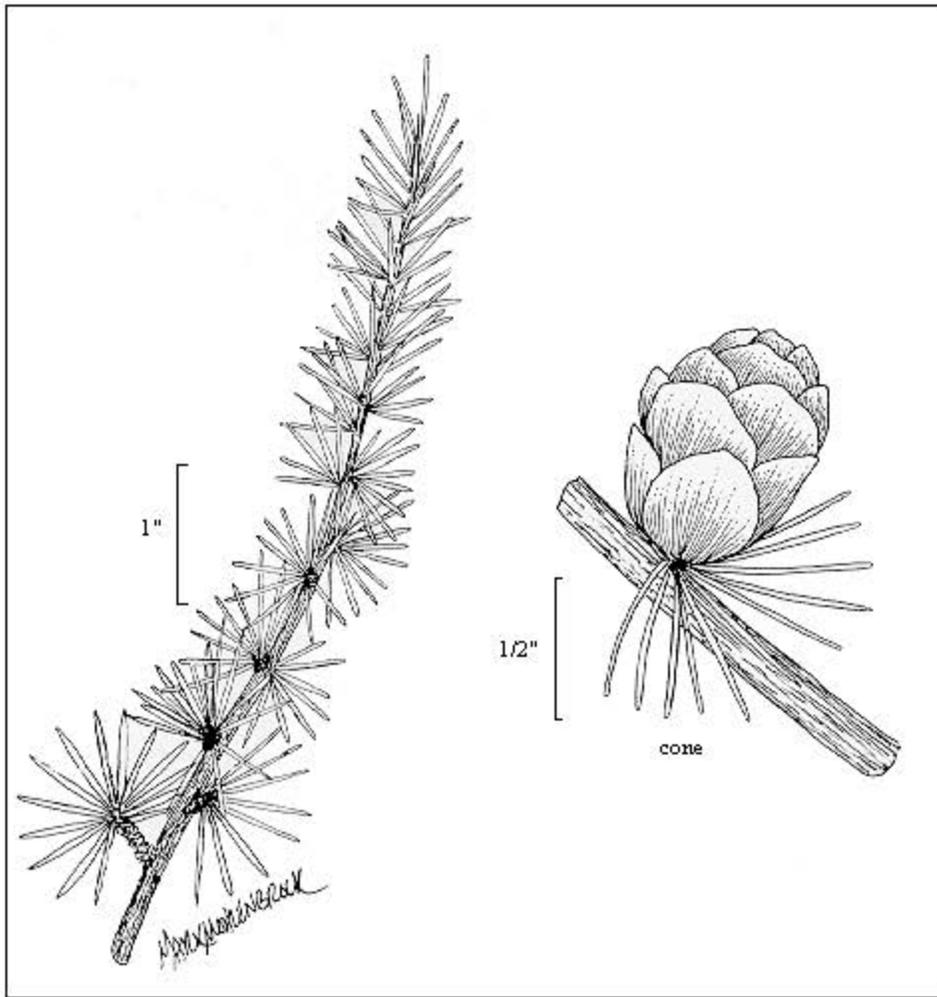
Field Office Guide to Plant Species

American Larch

Larix laricina (DuRoi) K. Koch.



- **Family:** Pine (Pinaceae)
- **Fruits:** Summer and Autumn
- **Field Marks:** This tree is distinguished by its deciduous leaves, small cones, and leaves borne several in a cluster.
- **Habitat:** Swamps, bogs.
- **Habit:** Medium to large tree to 100 feet tall, with a narrowly pyramidal crown; trunk diameter up to 1 1/2 feet; bark reddish brown, broken into scales.
- **Twigs:** Slender, light brown or orange, smooth; buds spherical, reddish brown, up to 1/8 inch in diameter; leaf scars alternate, elevated, borne on short spurs, with 1 bundle trace.
- **Leaves:** Needles numerous in clusters, soft, up to about 1 1/2 inches long, light green, falling away during the autumn.
- **Reproductive Structures:** Male spherical, yellow, usually not subtended by leaves; female oblong, rose-colored, usually subtended by leaves.
- **Fruits:** Cones erect, oblongoid, woody, up to 3/4 inch long, chestnut-brown; seeds with a wing about twice as long as the body.
- **Notes:** This tree is also known as tamarack. Its hard, orange-brown wood is used for fence posts, railroad ties, and interior finishing. This species is sometimes grown as an ornamental.



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Tulip Tree

Liriodendron tulipifera L.



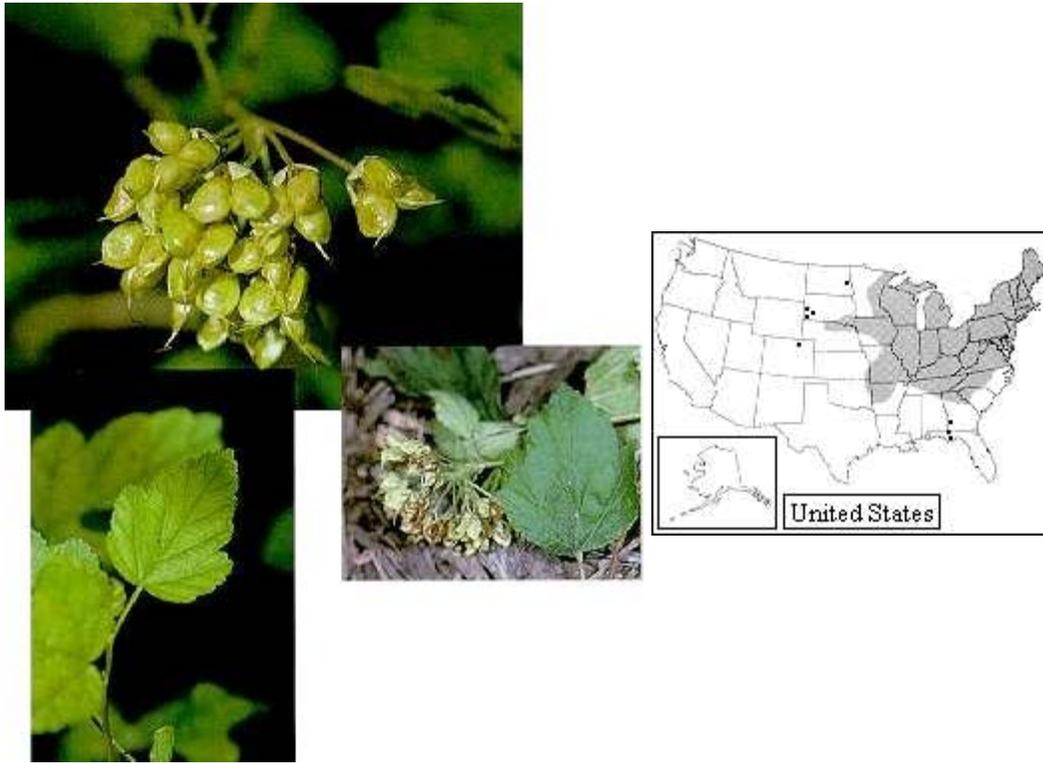
- **Family:** Magnolia (Magnoliaceae)
- **Flowering:** May-June
- **Field Marks:** The distinctive 4-lobed leaves, the large flowers with 6 petals, and the winged fruits aggregated into a "cone" distinguish this species.
- **Habitat:** Rich woods.
- **Habit:** Large tree up to 100 feet tall; crown oblong or pyramidal from a long, columnar trunk; trunk diameter up to 4 feet; bark grayish, becoming furrowed at maturity.
- **Twigs:** Smooth, reddish brown; buds flattened, up to 1 inch long, resembling duck bills; leaf scars alternate, with several bundle traces, with stipule scars encircling the twig.
- **Leaves:** Alternate, simple, 4-lobed, the upper two lobes usually with a conspicuous notch between them, bright green, smooth or nearly so, up to 6 inches long, often as broad.
- **Flowers:** Solitary, up to 2 inches long, cup-shaped, producing great quantities of nectar.
- **Sepals:** 3, turned downward, about as long as the petals.
- **Petals:** 6, in 2 rows, yellow-green with an orange base, obovate, rounded at the tip.
- **Stamens:** Numerous.
- **Pistils:** Several, each with a superior ovary.
- **Fruits:** Dry "cones" up to 2 1/2 inches long, comprised of several seeds winged at one end.
- **Notes:** This species is sometimes known as tulip poplar or yellow poplar. The wood is used for canoes and as veneer cores to which other wood can be glued. This species is frequently grown as an ornamental. The seeds are eaten by squirrels and various kinds of birds, while the seedlings are browsed by deer.

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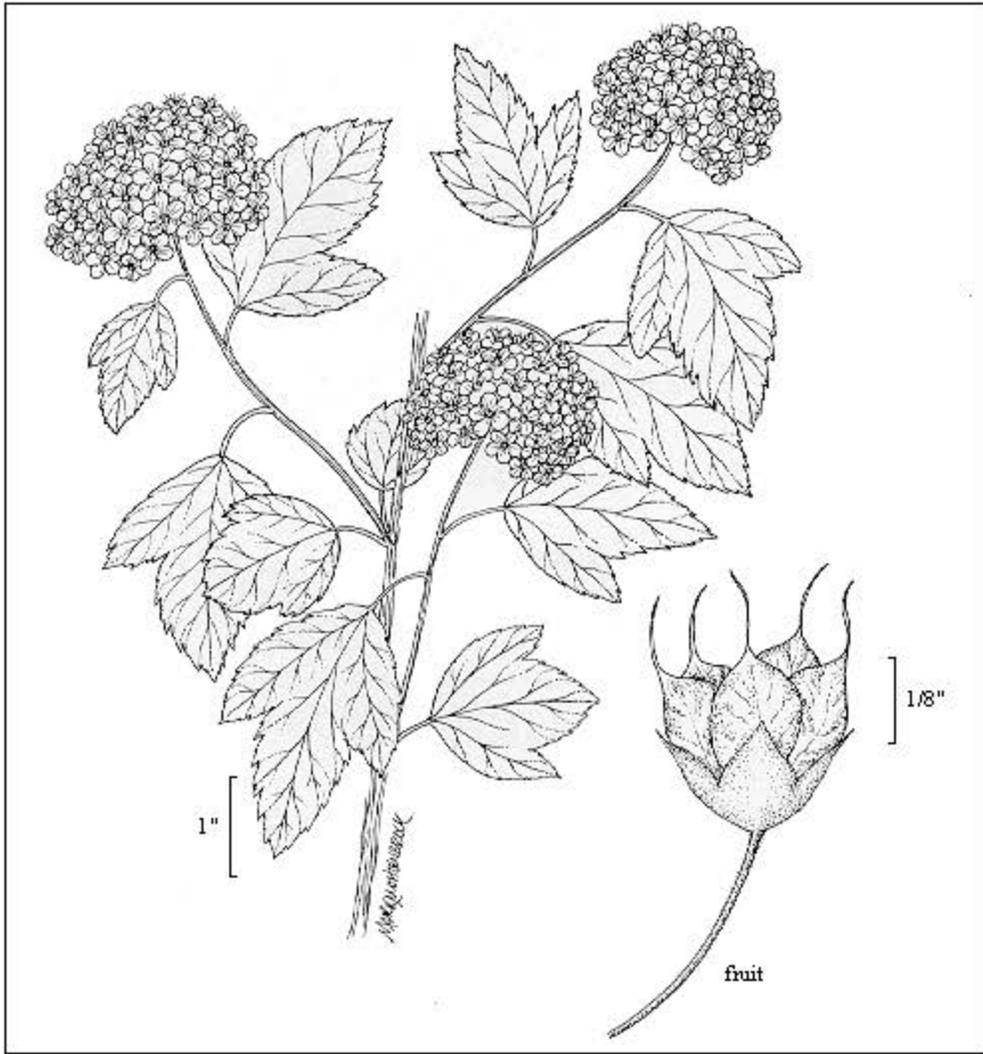
Field Office Guide to Plant Species

Eastern Ninebark

Physocarpus opulifolius (L.) Maxim.



- **Family:** Rose (Rosaceae)
- **Flowering:** May-July
- **Field Marks:** This shrub is characterized by its simple leaves, absence of spines, its dry capsular fruits, and its flowers with 5 petals, 30-40 stamens, and usually 3-5 pistils.
- **Habitat:** Along streams, thickets.
- **Habit:** Much-branched shrub to 10 feet tall; bark separating into thin layers at maturity, brown.
- **Stems:** Twigs slender, brown, smooth, older bark loose and peeling in strips; buds ovoid, up to 1/4 inch long, brown, sparsely hairy; bundle traces 3.
- **Leaves:** Alternate, simple, broadly ovate to spherical, sometimes heart-shaped at the base, usually 3-lobed, toothed irregularly, smooth or sparsely hairy on the upper surface, paler and hairy at least in the axils of the veins on the lower surface, up to 2 1/2 inches long; leaf stalks up to 1 inch long, smooth.
- **Flowers:** Several in terminal clusters, white or pinkish, up to 1/2 inch across, on smooth or short-hairy stalks 1/2-1 inch long.
- **Sepals:** 5, green, united below to form a bell, smooth or short-hairy, up to 1/4 inch long.
- **Petals:** 5, white or pinkish, free from each other but attached to the throat of the sepals, rounded at the tip.
- **Stamens:** 30-40, attached to the throat of the sepals.
- **Pistils:** 3-5, free from each other, the ovary superior, short-stalked.
- **Fruits:** Follicles inflated, smooth, 1/4-1/2 inch long, purple-tinged; seeds pale, obovoid, 1/12-1/10 inch long.
- **Notes:** This species is sometimes grown as an ornamental.



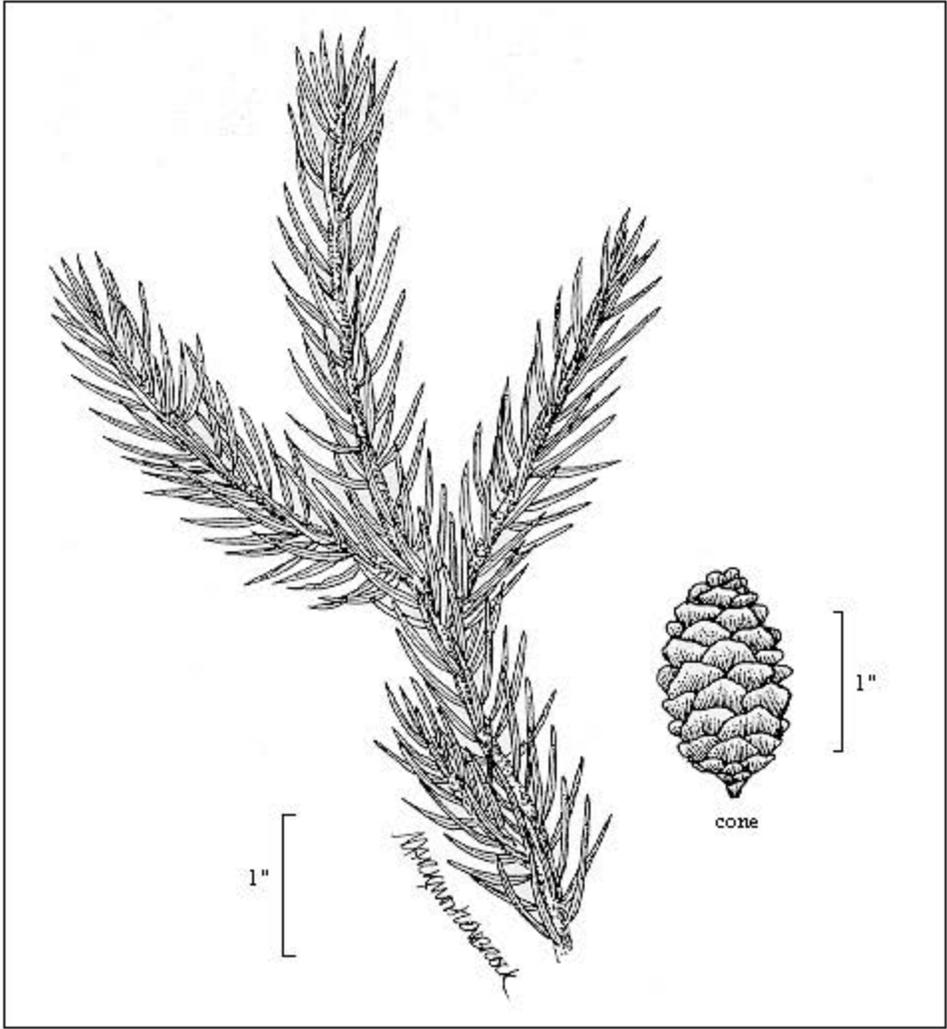
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Red Spruce *Picea rubens* Sarg.



- **Family:** Pine (Pinaceae)
- **Fruits:** Autumn
- **Field Marks:** This spruce differs from all others by its finely hairy twigs, its sharp-pointed needles, and its cones that fall quickly from the tree.
- **Habitat:** Woods.
- **Habit:** Tree to 90 feet tall, with a trunk diameter up to 2 feet; bark scaly, gray or red-brown.
- **Stems:** Twigs orange-brown, finely hairy when young but becoming smooth with age; buds ovoid, pointed at the tip, up to 1/3 inch long, reddish brown.
- **Leaves:** Needles borne singly, pointed at the tip, usually curving upward, up to 3/4 inch long.
- **Reproductive Structures:** Male cones bright red, usually not on the same twigs as the female cones; female cones red or green.
- **Fruits:** Cones woody, oblongoid, 1 1/2-2 inches long, reddish brown, with rounded scales not bearing prickles; seeds up to 1/6 inch long, with wings about twice as long.
- **Notes:** The wood is used in making musical instruments and in providing pulp.



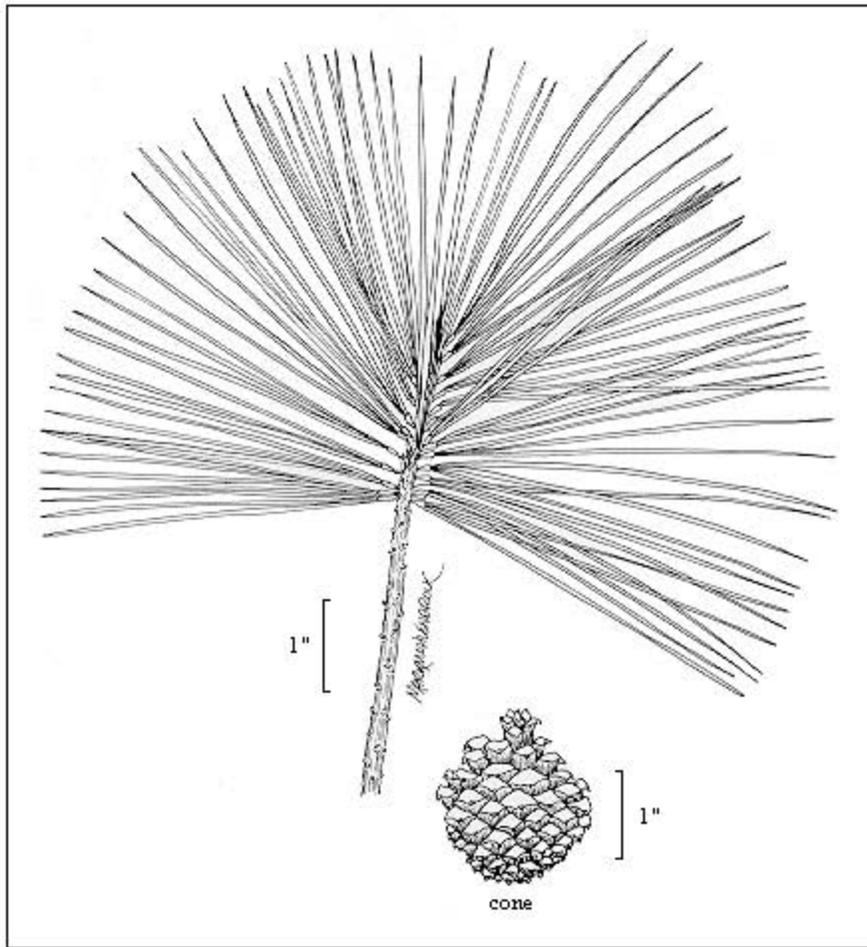
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Pitch Pine *Pinus rigida* Mill.



- **Family:** Pine (Pinaceae)
- **Fruits:** Autumn
- **Field Marks:** The distinguishing features of this pine are the spine-tipped scales of the female cones and the stiff needles in clusters of 3's and up to 8 inches long.
- **Habitat:** Usually dry, often barren soil, abandoned fields.
- **Habit:** Tree to 90 feet tall, with a trunk diameter up to 3 feet in diameter; bark red-brown to dark brown, scaly at first, becoming deeply fissured into elongated plates.
- **Twigs:** Brown, finely hairy when young, becoming smooth at maturity, the lower ones often drooping; buds ovoid, brown.
- **Leaves:** Needles in clusters of 3's, stiff, twisted, tapering to a sharp point, yellow-green or sometimes glaucous, up to 8 inches long.
- **Reproductive Structures:** Male cones crowded into several clusters, yellowish, up to 2 1/4 inches long; female cones yellow at first, soon becoming darker.
- **Fruits:** Cones woody, oblongoid to ovoid, up to 6 inches long, the scales ending in a sharp spine; seeds brown with blackish mottling, up to 1/3 inch long, with wings about 2-3 times as long.
- **Notes:** The wood is used for pulp and in general construction. The cones persist on the tree for about one year after shedding their seeds.

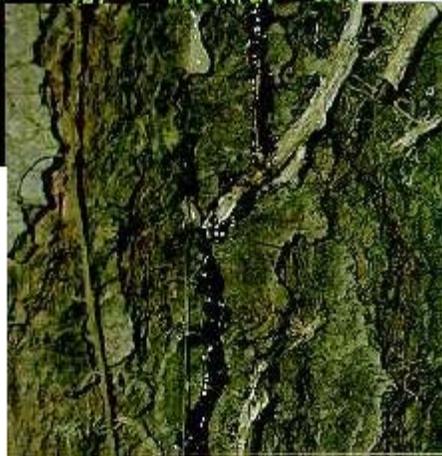


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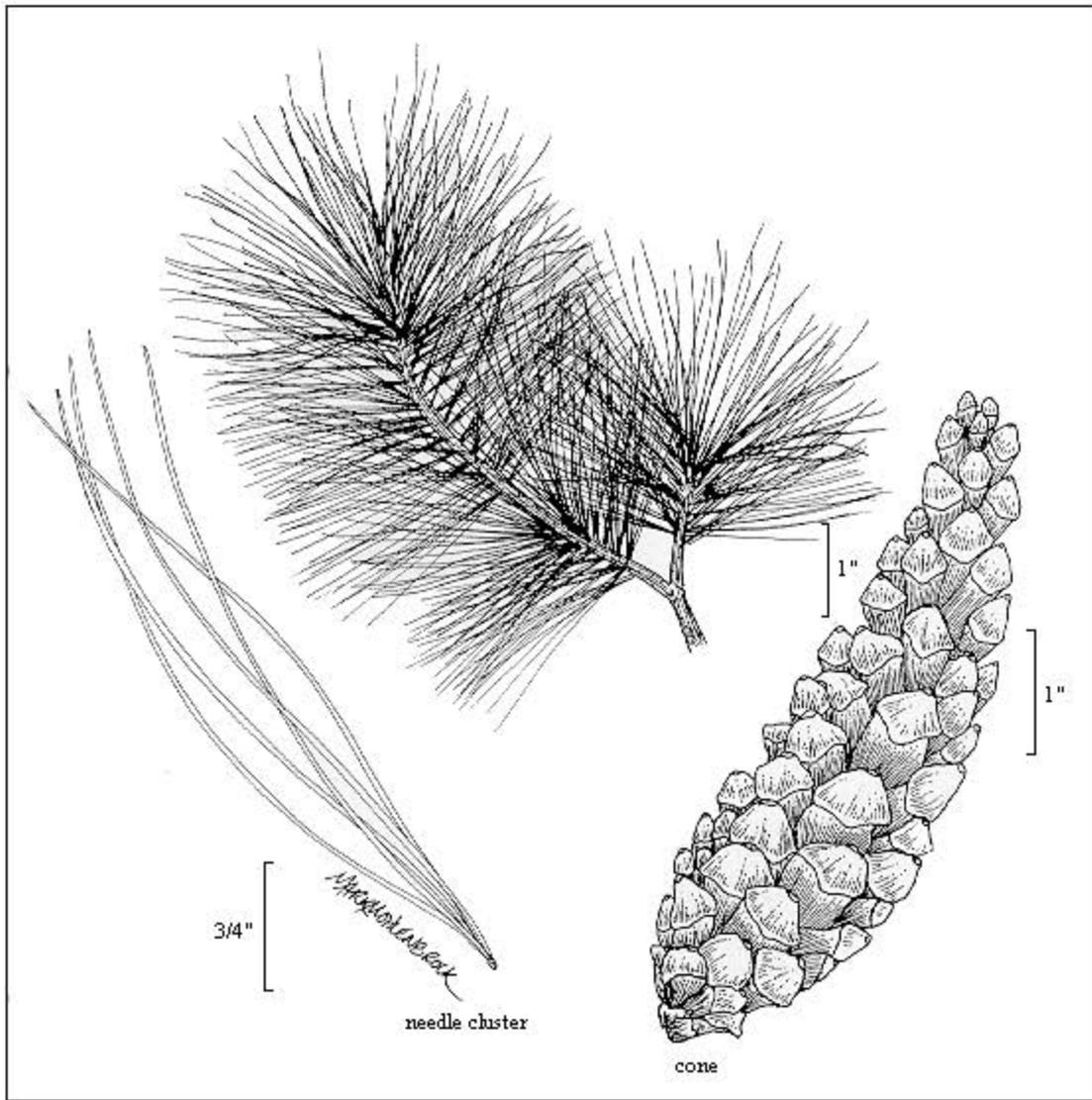
Eastern White Pine

Pinus strobus L.



- **Family:** Pine (Pinaceae)
- **Fruits:** Autumn
- **Field Marks:** The needles of this pine are soft and flexible and in clusters of 5's.
- **Habitat:** Woods.
- **Habit:** Tree to 150 feet tall, with a trunk diameter up to 6 feet; bark at maturity deeply fissured and with scaly ridges; branches usually horizontally spreading.
- **Twigs:** Orange-brown or green, finely hairy when young but becoming smooth; buds ovoid, reddish brown to orange.
- **Leaves:** Needles in clusters of 5's, soft, flexible, blue-green, up to 5 inches long the mature clusters lacking a fascicle sheath.
- **Reproductive Structures:** Male flowers crowded into several yellow cones up to 1/3 inch long; female flowers in fewer clusters, pinkish to purple.
- **Fruits:** Cones woody, oblongoid, curved, drooping, flexible, up to 8 inches long, the scales rounded at the tip, without prickles; seeds narrowly oblong, up to 1/4 inch long, with a wing twice as long.
- **Notes:** The wood is used for interior finishing and in general construction. White pine is own extensively as an

ornamental.



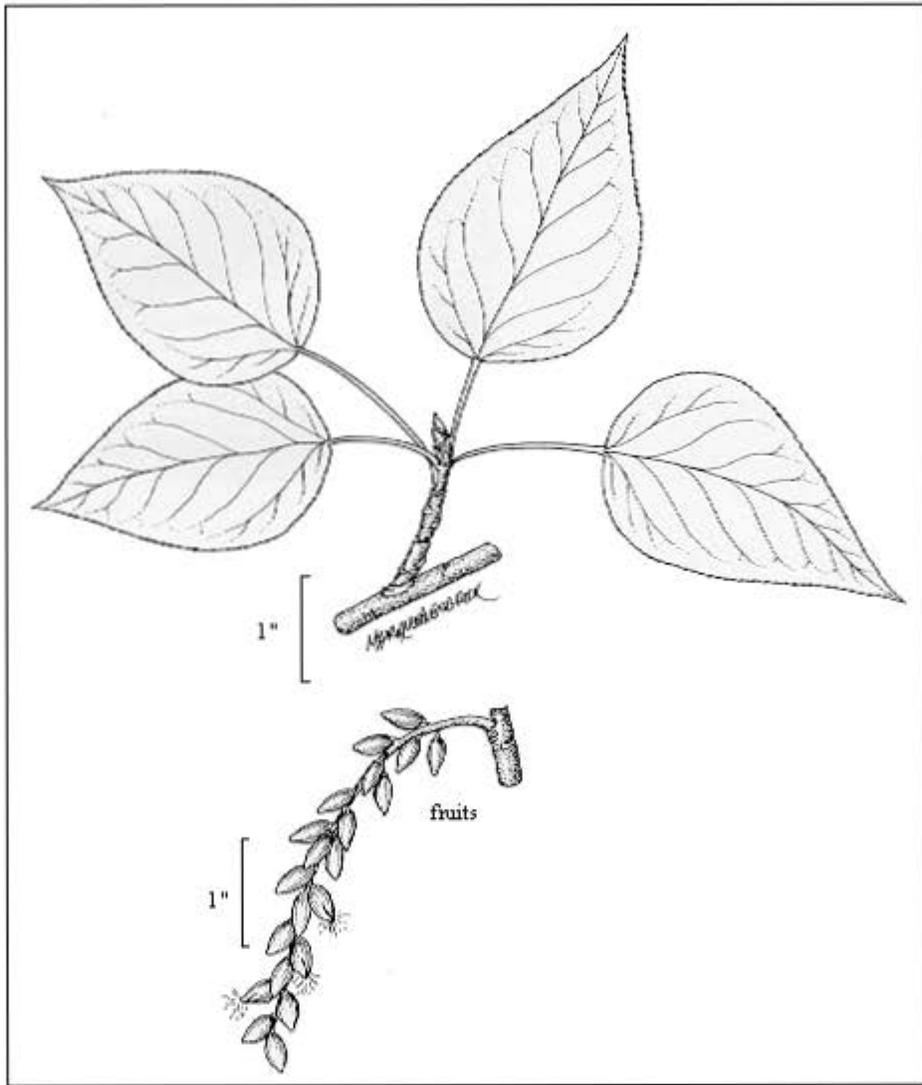
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Balsam Poplar *Populus balsamifera* L.



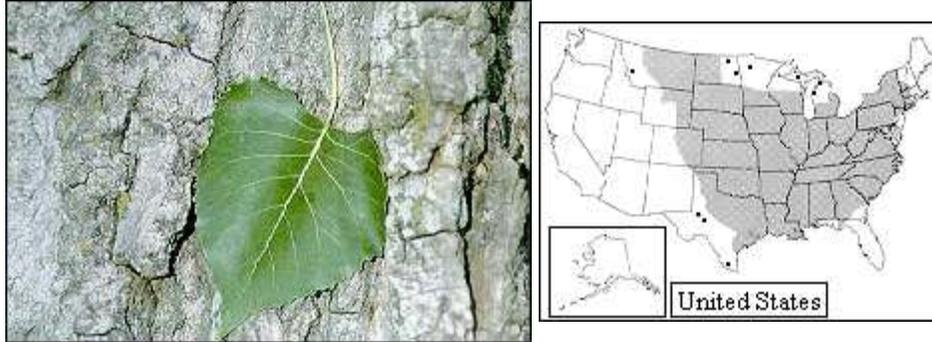
- **Family:** Willow (Salicaceae)
- **Flowering:** March-April
- **Field Marks:** The distinguishing features of this poplar are the terete leaf stalks and the leaves that are metallic and shiny on the lower surface and scented with balsam. The lower leaf surface is smooth, or with hairs only on the veins.
- **Habitat:** Riverbanks.
- **Habit:** Tree to 90 feet tall, with a trunk diameter up to 6 feet; upper part of trunk smooth, lower part fissured and ridged.
- **Twigs:** Shiny, gray to light brown, smooth at maturity; buds ovoid, yellow, gummy with resinous balsam; bundle traces 3.
- **Leaves:** Alternate, simple, broadly lanceolate to ovate, pointed at the tip, tapering, rounded, or sometimes heart-shaped at the base, toothed, smooth on the upper surface, smooth or hairy only on the veins on the lower surface, the lower surface metallic and shiny, up to 5 inches long; leaf stalks terete.
- **Flowers:** Male and female crowded into separate drooping spikes on different trees, the spikes appearing before the leaves unfold; flowers subtended by fringed bracts.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** Up to 60, hairy, borne on a disk.
- **Pistils:** Solitary, attached to a disk, smooth.
- **Fruits:** Capsules ovoid, up to 1/4 inch long; seeds numerous, hairy.
- **Notes:** The resin balsam is obtained from this plant.



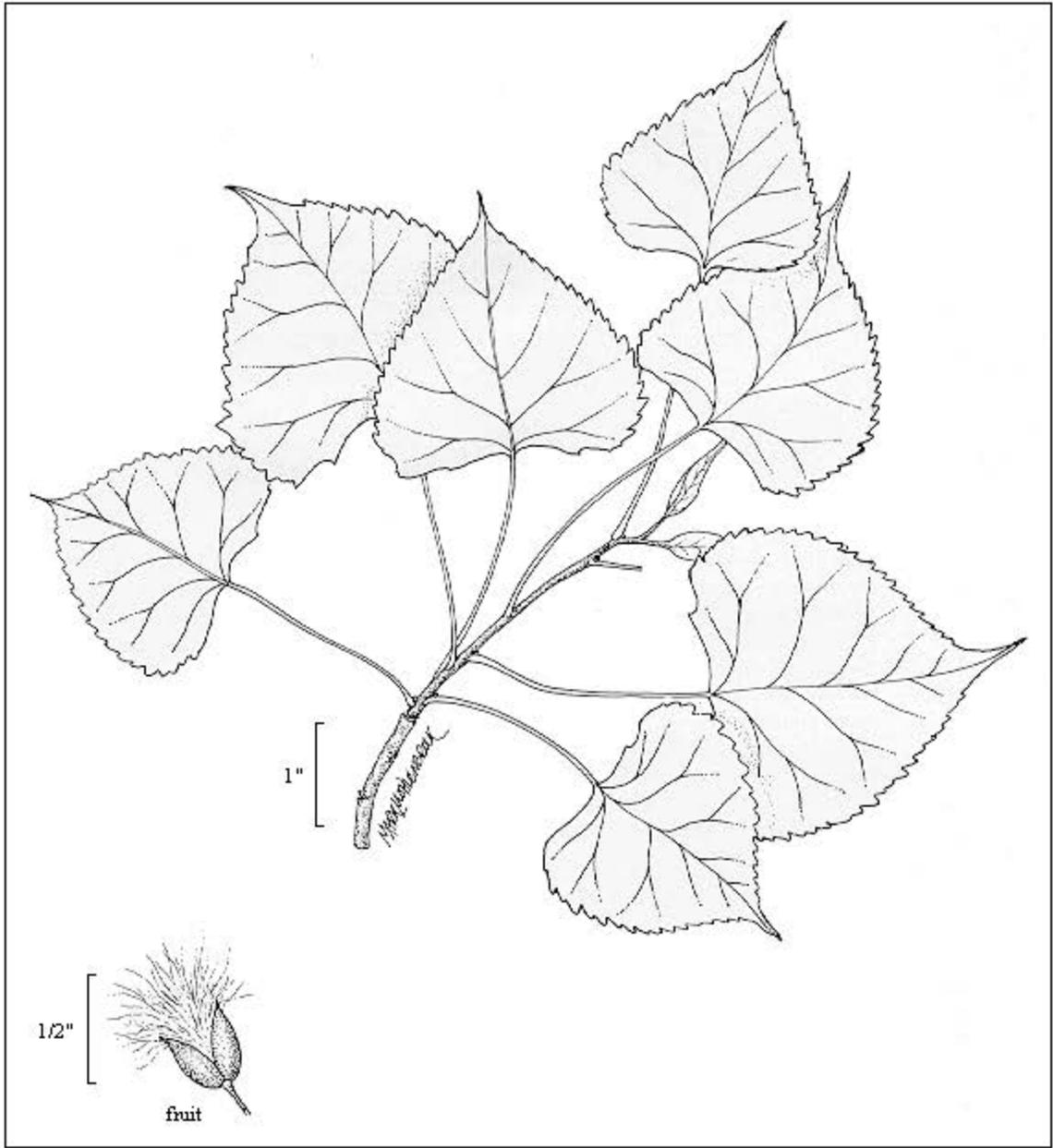
Northeast Wetland Flora

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Eastern Cotton-wood *Populus deltoides* W. Bartram ex Marshall



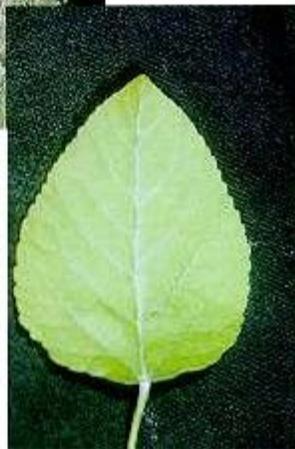
- **Family:** Willow (Salicaceae)
- **Flowering:** March-April
- **Field Marks:** This species is recognized by its triangular leaves with coarse, rounded teeth and its flattened leaf stalks.
- **Habitat:** Bottomland woods, along rivers and streams, in strip-mined areas.
- **Habit:** Rapidly growing tree to 100 feet tall, with a trunk diameter up to 8 feet; crown spreading to broadly rounded, with some drooping branches; bark smooth and gray when young, becoming furrowed at maturity.
- **Twigs:** Yellow-green, gray, or tan, smooth, moderately stout, with numerous pale lenticels; leaf scars alternate, triangular, with 3 large bundle traces; buds lanceoloid, long-pointed, up to 1/2 inch long, sticky, chestnut-colored.
- **Leaves:** Alternate, simple, triangular, abruptly pointed at the tip, cut straight across or even slightly heart-shaped at the base, with coarse, rounded teeth along the edges, up to 5 inches long, often nearly as broad, green, smooth, and shiny on the upper surface, paler on the lower surface; leaf stalks flattened, smooth, up to 4 inches long.
- **Flowers:** Male and female borne in drooping spikes on separate trees before the leaves unfold, the male crowded into rather thick, reddish spikes, the female crowded into narrower, greenish yellow spikes.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** Up to 60, hairy, attached to a disk.
- **Pistils:** Solitary, attached to a disk.
- **Fruits:** Capsules ellipsoid, greenish brown, up to 1/4 inch long, grouped in elongated clusters; seeds numerous, with cottony hairs attached.
- **Notes:** The soft wood is used for pulp and fuel. The twigs are browsed upon by deer, while the bark and buds are eaten by beavers.



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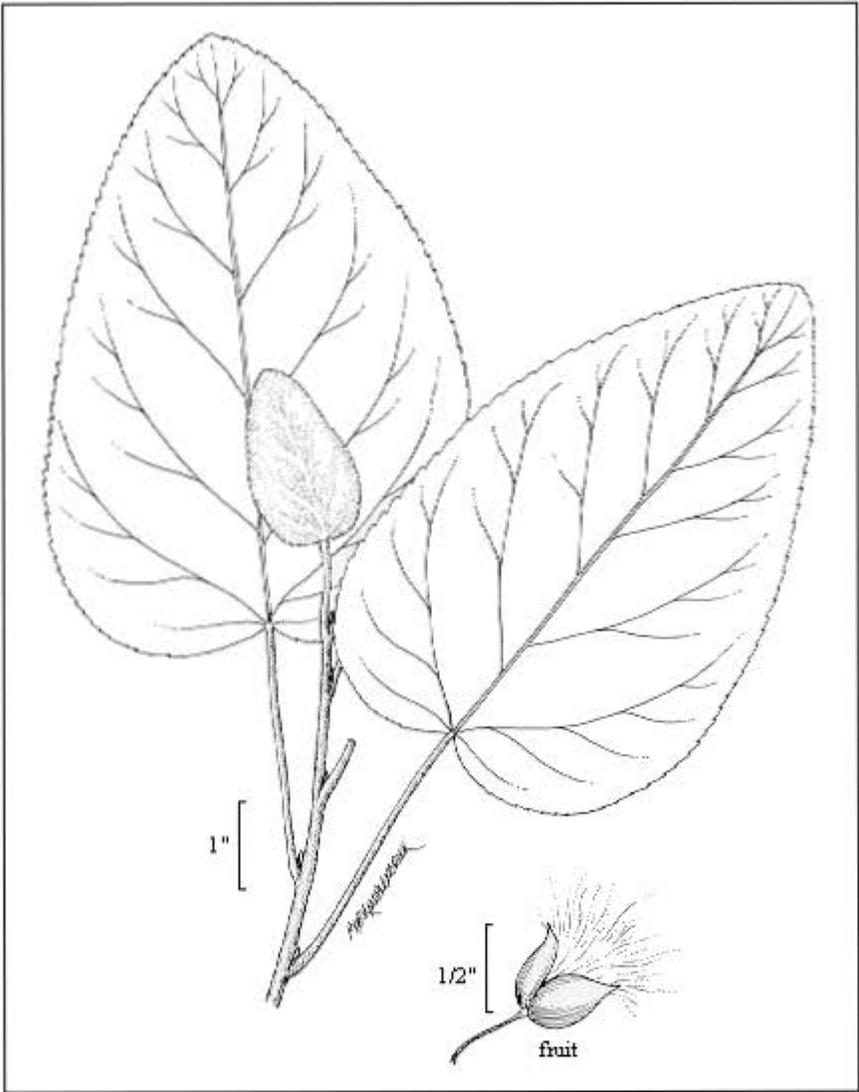
Field Office Guide to Plant Species

Swamp Cotton-wood *Populus heterophylla* L.



- **Family:** Willow (Salicaceae)
- **Flowering:** April-May
- **Field Marks:** The leaves of this species are finely toothed and rounded at the tip. The leaf stalks are more or less terete.
- **Habitat:** Swamps, low woods.
- **Habit:** Tree to 90 feet tall, with a trunk diameter up to 2 feet; crown very irregular, with a few large, upright branches; bark gray or brown, smooth when young, becoming scaly and ridged at maturity.
- **Twigs:** Rather stout, smooth or hairy, reddish; leaf scars alternate, 3-lobed, each with 3 bundle traces; buds ovoid, pointed, dark brown, sticky, up to 1/2 inch long.
- **Leaves:** Alternate, simple, ovate, rounded at the tip, heart-shaped at the base, up to 8 inches long, up to 6 inches wide, with fine rounded teeth along the edges, green on the upper surface, paler on the lower surface, densely white-woolly when young, becoming smooth at maturity; leaf stalks terete, smooth or sparsely hairy, up to 4 inches long.
- **Flowers:** Male and female borne in drooping spikes on separate trees before the leaves unfold, the male crowded into thick spikes up to 4 inches long, the female crowded into slender spikes up to 6 inches long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** Up to 60, hairy, borne on a disk.
- **Pistils:** Solitary, borne on a disk.
- **Fruits:** Capsules ovoid, reddish brown, up to 1/2 inch long, grouped into elongated clusters; seeds numerous, with cottony hairs attached.

Notes: The soft wood is used for pulp, fuel, and interior finishing.



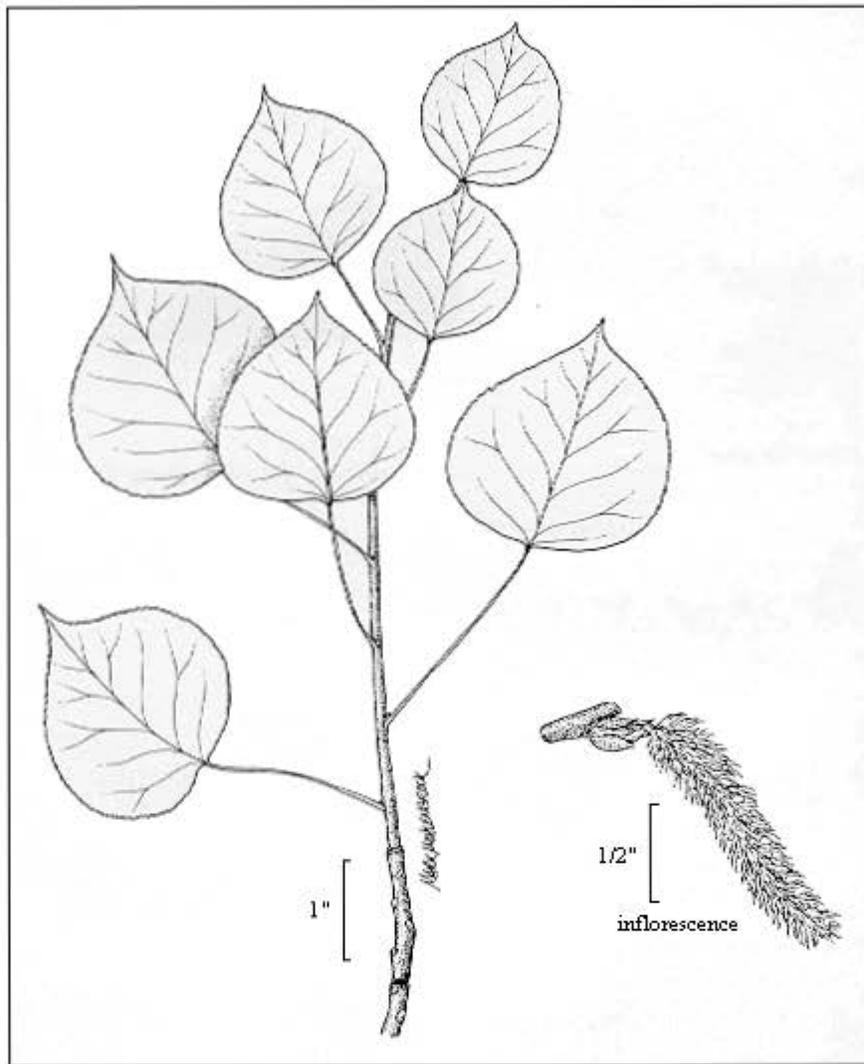
Northeast Wetland Flora

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Quaking Aspen *Populus tremula* L.



- **Family:** Willow (Salicaceae)
- **Flowering:** March-May
- **Field Marks:** The distinguishing features of this tree are the flattened leaf stalks, the ovate to nearly spherical leaves, and the rounded teeth that are 20-40 per leaf.
- **Habitat:** Edge of woods, thickets.
- **Habit:** Medium tree to 50 feet tall, with a trunk diameter up to 2 feet; crown rounded or occasionally spreading; bark pale yellow-green or white, becoming grayish and divided into dark scaly ridges at maturity.
- **Twigs:** Pale yellow-green or white, slender, smooth; leaf scars alternate, crescent-shaped, each with 3 bundle traces; buds lanceoloid, short-pointed, hairless, sticky, up to 1/3 inch long.
- **Leaves:** Alternate, simple, ovate to nearly spherical, short-pointed at the tip, rounded at the base, up to 4 inches long, nearly as wide, with 20-40 small rounded teeth along the margins, green, smooth, and shiny on the upper surface, not shiny on the lower surface; leaf stalks flat, smooth up to 3 inches long.
- **Flowers:** Male and female borne in drooping spikes on separate trees before the leaves unfold, the male crowded into spikes up to 4 inches long, the female crowded into spikes up to 6 inches long.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** Up to 60, hairy, borne on a disk.
- **Pistils:** Solitary, borne on a disk.
- **Fruits:** Capsules narrow, flask-shaped, up to 1/4 inch long, grouped into elongated clusters; seeds numerous, with cottony hairs attached.
- **Notes:** This tree rapidly invades burned over areas because of its vigorous root sprouts. The wood is used for pulp. Gleason and Cronquist call this species *P. tremuloides*.



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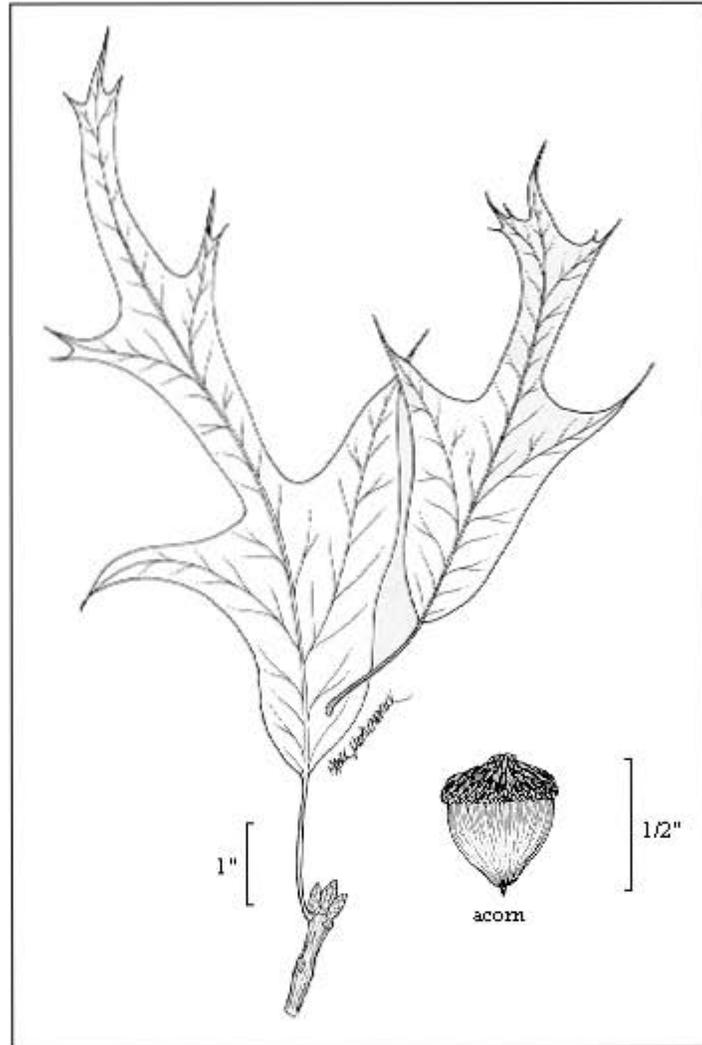
Field Office Guide to Plant Species

Southern Red Oak *Quercus falcata* Michx.



- **Family:** Beech (Fagaceae)
- **Flowering:** April-May
- **Field Marks:** The lower surface of the leaves is covered by tiny, star-shaped hairs. The terminal lobe of the leaves is often curved.
- **Habitat:** Moist or dry woods.
- **Habit:** Large tree up to 80 feet tall, with a trunk diameter up to 4 feet; crown broadly rounded, with stiff, stout, spreading branches; bark dark brown to nearly black, shallowly furrowed.
- **Twigs:** Reddish brown to gray, smooth or nearly so at maturity; leaf scars alternate but clustered near the tip, half-round, slightly elevated, with several bundle traces.
- **Leaves:** Alternate, simple, broadly rounded at the base, 3- to 5-lobed, the terminal lobe usually long, narrow, and strongly curved, all lobes bristle-tipped, up to 8 inches long, up to 6 inches wide, green on the upper surface, pale and finely hairy on the lower surface with star-shaped hairs; leaf stalks up to 2 1/2 inches long, usually hairy.
- **Flowers:** Male and female borne separately but on the same tree, appearing when the leaves begin to unfold, minute, the male in slender, drooping, densely hairy spikes, the female few in a rusty-hairy cluster.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary inferior; style dark reddish brown.
- **Fruits:** Acorn usually solitary, with or without a short stalk, the nut spherical or ellipsoid, up to 1/2 inch long, orange-brown, the cup covering only up to 1/3 of the nut, with hairy, reddish brown scales.
- **Notes:** The wood is used for fence posts, fuel, and in general construction. The leaves are variable in the number of lobes. A variety of this species, *Q. falcata* var. *pagodaefolia*, is recognized by its leaf apices which are shorter

and not curved and by the bases that are angled and not rounded. This variety occurs in wetter sites. Some authors refer to this variety as a separate species (*Q. pagoda*).



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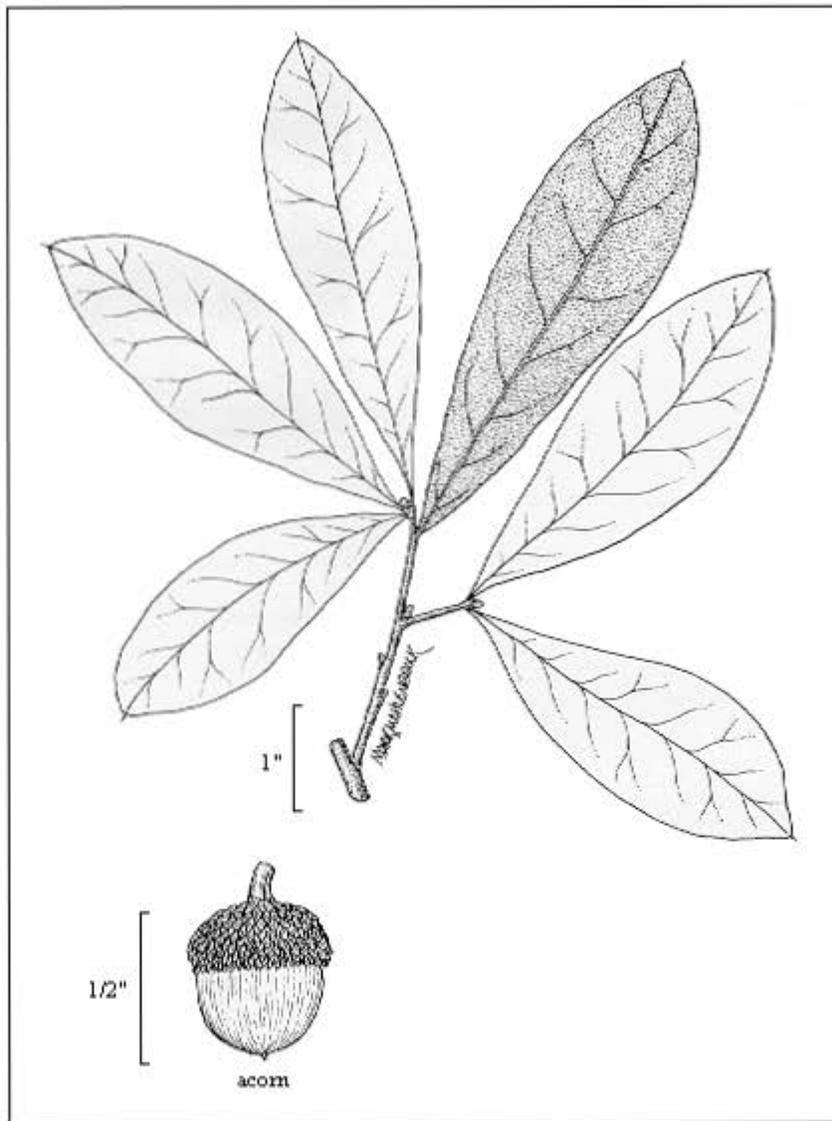
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Shingle Oak

Quercus imbricaria Michx.



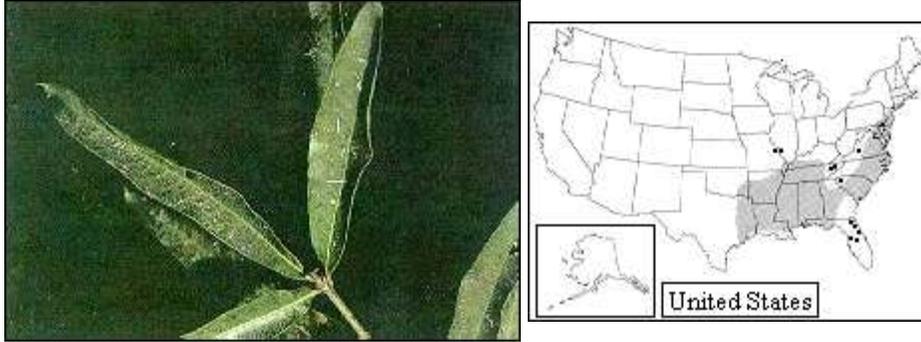
- **Family:** Beech (Fagaceae)
- **Flowering:** April-May
- **Field Marks:** This oak differs from all others that have unlobed and untoothed leaves by its wide, densely hairy undersurface of the leaves with star-shaped hairs and by its smooth or nearly smooth twigs.
- **Habitat:** Bottomlands, rich woods.
- **Habit:** Medium tree up to 70 feet tall, with a trunk diameter up to 3 feet across; crown rounded or oblong, with many branches; bark dark brown, deeply furrowed between flat, tight plates.
- **Twigs:** Slender, smooth, reddish brown; leaf scars alternate but crowded near the tip of the twigs, half-round, slightly elevated, with several bundle traces; buds ovoid, pointed at the tip, brown, smooth, up to 1/8 inch long.
- **Leaves:** Alternate, simple, lanceolate to oblong, with a bristle tip, tapering to the base, without lobes or teeth, up to 6 inches long, up to 2 inches wide, dark green, smooth, and shiny on the upper surface, paler and hairy with star-shaped hairs on the lower surface; leaf stalks up to 1/2 inch long, hairy.
- **Flowers:** Male and female borne separately but on the same plant, appearing as the leaves begin to unfold, minute, the male in slender, yellow, drooping spikes, the female few in a cluster.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary inferior.
- **Fruits:** Acorns solitary or 2 together, stalked, the nut nearly spherical, dark brown, less than half enclosed by the cup, the cup reddish brown and slightly hairy.
- **Notes:** The wood is used for shingles and in general construction.



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Willow Oak *Quercus phellos* L.

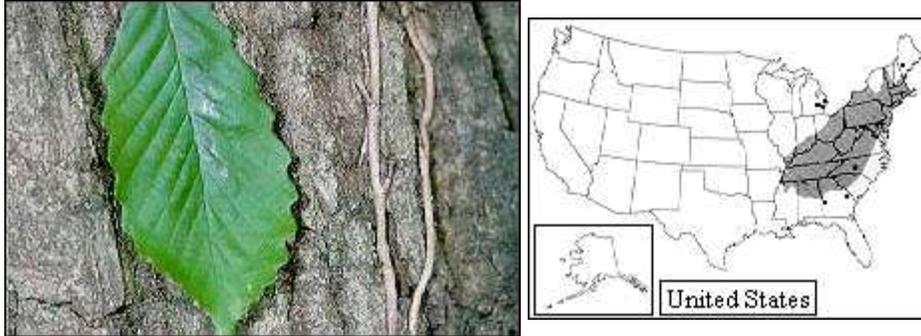


- **Family:** Beech (Fagaceae)
- **Flowering:** April-May
- **Field Marks:** This oak is distinguished by its narrow, toothless, lobeless leaves, the lower surface of the leaves hairy with silky hairs, and the smooth or nearly smooth twigs.
- **Habitat:** Swampy woods, bottomlands.
- **Habit:** Medium tree to 75 feet tall, with a trunk diameter up to 3 feet; crown narrowly round-topped; bark reddish brown, smooth at first, becoming irregularly and shallowly furrowed with age.
- **Twigs:** Slender, smooth, reddish brown; leaf scars alternate but crowded near the tip of the twigs, half-round, slightly elevated, with several bundle traces; buds ovoid, pointed at the tip, smooth, up to 1/8 inch long.
- **Leaves:** Alternate, simple, narrowly lanceolate to narrowly oblong, with a bristle tip, narrowed to the base, without lobes or teeth, up to 5 inches long, up to 1 inch wide, light green and smooth on the upper surface, paler and silky-hairy on the lower surface; leaf stalks up to 1/2 inch long, smooth or slightly hairy.
- **Flowers:** Male and female borne separately but on the same tree, appearing as the leaves begin to unfold, minute, the male in slender, drooping spikes, the female few in a cluster.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary inferior.
- **Fruits:** Acorns solitary or 2 together, with or without a short stalk, the nut more or less spherical, pale yellow-brown, enclosed less than 1/4 its length by the cup, the cup reddish brown, finely hairy.
- **Notes:** The wood is used in general construction. This tree is sometimes grown as an ornamental.

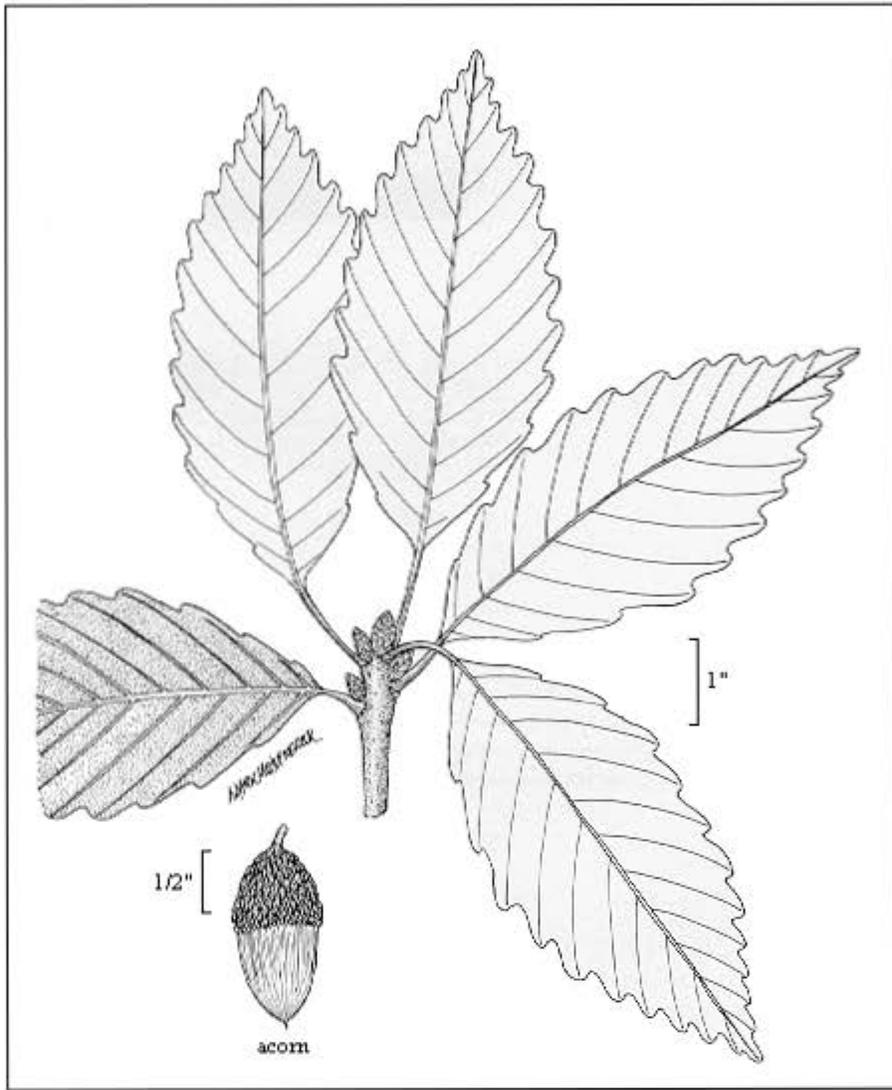
Northeast Wetland Flora

Field Office Guide to Plant Species

Chestnut Oak *Quercus prinus* L.



- **Family:** Beech (Fagaceae)
- **Flowering:** May-June
- **Field Marks:** This species is distinguished by its coarsely rounded, toothed, unlobed leaves and its sessile or nearly sessile acorns with the cup not more than 1 1/4 inches across.
- **Habitat:** Rocky woods.
- **Habit:** Tree to 90 feet tall, with a trunk diameter up to 2 1/2 feet; crown broad but irregular; bark dark brown, with conspicuous furrows between the rounded ridges.
- **Twigs:** Rather stout, reddish brown, smooth or nearly so; leaf scars alternate, but clustered near the tip of the twig, half-round, with several bundle traces; buds brown, pointed at the tip, somewhat hairy, up to 1/2 inch long.
- **Leaves:** Alternate, simple, obovate to broadly lanceolate, pointed at the tip, narrowed to the base, thick and leathery, coarsely round-toothed, smooth, shiny, and yellow-green on the upper surface, finely hairy over all the lower surface, up to 9 inches long, up to 4 inches wide; leaf stalk up to 1 inch long, smooth or slightly hairy.
- **Flowers:** Male and female borne separately but on the same tree, after the leaves are partly grown, the male crowded into long, slender, drooping spikes, the female few in a group.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary inferior.
- **Fruits:** Acorns solitary or 2 together, sessile or nearly so, the nut ovoid to ellipsoid, chestnut-colored, up to 1 1/2 inches long, the cup covering about 1/2 the nut or less, the scales of the cup reddish brown and warty.
- **Notes:** The wood is used for fence posts, railroad ties, and fuel. The bark is used in tanning.

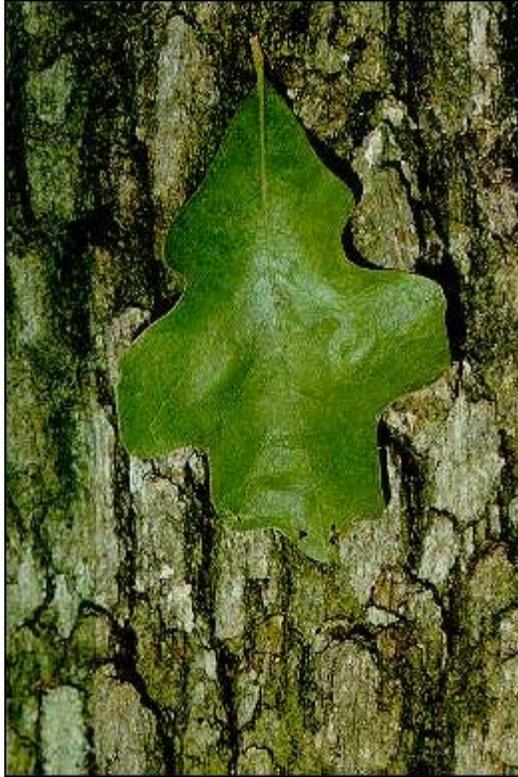


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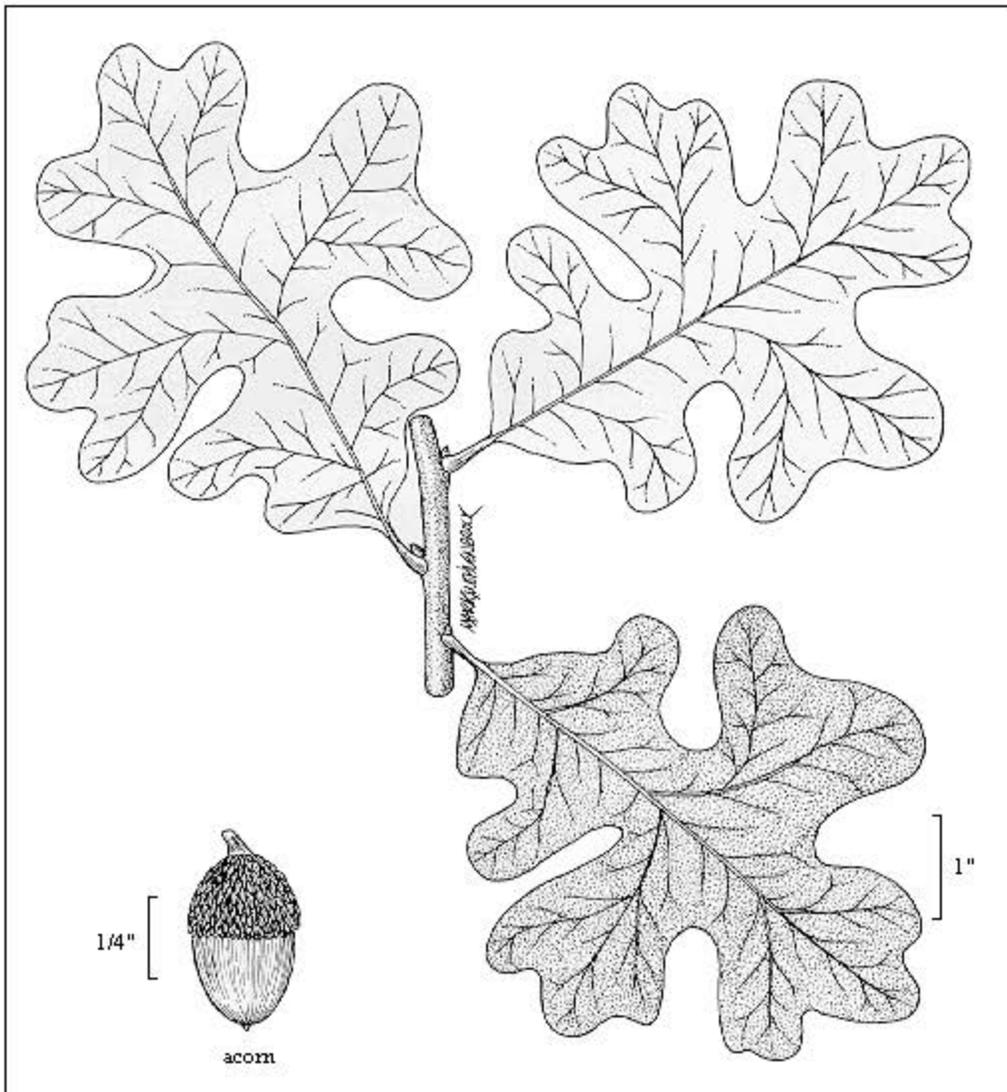
Post Oak

Quercus stellata Wangenh.



- **Family:** Beech (Fagaceae)
- **Flowering:** April-June
- **Field Marks:** The leaves of this species are thick and leathery and lack bristle-tipped lobes, the upper 3 lobes are squarish and larger than the other lobes, and the lower surface of the leaves is covered with star-shaped hairs.
- **Habitat:** Dry woods, dry bluffs, flatwoods, rarely in bottomlands.
- **Habit:** Small to medium tree up to 75 feet tall, with a trunk diameter up to 3 feet; crown rounded or obovoid; bark gray or light brown, divided into flat, sometimes squarish plates.
- **Twigs:** Stout, brownish, fuzzy-hairy when young, becoming more or less smooth; leaf scars alternate but densely clustered toward the tip of the stem, half-round, usually slightly elevated, with several bundle traces; buds more or less spherical, reddish brown, up to 1/8 inch long.
- **Leaves:** Alternate, simple, thick, leathery, 5-lobed, the upper 3 lobes squarish and larger than the others, separated from the other lobes by a deep cleft, up to 6 inches long, up to 4 1/2 inches wide, dark green and hairy on the upper surface, paler and hairy on the lower surface; leaf stalks up to 1 inch long, stout, hairy.
- **Flowers:** Male and female borne separately but on the same tree, appearing as the leaves unfold, minute, the male in slender, yellow, drooping spikes, the female few in a cluster.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary inferior.
- **Fruits:** Acorns solitary or 2 together, with or without a short stalk, the nut oval to oblong, cup to 1 inch long, pale brown, less than 1/2 enclosed by the cup, the cup reddish brown, hairy.

Notes: The wood is used for fence posts, fuel, and in general construction.



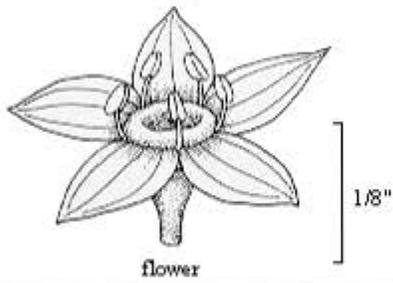
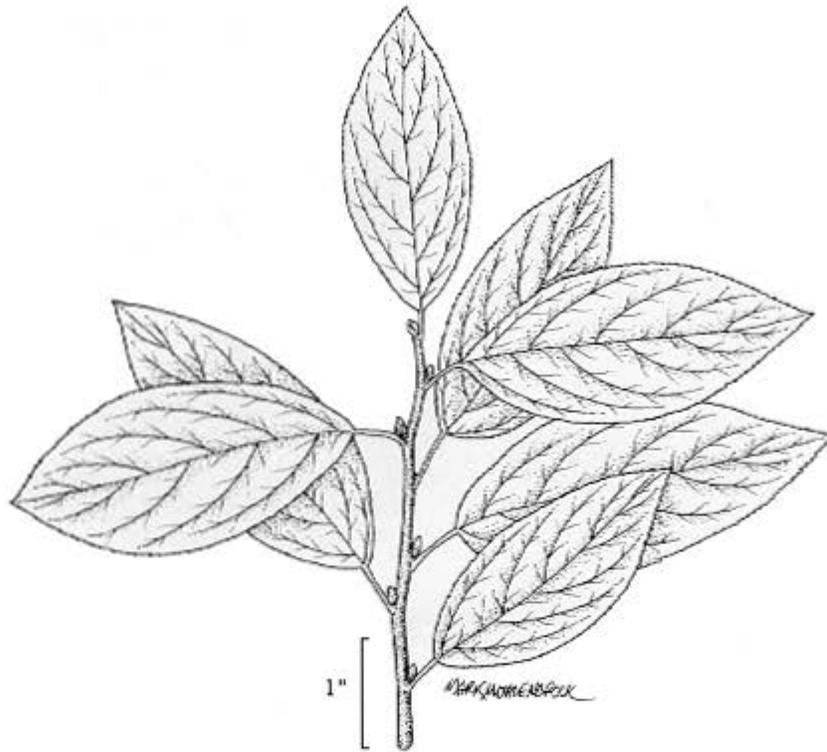
Northeast Wetland Flora

Field Office Guide to Plant Species

Alder-leaf Buckthorn *Rhamnus alnifolia* L'Her.



- **Family:** Buckthorn (Rhamnaceae)
- **Flowering:** May-July
- **Field Marks:** This shrubby species is the only buckthorn that has separate male and female flowers usually on separate plants, no petals, and 5 sepals.
- **Habitat:** Low woods, wet meadows, swamps, bogs, fens.
- **Habit:** Shrub to 2 1/2 feet tall, the branches forking and upright.
- **Stems:** Twigs slender, red or brown, finely hairy; buds ovoid, up to 1/4 inch long; leaf scars half-round, slightly elevated, with 3 bundle traces.
- **Leaves:** Alternate, simple, elliptic to oval, rounded to pointed at the tip, rounded or tapering to the base, finely toothed, smooth or nearly so, up to 4 inches long, up to 2 inches wide; leaf stalks slender, smooth.
- **Flowers:** 1-3 in the axils of the leaves, the male and female usually borne separately and on different plants.
- **Sepals:** 5, united below to form a bell, the lobes triangular, pointed, smooth.
- **Petals:** 0.
- **Stamens:** 5, free from each other and not attached to the sepals.
- **Pistils:** Ovary superior; styles usually 4.
- **Fruits:** Drupes spherical, black, up to 1/4 inch in diameter, with 3 seeds; seeds flat, shallowly grooved.
- **Notes:** The fleshy fruits are eaten by birds.



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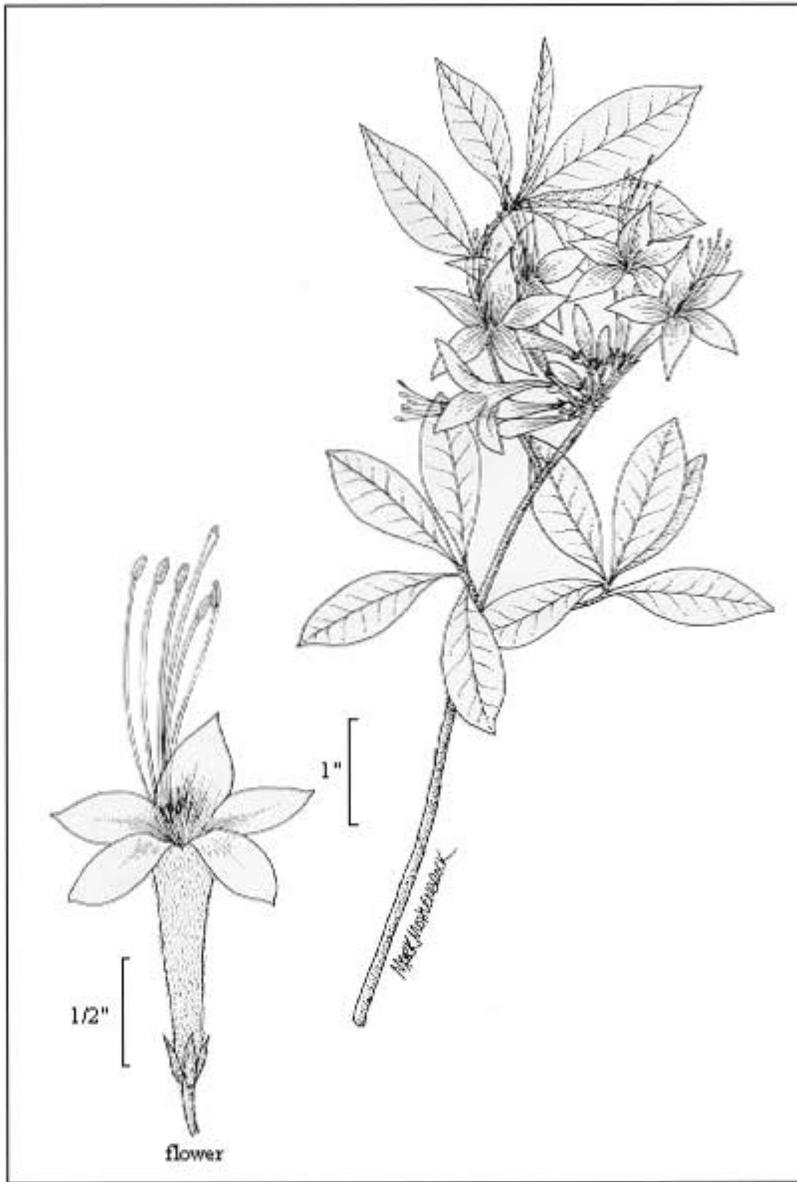
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Pink Azalea

Rhododendron periclymenoides (Michx.) Shinners



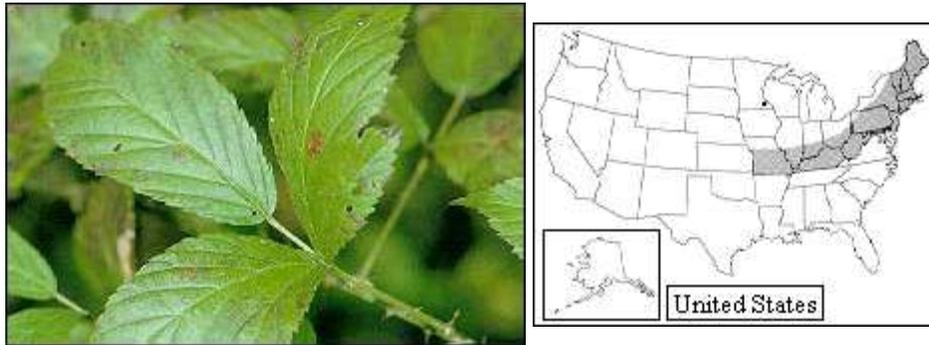
- **Family:** Heath (Ericaceae)
- **Flowering:** March-May
- **Field Marks:** The distinguishing features of this *Rhododendron* are the deciduous leaves, the pink flowers that open just as the leaves begin to expand, the nearly smooth leaves, and the faint odor of the non-glandular hairy flowers.
- **Habitat:** Woods, swamps, thickets.
- **Habit:** Shrub or small tree to 12 feet tall, the upper stems much branched.
- **Stems:** Grayish to orange-brown, slender, sparsely hairy when young, becoming smooth or nearly so at maturity.
- **Leaves:** Alternate, simple, elliptic to oblong, pointed at the tip, tapering to the base, smooth or sparsely hairy beneath, without teeth, up to 3 inches long, up to 1 1/2 inches wide; leaf stalks up to 1/4 inch long, densely white-hairy.
- **Flowers:** 6-12 in terminal clusters, faintly aromatic, rose to reddish pink, on hairy stalks up to 1/2 inch long.
- **Sepals:** 5, attached to each other, green, ciliate but not glandular, the lobes about 1/10 inch long.
- **Petals:** 5, united to form a slender tube, rose to reddish pink, the tube up to 1 inch long, the lobes up to 1 inch long, hairy but not glandular.
- **Stamens:** 5, exerted beyond the petals.
- **Pistils:** Ovary superior, hairy; style up to 2 1/2 inches long.
- **Fruits:** Capsules cylindrical, white-hairy, up to 1 1/2 inches long.
- **Notes:** For many years this species was known as *Rhododendron nudiflorum*. This species is frequently grown as an ornamental.



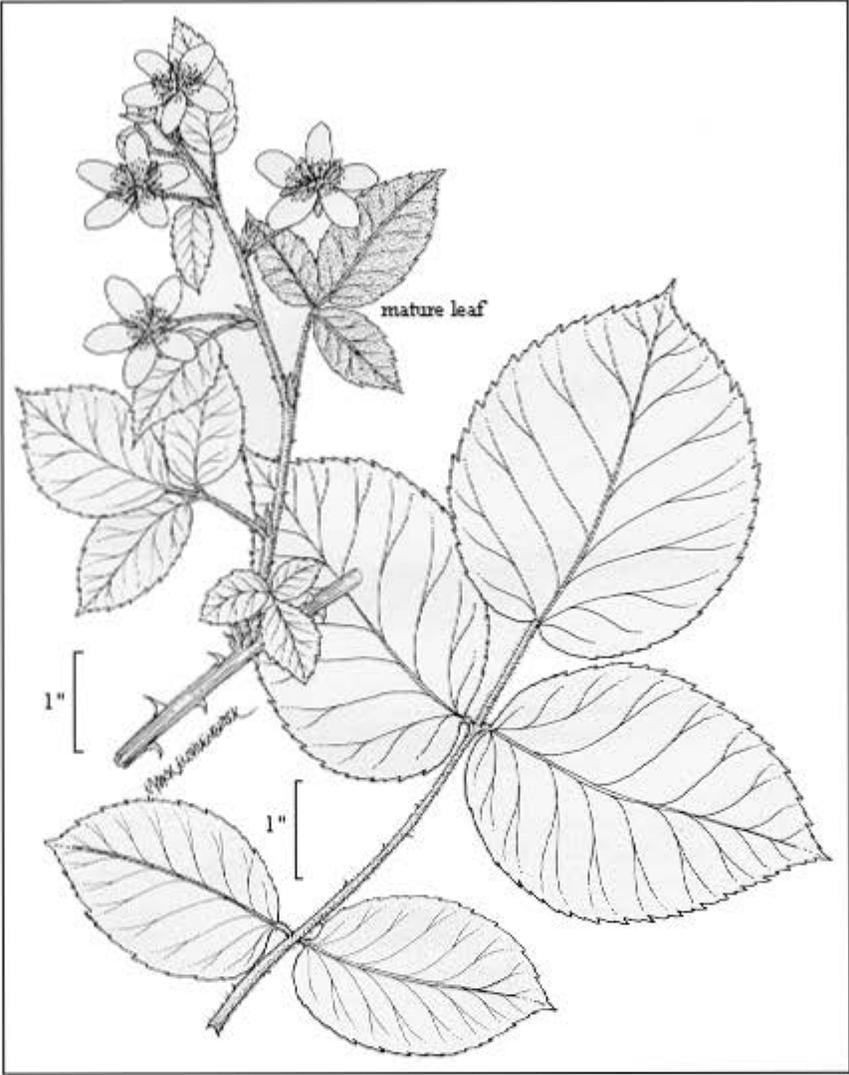
Northeast Wetland Flora

Field Office Guide to Plant Species

Old Field Blackberry *Rubus alumnus* L.H. Bailey



- **Family:** Rose (Rosaceae)
- **Flowering:** May-June
- **Field Marks:** The distinguishing features of this blackberry are the erect to arching stems with broad-based prickles and the branches of the inflorescence and leaves with glandular hairs. The inflorescence is frequently as broad as long.
- **Habitat:** Old fields, pastures.
- **Habit:** Stout shrub to 9 feet long.
- **Stems:** Upright or arching, stout, covered with broad-based prickles.
- **Leaves:** Alternate; those of the sterile stems with 3-7 leaflets, the leaflets ovate, pointed at the tip, rounded or heart-shaped at the base, coarsely toothed, hairy on the lower surface with glandular hairs, leaf stalk often with curved prickles; those of the flowering stems simple or divided into 3 or 5 leaflets, otherwise similar to the leaves of the sterile stem.
- **Flowers:** Several in short, flattened racemes usually about as broad as long; each flower up to 2 inches across, on glandular-hairy stalks.
- **Sepals:** 5, green, attached below to form a cup, ovate to broadly lanceolate.
- **Petals:** 5, white, free from each other, up to 1 inch long.
- **Stamens:** Numerous.
- **Pistils:** Numerous, each with a superior ovary.
- **Fruits:** Many drupelets in thimble-shaped clusters up to 1 inch long.
- **Notes:** Gleason and Cronquist consider this species to be the same as *R. allegheniensis*. The fruits are eaten by a variety of animals, including humans.



Northeast Wetland Flora

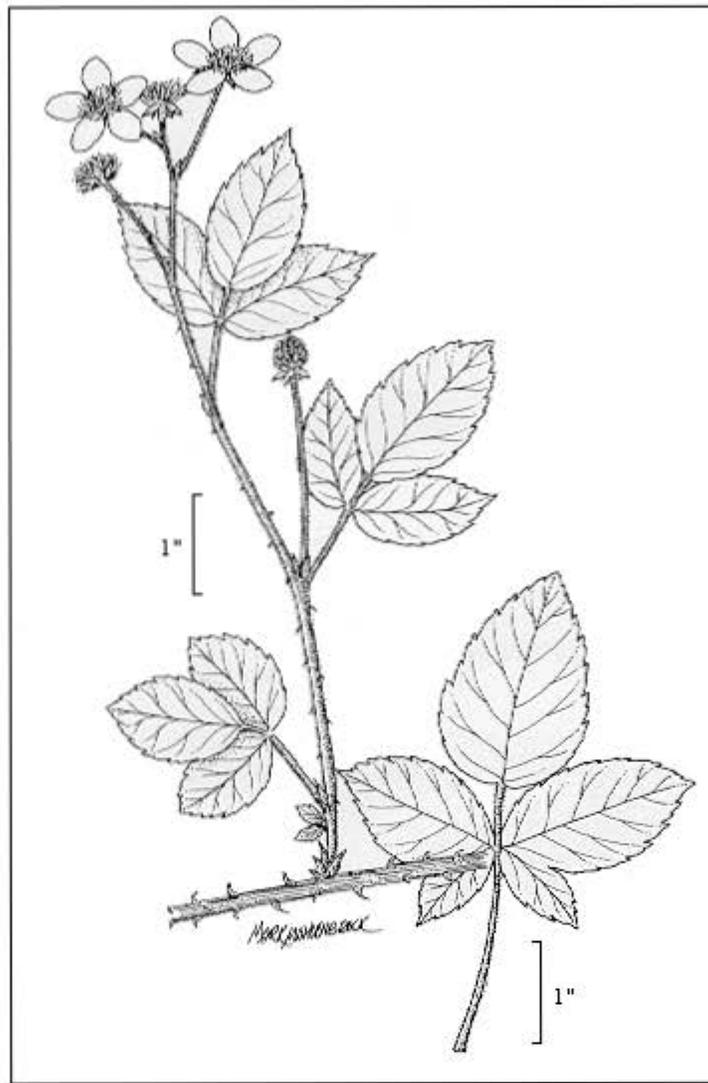
Field Office Guide to Plant Species

Bailey Blackberry

Rubus baileyanus Britt.



- **Family:** Rose (Rosaceae)
- **Flowering:** April-June
- **Field Marks:** This blackberry differs by its low-arching to trailing, non-glaucous stems that are about 1/4 inch in diameter and bear stout, broad-based prickles. The leaf stalks and flower stalks lack glandular hairs.
- **Habitat:** Open woods, thickets, pastures.
- **Habit:** Moderately stout shrub to 6 feet long.
- **Stems:** Upright at first, but becoming low-arching or trailing, not glaucous, up to 1/4 inch in diameter, with stout, broadbased prickles.
- **Leaves:** Alternate; those of the sterile stems divided into 3 or 5 leaflets, the leaflets lanceolate to obovate, pointed at the tip, tapering or rounded at the base, toothed, not thin, hairy on only the veins beneath, leaf stalks smooth or with glandless hairs; those of the flowering stems simple or divided into 3 leaflets, otherwise similar to the leaves of the sterile stems.
- **Flowers:** 1-4 at the tips of the branches, occasionally axillary, up to 1 1/2 inches across, on glandless stalks up to 3 1/2 inches long.
- **Sepals:** 5, green, attached below to form a cup, lanceolate.
- **Petals:** 5, white, free from each other, up to 3/4 inch long.
- **Stamens:** Numerous.
- **Pistils:** Numerous, each with a superior ovary.
- **Fruits:** Many drupelets in a short cylindrical cluster up to 3/4 inch in diameter.
- **Notes:** Gleason and Cronquist consider this species to be the same as *R. flagellaris*. The fruits are eaten by animals, including humans.



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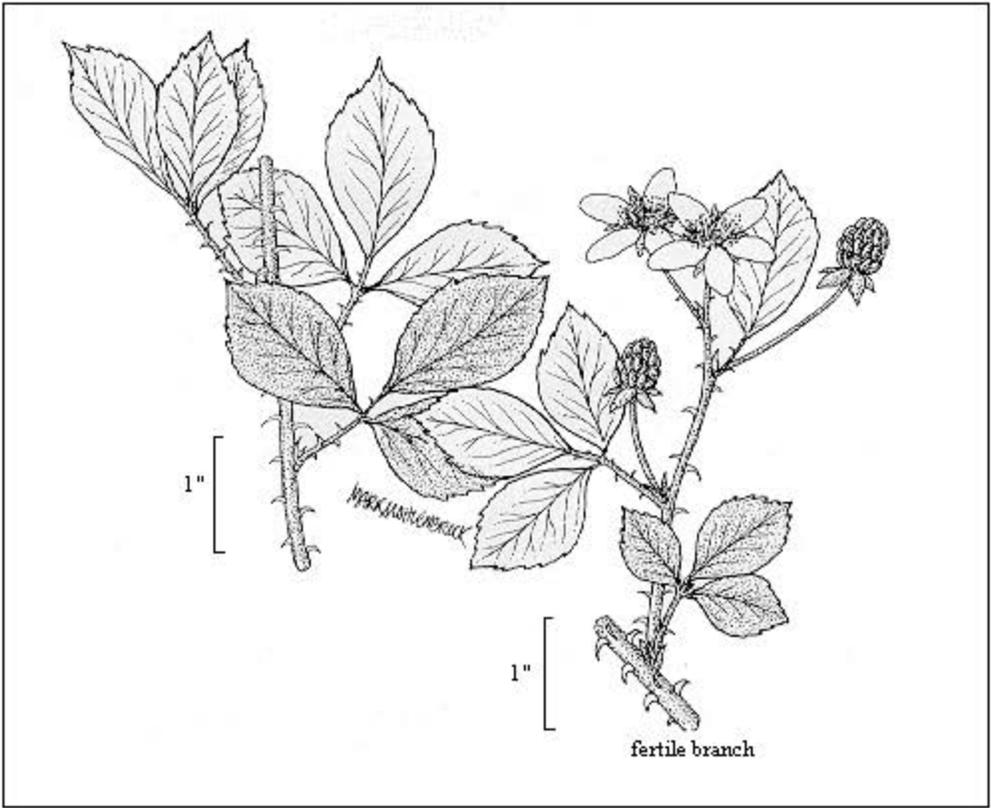
Field Office Guide to Plant Species

Sand Blackberry

Rubus cuneifolius Pursh



- **Family:** Rose (Rosaceae)
- **Flowering:** May-July
- **Field Marks:** The distinguishing features of this blackberry are its upright or arching, densely prickly stems that are also covered by short, gray hairs.
- **Habitat:** Dry sandy or rocky soil.
- **Habit:** Shrub to 3 feet tall.
- **Stems:** Upright or arching, densely prickly with straight or curved broad-based prickles and covered with short gray hairs.
- **Leaves:** Alternate; those of the sterile stems divided into 3 or 5 leaflets, the leaflets obovate, abruptly short-pointed at the tip, tapering to the base, toothed, smooth and green on the upper surface, white and downy-hairy on the lower surface, leaf stalks with broad-based prickles; those of the flowering stems divided into 3 leaflets, otherwise similar to the leaves of the sterile stems.
- **Flowers:** 1-5 at the tips of the branches, up to 1 1/2 inches across, on prickly or non-prickly stalks.
- **Sepals:** 5, green, attached below to form a cup, lanceolate, 1/4-1/2 inch long.
- **Petals:** 5, white, free from each other, up to 3/4 inch long.
- **Stamens:** Numerous.
- **Pistils:** Numerous, each with a superior ovary.
- **Fruits:** Many drupelets in a cylindrical cluster up to 1 inch long and up to 1/2 inch across.
- **Notes:** The fruits are eaten by animals.



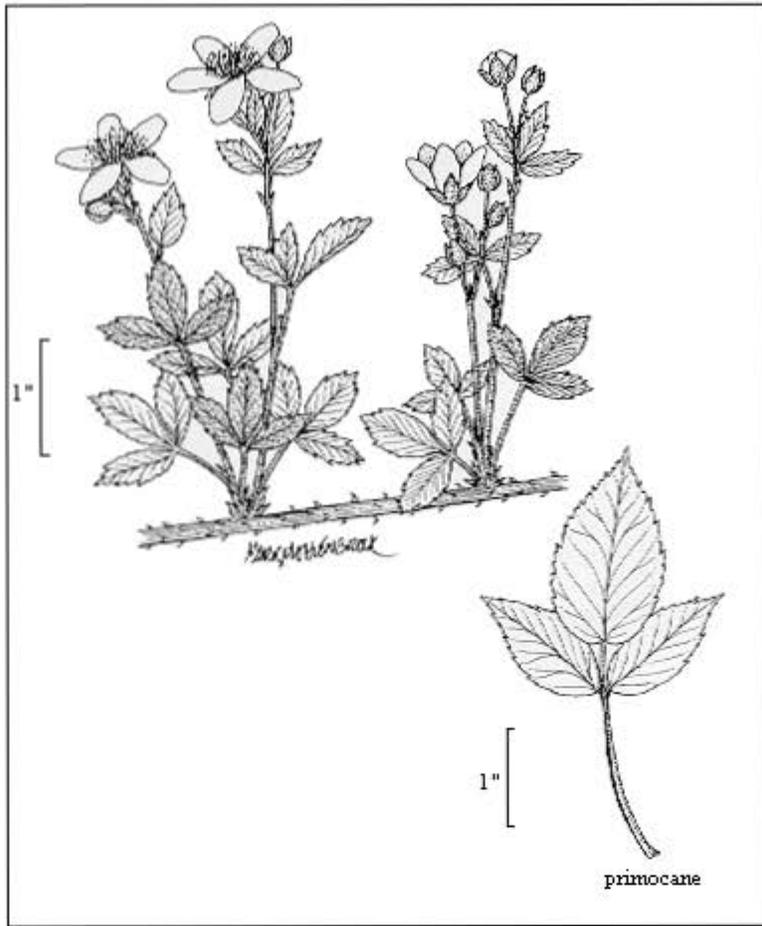
Northeast Wetland Flora

Field Office Guide to Plant Species

Enslen Blackberry *Rubus enslenii* Tratt.



- **Family:** Rose (Rosaceae)
- **Flowering:** April-June
- **Field Marks:** This blackberry differs by its low-arching to trailing, non-glaucous stems that are only 1/6 inch in diameter at maturity and without prickles or with only very weak prickles. The leaf stalks and flower stalks lack glandular hairs.
- **Habitat:** Woods, thickets.
- **Habit:** Slender shrub to 5 feet long.
- **Stems:** Upright at first, but becoming low-arching or trailing, not glaucous, up to 1/6 inch in diameter, without prickles or with very weak prickles.
- **Leaves:** Alternate; those of the sterile stems with 3 leaflets, the leaflets broadly lanceolate to obovate, pointed at the tip, tapering or rounded at the base, toothed, thin, smooth to soft-hairy on the lower surface, leaf stalks smooth or with glandless hairs; those of the flowering stems simple or divided into 3 leaflets, otherwise similar to the leaves of the sterile stems.
- **Flowers:** 1-3 at the tips of the branches, up to 1 1/2 inches across, on glandless stalks up to 3 1/2 inches long.
- **Sepals:** 5, green, attached below to form a cup, the lobes lanceolate.
- **Petals:** 5, white, free from each other, up to 3/4 inch long.
- **Stamens:** Numerous.
- **Pistils:** Numerous, each with a superior ovary.
- **Fruits:** Many drupelets in a short cylindrical cluster up to 1 inch in diameter.
- **Notes:** The exceptionally flavorful fruits are eaten by animals, including humans.



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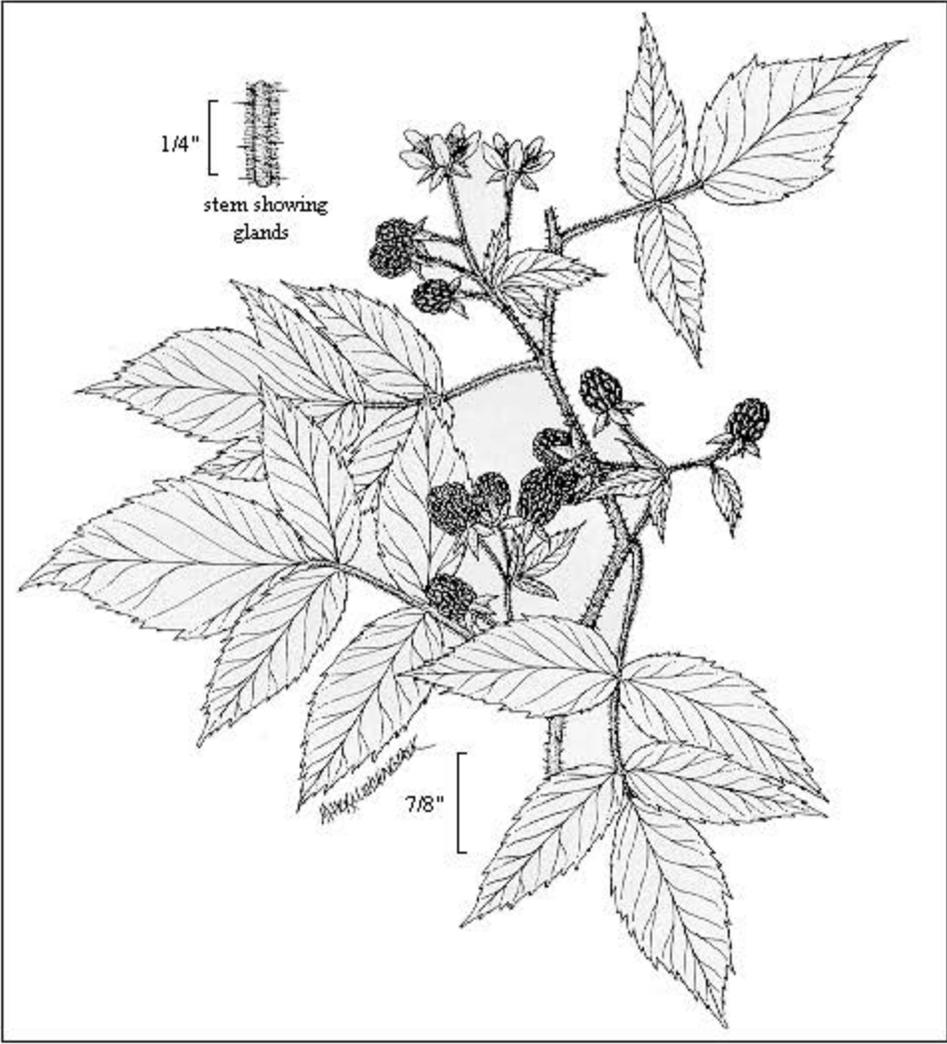
Field Office Guide to Plant Species

Common Red Raspberry

Rubus idaeus L.



- **Family:** Rose (Rosaceae)
- **Flowering:** May-July
- **Field Marks:** The red raspberry is distinguished by its erect and scarcely arching stems that are bristly between the prickles with non-red bristles. The lower surface of the leaflets is strongly whitened, and the fruits are red at maturity.
- **Habitat:** Thickets, edge of woods.
- **Habit:** Biennial shrub from stolons, not rooting at the tip.
- **Stems:** Upright, scarcely arching, up to 6 feet tall, prickly as well as bristly between the prickles, the bristles not red.
- **Leaves:** Alternate; those of the sterile stems divided into 3, 5, or 7 leaflets, the leaflets ovate to lanceolate, pointed at the tip, rounded to slightly heart-shaped at the base, sharply toothed, smooth and yellowish green above, white and downy-hairy beneath, leaf stalks usually with bristles; those of the fertile stems divided into 3 leaflets, otherwise similar to those of the sterile stems.
- **Flowers:** Few in terminal and axillary clusters, up to 1/2 inch across, on glandular-hairy and bristly stalks.
- **Sepals:** 5, green, attached below to form a cup, bristly, the lobes up to 1/4 inch long, turned downward.
- **Petals:** 5, white, free from each other, up to 1/4 inch long.
- **Stamens:** Numerous.
- **Pistils:** Numerous, each with a superior ovary.
- **Fruits:** Many drupelets in a spherical cluster up to 1/2 inch in diameter, usually downy-hairy, red.
- **Notes:** Gleason and Cronquist consider *R. strigosus* to be the same as this species. The fruits are eaten by animals, including humans.



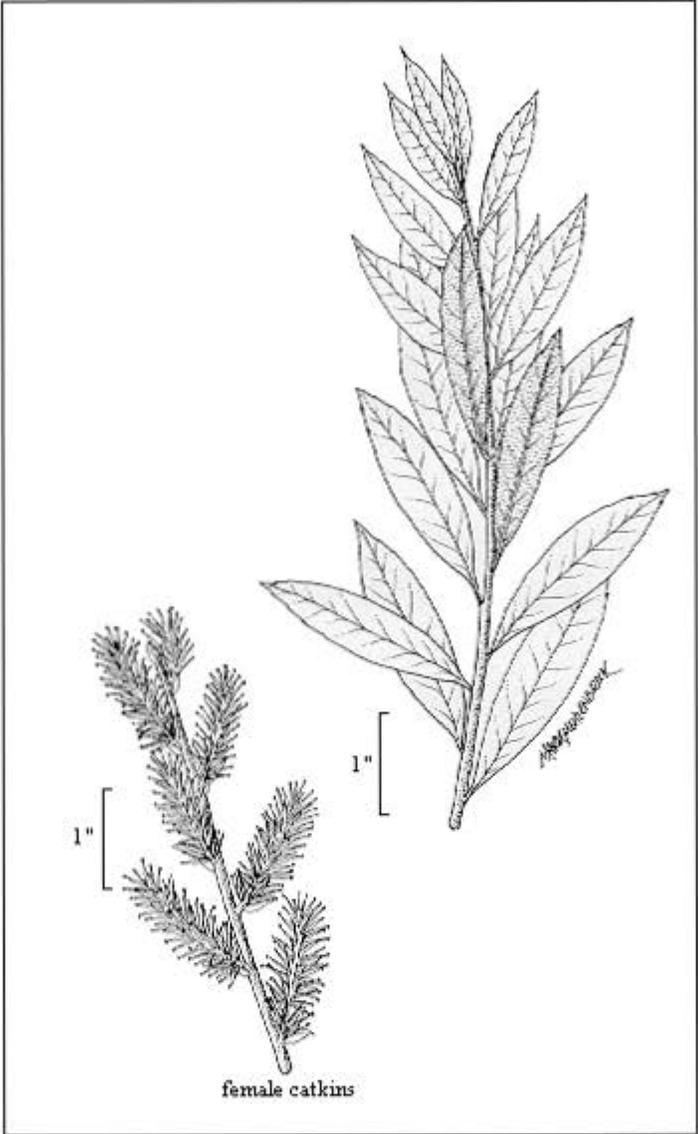
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Field Office Guide to Plant Species

Tall Prairie Willow *Salix humilis* Marshall



- **Family:** Willow (Salicaceae)
- **Flowering:** March-June
- **Field Marks:** This willow is distinguished by its shrubby growth form, the more or less toothless or wavy-edged leaves gray-hairy on the lower surface, and the young branchlets densely gray-hairy.
- **Habitat:** Dry thickets, prairies, along roads.
- **Habit:** Shrub to 9 feet tall; bark gray.
- **Stems:** Twigs slender, densely gray-hairy, branched or unbranched; buds oblongoid, rounded at the tip, finely hairy, brown.
- **Leaves:** Alternate, simple, elliptic to oblanceolate, pointed at the tip, tapering to the base, up to 6 inches long, up to 1 1/2 inches wide, toothless or wavy-edged, gray-green and smooth or hairy on the upper surface, gray-hairy on the under surface; leaf stalks downy-hairy, up to 1/2 inch long.
- **Flowers:** Male and female flowers borne in different spikes on separate shrubs, the male spikes up to 1 1/2 inches long, the female spikes up to 2 1/2 inches long, both types appearing before the leaves unfold; bracts oblanceolate, hairy, black-tipped.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary superior, hairy.
- **Fruits:** Capsules lanceoloid, hairy, up to nearly 1/2 inch long, on a stalk about 1/12 inch long.

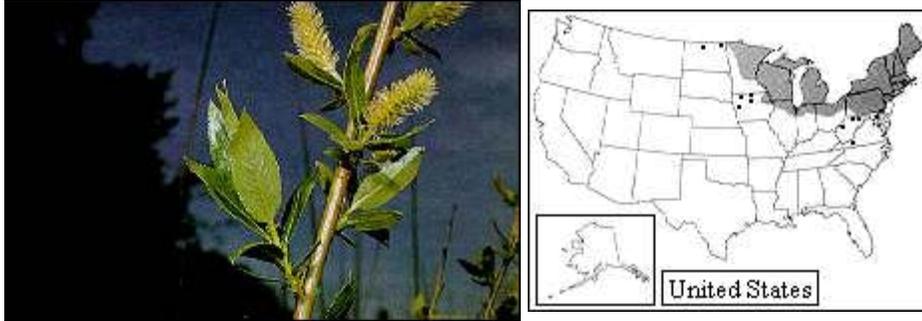


female catkins

Northeast Wetland Flora

Field Office Guide to Plant Species

Shining Willow *Salix lucida* Muhl.



- **Family:** Willow (Salicaceae)
- **Flowering:** April-June
- **Field Marks:** This large shrub or small tree is distinguished by the long-tapering tail-like tip of the leaves and the presence of a pair of tiny glands on the leaf stalk at the junction with the blade.
- **Habitat:** Wet ground, swamps, along streams.
- **Habit:** Shrub or small tree to nearly 30 feet tall, with a trunk diameter up to 10 inches; bark brown.
- **Stems:** Twigs shiny, yellow to brown; buds oblongoid, rounded at the tip, up to 1/4 inch long.
- **Leaves:** Alternate, simple, leathery, narrowly ovate, tapering to a long, tail-like point at the tip, rounded to heart-shaped at the base, dark green, smooth, and shiny on the upper surface, smooth and paler on the lower surface, finely toothed; leaf stalks up to 3/4 inch long, with a pair of tiny glands near the junction with the blade; stipules present, kidney-shaped.
- **Flowers:** Male and female borne in separate spikes on different trees, similar in appearance, up to 3 inches long; bracts oblong to oval, sparsely hairy, yellow-orange.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 3 or more.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules narrowly ovoid, pointed at the tip, green or brown, smooth, up to 1/4 inch long.



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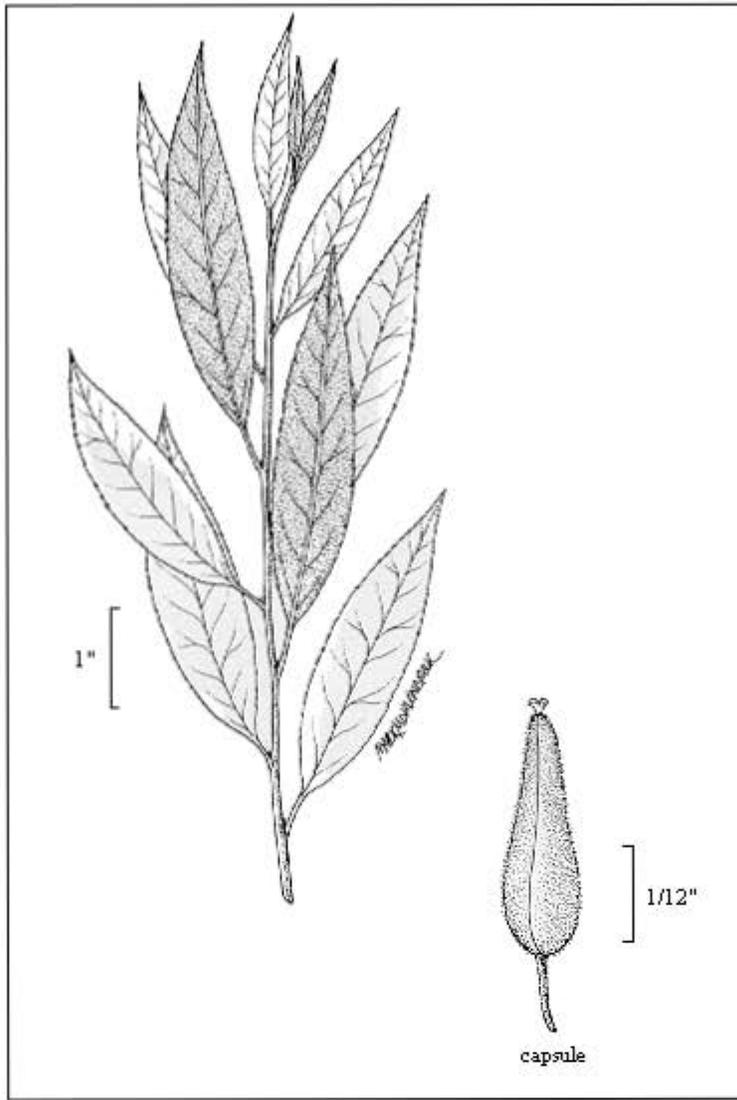
Field Office Guide to Plant Species

Silky Willow

Salix sericea Marshall



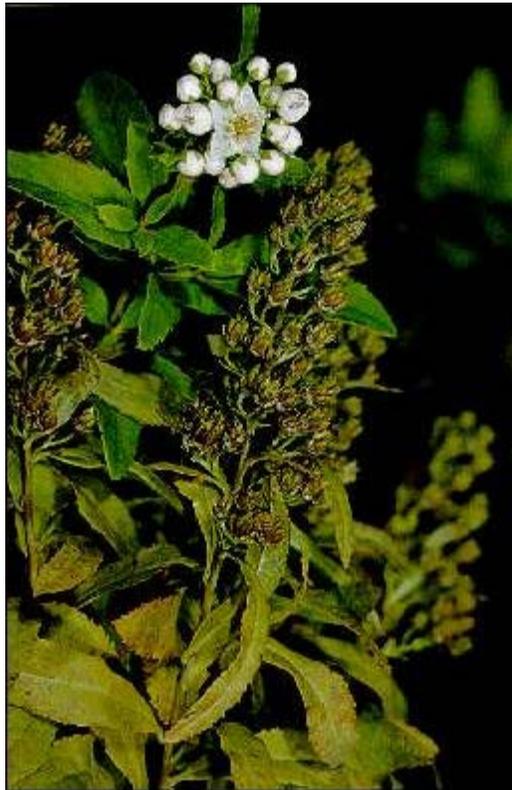
- **Family:** Willow (Salicaceae)
- **Flowering:** March-May
- **Field Marks:** This willow is distinguished by the silky hairs on the back of the narrowly lanceolate leaves and on the capsules.
- **Habitat:** Along streams, damp thickets.
- **Habit:** Shrub to 12 feet tall; bark gray.
- **Stems:** Twigs slender, brown to purple-tinged, smooth or finely hairy; buds oblongoid, rounded at the tip, finely hairy.
- **Leaves:** Alternate, simple, lanceolate, pointed at the tip, tapering to the base, finely toothed, green and smooth on the upper surface, silky-hairy on the lower surface, particularly when young, up to 4 inches long, up to 1 inch wide; leaf stalks up to 3/4 inch long, sometimes with tiny glands.
- **Flowers:** Male and female borne in separate spikes on different shrubs, similar in appearance, up to 2 1/2 inches long, appearing before the leaves expand; bracts brown to black, hairy.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 2.
- **Pistils:** Ovary superior, hairy.
- **Fruits:** Capsules ovoid to oblongoid, rounded at the tip, silky-hairy, up to 1/6 inch long.



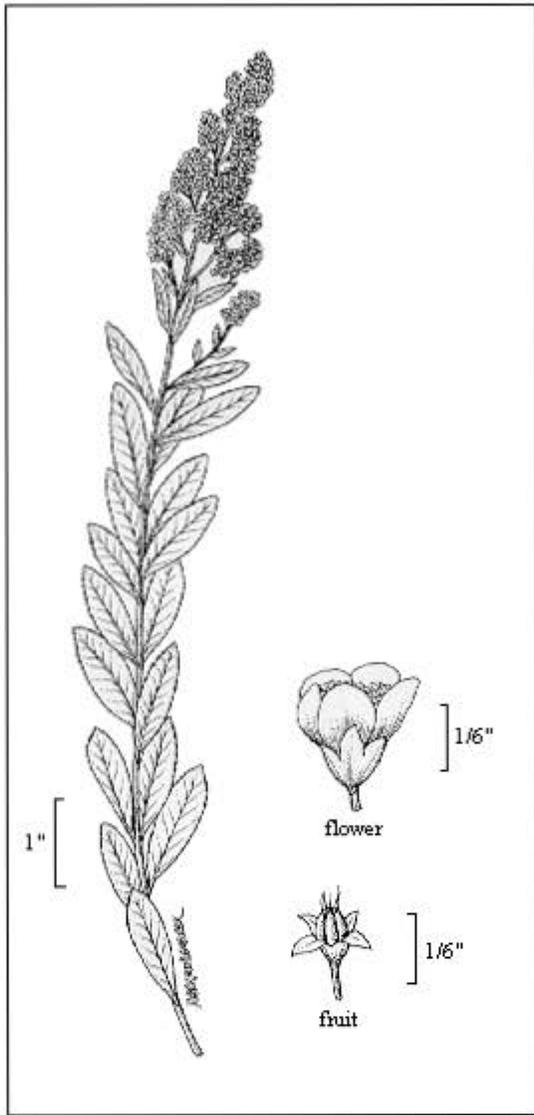
Northeast Wetland Flora

Field Office Guide to Plant Species

Narrow-leaf Meadow-sweet *Spiraea alba* DuRoi



- **Family:** Rose (Rosaceae)
- **Flowering:** June-September
- **Field Marks:** The inflorescence of the narrow-leaf meadow-sweet is an elongated panicle, with the panicle branches minutely woolly. The leaves of this species are green on both sides.
- **Habitat:** Moist soils.
- **Habit:** Shrub to 5 feet tall; bark brown.
- **Stems:** Twigs yellow-brown, tough; buds spherical, brown, smooth, about 1/24 inch long.
- **Leaves:** Alternate, simple, lanceolate to oblong, pointed at the tip, tapering to the base, finely toothed, green and smooth on both surfaces, up to 3 inches long, up to 1 inch wide; leaf stalks up to 1/6 inch long, winged.
- **Flowers:** Many in an elongated panicle, the branches of the panicle minutely woolly; flowers up to 1/3 inch across, white.
- **Sepals:** 5, united below, green.
- **Petals:** 5, free from each other, white, nearly spherical, up to 1/6 inch long.
- **Stamens:** Numerous.
- **Pistils:** Usually 5 but up to 8, free from each other, each with a superior ovary.
- **Fruits:** Follicles usually 5, pale brown, smooth, up to 1/4 inch long.



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Eastern Hemlock

Tsuga canadensis (L.) Carriere



- **Family:** Pine (Pinaceae)
- **Fruits:** Autumn
- **Field Marks:** This conifer is distinguished by its blunt, flat needles that are whitened on the back and by its small, drooping cones up to 1 inch long.
- **Habitat:** Moist, often rocky woods.
- **Habit:** Tree to nearly 100 feet tall, with a trunk diameter up to 3 feet; bark deeply furrowed, with rounded, scaly ridges.
- **Twigs:** Yellow-brown, finely hairy.
- **Leaves:** Evergreen, the needles appearing 2-ranked, linear, rounded at the tip, very short-stalked at the base, bright green on the upper surface, whitened on the lower surface, up to 3/4 inch long.
- **Reproductive Structures:** Male cones in the axils of the leaves, more or less spherical, short-stalked; female cones terminal.
- **Fruits:** Cones woody, drooping, up to 1 inch long; scales more or less spherical.
- **Notes:** This species is frequently grown as an ornamental. The twigs are browsed by deer, while birds and red squirrels eat the seeds, and ruffed grouse eat the buds and leaves.

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Tall Hairy Groovebur *Agrimonia gryposepala* Wallr.



- **Family:** Rose (Rosaceae)
- **Flowering:** June-August
- **Field Marks:** The way this *Agrimonia* differs from others is by its glandular-hairy stalks in the inflorescence and the large fruits 1/3-1/2 inch long.
- **Habitat:** Woods, thickets.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, branched, with spreading hairs, some of them gland-tipped, up to 6 feet tall.
- **Leaves:** Alternate, pinnately compound, with numerous small leaf segments mixed in among the longer 5-9 leaflets, the larger leaflets obovate to oblong-lanceolate, pointed at the tip, tapering or rounded at the base, coarsely toothed, smooth on the lower surface except on the hairy veins, usually glandular-dotted, up to 2 1/2 inches long.
- **Flowers:** Several in slender, spike-like racemes, the stalks of the racemes glandular-hairy; each flower 1/3-1/2 inch across.
- **Sepals:** 5, united below to form a turban-shaped cup, green, minutely bristly.
- **Petals:** 5, free from each other, yellow, 1/6-1/4 inch long.
- **Stamens:** 5-15.
- **Pistils:** Ovary inferior.
- **Fruits:** Turban-shaped, hanging downward, about 1/6 inch long, the rim of the fruit covered with hooked bristles.

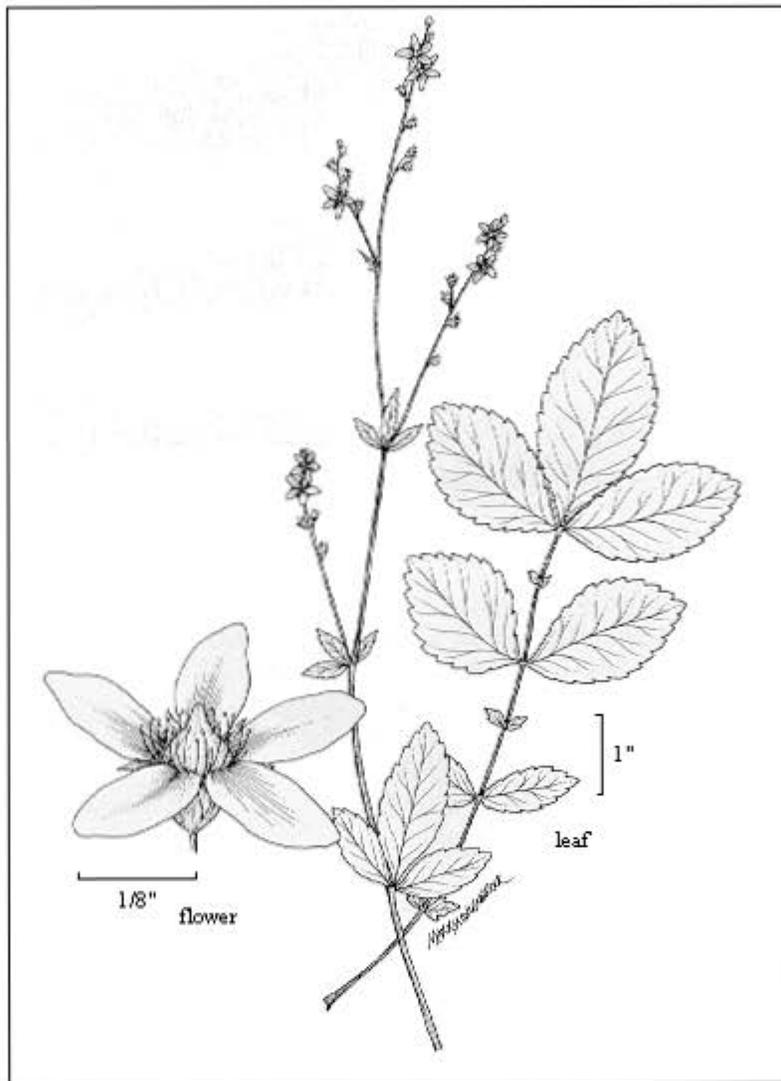
Northeast Wetland Flora

Field Office Guide to Plant Species

Beaked Groovebur *Agrimonia rostellata* Wallr.



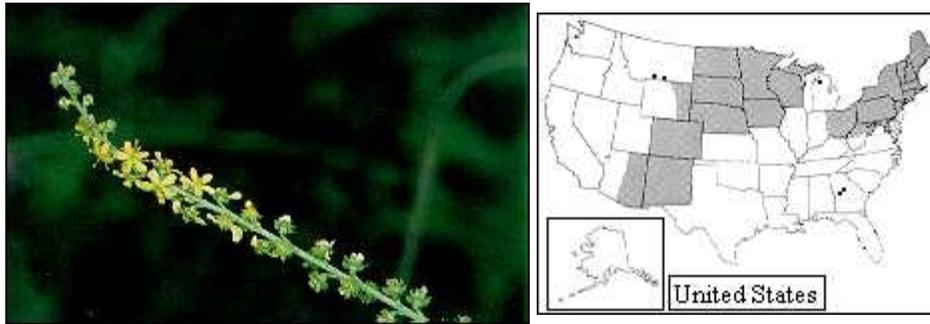
- **Family:** Rose (Rosaceae)
- **Flowering:** July-September
- **Field Marks:** Agrimonies are distinguished by their small yellow flowers, pinnately compound leaves that have tiny leaflet segments mixed in with larger leaflets, and fruits with hooked bristles. This one differs from the other species by having only 5 or 7 larger leaflets and nearly smooth stems.
- **Habitat:** Woods.
- **Habit:** Perennial herb with slender, thickened roots.
- **Stems:** Upright, branched, slender, smooth or slightly hairy, up to 3 feet tall.
- **Leaves:** Alternate, pinnately compound, with 5 or 7 large leaflets and several small leaflet segments mixed in, the large leaflets elliptic to obovate, tapering to the base, toothed, smooth or hairy on the veins beneath, up to 2 inches long.
- **Flowers:** Many in spike-like racemes, yellow, up to 1/4 inch across.
- **Sepals:** 5, green, forming a short tube, the upper edge of the tube with a ring of hooked hairs.
- **Petals:** 5, yellow, free from each other, about 1/8 inch long.
- **Stamens:** 5-15.
- **Pistils:** 2, the ovaries concealed by the tube of the sepals.
- **Fruits:** Dry, covered by hooked bristles, containing 2 achenes.
- **Notes:** The hooked hairs on the fruits get lodged in the fur of mammals and are dispersed in that manner.



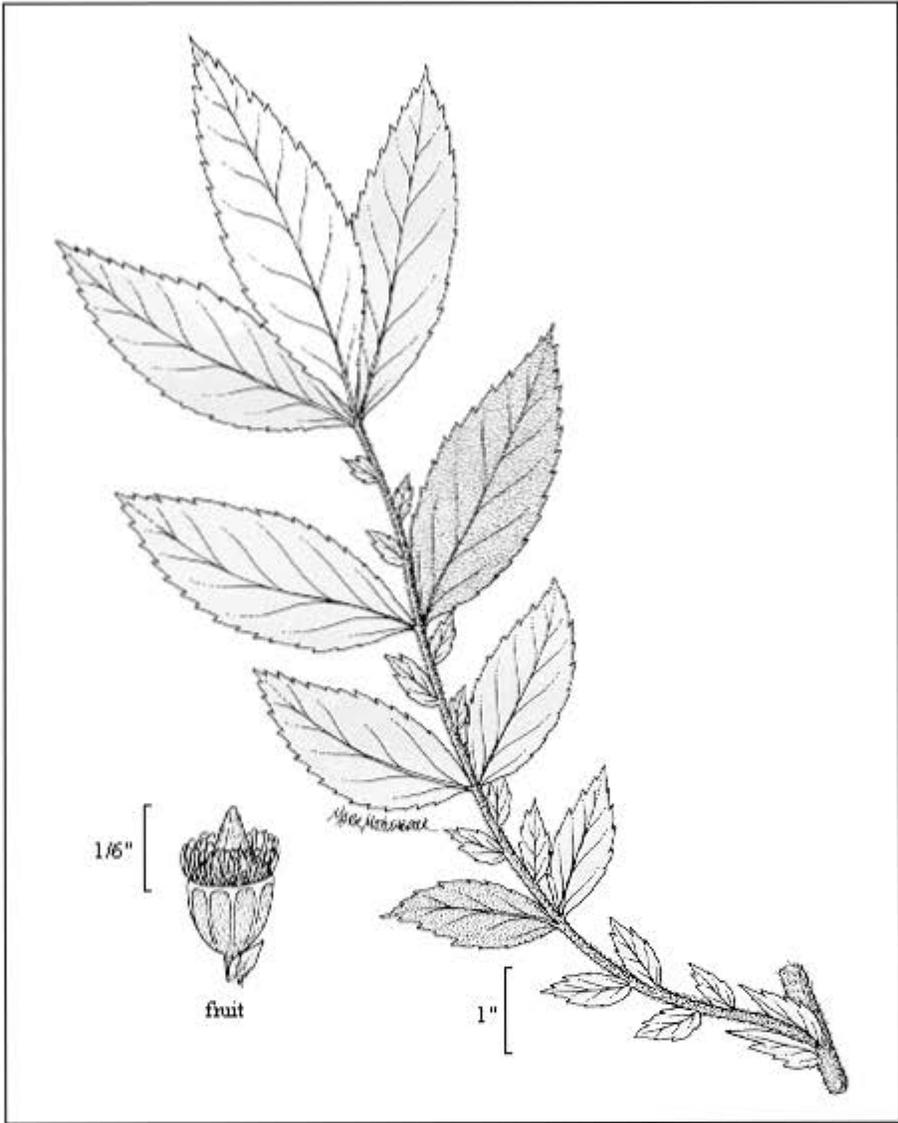
Northeast Wetland Flora

Field Office Guide to Plant Species

Woodland Groovebur *Agrimonia striata* Michx.



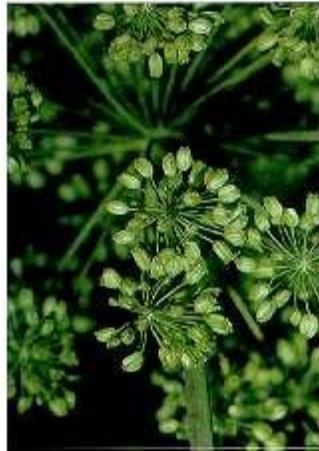
- **Family:** Rose (Rosaceae)
- **Flowering:** July-September
- **Field Marks:** The distinguishing features of this groovebur are its stems with spreading hairs, its 5-9 leaflets, its yellow petals about 1/6 inch long, and its large fruits up to 1/3 inch long, including the beak.
- **Habitat:** Woods, thickets.
- **Habit:** Perennial herb with slender, fibrous roots.
- **Stems:** Upright, stiff, up to 6 feet tall, spreading-hairy.
- **Leaves:** Alternate, pinnately compound, with smaller leaf segments mixed in among the larger leaflets, the larger leaflets 5-9, lanceolate to obovate, pointed at the tip, tapering to the base, coarsely toothed, hairy, glandular-dotted, up to 2 1/2 inches long, up to 1 3/4 inches wide.
- **Flowers:** Several in spike-like racemes, subtended by 3-cleft bracts, the axis of the inflorescence minutely hairy.
- **Sepals:** 5, green, united below to form a smooth or short-hairy cup, the lobes longer than broad.
- **Petals:** 5, yellow, free from each other, about 1/6 inch long.
- **Stamens:** Usually about 15.
- **Pistils:** Several, situated within the cup formed by the sepals.
- **Fruits:** Many achenes in a turban-shaped cup, the cup with numerous hooked bristles around the top, the achenes with a slender beak up to 1/3 inch long.
- **Notes:** The bristles on the achenes adhere to the fur of mammals and aid in the dispersal of the seeds.



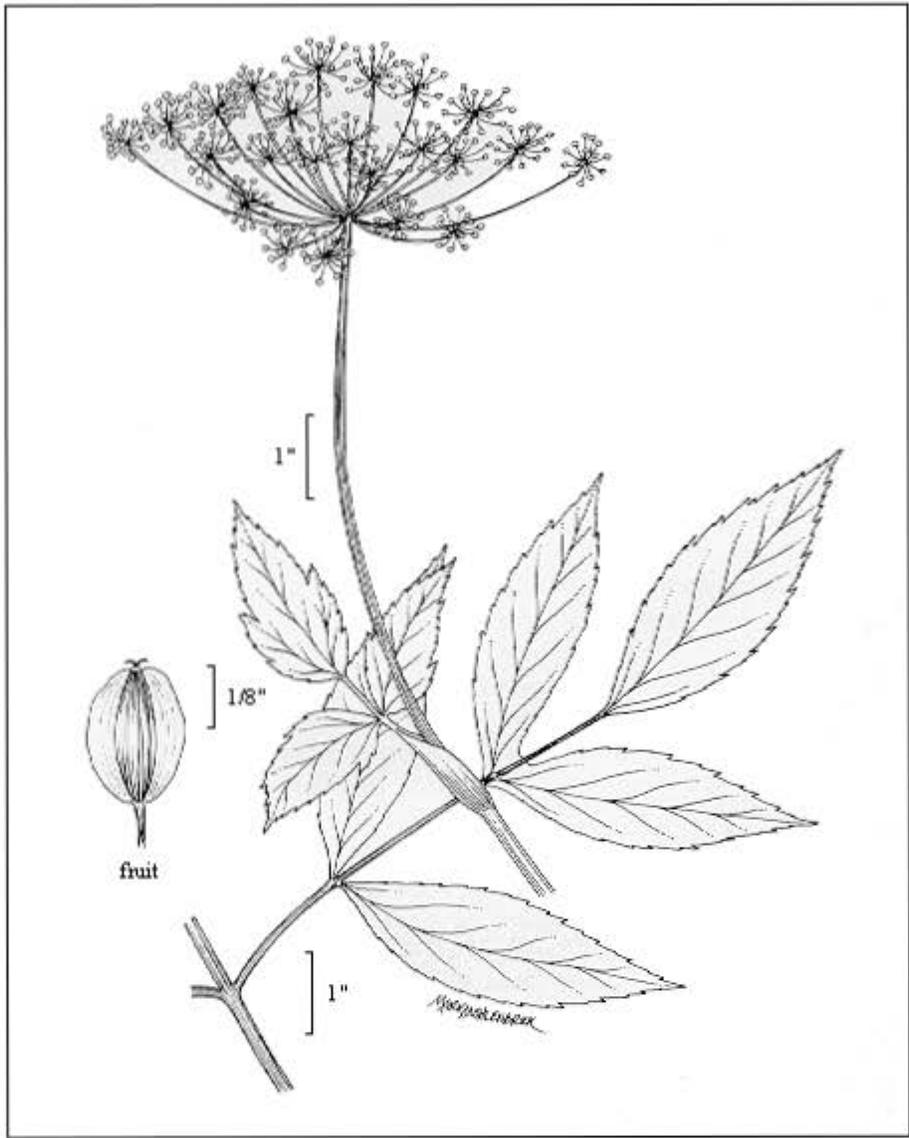
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Field Office Guide to Plant Species

Purple-stem Angelica *Angelica atropurpurea* L.



- **Family:** Carrot (Umbelliferae)
- **Flowering:** May-September
- **Field Marks:** This species is recognized by its giant stature (up to 12 feet tall), its large umbels of white flowers up to 1 foot across, the smooth, purplish stems, and the broadly winged fruits.
- **Habitat:** Swamps, bottomland forests, damp thickets, wet woods.
- **Habit:** Robust perennial herb with thickened rootstocks.
- **Stems:** Upright, stout, purple or purple blotched, smooth or sparsely hairy, branched or unbranched, up to 12 feet tall.
- **Leaves:** Basal leaves 2- or 3-pinnately compound, the leaflets lanceolate to ovate, toothed, smooth or minutely hairy on the lower surface, up to 4 inches long; stem leaves alternate, less divided than the basal leaves or reduced to sheaths, the sheaths inflated, up to 2 inches wide.
- **Flowers:** Many in huge umbels up to 1 foot across, each flower white, minute, on short-hairy stalks.
- **Sepals:** 0.
- **Petals:** 5, free from each other, white, minute.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Flattened, conspicuously ribbed, elliptic to oblong, 1/4-1/3 inch long, smooth, with broad wings.
- **Notes:** This family is Apiaceae according to Gleason and Cronquist.



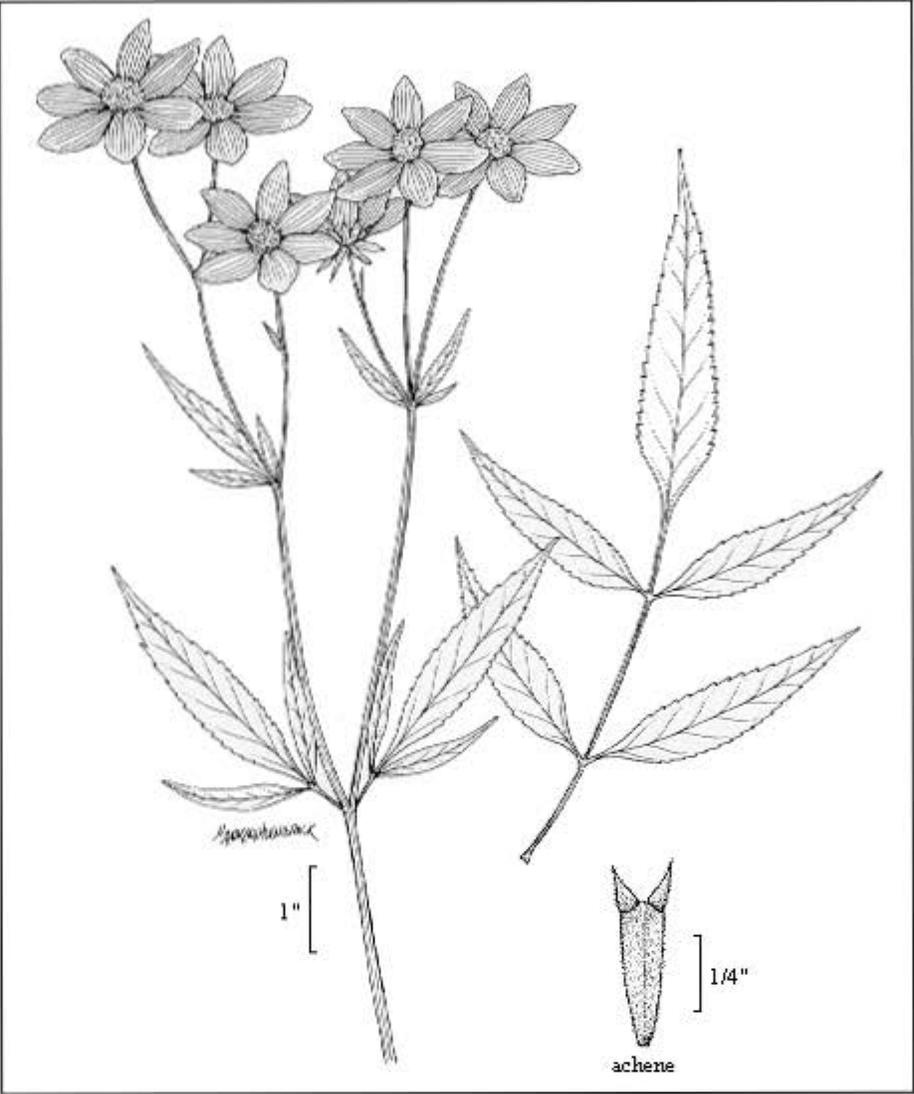
Northeast Wetland Flora

Field Office Guide to Plant Species

Large-fruit Beggar-ticks
Bidens coronata (L.) Britton



- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** The field marks for this species are the pinnately compound leaves with narrow leaflets and the fruits with flattened but 4-sided unwinged edges, and two short, erect hairy awns.
- **Habitat:** Moist soil, bogs, wet meadows, wet prairies.
- **Habit:** Annual or biennial herb with fibrous roots.
- **Stems:** Upright, branched or unbranched, smooth, slender, up to 5 feet tall.
- **Leaves:** Opposite, pinnately compound with 3-7 leaflets, the leaflets linear to lanceolate, pointed at the tip, tapering to the base, toothed or shallowly lobed, smooth.
- **Flowers:** Many flowers in heads, with several heads on smooth stalks up to 6 inches long, each head with numerous yellow rays and numerous yellow disk flowers, the rays oblong, up to 1 1/2 inches long, the disk flowers 1/6-1/4 inch long, each head subtended by usually 3-10 outer bracts.
- **Sepals:** 0.
- **Petals:** 5, some united to form yellow rays, others united to form tubular disk flowers.
- **Stamens:** 5, those within the disk flowers exerted and dark.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes oblongovate, flat, without wings, smooth or slightly hairy, ciliate toward the tip, up to 1/2 inch long, with a pair of stout, hairy awns up to 1/6 inch long.
- **Notes:** Gleason and Cronquist use the name Asteraceae for this family.



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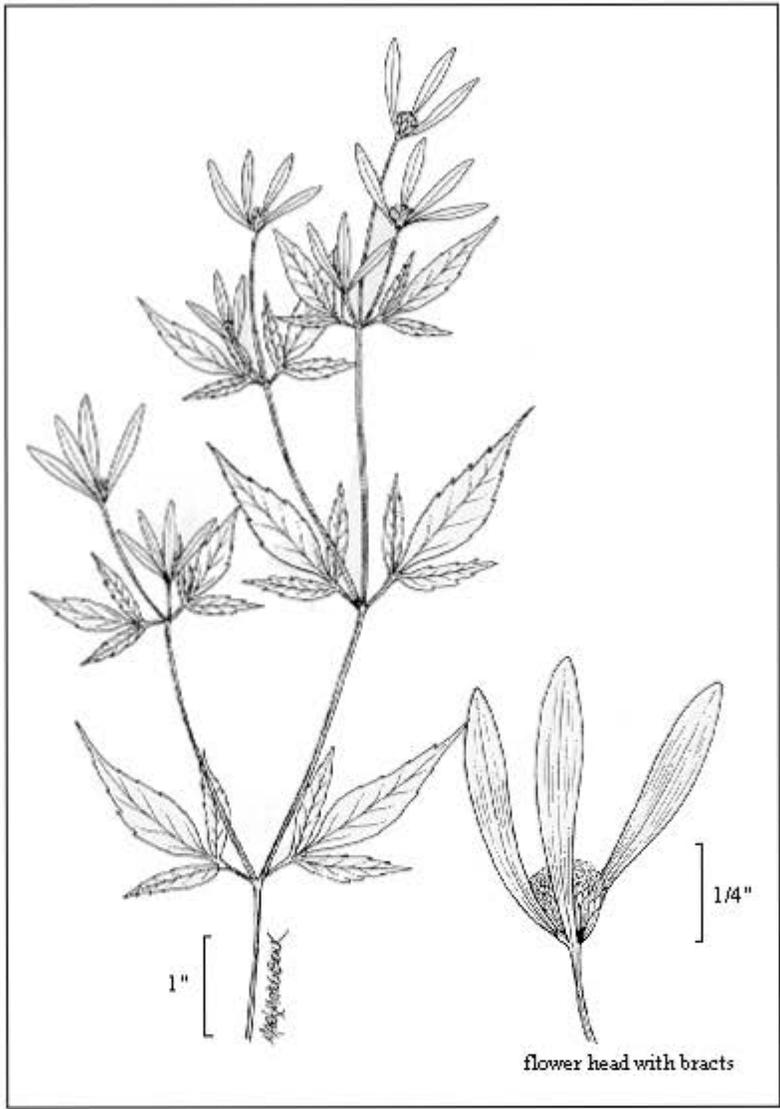
Field Office Guide to Plant Species

Swamp Beggar-ticks

Bidens discoidea (Torr. & Gray) Britton



- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** The characters which distinguish this species are the pinnately compound leaves, the rayless flower heads, and the 2-5 long, spatulate outer bracts that subtend each head.
- **Habitat:** Swamps, often on fallen logs or growing on the base of trees in standing water.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched or unbranched, very slender, smooth, often red, up to 5 feet tall.
- **Leaves:** Opposite, variable, the lowest pinnately compound with 3 leaflets, the upper often simple, lanceolate, tapering to a long point at the tip, tapering to the base, smooth, membranaceous; leaf stalks up to 1 inch long, smooth.
- **Flowers:** Many flowers in heads, with several heads on slender stalks up to 2 inches long, each head rayless, the disk 1/4-1/3 inch across, each head subtended by 2-5 smooth, outer bracts.
- **Sepals:** 0.
- **Petals:** 5, united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes obovate to oblanceolate, tapering to the base, hairy, 1/4-1/3 inch long, with a pair of hairy awns about 1/8 inch long.
- **Notes:** Gleason and Cronquist call this family Asteraceae.



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Field Office Guide to Plant Species

Small-fruit Beggar-ticks *Bidens mitis* (Michx.) Sherff



- **Family:** Composite (Compositae)
- **Flowering:** September-October
- **Field Marks:** The distinguishing characters of this species are the pinnately compound or lobed or sometimes undivided leaves, the bright yellow ray flowers, and the short achenes less than 1/4 inch long.
- **Habitat:** Brackish swamps, freshwater swamps.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched or unbranched, smooth, slender, up to 3 feet tall.
- **Leaves:** Opposite, highly variable and ranging from pinnately compound with 3-7 leaflets to undivided or merely lobed, the leaflets linear, pointed at the tip, tapering to the base, smooth, with or without teeth, up to 5 inches long.
- **Flowers:** Many flowers in heads, with several heads on smooth stalks up to 5 inches long, each head with numerous yellow rays and numerous yellow disk flowers, the rays oblong, up to 1 inch long, the disk flowers 1/6-1/4 inch long, each head subtended by 7-10 outer bracts.
- **Sepals:** 0.
- **Petals:** 5, some united to form yellow rays, others united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes obovate to oblong-ovate, flat, without wings, smooth except for short cilia, less than 1/4 inch long, with a pair of barbed awns about 1/20 inch long.
- **Notes:** Gleason and Cronquist call this is family Asteraceae.

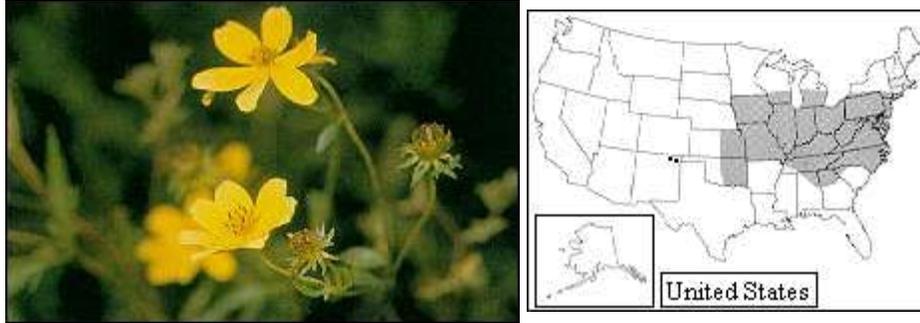


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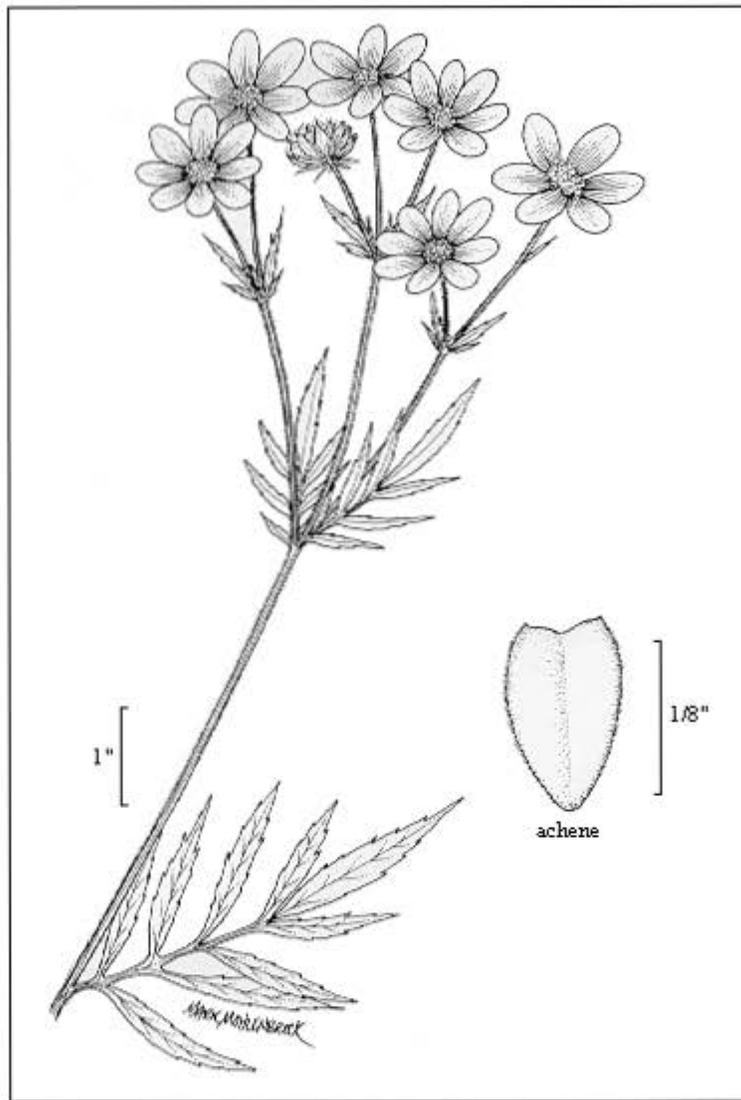
Field Office Guide to Plant Species

Awnless Beggar-ticks

Bidens polylepis Blake



- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** The distinguishing features of this species are its pinnately compound leaves, conspicuous ray flowers, 10 or more bracts subtending each flowering head, and its usually awnless achenes.
- **Habitat:** Wet ground, roadside ditches.
- **Habit:** Annual or biennial herb with fibrous roots.
- **Stems:** Upright, much branched, usually hairy, up to 3 feet tall.
- **Leaves:** Opposite, pinnately compound, the leaflets linear to lanceolate, coarsely toothed or shallowly lobed, smooth, up to 3 inches long.
- **Flowers:** Many crowded in heads, with numerous heads on slender, rough stalks up to 4 inches long, each head with about 8 bright yellow rays up to 1 inch long and numerous tubular disk flowers, each head subtended by 10 or more leafy bracts.
- **Sepals:** 0.
- **Petals:** Some united to form flat rays, others united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, sparsely hairy.
- **Fruits:** Achenes crowded into heads, each achene flat, sparsely hairy on the faces, with stiff hairs on the edges, up to 1/4 inch long, usually with a pair of 2 short awns at the tip, or the awns absent.
- **Notes:** This family is Asteraceae according to Gleason and Cronquist. This species is expanding its range from the midwest eastward.



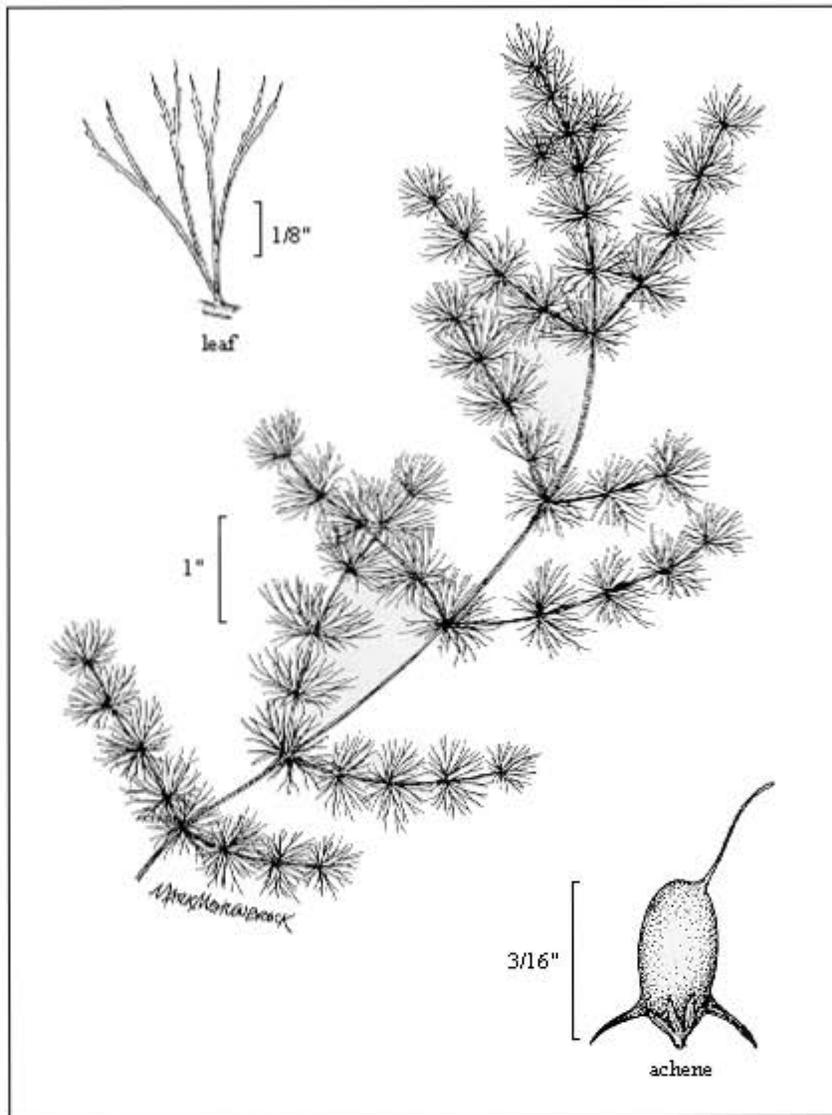
Northeast Wetland Flora

Field Office Guide to Plant Species

Common Hornwort *Ceratophyllum demersum* L.



- **Family:** Coontail (Ceratophyllaceae)
- **Flowering:** July-September
- **Field Marks:** This aquatic plant is distinguished by its whorled, toothed leaves and its tiny, sessile, axillary flowers and beaked fruits.
- **Habitat:** Lakes, ponds, slow streams.
- **Habit:** Herbaceous aquatic perennial.
- **Stems:** Much branched, elongated, smooth, varying in length according to the depth of the water.
- **Leaves:** Whorled, sessile, up to 1 1/2 inches long, smooth, divided usually into 3-forked, nearly thread-like segments, the segments flattened and toothed.
- **Flowers:** Solitary in the axils of the leaves, the male and female borne separately, each subtended by an 8- to 12-cleft bract.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 10-20.
- **Pistils:** One, the ovary superior.
- **Fruits:** Achenes ellipsoid, flattened, smooth, wingless, the body 1/6-1/4 inch long, with 2 basal spurs up to 1/4 inch long and a beak 1/8-1/4 inch long.
- **Notes:** The length and texture of the stems, the degree of toothing on the leaves, and the characters of the fruit are all variable. The fruits are eaten by ducks.



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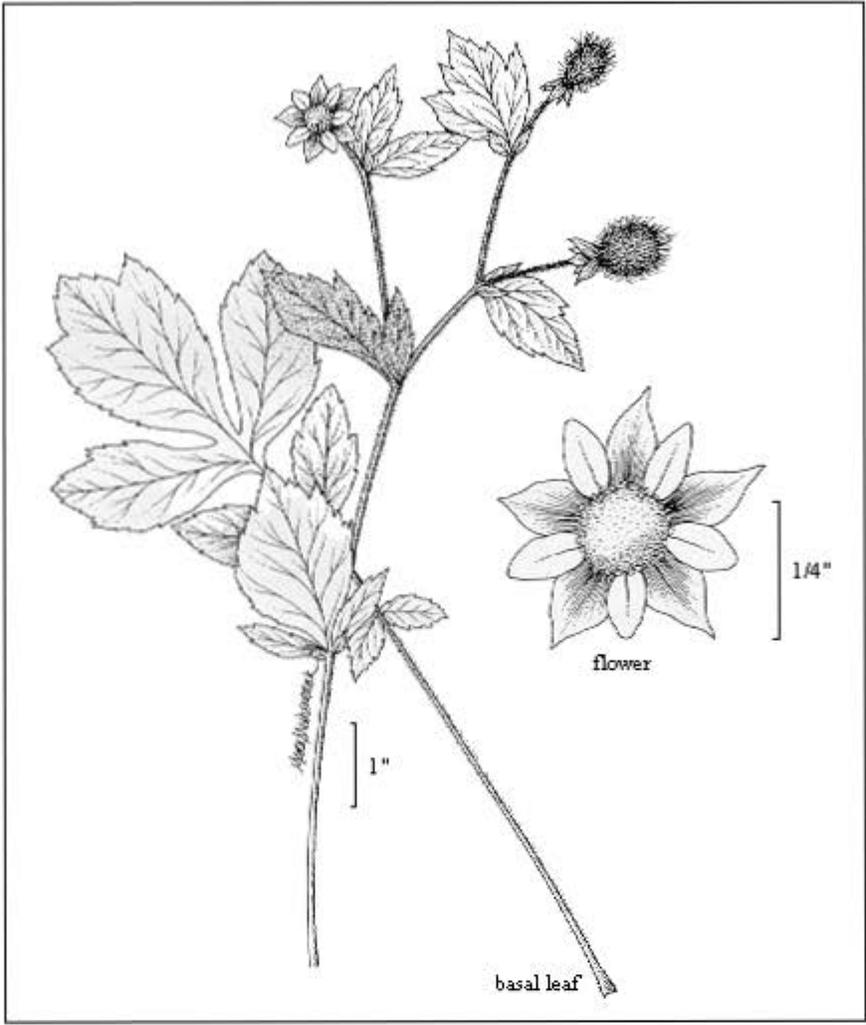
Field Office Guide to Plant Species

Rough Avens

Geum laciniatum Murray



- **Family:** Rose (Rosaceae)
- **Flowering:** May-July
- **Field Marks:** The distinguishing marks of this species are its whitish petals smaller than the lobes of the green sepals, flower stalks densely covered by spreading hairs, and its jointed styles.
- **Habitat:** Meadows, thickets, open, wet soil.
- **Habit:** Perennial herb from rhizomes.
- **Stems:** Upright, usually branched, often covered with downward pointing hairs, up to 3 feet tall.
- **Leaves:** Basal leaves with long stalks, pinnately lobed, the lobes with jagged segments, hairy, up to 10 inches long; stem leaves alternate, simple or divided into 3 leaflets, coarsely toothed, hairy, tapering to the base.
- **Flowers:** Several from the axils of the uppermost leaves, on densely hairy stalks.
- **Sepals:** 5, green, ovate-lanceolate, pointed at the tip, up to 1/2 inch long.
- **Petals:** 5, white, free from each other, rounded at the tip, shorter than the sepals.
- **Stamens:** Numerous.
- **Pistils:** Several, free from each other, hairy, the ovaries superior with a long style.
- **Fruits:** Achenes crowded in a spherical head up to 1 inch in diameter, the achenes brownish, up to 1/4 inch long, with a long, persistent style.



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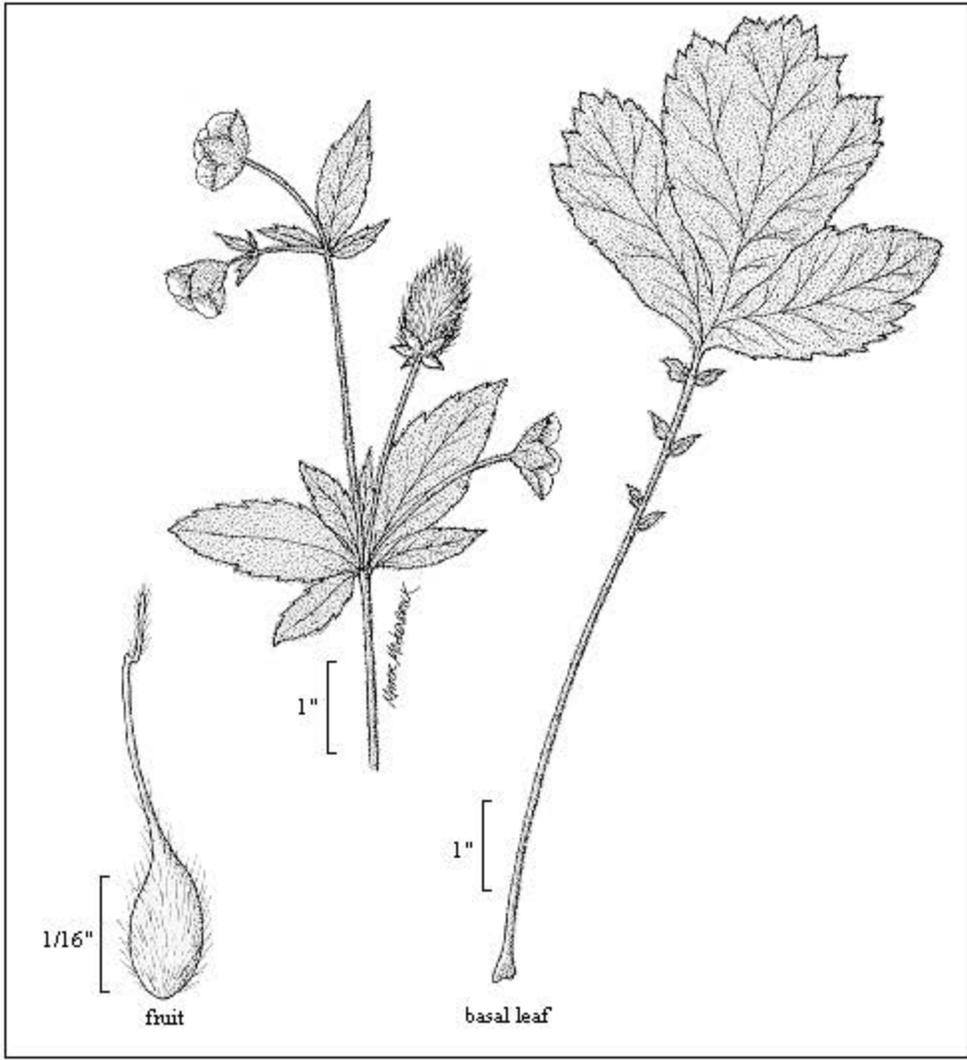
Field Office Guide to Plant Species

Purple Avens

Geum rivale L.



- **Family:** Rose (Rosaceae)
- **Flowering:** May-September
- **Field Marks:** This is the only species of *Geum* with purple flowers. The persistent styles on the fruits are plumose.
- **Habitat:** Swamps, bogs, wet fields.
- **Habit:** Perennial herb with thickened rootstocks.
- **Stems:** Upright, branched or unbranched, hairy, up to nearly 3 feet tall.
- **Leaves:** Basal ones pinnately divided, up to 1 foot long, divided into 3 or 5 large leaflets and a few very tiny ones; leaflets deeply lobed, toothed, hairy; stem leaves divided into 3 leaflets or at least 3-lobed, otherwise similar to the basal leaves but smaller; stipules leafy and deeply divided.
- **Flowers:** Few in a terminal raceme, nodding, purplish, up to 1/2 inch long, borne on hairy stalks.
- **Sepals:** 5, united below to form a bell, purple, the lobes broadly triangular, up to 1/2 inch long.
- **Petals:** 5, free from each other, yellow-tinged or lined with purple, obovate, slightly notched at the tip.
- **Stamens:** Numerous.
- **Pistils:** Numerous, each with a superior ovary.
- **Fruits:** Several achenes crowded into a spherical head raised on a short stalk above the sepals, each achene with a plumose style 1/4-1/3 inch long.



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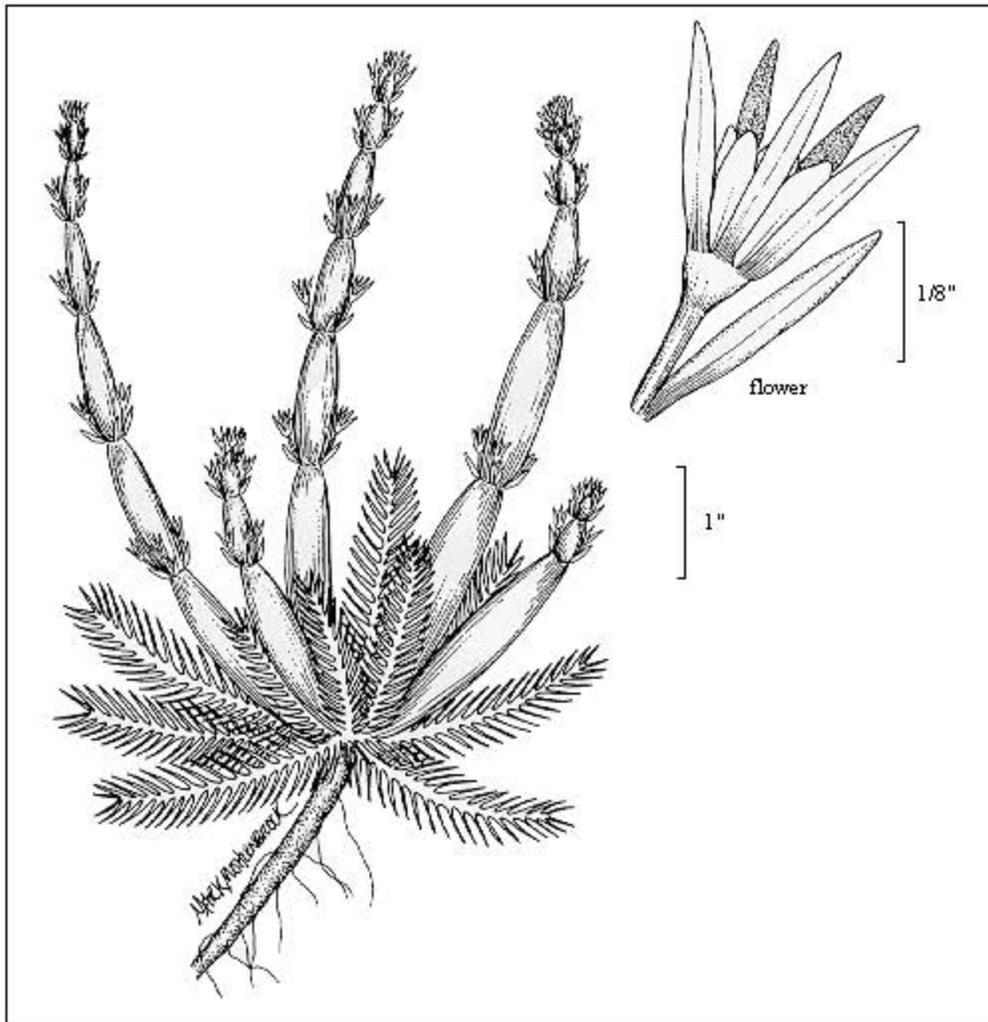
Field Office Guide to Plant Species

American Featherfoil

Hottonia inflata Elliott



- **Family:** Primrose (Primulaceae)
- **Flowering:** April-August
- **Field Marks:** The submersed leaves of this species are deeply pinnately divided. The hollow stalks of the inflorescence which extend above water are alternately swollen and constricted, with whorls of white flowers at each constriction.
- **Habitat:** Quiet water, sometimes on wet soil.
- **Habit:** Aquatic perennial herb with fibrous roots.
- **Stems:** Submersed, elongated, bearing a cluster of leaves at its summit; stems above water actually the stalks of the inflorescence, green, hollow, swollen, constricted, forming joints 1-2 inches apart.
- **Leaves:** Submersed, up to 2 1/2 inches long, deeply pinnately divided, smooth.
- **Flowers:** 3-10 in whorls from each constriction of the hollow stalks of the inflorescence, white, each flower subtended by a linear bract up to 1 1/2 inches long.
- **Sepals:** 5, green, united only at base, ascending, linear, up to 1/2 inch long.
- **Petals:** 5, white, forming a tube, up to 1/4 inch long.
- **Stamens:** 5, much shorter than the petals.
- **Pistils:** Ovary superior, ovoid, with a very short style.
- **Fruits:** Capsule spherical, smooth, up to 1/6 inch in diameter.



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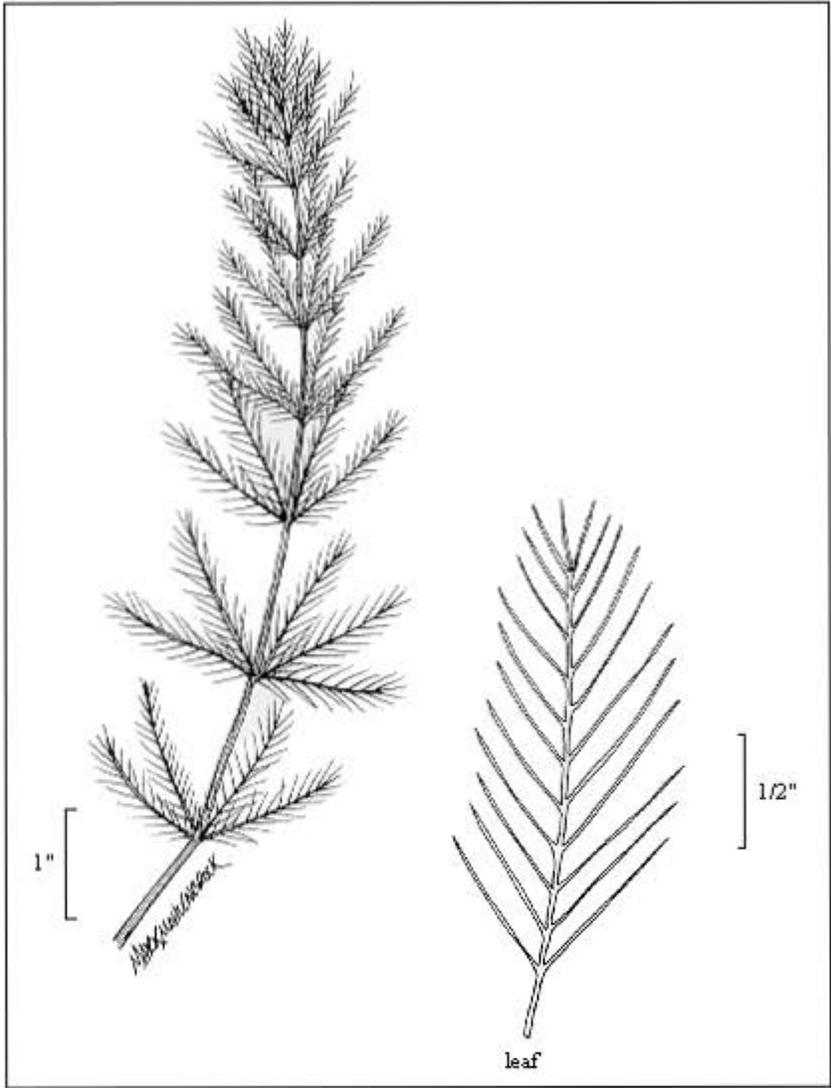
Field Office Guide to Plant Species

Parrot-feather

Myriophyllum brasiliense Cambess.



- **Family:** Water-milfoil (Haloragaceae)
- **Flowering:** June-September
- **Field Marks:** The distinguishing features of this aquatic plant are its whorled leaves and its flowers borne in the axils of ordinary leaves.
- **Habitat:** Shallow water.
- **Habit:** Aquatic perennial, often with a reddish hue.
- **Stems:** Much branched, sometimes reddish, smooth, stout, bearing many leaves.
- **Leaves:** Whorled, up to 2 1/2 inches long, with 10-25 thread-like segments on each side, smooth.
- **Flowers:** Male and female flowers borne separately and on different plants in the axils of ordinary leaves on emergent inflorescences; each flower subtended by a 2- or 3-cleft, thread-like bracteole.
- **Sepals:** 0.
- **Petals:** Usually 0.
- **Stamens:** 4.
- **Pistils:** Ovary superior, 4-lobed, smooth.
- **Fruits:** Nearly spherical, smooth, up to 1/8 inch in diameter, with a granular texture.
- **Notes:** This aquatic may become an aggressive weed in shallow bodies of water. It is a popular aquarium plant. In North America, apparently only female plants occur. This species is called *M. aquaticum* by Gleason and Cronquist, Godfrey and Wooten, and most other recent authors.



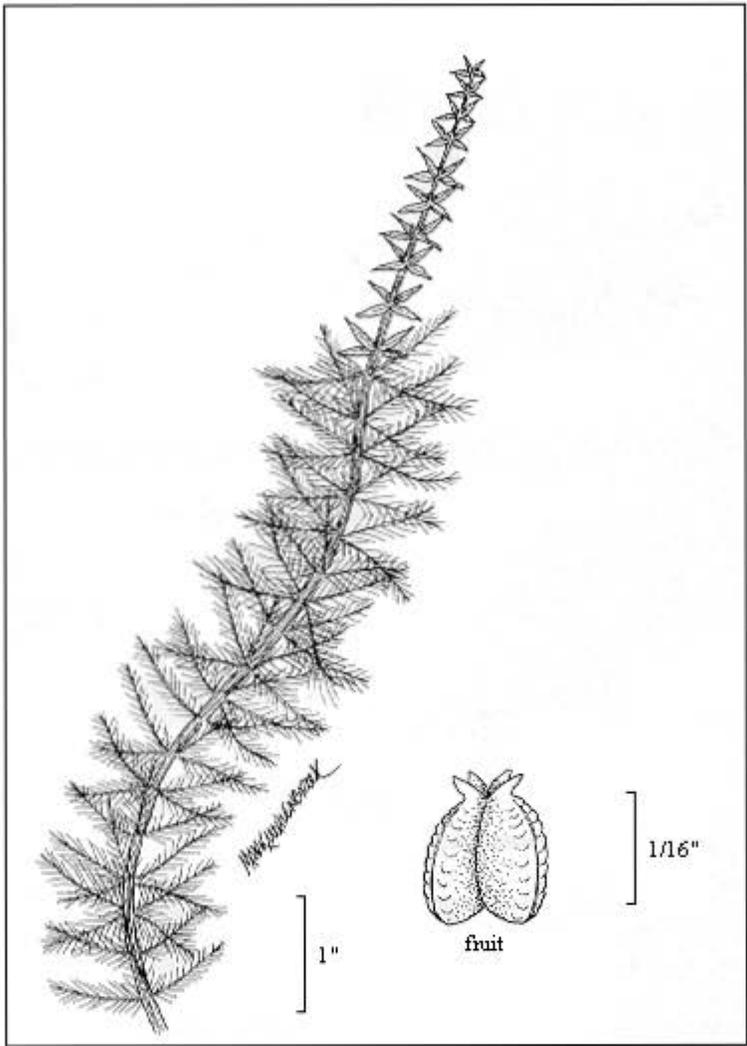
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Two-leaf Water-milfoil *Myriophyllum heterophyllum* Michx.



- **Family:** Water-milfoil (Haloragaceae)
- **Flowering:** June-September
- **Field Marks:** All the leaves of this species are whorled, the fruits have a pair of ridges down their otherwise rounded back, the leaves and bracts that protrude above the water are lanceolate to elliptic, and the 4 petals are up to 1/6 inch long.
- **Habitat:** Ponds, streams, shallow water.
- **Habit:** Aquatic perennial.
- **Stems:** Rather stout, smooth, branched.
- **Leaves:** All in whorls, the submersed ones pinnately divided, up to 2 1/2 inches long, with 6-12 pairs of segments, the emersed ones lanceolate to spatulate, up to 1/4 inch wide, with or without teeth along the edges.
- **Flowers:** Crowded in spikes, the male usually in the upper part of the spike, the female in the lower; each spike up to 12 inches long; flowers subtended by ovate, toothed bracteoles up to 1/24 inch long.
- **Sepals:** 0.
- **Petals:** 4 (at least in the male flowers), free from each other, up to 1/6 inch long, usually absent in the female flowers.
- **Stamens:** 4.
- **Pistils:** Ovary superior, 4-lobed, smooth.
- **Fruits:** Nearly spherical, pebbly, usually with a pair of ridges down the otherwise rounded back, distinctly beaked.
- **Notes:** The fruits are eaten by waterfowl.



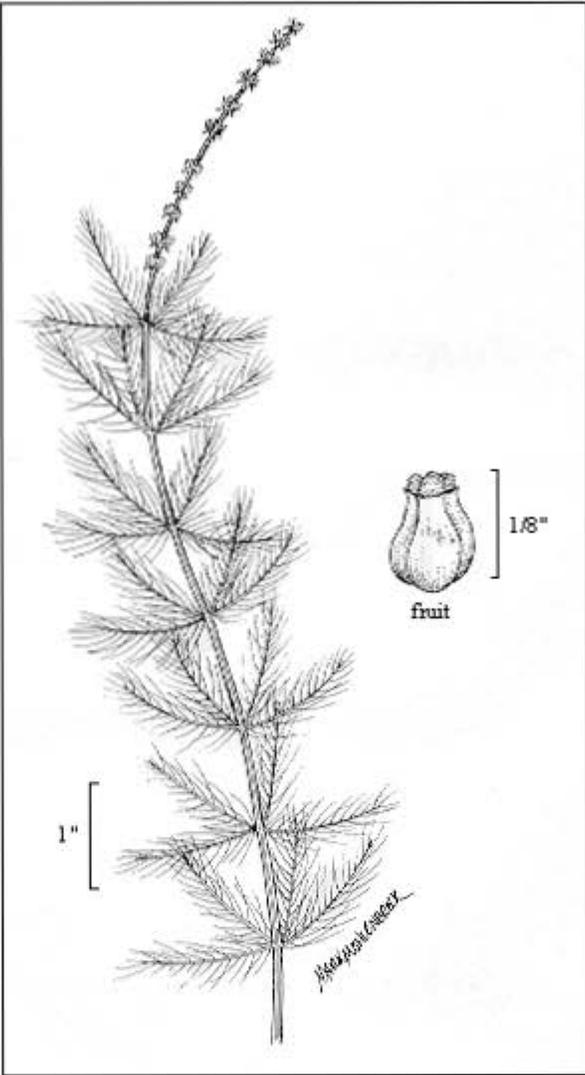
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Eurasian Water-milfoil
Myriophyllum spicatum L.



- **Family:** Water-milfoil (Haloragaceae)
- **Flowering:** July-September
- **Field Marks:** This water-milfoil is distinguished by having all leaves borne in whorls, with 6-11 pairs of divisions per leaf. The flowers are in whorls in terminal spikes.
- **Habitat:** Quiet water.
- **Habit:** Submerged aquatic herb.
- **Stems:** Branched or unbranched, usually purple but drying white, smooth, up to 2 feet long.
- **Leaves:** All in whorls, each leaf divided into 6-11 pairs of linear segments, smooth, each leaf up to 1 1/2 inches long.
- **Flowers:** Borne in whorls and crowded into terminal spikes, each spike up to 4 inches long, subtended by ovate to oblong, toothed bracts, the upper part of the spike with male flowers only, the lower part with female flowers only.
- **Sepals:** 4, green, united below, minute.
- **Petals:** 4, green, free from each other, minute, or absent.
- **Stamens:** 8.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Spherical, with 4 grooves, smooth or warty, up to 1/8 inch long.
- **Notes:** This species is sometimes considered the same as *M. exalbescens*. The nutlets are eaten by waterfowl. This species is introduced from Eurasia and is replacing native submerged aquatic species.

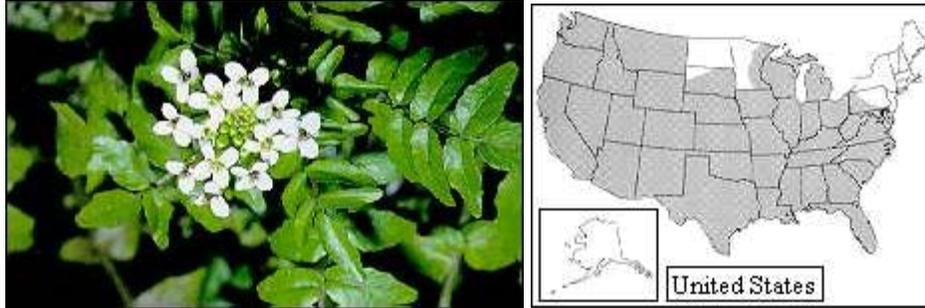


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True Water-cress

Nasturtium officinale R. Br. in W.T. Ait.

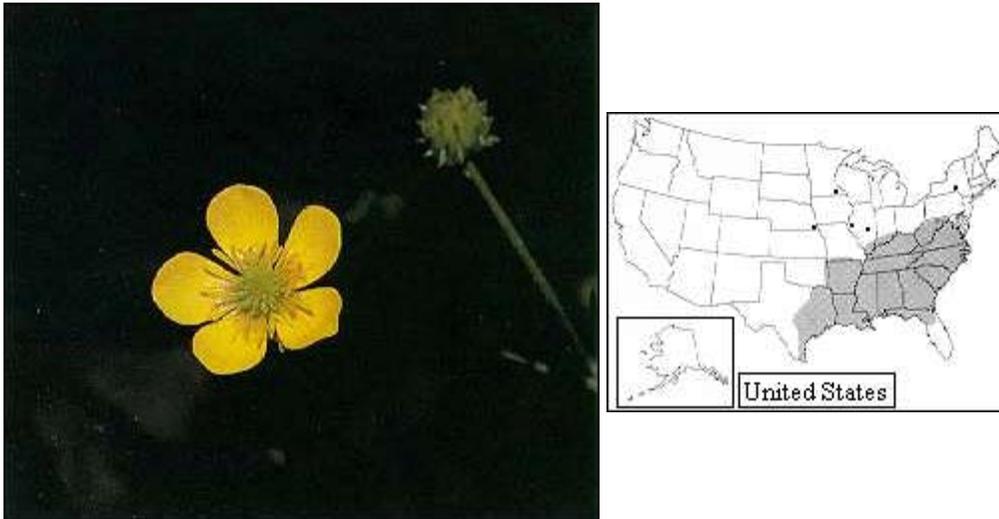


- **Family:** Mustard (Cruciferae)
- **Flowering:** April-October
- **Field Marks:** Water-cress differs from all other mustards by its pinnately compound leaves with 3-11 leaflets, its 4 white petals about twice as long as the sepals, and its long, slender, straight or curving pods, and with seeds in two rows.
- **Habitat:** Springs, brooks, cool water, usually in water.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Creeping or floating, rather fleshy, smooth, rooting at many of the nodes.
- **Leaves:** Alternate, pinnately compound, with 3-11 leaflets; leaflets oblong to oval to nearly spherical, rounded at the tip, smooth, without teeth or with wavy-toothed margins.
- **Flowers:** Borne in terminal racemes and in racemes from the axils of the uppermost leaves, each flower 1/6-1/4 inch across, not subtended by bracts.
- **Sepals:** 4, green, free from each other, elliptic to narrowly oblong, smooth, up to 1/8 inch long.
- **Petals:** 4, white, free from each other, broadly oblong to nearly spherical, rounded at the tip, up to 1/4 inch long.
- **Stamens:** 6.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Pods elongated, linear, cylindric, straight or curved, on slender stalks, smooth, up to 1 1/4 inches long, up to 1/8 inch thick, with or without a minute beak at the tip.
- **Notes:** This species is collected for use in salads or as a garnish. This family is called Brassicaceae by Gleason and Cronquist.

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Carolina Butter-cup *Ranunculus carolinianus* DC.



- **Family:** Butter-cup (Ranunculaceae)
- **Flowering:** March-June
- **Field Marks:** This species is recognized by its deeply divided leaves, its yellow petals 1/3-1/2 inch long, and its short, reflexed sepals up to 1/4 inch long.
- **Habitat:** Low woods, damp thickets, shores.
- **Habit:** Perennial herb with thick fibrous roots and creeping stolons, usually rooting at the nodes.
- **Stems:** Trailing to ascending, branched, appressed-hairy to nearly smooth, up to 2 1/2 feet long.
- **Leaves:** Alternate and basal, all alike, deeply 3-parted or even divided into 3 leaflets, the terminal segment smooth or appressed-hairy, borne on smooth or appressed-hairy stalks, the uppermost leaves progressively smaller.
- **Flowers:** 1-10 per stem, bright yellow, up to 1 1/4 inches across, on smooth or appressed-hairy stalks up to 2 1/2 inches long.
- **Sepals:** 5, greenish yellow, free from each other, narrowly ovate, pointed at the tip, turned downward, smooth or finely hairy, up to 1/4 inch long.
- **Petals:** 5, bright yellow, free from each other, often waxy-looking, oblong to obovate, 1/3-1/2 inch long.
- **Stamens:** 40 or more.
- **Pistils:** Several, each with a superior ovary.
- **Fruits:** Achenes borne in spherical heads 1/3-3/5 inch in diameter; achenes obovoid to nearly spherical, flattish, up to 1/4 inch long, smooth, with a high, broad keel near the edge, the beak straight, up to 1/10 inch long.
- **Notes:** Gleason and Cronquist consider this plant to be *R. hispidus* var. *nitidus*. The achenes are eaten by waterfowl.



Northeast Wetland Flora

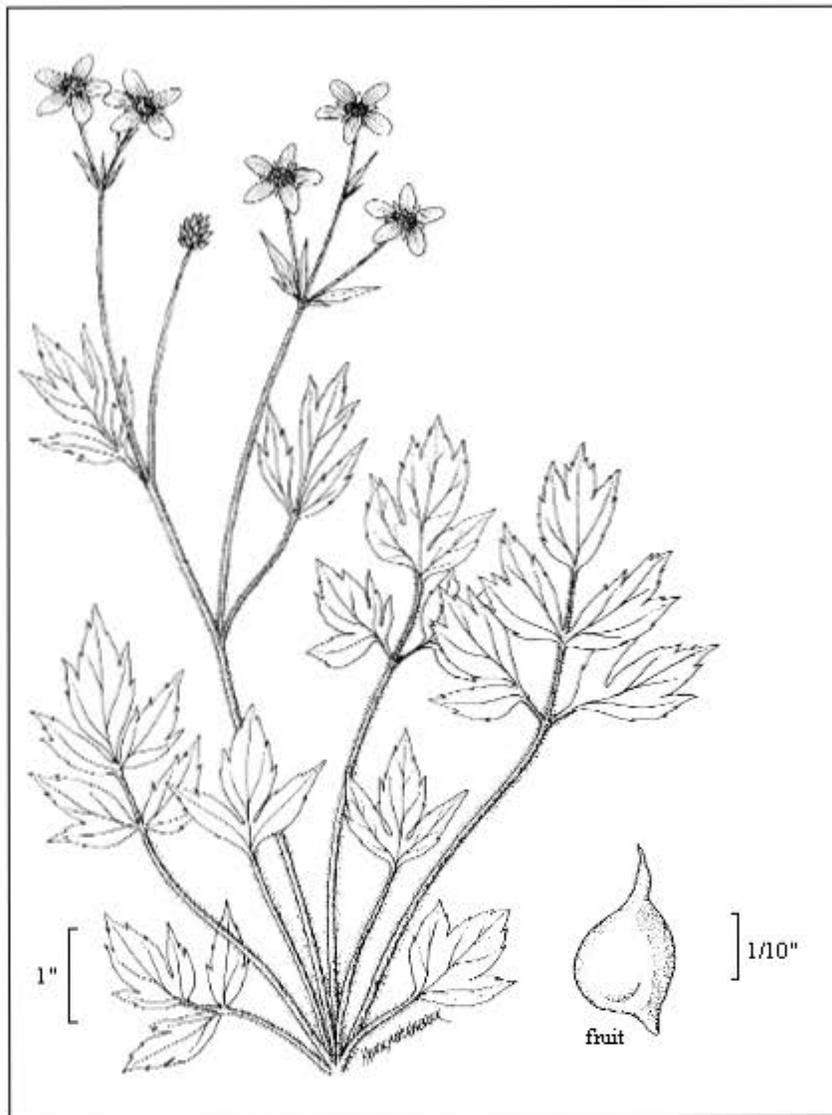
Field Office Guide to Plant Species

Bristly Butter-cup

Ranunculus hispidus Michx.



- **Family:** Butter-cup (Ranunculaceae)
- **Flowering:** March-May
- **Field Marks:** This butter-cup differs by its deeply divided leaves, its yellow petals 1/3-1/2 inch long, its spreading sepals 1/4-1/2 inch long, and the absence of stolons.
- **Habitat:** Rich woods.
- **Habit:** Perennial herb with a thickened base and short, thickened roots, without stolons.
- **Stems:** Upright, branched or unbranched, with spreading or appressed hairs, up to 1 1/2 feet tall.
- **Leaves:** Alternate and basal, the basal ones simple and unlobed to deeply 3-parted or even divided into 3 leaflets, the terminal segment stalked, with spreading or appressed hairs, borne on spreading-hairy stalks up to 8 inches long; stem leaves usually deeply 3-parted, the uppermost ones sessile or nearly so.
- **Flowers:** 1-6 per stem, bright yellow, up to 1 inch across, on spreading or appressed-hairy stalks up to 4 inches long.
- **Sepals:** 5, greenish yellow, free from each other, spreading, ovate, pointed at the tip, ovate, up to 1/3-1/2 inch long.
- **Petals:** 5, bright yellow, free from each other, often waxy-looking, obovate, 1/3-1/2 inch long.
- **Stamens:** 40 or more.
- **Pistils:** Several, each with a superior ovary.
- **Fruits:** Achenes borne in a spherical head up to 1/2 inch in diameter; achenes obovoid, flattened, up to 1/6 inch long, smooth with a prominent narrow margin, the beak straight, about 1/10 inch long.
- **Notes:** The achenes are eaten by waterfowl.

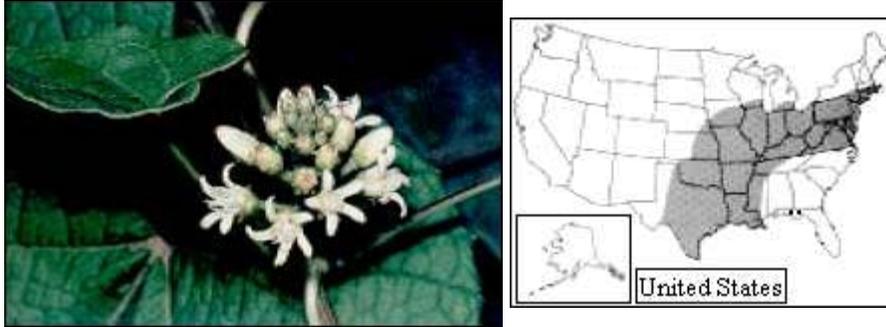


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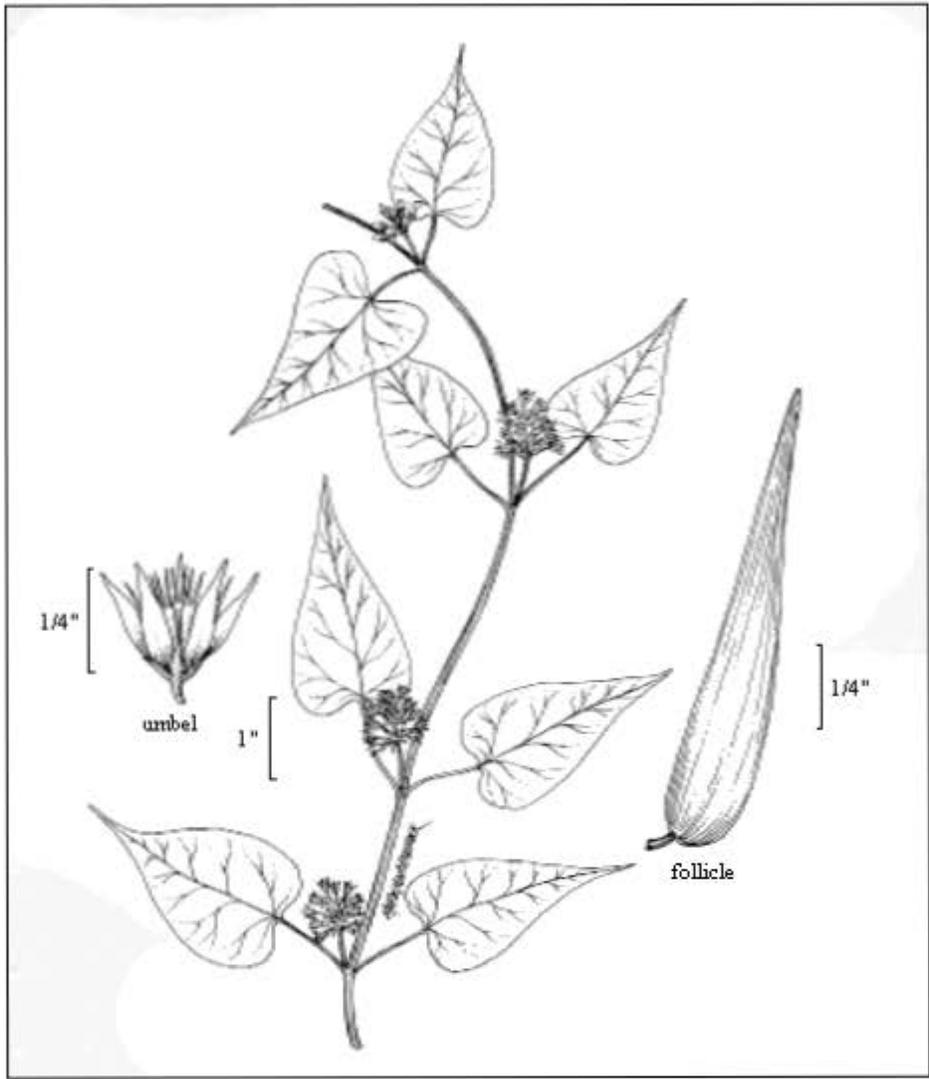
Field Office Guide to Plant Species

Sandvine

Ampelamus albidus (Nutt.) Britton



- **Family:** Milkweed (Asclepiadaceae)
- **Flowering:** July-September
- **Field Marks:** This vine differs by its opposite, heart-shaped leaves, its 5 white petals 1/4-1/3 inch long, and its smooth follicles 4-6 inches long.
- **Habitat:** Fields, moist woods.
- **Habit:** Climbing or twining herb from a thickened, woody rootstock.
- **Stems:** Twining or climbing, up to 30 feet long, smooth or sparsely hairy.
- **Leaves:** Opposite, simple, ovate, pointed at the tip, heart-shaped at the base, without teeth, smooth or sparsely hairy, up to 4 1/2 inches long, sometimes nearly as wide, on smooth or sparsely hairy stalks up to 4 inches long.
- **Flowers:** Few to several in short racemes or umbels, the racemes or umbels on smooth or sparsely hairy stalks up to 2 inches long.
- **Sepals:** 5, green, free from each other or barely united at the base.
- **Petals:** 5, white, united at the base, 1/4-1/3 inch long, with a 5-parted crown between the petals and the stamens, the crown lanceolate, cleft to about the middle.
- **Stamens:** 5.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Follicles lanceoloid to narrowly obovoid, green, smooth, 1/2-3/4 inch long; seeds numerous, with hairy, tail-like projections.
- **Notes:** Some authors in the past have incorrectly referred to this species as *Cynanchum laeve* (Michx.) Pers.



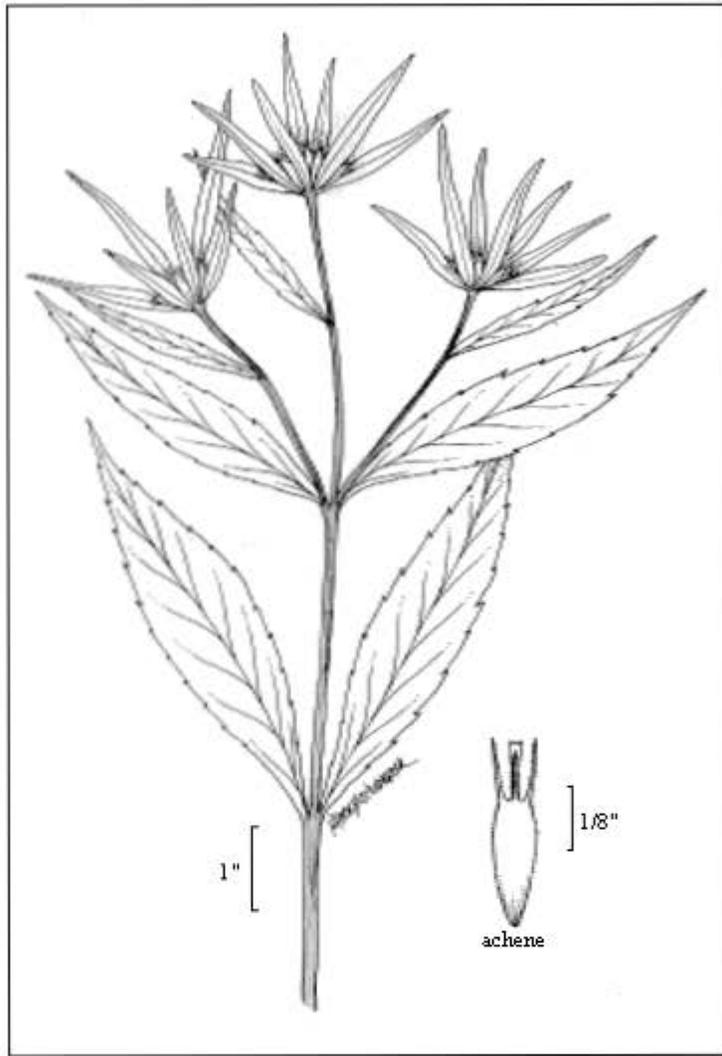
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Field Office Guide to Plant Species

Leafy-bract Beggar-ticks *Bidens comosa* (Gray) Wiegand



- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** This species is distinguished by its simple leaves and its rayless heads subtended by 6-10 leaf-like outer bracts.
- **Habitat:** Wet ground.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched, slender or stout, smooth, up to 6 feet tall.
- **Leaves:** Opposite, simple, elliptic to lanceolate, pointed at the tip, tapering to a winged stalk, coarsely toothed or sometimes with a pair of lobes at the base, up to 8 inches long, smooth.
- **Flowers:** Many crowded in heads, with few to several heads on stout, smooth stalks up to 4 inches long, each head usually without rays but with about 30 tubular disk flowers, each head subtended by 6-10 leafy outer bracts; disk flowers pale yellow, up to 1/4 inch long.
- **Sepals:** 0.
- **Petals:** 4, united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, sparsely hairy.
- **Fruits:** Achenes crowded into heads, each achene flat, smooth except for the ciliate edges, oblanceolate, 1/3-1/2 inch long, with 2-5 stout, barbed awns at the tip.
- **Notes:** Gleason and Cronquist call this family Asteraceae. This and the other species of *Bidens* with barbed awns allow the fruits to stick in the fur of animals as a means of seed dispersal.



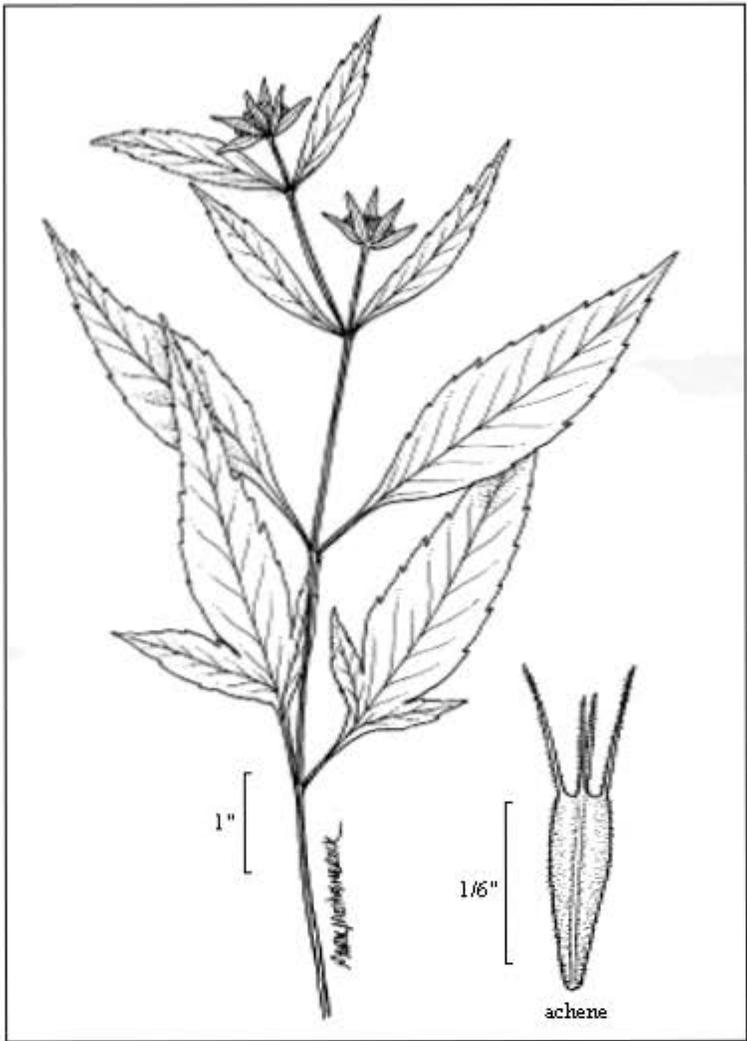
Northeast Wetland Flora

Field Office Guide to Plant Species

Purple-stem Beggar-ticks *Bidens connata* Muhl. ex Willd.



- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** This species is distinguished by its simple leaves that are often cleft into two or more basal lobes, rayless flower heads, and 2-6 outer leaf-like bracts.
- **Habitat:** Swamps, wet ground.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched, slender or stout, smooth, up to 6 feet tall.
- **Leaves:** Opposite, simple, elliptic to lanceolate, pointed at the tip, tapering to the base, sharply toothed or sometimes lobed at the base, up to 8 inches long, smooth.
- **Flowers:** Many crowded in heads, with few to several heads on stalks up to 4 inches long, each head usually without rays but with numerous tubular disk flowers, each head subtended by 2-6 leafy outer bracts; disk flowers orange, up to 1/3 inch long.
- **Sepals:** 0.
- **Petals:** 4, united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, sparsely hairy.
- **Fruits:** Achenes crowded into heads, each achene 4-angled, narrowly wedge-shaped, 1/6-1/3 inch long, smooth except for bristly edges, with 2-5 stout, barbed awns at the tip.
- **Notes:** Gleason and Cronquist call this family Asteraceae. This species is frequently confused with *B. tripartita*, a Eurasian introduction.



Northeast Wetland Flora

Field Office Guide to Plant Species

Smooth Beggar-ticks

Bidens laevis (L.) BSP.



- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** This *Bidens* is distinguished by its simple leaves and flower heads with conspicuous yellow rays 3/4-1 1/2 inches long.
- **Habitat:** Marshes, along streams.
- **Habit:** Annual or perennial herb from fibrous roots.
- **Stems:** Upright to spreading, branched, sometimes rooting at the nodes, up to 3 feet long, smooth.
- **Leaves:** Opposite, simple, narrowly lanceolate to broadly elliptic, pointed at the tip, tapering to the sessile base, toothed, smooth, up to 6 inches long, up to 2 inches wide.
- **Flowers:** Borne in heads, with yellow rays and a yellow disk, the heads hemispherical, the disk up to 1 inch across, each head subtended by bracts, the outer set of bracts 5-9, narrowly linear.
- **Sepals:** 0.
- **Petals:** Some of them forming yellow rays, the rays 7-8 in number, 3/4-1 1/2 inches long, others forming disk flowers up to 1/4 inch long.
- **Stamens:** 5, purpleblack.
- **Pistils:** Ovary inferior.
- **Fruits:** Narrowly wedge-shaped achenes, flat, dark brown to purple, ciliate along the edges, with 2-4 awns, the body of the achene 1/3-1/2 inch long, the awns 1/6-1/4 inch long.
- **Notes:** The achenes adhere to the furry coats of mammals and are dispersed in this manner. This family is called Asteraceae by Gleason and Cronquist.



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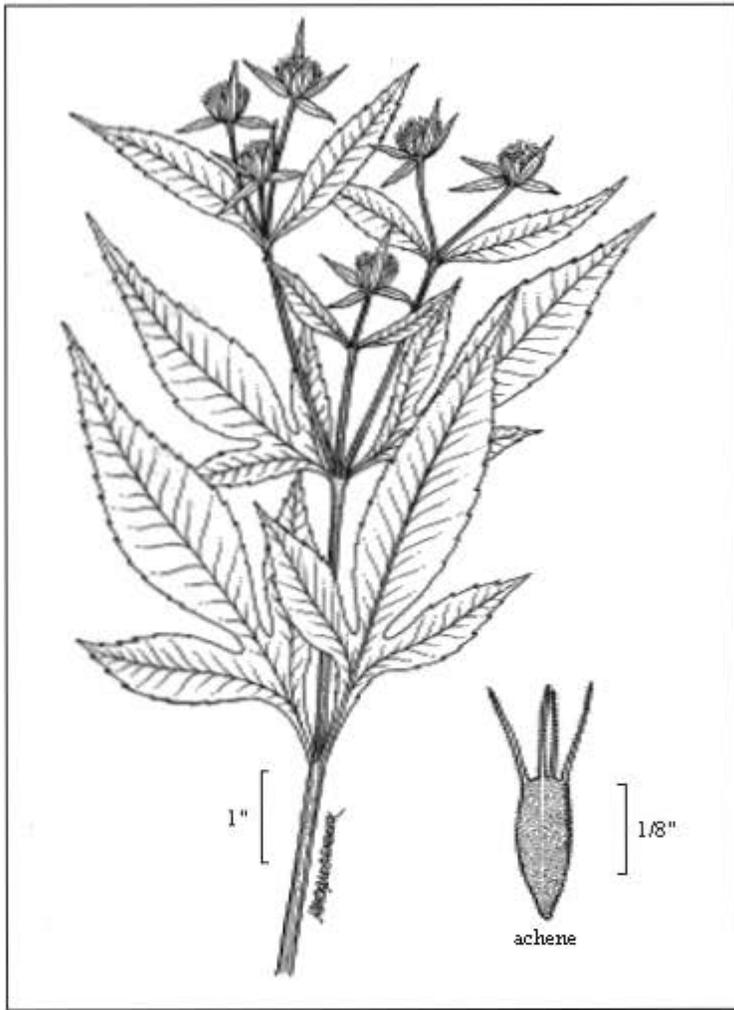
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Three-lobe Beggar-ticks

Bidens tripartita L.



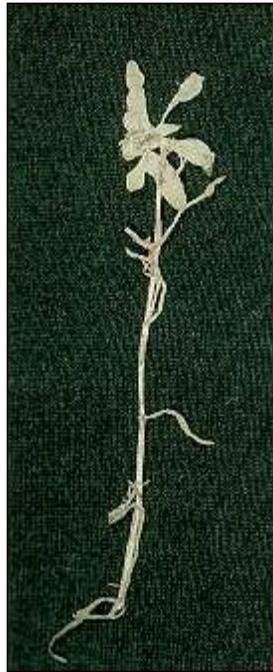
- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** This species of *Bidens* is characterized by its 3- to 5-lobed leaves with winged stalks, its flat achenes with 2-4 awns only about 1/8 inch long, and its rayless flower heads.
- **Habitat:** Swampy areas.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched or unbranched, smooth, up to 3 feet tall.
- **Leaves:** Opposite, simple, usually 3- to 5-lobed, pointed at the tip, tapering to a winged stalk, toothed, smooth, up to 6 inches long.
- **Flowers:** Many flowers in heads, with several heads on smooth stalks up to 4 inches long, each head with 4-8 outer bracts, the bracts linear to lanceolate, densely ciliate, each head rayless, the disk flowers 1/6-1/4 inch long.
- **Sepals:** 0.
- **Petals:** 5, united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes obovate, flat, with downward-pointing hairs along the edges, otherwise smooth, 1/4-1/3 inch long, with 2-4 awns only about 1/8 inch long.
- **Notes:** Although this family is called Asteraceae by Gleason and Cronquist, they do not recognize this species.



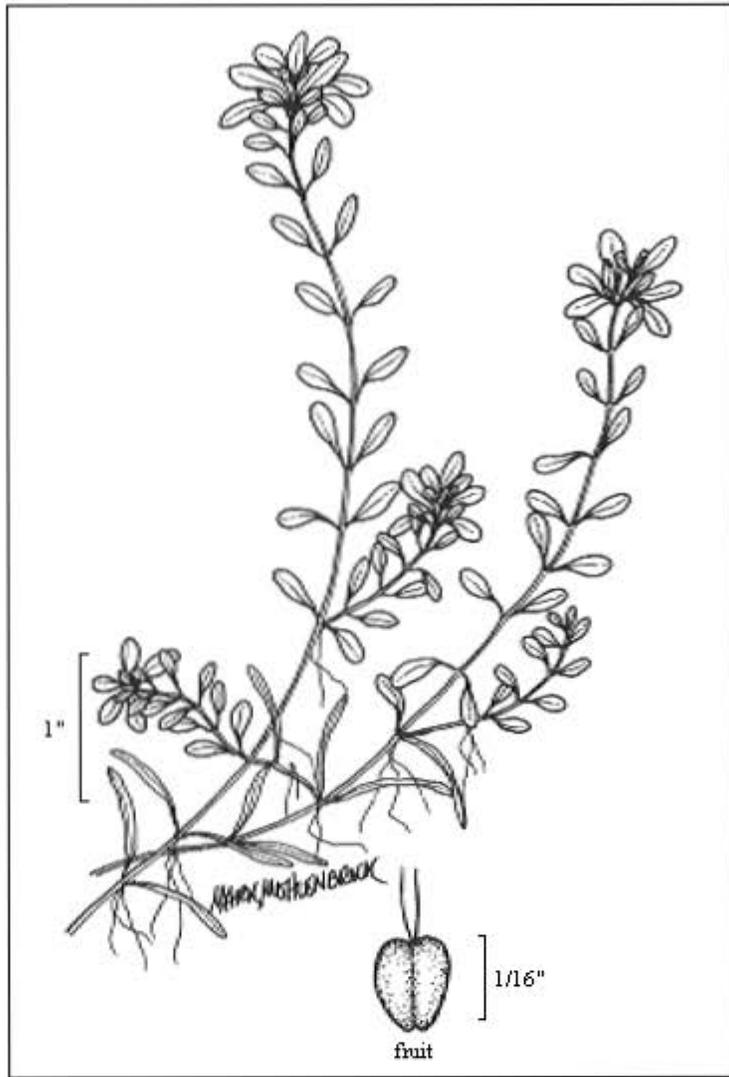
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Field Office Guide to Plant Species

Larger Water-starwort *Callitriche hetetophylla* Pursh



- **Family:** Water-starwort (Callitrichaceae)
- **Flowering:** April-December
- **Field Marks:** The flowers of this species are subtended by a pair of tiny bracts. The spherical fruits are only about 1/16 inch long.
- **Habitat:** Shallow standing water, muddy soil.
- **Habit:** Delicate perennial herb.
- **Stems:** Floating in water or forming small mats on mud, slender, flattened, smooth, up to 1 foot long.
- **Leaves:** Opposite, simple, of 2 kinds, the submersed leaves linear, 1-nerved, smooth, up to 1 inch long, the floating leaves often in rosettes, obovate to spatulate, rounded at the tip, tapering to a short stalk at the base, 3- to 5 nerved, up to 3/4 inch long, smooth.
- **Flowers:** 1-3, in the axils of the leaves, the male separate from the female but on the same plant, minute, inconspicuous, each flower subtended by 2 tiny bracts.
- **Sepals:** 0.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary superior; styles 2, persistent in fruit.
- **Fruits:** Nut-like, heart-shaped, sessile, 4-lobed but nearly spherical, about 1/16 inch long.



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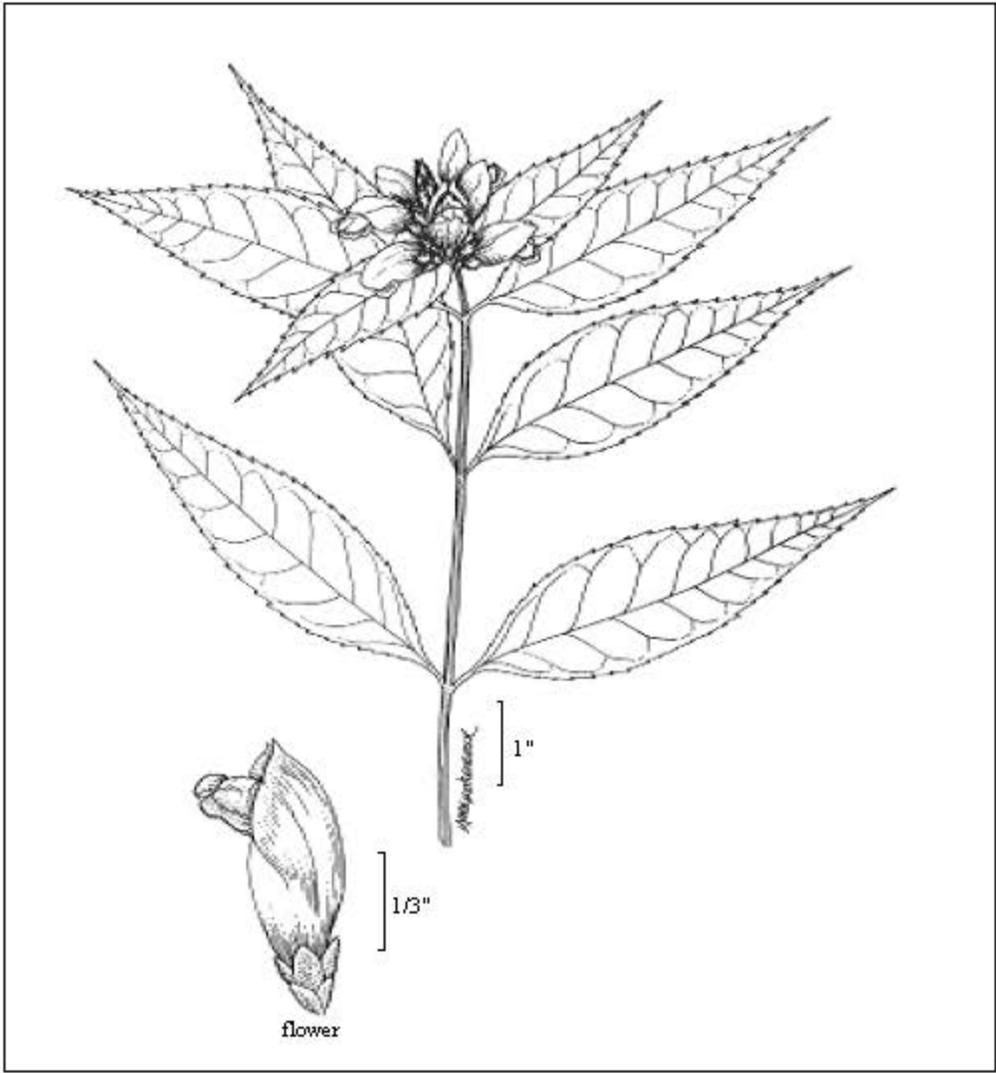
Field Office Guide to Plant Species

Red Turtlehead

Chelone obliqua L.



- **Family:** Figwort (Scrophulariaceae)
- **Flowering:** August-October
- **Field Marks:** This turtlehead is distinguished by its purple to purple-pink flowers and its distinctly stalked, lanceolate leaves.
- **Habitat:** Swamps, wet woods.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, branched or unbranched, smooth, up to 2 1/4 feet tall.
- **Leaves:** Opposite, simple, lanceolate to narrowly oblong, pointed at the tip, tapering to the base, toothed, smooth, up to 5 inches long, up to 2 inches wide; stalks winged, smooth, 1/4-3/4 inch long.
- **Flowers:** Several in terminal and axillary spikes, purple to purple-pink, sessile or nearly so.
- **Sepals:** 5, green, united at the base, smooth.
- **Petals:** 5, purple to purple-pink, 2-lipped, up to 1 1/2 inches long, the upper lip arched, notched at the tip, the lower lip 3-lobed, yellow-hairy inside.
- **Stamens:** 4, attached to the base of the tube of the petals.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules ovoid, smooth, 1/2-3/4 inch long, containing numerous, flat seeds.



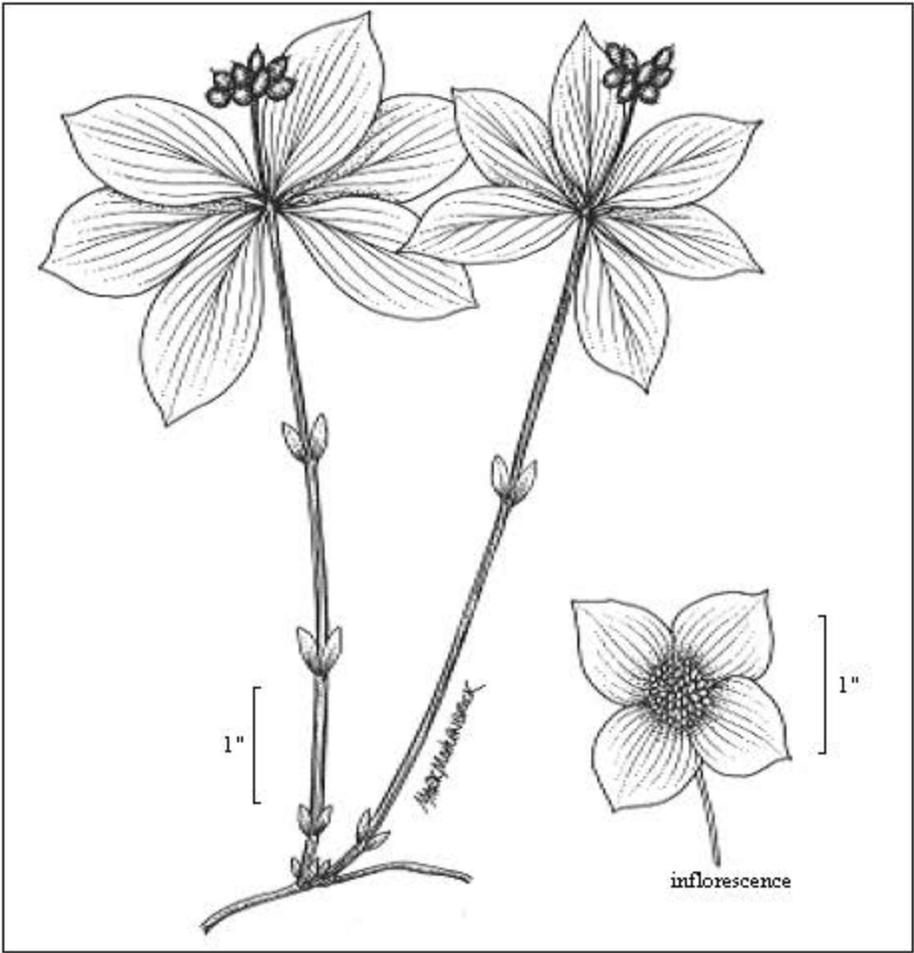
Northeast Wetland Flora

Field Office Guide to Plant Species

Canada Bunchberry *Cornus canadensis* L.



- **Family:** Dogwood (Cornaceae)
- **Flowering:** May-July
- **Field Marks:** This species is distinguished by its apparently whorled leaves at the base of the inflorescence and its 4 white bracts up to 1 inch long that subtend the cluster of flowers. The spherical or ellipsoid drupes are bright red.
- **Habitat:** Moist woods.
- **Habit:** Perennial herb with a woody base from slender rhizomes.
- **Stems:** Upright, unbranched, woody at base, smooth, up to 10 inches tall.
- **Leaves:** Lowermost opposite, reduced, oblanceolate, the uppermost appearing to be whorled with each leaf ovate to ovate-oblong, pointed at the tip, tapering to the base, pinnately veined, without teeth, smooth, up to 4 inches long; leaf stalk about 1/10 inch long.
- **Flowers:** Sessile in a crowded cluster subtended by 4 bracts and borne on a stalk up to 1 1/2 inches long; bracts white, petal-like, ovate, up to 1 inch long.
- **Sepals:** 4, united below, green, minute.
- **Petals:** 4, free from each other, oblong, greenish white, up to 1/4 inch long.
- **Stamens:** 4.
- **Pistils:** Ovary inferior; style 1.
- **Fruits:** Drupes nearly spherical or ellipsoid, up to 1/3 inch in diameter, bright red.
- **Notes:** The leaves are deciduous but the short stem and the red fruits are persistent throughout the winter.



Northeast Wetland Flora

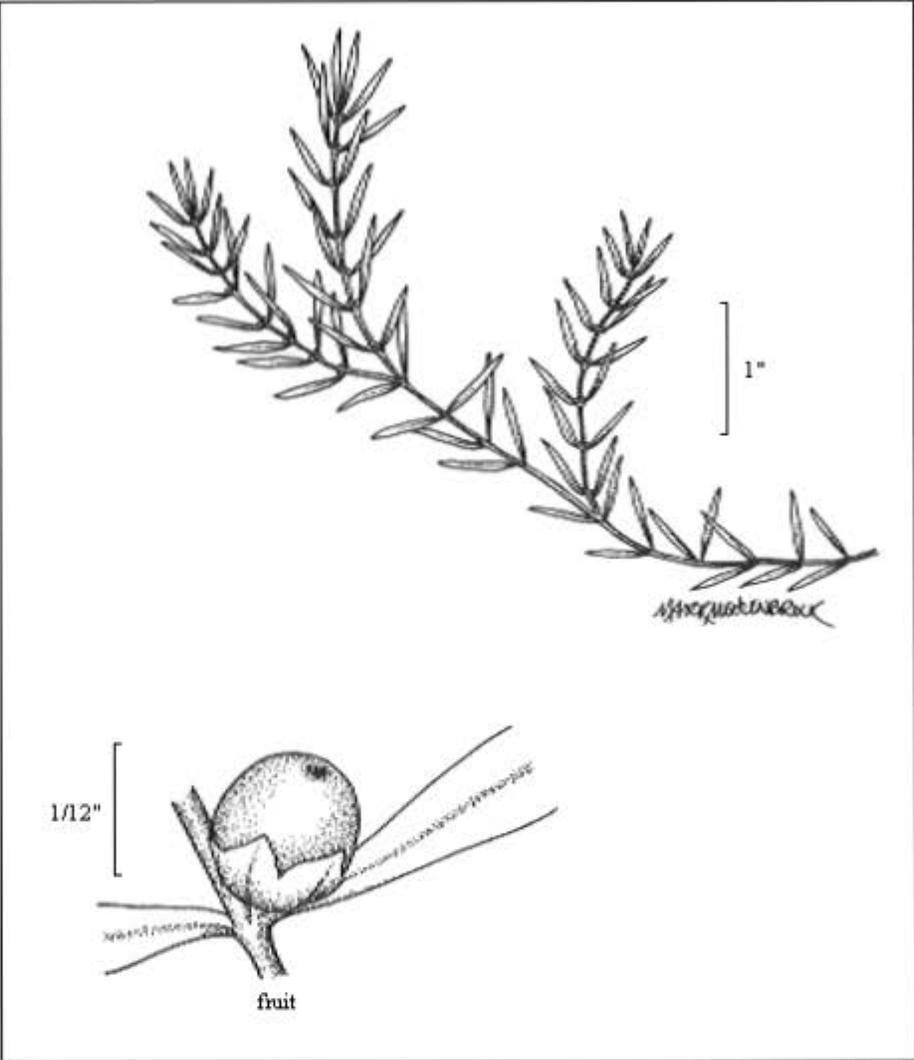
Field Office Guide to Plant Species

Water-purslane

Didiplis diandra (Nutt. ex DC.) A. Wood



- **Family:** Loosestrife (Lythraceae)
- **Flowering:** June-August
- **Field Marks:** This species that often roots in mud is recognized by its sessile, opposite leaves and solitary flowers in the axil of the leaves that consist of tiny 4-parted green sepals, 4 stamens, and a small superior ovary.
- **Habitat:** Mud, shallow water.
- **Habit:** Creeping or floating annual with fibrous roots.
- **Stems:** Creeping or floating, slender, smooth, up to 6 inches long.
- **Leaves:** Opposite, simple, narrowly oblong, smooth, without teeth, sessile, up to 3/4 inch long, the submersed leaves longer and narrower than the emersed leaves.
- **Flowers:** Borne singly in the axils of the leaves.
- **Sepals:** 4, very short, united to each other, green.
- **Petals:** 0.
- **Stamens:** 4.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules spherical, indehiscent, up to 1/12 inch long, smooth.
- **Notes:** This plant may grow either in water or rooted in mud.



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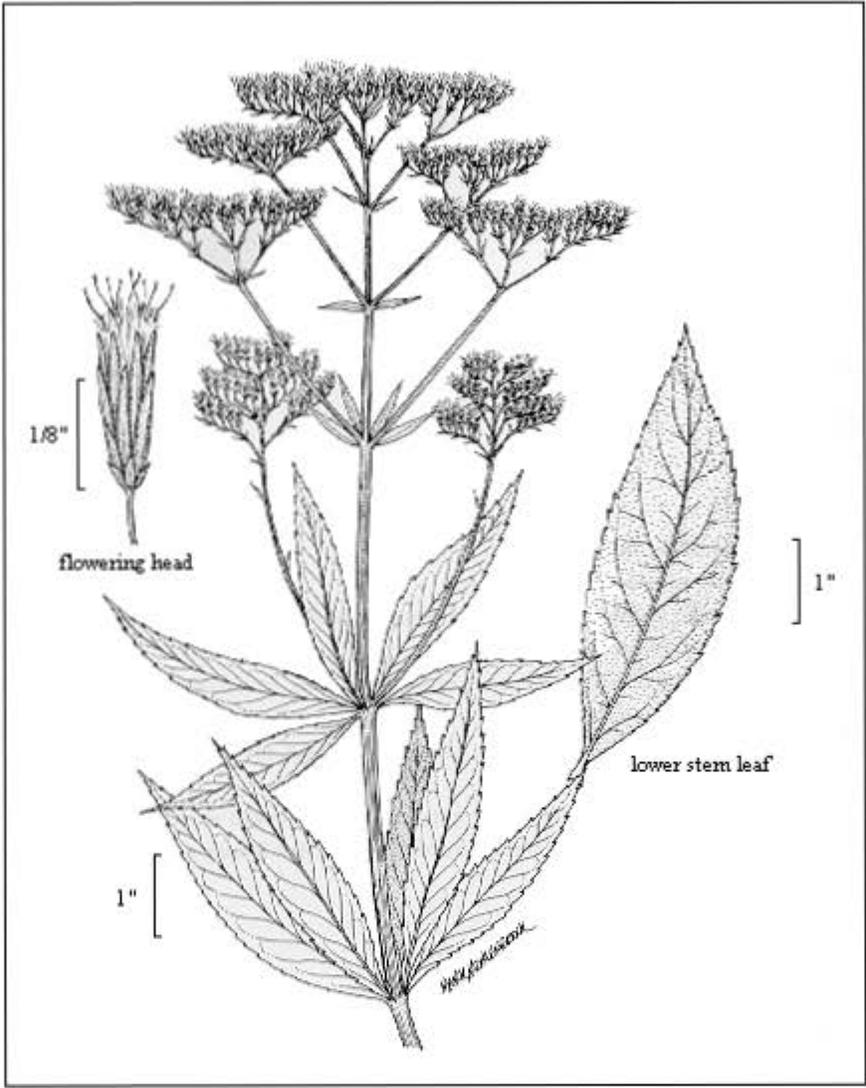
Field Office Guide to Plant Species

Spotted Joe-pye-weed

Eupatoriadelphus maculatus (L.) R.M. King & H. Rob.



- **Family:** Composite (Compositae)
- **Flowering:** July-September
- **Field Marks:** This Joe-pye-weed, with its whorls of 4-5 leaves, differs from other Joe-pye-weeds by its flat-topped inflorescence and its 8-22 flowers in each head.
- **Habitat:** Meadows, damp-soils.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, usually unbranched, not hollow, short-hairy at least near the inflorescence, purple-speckled, up to 4 feet tall.
- **Leaves:** In whorls of 4-5, simple, lanceolate to lance-ovate, long-pointed at the tip, tapering to the base, sharply toothed, smooth or slightly rough on the upper surface, short-hairy or smooth or rough on the lower surface, up to 6 inches long, up to 4 inches wide, sessile or with short stalks.
- **Flowers:** 8-22 in a head, with several heads in a flat-topped inflorescence, the heads cylindric, up to 1/2 inch high, purple, consisting only of disk flowers surrounded by oblong, round-tipped bracts.
- **Sepals:** 0.
- **Petals:** 5, united to form purple disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes ellipsoid, up to 1/6 inch long, glandular.
- **Notes:** Gleason and Cronquist call this plant *Eupatorium maculatum* in the Asteraceae.



Northeast Wetland Flora

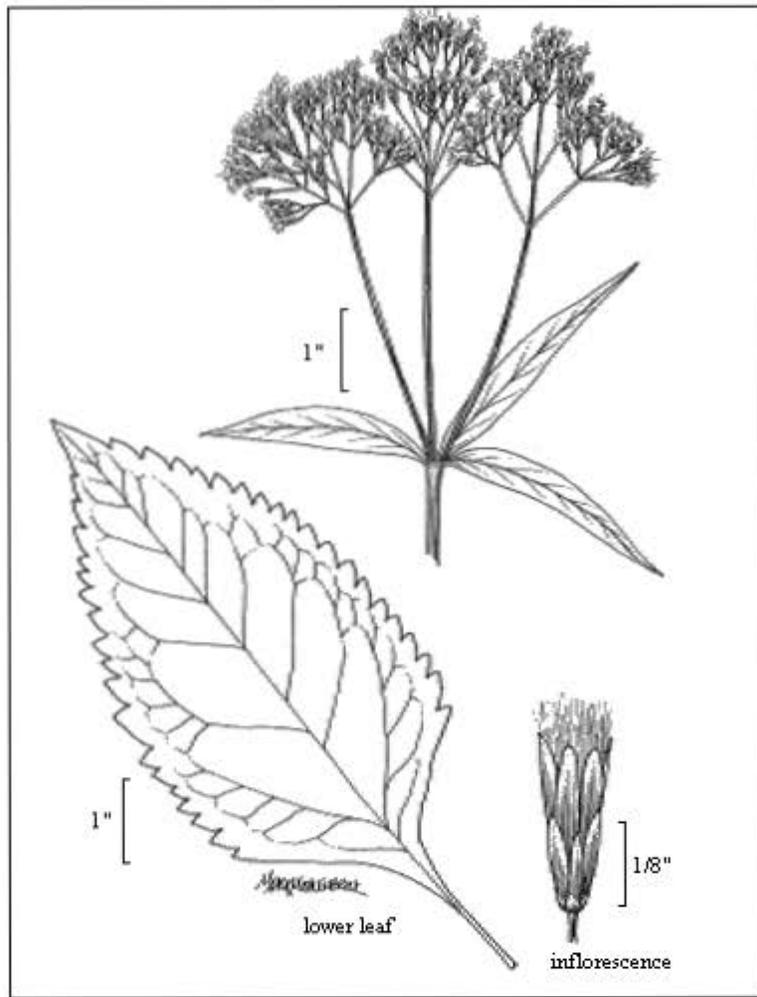
Field Office Guide to Plant Species

Sweet Joe-pye-weed

Eupatoriadelphus purpureus (L.) R.M. King & H. Rob.



- **Family:** Composite (Compositae)
- **Flowering:** July-September
- **Field Marks:** This Joe-pye-weed has solid stems that are purple at least at the nodes and leaves in whorls of 2-5.
- **Habitat:** Rich woods, damp thickets.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, rather slender, branched or unbranched, solid, green, usually glaucous, dark purple at the nodes, usually smooth, up to 10 feet tall.
- **Leaves:** In whorls of 2-5, simple, lanceolate to ovate, pointed at the tip, tapering to the base, sharply toothed, smooth on the upper surface, smooth or short-hairy on the lower surface, up to 1 foot long, up to 6 inches wide, on short stalks.
- **Flowers:** 3-7 in heads with numerous heads in open, round-topped clusters up to 1 foot across; heads up to 1/2 inch high, pink or lilac, consisting only of disk flowers; bracts narrowly oblong.
- **Sepals:** 0.
- **Petals:** 5, united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, smooth.
- **Fruits:** Achenes ellipsoid, smooth, up to 1/4 inch long, subtended by white hairs.
- **Notes:** Gleason and Cronquist call this plant *Eupatorium purpureum* of the Asteraceae. The leaves have the odor of vanilla when crushed.



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Round-leaf Thorough-wort *Eupatorium rotundifolium* L.



- **Family:** Composite (Compositae)
- **Flowering:** July-September
- **Field Marks:** This species differs by its sessile, broadly ovate to spherical leaves and its broad, flat-topped inflorescence of white flower heads.
- **Habitat:** Moist or dry woods and fields.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, unbranched or branched above, slender, soft-hairy, usually glandular-dotted, up to 4 feet tall.
- **Leaves:** Opposite, simple, broadly ovate to spherical, more or less pointed at the tip, rounded at the sessile base, toothed, hairy and usually rough to the touch on the upper surface, hairy beneath, conspicuously net-veined, 3- to 5-veined from the base, up to 3 inches long.
- **Flowers:** 5 in a head, with many heads in a broad, flat-topped inflorescence, each head 1/4-1/3 inch high, subtended by slender-pointed tips, consisting only of white disk flowers.
- **Sepals:** 0.
- **Petals:** 5, united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Achenes ellipsoid, about 1/8 inch long, subtended by white hairs.
- **Notes:** This family is Asteraceae according to Gleason and Cronquist.



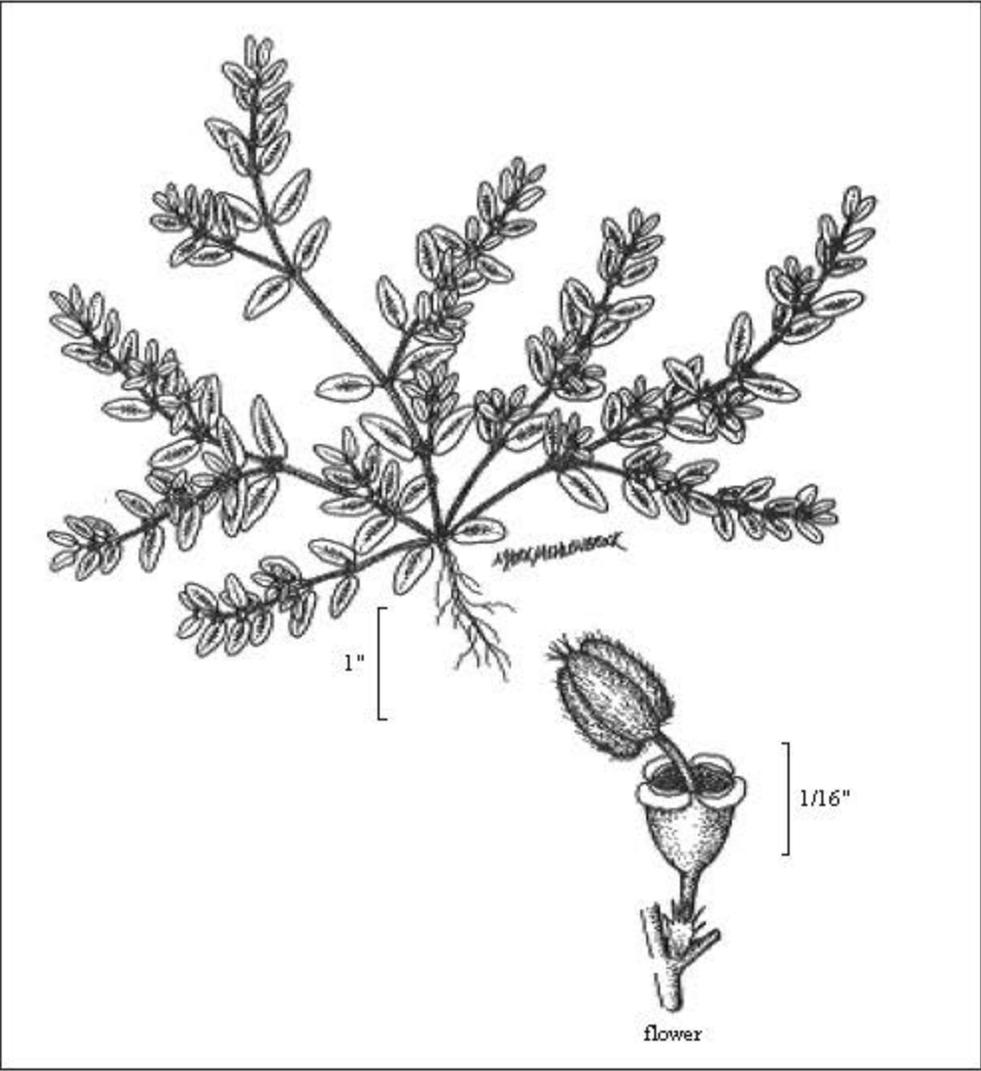
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Field Office Guide to Plant Species

Spreading Broomspurge *Euphorbia humistrata* Engelm.



- **Family:** Spurge (Euphorbiaceae)
- **Flowering:** July-October
- **Field Marks:** This small spurge has hairy stems, ovaries, and capsules, smooth seeds, and the main stem leaves less than twice as long as wide, and the branch leaves narrower.
- **Habitat:** Moist soil, along rivers.
- **Habit:** Annual herb with a taproot.
- **Stems:** Lying flat or ascending, branched, hairy, spreading up to 3 feet across.
- **Leaves:** Opposite, simple, ovate-oblong to elliptic-oblong, rounded at the tip, asymmetrical at the nearly sessile base, finely toothed to toothless, hairy or smooth, up to 3/4 inch long.
- **Flowers:** Clustered in the axils of the leaves, consisting of 4 glands and either stamens or pistils.
- **Sepals:** Male flower: 0 sepals; female flower: 3-6 minute, united sepals.
- **Petals:** 0.
- **Stamens:** 1.
- **Pistils:** Ovary superior, hairy.
- **Fruits:** Capsules nearly spherical, hairy, 3-angled, up to 1/10 inch in diameter; seeds oblongoid, 4-angled, smooth.



Northeast Wetland Flora

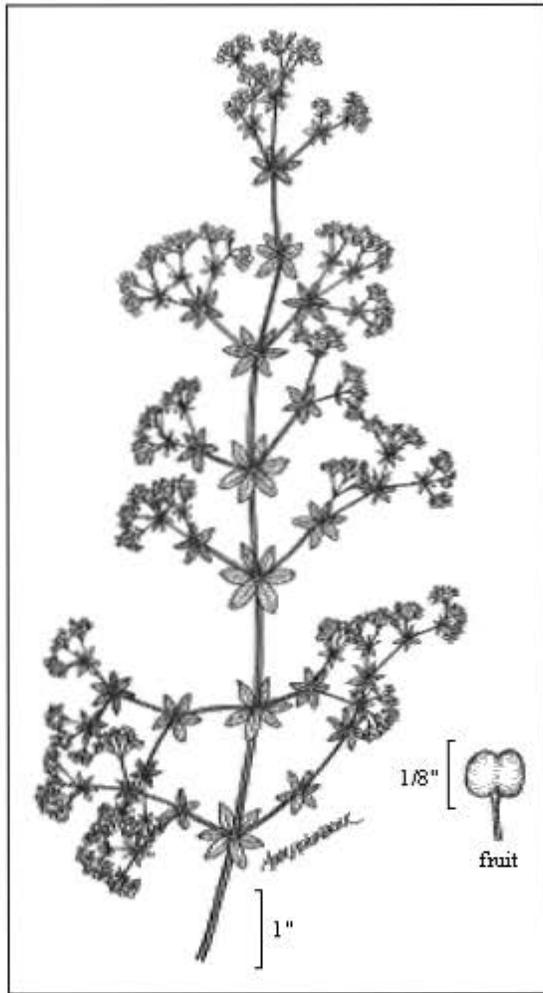
Field Office Guide to Plant Species

Rough Bedstraw

Galium asprellum Michx.



- **Family:** Madder (Rubiaceae)
- **Flowering:** May-September
- **Field Marks:** This bedstraw is distinguished by its leaves in whorls of 4, 5, and 6, rough-hairy, elliptic or oval leaves and stems, and the smooth fruits that are black at maturity and two lobed.
- **Habitat:** Wet woods, low ground, damp thickets.
- **Habit:** Perennial herb from slender roots.
- **Stems:** Spreading or ascending, much branched, reclining on vegetation, rough-hairy with hooked prickles, up to 6 feet long.
- **Leaves:** In whorls of 4, 5, or 6, simple, elliptic to oval, blunt to slightly pointed at the tip, tapering to the base, up to 1 inch long, up to 1/4 inch wide, rough-hairy on the edges and the midvein below.
- **Flowers:** Several in small branched clusters up to 1 inch long, white.
- **Sepals:** 0.
- **Petals:** 4, united at the base, white, about 1/16 inch long.
- **Stamens:** 4.
- **Pistils:** Ovary inferior, smooth.
- **Fruits:** Spherical, black at maturity and bilobed, up to 1/10 inch in diameter, smooth.



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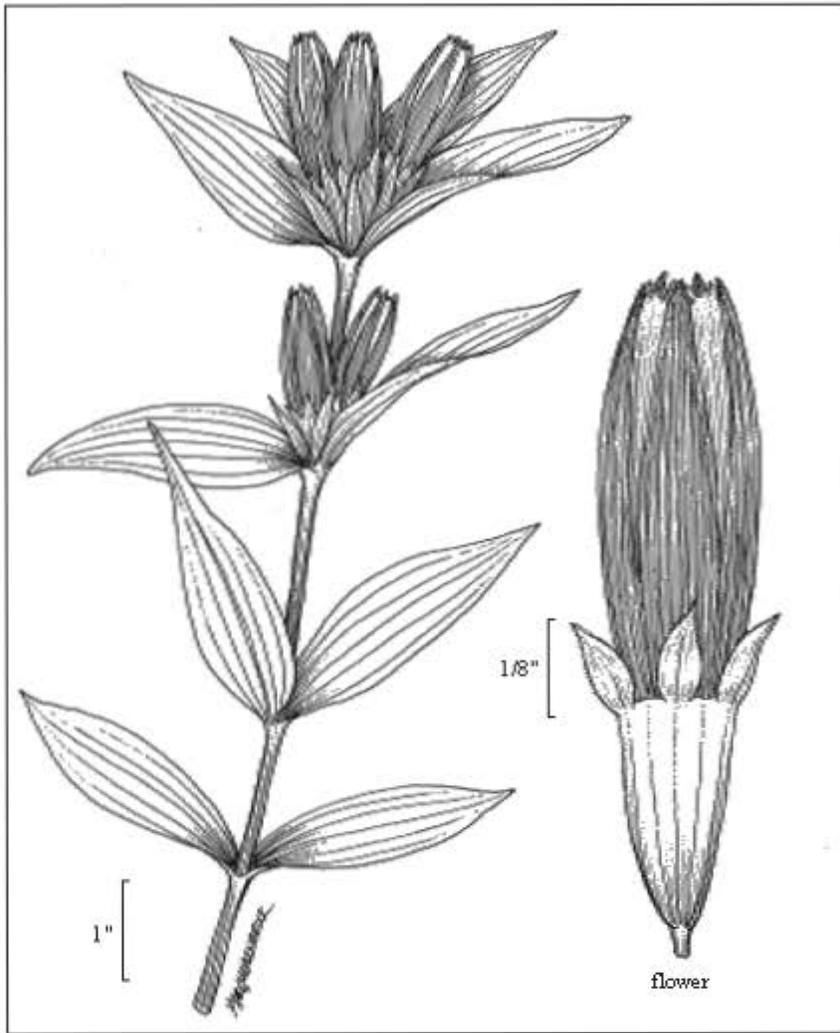
Field Office Guide to Plant Species

Fringe-top Bottle Gentian

Gentiana andrewsii Griseb.



- **Family:** Gentian (Gentianaceae)
- **Flowering:** August-October
- **Field Marks:** This gentian differs from all others by its closed petals, its ciliate sepals, and by the fringed appendages between the petals that are broader than the petals.
- **Habitat:** Wet prairies, wet meadows.
- **Habit:** Perennial herb from a thickened rootstock.
- **Stems:** Upright, smooth, up to 2 feet tall.
- **Leaves:** Opposite, simple, lanceolate to narrowly ovate, pointed at the tip, tapering to the sessile base, without teeth, smooth, up to 6 inches long, the lowest leaves reduced to bracts.
- **Flowers:** 2-5 in a terminal cluster, sessile, subtended by a cluster of 4-6 leaves.
- **Sepals:** 5, green, united below to form a tube, the free parts from 1/8 to 3/8 inch long, ciliate, shorter than the tube.
- **Petals:** 5, blue, united to form a cylindrical tube, up to 1 3/4 inches long, the tips closed at the top and separated by a broad, fringed appendage broader than the petals.
- **Stamens:** 5, attached to the petals.
- **Pistils:** Ovary superior; stigmas 2.
- **Fruits:** Capsules ellipsoid, short-stalked, up to 1 inch long.



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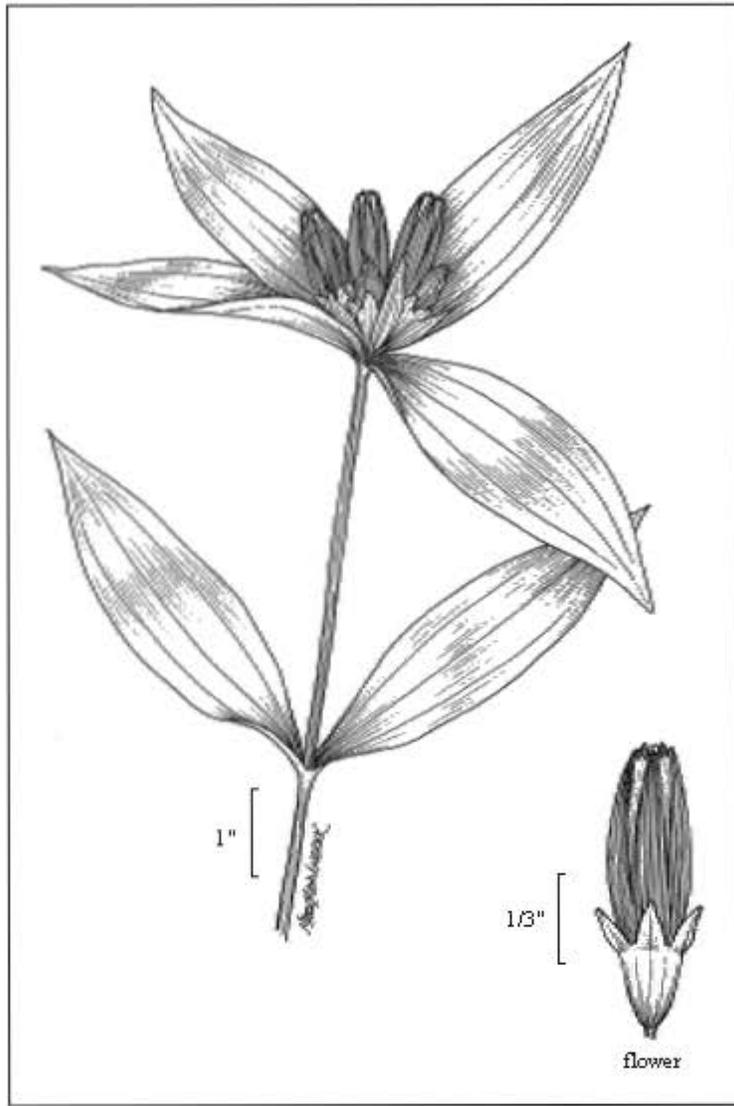
Field Office Guide to Plant Species

Closed Gentian

Gentiana clausa Raf.



- **Family:** Gentian (Gentianaceae)
- **Flowering:** August-October
- **Field Marks:** This gentian has the petals closed at the top, with the cleft appendage between the petals not quite as wide as the petals.
- **Habitat:** Moist woods, wet meadows, along streams.
- **Habit:** Perennial herb from a thickened rootstock.
- **Stems:** Upright, smooth, up to 2 feet tall.
- **Leaves:** Opposite, simple, lanceolate to narrowly ovate, pointed at the tip, tapering to the sessile base, without teeth, smooth, up to 4 inches long.
- **Flowers:** 2-5 in a terminal cluster, sessile, subtended by a cluster of 4-6 leaves.
- **Sepals:** 5, green, united below to form a tube, free parts up to 1/2 inch long, ciliate, shorter than the tube.
- **Petals:** 5, blue, united to form a cylindrical tube, up to 1 3/4 inches long, the tips closed at the top and separated by a cleft appendage a little narrower than the petals.
- **Stamens:** 5, attached to the petals.
- **Pistils:** Ovary superior; stigmas 2.
- **Fruits:** Capsules ellipsoid, short-stalked, up to 1 inch long.



Northeast Wetland Flora

Field Office Guide to Plant Species

Round-fruit Hedgehyssop *Gratiola virginiana* L.



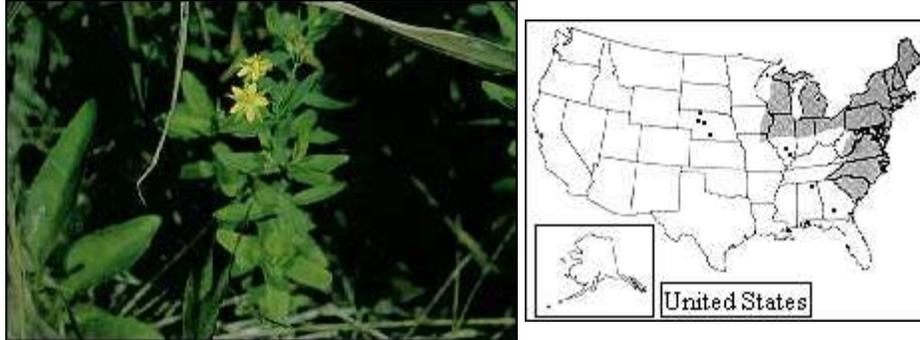
- **Family:** Figwort (Scrophulariaceae)
- **Flowering:** March-October
- **Field Marks:** This species is distinguished by its 2 bractlets at the base of the sepals, its flowers on stalks up to 3/4 inch long, and its spherical capsules up to 1/3 inch in diameter.
- **Habitat:** Wet woods, wet ditches, along streams.
- **Habit:** Annual or biennial herb with fibrous roots.
- **Stems:** Spreading to ascending, branched or unbranched, usually smooth, up to 1 1/2 feet long.
- **Leaves:** Opposite, simple, lanceolate to elliptic to oblong, pointed or rounded at the tip, tapering to the sessile base, toothed, up to 3 1/2 inches long.
- **Flowers:** Solitary in the axils of the leaves, subtended by a pair of bractlets, on rather stout stalks up to 3/4 inch long.
- **Sepals:** 5, green, united into a short tube, 1/6-1/3 inch long.
- **Petals:** 5, united to form 2 lips, white to pink-tinged and with purple striations, hairy on the inside, up to 3/4 inch long.
- **Stamens:** 4.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules spherical, up to 1/3 inch in diameter, containing numerous slender seeds.



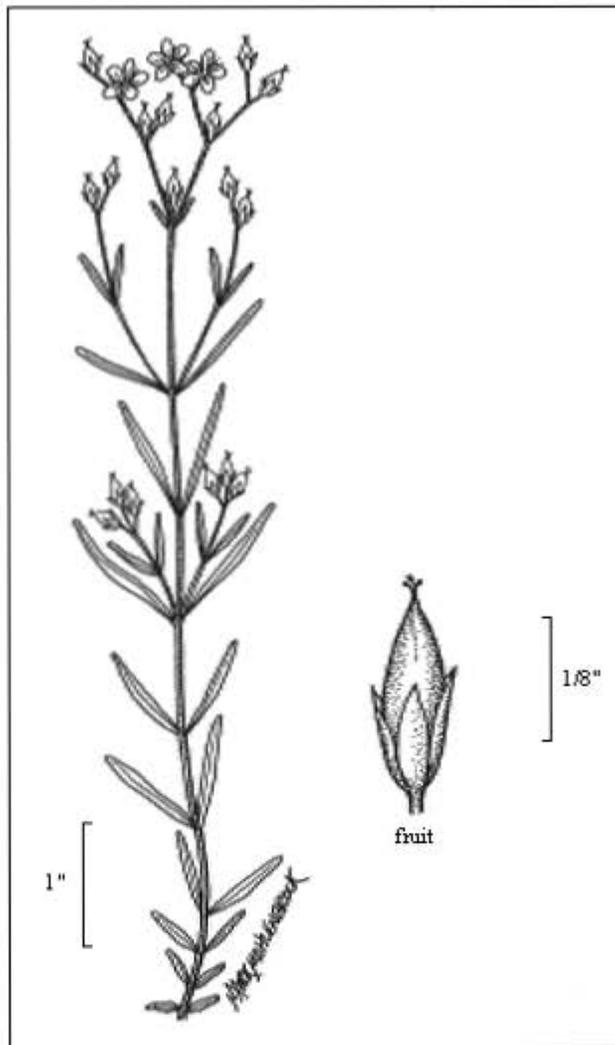
Northeast Wetland Flora

Field Office Guide to Plant Species

Canadian St. John's-wort *Hypericum canadense* L.



- **Family:** St. John's-wort (Guttiferae)
- **Flowering:** July-September
- **Field Marks:** This species is distinguished by its small yellow flowers, its linear 1- to 3-nerved leaves, its lanceolate sepals 1/8-1/4 inch long, and its purplish capsules.
- **Habitat:** Wet woods, wet meadows.
- **Habit:** Perennial herb forming basal offshoots.
- **Stems:** Upright, slender, branched, smooth, up to 2 feet tall.
- **Leaves:** Opposite, simple, linear to oblanceolate, rounded at the tip, tapering to the base, smooth, without teeth, 1- to 3-nerved, up to 1 3/4 inches long, up to 1/4 inch wide.
- **Flowers:** Several in cymes, each flower yellow, 1/6-1/4 inch across, subtended by linear bracts.
- **Sepals:** 5, green, free from each other, lanceolate, sharp-pointed at the tip, 1/8-1/4 inch long.
- **Petals:** 5, yellow, free from each other, oblong, rounded at the tip, 1/6-1/4 inch long.
- **Stamens:** About 20.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules conical, purplish, smooth, 1/6-1/4 inch long.
- **Notes:** Gleason and Cronquist use the name Clusiaceae for this family.



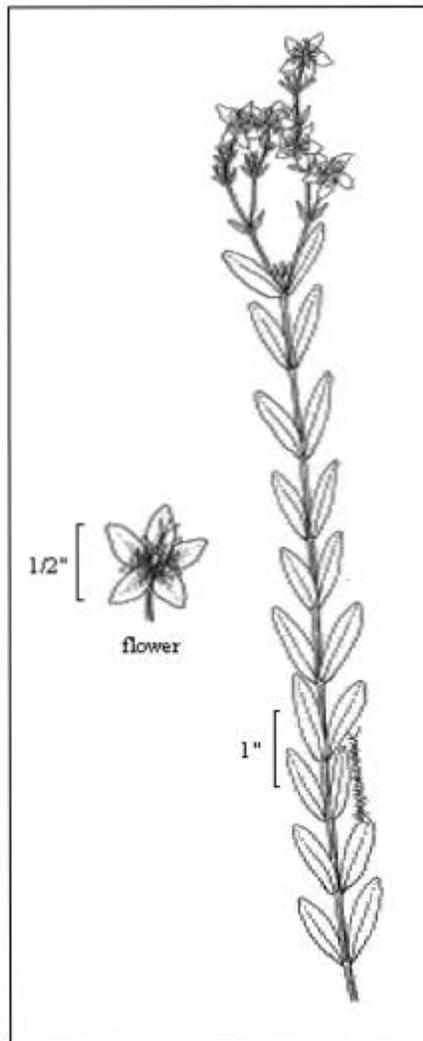
Northeast Wetland Flora

Field Office Guide to Plant Species

Coppery St. John's-wort *Hypericum denticulatum* Walter



- **Family:** St. John's-wort (Guttiferae)
- **Flowering:** June-September
- **Field Marks:** This herb differs by having more than 20 stamens, 3 styles free to the base, and smooth leaves and stems.
- **Habitat:** Moist woods, swamps, wet ditches, pine barrens.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, branched or unbranched, smooth, 4-angled, up to nearly 2 feet tall.
- **Leaves:** Opposite, simple, spreading to ascending, elliptic to narrowly ovate, rounded or pointed at the tip, rounded or tapering to the sessile base, smooth, sometimes dotted, up to 1 inch long, up to 3/4 inch wide.
- **Flowers:** Few to several in racemes, the racemes on strongly ascending stalks, the flowers yellow, about 1/2 inch across, subtended by small, linear bracts.
- **Sepals:** 5, green, narrowly ovate, pointed at the tip, up to 1/3 inch long, smooth.
- **Petals:** 5, copper-yellow, free from each other, up to 1/2 inch long.
- **Stamens:** Numerous.
- **Pistils:** Ovary superior; styles 3, free from each other.
- **Fruits:** Capsules ovoid, smooth, up to 1/4 inch long, with numerous black seeds.
- **Notes:** Gleason and Cronquist use the name Clusiaceae for this family.



Northeast Wetland Flora

Field Office Guide to Plant Species

Slender St. John's-wort *Hypericum mutilum* L.



- **Family:** St. John's-wort (Guttiferae)
- **Flowering:** July-September
- **Field Marks:** This species is distinguished by its ovate, oblong, partly clasping leaves with 3-5 nerves and its short-ellipsoid capsules.
- **Habitat:** Wet ground.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, slender, much branched, smooth, up to 2 feet tall.
- **Leaves:** Opposite, simple, ovate-oblong, rounded at the tip, rounded or sometimes clasping at the base, smooth, without teeth, 3- to 5-nerved, up to 1 3/4 inches long, up to 3/4 inch wide.
- **Flowers:** Several in cymes, each flower yellow, about 1/6 inch across, subtended by linear bracts.
- **Sepals:** 5, green, free from each other, lanceolate, sharp-pointed at the tip, up to 1/6 inch long.
- **Petals:** 5, yellow, free from each other, oblong, rounded at the tip, 1/6-1/4 inch long.
- **Stamens:** 5-10.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules narrowly ellipsoid, smooth, rounded at the tip, 1/8-1/6 inch long, with persistent styles.
- **Notes:** Gleason and Cronquist use the name Clusiaceae for this family.



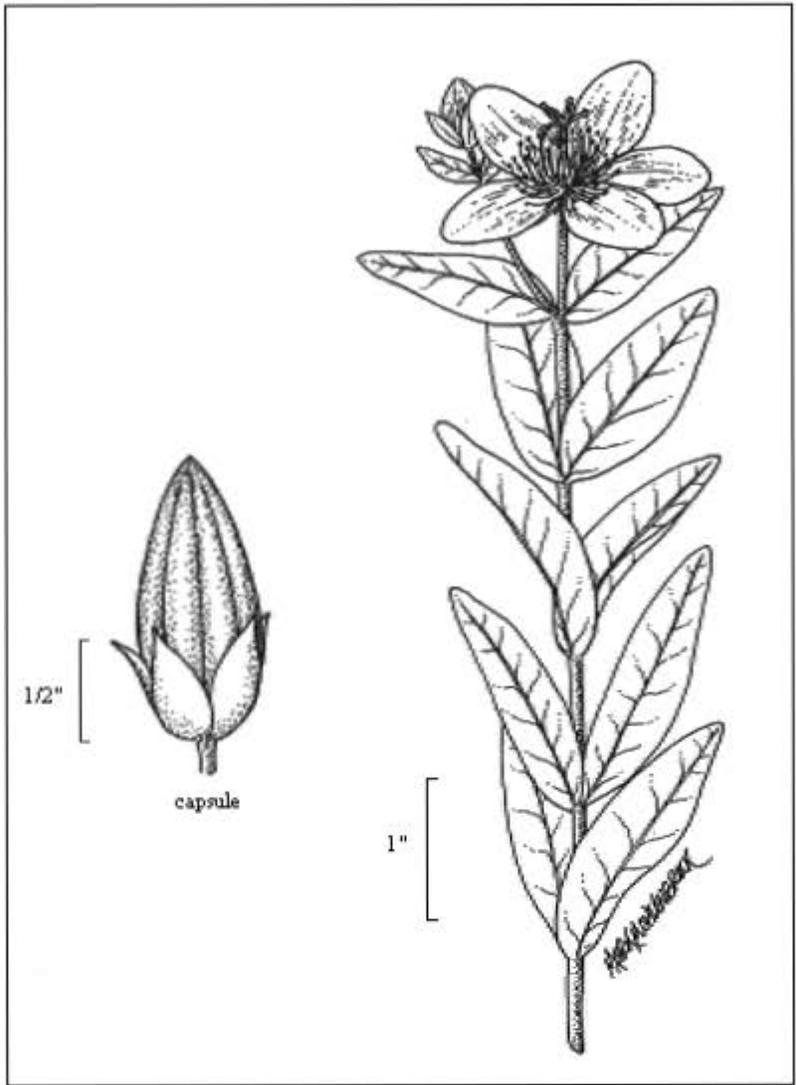
Northeast Wetland Flora

Field Office Guide to Plant Species

Great St. John's-wort
Hypericum pyramidatum Ait.



- **Family:** St. John's-wort (Guttiferae)
- **Flowering:** July-September
- **Field Marks:** This attractive species is distinguished by its yellow flowers 2-3 inches across, its numerous stamens, its 5 styles per flower which are united for the lower half, and its 5-chambered fruit.
- **Habitat:** Wet meadows, rich woods.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, branched, angular, smooth, up to 6 feet tall.
- **Leaves:** Opposite, simple, broadly lanceolate to ovate, rounded or pointed at the tip, rounded at the sessile and sometimes slightly clasping base, dotted, smooth on both surfaces, up to 4 inches long, up to 1 3/4 inches wide.
- **Flowers:** Few in a terminal cyme, the cyme up to 4 inches across.
- **Sepals:** 5, green, free from each other, ovate-lanceolate, pointed at the tip, smooth, not dotted, up to 1/2 inch long.
- **Petals:** 5, yellow, free from each other, up to 1 1/2 inches long.
- **Stamens:** Numerous, united in groups of 5.
- **Pistils:** Ovary superior; styles 5, free above, united below.
- **Fruits:** Capsules ovoid, 5-chambered, beaked, up to 1 1/2 inches long; seeds numerous, black, smooth.
- **Notes:** This species is often grown as an ornamental. This family is called Clusiaceae by Gleason and Cronquist.



Northeast Wetland Flora

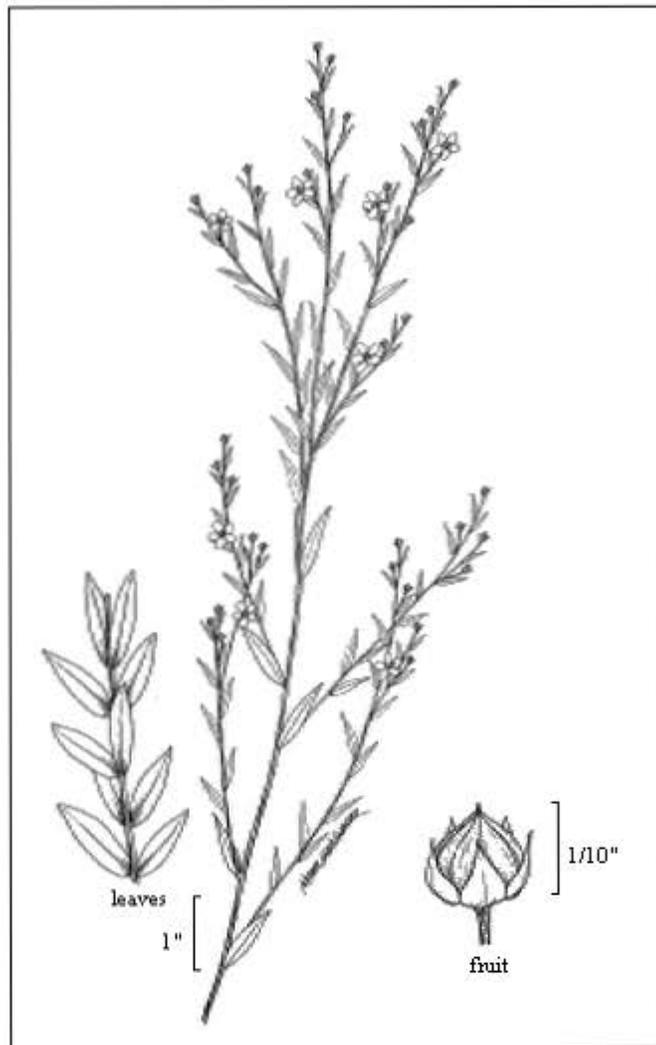
Field Office Guide to Plant Species

Flax

Linum striatum Walt.



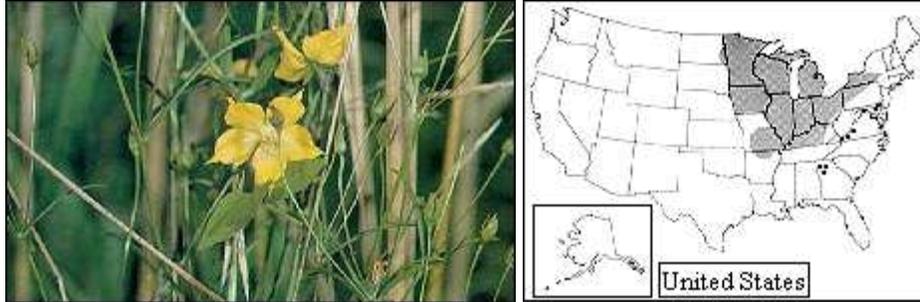
- **Family:** Flax (Linaceae)
- **Flowering:** June-August
- **Field Marks:** This wild flax differs from the others by its toothless outer sepals, its striate stems, the lower 5-12 pairs of leaves opposite and the rest alternate, and its capsules broader than tall.
- **Habitat:** Low woods, moist sandy soil, bogs.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Usually several, spreading to upright, somewhat angular, striate, smooth or sometimes sticky, up to 4 feet tall.
- **Leaves:** Lowest 5-12 pairs opposite, the rest alternate, simple, elliptic, pointed at the tip, tapering to the sessile base, sometimes slightly sticky, up to 1 inch long.
- **Flowers:** Numerous in short, open panicles, each flower yellow, short-stalked.
- **Sepals:** 5, green, free from each other, the outer not toothed and up to 1/8 inch long, the inner smaller and glandular-toothed.
- **Petals:** 5, yellow, free from each other, 1/4-1/3 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules flattened, broader than high, about 1/10 inch broad.



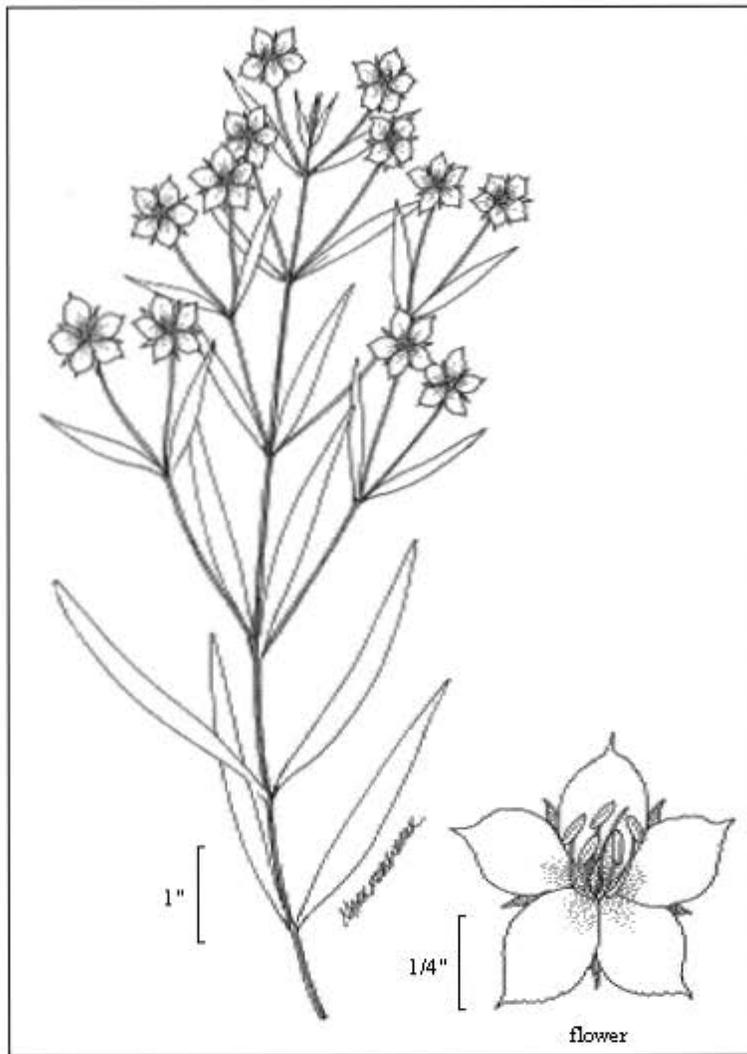
Northeast Wetland Flora

Field Office Guide to Plant Species

Four-flower Loosestrife *Lysimachia quadriflora* Sims



- **Family:** Primrose (Primulaceae)
- **Flowering:** July-August
- **Field Marks:** This loosestrife has linear, sessile leaves without apparent venation, 4-angled stem, and 5 yellow petals abruptly pointed at the tip.
- **Habitat:** Fens, shores, bogs.
- **Habit:** Perennial herb from slender rhizomes.
- **Stems:** Upright, sometimes branched, slender, 4-angled, smooth, up to 2 1/2 feet tall.
- **Leaves:** Basal leaves in a rosette, elliptic to obovate, up to 1 1/2 inches long, up to 1/2 inch wide, usually withered by flowering time; stem leaves opposite, linear, pointed or rounded at the tip, narrowed to the sessile base, up to 4 inches long, up to 1/3 inch wide, without teeth but rolled under along the margins, smooth except for the ciliate base, usually with clusters of smaller leaves in the axils of the major leaves.
- **Flowers:** Borne in clusters of 1-4 in the upper axils, on smooth stalks up to 1 1/2 inches long.
- **Sepals:** 5, green, united near the base, the lobes lanceolate, pointed at the tip, smooth, 1/6-1/4 inch long.
- **Petals:** 5, yellow, united near the base, obovate, with a pointed tip, up to 1/2 inch long, with gland-tipped hairs on the inner surface.
- **Stamens:** 5, attached to the base of the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules nearly spherical, 1/8-1/6 inch in diameter, with several tiny, flattish seeds.

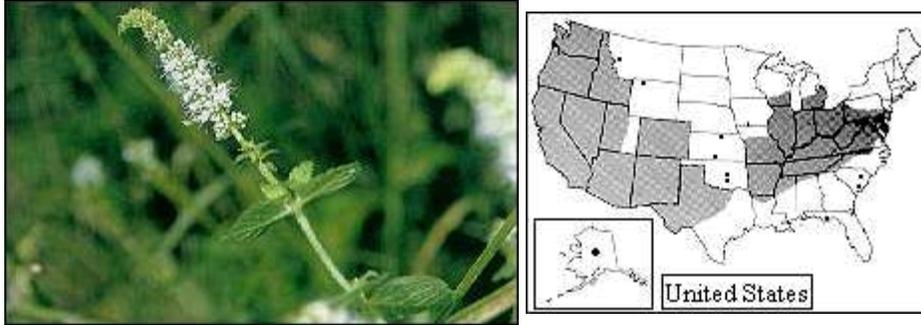


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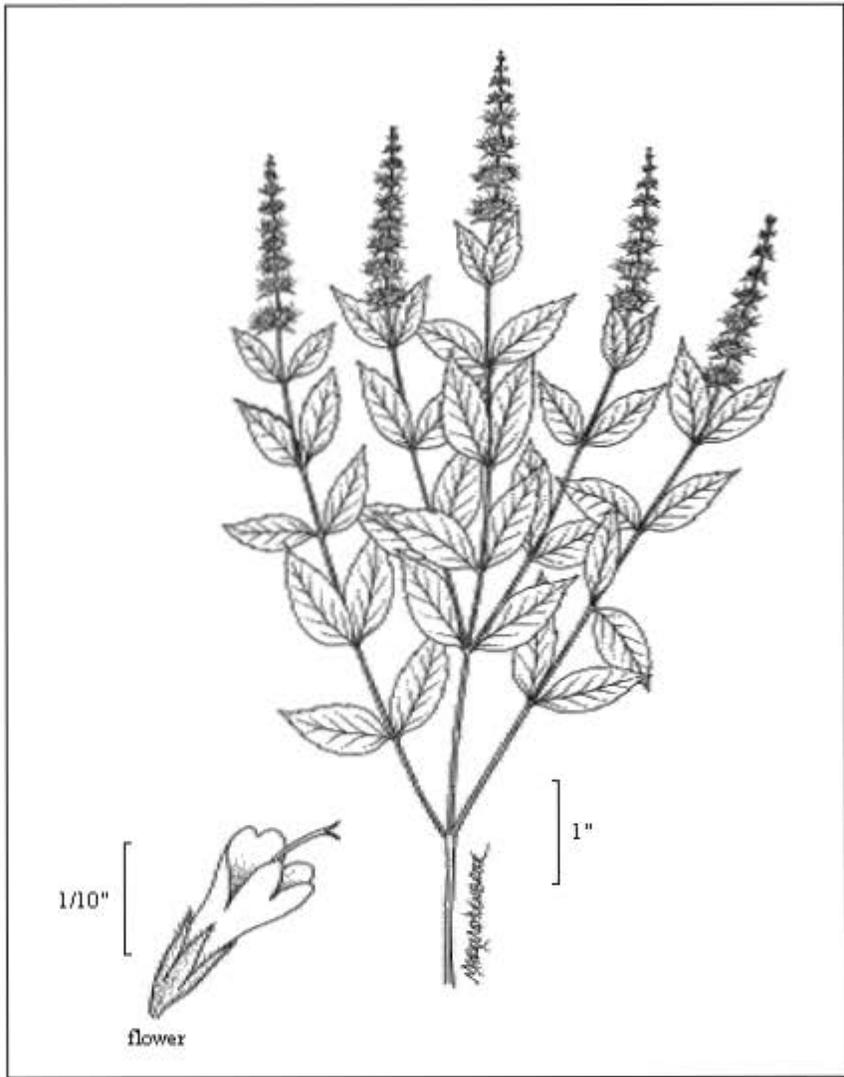
Field Office Guide to Plant Species

Spearmint

Mentha spicata L.



- **Family:** Mint (Labiatae)
- **Flowering:** June-October
- **Field Marks:** The flowers are crowded into slender, leafless spikes. The leaves are either sessile or with a very short stalk.
- **Habitat:** Wet soil, along streams, around springs.
- **Habit:** Perennial herb from extensive rhizomes.
- **Stems:** Upright, often branched, square, up to 3 feet tall, sometimes hairy.
- **Leaves:** Opposite, simple, oblong to lanceolate, pointed at the tip, more or less rounded at the nearly sessile base, sharply toothed, usually smooth but sometimes hairy on the veins beneath, up to 3 inches long, with fragrance and taste of spearmint.
- **Flowers:** Many crowded into distinct whorls on slender, leafless spikes up to 4 inches long.
- **Sepals:** 5, green, united below into a short tube, the lobes all about the same size, 1/12-1/10 inch long, the tube smooth, the lobes hairy.
- **Petals:** Fused to form a 2-lipped tube, pale violet to purple.
- **Stamens:** 4, attached to the petals.
- **Pistils:** Ovary superior, 4-lobed.
- **Fruits:** Nutlets 4, ovoid.
- **Notes:** This species is used as an herb because of its strong spearmint odor and taste. It is an introduction from Europe. Gleason and Cronquist call this family Lamiaceae.



Northeast Wetland Flora

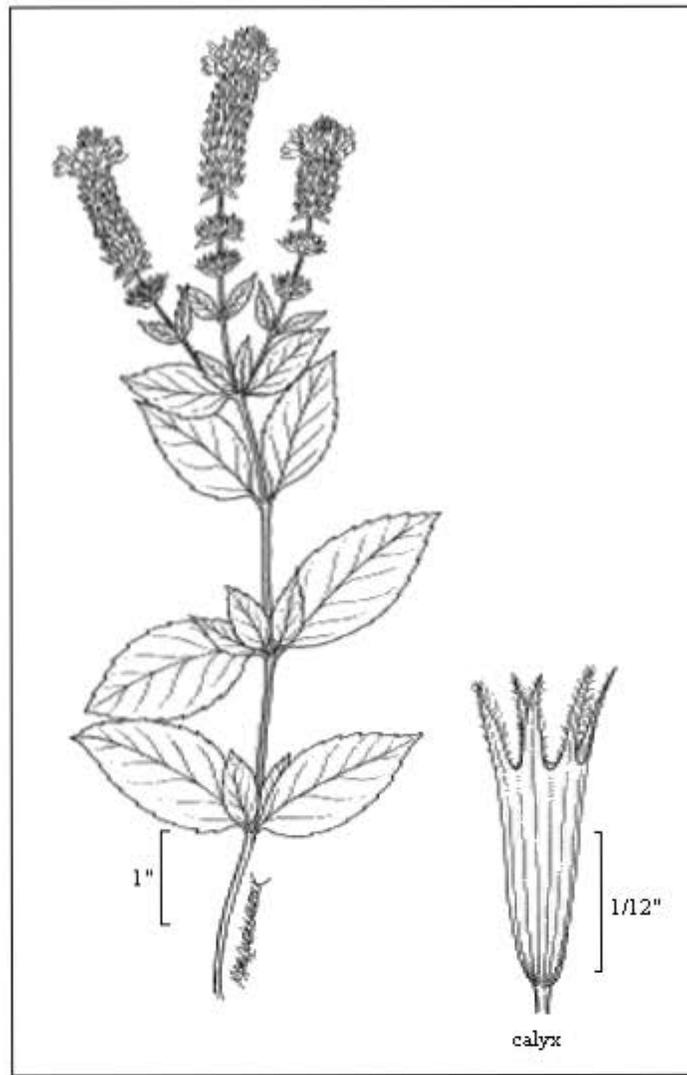
Field Office Guide to Plant Species

Peppermint

Mentha X piperita L.



- **Family:** Mint (Labiatae)
- **Flowering:** June-October
- **Field Marks:** This mint has slender spikes that are more or less interrupted, sepals hairy at the tip, leaves that are stalked, and smooth stems and leaves.
- **Habitat:** Wet meadows, along streams.
- **Habit:** Perennial herb from slender rhizomes.
- **Stems:** Upright, usually branched, square, to 3 feet tall, smooth.
- **Leaves:** Opposite, simple, oblong to lanceolate, pointed at the tip, more or less rounded at the base, sharply toothed, smooth, up to 4 inches long, on stalks up to 1/4 inch long.
- **Flowers:** Borne in more or less interrupted, slender spikes up to 4 inches long.
- **Sepals:** 5, green to purplish, united below into a short tube about 1/6 inch long, the 5 more or less equal lobes hairy at the tip.
- **Petals:** Fused to form a 2-lipped tube, purplish.
- **Stamens:** 4, attached to the petals.
- **Pistils:** Ovary superior, 4-lobed.
- **Fruits:** Nutlets 4, ovoid.
- **Notes:** This plant is apparently a hybrid between spearmint (*M. spicata*) and water mint (*M. aquatica*). It has been introduced from Europe and is widely planted in herb gardens. Gleason and Cronquist call this family Lamiaceae.

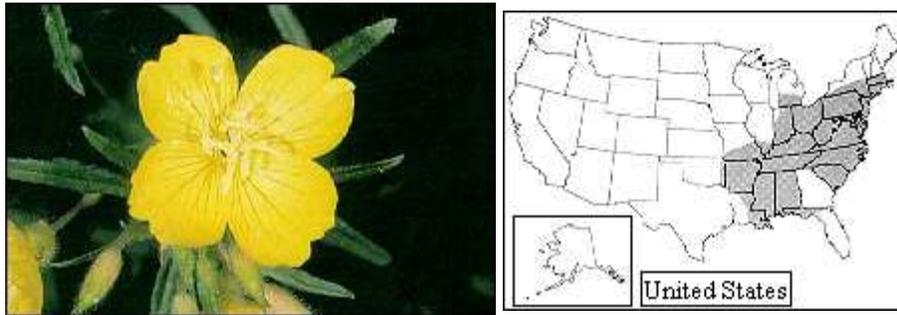


Northeast Wetland Flora

Field Office Guide to Plant Species

Narrow-leaf Sundrops

Oenothera fruticosa L.



- **Family:** Evening-primrose (Onagraceae)
- **Flowering:** May-August
- **Field Marks:** The capsules are obovoid, 4-angled, and taper to a long stalk finely hairy but not glandular. The tube of the sepals is 1/4-3/4 inch long.
- **Habitat:** Wet meadows, fields, marshes, edge of woods, sometimes in brackish areas.
- **Habit:** Perennial herb from fibrous rootstocks.
- **Stems:** Upright or sprawling and matted, finely hairy, up to 2 1/2 feet tall.
- **Leaves:** Usually opposite, linear to oblong to lanceolate, pointed at the tip, tapering to the sessile or short-stalked base, without teeth, finely hairy, up to 2 1/2 inches long.
- **Flowers:** Diurnal, few at the tips of the stem, notched at the tip, yellow, up to 3 inches across, on long, finely hairy stalks.
- **Sepals:** 4, green, united below to form a tube 1/4-3/4 inch long, finely hairy but not glandular.
- **Petals:** 4, yellow, free from each other, obovate, up to 1 1/2 inches long.
- **Stamens:** 8.
- **Pistils:** Ovary inferior, 4-sided.
- **Fruits:** Capsules obovoid, 4-angled, up to 1/2 inch long, finely hairy but not glandular, tapering to a long stalk.
- **Notes:** This is an extremely variable species, particularly with respect to growth form and degree of hairiness. Some authors have recognized three taxonomic varieties of this species. Gray's Manual identifies at least five varieties. Although the Atlas of the Georgia Flora does not list this species for Georgia, at least one Georgia botanist thinks it occurs in that state. Georgia is not shaded in the range map because there are apparently no specimens collected from that state, although the probability that this plant occurs in Georgia is strong.



Northeast Wetland Flora

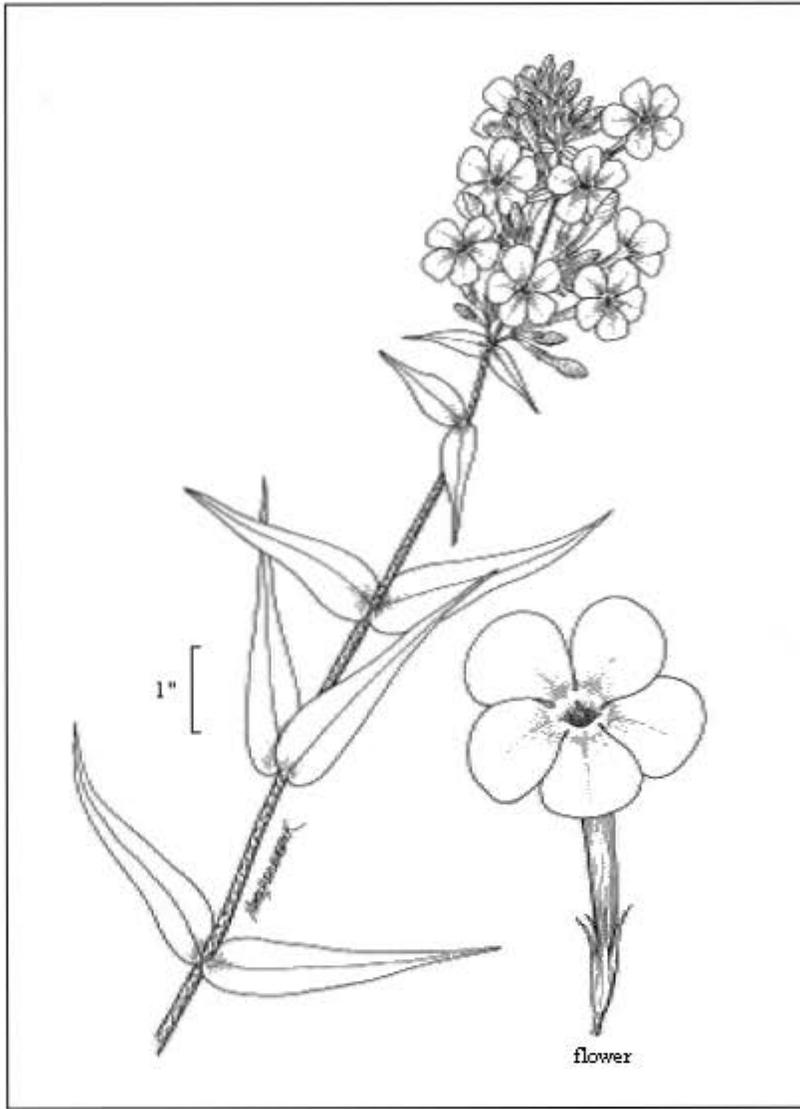
Field Office Guide to Plant Species

Meadow Phlox

Phlox maculata L.



- **Family:** Phlox (Polemoniaceae)
- **Flowering:** May-August
- **Field Marks:** This *Phlox* is readily distinguished by its purple-spotted stems and its sepal lobes shorter than the tube.
- **Habitat:** Fens, wet meadows, bottomlands.
- **Habit:** Perennial herb from slender rhizomes.
- **Stems:** Upright, usually unbranched, purple-spotted, up to 2 1/2 feet tall, smooth or short-hairy.
- **Leaves:** Opposite, simple, narrowly ovate to lanceolate to linear, pointed at the tip, tapering or rounded at the base, up to 4 inches long, without teeth, smooth or sparsely hairy.
- **Flowers:** Several in dense, cylindrical panicles up to 1 foot long, each flower pink to reddish purple, up to 3/4 inch across; flower stalks short.
- **Sepals:** 5, green, united below to form a tube, the lobes triangular, pointed, not glandular-hairy, about 1/4 as long as the tube; tube about 1/3 inch long.
- **Petals:** 5, pink or reddish purple, united below to form a slender tube, the lobes rounded, up to 1/2 inch long, the tube up to 1 1/4 inches long.
- **Stamens:** 5, attached to the tube of the petals, not exerted beyond the petals.
- **Pistils:** Ovary superior, smooth; stigmas 3.
- **Fruits:** Capsules ovoid, smooth, 1/3-1/2 inch long.
- **Notes:** This species is commonly cultivated and may escape.



Northeast Wetland Flora

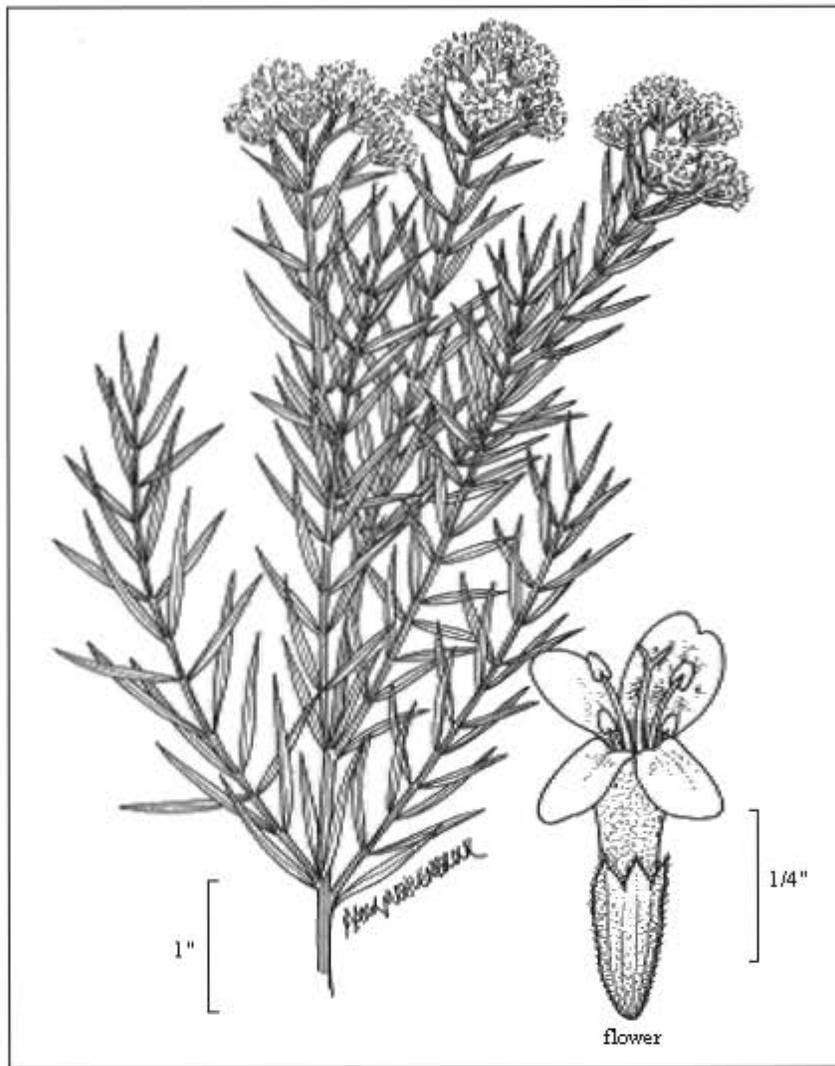
Field Office Guide to Plant Species

Narrow-leaf Mountain-mint

Pycnanthemum flexuosum (Walter) BSP.



- **Family:** Mint (Labiatae)
- **Flowering:** July-September
- **Field Marks:** This species is distinguished by the sepals being all the same size and sharp-pointed at the tip, and by the leaves being linear to narrowly lanceolate.
- **Habitat:** Fields, woods, bogs.
- **Habit:** Perennial herb from rhizomes.
- **Stems:** Upright, much branched, smooth to minutely hairy, gray-green, up to 3 feet tall.
- **Leaves:** Opposite, simple, linear to narrowly lanceolate, rounded or pointed at the tip, tapering to the sessile base, gray-green, smooth or minutely hairy, without teeth but with the margins turned under, up to 2 1/2 inches long, up to 1/4 inch wide.
- **Flowers:** Borne in dense heads, the heads up to 1/3 inch across, on slender stalks up to 3/4 inch long; inner bracts awn-tipped.
- **Sepals:** 5, united below, green, the lobes all the same size, up to 1/4 inch long, awn-tipped.
- **Petals:** 5, united below, more or less 2-lipped, white or pinkish, purple-spotted, the tube up to 1/3 inch long.
- **Stamens:** 4, attached to and exerted from the petals.
- **Pistils:** Ovary superior, 4-lobed.
- **Fruits:** Nutlets 4, usually smooth.

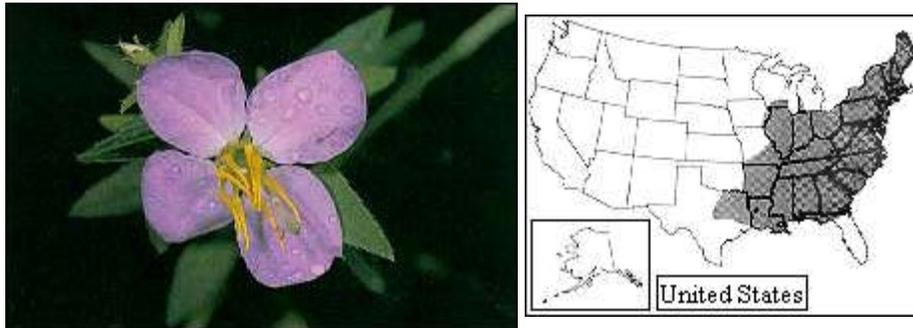


Northeast Wetland Flora

Field Office Guide to Plant Species

Virginia Meadow-beauty

Rhexia virginica L.



- **Family:** Meadow-beauty (Melastomaceae)
- **Flowering:** July-September
- **Field Marks:** This attractive species differs from others in the genus by its sharply toothed leaves, wing-angled stems, and presence of tubers.
- **Habitat:** Wet meadows.
- **Habit:** Perennial herb from tubers.
- **Stems:** Upright, branched or unbranched, wing-angled, square, sometimes spongy near the base, smooth or sparsely bristly, up to 3 feet tall.
- **Leaves:** Opposite, simple, oval to broadly lanceolate, pointed at the tip, rounded at the sessile base, sharply toothed, bristly-ciliate, strongly 3- to 5-nerved, up to 3 inches long, up to 1 1/2 inches wide.
- **Flowers:** Few in a terminal inflorescence; each flower on a glandular-hairy stalk.
- **Sepals:** 4, united below to form a tube up to 1/2 inch long, green, the tube attached to the ovary, glandular-hairy.
- **Petals:** 4, free from each other, crimson to bright purple, 1/2-1 inch long.
- **Stamens:** 8, elongated, yellow, with a minute spur on the back.
- **Pistils:** Ovary superior.
- **Fruits:** Capsule flask-shaped, swollen at the base, up to 1 inch long; seeds numerous.



Northeast Wetland Flora

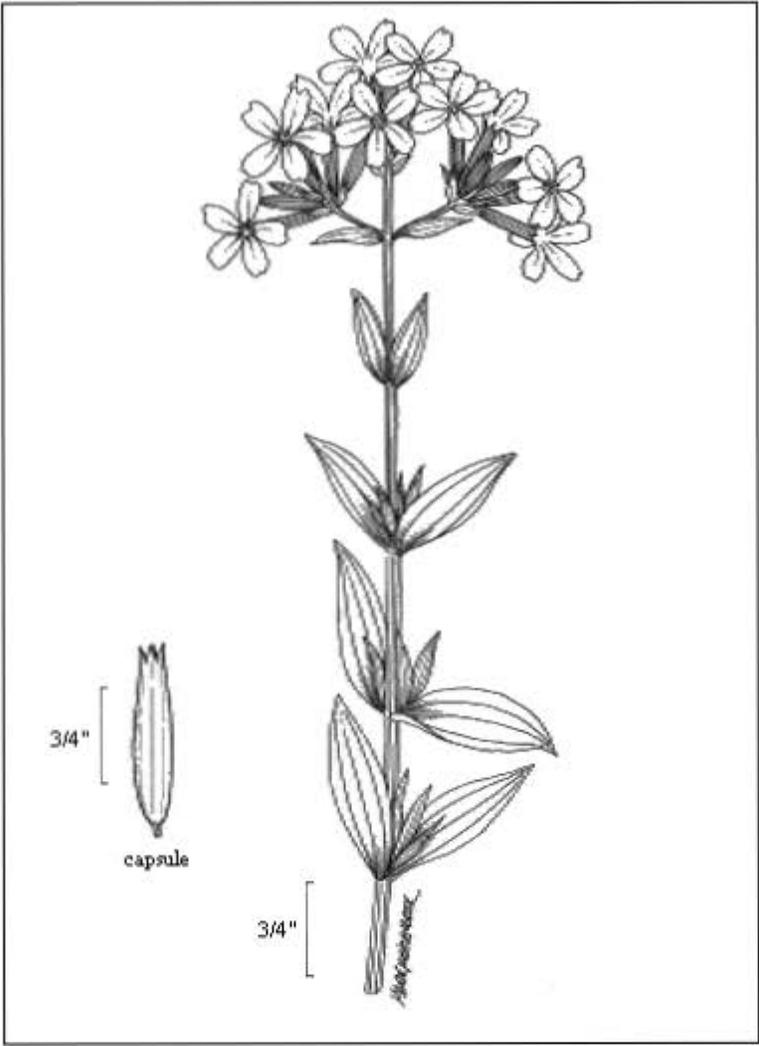
Field Office Guide to Plant Species

Bouncing-bet

Saponaria officinalis L.



- **Family:** Pink (Caryophyllaceae)
- **Flowering:** July-September
- **Field Marks:** This species is distinguished by its opposite, simple, toothless leaves, its sepals united into a cylindrical tube, its 2 styles, and its notched petals.
- **Habitat:** Roadsides, disturbed soil.
- **Habit:** Perennial herb with a thickened rootstock.
- **Stems:** Upright, branched or unbranched, smooth, up to 2 feet tall.
- **Leaves:** Opposite, simple, oval to lanceolate, pointed at the tip, tapering or rounded at the base, without teeth, smooth, up to 4 inches long, up to 2 inches wide.
- **Flowers:** Several in corymbs, white to pink to rose.
- **Sepals:** 5, green, united to form a cylindrical tube, up to 1 1/4 inches long, smooth.
- **Petals:** 5, white, pink, or rose, free from each other, notched at the tip, with a small appendage near the base.
- **Stamens:** 10.
- **Pistils:** Ovary superior; styles 2.
- **Fruits:** Capsules cylindrical, smooth, 4-toothed at the tip.
- **Notes:** This is a popular ornamental species that escapes regularly from cultivation.



Northeast Wetland Flora

Field Office Guide to Plant Species

Hooded Skullcap

Scutellaria galericulata L.



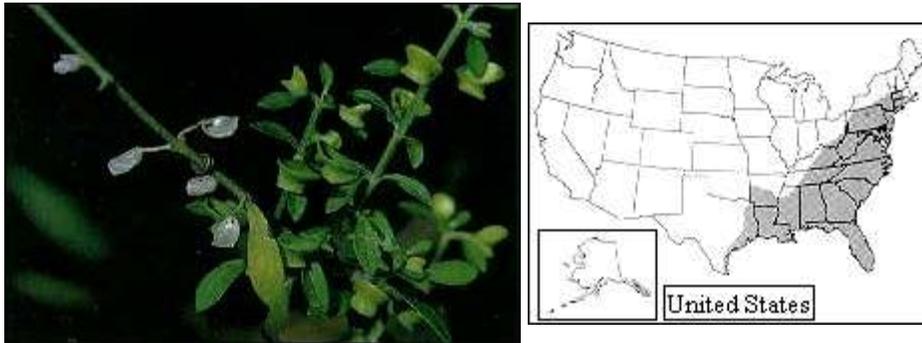
- **Family:** Mint (Labiatae)
- **Flowering:** June-September
- **Field Marks:** The distinguishing features of this skullcap are its slender rhizomes, its flowers 3/4-1 1/4 inches long, and the recurved hairs on the stems, leaves, and leaf stalks.
- **Habitat:** Wet meadows, swamps, damp thickets.
- **Habit:** Perennial herb from slender rhizomes.
- **Stems:** Upright, unbranched, square, up to 3 feet tall, with recurved hairs on the angles.
- **Leaves:** Opposite, simple, lanceolate to narrowly ovate, pointed at the tip, tapering or rounded at the base, smooth above, hairy beneath with recurved hairs, sparingly toothed; lower leaves with stalks up to 2 inches long, with recurved hairs; upper leaves sessile.
- **Flowers:** Solitary in the axils of the leaves, blue, on stalks up to 1/8 inch long.
- **Sepals:** 5, green, 2-lipped, united below, up to 1 1/4 inches long, with a distinct cap-like protuberance about the middle.
- **Petals:** 5, blue with white spots, 2-lipped, united below to form a tube, up to 1 1/4 inches long.
- **Stamens:** 4, attached to the tube of the petals.
- **Pistils:** Ovary superior, 4-parted.
- **Fruits:** Nutlets olive-green, obscurely warty, up to 1/10 inch long.
- **Notes:** This species has sometimes been known as *S. epilobiifolia*.



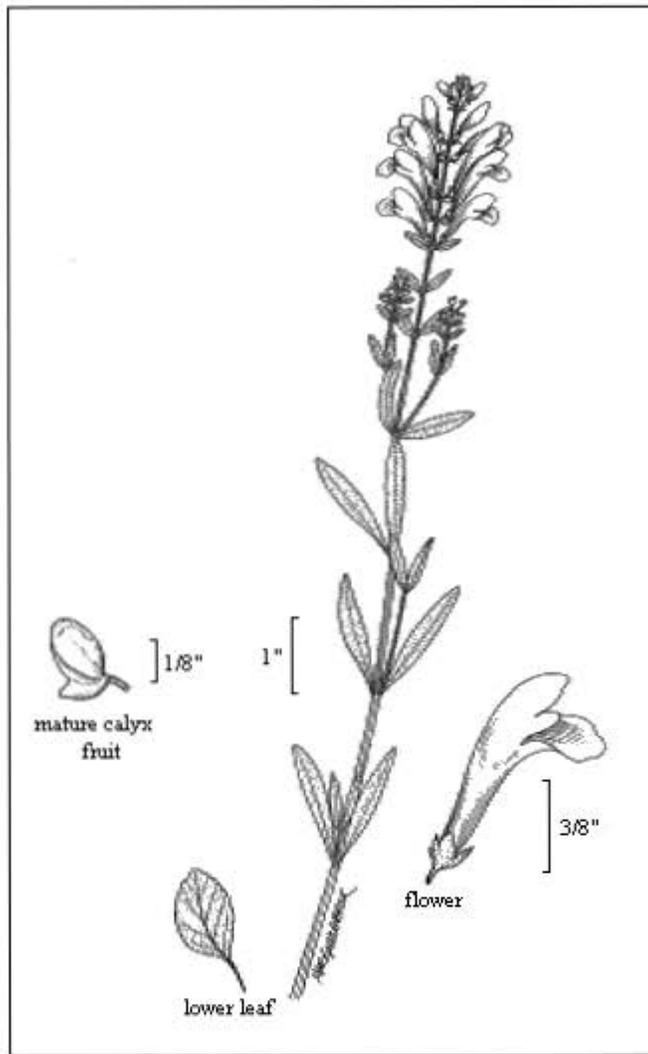
Northeast Wetland Flora

Field Office Guide to Plant Species

Hyssop Skullcap *Scutellaria integrifolia* L.



- **Family:** Mint (Labiatae)
- **Flowering:** May-September
- **Field Marks:** This skullcap has blue flowers in a single terminal raceme or single panicle and sessile, toothless upper leaves not over 3/4 inch wide.
- **Habitat:** Woods, fields.
- **Habit:** Perennial herb from a thickened, woody base.
- **Stems:** Upright, unbranched to branched, square, up to 2 feet tall, densely covered with incurved hairs.
- **Leaves:** Opposite, simple, linear-lanceolate to ovate, the uppermost ones very narrow, pointed at the tip, rounded at the sessile base, densely gray-hairy, the lower leaves round-toothed, up to 2 inches long, up to 3/4 inch wide, the lower without teeth.
- **Flowers:** Several in a terminal raceme or terminal panicle; flowers up to 1 1/2 inches long, blue, the lowest subtended by leafy bracts.
- **Sepals:** 5, green, 2-lipped, united below, up to 1/3 inch long, finely hairy, with a distinct protuberance about the middle.
- **Petals:** 5, blue, rarely white or purplish, 2-lipped, united below to form a tube up to 1 1/2 inches long.
- **Stamens:** 4, attached to the tube of the petals.
- **Pistils:** Ovary superior, 4-parted.
- **Fruits:** Nutlets black, spherical, up to 1/12 inch in diameter.



Northeast Wetland Flora

Field Office Guide to Plant Species

Canada Thimble-weed *Anemone canadensis* L.



- **Family:** Buttercup (Ranunculaceae)
- **Flowering:** May-July
- **Field Marks:** The distinguishing features of this *Anemone* are the sessile, leaf-like bracts that subtend the flowers, the white sepals, and the flat, broadly winged achenes.
- **Habitat:** Meadows, moist thickets, along shores.
- **Habit:** Perennial herb from slender rhizomes.
- **Stems:** Upright, much branched, slender, white-hairy, up to 2 feet tall, bearing a cluster of leafy bracts and flowers at the top.
- **Leaves:** Basal leaves deeply 3-parted, with each part lobed or sharply toothed, up to 6 inches long and up to 6 inches wide, with a long stalk; stem leaves at base of flower cluster actually are bracts that are similar to basal leaves but sessile.
- **Flowers:** Borne singly at tip of long stalks, each subtended by small, sessile, leaf-like bracts, white, up to 2 inches across.
- **Sepals:** 5, white, free from each other, oblong to obovate, sometimes unequal in size, up to 1 inch long.
- **Petals:** 0.
- **Stamens:** Numerous.
- **Pistils:** Numerous, with superior ovaries.
- **Fruits:** Many achenes crowded into a spherical head 3/4-1 inch in diameter, each achene flat, orbicular, with appressed hairs, 1/6-1/4 inch long, with a straight or curved beak 1/10-1/4 inch long, with appressed hairs.

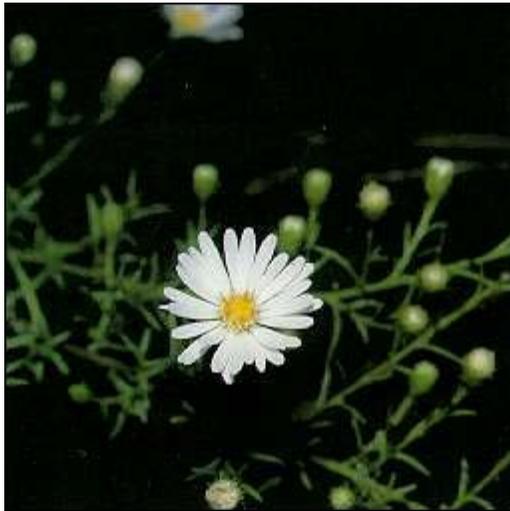


Northeast Wetland Flora

Field Office Guide to Plant Species

White Heath Aster

Aster ericoides L.



- **Family:** Composite (Compositae)
- **Flowering:** July-November
- **Field Marks:** This aster is distinguished by the numerous small white flower heads, its bracts with green, spreading tips, and its crowded linear leaves on the branches of the inflorescence.
- **Habitat:** Dry, open soil.
- **Habit:** Perennial herb from slender rhizomes and slender stolons.
- **Stems:** Upright, much branched, hairy, up to 6 feet tall.
- **Leaves:** Alternate, simple, numerous, linear, without teeth, hairy and usually rough to the touch, up to 2 inches long, those in the inflorescence much smaller.
- **Flowers:** Many crowded into heads, the heads up to 1/4 inch high, arranged in 1-sided racemes, each head subtended by several rows of bracts with hairy, green, spreading tips, some of the flowers forming white rays, others forming a central white disk; ray flowers 8-20, up to 1/4 inch long; disk flowers 10-20.
- **Sepals:** 0.
- **Petals:** Some united to form flat rays, others united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, hairy.
- **Fruits:** Achenes elongated, silky-hairy, up to 1/8 inch long, subtended by white hairs.
- **Notes:** Gleason and Cronquist use Asteraceae as the name for this family. This species is variable in degree of hairiness on the stems and in the color of the ray flowers which is usually white but sometimes pink or blue.



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Field Office Guide to Plant Species

Shining Aster

Aster lucidulus (Gray) Wiegand



- **Family:** Composite (Compositae)
- **Flowering:** September-November
- **Field Marks:** This species differs from the similar *Aster puniceus* by its toothless leaves, long-creeping rhizomes, upper portions of the stem and branches minutely hairy in lines, the leaves very crowded on the stem, and its pale blue to often white flower heads.
- **Habitat:** Fens, moist areas.
- **Habit:** Perennial herb from long-creeping rhizomes.
- **Stems:** Upright, branched or unbranched, rather stout, smooth or sparsely hairy in lines, up to 6 feet tall.
- **Leaves:** Alternate, simple, crowded, lanceolate to elliptic, pointed at the tip, tapering to a clasping base, without teeth, shiny and usually smooth on the upper surface, smooth or hairy on the lower surface, up to 6 inches long, up to 1 1/2 inches wide.
- **Flowers:** Many crowded into heads, with several heads in an open, leafy panicle, the heads 1/3-1/2 inch high, subtended by slender bracts, some of the heads forming blue or sometimes white rays, others forming a central yellow disk; ray flowers 20-60, 1/3-1 inch long; disk flowers 35-50, tubular.
- **Sepals:** 0.
- **Petals:** Some united to form flat blue or white rays, others united to form yellow tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, smooth.
- **Fruits:** Achenes ellipsoid, smooth, about 1/8 inch long, subtended by white hairs.
- **Notes:** This plant is sometimes considered to be a variety of *A. puniceus*. Gleason and Cronquist call this plant *A. firmus* of the Asteraceae.



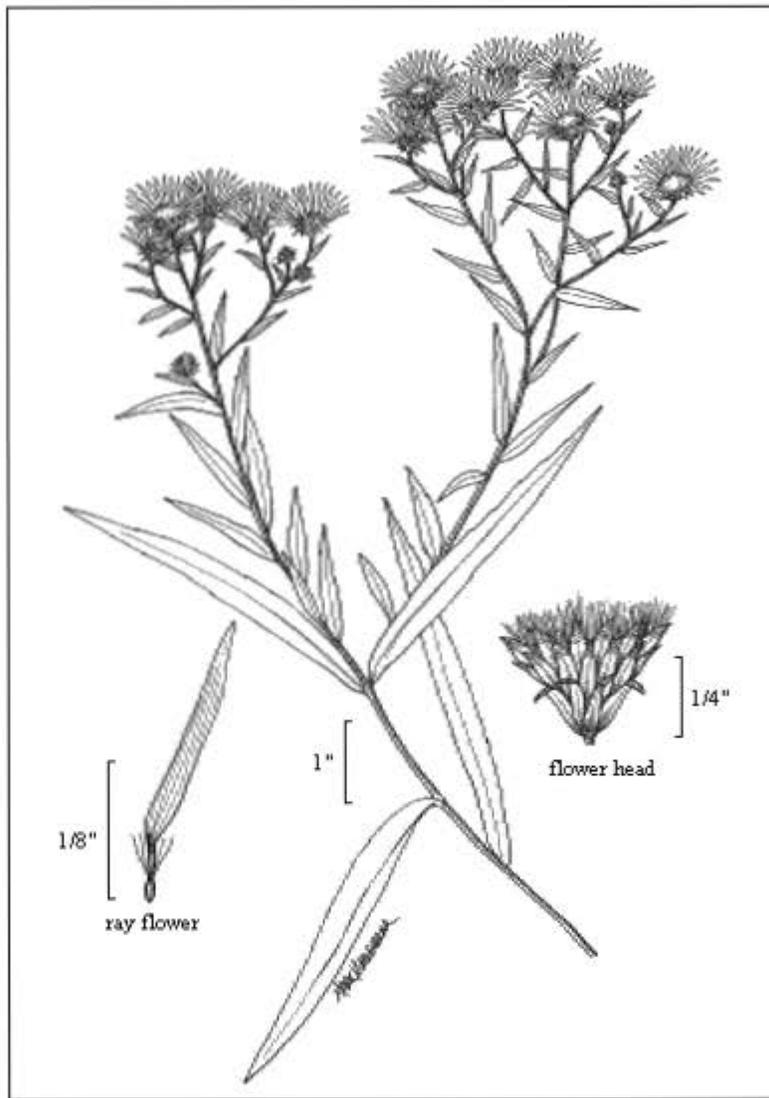
Northeast Wetland Flora

Field Office Guide to Plant Species

New York Aster *Aster novi-belgii* L.



- **Family:** Composite (Compositae)
- **Flowering:** July-October
- **Field Marks:** The distinguishing features of this aster are its blue rays, its recurved, green-tipped bracts, and its somewhat clasping leaf bases.
- **Habitat:** Wet meadows, marshes, particularly in brackish areas.
- **Habit:** Perennial herb from rhizomes.
- **Stems:** Upright, slender, branched, smooth or sometimes hairy in lines, up to 4 feet tall.
- **Leaves:** Alternate, simple, elliptic to lanceolate, pointed at the tip, tapering to the more or less clasping base, sometimes with a few scattered teeth, smooth except for the roughened edges, up to 6 inches long.
- **Flowers:** Many crowded into heads, the heads 1/3-1/2 inch high, arranged in a small, leafy-bracted panicle, each head subtended by recurved, green-tipped bracts, some of the flowers forming blue rays, others forming a central yellowish or reddish disk; ray flowers 20-50, up to 2/3 inch long; disk flowers 1/6-1/4 inch long.
- **Sepals:** 0.
- **Petals:** Some united to form flat blue rays, others united to form tubular yellow or reddish disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, usually hairy.
- **Fruits:** Achenes ellipsoid, more or less hairy, about 1/8 inch long, subtended by white hairs.
- **Notes:** This family is Asteraceae according to Gleason and Cronquist.



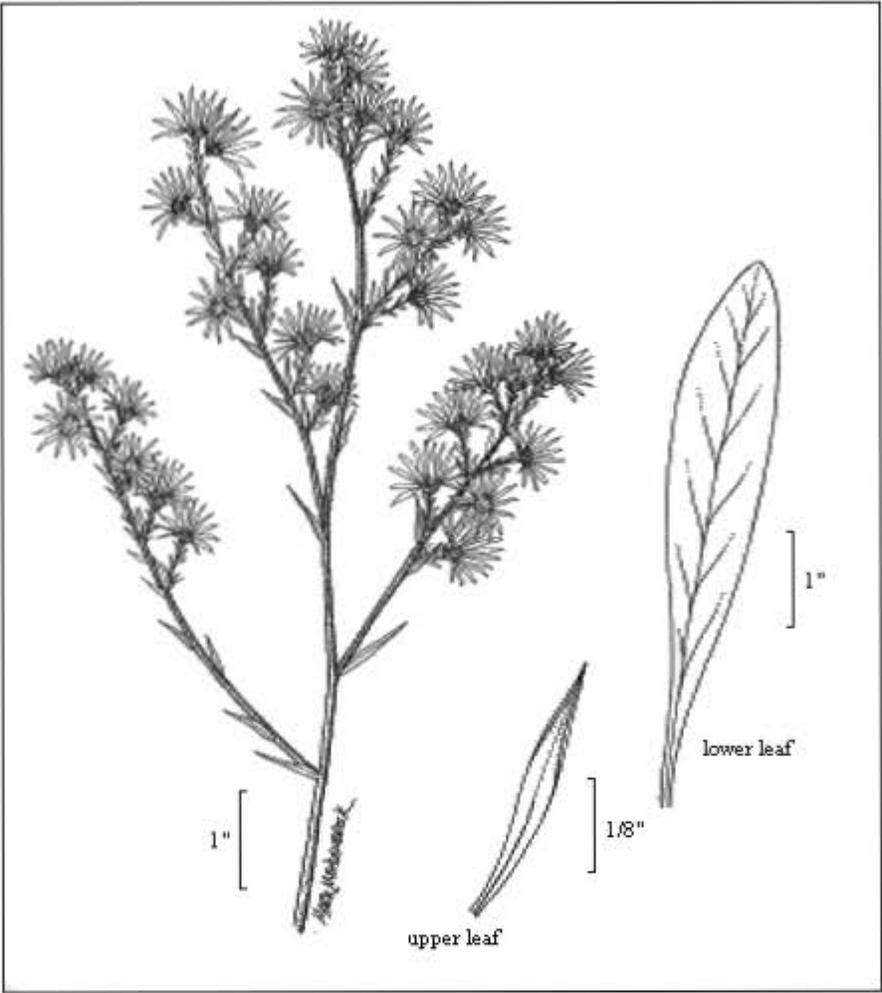
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Field Office Guide to Plant Species

White Heath Aster *Aster pilosus* Willd.



- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** This aster is recognized by its numerous white flower heads subtended by slender-pointed, green-tipped bracts and by its subulate-tipped leaves.
- **Habitat:** Wet or dry open areas, roadsides.
- **Habit:** Perennial herb from a thickened rootstock.
- **Stems:** Upright, branched, up to 5 feet tall, smooth or with spreading hairs.
- **Leaves:** Alternate, simple, oblanceolate to linear, sometimes slightly toothed, at least the uppermost subulate-tipped, otherwise merely pointed, tapering to the base, up to 4 inches long, the lower on long stalks, the upper without stalks.
- **Flowers:** Many crowded into heads, the heads 1/4-1/3 inch high, arranged in a much branched panicle often more than one-half the height of the plant, each head subtended by several slender-pointed, green-tipped, inrolled, appressed bracts, some of the flowers forming white rays, others forming a central yellow disk; ray flowers 16-35, white, 1/4-1/2 inch long; disk flowers 20-40, tubular.
- **Sepals:** 0.
- **Petals:** Some united to form flat white rays, others united to form tubular yellow disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, sparsely hairy.
- **Fruits:** Achenes ellipsoid, sparsely hairy, about 1/8 inch long, subtended by white hairs.
- **Notes:** Gleason and Cronquist use Asteraceae for this family. The ray flowers are sometimes purplish.



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Crooked-stem Aster *Aster prenanthoides* Muhl.



- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** This species is distinguished by its rough leaves that are abruptly tapering and clasping at the base, its rather large, blue- to pale purple- to white-rayed flower heads, and its very narrow bracts with a narrow green central stripe.
- **Habitat:** Moist woods, bottomlands, wet meadows, roadside ditches.
- **Habit:** Perennial herb from long, creeping rhizomes.
- **Stems:** Upright, branched above, zigzag, slender, smooth or hairy in lines, up to 3 feet tall.
- **Leaves:** Alternate, simple, lanceolate to narrowly ovate, pointed at the tip, tapering to a clasping base, sharply toothed except toward the base, rough to the touch, smooth or hairy along the midvein below, up to 8 inches long, up to 2 inches wide.
- **Flowers:** Many crowded into heads, with several heads in a leafy panicle, the heads 1/4-1/3 inch high, subtended by very narrow bracts with a narrow green central stripe, some of the flowers forming blue to pale purple to white rays, others forming a central yellow disk; ray flowers 20-30, 1/3-3/4 inch long; disk flowers tubular.
- **Sepals:** 0.
- **Petals:** Some united to form flat blue rays, others united to form tubular yellow disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, with appressed hairs.
- **Fruits:** Achenes ellipsoid, hairy, about 1/8 inch long, subtended by yellowish hairs.
- **Notes:** This family is Asteraceae according to Gleason and Cronquist.



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Swamp Aster *Aster puniceus* L.



- **Family:** Composite (Compositae)
- **Flowering:** August-November
- **Field Marks:** The distinguishing features of this aster are its usually purple stems, its clasping leaves, and its blue-rayed flower heads 1/3-1/2 inch high.
- **Habitat:** Swamps, rich woods, wet open areas.
- **Habit:** Perennial herb from a stout rhizome.
- **Stems:** Upright, branched or unbranched, stout, hairy or less commonly smooth, up to 8 feet tall.
- **Leaves:** Alternate, simple, lanceolate to elliptic, pointed at the tip, tapering to a clasping base, toothed or sometimes without teeth, rough or smooth on the upper surface, hairy or smooth on the midvein below, up to 8 inches long, up to 2 inches long.
- **Flowers:** Many crowded into heads, with several heads in an open, leafy panicle, the heads 1/3-1/2 inch high, subtended by narrow, loose bracts, some of the flowers forming blue rays, others forming a central yellow disk; ray flowers 20-60, 1/3-1 inch long; disk flowers 35-50, tubular.
- **Sepals:** 0.
- **Petals:** Some united to form flat blue rays, others united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, smooth.
- **Fruits:** Achenes ellipsoid, smooth, about 1/8 inch long, subtended by white hairs.
- **Notes:** Asteraceae is the name used for this family by Gleason and Cronquist. This species is also called purple-stemmed aster.



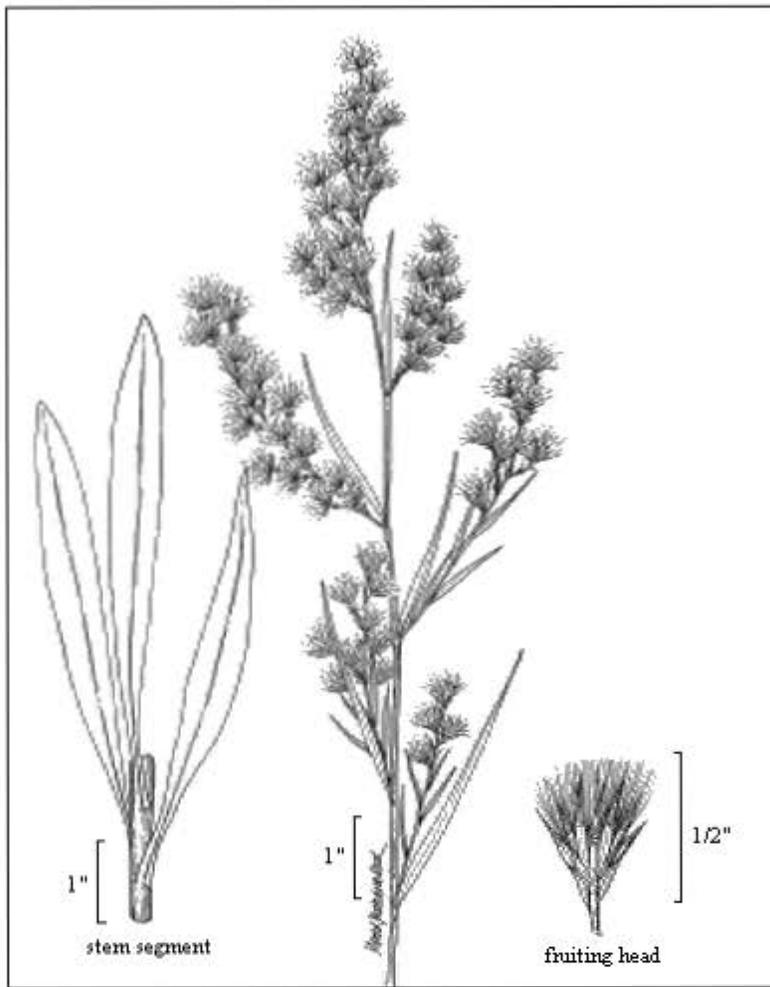
Northeast Wetland Flora

Field Office Guide to Plant Species

Annual Saltmarsh Aster *Aster subulatus* Michx.



- **Family:** Composite (Compositae)
- **Flowering:** August-October
- **Field Marks:** This aster differs by its annual habit, its purple rays, its smooth stems and leaves, and its often rather fleshy narrow leaves.
- **Habitat:** Brackish marshes, freshwater marshes, disturbed areas, lawns.
- **Habit:** Annual herb with a short taproot.
- **Stems:** Upright, usually much branched, up to 3 feet tall, smooth.
- **Leaves:** Alternate, simple, linear to narrowly lanceolate, spatulate, pointed at the tip, tapering to the sessile base, without teeth, smooth on both surfaces, up to 6 inches long, up to 1/2 inch wide.
- **Flowers:** Many borne in heads, with few to several heads in a raceme, each head 1/4-1/3 inch high, subtended by many very narrow, slender-pointed bracts, some of the heads forming slender blue rays, sometimes with a narrow white ring at the base,
- **Sepals:** 0.
- **Petals:** 5, some united to form flat, blue rays, sometimes with a narrow white ring at the base, others united to form tubular yellow disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, smooth or minutely hairy.
- **Fruits:** Achenes ellipsoid, about 1/8 inch long, minutely hairy, subtended by fine white hairs.
- **Notes:** This family is Asteraceae according to Gleason and Cronquist. Although this species occurs naturally in brackish or freshwater marshes, it is a frequent invader of lawns in some of the southern United States.



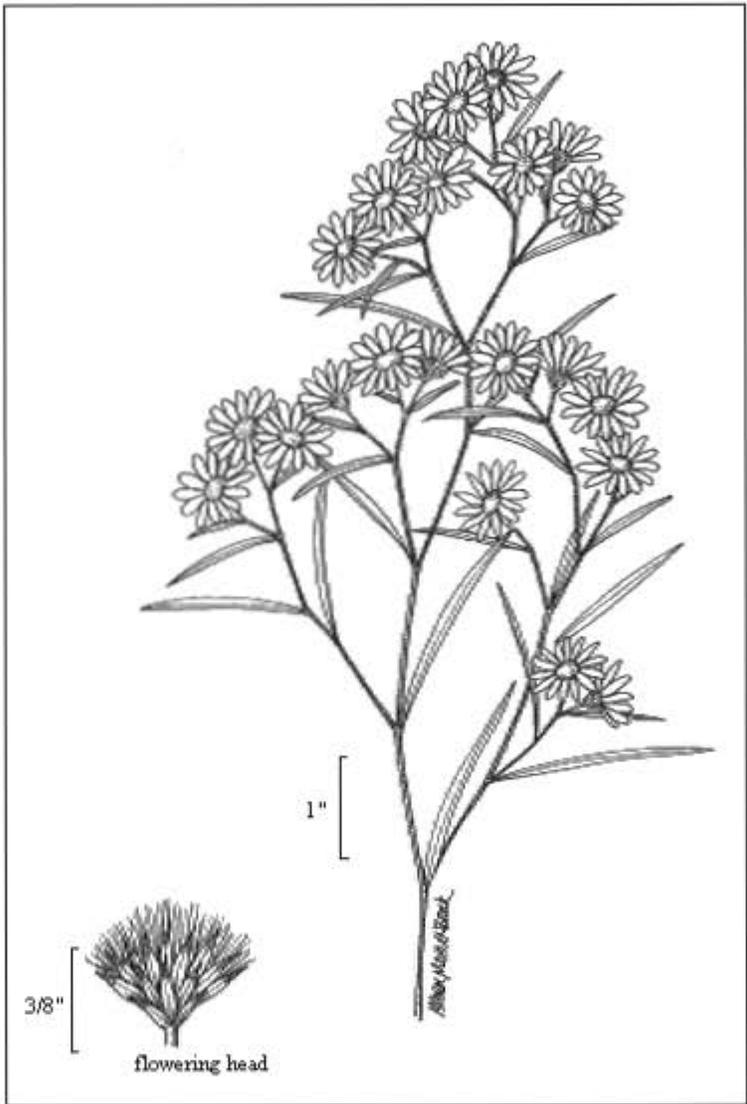
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Field Office Guide to Plant Species

Tradescant Aster *Aster tradescanti* L.



- **Family:** Composite (Compositae)
- **Flowering:** July-September
- **Field Marks:** The features that distinguish this aster from others are its relatively few white flower heads about 1/4 inch high and its very narrow bracts with a green, diamond-shaped tip.
- **Habitat:** Along streams, around ponds.
- **Habit:** Perennial herb from slender rhizomes.
- **Stems:** Upright, unbranched or sparingly branched, slender, smooth or hairy in lines, up to 2 feet tall.
- **Leaves:** Alternate, simple, narrowly lanceolate to oblong, pointed at the tip, tapering to the base, with or without sparse teeth, smooth, up to 4 inches long, up to 1/2 inch wide, the lower leaves on slender stalks, the upper leaves sessile.
- **Flowers:** Many crowded into heads, with relatively few heads in an elongated panicle, the heads about 1/4 inch high, subtended by narrow bracts with a green, diamond-shaped tip, some of the flowers forming white rays, others forming a central yellow disk; ray flowers 14-30, 1/6-1/3 inch long; disk flowers tubular.
- **Sepals:** 0.
- **Petals:** Some united to form flat rays, others united to form tubular disk flowers.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, smooth or sparsely hairy.
- **Fruits:** Achenes ellipsoid, smooth or sparsely hairy, about 1/8 inch long, subtended by white hairs.
- **Notes:** According to Gleason and Cronquist, the family name is Asteraceae.



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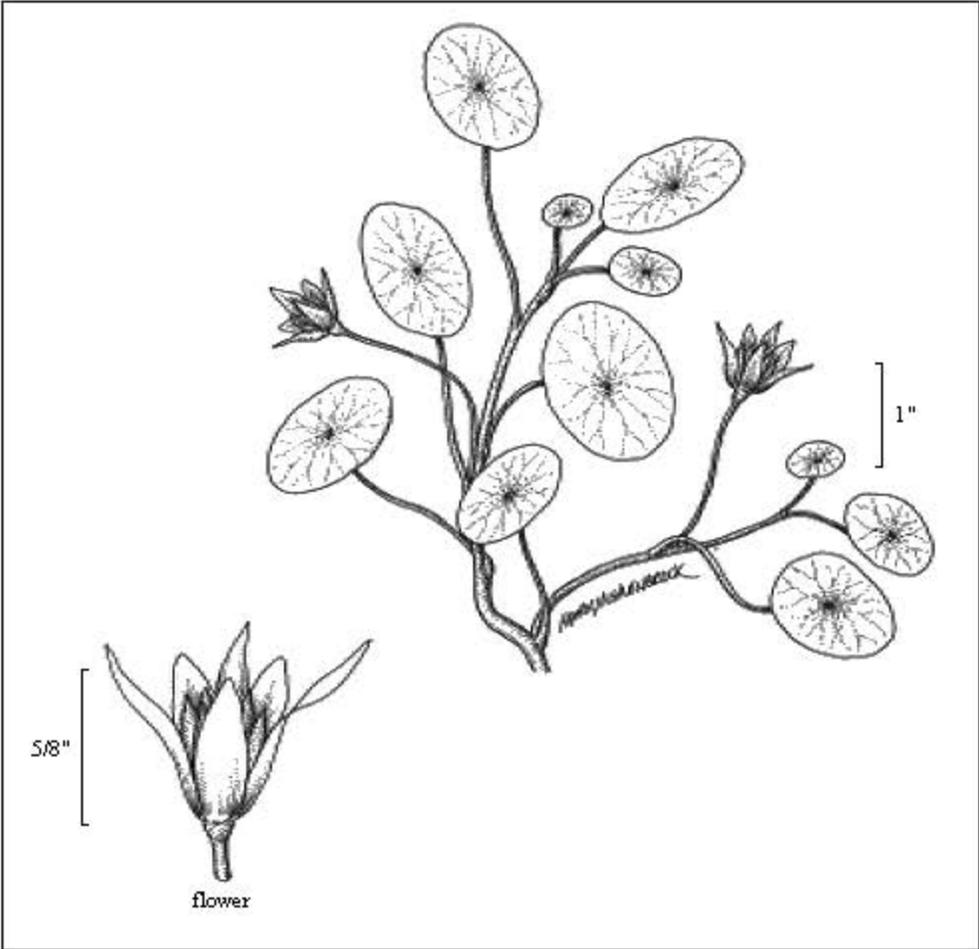
Field Office Guide to Plant Species

Watershield

Brasenia schreberi J.F. Gmel.



- **Family:** Waterlily (Nymphaeaceae)
- **Flowering:** June-September
- **Field Marks:** This species has elliptic to oval leaves with the leaf stalk attached to the center of the blade. The lower surface of the leaves and the stem are covered by a gelatinous material.
- **Habitat:** Ponds, lakes, streams.
- **Habit:** Aquatic perennial herb with slender, creeping rhizomes.
- **Stems:** Spreading, much-branched, up to 6 feet long, covered with a gelatinous material.
- **Leaves:** Alternate, floating, elliptic to oval, up to 5 inches long, smooth, without teeth but sometimes with a slightly wavy edge, the lower surface covered by a gelatinous material; leaf stalks often longer than the blades, attached to the middle of the blade.
- **Flowers:** Borne singly from the axils of the leaves, dull red to purple, up to 1 1/2 inches long, borne on stout stalks as long as the leaf stalks.
- **Sepals:** 3-4, free from each other, green or red, lanceolate, up to 3/4 inch long.
- **Petals:** 3-4, free from each other, dull red to purple, lanceolate, up to 3/4 inch long.
- **Stamens:** 12-18, of 2 different lengths.
- **Pistils:** Several, free from each other, the ovaries superior.
- **Fruits:** Club-shaped, leathery, up to 1/2 inch long, several in a cluster, each containing 1-2 seeds, each fruit tipped by the persistent style.
- **Notes:** This species is placed in the Cabombaceae by Gleason and Cronquist. The seeds are eaten by waterfowl.



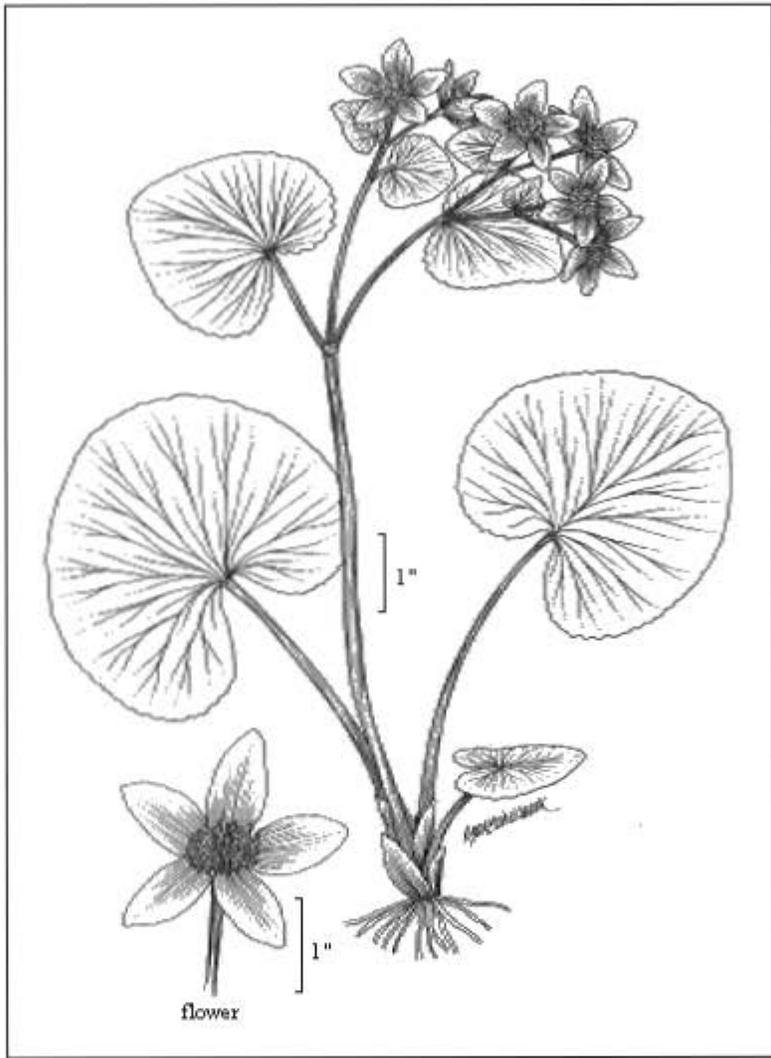
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Field Office Guide to Plant Species

Common Marsh-marigold *Caltha palustris* L.



- **Family:** Buttercup (Ranunculaceae)
- **Flowering:** April-August
- **Field Marks:** This species is readily distinguished by its simple, violet-like leaves, its hollow stems, and its bright yellow flowers that have 5-9 petal-like sepals, many stamens, and 3 or more pistils per flower.
- **Habitat:** Wet woods, swamps, wet meadows, bogs, sometimes in shallow water.
- **Habit:** Perennial herb from fibrous roots.
- **Stems:** Spreading to upright, smooth, hollow, shallowly furrowed, up to 2 feet long.
- **Leaves:** Basal leaves nearly circular to kidney-shaped, rounded at the tip, heart-shaped at the base, with or without teeth, smooth, up to 6 inches long and often nearly as broad, on stalks longer than the blades; upper leaves similar but smaller and sessile.
- **Flowers:** Solitary from the axils of the leaves, up to 1 3/4 inches broad, bright yellow, on stout, smooth stalks.
- **Sepals:** 5-9, bright yellow, free from each other, oval, rounded at the tip, up to 1 1/4 inches long, up to 3/4 inch broad.
- **Petals:** 0.
- **Stamens:** Numerous.
- **Pistils:** 3-12, free from each other, each with a superior ovary.
- **Fruits:** A cluster of flattened follicles, each follicle recurved-ascending, smooth, up to 3/4 inch long, prominently beaked, with many seeds.
- **Notes:** Pioneers used the young shoots of this plant, which they called cowslip, for a spring vegetable.



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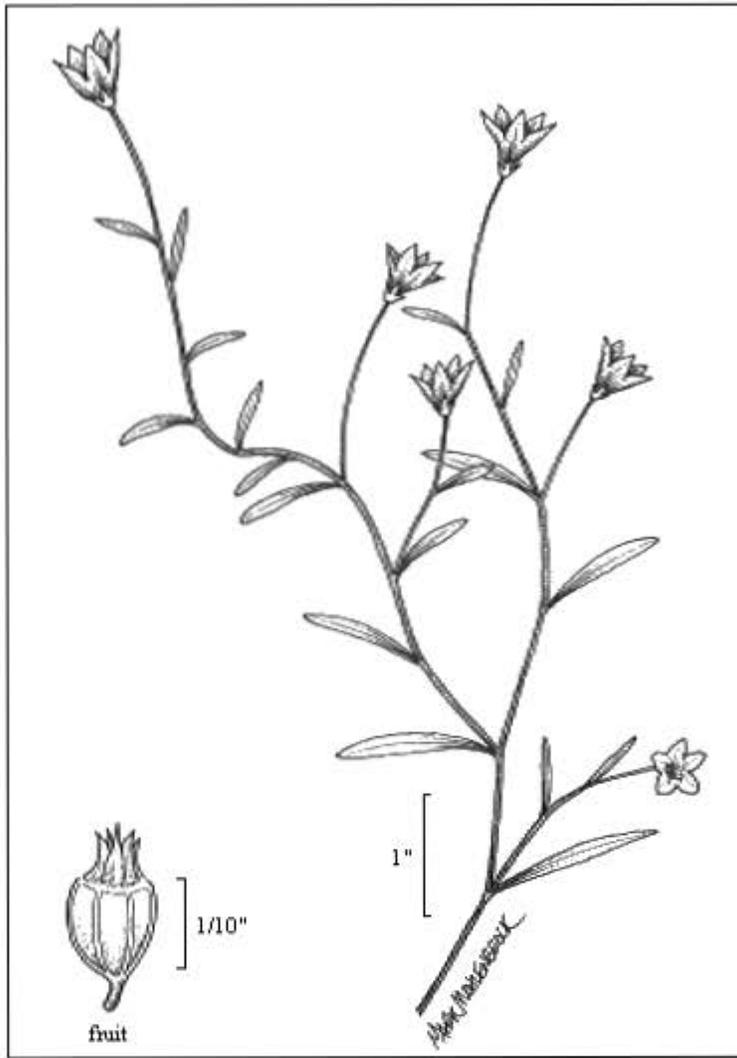
Field Office Guide to Plant Species

Marsh Bellflower

Campanula aparinoides Pursh



- **Family:** Bellflower (Campanulaceae)
- **Flowering:** June-August
- **Field Marks:** This species is recognized by its weak, slender, sprawling, three-angled stem which is rough-hairy on the edges and its small white to bluish flowers on slender stalks up to 2 inches long.
- **Habitat:** Swamps, wet meadows.
- **Habit:** Weakly sprawling annual with fibrous roots.
- **Stems:** Weak, sprawling, 3-angled, rough to the touch, up to 1 1/2 feet long.
- **Leaves:** Alternate, simple, linear to narrowly lanceolate, pointed at the tip, tapering to the base, often rough along the edges and on the midvein beneath, up to 2 inches long, up to 1/4 inch wide.
- **Flowers:** Borne singly at the end of leafy branchlets, on slender stalks up to 2 inches long.
- **Sepals:** 5, green, united below, up to 1/4 inch long, the lobes lanceolate or triangular.
- **Petals:** 5, white to bluish, united to form a bell, 1/4-1/2 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsule nearly spherical, about 1/10 inch in diameter, opening by tiny pores at its base.
- **Notes:** The growth form of this species is reminiscent of a bedstraw.



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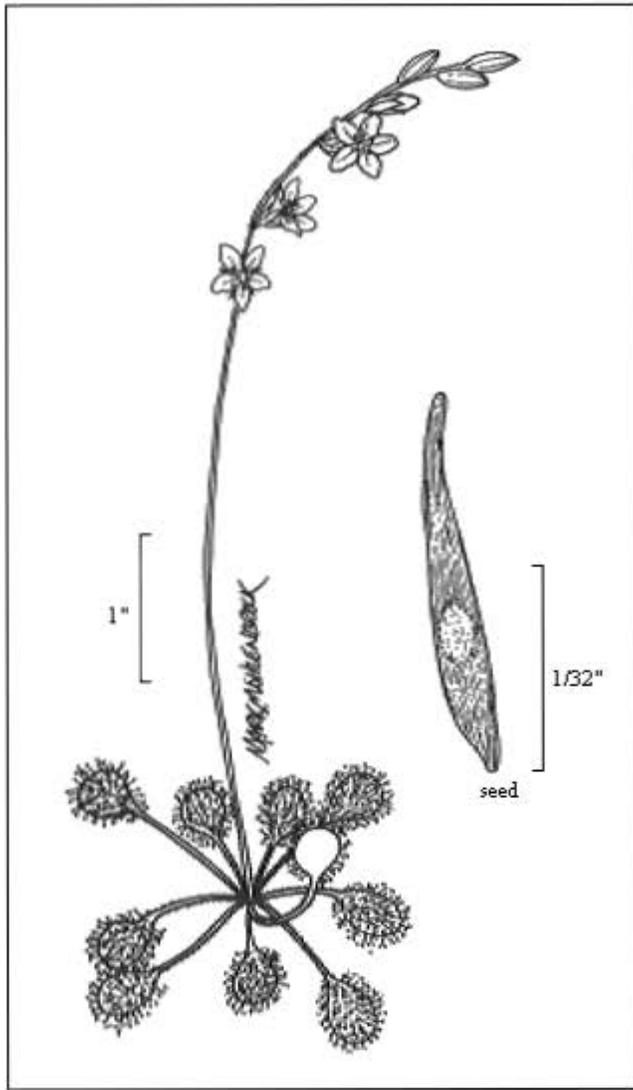
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Round-leaf Sundew

Drosera rotundifolia L.



- **Family:** Sundew (Droseraceae)
- **Flowering:** June-August
- **Field Marks:** The distinguishing features of the sundew are the broad, often nearly spherical leaves, white petals, and fusiform seeds.
- **Habitat:** Bogs, wet woods.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, unbranched, smooth, up to 1 foot tall, bearing only flowers.
- **Leaves:** All basal, usually spherical, up to 1/4 inch long, covered with gland-tipped hairs, with a slender, hairy stalk.
- **Flowers:** 2-25 in a 1-sided raceme at the tip of the leafless stem, each flower white (rarely pink), up to 1/3 inch across.
- **Sepals:** Usually 5, green, united at the base.
- **Petals:** 5, white (rarely pink), free from each other, 1/6-1/4 inch long.
- **Stamens:** 5.
- **Pistils:** Ovary superior; styles 3.
- **Fruits:** Capsules containing several fusiform, shiny brown seeds with a loose seed coat prolonged at each end.
- **Notes:** This species, like all other sundews, collects small insects in its gland-tipped hairs and utilizes nutrients attained from the insect's body.



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Fireweed

Epilobium angustifolium L.



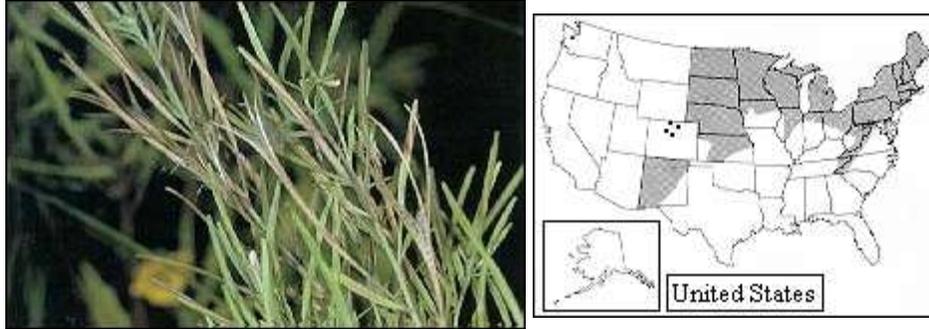
- **Family:** Evening-primrose (Onagraceae)
- **Flowering:** June-September
- **Field Marks:** This species is distinguished by its large, purple, 4-parted flowers and its 4 lobed stigmas.
- **Habitat:** Moist soils, often invading rapidly after a fire.
- **Habit:** Perennial herb from a thickened crown.
- **Stems:** Upright, sometimes branched, smooth, up to 7 feet tall.
- **Leaves:** Alternate, crowded, simple, lanceolate, pointed at the tip, tapering to the nearly sessile base, green on the upper surface, paler on the lower surface, smooth, without teeth, up to 8 inches long.
- **Flowers:** Several in racemes, purple, rarely white, nearly 1 inch long, subtended by scale-like to leaf-like bracts.
- **Sepals:** 4, green, united to form a tube, the lobes lanceolate, pointed at the tip.
- **Petals:** 4, purple, free from each other, 1/2-1 inch long, not notched at the tip, clawed at the base, somewhat unequal in size.
- **Stamens:** 8.
- **Pistils:** Ovary inferior, elongated; stigma 4-lobed.
- **Fruits:** Capsules cylindrical, up to 3 1/2 inches long, gray-hairy; seeds many, oblongoid, about 1/18 inch long.
- **Notes:** This is one of the first species to come in after a fire.



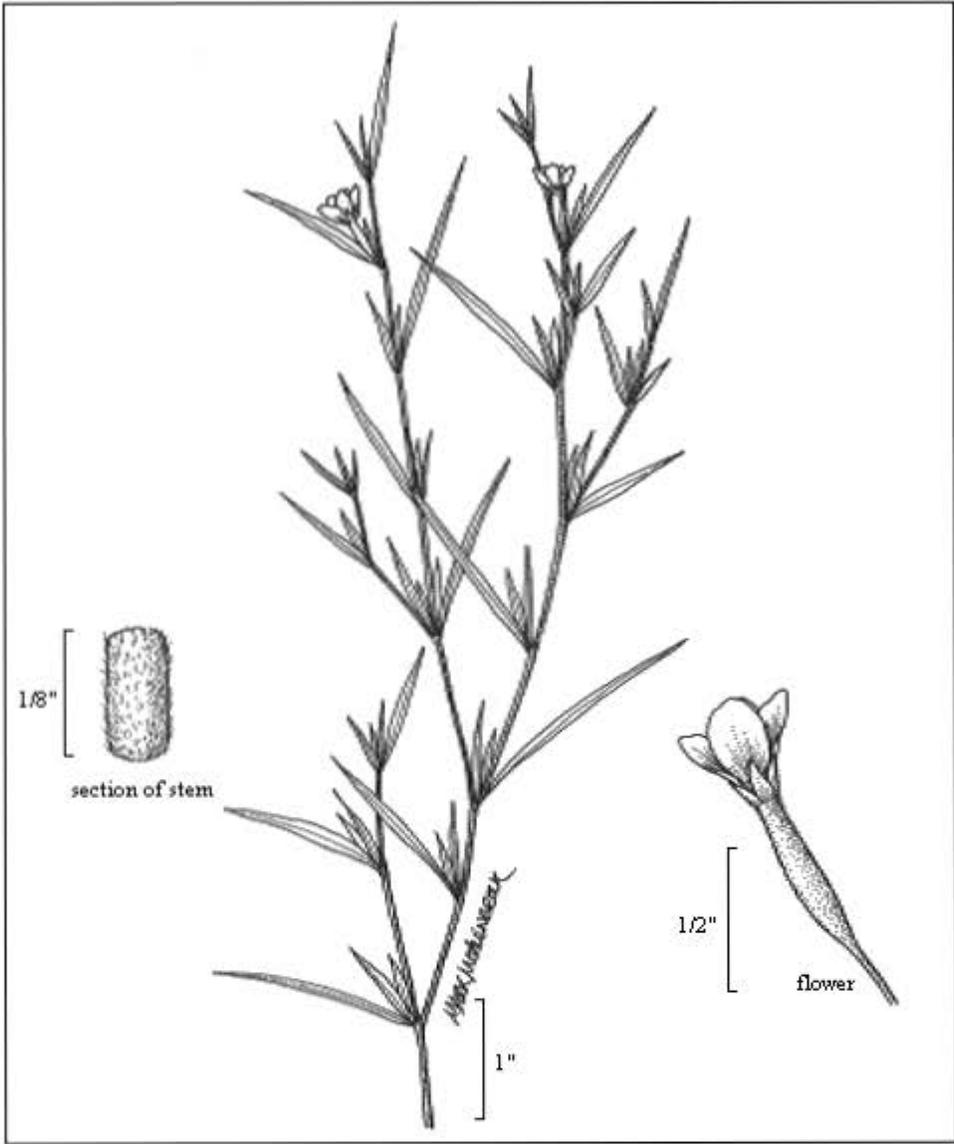
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Linear-leaf Willow-herb *Epilobium leptophyllum* Raf.



- **Family:** Evening-primrose (Onagraceae)
- **Flowering:** July-September
- **Field Marks:** This willow-herb is recognized by its linear to linear-lanceolate leaves and the minute, incurved hairs on the stem.
- **Habitat:** Bogs, fens, swamps, wet fields.
- **Habit:** Perennial herb with slender, branching rootstocks.
- **Stems:** Upright, unbranched or much branched, slender, with minute incurved hairs, up to 3 feet tall.
- **Leaves:** Alternate, simple, often with clusters of smaller leaves in the axils of the larger ones, linear to linear-lanceolate, pointed at the tip, tapering to the sessile base, without teeth and often inrolled along the edges, grayish hairy on the upper surface, up to 2 1/4 inches long, up to 1/6 inch wide.
- **Flowers:** Borne singly in the axils of the upper leaves, 1/6-1/3 inch across, pink or white, on short, slender stalks.
- **Sepals:** 4, green, united below to form a tube, up to 1/6 inch long, gray-hairy.
- **Petals:** 4, pink or white, free from each other, up to 1/4 inch long.
- **Stamens:** 8.
- **Pistils:** Ovary inferior; stigma unlobed.
- **Fruits:** Capsules elongated, cylindrical, up to 2 1/4 inches long, gray-hairy, on stalks up to 1 inch long; seeds warty, about 1/16 inch long, with a short neck at the upper end.



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American Burn

Erechtites hieracifolia (L.) Raf. ex DC.



- **Family:** Composite (Compositae)
- **Flowering:** July-September
- **Field Marks:** This species is distinguished by its cylindrical heads which are distinctly swollen at the base and that bear white disk flowers only. The jagged-edged leaves are membranous.
- **Habitat:** Marshes, moist woods, dry woods, damp thickets; often becoming common after a fire.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, branched or unbranched, smooth or hairy, grooved, somewhat succulent, up to 10 feet tall.
- **Leaves:** Alternate, simple, membranous, lanceolate to elliptic to oblong, pointed at the tip, tapering to the base, jagged-toothed, smooth or hairy, sometimes clasping at the base, otherwise sessile or with a short stalk.
- **Flowers:** Many borne in heads in a flat-topped or elongated cluster, the heads cylindrical, up to 3/4 inch long, surrounded by very slender, pointed, green, smooth or hairy bracts.
- **Sepals:** 0.
- **Petals:** 4-5, fused, forming disk flowers only, whitish.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Ellipsoid, about 1/8 inch long, with 10-12 vertical ribs, appressed-hairy, with a tuft of bright white hairs at the tip.
- **Notes:** Gleason and Cronquist call this family Asteraceae. Although this species is characteristic of moist soil, it will come into recently burned areas very rapidly.

Northeast Wetland Flora

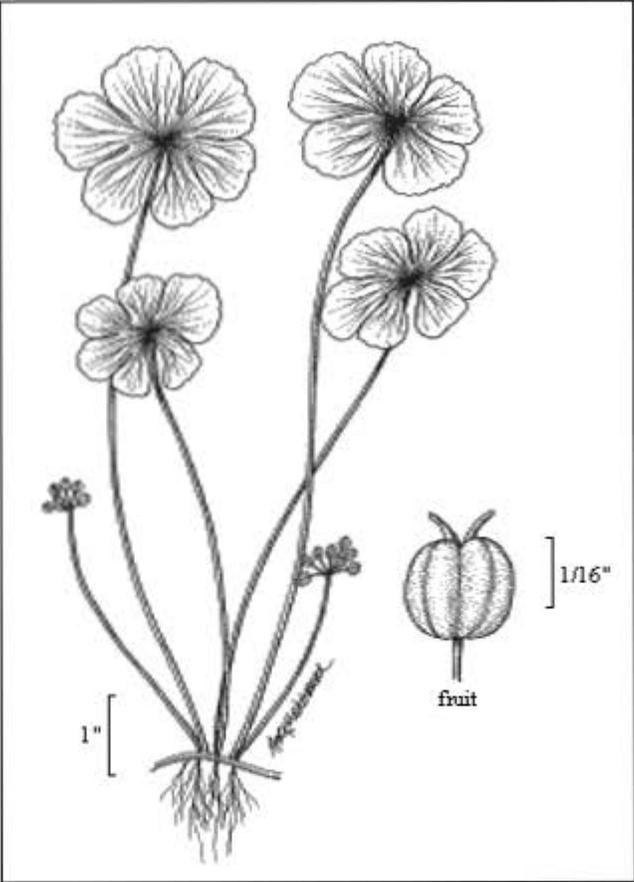
Field Office Guide to Plant Species

Floating Penny-wort

Hydrocotyle ranunculoides L.f.



- **Family:** Carrot (Umbelliferae)
- **Flowering:** July-October
- **Field Marks:** This penny-wort has leaves that are usually a little wider than long, with the leaf stalk attached along the edge of the leaf. The stalks that bear the umbel of white flowers are shorter than the leaf stalks.
- **Habitat:** Shallow water, in mud.
- **Habit:** Floating or creeping perennial herb, rooting at the nodes.
- **Stems:** Floating or creeping, slender, smooth, somewhat fleshy.
- **Leaves:** Simple, 5- to 6-lobed, usually a little wider than long, cleft at the base where the leaf stalk is attached, smooth, up to 3 inches wide, on smooth stalks up to 1 foot long.
- **Flowers:** Several in a small umbel, white, the umbel borne on a leafless stalk shorter than the stalk of the leaves; individual flower stalks up to 1/10 inch long.
- **Sepals:** 0.
- **Petals:** 5, free from each other, about 1/16 inch long, white.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, 2-lobed; styles 2.
- **Fruits:** Nearly round, flat, 2-lobed, brownish, with faint ribs.
- **Notes:** Gleason and Cronquist use the name Apiaceae for this family.



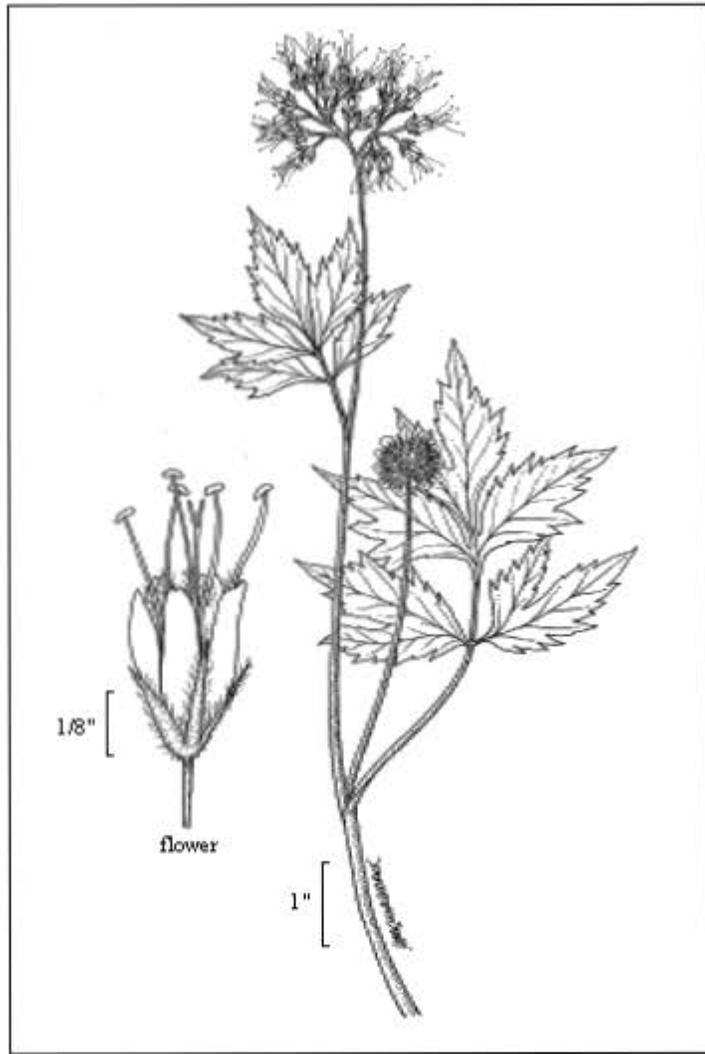
Northeast Wetland Flora

Field Office Guide to Plant Species

Virginia Water-leaf *Hydrophyllum virginianum* L.



- **Family:** Water-leaf (Hydrophyllaceae)
- **Flowering:** May-August
- **Field Marks:** This water-leaf has pinnately lobed leaves with 3-7 lobes and hairy sepals, and mostly non-hairy stems.
- **Habitat:** Rich woods, floodplains.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright or ascending, more or less smooth, except for appressed hairs near the tip, up to 2 feet tall.
- **Leaves:** Alternate, pinnately divided into 3-7 segments, more or less smooth, the segments lanceolate to ovate, toothed, sometimes lobed.
- **Flowers:** Borne in short clusters, the clusters on stalks longer than the leaf stalks, the stalks appressed-hairy; each flower short-stalked.
- **Sepals:** 5, green, linear, bristly-hairy, united at base, up to 1/3 inch long.
- **Petals:** 5, purplish to white, united below into a bell up to 1/2 inch long.
- **Stamens:** 5, exserted beyond the petals.
- **Pistils:** Ovary superior, hairy.
- **Fruits:** Capsules nearly spherical, about 1/6 inch in diameter.



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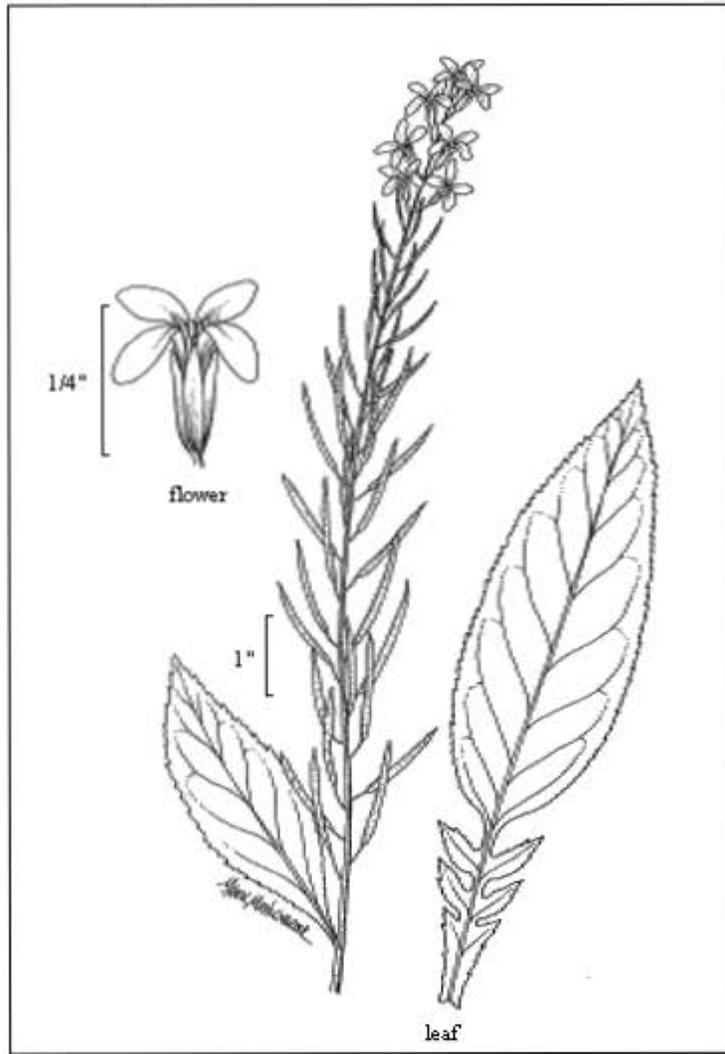
Field Office Guide to Plant Species

Purple-Rocket

Iodanthus pinnatifidus (Michx.) Steud.



- **Family:** Mustard (Cruciferae)
- **Flowering:** May-June
- **Field Marks:** This species is distinguished by its pinnatifid leaves with ear-like lobes at the base of the leaf, its purple petals with slender basal claws, its slender, elongated, short-stalked fruits, and its smooth leaves and stems.
- **Habitat:** Wet woods, along rivers.
- **Habit:** Perennial herb with slender roots.
- **Stems:** Upright, slender, branched above, smooth, up to 2 1/2 feet tall.
- **Leaves:** Basal leaves ovate to oblong, pinnatifid or coarsely toothed, smooth, to 8 inches long; stem leaves alternate, simple, ovate-oblong, pointed at the tip, tapering to the base, toothed or sometimes pinnatifid, up to 6 inches long, the winged leaf stalks with a pair of slender ear-like lobes at the base.
- **Flowers:** Numerous in panicles, each flower 1/4-1/2 inch wide, on slender, smooth, spreading stalks up to 1/4 inch long.
- **Sepals:** 4, free, green, in 2 pairs, the inner pair slightly swollen at the base, lanceolate, smooth, about 1/6 inch long.
- **Petals:** 4, free, purple, 1/4-1/2 inch long, with a slender claw at the base.
- **Stamens:** 6.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Elongated, slenderly cylindrical, slightly flattened, spreading or ascending, smooth, tipped by the persistent short style, up to 1 1/2 inches long, with several oblong seeds.
- **Notes:** This family is Brassicaceae according to Gleason and Cronquist.

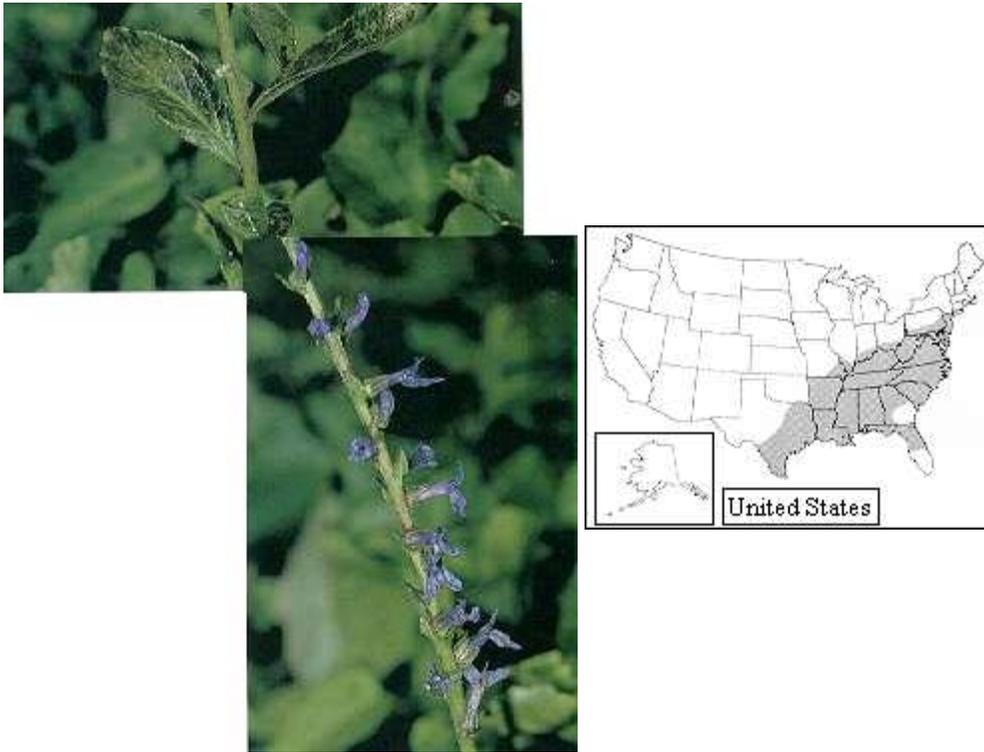


Northeast Wetland Flora

Field Office Guide to Plant Species

Downy Lobelia

Lobelia puberula Michx.



- **Family:** Bellflower (Campanulaceae)
- **Flowering:** August-October
- **Field Marks:** This species differs by its inch long blue flowers, the lanceolate to ovate sepals, and the short hairiness over the entire plant.
- **Habitat:** Woods, marshes, wet soil.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, usually unbranched, covered with short hairs, up to 4 1/2 feet tall.
- **Leaves:** Alternate, simple, oblong to lanceolate to oval, rounded or sometimes pointed at the tip, tapering or rounded at the sessile base, short-hairy, with or without teeth, up to 4 inches long.
- **Flowers:** Flowers borne in loose or dense racemes, the racemes up to 1 1/2 feet long, subtended by lanceolate to ovate bracts 1/2-1 inch long, each flower on a hairy stalk up to 1/4 inch long.
- **Sepals:** 5, united below, green, lanceolate to ovate, 1/4-1/2 inch long.
- **Petals:** 5, united below to form a tube, blue, usually with a white center, hairy, up to 1 inch long, the tube split down one side.
- **Stamens:** 5.
- **Pistils:** Ovary inferior.
- **Fruits:** Capsules up to 1 inch long, opening at the top, containing many seeds.



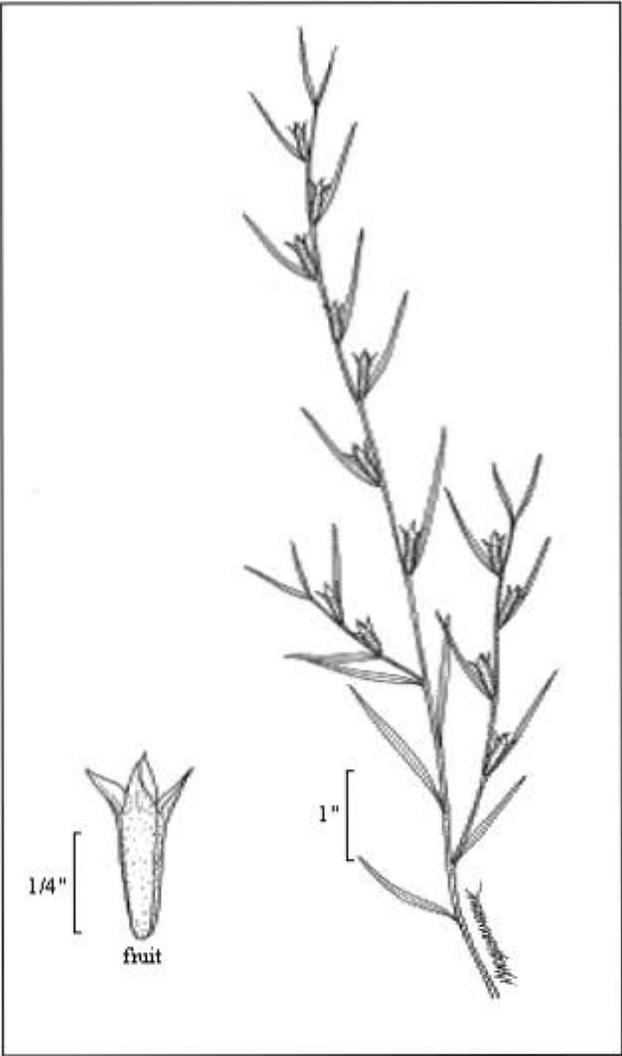
Northeast Wetland Flora

Field Office Guide to Plant Species

Narrow-leaf Seedbox *Ludwigia linearis* Walter



- **Family:** Evening-primrose (Onagraceae)
- **Flowering:** July-September
- **Field Marks:** This *Ludwigia* differs by its very narrow, alternate leaves and its sessile fruits much longer than broad.
- **Habitat:** Swamps, wet ditches, wet pine barrens, sometimes in shallow water.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Upright, usually unbranched, slender, angular, up to 2 1/2 feet tall, smooth.
- **Leaves:** Alternate, simple, linear to linear-lanceolate, pointed at the tip, tapering to the base, without teeth, sessile, up to 3 inches long, up to 1/4 inch wide, finely granular on the surface.
- **Flowers:** Solitary in the axils of the leaves, sessile.
- **Sepals:** 4, green, united below to form a tube, the lobes triangular, 1/6-1/4 inch long.
- **Petals:** 4, yellow, free from each other, about as long as the sepal lobes.
- **Stamens:** 8.
- **Pistils:** Ovary inferior, 4-sided.
- **Fruits:** Capsule bell-shaped, 4-sided, 1/4-1/2 inch long, containing several elongated seeds.

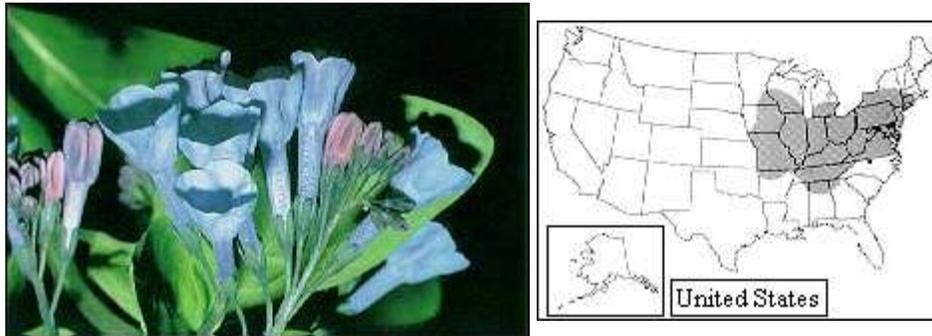


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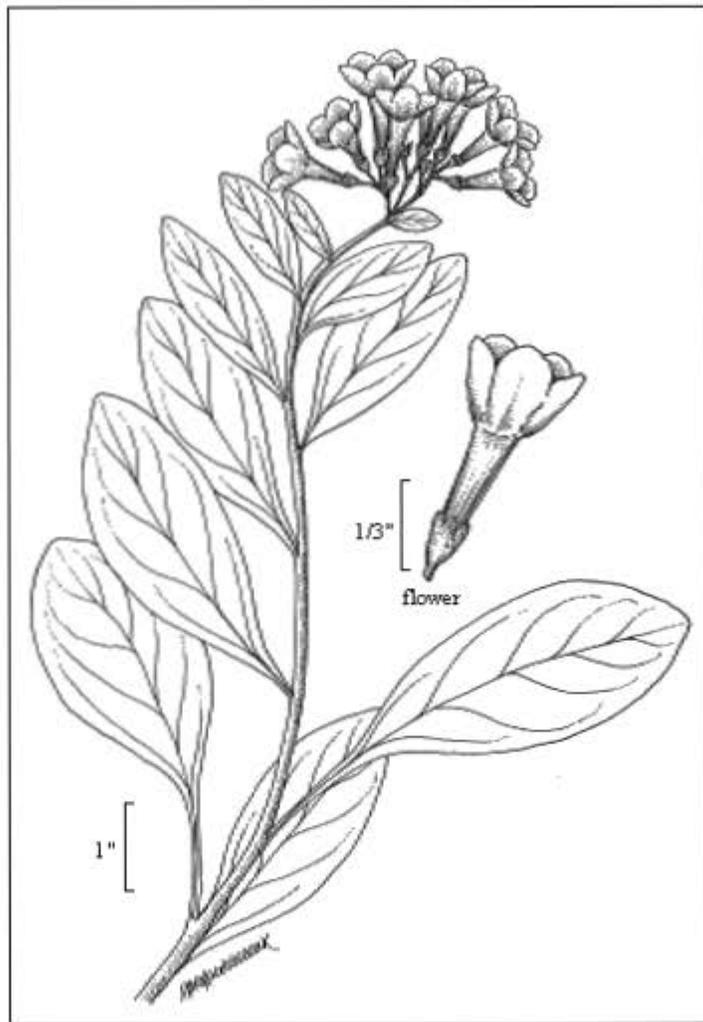
Field Office Guide to Plant Species

Virginia Bluebells

Mertensia virginica (L.) Pers.



- **Family:** Borage (Boraginaceae)
- **Flowering:** March-June
- **Field Marks:** This species is distinguished by its clusters of long, bell-shaped blue flowers and the complete absence of hairs on the plant.
- **Habitat:** Rich woods, bottomlands.
- **Habit:** Perennial herb from shallow roots.
- **Stems:** Upright, sometimes branched, smooth, sometimes slightly glaucous, up to 2 feet tall.
- **Leaves:** Basal leaves elliptic to ovate, smooth, without teeth, up to 8 inches long, on smooth stalks; stem leaves alternate, simple, oblong to oval, smooth, without teeth, up to 6 inches long, sessile or nearly so.
- **Flowers:** Several in terminal clusters, often on one side of the branches of the inflorescence; buds pink.
- **Sepals:** 5, united below, green, smooth, up to 1/4 inch long.
- **Petals:** 5, united below into an elongated tube, blue, up to 1 1/4 inches long.
- **Stamens:** 5, attached to the tube of the petals.
- **Pistils:** Ovary superior, 4-lobed; style 1.
- **Fruits:** Nutlets 4 in a cluster, wrinkled, somewhat fleshy when young, about 1/8 inch long.
- **Notes:** This is a choice plant for shaded wildflower gardens. Flower color is influenced by soil acidity and alkalinity.



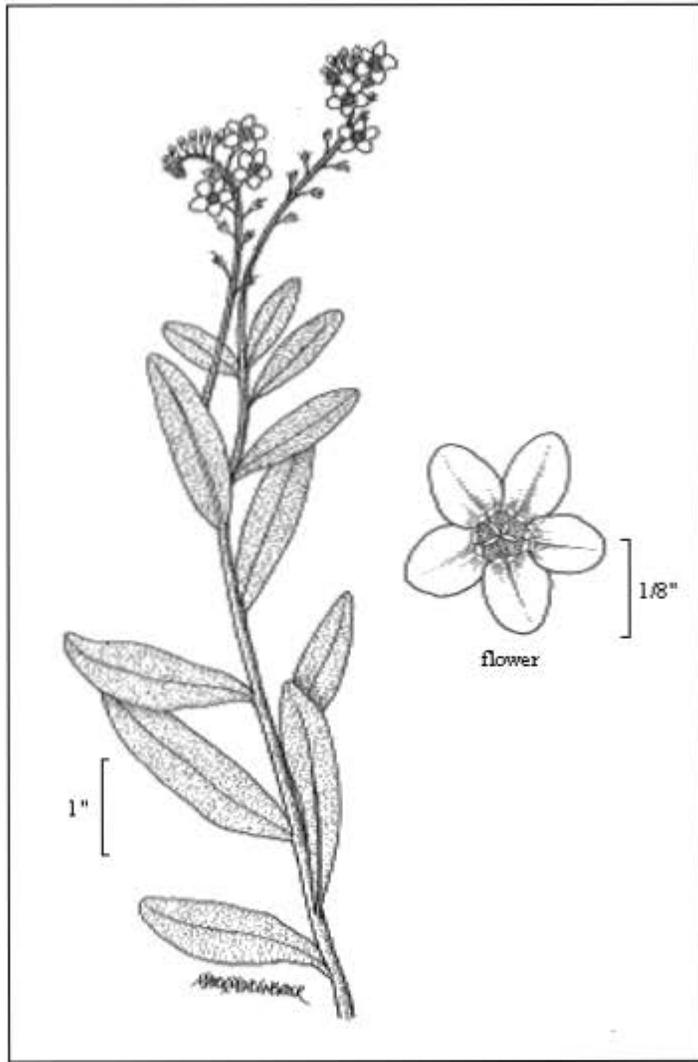
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Field Office Guide to Plant Species

Large-seed Forget-me-not *Myosotis scorpioides* L.



- **Family:** Borage (Boraginaceae)
- **Flowering:** May-October
- **Field Marks:** This species has a blue flower with a yellow center and an angular stem. The hairs on the sepals are not glandular.
- **Habitat:** Wet soil.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Spreading to ascending, angular, somewhat fleshy, branched, finely hairy, up to 2 feet long.
- **Leaves:** Alternate, simple, narrowly oblong to lanceolate, rounded at the tip, tapering to the sessile base, without teeth, rough-hairy, up to 3 inches long.
- **Flowers:** Several in often 1-sided racemes, the racemes up to 8 inches long; none of the flowers subtended by bracts; each flower blue with a yellow center, on slender, finely hairy stalks up to 1/4 inch long.
- **Sepals:** 5, united below to form a short tube, green, up to 1/4 inch long, the lobes shorter than the tube, hairy but not glandular.
- **Petals:** 5, united below, blue, the lobes up to nearly 1/2 inch long.
- **Stamens:** 5, not exerted beyond the petals.
- **Pistils:** Ovary superior, 4-lobed; style 1.
- **Fruits:** Nutlets in clusters of 4, more or less flattened.
- **Notes:** This species is an introduction from Europe.



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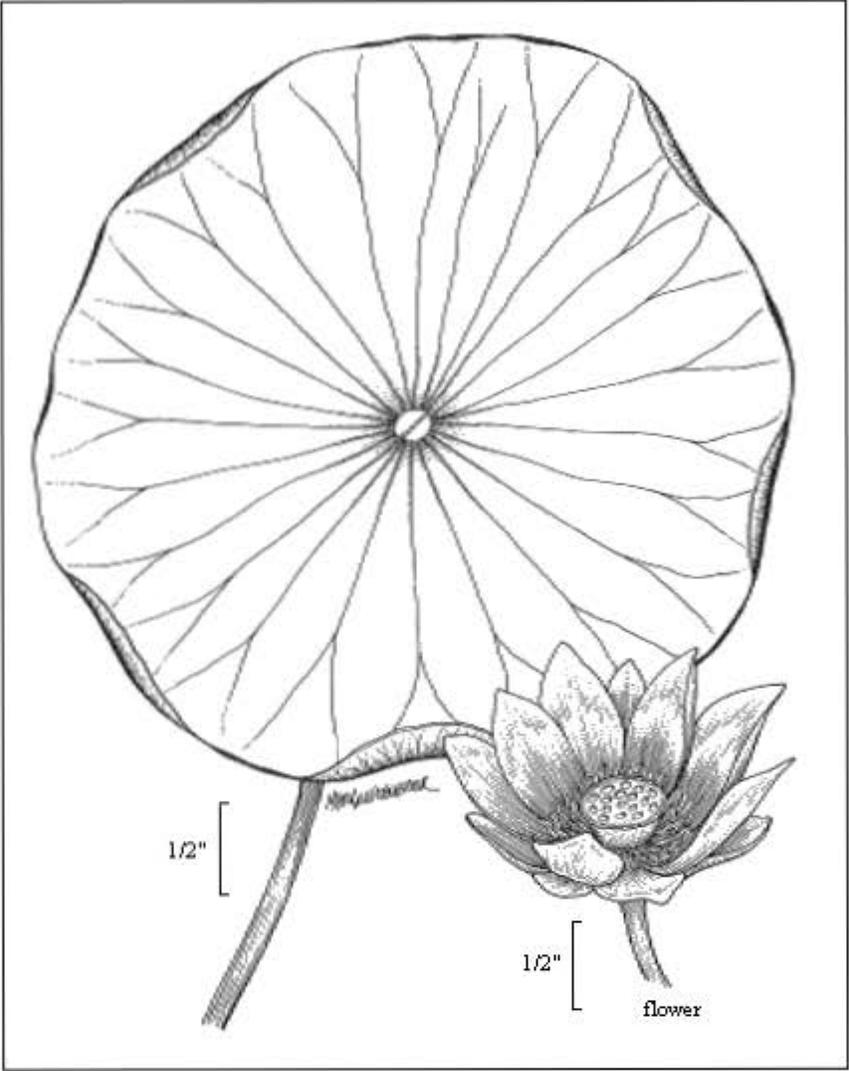
Field Office Guide to Plant Species

American Lotus

Nelumbo lutea (Willd.) Pers.



- **Family:** Water-lily (Nymphaeaceae)
- **Flowering:** July-September
- **Field Marks:** This aquatic species is readily distinguished by its large, circular, peltate leaves, its large pale yellow- to cream-colored flowers with numerous petals, and its woody, top-shaped fruits.
- **Habitat:** Quiet waters, ponds, lakes, pools.
- **Habit:** Aquatic herb from thick, fleshy rhizomes and tubers.
- **Stems:** Only stems are rhizomes and tubers.
- **Leaves:** Large, alternate, floating or raised above the water, spherical, green above and below, smooth above, more or less finely hairy below, up to 2 feet across, peltate, sunken at the attachment of the leaf stalk, the leaf stalk very long, smooth.
- **Flowers:** Solitary, showy, up to 10 inches across, pale yellow to cream, on stout, smooth stalks up to 3 feet above the water.
- **Sepals:** 4-5, green, free from each other.
- **Petals:** Numerous, pale yellow to cream, free from each other, obovate, concave, rounded to somewhat pointed at the tip, up to 6 inches long.
- **Stamens:** Numerous, the stalks petal-like.
- **Pistils:** Numerous, borne in pits in the large receptacle.
- **Fruits:** Woody, top-shaped, up to 8 inches across, with numerous sunken seeds; seeds woody, spherical, up to 3/4 inch in diameter.
- **Notes:** The tubers of this species contain much starch and are edible. The extremely hard seed coats enable the seeds to remain viable for several years. The top-shaped fruits are frequently used by florists in dried floral arrangements. frequent

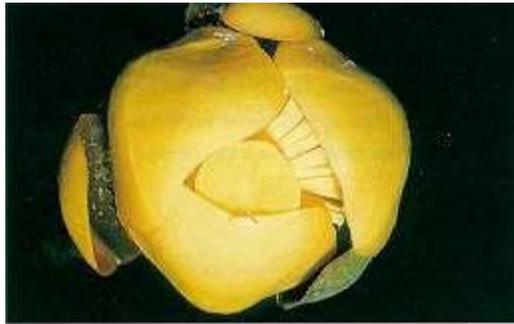


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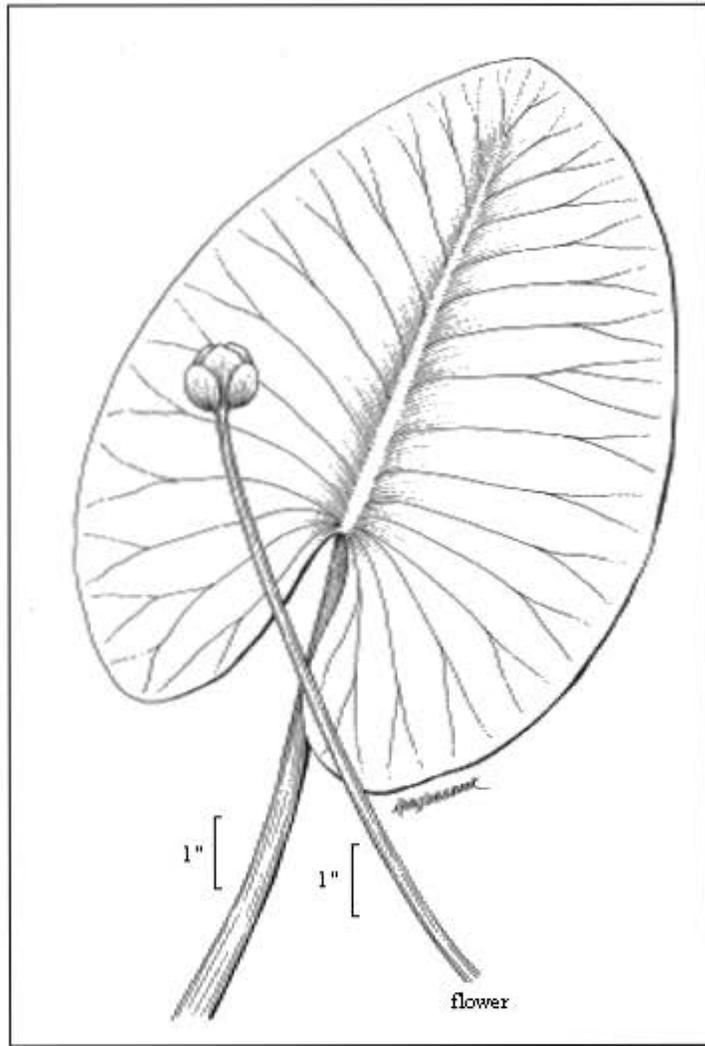
Field Office Guide to Plant Species

Yellow Cow-lily

Nuphar luteum (L.) Sibth. & J.E. Smith



- **Family:** Water-lily (Nymphaeaceae)
- **Flowering:** May-October
- **Field Marks:** This species has leathery, shiny leaves deeply notched at one end and club-shaped flowers with 5 or 6 (9) concave green to yellow sepals that appear as petals and numerous small, stamen-like petals.
- **Habitat:** Swamps, ponds, lakes, pools.
- **Habit:** Aquatic perennial herb from thick, horizontal, cylindrical rhizomes.
- **Stems:** Only present as rhizomes.
- **Leaves:** Floating or emersed, simple, oblong to ovate, heart-shaped at the base, the basal lobes sometimes overlapping, smooth above, smooth or finely hairy below, up to 1 foot long, up to 10 inches wide, with terete or somewhat flattened stalks; submerged leaves generally thinner, more flaccid, and with wavier margins than the floating leaves.
- **Flowers:** Solitary, yellow, up to 4 inches across, on long, smooth stalks that raise the flower above the water.
- **Sepals:** 5-6, free from each other, concave, the outer ones green, the inner ones yellow with a green tip.
- **Petals:** Numerous, oblong, yellow, smaller than the sepals.
- **Stamens:** Numerous, in several rows.
- **Pistils:** Ovary disk-shaped, yellow, with up to 26 stigmatic rays.
- **Fruits:** Leathery, ovoid, up to 2 1/2 inches long, with a thick, short neck; seeds ovoid, up to 1/3 inch long.
- **Notes:** This is a variable species. Several other species have been segregated in the past.

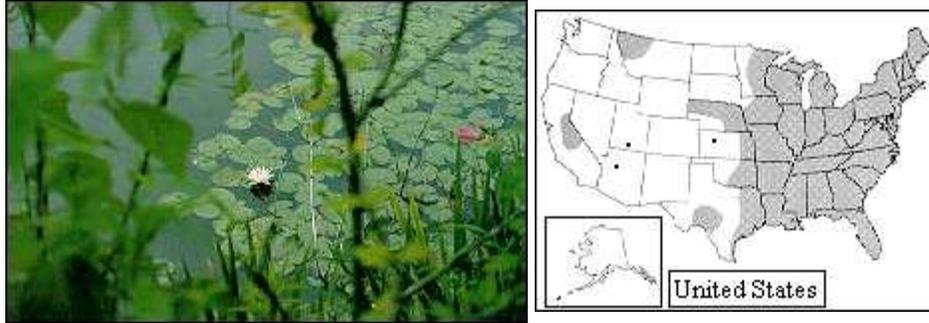


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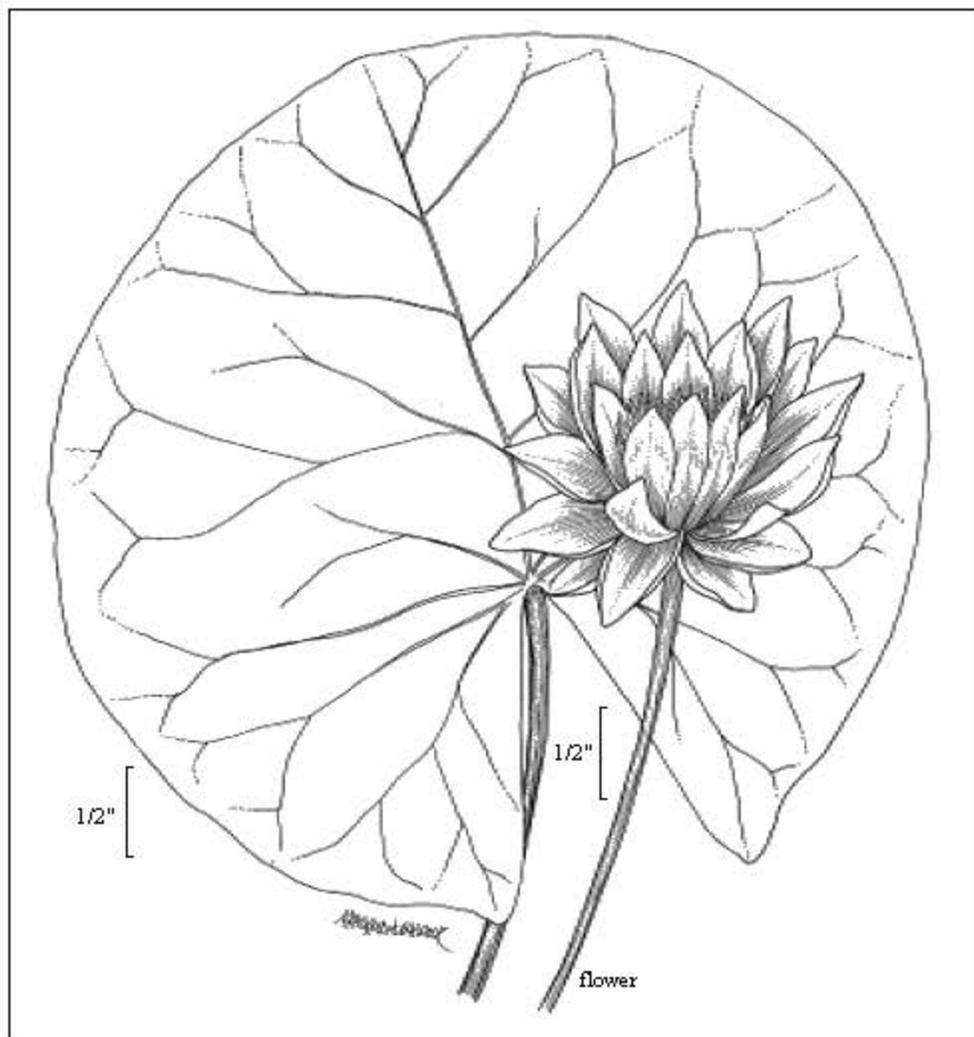
Field Office Guide to Plant Species

White Water-lily

Nymphaea odorata Soland. in Ait.



- **Family:** Water-lily (Nymphaeaceae)
- **Flowering:** June-September
- **Field Marks:** This attractive species has circular leaves that are cleft at the base and usually purple on the back side. The fragrant flowers consist of 17 or more white petals.
- **Habitat:** Ponds, lakes, pools.
- **Habit:** Aquatic perennial herb from branched rhizomes.
- **Stems:** Only present as rhizomes.
- **Leaves:** Alternate, simple, floating or less commonly emersed, spherical but with a basal cleft, up to 2 feet in diameter, green and smooth on the upper surface, usually purple and finely hairy on the lower surface, with flat, smooth stalks.
- **Flowers:** Solitary, showy, white, fragrant, up to 8 inches across, on long stalks.
- **Sepals:** 4, green or purplish, free from each other, narrowly ovate, usually rounded at the tip, up to 4 inches long.
- **Petals:** Numerous, white, free from each other, the inner ones smaller than the outer ones.
- **Stamens:** Numerous, white, attached to the ovary.
- **Pistils:** Ovary superior, with a sessile, many-rayed stigma.
- **Fruits:** Berry spherical but usually depressed at the top, containing many seeds; seeds ellipsoid to oblongoid, up to 1/8 inch long.
- **Notes:** The thickened rhizomes are eaten by beavers, muskrats, and other wildlife. Flower color can be variable; local populations may have varying shades of pink as well as white.

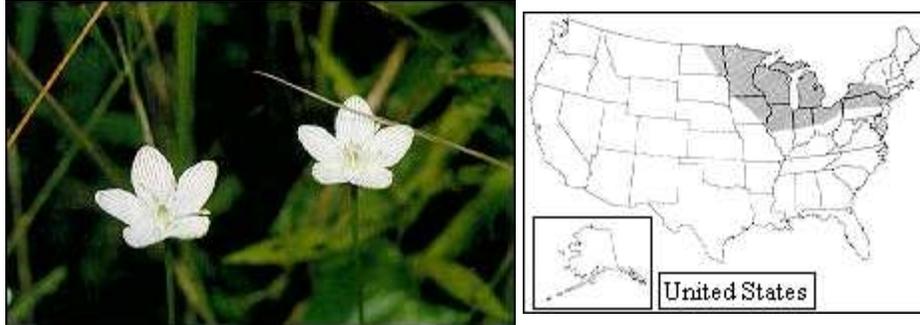


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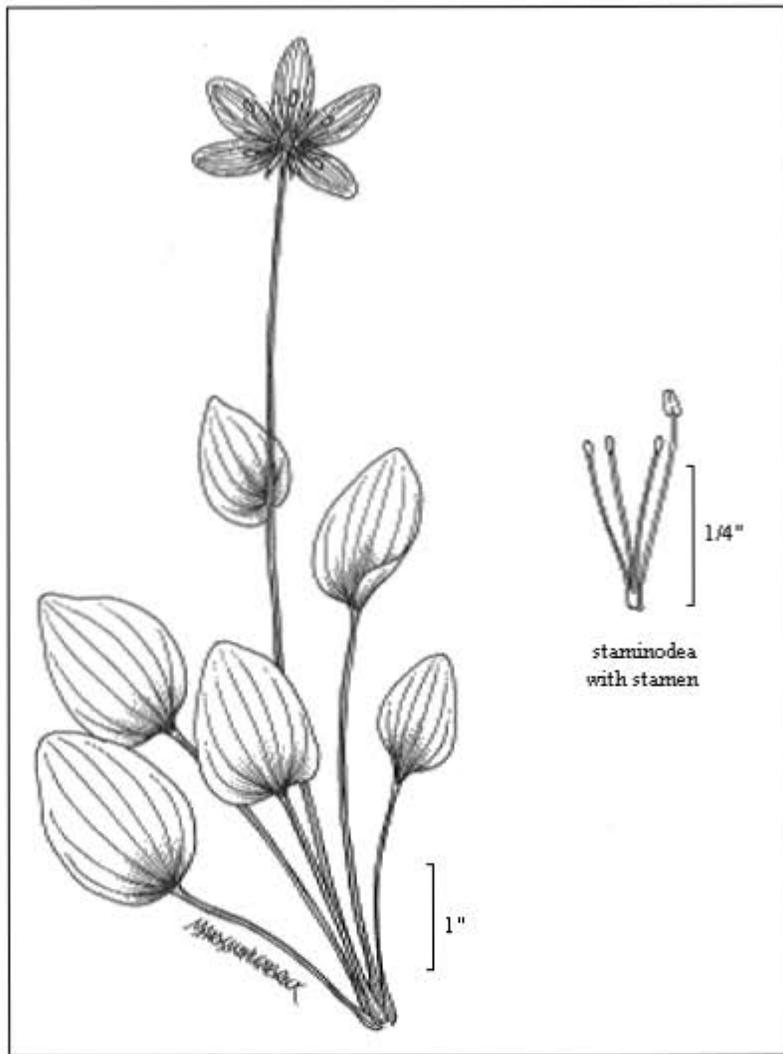
Field Office Guide to Plant Species

Glaucous Grass-of-Parnassus

Parnassia glauca Raf.



- **Family:** Saxifrage (Saxifragaceae)
- **Flowering:** July-October
- **Field Marks:** This is the only grass-of-Parnassus with oval, leathery leaves, sessile petals and sterile stamens shorter than or about as long as the fertile stamens.
- **Habitat:** Wet meadows, shores.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, unbranched, smooth, up to 2 feet tall, bearing one flower and one leaf.
- **Leaves:** Basal leaves oval, leathery, smooth, without teeth, the bases rounded to subcordate, a little longer than broad, up to 3 inches long, on long stalks; stem leaf 1, clasping the stem.
- **Flowers:** Solitary at the tip of the stem, up to 1 1/2 inches across.
- **Sepals:** 5, green, barely united at the base, persistent on the fruit.
- **Petals:** 5, free from each other, white with conspicuous veins, oblong to oval, up to 3/4 inch long, each with a 3-branched sterile stamen at its base.
- **Stamens:** 5 fertile, longer than or equalling the 5, 3-branched sterile stamens.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules ovoid, smooth.



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Field Office Guide to Plant Species

Common Pokeweed
Phytolacca americana L.



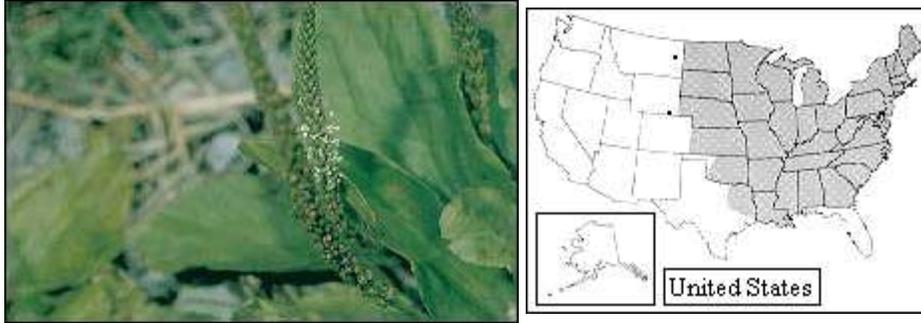
- **Family:** Pokeweed (Phytolaccaceae)
- **Flowering:** July-October
- **Field Marks:** This coarse, hairless herb is characterized by its reddish purple stems (at least by summer), its racemes of white flowers with 5 sepals and 0 petals, and its purple berries.
- **Habitat:** Disturbed soil, thickets, rich woods.
- **Habit:** Coarse perennial herb with thickened roots and an unpleasant odor.
- **Stems:** Upright, stout, branched, reddish at maturity, smooth, up to 10 feet tall.
- **Leaves:** Alternate, simple, ovate to oblong, wavy-edged but not toothed, smooth, up to 1 foot long.
- **Flowers:** Many in racemes, the racemes borne opposite some of the leaves, each raceme up to 8 inches long; flowers 1/4-1/3 inch across, on spreading stalks.
- **Sepals:** 5, free from each other, rounded at the tip, white or less commonly pinkish, up to 1/6 inch long.
- **Petals:** 0.
- **Stamens:** 10.
- **Pistils:** Ovary consisting of 5-12 ovaries united in a ring.
- **Fruits:** Berries spherical, juicy, dark purple, up to 3/8 inch in diameter; seeds poisonous.
- **Notes:** The roots and seeds of this species are poisonous when eaten, as are the mature leaves and stems. The very young leaves, however, may be eaten as greens. The fruits are relished by many species of songbirds.



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Black-seed Plantain *Plantago rugelii* Decne.



- **Family:** Plantain (Plantaginaceae)
- **Flowering:** July-October
- **Field Marks:** This plantain is distinguished by its continuous cylindrical spikes of flowers and its broadly elliptic leaves with the lowest portions of the stalk reddish.
- **Habitat:** Disturbed soil.
- **Habit:** Annual or perennial herb from a taproot.
- **Stems:** Leafless, bearing only a spike of flowers.
- **Leaves:** Basal, spreading or ascending, oval to broadly elliptic, up to 1 foot long, smooth or somewhat hairy, conspicuously parallel-veined, with reddish stalks.
- **Flowers:** Crowded into solitary spikes, the spikes cylindrical, continuous, up to 1 foot long, the lowest flowers usually not overlapping; all flowers short-stalked.
- **Sepals:** 4, united below, green, the lobes oblong and keeled.
- **Petals:** 4, united below, whitish, thin, papery, the lobes about 1/24 inch long.
- **Stamens:** 2 or 4, attached to the petals.
- **Pistils:** Ovary inferior; style 1.
- **Fruits:** Capsules ellipsoid, 1/6-1/4 inch long, with 4-10 oval seeds up to 1/8 inch long.
- **Notes:** This species can be a nuisance in lawns.



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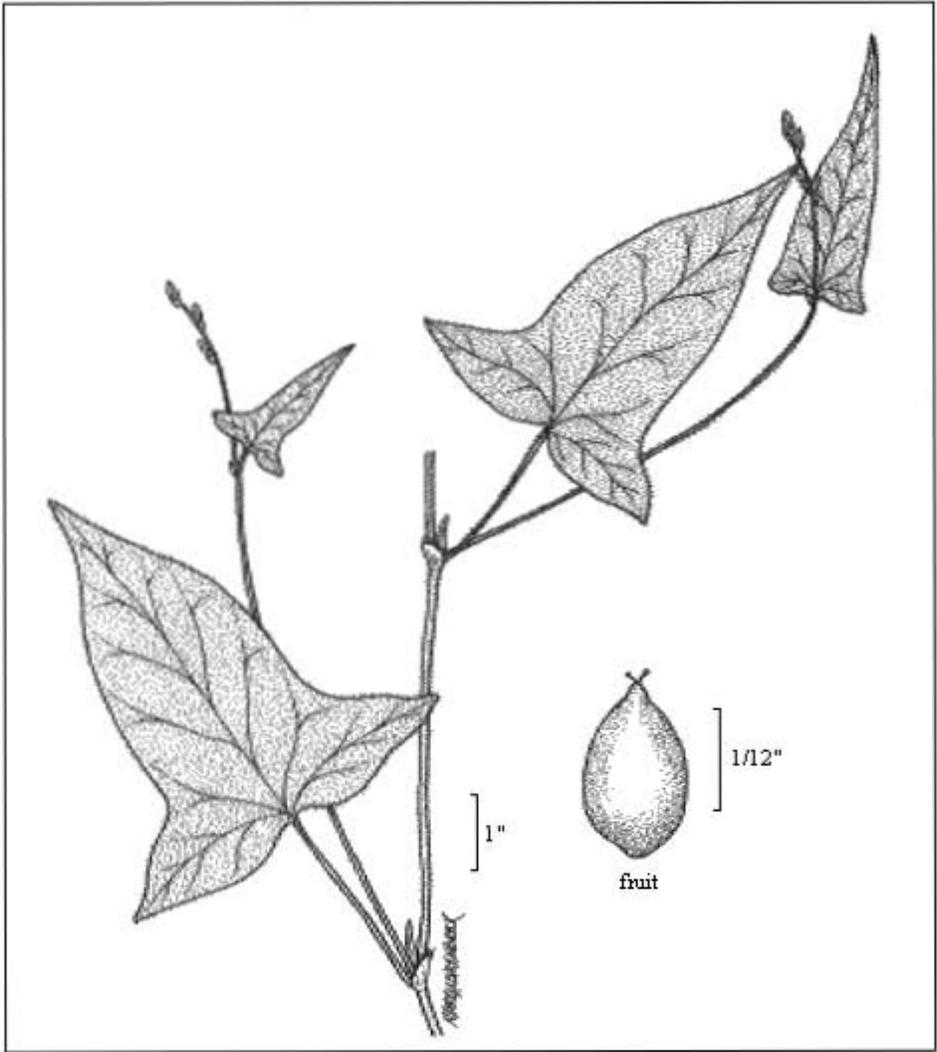
Field Office Guide to Plant Species

Halberd-leaf Tearthumb

Polygonum arifolium L.



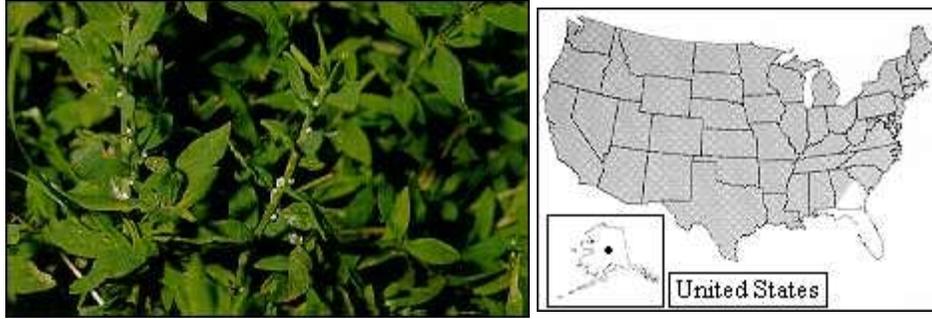
- **Family:** Smartweed (Polygonaceae)
- **Flowering:** July-October
- **Field Marks:** This species is readily recognized by its hastate leaf shape and the presence of reflexed prickles on the stems.
- **Habitat:** Marshes, swamps.
- **Habit:** Sprawling perennial from fibrous roots.
- **Stems:** Spreading, often lying on other vegetation, 4-angled, reflexed prickly, up to 6 feet long.
- **Leaves:** Alternate, simple, hastate, pointed at the tip, truncate to slightly heart-shaped at the base, up to 8 inches long, up to 6 inches wide, stellate-hairy at least on the lower surface, prickly on the main veins below, the lowermost leaves on prickly stalks, the uppermost leaves sessile or nearly so; sheaths fringed at summit, bristly-hairy at the base.
- **Flowers:** Few in short terminal or axillary racemes, the racemes with glandular-bristly stalks.
- **Sepals:** 5, pink to white to greenish, united below, up to 1/8 inch long.
- **Petals:** 0.
- **Stamens:** 6.
- **Pistils:** Ovary superior; style 2-parted.
- **Fruits:** Achenes lenticular, obovoid, dark brown, smooth, shining, up to 1/6 inch long.



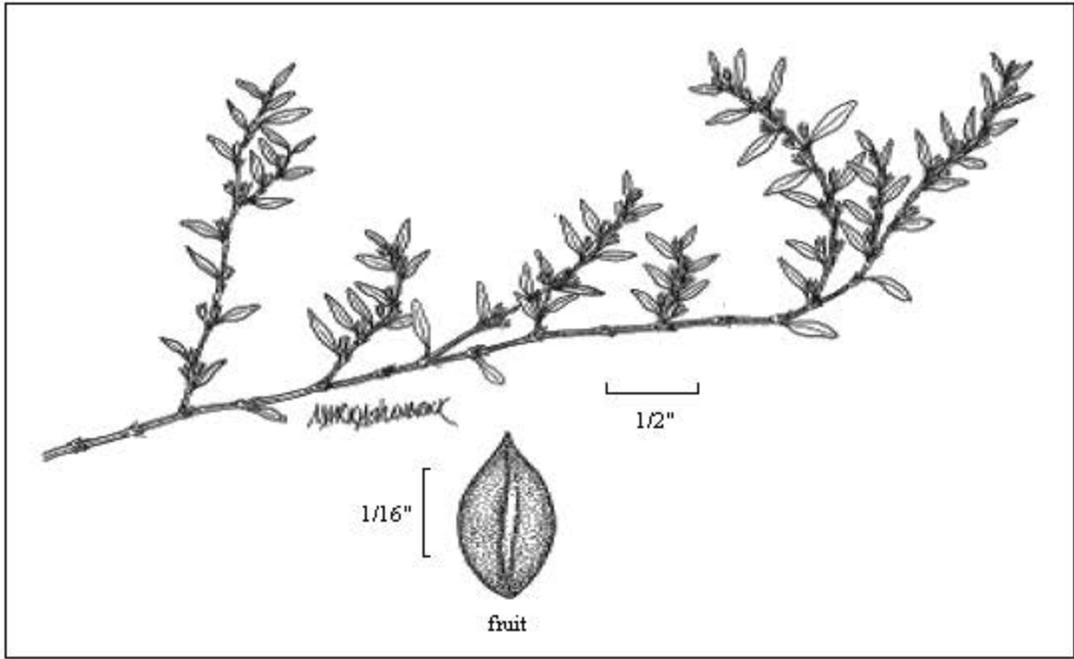
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Field Office Guide to Plant Species

Prostrate Knotweed *Polygonum aviculare* L.



- **Family:** Smartweed (Polygonaceae)
- **Flowering:** June-November
- **Field Marks:** This species is recognized by its tiny axillary flowers, its dull (not shiny) achenes, and its sprawling growth form.
- **Habitat:** Disturbed soil.
- **Habit:** Annual herb from a taproot, frequently mat-forming.
- **Stems:** Lying flat, branched, wiry, slightly grooved, smooth, up to 2 feet long.
- **Leaves:** Alternate, simple, broadly elliptic to oval to oblong, rounded or pointed at the tip, tapering to the base, without teeth, green to pale green to blue-green, up to 1 1/4 inches long, up to 1/3 inch wide, sessile or nearly so; sheaths silvery, shredded.
- **Flowers:** 1-5 in the axils of the leaves, sessile or on very short stalks.
- **Sepals:** 5, united below, usually green with pink or white borders, up to 1/8 inch long.
- **Petals:** 0.
- **Stamens:** 5-8.
- **Pistils:** Ovary superior.
- **Fruits:** Achenes triangular to somewhat compressed, ovoid, pointed at the tip, dark brown, shiny only along the margins, striate to granular to minutely dotted, up to 1/8 inch long.
- **Notes:** This is a noxious weed in lawns and in the cracks of sidewalks.



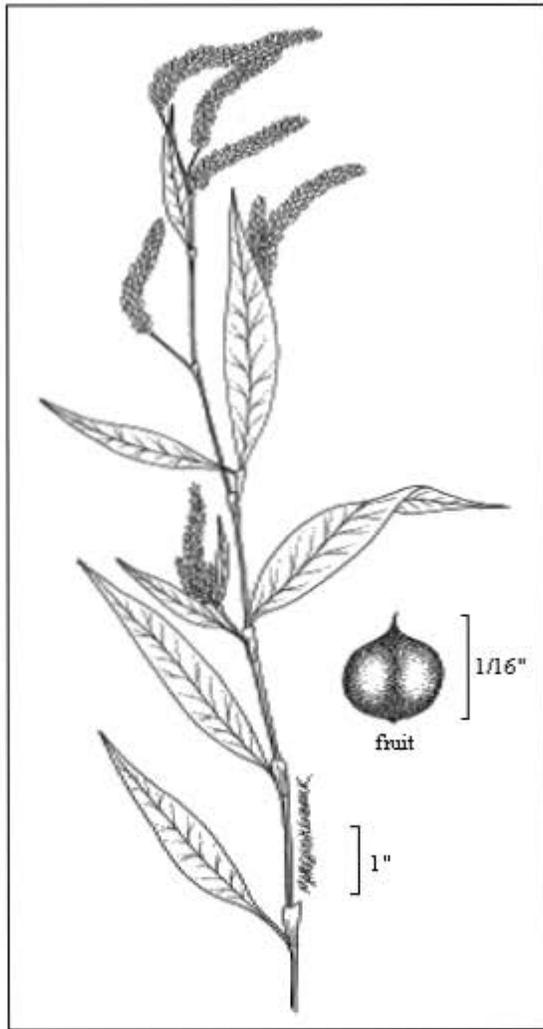
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Field Office Guide to Plant Species

Dense-flower Smartweed *Polygonum densiflorum* Meisn.



- **Family:** Smartweed (Polygonaceae)
- **Flowering:** August-October
- **Field Marks:** This smartweed differs by the absence of bristles on the leaf sheaths and the thickened, crowded spikes of white flowers.
- **Habitat:** Swamps, wet woods.
- **Habit:** Perennial herb from thick rhizomes.
- **Stems:** Spreading to upright, often rooting at the lower nodes, branched, smooth, up to 6 feet tall.
- **Leaves:** Alternate, simple, lanceolate, pointed at the tip, tapering to the sessile base, smooth on both sides, up to 1 foot long; sheaths without bristles at maturity.
- **Flowers:** Several in spike-like racemes, the racemes up to 4 inches long, on short-hairy stalks.
- **Sepals:** 5, united below, white, up to 1/5 inch long.
- **Petals:** 0.
- **Stamens:** 6 or 8.
- **Pistils:** Ovary superior; styles 2.
- **Fruits:** Achenes lenticular, ovoid, black, about 1/16 inch long.
- **Notes:** The achenes are eaten by waterfowl.

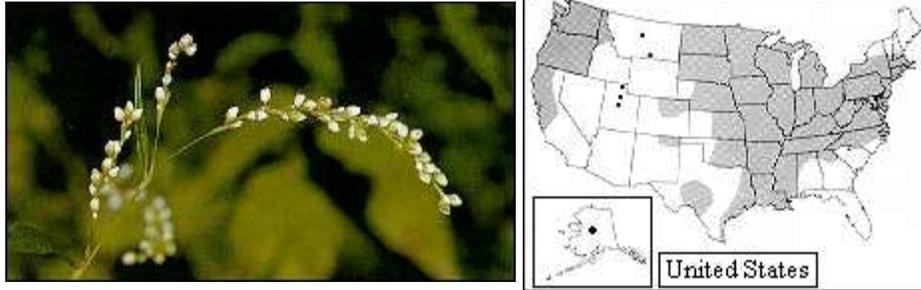


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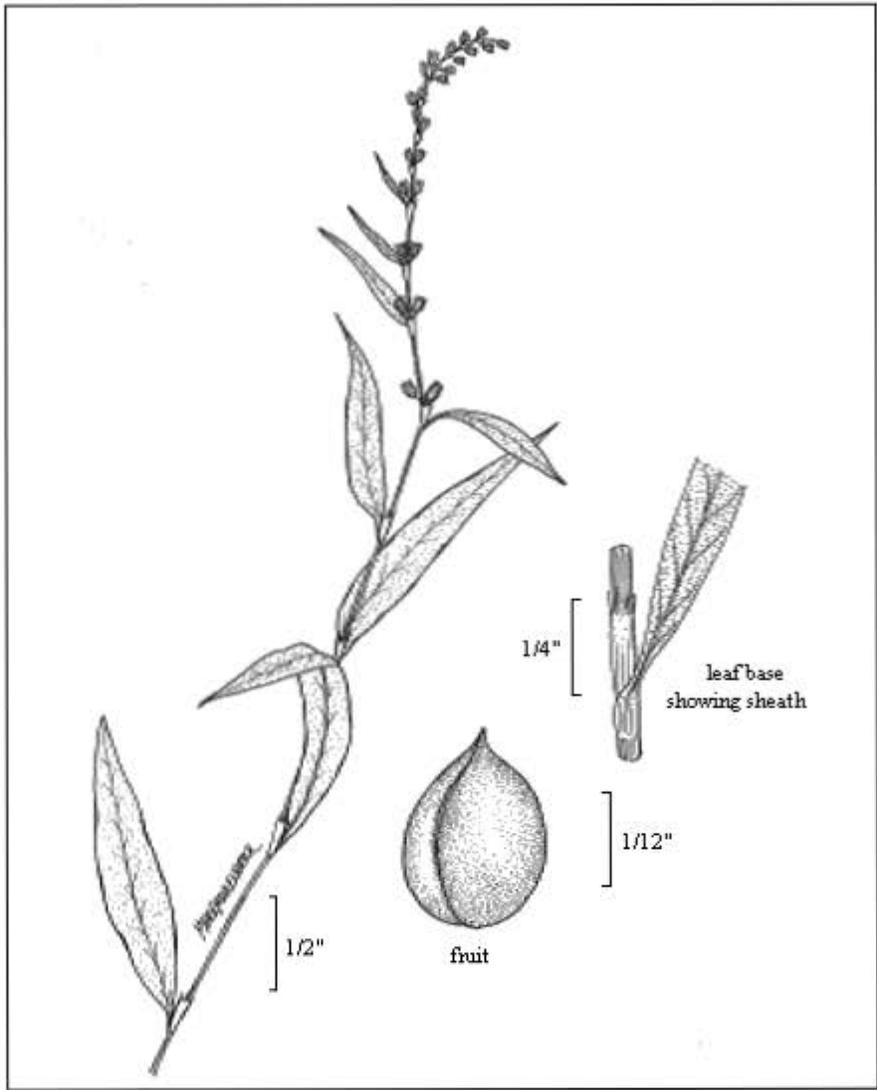
Field Office Guide to Plant Species

Marshpepper Smartweed

Polygonum hydropiper L.



- **Family:** Smartweed (Polygonaceae)
- **Flowering:** June-November
- **Field Marks:** The characters that distinguish this species from all other smartweeds are the bristly leaf sheaths, the glandular-dotted, green and often purplish sepals, and the dull (not shiny) achenes.
- **Habitat:** Wet ground.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Spreading to upright, branched or unbranched, often purple-red, up to 1 1/2 feet tall, smooth.
- **Leaves:** Alternate, simple, linear-lanceolate to ovate-lanceolate, pointed at the tip, tapering or somewhat rounded at the base, without teeth but often wavy-edged, smooth or sometimes short-hairy on the veins beneath, usually dotted, up to 3 1/2 inches long, up to 1 1/4 inches wide, short-stalked; sheaths fringed with short bristles.
- **Flowers:** Several in interrupted racemes, the racemes drooping or arching, up to 3 1/2 inches long.
- **Sepals:** 4, united below, greenish, often tinged with purple and bordered with white, dotted, up to 1/8 inch long.
- **Petals:** 0.
- **Stamens:** 4-6.
- **Pistils:** Ovary superior; style 2- to 3-parted.
- **Fruits:** Achenes lenticular to triangular, ovoid, dull, striate, dark brown to black, up to 1/6 inch long.
- **Notes:** The achenes are eaten by waterfowl.



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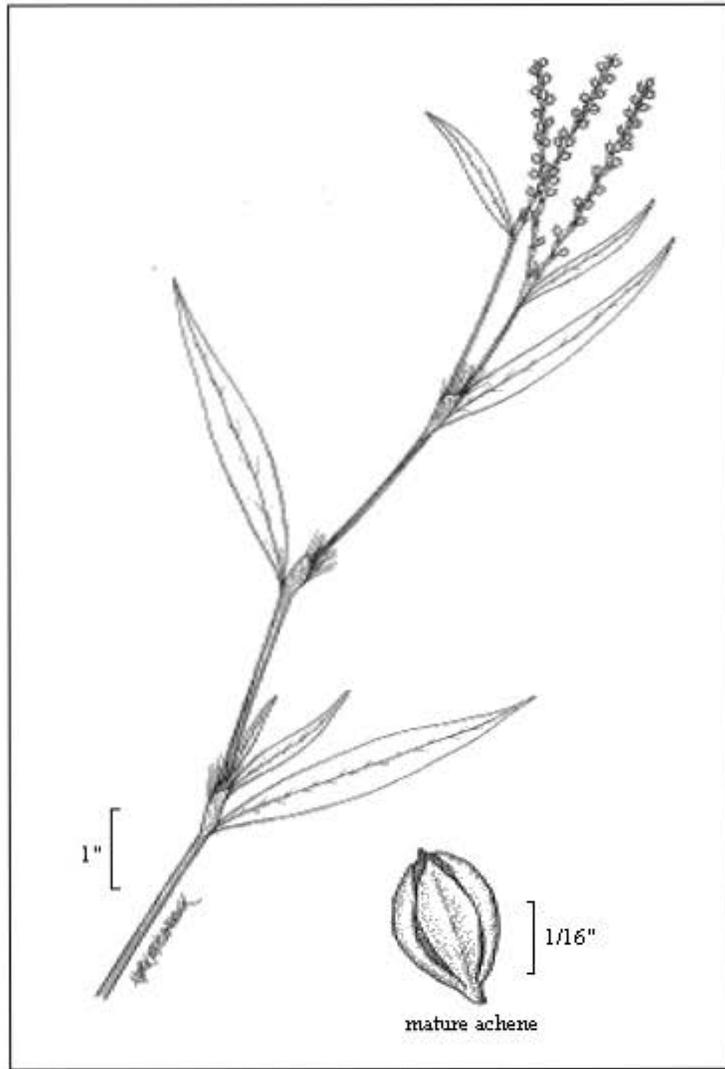
Field Office Guide to Plant Species

Little Water-pepper

Polygonum opelousanum Riddell



- **Family:** Smartweed (Polygonaceae)
- **Flowering:** July-October
- **Field Marks:** The distinguishing features of this *Polygonum* are the bristly sheaths, the absence of glandular dots on the sepals, the smooth leaves, and the white or greenish flowers. The achene beak is slightly exerted beyond the sepals at maturity.
- **Habitat:** Wet shores, damp thickets, sometimes in shallow standing water.
- **Habit:** Perennial herb from extensive creeping rhizomes.
- **Stems:** Upright to spreading, often rooting at the lower nodes, branched or unbranched, smooth or nearly so, up to 3 feet tall.
- **Leaves:** Alternate, simple, linear-lanceolate to lanceolate, pointed at the tip, tapering to the sessile or nearly sessile base, without teeth, usually ciliate along the margins, up to 4 inches long, up to 1 inch wide; sheaths with bristles.
- **Flowers:** Many loosely arranged into racemes, the racemes up to 2 1/2 inches long; each flower short-stalked.
- **Sepals:** 5, united below, white, greenish white, or greenish purple, up to 1/8 inch long, not glandular-dotted, persistent on the fruit.
- **Petals:** 0.
- **Stamens:** Usually 8.
- **Pistils:** Ovary superior; styles 3-parted.
- **Fruits:** Achenes triangular, ovoid to obovoid, shining, smooth, black, up to 1/8 inch long, partly exerted from the persistent sepals.
- **Notes:** This species is very similar to *P. hydropiperoides* and frequently is considered a variety of it. These two species are distinguished only in that the beak of the mature achene of *P. opelousanum* is slightly exerted beyond the incurved sepals. The beak of *P. hydropiperoides* is completely enclosed within the sepals. The achenes are eaten by waterfowl.



Northeast Wetland Flora

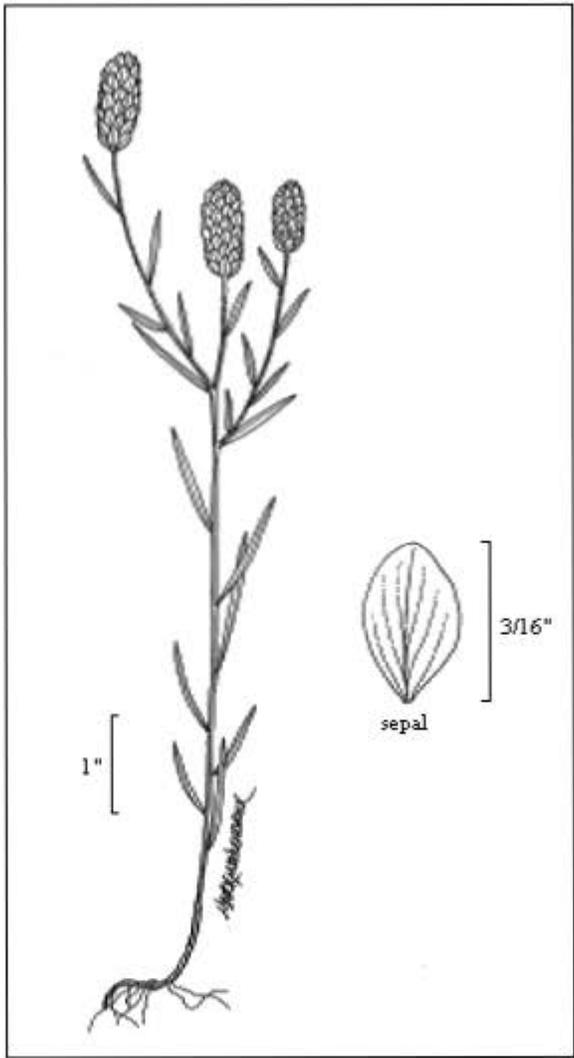
Field Office Guide to Plant Species

Red Milkwort

Polygala sanguinea L.



- **Family:** Milkwort (Polygalaceae)
- **Flowering:** June-October
- **Field Marks:** This species is distinguished by its annual growth form, its flowers crowded in a dense raceme, and the 2 large, petal-like sepals (wings) 1/4-1/3 inch long.
- **Habitat:** Meadows, prairies, open areas.
- **Habit:** Annual herb with fibrous roots.
- **Stems:** Upright, unbranched or branched, somewhat angular, up to 15 inches tall, smooth.
- **Leaves:** Alternate, simple, numerous, linear to oblong, pointed at the tip, tapering to the sessile base, toothless, smooth, up to 1/4 inch wide.
- **Flowers:** Many in dense racemes up to 1 3/4 inches long, up to 3/4 inch thick, short-cylindric, rounded at the top; flowers rose-purple, greenish, or white, short-stalked.
- **Sepals:** 5, 3 of them small and green, the other 2 (wings) larger, oval, petal-like, 1/4-1/3 inch long.
- **Petals:** 3, rose-purple to green to white, attached to each other and to the stamen tube.
- **Stamens:** 6 or 8, united to form a tube attached to the petals.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules more or less flattened, notched at the tip, containing 2 seeds; seeds obovoid, hairy, with a 2-lobed growth (aril) one end.



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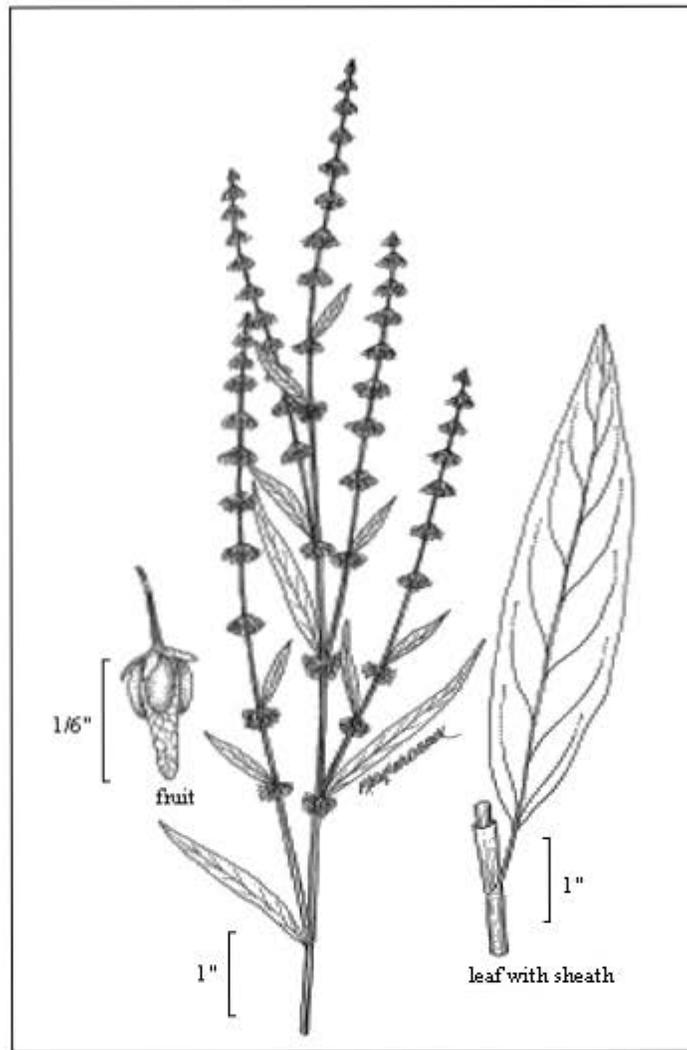
Field Office Guide to Plant Species

Clustered Dock

Rumex conglomeratus Murray



- **Family:** Smartweed (Polygonaceae)
- **Flowering:** June-July
- **Field Marks:** The valves of the fruits of this species are toothless, each valve bears a tubercle, and each valve is only about 1/16 inch wide, just barely wider than the tubercle.
- **Habitat:** Wet ditches, shores, disturbed areas.
- **Habit:** Perennial herb from a thickened root.
- **Stems:** Upright, usually branched, smooth, usually grooved, up to 5 feet tall.
- **Leaves:** Alternate, simple, oblong to narrowly oblong-ovate, smooth, usually without teeth but sometimes wavy-edged, more or less pointed at the tip, tapering to the base, with the sheath ascending up and around the stem at the junction of the leaf stalk.
- **Flowers:** Many borne in slender, ascending racemes up to 6 inches long, interspersed with leafy bracts; flowers short-stalked.
- **Sepals:** 6, free from each other, the outer 3 appressed, the inner 3 larger, oblong, up to 1/8 inch long.
- **Petals:** 0.
- **Stamens:** 6.
- **Pistils:** Ovary superior, smooth; stigmas 3.
- **Fruits:** Triangular, surrounded by 3 valves (the inner sepals), each valve oblong, up to 1/6 inch long, up to 1/16 inch wide, not toothed, bearing a tubercle almost as wide as the valve.
- **Notes:** This species has been introduced from Europe.

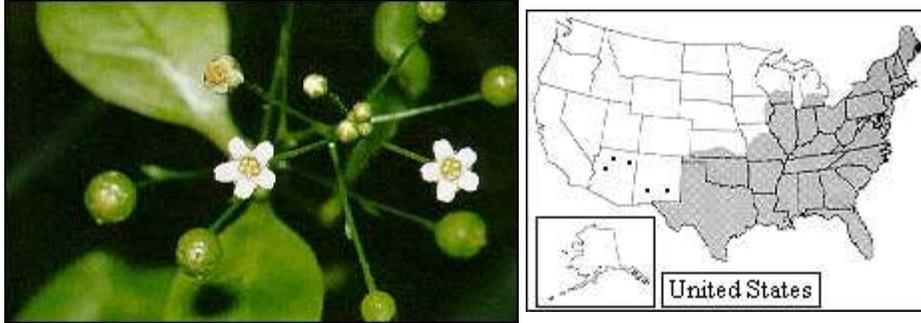


Northeast Wetland Flora

Field Office Guide to Plant Species

Water Pimpernel

Samolus parviflorus Raf.



- **Family:** Primrose (Primulaceae)
- **Flowering:** May-September
- **Field Marks:** This species is distinguished by its small, white, 5-parted flowers and its alternate, toothless, smooth, usually spatulate leaves.
- **Habitat:** Wet soil, marshes, sometimes in shallow water, sometimes brackish.
- **Habit:** Perennial herb with fibrous roots.
- **Stems:** Sprawling to upright, branched, smooth, up to 1 1/2 feet tall.
- **Leaves:** Basal and alternate, simple, spatulate to obovate, rounded at the tip, long-tapering to the base, without teeth, smooth, up to 4 inches long; basal leaves stalked, upper stem leaves sessile.
- **Flowers:** Several in terminal and axillary racemes up to 6 inches long; flowers white, 1/8-1/6 inch across, on smooth stalks up to 1 inch long.
- **Sepals:** 5, green, united below, smooth, the tube about 1/16 inch long, persistent in fruit.
- **Petals:** 5, white, united below, up to 1/8 inch long.
- **Stamens:** 5, attached to the tube of the petals.
- **Pistils:** Ovary superior, smooth.
- **Fruits:** Capsules spherical, smooth, 1/10-1/8 inch in diameter.
- **Notes:** Gleason and Cronquist call this species *S. floribundus*.

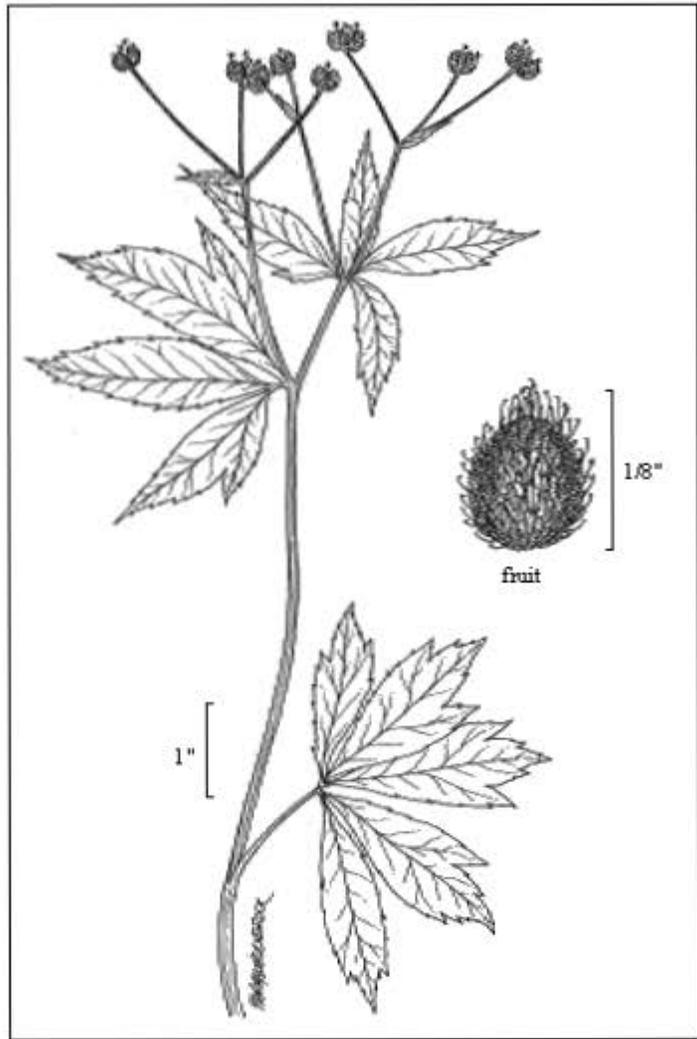
Northeast Wetland Flora

Field Office Guide to Plant Species

Clustered Black-snakeroot *Sanicula gregaria* Bickn.



- **Family:** Carrot (Umbelliferae)
- **Flowering:** April-August
- **Field Marks:** The distinguishing features of this black-snakeroot are the styles longer than the bristles of the fruit and the stalked fruits up to 1/2 inch long.
- **Habitat:** Rich woods, floodplain woods.
- **Habit:** Perennial herb from slender rhizomes.
- **Stems:** Upright, branched, slender, smooth, up to 2 1/2 feet tall.
- **Leaves:** Basal and alternate, deeply divided into 3-5 segments, the segments obovate to elliptic, pointed at the tip, tapering to the base, sharply toothed, smooth, the upper leaves similar but smaller; leaf stalks greatly dilated.
- **Flowers:** Several at the tips of unequal, forked rays, greenish yellow, on short stalks, some flowers with only stamens, others with both stamens and pistils.
- **Sepals:** 5, green, attached below, about 1/24 inch long.
- **Petals:** 5, greenish yellow, free from each other, about 1/16 inch long.
- **Stamens:** 5.
- **Pistils:** 2, the ovaries inferior, covered with hooked prickles.
- **Fruits:** In pairs, covered by hooked prickles, up to 1/6 inch long.
- **Notes:** The hooked prickles of the fruits often become entangled in the fur of animals and are dispersed in this manner.

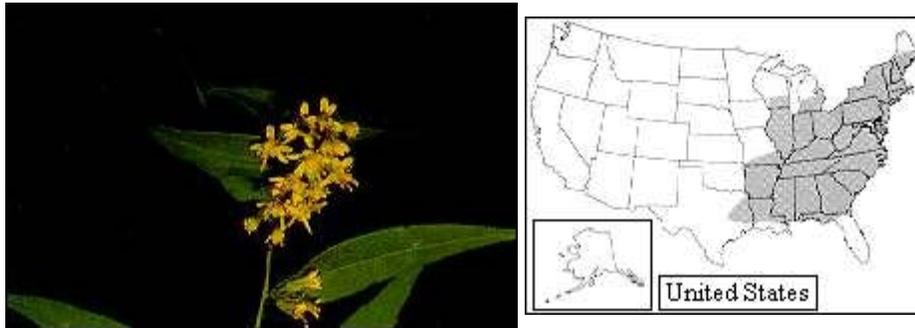


Northeast Wetland Flora

Field Office Guide to Plant Species

Wreath Golden-rod

Solidago caesia L.



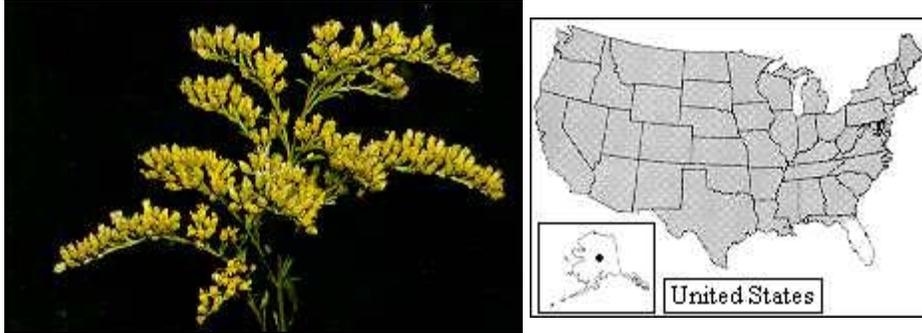
- **Family:** Aster (Compositae)
- **Flowering:** August-October
- **Field Marks:** This golden-rod differs by its axillary flower clusters, smooth stems, and lanceolate to narrowly oblong leaves.
- **Habitat:** Rich woods.
- **Habit:** Perennial herb from short, stout rhizomes.
- **Stems:** Upright, branched or unbranched, smooth, often glaucous or bluish, up to 3 feet tall.
- **Leaves:** Alternate, simple, lanceolate to narrowly oblong, long-pointed at the tip, tapering to the sessile base, sharply toothed, smooth on both surfaces, slightly hairy, up to 5 inches long, up to 1 3/4 inches wide.
- **Flowers:** Few in heads borne in axillary clusters, the heads up to 1/4 inch high; heads with 3-5 ray flowers and 3-7 disk flowers; bracts subtending the heads rounded at the tip, smooth.
- **Sepals:** 0.
- **Petals:** 5, yellow, some united to form rays, others united to form short tubes.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, hairy.
- **Fruits:** Achenes hairy, up to 1/8 inch long.
- **Notes:** This family is called Asteraceae by Gleason and Cronquist.



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Canada Golden-rod *Solidago canadensis* L.



- **Family:** Aster (Compositae)
- **Flowering:** July-September
- **Field Marks:** This golden-rod is recognized by its lanceolate, strongly 3-veined leaves, its hairy stem, its spreading inflorescence, and its flower heads up to 1/8 inch high.
- **Habitat:** Old fields, roadsides, edges of woods.
- **Habit:** Perennial herb from creeping rhizomes.
- **Stems:** Upright, branched or unbranched, hairy except for the base, up to 6 feet tall.
- **Leaves:** Alternate, simple, linear-lanceolate to elliptic, pointed at the tip, tapering to the sessile base, strongly 3-nerved, coarsely toothed, smooth or rough on the upper surface, hairy beneath on the veins, up to 5 inches long, up to nearly 1 inch wide.
- **Flowers:** Few in heads, with many heads arranged on one side of a widely branched panicle, the branches hairy; heads up to 1/8 inch high; heads with 7-17 ray flowers and 2-9 disk flowers; bracts subtending the heads yellowish, narrow, pointed at the tip.
- **Sepals:** 0.
- **Petals:** 5, yellow, some of them united to form rays, others united to form short tubes.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, hairy.
- **Fruits:** Achenes hairy, up to 1/8 inch long.
- **Notes:** In the northeast, authors recognize five varieties of this species which vary on the basis of stem and leaf hairiness and head size. This family is called Asteraceae by Gleason and Cronquist.



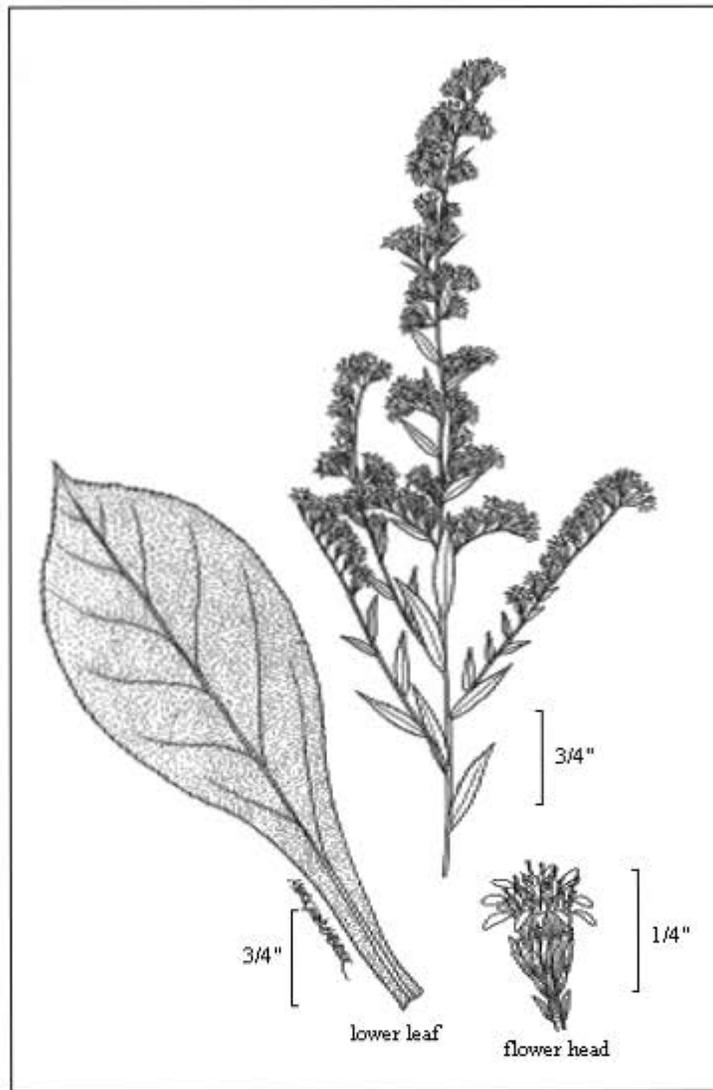
Northeast Wetland Flora

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Willow Golden-rod *Solidago salicina* Ell.



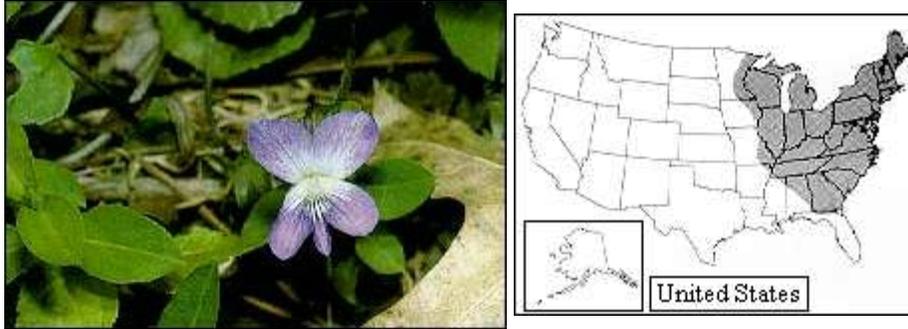
- **Family:** Aster (Compositae)
- **Flowering:** September-October
- **Field Marks:** This species differs by its spreading inflorescence with flower heads borne on one side of the branches, large broad leaves, square stems, and numerous stem leaves that are more or less round-toothed.
- **Habitat:** Swamps, bogs.
- **Habit:** Perennial herb from thickened rootstocks.
- **Stems:** Upright, usually branched, square, smooth, rather slender, up to 6 feet tall.
- **Leaves:** Basal and alternate, numerous, the lowest very large, becoming progressively smaller above, lanceolate to narrowly ovate, pointed at the tip, the basal on a winged stalk, the uppermost sessile, sharply toothed, rough on the upper surface, usually smooth on the lower surface.
- **Flowers:** Few in heads, with few to several heads arranged on one side of a widely branched panicle; heads with 6-8 ray flowers and 8-10 disk flowers; heads up to 1/5 inch high, on stalks of equal length; bracts subtending each head oblong, rounded at the tip.
- **Sepals:** 0.
- **Petals:** 5, yellow, some of them united to form rays, others united to form short tubes.
- **Stamens:** 5.
- **Pistils:** Ovary inferior, minutely hairy.
- **Fruits:** Achenes up to 1/8 inch long, hairy.
- **Notes:** This plant is called *S. patula* var. *strictula* by Gleason and Cronquist, as well as most recent authors. Gleason and Cronquist call this family Asteraceae.



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Marsh Blue Violet *Viola cucullata* Ait.



- **Family:** Violet (Violaceae)
- **Flowering:** April-July
- **Field Marks:** This violet is recognized by the heart-shaped leaves, no aerial stem, and club-shaped hairs on the inside of some of the blue petals.
- **Habitat:** Wet meadows, bogs, swampy woods.
- **Habit:** Perennial herb from a fleshy, branching rhizome.
- **Stems:** Only as underground rhizomes.
- **Leaves:** Basal, ovate to kidney-shaped, usually rounded at the tip, often heart-shaped at the base, round-toothed, smooth or nearly so, up to 5 inches wide; leaf stalks longer than the blades, smooth.
- **Flowers:** Solitary on smooth stalks that usually overtop the leaves, each flower deep blue-violet, usually with a white or yellowish center, with strong, dark lines, up to 1 1/2 inches across.
- **Sepals:** 5, green, free from each other, with ear-like lobes up to 1/6 inch long at base.
- **Petals:** 5, deep blue violet, free from each other, the lower spurred, with the spur shorter than the lateral petals; lateral petals with club-shaped hairs on the inner face.
- **Stamens:** 5.
- **Pistils:** Ovary superior.
- **Fruits:** Capsules ovoid, green, a little longer than the sepals, 1/2-3/4 inch long; seeds black, spherical.
- **Notes:** The fruits are usually produced from inconspicuous flowers that have no petals.

