

Trailing & Vine-like Herbs

Hog peanut (*Amphicarpaea bracteata*)



Monica Zachay, MNDNR

Field Tips: Creeping herbaceous vine with trifoliate leaves; leaflets entire, ovate. White pea-like flowers above yielding pods. Rudimentary flowers on hair-like branches "burrowing" into the ground and yielding a "peanut."

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FDs, MHc	WFs, MHs	FFn, FDC, MHn, MHw, WFw, FDw, WFn, FFs, FPs

Occurrence in ECS Field Keys

MDL-FD, MDL-MH, MIM-FD, MOP-MH, WSU-FD

Wild cucumber (*Echinocystis lobata*)



John C. Almendinger, MNDNR

Field Tips: Tall, climbing annual with 3-forked tendrils, leaves deeply and sharply 5-lobed, maple-like, and pale green. The distinctive fruits watermelon-shaped, 2" long, and spiny, disintegrating into little nets of vascular tissue often evident before the plants emerge in the spring.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FFn, FFs

Occurrence in ECS Field Keys

LAP-FF

Twinsflower (*Linnaea borealis*)



John C. Almendinger, MNDNR

Field Tips: Creeping, evergreen plant with opposite, terminally toothed leaves. Short, vertical shoots with leaves varying in size. Flowers a pair of white, bell-shaped flowers on a Y-shaped stalk yielding a single, dry seed.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FPw, FDn	FPn	WFn, FPs, FDC

Occurrence in ECS Field Keys

LAP-WF, MDL-FP, MDL-WF, MOP-FP, MOP-MH, MOP-WF, NSU-FD, NSU-FP, NSU-WF, WSU-FP, WSU-MH, WSU-WF

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Dwarf raspberry (*Rubus pubescens*)



John C. Almendinger, MNDNR

Field Tips: Low, trailing herb without prickles. Leaves compound with 3 leaflets, the laterals quite asymmetric about the midvein. Flowers solitary or just a few, white, and yielding a raspberry-like, edible fruit.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
FPw, WFn, WFW, MHw, FPn, FPs	MHn, FDn	FDw, WFs, MHc, FDC	FFn, WMs, FDs, OPn, WMn, WPn, OPp

Occurrence in ECS Field Keys

LAP-FD, MIM-FP, MIM-WF, NSU-FD, WSU-FD, WSU-MH, WSU-WF

Carrion-flowers & Greenbrier (*Smilax spp.*)



Photo provided by
Dan Tenaglia
www.missouriplants.com

Field Tips: Upright herb (~1') or climbing herb with tendrils or woody vine with thorns. Alternate, heart-shaped, entire leaves with distinctive, parallel main veins. Female plants producing a "ball" of blue berries.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
Not meaningful, diverse genus			

Occurrence in ECS Field Keys

LAP-FF, MDL-FF, MDL-MH, MIM-FD, MIM-FF, MOP-FF, WSU-FF, WSU-WF, MDL-WF

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Leafy Violets

Yellow & Canada violets (*Viola pubescens* / *canadensis*)



John C. Almendinger, MNDNR

Field Tips: Only violets in MN with wide (2-3") leaves, and with at least some leaves and flowers on an aerial stem. Flowers yellow or blue/white yielding a dry capsule that splits into 3 segments, exposing the seeds.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	MHc, MHs	MHn, MHw, FFn	FFs, WFw, FDs, WFs, WFn, FDw, FDn

Occurrence in ECS Field Keys

MIM-FF, MIM-MH, NSU-MH, PPL-FF, PPL-MH, WSU-MH

Sand & Dog violets (*Viola adunca* / *conspersa*)



John C. Almendinger, MNDNR

Field Tips: Only violets in MN with small (<1" wide) leaves, and with at least some leaves and flowers on an aerial stem. Sometimes spreading into a circular mat.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			MHw, FDc, WFw, WFs, FDw, FDn, FFn

Occurrence in ECS Field Keys

MDL-FD, MOP-FD

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Composites with Just Disk or Ray Flowers

Swamp thistle (*Cirsium muticum*)



Field Tips: Tall (2-5') thistle with extremely large basal leaves, often over a foot long. Stem lacking spines. Bracts below the flowers not spiny and with cobwebby hairs.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FPw	WPn, OPp, WPs, FDw, WMs, WFn, FPs, WFw, WFs, FFn	

Occurrence in ECS Field Keys

LAP-FD, MIM-MH

Spotted Joe pye weed (*Eupatorium maculatum*)



Field Tips: Tall (2-4') composite with toothed, lanceolate leaves in whorls of 3-7 around a purple or purple-spotted stem. Flower cluster flat-topped, the heads a "hairy" mass of pink-purple, tubular disc flowers.

Notes:



Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
FPw	WMs	OPp, FPs, WMp, WMn, WFw	WFn, FPn, MRs, MRn, WPs, OPn, FFn, WPn

Occurrence in ECS Field Keys

NSU-WF

White snakeroot (*Eupatorium rugosum*)



Field Tips: Tall, 2-3' composite with opposite, petioled, broadly ovate, coarsely toothed leaves. Flower cluster flat-topped; heads with white disc flowers. Sterile plants superficially like lopseeds, but snakeroot with fibrous roots.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		FDs	MHs, FFs, WFs

Occurrence in ECS Field Keys

PPL-FD

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

Rough hawkweed (*Hieracium umbellatum*)



Field Tips: Tall (1-3') composite with alternate, irregularly toothed leaves that don't clasp the stem. Usually lacking basal leaves and plant without any spines/bristles. Flowers yellow and all rays (like dandelions) on 3-4 heads.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FDc, FDw, FDn

Occurrence in ECS Field Keys

MOP-FD

White rattlesnakeroot (*Prenanthes alba*)



Field Tips: Tall (2-4') composite, often present as just basal leaves, which are distinctively triangular in outline, with milky juice, and very irregularly toothed. The heads pinkish, pendant, and yielding seeds with long reddish hairs (pappus).

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		FDw	WFs, WFn, Mhc, FDc, Mhn, MHs, WFw, FDs, FDn

Occurrence in ECS Field Keys

LAP-FD

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Composites with Disk & Ray Flowers

Yarrow (*Achillea millefolium*)



Field Tips: Tall (1-3') composite with very distinctive, many-divided, "feathery" basal and stem leaves. White disk and few white ray flowers organized in a flat-topped cluster (corymb). Foliage aromatic.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		UPs, WPs, FDw, UPn, FDc	WFw, WPn, WMp, WMs, FDs

Occurrence in ECS Field Keys

LAP-FD, MDL-FD

Bog aster (*Aster borealis*)



Field Tips: Tall (1-2') composite. Yellow disk and white (lavender) ray flowers. Stem leaves alternate, long (2-5"), narrower than any other Aster (<1/2"), and with edges that curve upward.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	OPp	FPs, FPw, OPn, WMs	WMp, WMn, WPn, FPn, UPn

Occurrence in ECS Field Keys

LAP-FP

Side-flowering aster (*Aster lateriflorus*)



Field Tips: Tall (1-2') composite. Purplish disk and white ray flowers. Stem leaves linear/rhombic, glabrous beneath. Distinctive, flowering branches from axils on main stem that stick out sideways and have miniature leaves.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
WFw		FFn, WFn, FDw, FPw	WFs, MHw, MHc, MHn, FDs, FFs, FPs

Occurrence in ECS Field Keys

MDL-MH

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Large-leaved aster (*Aster macrophyllus*)



Field Tips: Composite (1-2' tall) forming large colonies of heart-shaped basal leaves that differ from most other asters by their large size (5-8" long), cordate base, and spine-tipped teeth. Glandular in inflorescence; rays lavender.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
MHn, FDn	MHc, FDc	WFn	FDs, FPn, WFs
Occurrence in ECS Field Keys			
MOP-FD			

Skyblue aster (*Aster oolentangiensis*)



Field Tips: Tall (1-3') composite from a tuft of distinctive basal leaves that are entire, long-petioled, and feel like sandpaper above. Flower cluster an open panicle of many flowers; rays blue and disks yellow.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
			UPs, WPs, FDc, FDs
Occurrence in ECS Field Keys			
WSU-FD			

Flat-topped aster (*Aster umbellatus*)



Field Tips: Tall (2-4') composite. Flower clusters a dense flat-topped panicle with 30-300 heads and white rays. Alternate, entire, elliptic leaves with well developed veins and evidently reticulate between veins beneath.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
		MHw, FDw, WFw, OPp, WFn, FPw, WMs, WPn	WPs, UPn, FPn, WMp, FDn, WFs, WMn, MHn, OPn
Occurrence in ECS Field Keys			
NSU-FP, WSU-FP			

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Bur marigold & Beggarticks (*Bidens* spp.)



Scott Milburn

Field Tips: Annual composites with simple or compound leaves. Usually in ponded habitats, the plants germinating and developing upon drying out. Flowering in late summer, rays yellow, distinctive 4-barbed, "beggar's tick" fruits.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	MRs	FPs	WMn, FFs, MRn, WFn, FFn, WFs, FPn, WMs, OPn

Occurrence in ECS Field Keys

MIM-FF, PPL-FF

Palmate sweet coltsfoot (*Petasites frigidus*)



Jason Johnson, MNDNR

Field Tips: Low (<1') composite forming colonies of basal leaves that are palmately veined and deeply cut into 5-7 lobes, white wooly beneath. Flowering stalks appearing very early before basal leaves and rarely seen.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	WFw		WFn, MHn, FDn, FPn, FDw

Occurrence in ECS Field Keys

LAP-MH, LAP-WF, MIM-MH, MOP-MH

Arrow-leaved sweet coltsfoot (*Petasites sagittatus*)



John C. Almendinger, MNDNR

Field Tips: Low (<1') composite forming colonies of basal leaves that are pinnately veined and with arrowhead shape, white wooly beneath. Flowering stalks appearing very early before basal leaves and rarely seen.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		WFw	FPw, WMp, OPp

Occurrence in ECS Field Keys

MOP-WF

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Woodland sunflower (*Helianthus strumosus*)



Field Tips: Tall (3-4'), perennial composite. Lower stem leaves opposite, nearly entire, with sandpapery stiff hairs from white bases. 1-few heads; involucre bracts with narrow, spreading tips; disks and rays yellow.

Notes:



Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
			FDs, FDc, MHs, MHc, FDw
Occurrence in ECS Field Keys			
MIM-MH, PPL-FD, WSU-FD			

Tall coneflower (*Rudbeckia laciniata*)



Field Tips: Very tall (2-6') composite forming colonies of large distinctively divided basal leaves (up to 1'). Disk gumdrop-shaped, young green flowers turning yellow, maturing from outside to center. Large, drooping, yellow rays.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
	MHw, WFs, FFs	FFn	MHs, MHc, FDs, WFW, WMs
Occurrence in ECS Field Keys			
LAP-WF, MDL-FF, MIM-MH, MIM-WF, MOP-FF, PPL-MH, WSU-FF, WSU-MH			

Balsam ragwort (*Senecio pauperculus*)



Field Tips: Composite with yellow disk and ray flowers. Basal rosette of petiolate, oblanceolate leaves of all sizes and very evenly toothed resembling an ice-saw. Meandering "tracks" of leaf-miners often visible on basal leaves.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
			FDc, RFn, WPn, WFW
Occurrence in ECS Field Keys			
MDL-FD			

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Zigzag goldenrod (*Solidago flexicaulis*)



Field Tips: Herbaceous composite (1-2'). Alternate leaves on zigzag stem with distinctive "circular saw" teeth and winged petioles. Goldenrod flowers in short, axillary clusters and flowering very late ~ September.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
	MHs, MHc	WFs, MHn	FDs, WFn
Occurrence in ECS Field Keys			
LAP-MH, MDL-MH, MIM-MH, MIM-WF, NSU-MH, PPL-MH, WSU-MH			

Hairy goldenrod (*Solidago hispida*)



Field Tips: Medium-tall (1-2') goldenrod with distinctive basal leaves that are wide (1-3") and very hairy. Stem leaves broad near base, becoming bract-like above. Small clusters of heads from upper 10 or more leaf axils.

Notes:



Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
			FDc, FDn
Occurrence in ECS Field Keys			
MOP-FD			

Bog goldenrod (*Solidago uliginosa*)



Field Tips: Medium tall composite (1-3') with alternate leaves, the lower leaves distinctively long (6-12" commonly) and with a long, stalked, sheathing base. Spike-like inflorescence of yellow flowers, appearing late.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
		FPw	FPn, FPs, OPn, OPp, WFn
Occurrence in ECS Field Keys			
LAP-FP, MOP-FP, NSU-FP			

Lilies & Orchids with Just Basal Leaves

Wild leek (*Allium tricoccum*)



Field Tips: Emerging very early in the spring as a large tuft of wide (3-8cm), onion-smelling leaves, soon withering. In summer, usually smelled before seen, is a leafless brown stalk with black, shiny seeds in groups of 3. Bulbs near summer stalks.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		MHs	MHc, FFs, WFs, MHn

Occurrence in ECS Field Keys

MDL-MH

Bluebead lily (*Clintonia borealis*)



Field Tips: Low (<1') lily-like plant with 2 to 5 thick, glossy, green basal leaves. Flower cluster of a few, yellow, bell-shaped flowers yielding large blue berries on a leafless stalk.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FDn, MHn	WFn, FPn	FDc, MHc, FPs

Occurrence in ECS Field Keys

LAP-FP, MDL-MH, MOP-FP, MOP-MH, NSU-FP, NSU-MH

Stemless lady's slipper (*Cypripedium acaule*)



Field Tips: Low growing orchid with just 2-3 parallel-veined basal leaves. Leafless flowering stalk (~1') with a single, large, pink "moccasin" flower or "lady's slipper". Large fluted capsule evident in fall.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FPn, FPs, APn

Occurrence in ECS Field Keys

LAP-AP, MDL-FP, MOP-FP, WSU-AP, WSU-FD, WSU-FP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Downy rattlesnake plantain (*Goodyera pubescens*)



Field Tips: Orchid (~1' tall) with an evergreen rosette of green basal leaves with distinctive white zones along the veins (reticulate). Flowers small, white, tightly clustered near the tip of the leafless flowering stalk.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
			FDs
Occurrence in ECS Field Keys			
PPL-FD			

Lesser rattlesnake plantain (*Goodyera repens*)



Field Tips: Small orchid (<6") with evergreen rosette of green basal leaves with distinctive white zones along the veins (reticulate). Flowers small, white; adjacent flowers pointing the same direction (secund) in a loose spiral.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
			FPn, FDn, WFn
Occurrence in ECS Field Keys			
MOP-FP			

Small northern bog orchid (*Platanthera obtusata*)



Field Tips: Small (~6") orchid with a single basal leaf and flower stalk. Flower cluster a raceme of 4-18 greenish flowers.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
			FPn, FPs, WFn
Occurrence in ECS Field Keys			
MDL-FP, NSU-FP			

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Leafy Orchids

Yellow lady's slipper (*Cypripedium calceolus*)



Field Tips: Tall (1-2') orchid with alternate, sheathing stem leaves up to 3" wide, parallel veins, hairy above and below. Flowers large, yellow "lady's slippers" with three long, twisted, brown bracts.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FPw, FPs, MHc, WFw, WFn, FPn, MHs, FDw, FDs

Occurrence in ECS Field Keys

MDL-MH

Showy lady's slipper (*Cypripedium reginae*)



Field Tips: Large (2-3') orchids with alternate, parallel veined, wide (2-4") leaves along the stem. Large, pink/white "lady's slipper" flowers.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		FPw, WFw	FPn, FPs, FDw, WMs, WFn

Occurrence in ECS Field Keys

MOP-FP

Heart-leaved twayblade (*Listera cordata*)



Field Tips: Small (<6") orchid with just one pair of ovate-triangular leaves at the stem's middle that stick out sideways. Flower cluster a spike of 6-21 tiny, green/maroon flowers, with forked lip petals.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FPn

Occurrence in ECS Field Keys

MDL-FP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Tall Northern bog orchid (*Platanthera hyperborea*)



Field Tips: Tall (~2') orchid with 3-7 linear leaves that get smaller up the stem. Flower cluster a tight terminal raceme of 20-60 greenish flowers. Lip lanceolate and spurred.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		FPs	FPn, WFn, FPw, WFs, WMs

Occurrence in ECS Field Keys

NSU-FP

Plants Resembling Solomon's Seal

Canada mayflower (*Maianthemum canadense*)



Field Tips: Small, colonial, lily-like herb appearing as a single leaf when sterile or with 2-3, lance-shaped leaves with parallel veins when fertile. White flowers in loose clusters and later with red or red-speckled white berries.
Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
MHw, FDn, FDc, MHn, FDw	WFn, WFw, MHc, FDs, FPs, FPn, FPw	WFs, FFn	MHs

Occurrence in ECS Field Keys

MDL-FP, MIM-MH, MOP-FP, NSU-FF, NSU-FP, NSU-WF, PPL-FD, WSU-FF, WSU-FP

Giant Solomon's seal (*Polygonatum biflorum*)



Field Tips: Large (1-2'), unbranched herb with alternate, short-petioled, ovate leaves with parallel veins. Leaf undersides are glabrous. Flowers 1-3 from leaf axils, pendant, and yielding round blue berries.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		MHw	MHs, FDs, WFs, FDw, FDc

Occurrence in ECS Field Keys

MIM-MH, PPL-MH

Hairy Solomon's seal (*Polygonatum pubescens*)



Field Tips: Large (1-2'), unbranched herb with alternate, short-petioled, ovate leaves with parallel veins. The veins with short hairs on underside. Flowers 1-2 from leaf axils, pendant, and yielding round blue berries.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	MHn	MHc	WFs, MHw, MHs, FDs, WFn, FDc, FDn

Occurrence in ECS Field Keys

MDL-FD, MDL-MH, MIM-MH, MOP-MH, NSU-MH, PPL-MH, WSU-FD

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Common false Solomon's seal (*Smilacina racemosa*)



Field Tips: Large (1-2'), unbranched lily-like herb with alternate, sessile, elliptic leaves with parallel veins. Flower cluster a terminal panicle of many white flowers yielding red or white berries dotted with purple.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
	MHc, MHs	FDs, MHw, WFs	MHn, FDc, WMp, FFn, FFs
Occurrence in ECS Field Keys			
NSU-MH, WSU-MH			

Starry false Solomon's seal (*Smilacina stellata*)



Field Tips: Small (~1'), unbranched lily-like herb with alternate, sessile, somewhat folded, lanceolate leaves with parallel veins. Flower cluster a terminal raceme; ~10 white flowers yielding black-striped fruits that turn red.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
	FDw, MHw, WFw	FPw, WFs	FDs, FFn, MHs, FDc, FFs, WFn, UPs, WPn, WMs, FPs
Occurrence in ECS Field Keys			
MIM-FD, MOP-FP, MOP-WF			

Three-leaved false Solomon's seal (*Smilacina trifolia*)



Field Tips: Small lily-like herb with 3, lance-shaped leaves with parallel veins. White flowers in loose clusters and later with red or red-speckled white berries.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
FPn	FPw, FPs	APn	WFn, OPn
Occurrence in ECS Field Keys			
MDL-AP, MDL-AP, MDL-FP, MDL-WF, MIM-WF, MOP-AP, MOP-FP, MOP-WF, NSU-AP, NSU-FP, NSU-WF, WSU-AP, WSU-FP, WSU-WF			

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

Rose twistedstalk (*Streptopus roseus*)



Field Tips: Low (~1.5') lily-like herb. Unbranched or once-branched. Leaves alternate, sessile, with very distinctive cilia on edge. Flowers solitary at the nodes yielding red, triangular berries.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
MHn	MHc, FDn	MHw, WFn	FDc, WFs, FPn, FDs, FFn

Occurrence in ECS Field Keys

LAP-MH, MDL-FD, MDL-WF, MIM-FD, MIM-MH, MOP-FD, MOP-WF, NSU-FD, PPL-MH, WSU-FD, WSU-WF

Large-flowered bellwort (*Uvularia grandiflora*)



Field Tips: Large (1-2') lily-like herb with perfoliate leaves. Sterile plants unbranched, fertile plants branched. Yellow, drooping flowers (as a uvula) in spring yielding triangular capsule.

Notes:

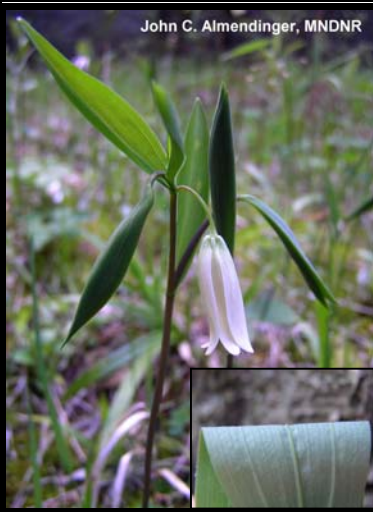
Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
MHc	MHs, MHn	FDs	WFs, FDc, FFn, WFn, FDn

Occurrence in ECS Field Keys

LAP-MH, MDL-FD, MDL-MH, MDL-WF, MIM-FD, MIM-MH, MOP-MH, PPL-MH, WSU-FD, WSU-WF

Pale bellwort (*Uvularia sessilifolia*)



Field Tips: Low (~1') lily-like herb with alternate, sessile, hairless leaves shredding into parallel segments in fall. Sterile plants unbranched, fertile plants branched. Creamy, drooping flowers in spring yielding triangular capsule.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	MHc	MHn, FDc, FFn, FDs, WFs	FDn, WFn

Occurrence in ECS Field Keys

LAP-WF, MDL-FD, NSU-FD, NSU-FF, NSU-MH, WSU-FD

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Unique Plants

Round-leaved sundew (*Drosera rotundifolia*)



Field Tips: Minute herb consisting of a basal rosette of leaves shaped like a soup-spoon and beset with red, gland-tipped, sticky hairs that catch insects. White flowers in a one-sided raceme, yielding dry, many-seeded capsules.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		APn, OPn	APn

Occurrence in ECS Field Keys

LAP-AP, MOP-FP, NSU-AP, NSU-FP

Indian pipe (*Monotropa uniflora*)



John C. Almendinger, MNDNR

Field Tips: Pure white, saprophytic plant with scale-like leaves and a single terminal flower. Flower drooping at first, then turning upright when the plant matures and dries to a brown color.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			APn, FDn, FPn, FDC, MHs, MHC, MHN, FDS

Occurrence in ECS Field Keys

LAP-AP, MDL-AP, MOP-AP, NSU-AP, WSU-AP

Pitcher plant (*Sarracenia purpurea*)



John C. Almendinger, MNDNR

Field Tips: Unique, insectivorous plant with only basal leaves in circular clusters. The leaves tubular, ~6" long, green with red veins, and upright to catch water and insects. The single flowers large, 2-3" across, and gaudy red/yellow on leafless stems 1-2' tall.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		APn, OPn	FPn, FPw

Occurrence in ECS Field Keys

LAP-AP

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

Scheuchzeria (*Scheuchzeria palustris*)



Field Tips: Sedge-like plant with unusual leaves: alternate, tubular with a pore at the tip, and with wide dilated sheaths. Fruits are pod-like capsules in groups of 3.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		APn	OPn

Occurrence in ECS Field Keys

MDL-AP, MIM-AP, NSU-AP, WSU-AP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Ferns with Triangular Blades

Rattlesnake fern (*Botrychium virginianum*)



Field Tips: Largest (~1' tall) of MN Botrychiums, with a broadly triangular, finely dissected (tri-pinnate) blade. Spore-bearing stalk not at all like vegetative blade, arising from the vegetative blade (well above the ground).
Notes:



Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	MHw, WFw	MHc, MHn, MHs, FDs, WFn	FDw, FPw, FPn, WFs, FPs

Occurrence in ECS Field Keys

LAP-FD, MDL-FP, MIM-MH, MOP-FP, MOP-MH, PPL-MH

Common oak fern (*Gymnocarpium dryopteris*)



Field Tips: Low-growing (<1') fern with triangular blades that resemble a miniature bracken. Black, smooth stem. Lower pinnae asymmetric with lower pinnules longer. Spore-clusters on normal, vegetative blades.
Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	WFn		MHn, FPn, FDn, FPw

Occurrence in ECS Field Keys

LAP-WF, MDL-FD, MOP-WF, NSU-MH, NSU-WF, WSU-MH

Bracken (*Pteridium aquilinum*)



Field Tips: Tall (2-3') distinctive fern with triangular fronds. Spore-clusters on normal, vegetative blades and located along the rolled pinnule margins (not as "dots" on the undersides of blade).
Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FDc, FDn, MHc	FDs, MHw, MHn	MHs, FDw, WFw

Occurrence in ECS Field Keys

MDL-MH, MIM-FD, MIM-MH, NSU-FD, NSU-MH, PPL-MH, WSU-FD, WSU-MH

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Ferns with Feathery Blades

Maidenhair fern (*Adiantum pedatum*)



Field Tips: Distinctive fern, 1-2' tall. The rachis split, arching, and with pinnae on just one side; appearing semi-circular. Stipe dark and shiny. Spores born on vegetative blades at leaf margins.
Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		MHs, WFs	MHc

Occurrence in ECS Field Keys

MIM-MH, PPL-MH

Lady fern (*Athyrium filix-femina*)



Field Tips: Ferns 1-2' tall. Blades bipinnate-pinnatifid with black/brown scales at base. Lowest pinnae about as long as middle ones and reflexed downward and above stipe. Spore-clusters on normal, vegetative blades.
Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
WFn	MHn, WFs, MHs, MHc	FDs, WFW	FFn, FPn, FDn, FPw, FPs, FDC

Occurrence in ECS Field Keys

LAP-WF, MDL-FF, MDL-MH, MDL-WF, MIM-FD, MIM-WF, MOP-MH, MOP-WF, NSU-WF, WSU-WF

Shield fern or Wood fern (*Dryopteris carthusiana* / *intermedia*)



Field Tips: Ferns 1-2' tall. Blades bipinnate-pinnatifid with golden scales at base. Lowest pinnae about as long as middle ones and asymmetric with lower pinnules the longest. Spore-clusters on normal, vegetative blades.
Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	WFn	FPs, MHn, FPn, FDn, WFW, FPw	FFn, FDc, MHc, WMn, FDs, MHs

Occurrence in ECS Field Keys

LAP-MH, MDL-AP, MIM-FD, MIM-WF, NSU-MH, PPL-MH, WSU-AP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Crested fern (*Dryopteris cristata*)



John C. Almendinger, MNDNR

Field Tips: Ferns 1-2' tall. Blades pinnate. Lowest pinnae slightly shorter, wider, and more triangular in outline than middle ones; all pinnae with bristly-tipped teeth and deep-set veins. Spore-clusters on normal, vegetative blades.

Notes:



Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FPn	FPs, FPw, WFn	FFn, OPn, WFs, WFw, WMn

Occurrence in ECS Field Keys

MOP-FP, WSU-FP

Ostrich fern (*Matteuccia struthiopteris*)



John C. Almendinger, MNDNR

Field Tips: Tall (2-3') fern in distinct clumps. Blades once-pinnate, the pinnae widest at the middle and gradually tapering to very small pinnae at the base. Spore-clusters on separate stalks unlike the normal, vegetative blades.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FFn	WFs	MHw, WFn, MHn, FFs, MHs

Occurrence in ECS Field Keys

LAP-FF, LAP-WF, MDL-MH, MDL-WF, MIM-FF, MIM-MH, MIM-WF, MOP-MH, NSU-FF, NSU-WF, PPL-MH, WSU-MH, WSU-WF

Sensitive fern (*Onoclea sensibilis*)



John C. Almendinger, MNDNR

Field Tips: Rather short (~1') fern in loose colonies. Blades pinnate with pinnae opposite and wavy edged. Spore-clusters on separate stalks unlike the normal, vegetative blades. Blades "sensitive" to early frost and bruising.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FFn, WFs	WFn	WMn, MRn, FFs, FPn, FPs, WMs, WPs, MHn

Occurrence in ECS Field Keys

MDL-MH, MDL-WF, MIM-FF, MIM-WF, MOP-WF, NSU-WF

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

Interrupted fern (*Osmunda claytoniana*)



Field Tips: Tall (2-3') fern in distinct clumps. Blades pinnate-pinnatifid, not hairy. Fertile blades with a few, contracted, spore-bearing pinnae near the middle of the blade that "interrupt" normal vegetative pinnae above and below.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		MHc	WFn, MHn, MHs, FDs, WFs, FDn, FPn

Occurrence in ECS Field Keys

MDL-WF, NSU-WF, PPL-MH, WSU-MH

Royal fern (*Osmunda regalis*)



Field Tips: Ferns 2-3' tall. Blades clearly bipinnate, and distinctive among MN ferns. The pinnules lance-linear and entire. Spore-clusters at apex of special fronds with some vegetative pinnae.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			WFn, FPs

Occurrence in ECS Field Keys

MIM-WF

Long beech fern (*Phegopteris connectilis*)



Field Tips: Small fern (~1'). Blades bipinnate-pinnatifid. Lowest pinnae not connected to stem by green wings, as long as middle ones, strongly reflexed downward and above. Spore-clusters on normal, vegetative blades.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			WFn, MHn

Occurrence in ECS Field Keys

NSU-MH, NSU-WF

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Common polypody (*Polypodium virginianum*)



Field Tips: Very small fern (~6") commonly growing on rocks . Blades pinnatifid, leathery and evergreen, the segments alternating up the rachis. Spore-clusters on normal, vegetative blades.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FDn

Occurrence in ECS Field Keys

NSU-FD, PPL-MH

Northern marsh fern (*Thelypteris palustris*)



Field Tips: Rather short (~1') fern in colonies of scattered individuals. Blades once-pinnate; middle and lower pinnae of similar size and at right-angles to the rachis. Spore clusters on blades similar to normal, vegetative blades.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FPs, FPw	OPn, FPn, WMn	WMs, WFn, MRn, MRs, WPs, WFs, OPp, FFn

Occurrence in ECS Field Keys

MDL-WF, MIM-WF, MOP-WF, WSU-WF

Clubmosses & Firmosses

Bristly clubmoss (*Lycopodium annotinum*)



Field Tips: Low-growing, evergreen, fern ally with "leaves" arranged like a bottle-brush; prickly from spine-like leaf tips. Trailing (shallow) horizontal stem with little-branched, upright shoots often tipped with sessile "cones".

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FDn, FPn, WFn, MHn

Occurrence in ECS Field Keys

MOP-FD, NSU-FP

Running clubmoss (*Lycopodium clavatum*)



Field Tips: Low-growing, evergreen, fern ally with "leaves" arranged like a bottle-brush; soft from long-wispy leaf tips. Trailing horizontal stem with little-branched, upright shoots. "Cones" on long branched stalks.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FDn

Occurrence in ECS Field Keys

MOP-FD, NSU-FD, WSU-FD

Shining firmoss (*Huperzia lucidula*)



Field Tips: Low-growing, evergreen, fern ally with shiny "leaves" arranged like a bottle-brush. Underground stem shallow or trailing, with unbranched or few-branched upright shoots. Sporangia born on leaves, not in cones.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			WFn, MHn, FDn, FPn

Occurrence in ECS Field Keys

MDL-WF

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Groundpines & Groundcedars

Groundpines (*Lycopodium dendroideum* / *hickeyi*)



Jason Johnson, MNDNR

Field Tips: Low-growing, evergreen, fern ally with "leaves" arranged like a bottle-brush. Underground stem deep in the soil (not trailing), with upright shoots that are many times branched resembling little trees.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		FDn, MHn	

Occurrence in ECS Field Keys

MDL-FD, MDL-MH, MOP-FD, MOP-MH, NSU-FD, WSU-FD, WSU-MH

Northern & Wirey groundcedar (*Diphasiastrum complanatum* / *digitatum*)



Alaina Berger, MNDNR

Field Tips: Low-growing, evergreen, fern ally with creeping, underground, horizontal stem. Upright stems branched; branches flattened and with scale-like "leaves" resembling sprays of northern white cedar.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FDn

Occurrence in ECS Field Keys

MDL-FD, NSU-FD

Horsetails & Scouring Rushes

Field horsetail (*Equisetum arvense*)



Field Tips: Terrestrial horsetail with whorls of simple branches with angles of about 45 degrees. Stems rigid and lacking definite white, rough bumps (silica spicules). Fertile stalks brown and withering upon maturation of the cone.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	WFw	WFs, WPs, FFn	FDw, WFn, MHw, WMp, WMs, FPw, FPs, WPn, OPp

Occurrence in ECS Field Keys

LAP-WF, WSU-WF

Water horsetail (*Equisetum fluviatile*)



Field Tips: Tall (2-4') horsetail with a weak, easily crushed stem. Sterile plants with whorls of branches shortening progressively towards the top, central stem often greatly tapered at the tip, lacking branches, and wavy. Usually in standing water.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		FPS, FPw, OPn	FPn, MRn, WMs, WMn, APn, WFn, MRs, OPp

Occurrence in ECS Field Keys

LAP-FP, MDL-AP, MOP-AP, NSU-AP, WSU-AP

Meadow horsetail (*Equisetum pratense*)



Field Tips: Terrestrial horsetail with whorls of simple branches, with angles of about 90 degrees. Stems rigid and with ridges having definite white, rough bumps (silica spicules). Fertile stalks initially brown, but turning green and developing branches.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		FFn, MHw, WFw, WFn, FDw, WMp, WFs, MHn, FPn	

Occurrence in ECS Field Keys

MDL-MH

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Woodland horsetail (*Equisetum sylvaticum*)

Jason Johnson, MNDNR



Field Tips: Horsetail with whorls of compound branches. Distinctive cinnamon-colored sheaths. Fertile stalks initially brown, but turning green and developing branches and resembling sterile shoots.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		WFn	WFw, FPn, MHn, WFs, FDn, FPw

Occurrence in ECS Field Keys

MDL-MH, NSU-FP, WSU-FP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Sedges without Pendant Spikelets

Brome-like sedge (*Carex bromoides*)



Field Tips: Low (~1') tufted sedge with slender, lax leaves. Culms barely exceeding the leaves with 3-8 loose spikelets that are female above and male below. Bracts small, awn-tipped. Slender, perigynium with long beak.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
			WFs, FFn
Occurrence in ECS Field Keys			
MIM-WF			

Creeping sedge (*Carex chordorrhiza*)



Field Tips: Small (<1') sedge with creeping stems that send up short, vertical shoots from each node; apparent as a line of similar shoots; easily seen when pulled from the peat. Crowded terminal clusters of 3-8 spikes.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
		OPn	APn, FPn, FPs, WMn
Occurrence in ECS Field Keys			
MDL-AP, MOP-AP, NSU-AP, WSU-AP			

Hayden's sedge (*Carex haydenii*)



Field Tips: Tall (1-3') sedge in loose tufts. Leaves wide (~1/3"), shorter than flowering stems. Terminal male spike(s) above 2-3 stalkless, upright, female spikes. Basal sheaths not filamentous and perigynia shorter than their scales.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
			WPs, WMp, MRs
Occurrence in ECS Field Keys			
MIM-WF			

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Interior sedge (*Carex interior*)



Field Tips: Slender, tufted sedge (1-2'). Flower clusters 3-5 sessile spikes, few flowered and spreading to give a starry appearance. The terminal spike with a distinct, brown zone of male flowers beneath the female flowers.

Notes:



Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
		FPw, FPs, FPn	OPn, WMs, WFn, WFs, WPs, OPp, WMp
Occurrence in ECS Field Keys			
MOP-FP, NSU-FP			

Bladder sedge (*Carex intumescens*)



Field Tips: Sedge, ~2' tall growing in clumps. Leaves wide (~1/2") and soft. Flower cluster of terminal male spike above 1-3 short female spikes set in the axils of long, leaf-like bracts. 2-12 large, inflated, beaked perigynia.

Notes:



Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
	WFn	FFn	MHn, WFs, FPn, MHc, FPs, FFs
Occurrence in ECS Field Keys			
LAP-WF, MOP-WF			

Fen wiregrass sedge (*Carex lasiocarpa*)



Field Tips: Tall (2-3') sedge forming monotypic swards. Leaves narrow, longer than flowering stems, arched, folded, wire-like. Terminal male spike(s) above 1-3 stalkless female spikes. Woolly seed covering. Peppery smell.

Notes:

Habitat Distribution (Presence by Floristic Region)			
75-100%	50-75%	25-50%	5-25%
OPn	OPp	FPs, WMn	APn, FPw, WMs, FPn
Occurrence in ECS Field Keys			
LAP-AP, MDL-AP, MIM-AP, MOP-AP, MOP-FP, NSU-FP, WSU-AP			

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

Bog wiregrass sedge (*Carex oligosperma*)



John C. Almendinger, MNDNR

Field Tips: Leaves shorter than flowering stems, rolled into cylinders at tips. Brown stem base. Cluster of 3-15 seeds in y-shaped crotch composed of the stem or terminal male spike and a long, bract below the female flowers.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		APn	

Occurrence in ECS Field Keys

LAP-AP, MDL-AP, MIM-AP, MOP-AP, NSU-AP, WSU-AP

Long-stalked sedge (*Carex pedunculata*)



Jason Johnson, MNDNR

Field Tips: Low (<1') sedge growing in dense, pom-pom tufts. Blades appearing all basal, with deep purple bases, and over-wintering. Flowering early, the culms of varying length that wither to hair-like strands with 4-5 tiny spikelets.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	MHn	WFn, WFs, MHc	MHs, WFw, FDn, FFn, FPs

Occurrence in ECS Field Keys

LAP-WF, MIM-MH, MOP-MH, WSU-MH

Retorse sedge (*Carex retrorsa*)



Photo: Scott Milburn

Field Tips: Densely tufted, tall (2-3') sedge with 1-2 male spikes just above 3-8 female spikes on short peduncles. Seeds in large, inflated, long-beaked sacks, with the beaks spreading or pointing down the stem (retorse).

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FFn, WFn

Occurrence in ECS Field Keys

MDL-FF, MOP-FF

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Awl-fruited sedge (*Carex stipata*)



Field Tips: Tall (2-3') clumped sedge. Culms stout, sharply 3-angled. Flower cluster of many, crowded, small few-flowered spikes with non-leafy bracts; appearing as a single, terminal spike. Male spikelets inconspicuous.

Notes:



Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	WFs	WFn	WMs, FFn, WMn, FPn

Occurrence in ECS Field Keys

MDL-WF, MIM-WF, MOP-WF, WSU-WF

Three-fruited bog sedge (*Carex trisperma*)



Field Tips: Low (~1') weakly clumped sedge, the stems drooping and leaves lax. The flower cluster has 1-3, few-flowered, widely spaced spikes. The lowest spike with a slender bract longer than the entire inflorescence.

Notes:



Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		FPn, APn	WFn, FPs

Occurrence in ECS Field Keys

LAP-AP, LAP-AP, MDL-AP, MIM-AP, MOP-AP, NSU-AP, NSU-FP, WSU-AP

Beaked sedge (*Carex utriculata*)



Field Tips: Tall (2-4') sedge forming swards. Leaves taller than flowering stems, sheaths with cross-veins. Spikes sessile, 2-3 male spikes above 1-4 female spikes crowded with inflated, long-beaked perigynia.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		WMn	OPn, MRn, WMs, APn, MRs

Occurrence in ECS Field Keys

MIM-AP, NSU-AP, WSU-AP

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

White beak rush (*Rhynchospora alba*)

John C. Almendinger, MNDNR



Field Tips: Low (~1') loosely clustered sedge. Leaves shorter than the flowering stems. Flowers/seeds in 1-3 tuft-like spikelets. Seeds hidden among white/pale brown scales.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			OPn, APn

Occurrence in ECS Field Keys

MDL-AP, NSU-AP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Sedges with Pendant Spikelets

Graceful sedge (*Carex gracillima*)



Field Tips: Tufted sedge (1-2') with purple leaf bases. Flower clusters 3-5 spikes on slender pedicels and drooping. The terminal spike with a brown zone of male flowers beneath the female flowers. Perigynia without a beak.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		WFn, FFn, WFs	WFw, MHn, MHc, MHs

Occurrence in ECS Field Keys

WSU-MH

Candle-lantern sedge (*Carex limosa*)



Field Tips: Small, (~1') sedge with bluish green leaves and roots covered with yellow-brown felt. Flower cluster includes a male terminal spike and 1-5 pendant female spikes that hang like "candle lanterns."

Notes:



Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		OPn	APn, FPn, FPs, OPp

Occurrence in ECS Field Keys

MDL-AP, MOP-AP, NSU-AP, WSU-AP

Cyperus sedge (*Carex pseudocyperus*)



Field Tips: Tall (2-3') tufted sedge with stout culms. A single short-stalked terminal male spike and 3-6 female spikes below. Spikes nodding, long, crowded, perigynia with long, sharp points (bottle-brush) and pointing a bit backwards.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			FPn, FPs

Occurrence in ECS Field Keys

MOP-FP, NSU-FP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Cottongrasses

Tall cottongrass (*Eriophorum polystachion*)



John C. Almendinger, MNDNR

Field Tips: Growing isolated or in small colonies, not strongly tufted. Inflorescence with 2-8 peduncled, cottony spikelets with several of the chestnut-colored floral bracts longer than the flower cluster.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		OPp	OPn, FPw, WPn

Occurrence in ECS Field Keys

MDL-AP

Delicate cottongrass (*Eriophorum tenellum*)



Field Tips: Growing isolated or in small colonies, not strongly tufted. Inflorescence with 3-6 peduncled, cottony spikelets with a single, erect, leaf-like bract that is shorter than the flower cluster.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
			None >5%

Occurrence in ECS Field Keys

NSU-AP

Tussock cottongrass (*Eriophorum vaginatum*)



John C. Almendinger, MNDNR

Field Tips: Densely tufted sedge with narrow basal leaves and stem leaves with inflated basal sheaths. Flowering stalks with a single, terminal, cottony spike lacking leafy bracts.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		APn	

Occurrence in ECS Field Keys

LAP-AP, MDL-AP, MIM-AP, MIM-AP, MOP-AP, NSU-AP, WSU-AP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Tawny cottongrass (*Eriophorum virginicum*)



John C. Almendinger, MNDNR

Field Tips: Sedge in loose colonies with flat leaves often rolled at the tips. Flowering stalks with several cottony spikes and leafy bracts exceeding the spikes. "Cotton" usually tawny. Distinctive by flowering very late (~August).
Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		APn	

Occurrence in ECS Field Keys

LAP-AP, MDL-AP, MIM-AP, MIM-AP, MOP-AP, NSU-AP, WSU-AP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Grasses

Big bluestem (*Andropogon gerardii*)



John C. Almendinger, MNDNR

Field Tips: Very tall (3-6') grass with fall foliage curing to a purplish hue. Plants usually tufted. The inflorescence digitally branched, hence the nickname "turkey foot". The inflorescence shattering entirely in the fall and winter.

Notes:



Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
UPn, UPs, WPs	WPn		FDc, OPp, FDw, WMp

Occurrence in ECS Field Keys

MDL-FD, WSU-FD

Bearded shorthusk (*Brachyelytrum erectum*)



Jason Johnson, MNDNR

Field Tips: Tall (2-3') clumped grass with wide (0.5") fuzzy blades and sheaths. Florets long-awned in appressed panicle. Culms snapping at first node each fall, leaving a collection of white "bamboo stubs" at the base.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		MHn, MHc	MHs, WFn, WFs

Occurrence in ECS Field Keys

MDL-MH, MOP-MH, WSU-MH

Fringed brome (*Bromus ciliatus*)



John C. Almendinger, MNDNR

Field Tips: Tall (2-4') grass growing mostly in small clumps. Inflorescence an open panicle with branches evident. Spikelets with several seeds, the lemmas with a distinctive fringe of hairs on their margins but hairless otherwise.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FPw, WFw	FDw, FPs	WFn, OPp, WMs, FDc, WPs, WPn, FFn, FDn, FPN, WMn

Occurrence in ECS Field Keys

LAP-FP

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Bluejoint (*Calamagrostis canadensis*)



Field Tips: Tall (2-4') grass often forming monotypic swards. Inflorescence an open panicle with branches evident. Inflorescence and leaves becoming flaggy (secund). Unusual ability to form late-season branches in leaf axils.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
WMn	WFw, FPn	WMp, FPs, FDw, WMs, WFw, FPw, OPn, MRn, MRs	WPs, FFn, FDn, WPn, OPp, APn, WFs

Occurrence in ECS Field Keys

LAP-FD, LAP-FD, MDL-AP, MOP-AP, NSU-AP, WSU-AP

Poverty grass (*Danthonia spicata*)



Field Tips: Low (~1') strongly tufted grass with leaves of past years persistent and curly. Flowering stalk with sessile spikelets with a few, hairy "seeds" with awns twisted, bent at right angles, and black at the bend.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
		FDc	FDn, FDw

Occurrence in ECS Field Keys

MOP-FD, NSU-FD, WSU-FD

Virginia wild rye (*Elymus virginicus*)



Field Tips: Tall (1-3') clumped grass with blades ~1/3" wide. Flower cluster a spike of sessile florets, each with a mix of fertile and sterile flowers, all with stiff, long-awned glumes and lemmas to produce a broom-like inflorescence. Awns straight.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FFn	FFs, WFs	MRs, WFw

Occurrence in ECS Field Keys

MIM-FF

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

Fowl manna grass (*Glyceria striata*)



Field Tips: Tall (2-3') loosely clumped grass. Flower cluster a panicle with ascending branches drooping at tips. Florets green/purple early but turning a very light tan in summer. Small seeds with 7 strongly raised ribs.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
FPw, WFs, WFn	FPs, WMs, WFw, FPN	WPs, WMp, OPp, WPn, FDw	

Occurrence in ECS Field Keys

MDL-WF, MIM-WF, MOP-WF, WSU-WF

Mountain rice grass (*Oryzopsis asperifolia*)



Field Tips: Low (1') tufted, grass, with wide blades, current blades upright and green, blades of past years decumbent and turning brown from the tip towards base. Flowering spike persistent all summer with glumes gaping.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
MHn, MHc, FDc, FDn, FDw	WFw, FDs	MHw, WFn, MHs	

Occurrence in ECS Field Keys

LAP-WF, MDL-FD, MIM-MH

False melic grass (*Schizachne purpurascens*)



Field Tips: Tufted grass with long, arching culms. The purplish spikelets drooping from a lax panicle. Lemmas with basal tuft of hair and long awn seemingly from near middle of lemma.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
	FDw, FDc, FDn, WFw, MHw, WFn, MHc, MHn		

Occurrence in ECS Field Keys

LAP-WF, MIM-FD, MIM-WF

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Prairie cordgrass (*Spartina pectinata*)



Field Tips: Very tall (3-6') grass from a tough, "cordlike" rhizome. The leaves coarse, and with hairless sheaths. The inflorescence a narrow panicle with spikelets crowded along one side of the branch (second) giving the appearance of a brush or comb.

Notes:

Habitat Distribution (Presence by Floristic Region)

75-100%	50-75%	25-50%	5-25%
WPs, WMp, WPn		UPn	WMs, UPs, FDw, MRs

Occurrence in ECS Field Keys

LAP-FD

Sphagnum Mosses

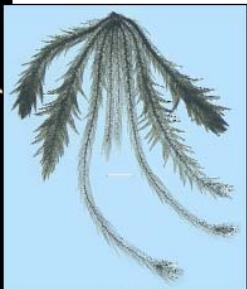
Sphagnum moss (*Sphagnum* spp.)



Sphagnum wulfenianum (1 cm)



rough carpet



Sphagnum wulfenianum (1 mm)

single fascicle
(four pendent in center and four spreading branches)

spherical capitulum

Field Tips: Peat-forming mosses in carpets, hummocks, or hollows. All species belong to the single genus, *Sphagnum*. The evident characters in the field are: unbranched upright stems and fascicles of branches arranged spirally around the stem. At the top of the stem, branch internodes are short as are the branches, which causes the appearance of a distinct head (capitulum). Below the head, nodes and branches are longer and the branch fascicles evident. Each fascicle will have some branches that spread and some that droop next to the stem. In shade, most *Sphagnum* mosses are green, but in the open they are often richly colored red, orange, purple, or yellow. *Sphagnum magellanicum* and *S. angustifolium* are two of the most common mosses in this group (below).

Notes:



Sphagnum magellanicum (large red) plants mixed with those of *S. russowii* (small red) and *S. angustifolium* (larger green-yellow-brown)



Sphagnum angustifolium (1 cm)

smooth carpet



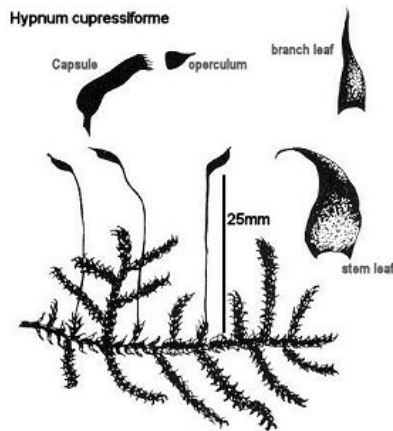
Sphagnum angustifolium (1 mm)

pendent branches in pairs

Photos by permission from: Janssens, Joannes A. (2007) *Noteworthy Mosses & Liverworts of Minnesota: field keys and habitat descriptions of common bryophytes*. Minneapolis, Minnesota.

Brown Mosses – Pleurocarps

e.g. *Calliergon cordifolium*, *Hypnum lindbergii*

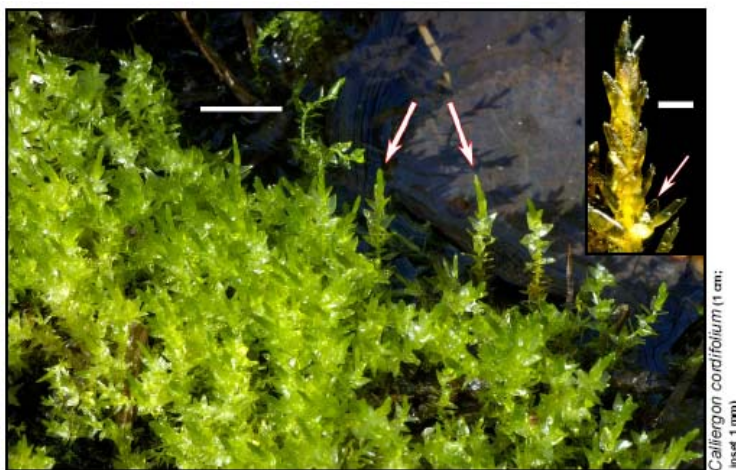


Field Tips: The use of the term “brown mosses” in the field guides is unfortunate because it spans taxa that are not closely related. To the taxonomist most brown mosses are pleurocarpous mosses (examples to left) of wetlands and peatlands. In the field, one notices that pleurocarpous mosses have main stems lying roughly parallel to the ground, profuse branching often interweaving with adjacent stems, and have sporophores that arise from short lateral shoots. Two widespread pool pleurocarps are *Calliergon cordifolium* and *Hypnum lindbergii* (below).

Notes:



dendroid (tree-like) branching



pointed branch tips with enrolled, rounded-obtuse leaves (inset)

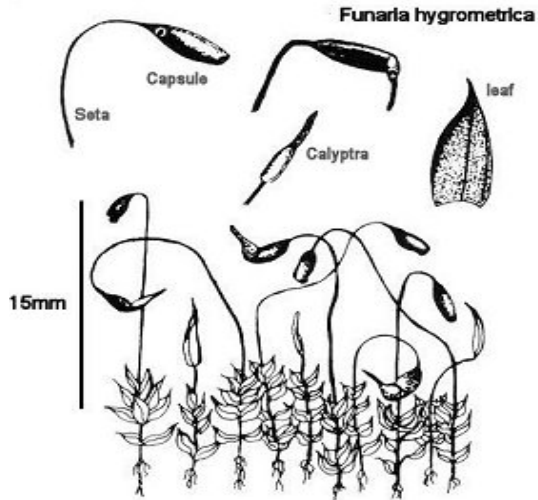


curved-to-falcate-second leaves

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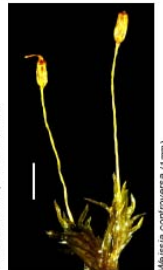
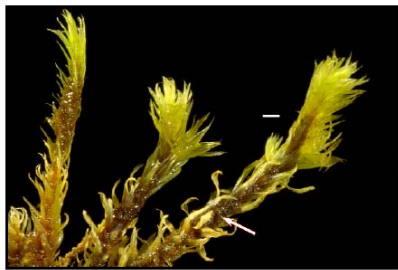
Brown Mosses – Acrocarps

e.g. *Plagiomnium*, *Rhizomnium*



Field Tips: the use of the term “brown mosses” in the field guides to refer to some acrocarpous mosses (left) is unfortunate because most taxonomists would not call these brown mosses. Acrocarps are mosses with upright stems that are not much branched (if so near the ground and branches strongly ascending), and the sporophores arise from the tips of the upright branches. *Plagiomnium ellipticum* and *Rhizomnium magnifolium* are common pool acrocarps (below).

Notes:

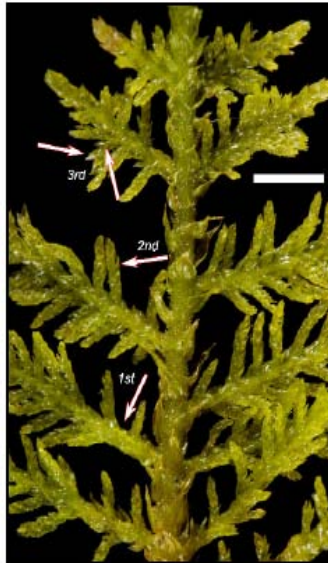


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Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Feather Mosses

e.g. *Pleurozium*, *Ptilium*, *Hylocomium*, *Thuidium*



Thuidium delicatulum (1 mm)

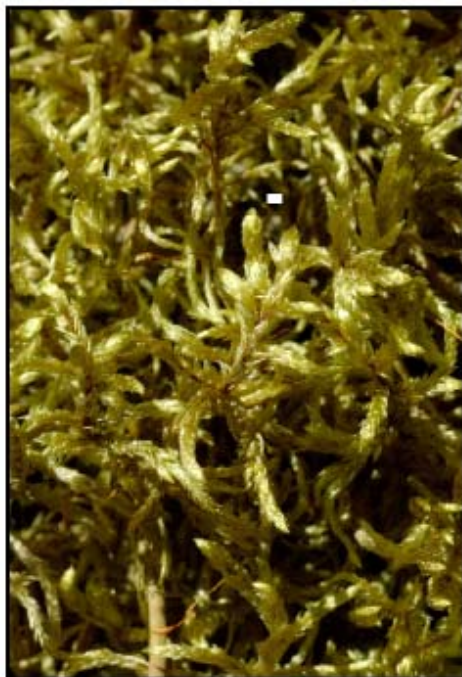


Ptilium crista-castrensis (1 mm)

annual segment bi (tri)-pinnately (left) versus uni-pinnately branched (right)

Field Tips: Feather mosses comprise a diverse group of pleurocarpous mosses. They occur in thick carpets that are usually easily removed from the substrate. They are common in poor habitats, whether very wet (WF, FP and AP Systems) or very dry (FD System). Their characteristic feature is to have pinnate branching, which can be singly or multiply pinnate (left). Mostly, this results in the individual stems having branches all in the same plane. By far, *Pleurozium schreberi*, is the most widespread and common feathermoss. Other common feathermosses are: *Ptilium crista-castrensis*, *Hylocomium splendens*, and *Thuidium delicatulum* (below).

Notes:



Pleurozium schreberi (1 mm)



John C. Almendinger, MNDNR



Thuidium delicatulum (1 mm)



Hylocomium splendens (1 mm)

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Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

Plant Index

Abies balsamea, 1
Acer negundo, 4
Acer rubrum, 4
Acer saccharinum, 4
Acer saccharum, 5
Acer spicatum, 13
Achillea millefolium, 73
Actaea pachypoda, 59
Actaea rubra, 59
Adiantum pedatum, 88
Agastache foeniculum, 55
Allium tricoccum, 78
Alnus incana, 13
Alpine enchanter's nightshade, 55
Amelanchier spp., 13
American elm, 12
American hazelnut, 16
American spikenard, 39
American vetch, 62
Amphicarpaea bracteata, 68
Andromeda glaucophylla, 29
Andropogon gerardii, 104
Anemone acutiloba, 37
Anemone americana, 37
Anemone quinquefolia, 37
Antennaria spp., 38
Apocynum androsaemifolium, 38
Appendaged waterleaf, 43
Aquilegia canadensis, 59
Aralia nudicaulis, 38
Aralia racemosa, 39
Arctostaphylos uva-ursi, 31
Arisaema triphyllum, 39
Arrow-leaved sweet coltsfoot, 75
Asarum canadense, 39
Aster borealis, 73
Aster lateriflorus, 73
Aster macrophyllus, 74
Aster oolentangiensis, 74
Aster umbellatus, 74
Athyrium filix-femina, 88
Avens, 43
Awl-fruited sedge, 99
Balsam fir, 1
Balsam poplar, 8
Balsam ragwort, 76
Basswood, 12
Bastard toadflax, 40
Beaked hazelnut, 16
Beaked sedge, 99
Bearberry, 31
Bearded shorthusk, 104
Bebb's willow, 18
Betula alleghaniensis, 5
Betula papyrifera, 5
Betula pumila, 14

Bidens spp., 75
Big bluestem, 104
Bitternut hickory, 6
Black ash, 6
Black cherry, 9
Black oak, 11
Black spruce, 1
Black walnut, 7
Bladder sedge, 97
Bloodroot, 49
Blue beech, 14
Blue cohosh, 60
Blue giant hyssop, 55
Blue phlox, 47
Bluebead lily, 78
Bluejoint, 105
Bog aster, 73
Bog birch, 14
Bog goldenrod, 77
Bog laurel, 29
Bog rosemary, 29
Bog willow, 19
Bog wiregrass sedge, 98
Botrychium virginianum, 87
Box elder, 4
Brachyelytrum erectum, 104
Bracken, 87
Bristly clubmoss, 92
Brome-like sedge, 96
Bromus ciliatus, 104
Brown Mosses – Acrocarps, 110
Brown Mosses – Pleurocarps, 109
Buckbean, 45
Bunchberry, 41
Bur marigold & Beggarticks, 75
Bur oak, 10
Bush honeysuckle, 24
Butternut, 7
Calamagrostis canadensis, 105
Calla palustris, 40
Calliergon cordifolium, 109
Caltha palustris, 40
Campanula aparinoides, 53
Canada mayflower, 82
Candle-lantern sedge, 101
Cardamine concatenata, 52
Carex bromoides, 96
Carex chordorrhiza, 96
Carex gracillima, 101
Carex haydenii, 96
Carex interior, 97
Carex intumescens, 97
Carex lasiocarpa, 97
Carex limosa, 101
Carex oligosperma, 98
Carex pedunculata, 98
Carex pseudocyperus, 101
Carex retrorsa, 98

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

<i>Carex stipata</i> , 99	<i>Diphasiastrum complanatum/digitatum</i> , 93
<i>Carex trisperma</i> , 99	<i>Dirca palustris</i> , 17
<i>Carex utriculata</i> , 99	Dotted smartweed, 63
Carolina spring beauty, 52	Downy arrowwood, 20
<i>Carpinus caroliniana</i> , 14	Downy rattlesnake plantain, 79
Carrion-flowers & Greenbrier, 69	<i>Drosera rotundifolia</i> , 85
<i>Carya cordiformis</i> , 6	<i>Dryopteris carthusiana/intermedia</i> , 88
<i>Caulophyllum thalictroides</i> , 60	<i>Dryopteris cristata</i> , 89
<i>Celastrus scandens</i> , 24	Dwarf alder, 27
<i>Celtis occidentalis</i> , 6	Dwarf raspberry, 69
<i>Chamaedaphne calyculata</i> , 29	Early meadow-rue, 60
<i>Chimaphila umbellata</i> , 31	<i>Echinocystis lobata</i> , 68
Chokecherry, 18	<i>Elymus virginicus</i> , 105
<i>Cicuta maculata</i> , 65	<i>Epigaea repens</i> , 32
<i>Circaea alpina</i> , 55	<i>Equisetum arvense</i> , 94
<i>Circaea lutetiana</i> , 55	<i>Equisetum fluviatile</i> , 94
<i>Cirsium muticum</i> , 71	<i>Equisetum pratense</i> , 94
<i>Claytonia caroliniana</i> , 52	<i>Equisetum sylvaticum</i> , 95
<i>Claytonia virginica</i> , 52	<i>Eriophorum polystachion</i> , 102
Clayton's sweet cicely, 66	<i>Eriophorum tenellum</i> , 102
Clearweed, 58	<i>Eriophorum vaginatum</i> , 102
Cleavers, 53	<i>Eriophorum virginicum</i> , 103
Climbing bittersweet, 24	<i>Eupatorium maculatum</i> , 71
<i>Clintonia borealis</i> , 78	<i>Eupatorium rugosum</i> , 71
Columbine, 59	<i>Euphorbia corollata</i> , 41
<i>Comandra umbellata</i> , 40	False melic grass, 106
Common enchanter's nightshade, 55	Feather Mosses, 111
Common false Solomon's seal, 83	Fen wiregrass sedge, 97
Common marsh marigold, 40	Field horsetail, 94
Common mint, 57	Flat-topped aster, 74
Common oak fern, 87	Flowering spurge, 41
Common polypody, 91	Fly honeysuckle, 25
Common strawberry, 42	Fowl manna grass, 106
<i>Comptonia peregrina</i> , 24	<i>Fragaria virginiana</i> , 42
<i>Coptis trifolia</i> , 31	<i>Fraxinus nigra</i> , 6
<i>Cornus alternifolia</i> , 14	<i>Fraxinus pennsylvanica</i> , 7
<i>Cornus canadensis</i> , 41	Fringed brome, 104
<i>Cornus racemosa</i> , 15	<i>Galium aparine</i> , 53
<i>Cornus rugosa</i> , 15	<i>Galium boreale</i> , 53
<i>Cornus sericea</i> , 15	<i>Galium labradoricum</i> , 54
<i>Corylus americana</i> , 16	<i>Galium triflorum</i> , 54
<i>Corylus cornuta</i> , 16	<i>Gaultheria hispidula</i> , 32
Cottonwood, 8	<i>Gaultheria procumbens</i> , 32
Cow parsnip, 65	Gaywings, 47
Cow wheat, 45	<i>Geranium maculatum</i> , 42
<i>Crataegus spp.</i> , 16	Germander, 58
Creeping sedge, 96	<i>Geum canadense</i> , 42
Creeping snowberry, 32	<i>Geum spp.</i> , 43
Crested fern, 89	Giant Solomon's seal, 82
<i>Cryptotaenia canadensis</i> , 65	<i>Glyceria striata</i> , 106
Cut-leaved toothwort, 52	Golden alexanders, 67
<i>Cyperus</i> sedge, 101	Goldthread, 31
<i>Cypripedium acaule</i> , 78	<i>Goodyera pubescens</i> , 79
<i>Cypripedium calceolus</i> , 80	<i>Goodyera repens</i> , 79
<i>Cypripedium reginae</i> , 80	Graceful sedge, 101
<i>Danthonia spicata</i> , 105	Gray dogwood, 15
Delicate cottongrass, 102	Great water dock, 64
<i>Desmodium glutinosum</i> , 41	Green ash, 7
<i>Diervilla lonicera</i> , 24	Greenbrier, 35

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

Groundpines, 93	<i>Lithospermum canescens</i> , 45
<i>Gymnocarpium dryopteris</i> , 87	Long beech fern, 90
Hackberry, 6	Long-leaved chickweed, 54
Hairy goldenrod, 77	Long-stalked sedge, 98
Hairy honeysuckle, 25	<i>Lonicera canadensis</i> , 25
Hairy Solomon's seal, 82	<i>Lonicera dioica</i> , 25
Halberd-leaved tearthumb, 63	<i>Lonicera hirsuta</i> , 25
Hawthorn, 16	<i>Lonicera villosa</i> , 26
Hayden's sedge, 96	Lopseed, 57
Heart-leaved alexanders, 66	Lowbush blueberry, 30
Heart-leaved twayblade, 80	<i>Lycopodium annotinum</i> , 92
<i>Helianthus strumosus</i> , 76	<i>Lycopodium clavatum</i> , 92
<i>Heracleum lanatum</i> , 65	<i>Lycopodium dendroideum/hickeyi</i> , 93
<i>Hieracium umbellatum</i> , 72	<i>Lycopodium</i> spp.
Highbush cranberry, 20	<i>Lycopus uniflorus</i> , 56
Hispid buttercup, 48	<i>Lysimachia terrestris</i> , 56
Hoary puccoon, 45	<i>Lysimachia thyrsiflora</i> , 56
Hog peanut, 68	Mad dog skullcap, 58
Honewort, 65	<i>Maianthemum canadense</i> , 82
Hooked crowfoot, 48	Maidenhair fern, 88
<i>Huperzia lucidula</i> , 92	Marsh bellflower, 53
<i>Hydrophyllum appendiculatum</i> , 43	Marsh vetchling, 61
<i>Hydrophyllum virginianum</i> , 43	Maryland black snakeroot, 49
<i>Hylocomium splendens</i> , 111	<i>Matteuccia struthiopteris</i> , 89
<i>Hypnum lindbergii</i> , 109	Meadow horsetail, 94
<i>Ilex verticillata</i> , 17	<i>Melampyrum lineare</i> , 45
<i>Impatiens</i> spp., 44	<i>Menispermum canadense</i> , 35
Indian pipe, 85	<i>Mentha arvensis</i> , 57
Interior sedge, 97	<i>Menyanthes trifoliata</i> , 45
Interrupted fern, 90	<i>Mertensia paniculata</i> , 46
<i>Iris versicolor</i> , 44	<i>Mitella diphylla</i> , 46
Ironwood, 8	<i>Mitella nuda</i> , 46
Jack pine, 2	<i>Monarda fistulosa</i> , 57
Jack-in-the-pulpit, 39	<i>Moneses uniflora</i> , 33
<i>Juglans cinerea</i> , 7	<i>Monotropa uniflora</i> , 85
<i>Juglans nigra</i> , 7	Moonseed, 35
Juneberries, 13	Mountain ashes, 12
<i>Kalmia polifolia</i> , 29	Mountain fly honeysuckle, 26
Kidney-leaved buttercup, 48	Mountain maple, 13
Kidney-leaved violet, 51	Mountain rice grass, 106
Labrador bedstraw, 54	<i>Myrica gale</i> , 17
Labrador tea, 30	Naked miterwort, 46
Lady fern, 88	Nannyberry, 20
<i>Laportea canadensis</i> , 44	Nodding trillium, 50
Large cranberry, 34	Northern & Wirey groundcedar, 93
Large-flowered bellwort, 84	Northern bedstraw, 53
Large-flowered trillium, 50	Northern blue flag, 44
Large-leaved aster, 74	Northern bugleweed, 56
<i>Larix laricina</i> , 1	Northern marsh fern, 91
<i>Lathyrus ochroleucus</i> , 61	Northern pin oak, 10
<i>Lathyrus palustris</i> , 61	Northern red oak, 11
<i>Lathyrus venosus</i> , 61	One-flowered pyrola, 33
Leatherleaf, 29	One-sided pyrola, 33
Leatherwood, 17	<i>Onoclea sensibilis</i> , 89
<i>Ledum groenlandicum</i> , 30	<i>Oryzopsis asperifolia</i> , 106
Lesser rattlesnake plantain, 79	<i>Osmorhiza claytonii</i> , 66
Lingonberry, 34	<i>Osmunda claytoniana</i> , 90
<i>Linnaea borealis</i> , 68	<i>Osmunda regalis</i> , 90
<i>Listera cordata</i> , 80	Ostrich fern, 89

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

<i>Ostrya virginiana</i> , 8	<i>Quercus ellipsoidalis</i> , 10
Pagoda dogwood, 14	<i>Quercus macrocarpa</i> , 10
Pale bellwort, 84	<i>Quercus rubra</i> , 11
Pale vetchling, 61	<i>Quercus velutina</i> , 11
Palmate sweet coltsfoot, 75	<i>Ranunculus abortivus</i> , 48
Panicled bluebells, 46	<i>Ranunculus hispidus</i> , 48
Paper birch, 5	<i>Ranunculus recurvatus</i> , 48
<i>Parthenocissus</i> spp., 35	Rattlesnake fern, 87
Peach-leaved willow, 11	Red baneberry, 59
<i>Petasites frigidus</i> , 75	Red maple, 4
<i>Petasites sagittatus</i> , 75	Red pine, 2
<i>Phegopteris connectilis</i> , 90	Red raspberry, 23
<i>Phlox divaricata</i> , 47	Red-osier dogwood, 15
<i>Phryma leptostachya</i> , 57	Retorse sedge, 98
<i>Picea mariana</i> , 1	<i>Rhamnus alnifolia</i> , 27
<i>Pilea</i> spp., 58	<i>Rhizomnium</i> spp., 110
Pink shinleaf, 33	<i>Rhynchospora alba</i> , 100
<i>Pinus banksiana</i> , 2	<i>Ribes americanum</i> , 27
<i>Pinus resinosa</i> , 2	<i>Ribes cynosbati</i> , 22
<i>Pinus strobus</i> , 2	<i>Ribes hirtellum</i> , 22
Pipsissewa, 31	<i>Ribes triste</i> , 27
Pitcher plant, 85	<i>Rosa acicularis/blanda</i> , 22
<i>Plagiomnium</i> spp., 110	Rose twistedstalk, 84
<i>Platanthera hyperborea</i> , 81	Rough hawkweed, 72
<i>Platanthera obtusata</i> , 79	Round-leaved dogwood, 15
<i>Pleurozium schreberi</i> , 111	Round-leaved sundew, 85
Pointed-leaved tick trefoil, 41	Round-lobed hepatica, 37
Poison ivy, 36	Royal fern, 90
<i>Polemonium reptans</i> , 47	<i>Rubus allegheniensis/Rubus</i> spp., 23
<i>Polygala paucifolia</i> , 47	<i>Rubus flagellaris</i> section, 23
<i>Polygonatum biflorum</i> , 82	<i>Rubus idaeus</i> , 23
<i>Polygonatum pubescens</i> , 82	<i>Rubus parviflorus</i> , 28
<i>Polygonum amphibium</i> , 63	<i>Rubus pubescens</i> , 69
<i>Polygonum arifolium</i> , 63	<i>Rudbeckia laciniata</i> , 76
<i>Polygonum punctatum</i> , 63	<i>Rumex orbiculatus</i> , 64
<i>Polypodium virginianum</i> , 91	Running clubmoss, 92
<i>Populus balsamifera</i> , 8	Sage-leaved willow, 18
<i>Populus deltoides</i> , 8	<i>Salix amygdaloides</i> , 11
<i>Populus tremuloides</i> , 9	<i>Salix bebbiana</i> , 18
<i>Potentilla fruticosa</i> , 26	<i>Salix candida</i> , 18
Poverty grass, 105	<i>Salix discolor</i> , 19
Prairie cordgrass, 107	<i>Salix humilis</i> , 19
Prairie willow, 19	<i>Salix pedicellaris</i> , 19
<i>Prenanthes alba</i> , 72	Sand & Dog violets, 70
Prickly & Smooth wild roses, 22	Sand cherry, 26
Prickly ash, 21	<i>Sanguinaria canadensis</i> , 49
Prickly gooseberry, 22	<i>Sanicula marilandica</i> , 49
<i>Prunus pumila</i> , 26	<i>Sarracenia purpurea</i> , 85
<i>Prunus serotina</i> , 9	Scheuchzeria, 86
<i>Prunus virginiana</i> , 18	<i>Scheuchzeria palustris</i> , 86
<i>Pteridium aquilinum</i> , 87	<i>Schizachne purpurascens</i> , 106
<i>Ptilium crista-castrensis</i> , 111	<i>Scutellaria lateriflora</i> , 58
Pussy willow, 19	<i>Senecio pauperculus</i> , 76
Pussytoes, 38	Sensitive fern, 89
<i>Pyrola asarifolia</i> , 33	Sharp-lobed hepatica, 37
<i>Pyrola secunda</i> , 33	Shield fern or Wood fern, 88
Quaking aspen, 9	Shining firmoss, 92
<i>Quercus alba</i> , 9	Showy lady's slipper, 80
<i>Quercus bicolor</i> , 10	Shrubby cinquefoil, 26

Key plants appearing in the Field Guides to Native Plant Communities: Forests & Woodlands

Side-flowering aster, 73	<i>Toxicodendron rydbergii</i> , 36
Silver maple, 4	Trailing arbutus, 32
<i>Sium suave</i> , 66	Trailing blackberries, 23
Skunk cabbage, 49	<i>Trientalis borealis</i> , 50
Skyblue aster, 74	<i>Trillium cernuum</i> , 50
Small cranberry, 34	<i>Trillium grandiflorum</i> , 50
Small northern bog orchid, 79	Tufted loosestrife, 56
<i>Smilacina racemosa</i> , 83	Tussock cottongrass, 102
<i>Smilacina stellata</i> , 83	Twinflower, 68
<i>Smilacina trifolia</i> , 83	Two-leaved miterwort, 46
<i>Smilax</i> spp., 69	<i>Ulmus americana</i> , 12
<i>Smilax tamnoides</i> , 35	<i>Urtica dioica</i> , 51
Snowberry & Wolfberry, 28	<i>Uvularia grandiflora</i> , 84
<i>Solidago flexicaulis</i> , 77	<i>Uvularia sessilifolia</i> , 84
<i>Solidago hispida</i> , 77	<i>Vaccinium angustifolium</i> , 30
<i>Solidago uliginosa</i> , 77	<i>Vaccinium macrocarpon</i> , 34
<i>Sorbus</i> spp., 12	<i>Vaccinium myrtilloides</i> , 30
<i>Spartina pectinata</i> , 107	<i>Vaccinium oxycoccos</i> , 34
Speckled alder, 13	<i>Vaccinium vitis-idaea</i> , 34
Sphagnum moss, 108	Veiny pea, 61
<i>Sphagnum</i> spp., 108	Velvet-leaved blueberry, 30
Spotted Joe pye weed, 71	<i>Viburnum lentago</i> , 20
Spotted water hemlock, 65	<i>Viburnum rafinesquianum</i> , 20
Spreading dogbane, 38	<i>Viburnum trilobum</i> , 20
Spreading Jacob's ladder, 47	<i>Vicia americana</i> , 62
Starflower, 50	<i>Viola adunca/conspersa</i> , 70
Starry false Solomon's seal, 83	<i>Viola pubescens/canadensis</i> , 70
<i>Stellaria longifolia</i> , 54	<i>Viola renifolia</i> , 51
Stemless lady's slipper, 78	Virginia creepers, 35
Stinging nettle, 51	Virginia spring beauty, 52
<i>Streptopus roseus</i> , 84	Virginia waterleaf, 43
Sugar maple, 5	Virginia wild rye, 105
Swamp gooseberry, 22	<i>Vitis riparia</i> , 36
Swamp red currant, 27	Water horsetail, 94
Swamp thistle, 71	Water parsnip, 66
Swamp white oak, 10	Water smartweed, 63
Sweet fern, 24	White avens, 42
Sweet gale, 17	White baneberry, 59
Sweet-scented bedstraw, 54	White beak rush, 100
<i>Symphoricarpos</i> spp., 28	White cedar, 3
<i>Symplocarpus foetidus</i> , 49	White oak, 9
Tall blackberries, 23	White pine, 2
Tall coneflower, 76	White rattlesnakeroot, 72
Tall cottongrass, 102	White snakeroot, 71
Tall meadow-rue, 60	Wild bergamot, 57
Tall Northern bog orchid, 81	Wild black currant, 27
Tamarack, 1	Wild calla, 40
Tawny cottongrass, 103	Wild cucumber, 68
<i>Teucrium canadense</i> , 58	Wild geranium, 42
<i>Thalictrum dasycarpum</i> , 60	Wild ginger, 39
<i>Thalictrum dioicum</i> , 60	Wild grape, 36
<i>Thelypteris palustris</i> , 91	Wild honeysuckle, 25
Thimbleberry, 28	Wild leek, 78
Three-fruited bog sedge, 99	Wild sarsaparilla, 38
Three-leaved false Solomon's seal, 83	Winterberry, 17
<i>Thuidium delicatulum</i> , 111	Wintergreen, 32
<i>Thuja occidentalis</i> , 3	Wood anemone, 37
<i>Tilia americana</i> , 12	Wood nettle, 44
Touch-me-nots, 44	Woodland horsetail, 95

Key plants appearing in the Field Guides to Native Plant Communities:
Forests & Woodlands

Woodland sunflower, 76
Yarrow, 73
Yellow & Canada violets, 70
Yellow birch, 5
Yellow lady's slipper, 80
Yellow loosestrife, 56
Zanthoxylum americanum, 21
Zigzag goldenrod, 77
Zizia aptera, 66
Zizia aurea, 67