

Lake County Seed Collection Guide

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Asters and Goldenrods

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

Images ©2019 DJShields. Produced by: Dale Shields & Kelly Schultz ©Lake County Forest Preserve District [kschultz@lcpfd.org]

The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1” on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind.** For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed.**

Seed Groups

Fluffy seeds are quite common, allowing for wind to efficiently move seeds over long distances. Collect when fluffy. It is ok to collect these seeds *slightly* early, by collecting entire stems with seeds that are either fully poofed or have dropped their ray florets (the colorful "petals"); snip stems and let them poof in a paper or mesh bag. Spring fluffy seeds are typically more sensitive to strong weather.



This group often gets a groan, for the visual similarity that some people find boring and many of us find challenging to identify, but these flowers are critical for feeding pollinators after other flowers have faded. Sit and watch a patch of asters on a sunny fall day, and it is teeming with life – butterflies, skippers, and bees feasting away. Prairies would be far duller without the golds, purples, and whites of the flowers. Many of them have a color changing “eye,” going from bright yellow to burgundy with the season. The seeds are simple to collect and most of the species are important for restoration mixes.

These fluffy seeds are Mama’s Boys because different seeds on the same plant will ripen over time, providing a long opportunity to harvest seed. Pro tip: watch for the first seeds; usually a few flowers are still blooming at the same time or a little color lingers around the fluff, making ID easier. The diameter of the fluffy heads is roughly the same as the diameter of the flowers. Generally, goldenrods have smaller flowers and smaller fluff than asters, but not always.

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Woody Plants

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Seed Groups

Time sensitive groups – seeds disperse in a few days or weeks due to wildlife, sensitivity to wind, etc.

Elaiosomes are “ant candy” attached to the seeds. Ants are strong and motivated, able to quickly carry the candy back to their home and tossing the heavy “candy wrapper” (seeds) into their compost piles. Check these species frequently; ants will rapidly collect all of the seeds. These seeds have higher germination when sown within a day or two.



Ballistic capsules catapult their babies away, up to 30 feet! Search YouTube for “exploding seeds” to see these in action. To harvest: learn the ripening sequence & harvest just before explosion; store in a *sealed* paper bag or mesh bag for a day or two. Another option is to cover the seed heads with mesh hoods (*after flowers wilt*) to contain the seeds. Snip the entire stem after the seeds have popped, and carefully open the hoods indoors.



Fluffy seeds are quite common, allowing for wind to efficiently move seeds over long distances. Collect when fluffy. It is ok to collect these seeds *slightly* early, by collecting entire stems with seeds that are either fully poofed or have dropped their ray florets (the colorful “petals”); snip the stems and let them poof in a paper or mesh bag. Spring fluffy seeds are typically more sensitive to strong weather.



Milkweed seeds are ripe when pods are split open & seeds are brown. Ignore the pod color. Pro tip: rubberband the unripe pods, to prevent seeds from flying away.



Berries turn a vibrant color when ripe, as an advertisement to the wildlife to EAT ME and disperse the seed. Collection window is small for some of these seeds. These species need to be sown fresh in damp soil OR cleaned & stored in plastic in the refrigerator (which maintains a higher level of humidity). The natural process of a seed stored in a juicy berry, followed by chewing, digestion, and dispersal in a pile of “fertilizer” means these seeds are not used to completely drying out.



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Mama's Boys will remain on the stem for a while. Ideal for forecasting future workdays.

Shakers drop seeds very close to the mother plant, when shaken loose by the wind or a passing critter. Usually a Mama's Boy, unless strong weather occurs.

Beaks are a subset of the shaker group, with seed capsules that split open like a beak when the seeds are ripe. Collect when beaks are open.

Coneheads are flowers with a cone-shaped center. Imagine these flowers without their colorful parts, and you know exactly what they look like when seeds are ripe. Seeds are inside the hard cone.

Crumbly Coneheads are cone-shaped or thimble-shaped. Softer than standard coneheads, they crumble when ripe and are easily stripped by hand.

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama's Boys.

Hitchhikers are easy to tell when ripe – they hitch a ride on your pants! Color can be an indicator, but not always.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

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Allegheny Juneberry

Amelanchier laevis

ROSACEAE



Photo: 6-30-19, 7-15-20

Berries. *Amelanchier* species are a challenge to ID: flowers or fruit must be present (sometimes must check both) and they hybridize. This species has longer pedicels (stalks to the fruit/flower), often more than 2.2 cm long. Few to no hairs on the ovary. At flowering time, leaves are reddish-tinged & half-grown; later in the season they become green and hairless. Purple fruit preferred, but animals love to eat them too.

Inland Juneberry

Amelanchier interior

ROSACEAE

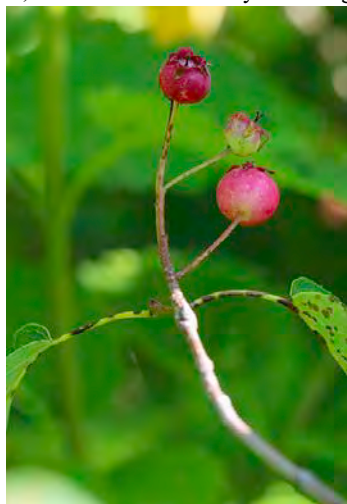


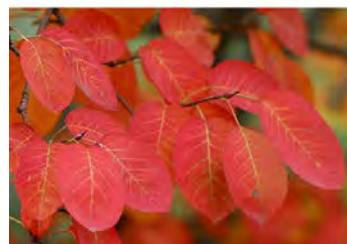
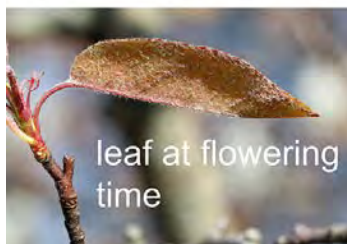
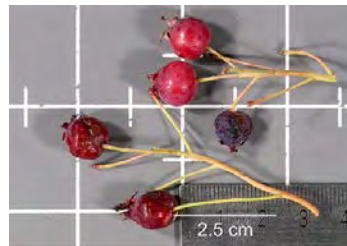
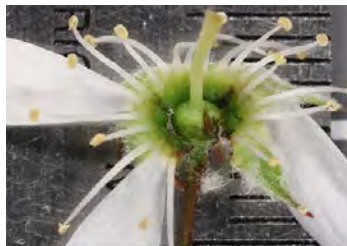
Photo: 7-16-20, 5-4-20

Berries. This species is furry on the top of the ovary, which can be observed in flower and somewhat evident on the tip of the fruit. Leaves have many teeth, more than twice the number of veins. The longer pedicels are more than 16 mm long. Ripe fruits are purple or purple-black.

Serviceberry Cultivar

Amelanchier
x grandiflora

ROSACEAE



Photos: 5-5-20, 7-1-20, 10-30-19

Berries. Serviceberry hybrids and cultivars are commonly sold for landscape shrubbery. A popular one is *A. x grandiflora* (autumn brilliance) an *A. laevis* hybrid which may or may not fit the Flora key in all aspects of pubescence, fruit size and fruit stem length. Do not collect *Amelanchier* berries from landscape plants. Source only from remnant native populations for use in restorations.

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Black Raspberry

Rubus occidentalis

ROSACEAE

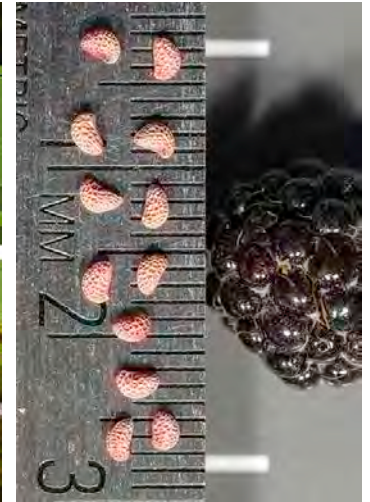


Photo: 7-10-18

Berries. These sweet berries are found in many habitats. Prickly stems with a blue/white waxy coating (“glaucous”). Leaves typically in 3s, green above and white below. Immature reddish fruits and finally ripening to dark black berries that are easy to pluck off the plant.

Kittatinny Blackberry

Rubus bellobatus

ROSACEAE



Photo: 7-26-18

Berries. Compared to raspberries: blackberry plants have thicker canes, leaves typically in 5s, and the fruit cluster is bigger and longer. This common species is hairless. The fruit is 1.5 – 3 cm long. Easily plucked when ripe.

Highbush Blackberry

Rubus allegheniensis

ROSACEAE



Photo: 8-1-18

Berries. This common species has glandular hairs (looks like lollipops under magnification) on the pedicels (the small stems to the flower/fruit). Primary stalks are 7-11mm wide. Fruit are typically 1.5 cm or longer.

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Missouri Wild
Gooseberry

Ribes missouriense

GROSSULARIACEAE

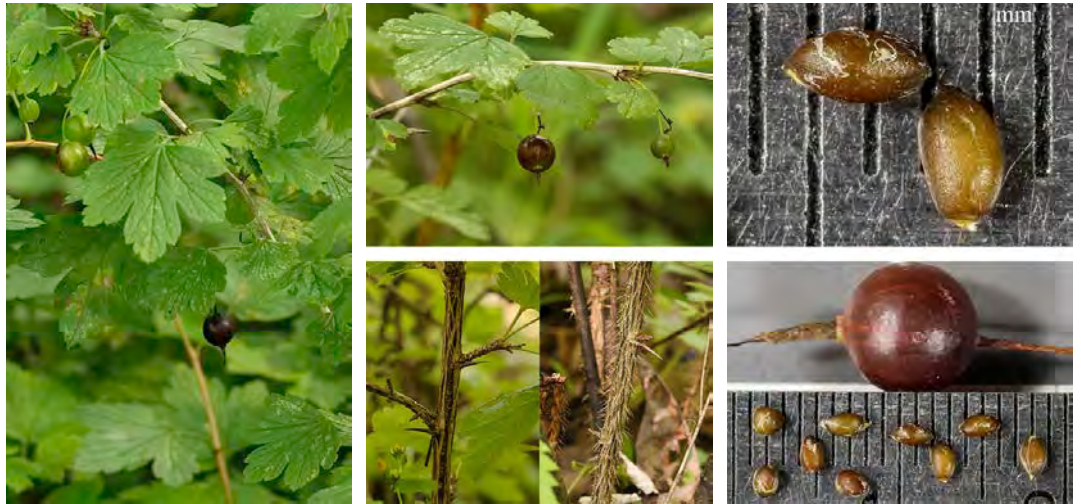


Photo: 7-22-19

Berries. Currants & gooseberries are tasty to many critters; don't wait long to collect these. This species has spines at the nodes plus prickles (skinnier, smaller spines) on the stem, no prickles on fruit, and leaves do not have golden dots. Collect when berries are plump & dark.

Prickly Wild
Gooseberry

Ribes cynosbati

GROSSULARIACEAE

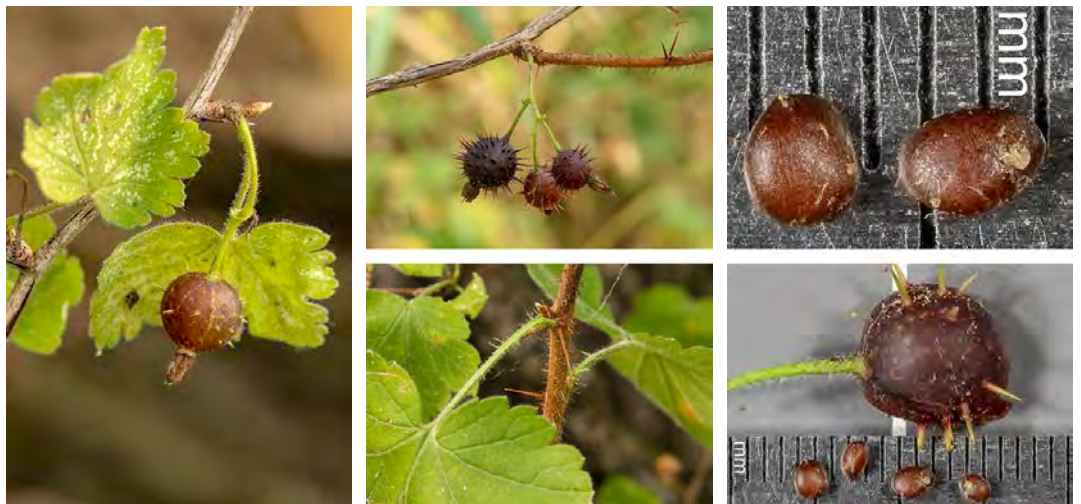


Photo: 8-15-18

Berries. This species is unique with the "medieval mace" berries. Despite the prickly fruits, critters will eat them. Collect promptly when burgundy or darker. Mesic woodlands & seeps.

Wild Black Currant

Ribes americanum

GROSSULARIACEAE



Photo: 8-10-17

Berries. This *Ribes* species has leaves with golden glandular dots, and stems lack prickles and thorns. Flowers typically about 1 cm long. Var. *mesochorum* (known in IN) has different sepals, and the terminal lobe of the leaf is longer with longer teeth. Collect plump black fruits.

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Choke Cherry

Prunus virginiana

ROSACEAE

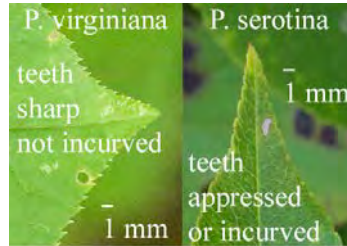


Photo: 8-10-17

Berries. This shrub has long clusters of white flowers like its tree sister - black cherry (*P. serotina*). Fruits are dark when ripe and very astringent when raw (hence the name). Prone to black knot, a fungus that grows on the stems of cherries & plums. Birds love the fruit.

Riverbank Grape

Vitis riparia

VITACEAE



Photo: 8-10-18

Berries. Grape vines are often spotted sprawling over and through trees, like Tarzan vines holding up the buckthorn you are trying to cut! Older vines are covered in peeling brown bark and ooze a gelatinous sap when cut. Fruits are blue-black with a waxy gray-blue color when ripe. Leaves are lobed, and the underside of the leaf is hairy only on the veins or completely hairless. Good food for birds & insects.

Yellow Honeysuckle

Lonicera reticulata

CAPRIFOLIACEAE



Photo: 9-4-18

Berries. Yes, there are good honeysuckles! Viney. Leaves along the vine are oval paired opposites. The terminal leaves are perfoliate (stem perforates the leaf), providing a backdrop for flowers & fruit. It is rare to find flowering specimens in the wild. Commonly creeping along the ground; flowering plants are more likely on edges (a little more sun), with something to climb, and deer protection.

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Gray Dogwood

Cornus racemosa

CORNACEAE



Photo: 8-16-18

Berries. This native shrub inspires mixed reactions in land managers. Used by numerous native bees, moths, flies, butterflies, birds, and mammals. Prone to creating thickets, which are essential for the struggling shrubland birds, but can readily take over prairies; finding the right balance is key. White berries on bold red pedicels. Leaves are opposite; gently tear one in half, and it will dangle by stringy veins.

Blue-fruited
Dogwood

Cornus obliqua

CORNACEAE

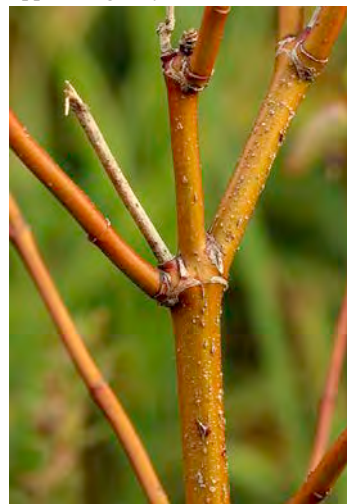


Photo: 9-22-19

Berries. Can be mistaken for red-twig dogwood (*C. sericea*), but *C. obliqua* is the only red dogwood with blue fruit. 2nd year twigs have a brown pith (the twig core). Twigs are usually red with gray streaks but can be yellowish in winter. Bluer fruits preferred. Wetlands.

Red Sticks
aka
Red-twig Dogwood

Cornus sericea

CORNACEAE



Photo: 9-22-19

Berries. Commonly called “red twig” or “red osier.” Ripe berries are white. Seeds are dark, which appears to be a unique trait among *Cornus*. Pith (twig core) is lighter than surrounding wood. Flora also recognizes *C. baileyi*. Examine the hairs on the underside of the leaf for ID.

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Moonseed

Menispermum canadense

MENISPERMACEAE



Photo: 9-11-19

Berries. Typical leaves look like a cross between a grape & ivy with 3-5 lobes, but can be rounded or egg-shaped. Leaves are “peltate” (petioles - leaf stems - are attached under the leaf. Like an umbrella). This species is dioecious; it needs male & female plants to produce fruit. Vines are woody. Berries are blue-black, like wild grapes, but seeds are crescent moons. Toxic – do not eat!!

American Hazelnut

Corylus americana

BETULACEAE



Photo: 9-12-17

Shattering. The “Nutella shrub” excites groups into collecting. The nut is wrapped in a pair of oversized bracts, like insane eyelashes. Watch for the nut & bracts to turn brown; collect promptly before the squirrels. If too tight, pliers or nutcracker can help with processing.

Spicebush

Lindera benzoin

LAURACEAE

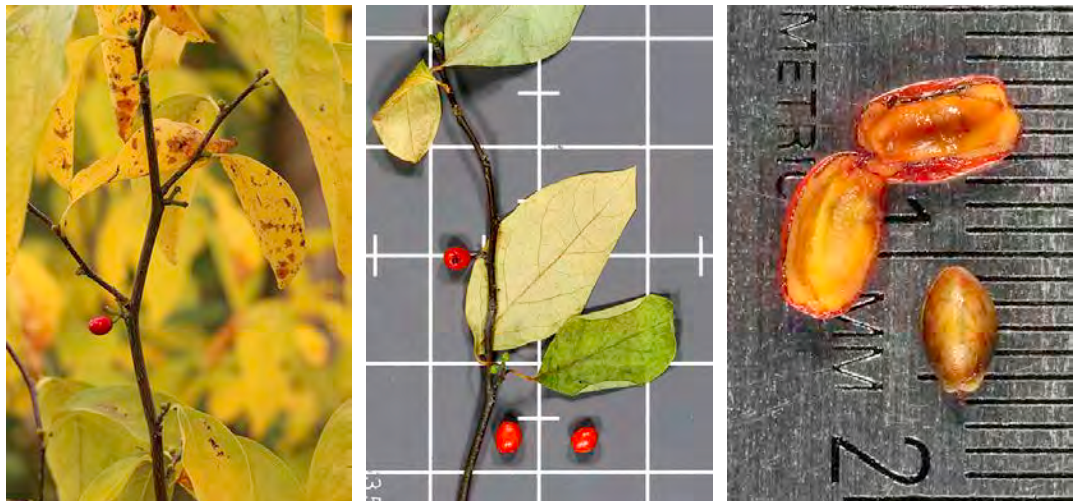


Photo: 9-14-17

Berries. More common in the southeast part of the region. Flowers and crushed leaves are aromatic. Bright red, flattened oval-shaped fruits. Only local species in the genus. Seeds are unusually tender – do not use a blender or other aggressive processing methods.

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Nannyberry

Viburnum lentago

ADOXACEAE



Photo: 9-12-17

Berries. Mama's Boy. *Viburnums* are fantastic shrubs to use in restorations since they are rarely eaten by deer. This common species grows in wet to mesic, sun to shade environments. Look for opposite leaves and droopy clusters of dark blue-black fruits on vibrant red pedicels (the fruit/flower stems). Leaf stems have a skinny winged margin. End buds are unusually elongated. One of the larger species, up to 25' tall.

Black Haw

Viburnum prunifolium

ADOXACEAE



Photo: 12-3-17, 7-18-20

Berries. Mama's Boy. Another *Viburnum* with dark blue-black fruits on drooping reddish pedicels. Bark is similar to hawthorns (haw). Mesic to dry woodlands & savannas, max 15'. Simple petioles, leaf tip can be rounded or pointed (*V. lentago* has winged or wavy petiole; abruptly pinches to a pointed tip). Leaves are usually much smaller than *V. lentago*.

Maple-leaved
Arrowwood

Viburnum acerifolium

ADOXACEAE

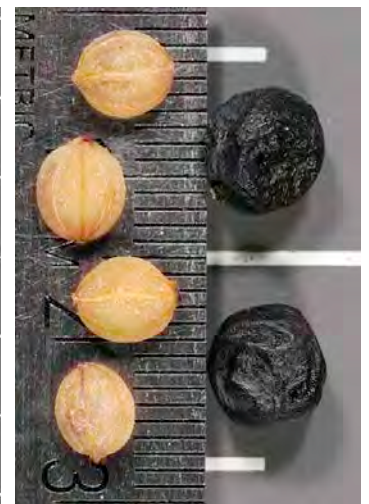


Photo: 11-2-18

Berries. Mama's Boy. A more conservative *Viburnum*, often in sandy or morainic soils. The species name literally means "maple-leaved." Fruits are dark blue-black on red pedicels, but these stand upright. Reportedly prone to transplant shock, sowing seeds may be the best option.

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Prickly Pasture Rose

Rosa carolina
subsp. *subserulata*

ROSACEAE



Photo: 9-15-18

Berries. *R. carolina* has straight, needle-like prickles, paired at the stem nodes and often densely at the base; var. *subserulata* also has prickles scattered throughout the stem. Usually 5-7 leaflets. Height usually 70 cm or less. Rose hips aka the fruit should be red-orange.

Downy Illinois Rose

Rosa setigera
var. *tomentosa*

ROSACEAE



Photo: 10-6-18

Berries. Mama's Boy. Leaflets primarily in groups of 3, sometimes 5. Plants can be more than 1 m tall, found in wet to mesic open woodlands, marshes & sedge meadows, wet to dry mesic prairies. This variety has hairs all over the underside of the leaf face. The straight species is less common in the region and has hairs only on the veins or is hairless.

Early Wild Rose

Rosa blanda

ROSACEAE



Photo: 10-9-19

Berries. Mama's Boy. Leaflets 5-7. Marketed as "smooth rose," this species can be completely thornless but the lower stems often have slender prickles. Part shade to sunny, dry to wet. Most local *Rosa* species bloom Jun/Jul; this species usually starts in mid-May. Collect plump red hips.

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Climbing Bittersweet

Celastrus scandens

CELASTRACEAE

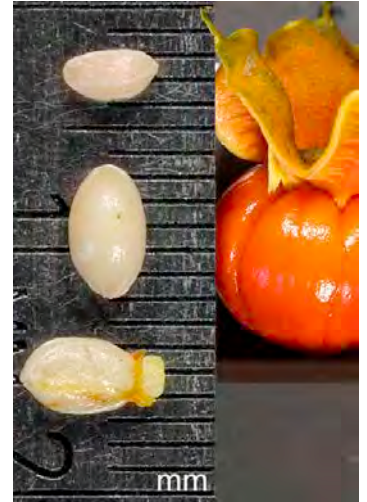


Photo: 9-18-19

Berries. This native bittersweet vine is overshadowed by its aggressive Oriental sister. The easiest way to tell these species apart is that *C. scandens* only has flowers & fruit at the tips of the terminal stems; the invasive *C. orbiculatus* forms tons of berries in the axils (where the leaves meet the stem).

Oriental Bittersweet

Celastrus orbiculatus

CELASTRACEAE



Photo: 11-4-19

Berries. Both sisters have round-ish leaves; *C. scandens* leaves are widest in the middle or closer to the stem, or oval shaped (*C. orbiculatus* is wider beyond the middle or completely round). *C. orbiculatus* is a jerk, able to strangle trees or swallow them up like kudzu. Kill it!

Indigo Bush

Amorpha fruticosa

FABACEAE



Photo: 9-28-17

Shattering. Blooms just like *A. canescens* (lead plant) with purple flower & bright orange stamens, but this shrub grows to head height. Mini banana-shaped seed pods are quite different from its sister. Collect when brown. Wet to wet-mesic habitats, often near streams and rivers.

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Bladdernut

Staphylea trifolia

STAPHYLEACEAE



Photo: 10-7-17

Shattering. Mama's Boy. This shrub forms dangling Chinese paper lanterns with 3 fused chambers, which can float downstream. A few glossy taupe seeds in each lantern. Leaflets in 3s. Forms rhizomatous colonies. Rich woodlands, wet to mesic, often growing just above wet places. Collect beige-brown lanterns. Sow promptly, seeds take a long time to germinate.

New Jersey Tea

Ceanothus americanus

RHAMNACEAE

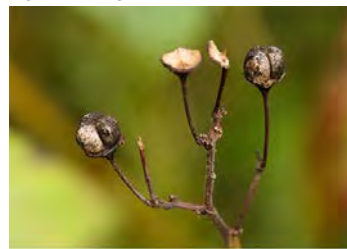


Photo: 10-8-18

Ballistic. This prairie shrub is naturally dwarf-sized and deer like to prune it even shorter. Capsules go from green, to black, then black crackled with beige (like a burnt marshmallow), before catapulting away. Collect capsules that are crackled or all black. Store in a sealed paper or mesh bag. Seeds are glossy little beans in assorted colors. Needs hot water scarification & cold-moist stratification to germinate.

Ninebark

Physocarpus opulifolius

ROSACEAE

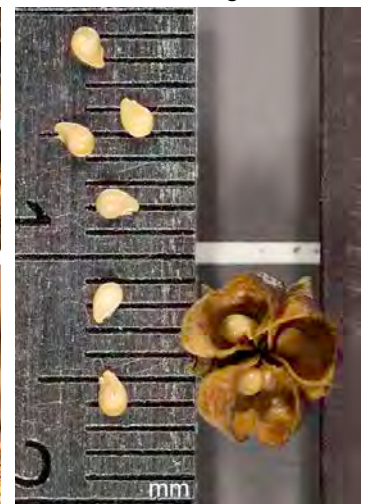


Photo: 10-9-17

Beaks. The many layers of peeling bark in assorted shades of brown give this shrub a distinct appearance. Loaded with white flowers. Seed capsules are clustered with 3 – 5 chambers, which split open to release tiny shiny seeds.

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Winterberry

Ilex verticillata

AQUIFOLIACEAE

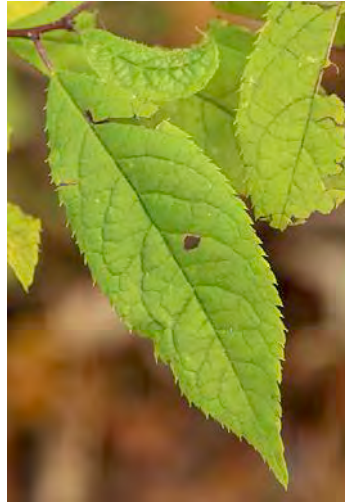


Photo: 10-11-18

Berries. This native holly has dense clusters of red berries. Leaves are deciduous and light green. Flowers are in whorls (“*verticillata*”) around the leaf axils. Likes flatwoods, bogs, swamps. Collect Christmas-red berries.

Kalm’s
St. John’s Wort

Hypericum kalmianum

HYPERICACEAE



Photo: 10-14-19

Beaks. An uncommon short shrub found close to Lake Michigan in wet to dry sand prairies and marly pannes. Yellow flowers loaded with so many stamens, it is like a yellow pompom was placed in the center. Bees love it! Capsules split into 5s. Flower clusters at tips only.

Shrubby
St. John’s Wort

Hypericum prolificum

HYPERICACEAE

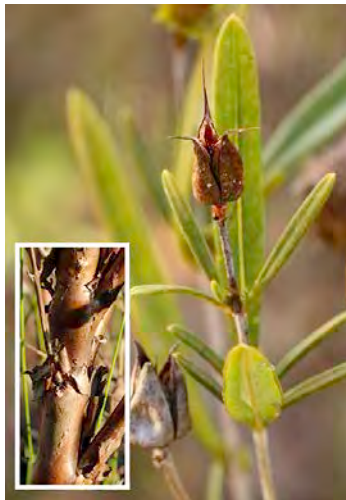


Photo: 10-14-19

Beaks. Very similar to *H. kalmianum*. Capsules split into 3s. This species flowers & seeds at the top *and* in the upper axils. Bark is slower to peel than its sister. An uncommon shrub found in mesic to dry savannas, prairies, and seeps; usually near bluffs. Short (less than 2 m).

Woody Plants

Kelly Schultz¹, Dale Shields²

version 2 7/2020

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Poison Ivy

Toxicodendron radicans

ANACARDIACEAE



Photo: 10-12-19

Berries. YIKES!! Don't collect that! Leaflets three, leave it be, it's poison ivy. Other natives have three leaflets but notice the centipede-like clinging aerial roots and creamy white ripe berries to confidently identify poison ivy. Here, a flock of yellow warblers chow down on their way south. No photographers were harmed in collecting these images.

Smooth Sumac

Rhus glabra

ANACARDIACEAE



Photo: 12-25-18

Berries. Another native shrub that inspires mixed reactions. Forms dense thickets, great for pollinators, birds, and mammals. Lovely fall color, but overwhelms grasslands without fire. Branches are smooth all over and the fruit are relatively smooth, compared to *R. typhina*.

Northern Sumac

Rhus x pulvinata
(*R. glabra* x *typhina*)

ANACARDIACEAE



Photo: 12-25-18

Berries. A natural hybrid between smooth sumac & staghorn sumac. This species has fuzzy new branches, like velvety antlers (same as *R. typhina*) but smooth 2nd year branches (like *R. glabra*). The fruit hairs on *R. glabra* are typically less than 0.5 mm, *R. typhina* hairs are mostly 1.5 mm long; this hybrid has hairs in between.

Woody Plants

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Buttonbush

*Cephalanthus
occidentalis*

RUBIACEAE



Photo: 11-2-18

Crumbly Coneheads. Loves standing water, can form small thickets in shady ponds that birds love. A white pincushion of flowers, which becomes a crumbly globe of seed – both are distinctive. Collect when easily crumbles by hand.

Summer Woodland Forbs

Kelly Schultz¹, Dale Shields²

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The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1” on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind**. For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed**.

Seed Groups

Time sensitive groups – seeds disperse in a few days or weeks due to wildlife, sensitivity to wind, etc.

Elaiosomes are “ant candy” attached to the seeds. Ants are strong and motivated, able to quickly carry the candy back to their home and tossing the heavy “candy wrapper” (seeds) into their compost piles. Check these species frequently; ants will rapidly collect all of the seeds. These seeds have higher germination when sown within a day or two.



Ballistic capsules catapult their babies away, up to 30 feet! Search YouTube for “exploding seeds” to see these in action. To harvest: learn the ripening sequence & harvest just before explosion; store in a *sealed* paper bag or mesh bag for a day or two. Another option is to cover the seed heads with mesh hoods (*after flowers wilt*) to contain the seeds. Snip the entire stem after the seeds have popped, and carefully open the hoods indoors.



Fluffy seeds are quite common, allowing for wind to efficiently move seeds over long distances. Collect when fluffy. It is ok to collect these seeds *slightly* early, by collecting entire stems with seeds that are either fully poofed or have dropped their ray florets (the colorful "petals"); snip the stems and let them poof in a paper or mesh bag. Spring fluffy seeds are typically more sensitive to strong weather.



Milkweed seeds are ripe when pods are split open & seeds are brown. Ignore the pod color. Pro tip: rubberband the unripe pods, to prevent seeds from flying away.



Berries turn a vibrant color when ripe, as an advertisement to the wildlife to EAT ME and disperse the seed. Collection window is small for some of these seeds. These species need to be sown fresh in damp soil OR cleaned & stored in plastic in the refrigerator (which maintains a higher level of humidity). The natural process of a seed stored in a juicy berry, followed by chewing, digestion, and dispersal in a pile of “fertilizer” means these seeds are not used to completely drying out.



Lake County Seed Collection Guide

Summer Woodland Forbs

Kelly Schultz¹, Dale Shields²

version 2 6/2020

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Mama's Boys will remain on the stem for a while. Ideal for forecasting future workdays.

Shakers drop seeds very close to the mother plant, when shaken loose by the wind or a passing critter. Usually a Mama's Boy, unless strong weather occurs.

Beaks are a subset of the shaker group, with seed capsules that split open like a beak when the seeds are ripe. Collect when beaks are open.

Coneheads are flowers with a cone-shaped center. Imagine these flowers without their colorful parts, and you know exactly what they look like when seeds are ripe. Seeds are inside the hard cone.

Crumbly Coneheads are cone-shaped or thimble-shaped. Softer than standard coneheads, they crumble when ripe and are easily stripped by hand.

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama's Boys.

Hitchhikers are easy to tell when ripe – they hitch a ride on your pants! Color can be an indicator, but not always.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

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Red Baneberry

Actaea rubra

RANUNCULACEAE



Photo: 7-5-18

Berries. Red baneberry is the bright sister to doll's eyes aka white baneberry. Berries need to be reddish before collecting. Birds are apparently immune to the toxicity of this plant, but berries often linger, uneaten.

Wild Onion
aka
Wild Garlic

Allium canadense

ALLIACEAE



Photo: 7-7-19

Shattering. This native garlic rarely forms seed, but it does form "bulblets." Collect the bulblets when they easily separate from the plant. The outer papery shell will be beige and the inner bulblet can vary in color.

Cancer Root

*Conopholis
americana*

OROBANCHACEAE



Photo: 7-18-2019

Berries. This uncommon parasite attaches to the roots of Oaks, primarily the red oak group. Little is known about germination. Capsules are dull and dark when ripe, due to the deep brown color of the seeds inside, and start to fall off the "cone." Fleshy capsules are reportedly eaten by mammals, but can also dry & split open. Collect <10%. Sow fresh around red oaks. 4+ years to attach & flower.

Summer Woodland Forbs

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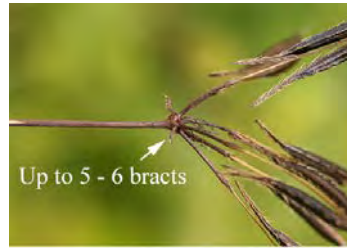
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Smooth Sweet Cicely

Osmorhiza longistylis

APIACEAE



Photos: 7-15-2017
And 8-10-2019



Shattering. Hitchhikers. The sweet cicely species are very similar. This species has anise-scented foliage, 5-6 bracts, and 8-16 flowers per umbellet. Plants are smooth or fuzzy, but do not have long hairs. Seeds shatter in place, but can hitch a ride by the tips.

Hairy Sweet Cicely

Osmorhiza claytonii

APIACEAE

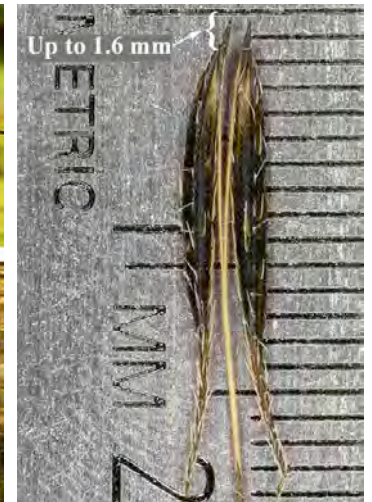
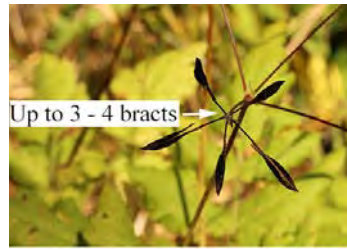


Photo: 7-18-2017



Shattering. Hitchhikers. The sweet cicely species are very similar. This species has 3-4 bracts, typically 4-7 flowers per umbellet. Lacks the anise (licorice) odor. Plants have long spreading hairs. Seeds shatter in place, but can hitch a ride by the tips.

Virginia Waterleaf

Hydrophyllum virginianum

HYDROPHYLLACEAE



Photo: 7-18-19



Beaks. Seeds are shades of brown and cratered. Capsules split open to release seeds. Snip entire head once an open capsule has been spotted. Variable patterns on the leaves: some are entirely green, others have "water spots" - white or pale green blotches of various sizes.

Summer Woodland Forbs

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Mayapple

Podophyllum peltatum

BERBERIDACEAE

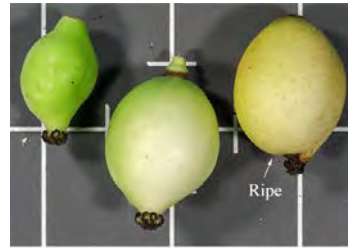
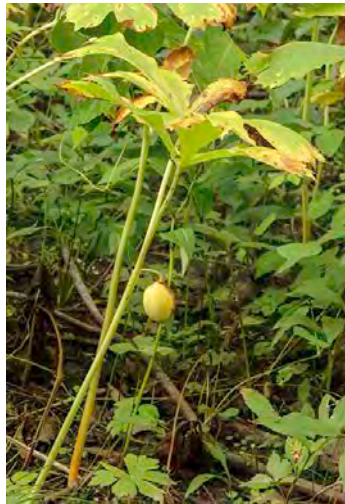


Photo: 7-23-18

Berries. These fruits are reportedly eaten by box turtles. The fruits turn from unripe green to a ripe pale yellow; the inside should be soft & gelatinous. Most spread by rhizomes so it's nice to provide genetic diversity by moving seeds around.

Garlic Mustard

Alliaria petiolata

BRASSICACEAE



Photo: 7-28-18

Ballistic. This evil invasive spreads throughout woodlands, especially right after clearing work. Flowers have 4 petals, indicating this is in the mustard family, and leaves have a garlicky odor. Pull it when blooming or pods are green. Beige seed pods are fragile & ballistic; pulling at this stage only scatters the seeds around. Reportedly harms the beneficial mycorrhizal fungi that natives need to thrive.

Shooting Star

Dodecatheon meadia

PRIMULACEAE

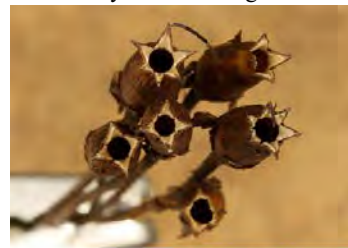
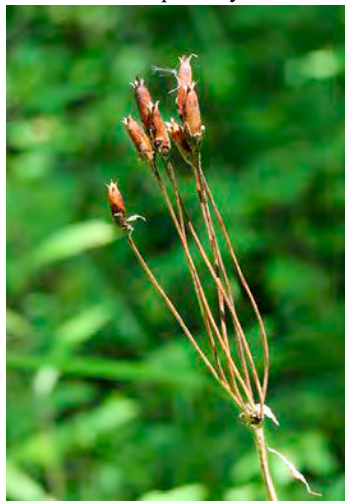


Photo: 7-29-17

Beaks. Look for brown & open capsules. Capsules start off green-yellow and nodding, then they raise to the sky, then turn brown, and finally open. Seeds are tiny. Germination is high, but survival past seedling stage is low due to damping off. Takes several years to flower.

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Eastern Tall
Anemone

Anemone virginiana

RANUNCULACEAE

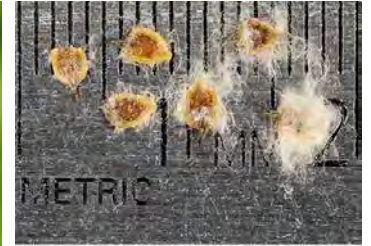


Photo: 8-1-17

Crumbly coneheads. The thimble-shaped cone fluffs up into a cottony mass when ripe. Check for loose cotton, strips easily by hand when ripe. *A. cylindrica* leaves are more deeply lobed, have more slender coneheads (pencil-width), and are found in full sun.

Wood Self Heal

Prunella vulgaris
var. *lanceolata*

LAMIACEAE



Photo: 8-3-18

Shakers. This ultra-common native weed grows in disturbed old fields, woodlands, and prairies. A variety of the lawn weed, both have purple flowers & square stems. The native one grows upright. Ultra common, this species doesn't need to be collected & sown.

Chicago Leek

Allium burdickii

ALLIACEAE



Photo: 8-5-18

Shattering. Black pearls hiding in the understory. Formerly a variety of *A. tricoccum*, this species of leek has green petioles, smaller clusters of flowers & seed, and typically starts to ripen first. Poor from seed, leeks spread locally by bulbs. Poaching is a problem.

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Heart-leaved Skullcap

Scutellaria ovata

LAMIACEAE



Photo: 8-9-18

Shakers. Skullcaps hold their seeds in “scoop shovels” that are covered by a cap. When ripe, the cap falls off and seeds easily shake loose. Look for open scoops, then snip the entire stalk. Hand collecting leaves a weird residue that is easily washed off, no known skin issues. This uncommon species appears to be a short-lived perennial. It moves around and sometimes creates fairy rings. Two years to germinate.

Yellow Pimpernel

Taenidia integerrima

APIACEAE



Photo: 8-16-18

Shattering. Mama’s Boy. Like Alexanders and other parsley-relatives, this species has an umbel (flat umbrella) of flowers and seeds. Collect seed when they easily strip free by hand. Smells like celery. A true savanna species, occasionally in prairies.

White Avens

Geum canadense

ROSACEAE



Photo: 8-23-18

Hitchhikers. A common white-flowered forb, found in woodlands, savannas, and pastures. This pioneering species easily moves around with its hitchhiker seeds and colonizes new areas. Not a species to target for collection, but often asked about when it appears on socks.

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Honewort

Cryptotaenia canadensis

APIACEAE



Photo: 8-24-17

Shattering. A woodland parsley relative, this name comes from the historic treatment of swelling (hone) by the plant (wort). Collect when easy to strip off the stem. Host plant for swallowtail caterpillars.

Blue Cohosh

Caulophyllum thalictroides

BERBERIDACEAE

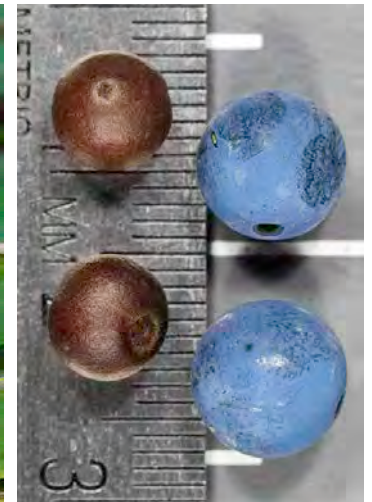
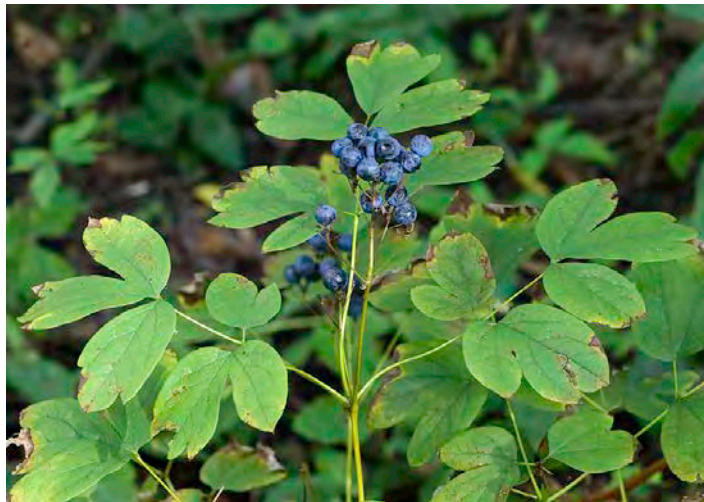


Photo: 8-25-18

Berries. Looks like a blueberry, but it is actually a hard nut with a dry papery blue shell. Leaves are shaped like *Thalictrum* (“thalictroides”). Reportedly takes 5 years to germinate from seeds (yes, 5!) but may germinate faster when sown fresh. Individuals dug up during a plant rescue went dormant for 2 years from transplant shock. A conservative species of mesic woodlands & savannas.

White Baneberry

aka

Doll’s Eyes

Actaea pachypoda

RANUNCULACEAE



Photo: 8-31-18

Berries. An awesomely creepy plant, the common name is very appropriate. Collect when berries are white-ish. As with any plant called a “bane,” this is not one you want to eat.

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Enchanter's
Nightshade

Circaea canadensis

ONAGRACEAE



Photo: 8-25-18

Hitchhikers. This species is abundant throughout our region's woodlands and is only worth (intentionally) collecting for new restorations. Collect when it sticks to your socks.

Golden Alexanders

Zizia aurea

APIACEAE



Photo: 8-25-17

Shattering. This common parsley-relative has bright yellow flowers that turn to green seeds and finally ripen to brown. Collect when easy to strip by hand. Most often mesic to wet-mesic prairies, but can be in open woodlands, savannas, prairies, and fens, from wet to dry.

Smooth Bank Cress

Boechera laevigata

BRASSICACEAE

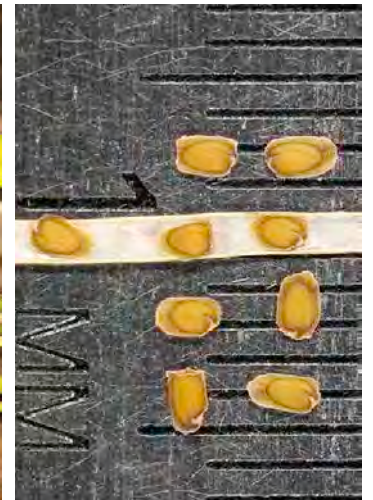


Photo: 8-26-18

Ballistic. This easily overlooked native biennial loves rocky shady habitats. The small flowers become thin "siliques" (skinny pods, like garlic mustard's, but those point upward). Look for open siliques, collect some unopened pods (<10%).

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Wood Mint

Blephilia hirsuta

LAMIACEAE



Photo: 8-5-18

Shakers. Like *Monarda* and many other mints, seeds are held in “tubes” (the calyx). Tip into your hand, seeds will fall out if ripe. Differs from Ohio horse mint (*B. ciliata*) with longer petioles & longer stem hairs, minty odor when the leaves are crushed, prefers a little shade.

Tall Agrimony

Agrimonia gryposepala

ROSACEAE

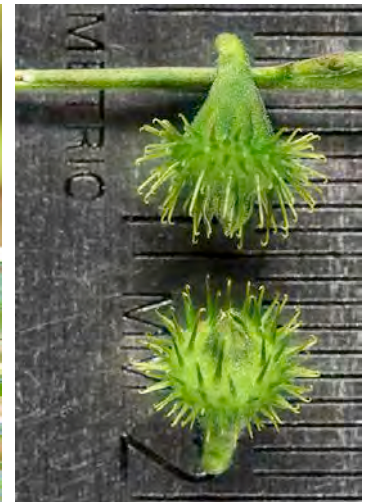


Photo: 8-30-18

Hitchhikers. All agrimony species are priceless aka unavailable on the commercial market. This is the most common of them. Little yellow flowers turn into green burs, about ¼” in diameter. Easy to spot due to the seed size, easy to collect, good for early woodland restorations.

Beaked Agrimony

Agrimonia rostellata

ROSACEAE



Photo: 8-30-18

Hitchhikers. This species favors mesic/upland woodlands and has smaller fruits than the common *A. gryposepala*. Collect when it sticks to your clothes, easily strips by hand. Agrimony are relatively friendly hitchhikers – very easy to clean off of your pants.

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Starry Champion

Silene stellata

CARYOPHYLLACEAE



Photo: 8-28-18



Beaks. This lovely plant can be found in healthy savannas, open woods, and sometimes wet-mesic prairies. The flower is a white fringed star. Capsules form inside the paper calyx; collect beige capsules.

Pale Indian Plantain

Arnoglossum atriplicifolium

ASTERACEAE



Photo: 8-31-18



Fluffy. This towering plant is regionally uncommon (C = 8) but locally abundant. Underside of leaves are *pale* and lobed. Snip when fluffy, pappus (fluff) is bleach white and seeds are plump and blackish. Readily self-seeds.

Lake County Seed Collection Guide

Summer Wetland Grasses and Kin

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Grasses and kin include plants in the Grass Family (Poaceae), Rush Family (Juncaceae), and Sedge Family (Cyperaceae). All of these species have long narrow, parallel-veined leaves and are wind-pollinated. These species are typically identified by their seeds, so any field guide of these species is essentially a seed guide. Check for ripeness with the “touch test” – if they are loose, then they are ripe. Strip by hand or snip stalks.

Cyperaceae (Sedge Family). *Sedges have edges*: stems are typically triangular, and the edges can be felt by rolling in your fingers. Leaves are 3-ranked: each leaf exits from a different side of the triangle, rotating around the stem. Some species have round solid stems, but are not jointed like grasses. Single seed in each flowering scale. The sheath is closed on the side opposite the leaf blade. The biggest group is the genus *Carex*, which has a single seed in a papery pouch called a perigynium. Other members of this family have naked seeds and go by common names such as bulrush, woolgrass, spike rush, nut rush, nut sedge, etc. Sedges are very tough to ID. The good news: very few sedges are bad, you can always collect a “woodland sedge mix.” Consult a sedge guide for ID; this guide is intended to highlight a few quick notes.



Juncaceae (Rush Family). *Rushes are round*: stems are typically round & solid. Some have flattened stems, but they are not jointed. Typically unbranched, simple stems. Three or more seeds in a three-sided capsule. Flower parts come in threes and sixes, most flowers are perfect, having both stamens and pistils. Leaves are thread-like or flat & linear. Many of our common species are relatively short (about knee-high), and appear delicately wiry. Common species include path rush, Dudley’s rush, and soft rush.



Poaceae (Grass Family). *Grasses are straws, with holes to the ground*: stems are typically round & hollow, like a reed. Some species have flattened stems. Grasses have jointed stems; the joints are called nodes and the stem is solid at that point. There is a single seed in each flowering scale. Leaves are 2-ranked, with each leaf exiting the stem on the opposite side of the one below. The sheaths are open or split on the opposite side from the leaf blade. Grasses can be 1-2’ tall (like poverty oat grass & June grass) or head height (like big bluestem) or even basketball player tall (like the invasive *Phragmites*).



Summer Wetland Grasses and Kin

Kelly Schultz¹, Dale Shields²

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Common Fox Sedge

Carex stipata

CYPERACEAE

CAREX: VULPINAE

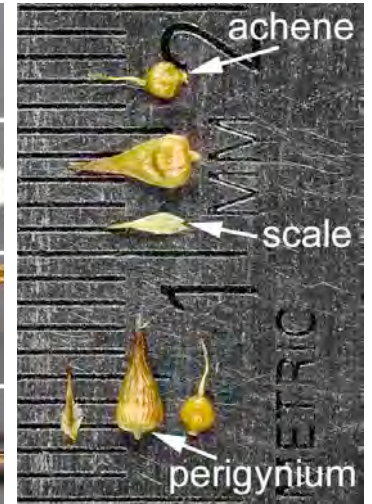


Photo: 6-12-19

Common sedge of wet habitats, aka awl-fruited sedge, referring to the long beak. Fox sedges tend to resemble bushy fox tails, with densely clustered pointed seeds. This species has rugose (wrinkly) sheaths. Stems are thick, but easily compressed.

Narrow-leaved Oval Sedge

Carex tenera

CYPERACEAE

CAREX: OVALES

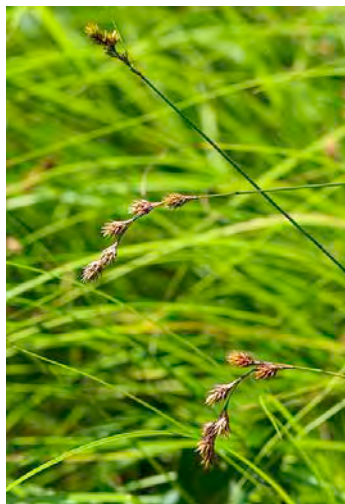


Photo: 6-19-17

One of the “Oh no - Oval sedges!” Wide leaves, less than 3 mm wide, and look for some separation between the spikelets (pinecones of seed). The spike is often nodding or arched at harvest time. Perigynia, pistillate scales, and sheaths are useful to ID from other oval sedges.

Common Tussock Sedge

Carex stricta

CYPERACEAE

CAREX: PHACOCYSTIS



Photo: 6-29-18

As this name says, this species is common and forms tussocks (mounds, like prairie dropseed) that are easily discovered while tripping your way through a wetland. Seeds are small and tightly packed; initially green with brown scales before ripening to a light brown. Most spikes are staminate at the tip. Lowest leaf sheaths disintegrate to look like the laces of a boot, or a rope net. Easily crumbles by hand.

Summer Wetland Grasses and Kin

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Small-seeded Fox Sedge

Carex annectens var. *xanthocarpa*

CYPERACEAE

CAREX:
MULTIFLORAE



Photo: 6-27-18

Happiest in full sun & damp places but can grow in part shade & mesic soils. Seeds are small & yellow, sheaths are wrinkly. Seeds are slightly smaller & spikes are slightly shorter than the straight species *C. annectens*. The variety *xanthocarpa* is more common in the region.

Brown Fox Sedge

Carex vulpinoidea

CYPERACEAE

CAREX:
MULTIFLORAE

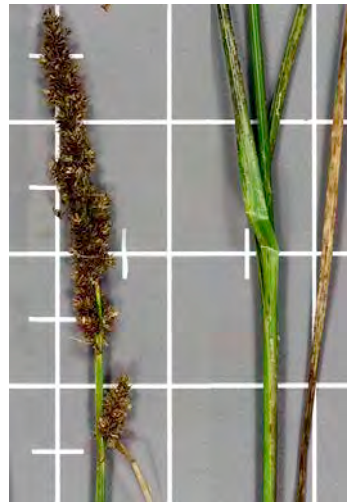


Photo: 8-8-2017

C. vulpinoidea is similar to *C. annectens* but leaf blades are similar height or taller than fruiting stems; the 2 varieties of *C. annectens* typically have fruiting stems taller than leaf blades. *C. vulpinoidea* typically has a more prominent bract at the base of the spikelet, the spikes are often more than 5.5 cm long, and the perigynia have longer beaks relative to the winged body.

Prairie Woolly Sedge

Carex pellita

CYPERACEAE

CAREX: PALUDOSAE



Photo: 7-3-19

One of the granular-seeded sedges, notable for its woolly (like peach fuzz) perigynia. Perigynium color is variable – pale green, yellow, or purplish before drying to a muted brown. Consult leaves & perigynia size. Common in wetlands and plays well with other natives.

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Running Prairie
Sedge

Carex sartwellii

CYPERACEAE

CAREX:
HOLARRHENAE



Photo: 7-3-19

A rhizomatous species of full sun wetlands. Isolated stalks sprout up from the creeping roots, and there are more sterile stalks than fertile ones. Most sedge species are clumping or grow in dense mats; the single stalks are a key feature to narrow down the ID.

Dark-scaled Sedge

Carex buxbaumii

CYPERACEAE

CAREX: RACEMOSAE



Photo: 7-4-19

Plump mint chocolate chip spikelets: pale green seed interspersed with dark chocolate scales. ID can be fairly certain from spikes alone, but can be confirmed by rhizomes, stem bases, and leaf width. Old seeds may turn brown.

Brome Tussock
Sedge

Carex bromoides

CYPERACEAE

CAREX: DEWEYANAE

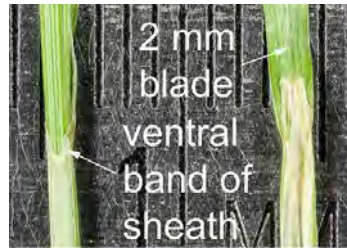


Photo: 7-8-19

State threatened, abundant in flatwoods. Forms tussocks (mounds) like *C. stricta*, but a shorter stature plant and seeds are clearly different – thin lance-shaped perigynia. Sheaths have curved thickened hyaline (translucent) bands. Hyaline features of native plants are typically translucent off-white, like a fingernail.

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Common Lake Sedge

Carex lacustris

CYPERACEAE

CAREX: PALUDOSAE



Photo: 7-12-20

Common in wetlands. Plants are tall (often 1 meter or taller), completely hairless, and form dense colonies. Leaves are wide (1-2 cm wide). Sheath is reddish (when fresh) and has a fibrous ladder pattern. The ligule (where the leaf meets the stem) is taller than wide, like a church steeple. Perigynia have a gentle taper and a small beak with tiny teeth. It is so effective at spreading by rhizomes that seeds are uncommon.

Crowfoot Fox Sedge

Carex crus-corvi

CYPERACEAE

CAREX: VULPINAE



Photo: 7-24-19

A rare *Carex* with unique seeds that can't be mistaken: extra-long beaks & an abrupt cap at the base of each perigynium. A dense, bristly spike, like other fox sedges. Loves flatwoods and edges of ephemeral ponds.

Narrow-leaved Cattail Sedge

Carex squarrosa

CYPERACEAE

CAREX: SQUARROSAE



Photo: 8-1-17

Another unique *Carex*. Look for spikey eggs, usually one egg per stalk. Stalks are usually upright. Similar *Carex* species have spikelets that are cucumbers rather than egg-shaped, often nodding. Likes shady edges of standing water. Crumbles when ripe; collect by hand or snip.

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Crested Oval Sedge

Carex cristatella

CYPERACEAE

CAREX: OVALES

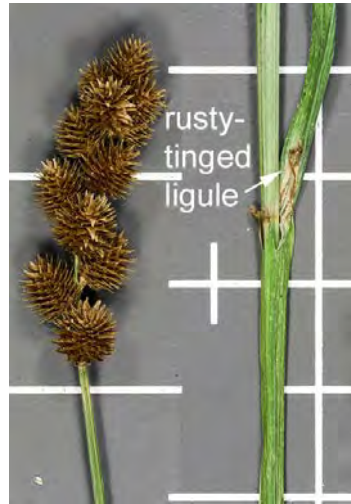
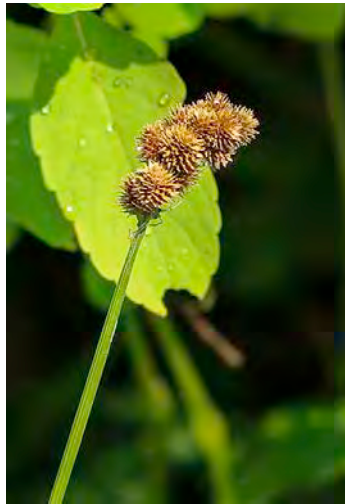


Photo: 8-5-17

Another tough-to-ID oval sedge. Tightly packed bristly & round oval spikelets (the pinecone-like clusters of seeds). Found in full sun to medium shade. The roundness of the spikelets and the number of spikelets are fairly indicative, but consult sheath characteristics to be sure.

Broom Oval Sedge

Carex scoparia

CYPERACEAE

CAREX: OVALES



Photo: 8-7-19

Another oval sedge with crowded spikelets, but these have pointed oval spikelets. Another name is pointed broom sedge. Note the skinny leaf blades that are shorter than the main stem. Leaf blade midrib is a ridge on the side away from the stem, and the sheath has a thin translucent band at the summit. Typically full sun, wet to moist conditions. Crumbles easily when ripe, collect by hand or snip stalks.

Awl-fruited Oval Sedge

Carex tribuloides

CYPERACEAE

CAREX: OVALES

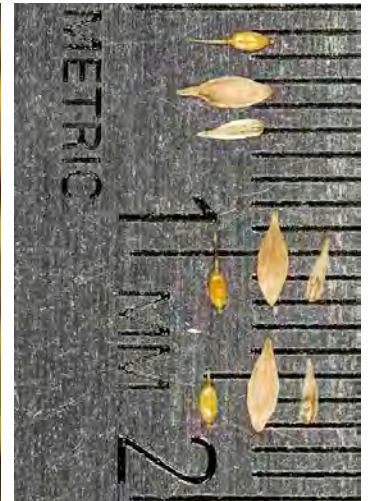


Photo: 8-8-17

Aka blunt broom sedge. Resembles *C. scoparia*, but this species has blunter, less pointed spikelets. Leafy stems, loose sheaths, and the number of perigynia per spikelet will help with ID. Grows in marshes & flatwoods. Crumbles easily when ripe, collect by hand or snip stalks.

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Porcupine Sedge

Carex hystericina

CYPERACEAE

CAREX: VESICARIAE



Photo: 8-8-17

A prickly cucumber of seeds that may poke into your skin (gloves recommended for collecting). Perigynia are slightly inflated. Pedicels (the ‘petiole’ or stalk to the spikelet) are shorter than other similar prickly cucumber sedges; spikelets are also shorter (fewer perigynia per spikelet). Perigynia are yellow to brown when ripe; spikelet crumbles easily.

Shining Bur Sedge

Carex intumescens

CYPERACEAE

CAREX: LUPULINAE



Photo: 8-10-18

State threatened. One of the big “super sedges” – the large perigynia are similarly sized to the common *C. grayi* & *C. lupulina*. Spikelets have only a few seeds, often looks like 1/3 of the *C. grayi* “medieval mace.” Perigynia are in a cylindrical or round-cylindrical arrangement, and beaks point out or up, never down.

Swamp Oval Sedge

Carex muskingumensis

CYPERACEAE

CAREX: OVALES



Photo: 8-17-19

A unique-looking oval sedge (hooray!); the perigynia are unusually long, the spikelets are long & pointed, and the plants are leafy & palm-like (aka palm sedge). Leaves arranged like a spiral staircase, clearly in 3 ranks when viewed from above. Loves floodplain forests.

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River Bulrush

*Bolboschoenus
fluviatilis*

CYPERACEAE



Photo: 8-1-18

This big beautiful beast densely fills in wetlands and has a mixed reputation due to its aggressive nature. Do not use in delicate sedge meadows, but well suited for wetlands challenged with cattails & *Phragmites*. Big spikelets with big seeds that will fall out when crumbled. Collect by hand or snip stalks & process against a sturdy screen.

Reddish Bulrush

Scirpus microcarpus

CYPERACEAE

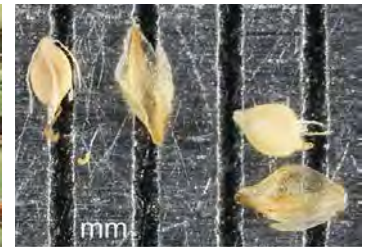


Photo: 7-30-19

This state endangered species superficially resembles the common *S. atrovirens*, but *S. microcarpus* is typically knee-high, and clusters are more open & pale brown. Sheaths are reddish-purple; the alternating bands of green & purple inspired the other name of barber pole sedge.

Red Bulrush

Scirpus pendulus

CYPERACEAE



Photo: 8-7-19

As the Latin name indicates, these seeds like to dangle. Often found in ditches, meadows, disturbed wet margins, and former mowed trails. Sheaths are yellow-green to straw-colored. Check out floral scales, bright yellow-green foliage, and round stalk. Crumbles easily when ripe.

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Dark Green Rush

Scirpus atrovirens

CYPERACEAE

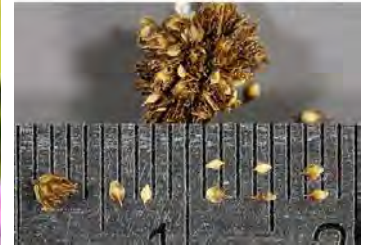


Photo: 8-13-18

An ultra-common, hearty wetland native. Clusters are dark-chocolate brown, and crumble when ripe to release tiny beige seeds. Collect by hand and crumble, or snip and crush against a screen.

Chairmaker's Rush

Schoenoplectus pungens

CYPERACEAE

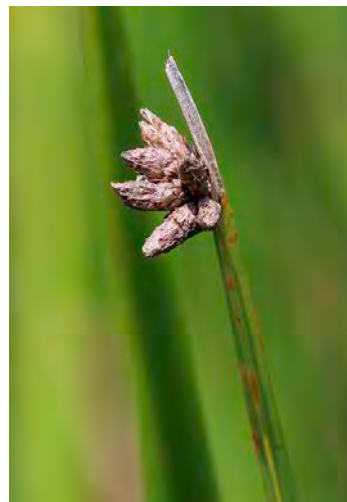


Photo: 8-15-17

Chairmaker's rush has a small pop of spikelets sticking out from the side of the stem near the peak of the stalk. Stems are strongly 3-angled, almost winged in cross-section, with concave sides between the ridged edges. Brown & crumbly when ripe; collect by hand & crumble or snip stalks & process against a screen. This is one of several rush species historically woven to create chair seats.

Great Bulrush

Schoenoplectus tabernaemontani

CYPERACEAE



Photo: 8-15-17

Formerly known as soft-stem bulrush, this species is often found in standing water and in dense stands. Stems are easily compressed with a gentle squeeze. Spikelets typically less than twice as long as broad (less than 10mm long); achenes typically less than 2.1 mm long.

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Red-rooted Spikerush

Eleocharis erythropoda

CYPERACEAE

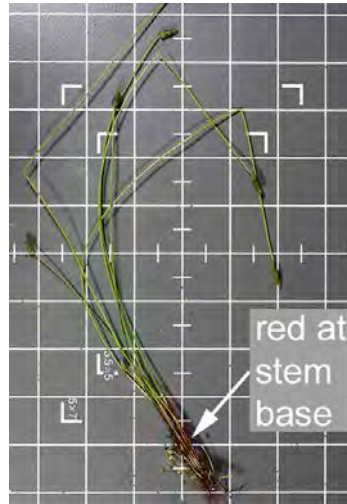


Photo 8-16-18

Eleocharis are tough to ID, but you can comfortably collect any of them since all of the local species are native (per *Flora* & USDA plants). Many species form rhizomatous lawns in wetlands, with short pineapple-shaped spikes at the tip. ID by examining width of stems, roots, achene tubercle (cap on top of the seed), bristles (rough hairs sprouting from the seed base), and scales (at the base & middle of the spikelet).

Soft Rush

Juncus effusus

JUNCACEAE

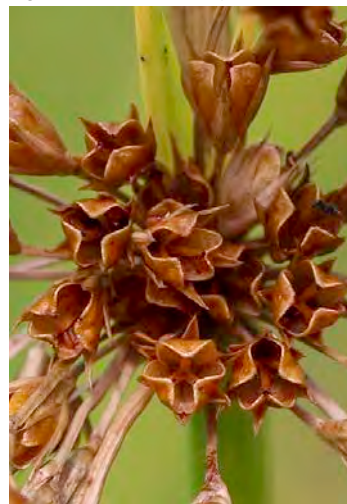


Photo: 7-30-19

This species grows in full sun to part shade, moist to wet conditions. Look for a bouquet of florets shooting out from the side of the stem (most *Juncus* have bouquets pointing up to the sky). 3-part capsules open to release tiny seeds. Nine varieties listed on USDA, but only the straight species is recognized in this area. Snip stalks with open capsules, seeds are small enough to pass through no-see-um mesh.

Dudley's Rush

Juncus dudleyi

JUNCACEAE

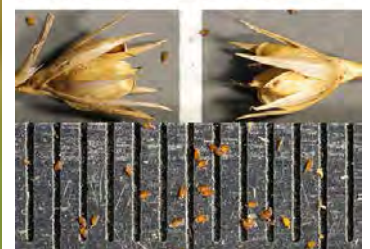
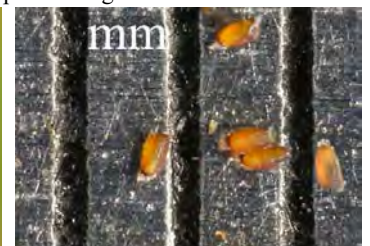


Photo: 8-8-18

This common species grows in many wetlands. Florets point up to the sky. 3-part capsules are shorter than the pointed tepals, and open to release tiny (0.5 mm long) seeds. Leaf blades are shorter than the flowering stalks. Sheaths have a thick, blunt auricle (ear-like collar).

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Joint Rush

Juncus nodosus

JUNCACEAE



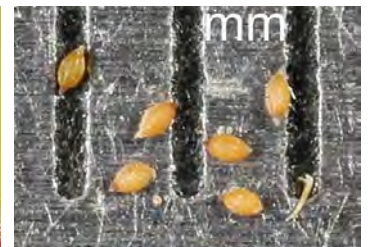
Photo: 8-16-18

Little pompoms on short stalks, containing teeny tiny seeds. Similar to several other species: compare the number of flowers per pompom (8-20) and the diameter of the pompom (6-12 mm). Note the rusty-red capsules are longer than the beige sepals. Once in a while, super-sized florets (2-3x longer) will emerge from the pompom; these are reportedly galls caused by hymenoptera larva.

Torrey's Rush

Juncus torreyi

JUNCACEAE



Photos: 8-10-18
8-30-19

Little pompoms on short stalks, containing teeny tiny seeds. Similar to other species: note the densely packed head with 25-100 flowers/head. Rusty-red capsules are typically around the same height as the beige sepals.

Sweet Grass

Hierochloë hirta

POACEAE



Photo: 6-17-19

An uncommon grass with a smell similar to sweet black-eyed Susan and the invasive sweet clover. Aka holy grass, the species is braided and used in sacred Native American ceremonies. Strips easily by hand, seeds are a caramel brown when ripe. Seeds are soft; mechanical tools are often too aggressive for these seeds. Unlike most grasses, this one needs stratification to germinate, or perhaps sow fresh.

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Floating Manna Grass

Glyceria septentrionalis

POACEAE

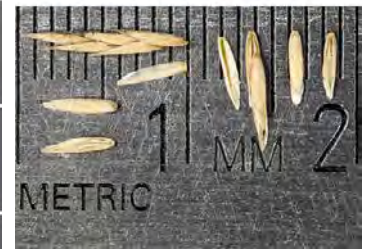
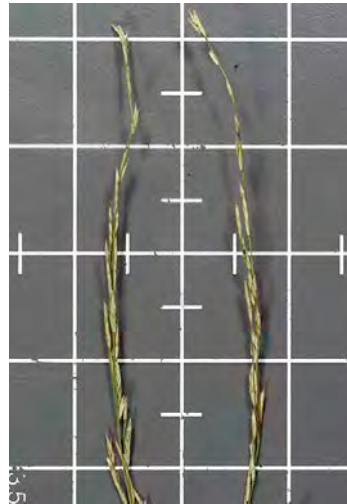


Photo: 8-16-18

This species looks quite different from its more common sister, fowl manna grass. Leaves are wider (up to 12mm across) and seeds are longer (4-5mm). Tiny rough hairs (“hispidulous”) are present on the seeds, but not visible without a microscope or lens.

Blue Joint Grass

Calamagrostis canadensis

POACEAE



Photo: 8-11-19

One of the native grasses that was likely abundant before reed canary grass invaded. Plants are blue-green in spring; joints are often blue-purple. Flowers in a Xmas tree shape (like Kentucky bluegrass) but collapses to a slender feather at harvest time. Similar looking to reed canary grass, but this is the delicate gazelle to the bull of RCG – slender stalks & leaves, slender feathery head and seeds with little hairy tufts.

Blue Joint Grass *Calamagrostis canadensis*

vs.

Reed Canary Grass *Phalaris arundinacea*



The invasive Reed Canary Grass (RCG) and blue joint grow in the same habitat. RCG has much wider leaves. RCG has yellow auricles (wrapped collar of the leaf sheath) aka the “canary’s ear” sometimes with an ear-like bend. Blue joint auricles are green, or blueish/reddish-tinted at the base. The ligule (the leaf sheath’s “popped collar”) of RCG is translucent, tall, and intact; blue joint is typically ragged.

Lake County Seed Collection Guide

Summer Wetland Forbs

Kelly Schultz¹, Dale Shields²

version 2 6/2020

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The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1” on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind.** For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed.**

Seed Groups

Time sensitive groups – seeds disperse in a few days or weeks due to wildlife, sensitivity to wind, etc.

Elaiosomes are “ant candy” attached to the seeds. Ants are strong and motivated, able to quickly carry the candy back to their home and tossing the heavy “candy wrapper” (seeds) into their compost piles. Check these species frequently; ants will rapidly collect all of the seeds. These seeds have higher germination when sown within a day or two.



Ballistic capsules catapult their babies away, up to 30 feet! Search YouTube for “exploding seeds” to see these in action. To harvest: learn the ripening sequence & harvest just before explosion; store in a *sealed* paper bag or mesh bag for a day or two. Another option is to cover the seed heads with mesh hoods (*after flowers wilt*) to contain the seeds. Snip the entire stem after the seeds have popped, and carefully open the hoods indoors.



Fluffy seeds are quite common, allowing for wind to efficiently move seeds over long distances. Collect when fluffy. It is ok to collect these seeds *slightly* early, by collecting entire stems with seeds that are either fully poofed or have dropped their ray florets (the colorful "petals"); snip the stems and let them poof in a paper or mesh bag. Spring fluffy seeds are typically more sensitive to strong weather.



Milkweed seeds are ripe when pods are split open & seeds are brown. Ignore the pod color. Pro tip: rubberband the unripe pods, to prevent seeds from flying away.



Berries turn a vibrant color when ripe, as an advertisement to the wildlife to EAT ME and disperse the seed. Collection window is small for some of these seeds. These species need to be sown fresh in damp soil OR cleaned & stored in plastic in the refrigerator (which maintains a higher level of humidity). The natural process of a seed stored in a juicy berry, followed by chewing, digestion, and dispersal in a pile of “fertilizer” means these seeds are not used to completely drying out.



Lake County Seed Collection Guide

Summer Wetland Forbs

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version 2 6/2020

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Mama's Boys will remain on the stem for a while. Ideal for forecasting future workdays.

Shakers drop seeds very close to the mother plant, when shaken loose by the wind or a passing critter. Usually a Mama's Boy, unless strong weather occurs.

Beaks are a subset of the shaker group, with seed capsules that split open like a beak when the seeds are ripe. Collect when beaks are open.

Coneheads are flowers with a cone-shaped center. Imagine these flowers without their colorful parts, and you know exactly what they look like when seeds are ripe. Seeds are inside the hard cone.

Crumbly Coneheads are cone-shaped or thimble-shaped. Softer than standard coneheads, they crumble when ripe and are easily stripped by hand.

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama's Boys.

Hitchhikers are easy to tell when ripe – they hitch a ride on your pants! Color can be an indicator, but not always.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

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Purple Cress

Cardamine douglassii

BRASSICACEAE



Photo: 5-31-19

Ballistic. Like several other mustard-relatives, *C. douglassii* forms seeds in siliques (skinny pods). Look for open (exploded) pods & grab remaining siliques. Similar looking to Bulbous Cress (*C. bulbosa*), which blooms a little later, has 5+ stem leaves, and a hairless upper stem (not pictured). For both species, collect ≤10% and sow fresh.

Hooked Buttercup

Ranunculus recurvatus

RANUNCULACEAE

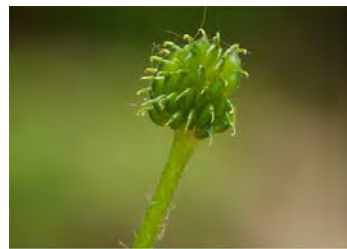


Photo: 6-2-18

Hitchhikers. Shattering seeds. *Ranunculus* species can shatter in place, or the hooks on the seeds can hitch a ride on a passing critter. Collect when seeds are loose to the touch. Deeply cleft leaves, stem hairs, and hooked achenes are identifying characters of this species.

Marsh Marigold

Caltha palustris

RANUNCULACEAE



Photo: 6-1-19

Beaks. Star-like capsules split open and look like little boats with green-yellow seeds inside. Must sow seed fresh. Strong weather or a passing animal will knock the seeds out of the capsules.

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Golden Ragwort

Packera aurea

ASTERACEAE

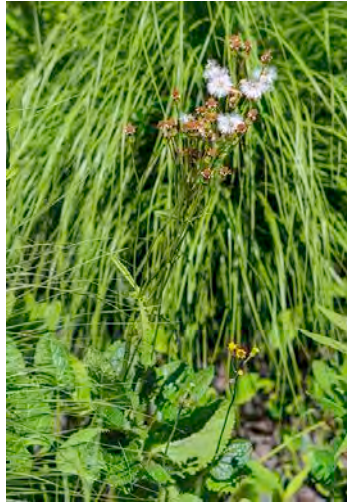


Photo: 6-5-18

Fluffy. The native ragworts were moved from *Senecio* to *Packera* and split into new species. Thankfully, this one is still distinct with rounded basal leaves with cordate (heart-shaped) base, and wingless petioles. Ideally collect when fully poofed. Can also collect the stem once the yellow ray florets (“petals”) have disappeared; store in a paper bag and they should finish ripening.

Butterweed

Packera glabella

ASTERACEAE



Photo: 7-8-19

Fluffy. This may be a harbinger of climate change. Flora lists a first collection of this species in the region in 1976. It has been rapidly moving into more preserves, especially flatwoods. Similar to desirable ragwort species, but this one is generally taller (thigh to waist-high vs shin-high), has thicker stalks at least (pencil-thick vs slender wires), and the basal leaves are lobed the same as the stem leaves.

Swamp saxifrage

Micranthes pensylvanica

SAXIFRAGACEAE

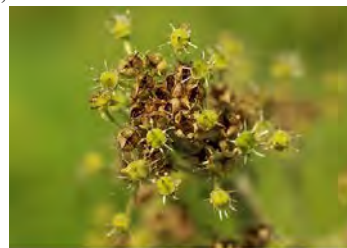


Photo: 6-18-18

Beaks. Assuming the deer have not eaten all of the stems, clusters of tiny duck bills turn from green to brown, revealing brown/black dust-like seeds. Capsules turn brown at different times, on the same plant. Collect brown & open duckbills. Basal leaves are hairy rosettes.

Summer Wetland Forbs

Kelly Schultz¹, Dale Shields²

version 2 6/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Dwarf Raspberry

Rubus pubescens

ROSACEAE



Photo: 7-5-19

Berries. This rare raspberry forms creeping colonies in flatwoods, tamarack bogs, and other wet woodlands. Fruit production is limited, and berries on the same colony ripen at different times. Collect when berries are deep red & easy to pluck. Vegetative cuttings are an option.

Great Angelica

Angelica atropurpurea

APIACEAE



Photo: 7-9-19

Shattering. Great angelica seeds are ripe when they are beige and easily plucked off of the stem. Sometimes confused with other tall parsley-relatives, this species has a globe of seeds, not a flat umbel.

Cow Parsnip

Heracleum maximum

APIACEAE

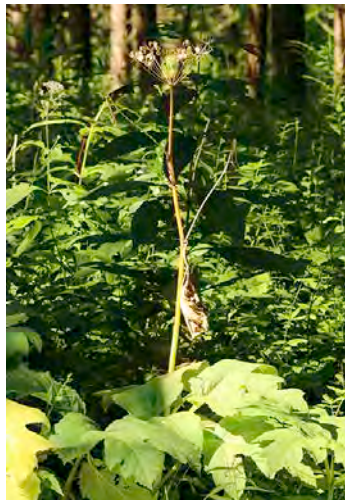


Photo: 7-23-17

Shattering. This species can be disliked for being abundant, but often stays localized even if suitable habitat is just beyond the next clearing. Ripe beige seeds are easily plucked. Flora lists this species as FACW; formerly UPL in Swink & Wilhelm. Some people report skin rashes; wear gloves & long sleeves if your skin sensitivity to this species is unknown.

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Marsh Phlox

Phlox glaberrima var. *interior*

POLEMONIACEAE



Photo: 7-24-19

Ballistic. The petals drop, revealing hard capsules that swell & turn beige, before splitting into 3 pieces & shooting the dark seeds away. Sepals often reflex (peel backwards) like a star shortly before catapulting. When flowers start to fade, cover with mesh hoods to capture seeds.

Purple Meadow Rue

Thalictrum dasycarpum

RANUNCULACEAE



Photo: 8-10-18

Shattering. Seeds turn from green to dark chocolate when ripe. Pluck brown seeds. There are several tall meadow rue species & varieties. One species has revolute (rolled) leaf margins, the other 2 are ID'd by hairs (or lack thereof) on the underside of the leaf.

American Sweet Flag

Acorus americanus

ARACEAE

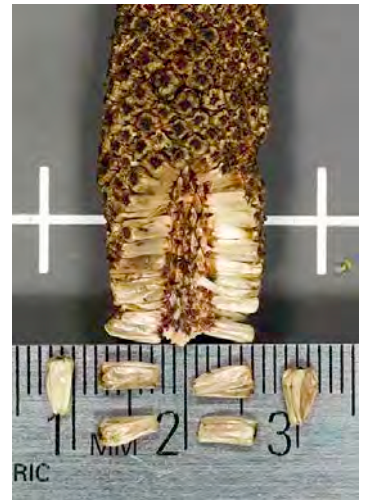


Photo: 8-15-17

Crumbly coneheads. The leaves are often mistaken for blue flag iris, but sweet flag leaves have a citronella smell. Brown fingers of seeds form low on the plant. Collect when crumbly. The non-native *A. calamus* has sterile pollen and does not form fruit.

Summer Wetland Forbs

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Common Water
Plantain

Alisma subcordatum

ALISMATACEAE



Photo: 8-16-18

Shattering. *Alisma* seeds sit like little turbans on the tips of the panicle (xmas tree shaped seed head). Leaves are broad like the lawn weed. Flowers are 3 white petals, and has a delicate baby's breath-type appearance in the wetlands. Collect when brown & crumbly.

Large-flowered Water
Plantain

Alisma triviale

ALISMATACEAE

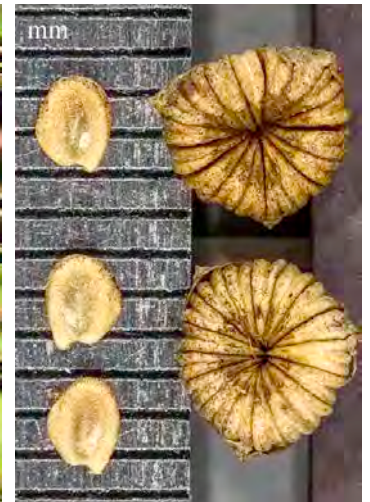


Photo: 8-15-17

Shattering. This species is like the former, except bigger: bigger flowers, bigger seeds, bigger panicle. Both can be found in the same wetlands and have equal conservation value. Found in wetlands that typically dry down in the summer.

Common Bur Reed

*Sparganium
eurycarpum*

SPARGANIACEAE



Photo: 8-15-17

Crumbly coneheads. Look for "medieval mace" seed heads, collect when crumbly and brown. This species is sometimes disrespected as too aggressive. It is well-suited in *Phragmites*/cattail/*Scirpus* wetlands, but not recommended for delicate sedge meadows. This common *Sparganium* species has big seeds; the rarer species have seeds less than 3.5 mm thick.

Summer Wetland Forbs

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Blue Flag

Iris virginica var.
shrevei

IRIDACEAE

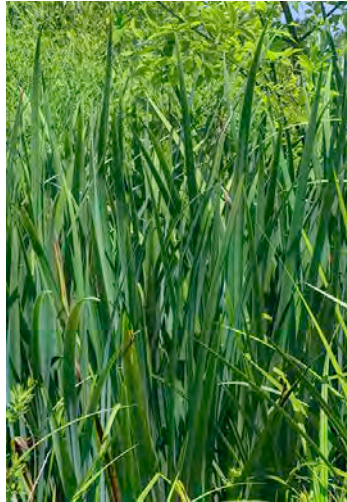


Photo: 8-16-18

Beaks. Our only native iris, the lovely blue flag transforms to terra cotta colored seeds stacked within a banana-like pod. Collect *open* banana peels. Flower parts & seeds are in groups of 3s & 6s, a trait showing their distant relation to the lily group.

False Loosestrife

Ludwigia polycarpa

ONAGRACEAE



Photo: 8-16-18

Shakers. The seedbox (*Ludwigia*) species are often overlooked, hiding in the lower 2 feet of sedge meadows & wet prairies. The “seedbox” will crumble & shake out miniscule seeds when ripe. Over 1 million seeds/ounce. The larger capsules are 4 mm+ for this species.

Brookweed

Samolus parviflorus

SAMOLACEAE

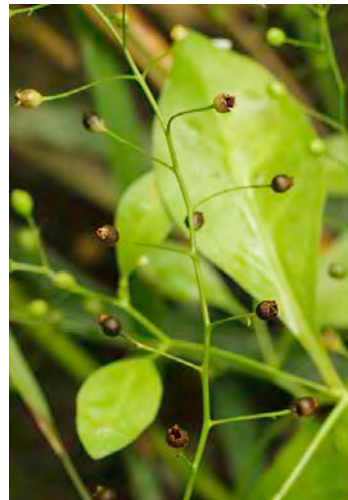


Photo: 8-17-19

Beaks. This rare species appears on banks, receding shores, seeps, and typically in shade. The tiny capsules open to spill out even tinier seeds. Collect open capsules.

Summer Wetland Forbs

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Meadow Anemone

Anemone canadensis

RANUNCULACEAE

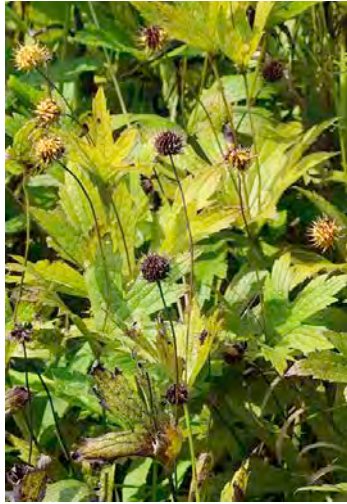


Photo: 8-24-17

Shattering. This colonial anemone blooms like its thimbleweed sisters, but looks closer to its buttercup relations when in seed. Spreads primarily by rhizomes, forming a thick groundcover. Collect brown seeds, clusters will easily crumble when ripe.

Meadowsweet

Spiraea alba

ROSACEAE



Photo: 8-24-17

Beaks. This wetland shrub forms flowers like the ornamental bridal wreath *Spiraea*, except the flowers are arranged in a Xmas tree shape. Each flower turns into 5 tiny capsules, which split open to release a sliver of a seed. At harvest, capsules often turn red due to overnight lows. Look for any plump open capsules, snip the entire Xmas tree. Can also be grown by cuttings.

Swamp Agrimony

Agrimonia parviflora

ROSACEAE



Photo: 8-25-17

Hitchhikers. All native Agrimony are unavailable commercially and often overlooked. The tiny sunny yellow flowers morph into green burs. Collect when they stick to your clothes & are easily stripped from the stem. *A. parviflora* has 5+ pairs of longer leaflets. A (washable) residue builds up on your hands if collecting a large quantity of this particular species.

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The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1" on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind**. For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed**.

Seed Groups

Time sensitive groups – seeds disperse in a few days or weeks due to wildlife, sensitivity to wind, etc.

Elaiosomes are “ant candy” attached to the seeds. Ants are strong and motivated, able to quickly carry the candy back to their home and tossing the heavy “candy wrapper” (seeds) into their compost piles. Check these species frequently; ants will rapidly collect all of the seeds. These seeds have higher germination when sown within a day or two.



Ballistic capsules catapult their babies away, up to 30 feet! Search YouTube for “exploding seeds” to see these in action. To harvest: learn the ripening sequence & harvest just before explosion; store in a *sealed* paper bag or mesh bag for a day or two. Another option is to cover the seed heads with mesh hoods (*after flowers wilt*) to contain the seeds. Snip the entire stem after the seeds have popped, and carefully open the hoods indoors.



Fluffy seeds are quite common, allowing for wind to efficiently move seeds over long distances. Collect when fluffy. It is ok to collect these seeds *slightly* early, by collecting entire stems with seeds that are either fully poofed or have dropped their ray florets (the colorful "petals"); snip the stems and let them poof in a paper or mesh bag. Spring fluffy seeds are typically more sensitive to strong weather.



Milkweed seeds are ripe when pods are split open & seeds are brown. Ignore the pod color. Pro tip: rubberband the unripe pods, to prevent seeds from flying away.



Berries turn a vibrant color when ripe, as an advertisement to the wildlife to EAT ME and disperse the seed. Collection window is small for some of these seeds. These species need to be sown fresh in damp soil OR cleaned & stored in plastic in the refrigerator (which maintains a higher level of humidity). The natural process of a seed stored in a juicy berry, followed by chewing, digestion, and dispersal in a pile of “fertilizer” means these seeds are not used to completely drying out.



Lake County Seed Collection Guide

Summer Prairie Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Mama's Boys will remain on the stem for a while. Ideal for forecasting future workdays.

Shakers drop seeds very close to the mother plant, when shaken loose by the wind or a passing critter. Usually a Mama's Boy, unless strong weather occurs.

Beaks are a subset of the shaker group, with seed capsules that split open like a beak when the seeds are ripe. Collect when beaks are open.

Coneheads are flowers with a cone-shaped center. Imagine these flowers without their colorful parts, and you know exactly what they look like when seeds are ripe. Seeds are inside the hard cone.

Crumbly Coneheads are cone-shaped or thimble-shaped. Softer than standard coneheads, they crumble when ripe and are easily stripped by hand.

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama's Boys.

Hitchhikers are easy to tell when ripe – they hitch a ride on your pants! Color can be an indicator, but not always.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

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Violet Wood Sorrel

Oxalis violacea

OXALIDACEAE

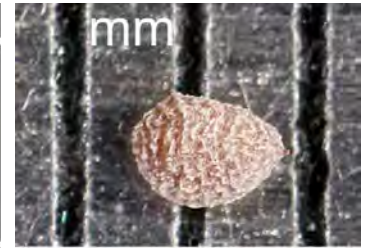


Photo: 6-7-19

Ballistic. Capsules are formed on drooping stems, then turn up toward the sky and split open when ripe. Collect the capsules that are pointing toward the horizon or the sky. Sow fresh. Ripe capsules are often paler (less green, more white-ish). Sow asap

Wood Betony

Pedicularis canadensis

OROBANCHACEAE



Photo: 6-7-19

Beaks. A native hemiparasite, this species will germinate on its own but requires a host plant to survive past the juvenile stage. The plant blooms from bottom to top; seeds ripen in the same order. Green tongues stick out, and then turn brown & split along the top; seeds are cradled in an open lower lip. Look for some open lower lips, then snip the entire stalk. Collect before storms, seeds easily shake out.

Prairie Smoke

Geum triflorum

ROSACEAE

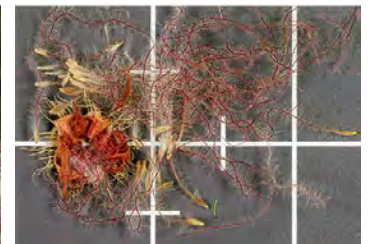
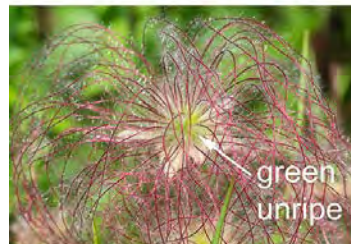


Photo: 6-8-17

Shattering. Wispy plumes are reminiscent of smoke, but also affectionately referred to as "troll doll hair" or "Dr. Seuss plants". Not fully fluffy, these are poor fliers. Collect when loose - no force necessary. Seeds and plumes change color as they ripen: hot pink plumes fade to gray-pink; seeds clustered at the base of the "smoke" change from neon green to yellow-beige. Must use fresh seed. Low viability.

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Short-leaved Cat's
Foot

Antennaria howellii
subsp. *neodioica*

ASTERACEAE

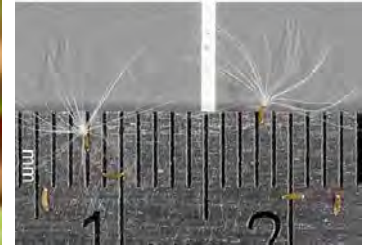
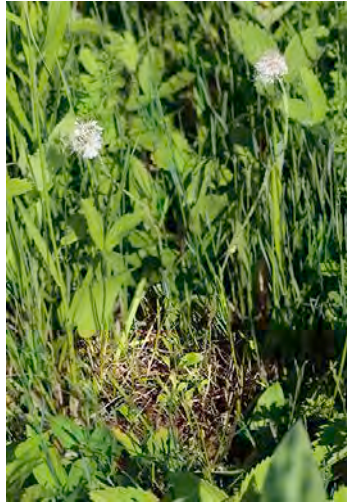


Photo: 6-8-18

Fluffy. The pussytoes species have split from 2 species into 6 with the new subspecies. This one has 1 distinct vein like *A. neglecta* (a pair of indistinct veins may also be present), but the upper leaf surface loses most of its hairs. The leaf has a point at its tip and tapers to a petiole.

Pussytoes

Antennaria
plantaginifolia

ASTERACEAE

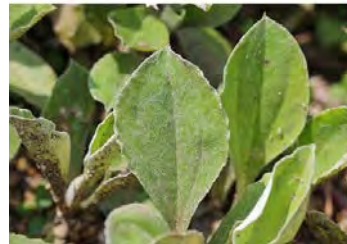


Photo: 6-13-19

Fluffy. Tiny plants with tiny seeds. Bright white pappus (fluff) is attached to minuscule tan seeds. *Antennaria* are happiest in areas with low competition & low competition, such as mowed turf & eroding edges. Collect when puffy. This species can be ID'd by the wide leaf (plantain-like), with a midrib flanked by at least two more prominent veins in the basal leaves.

Yellow Star Grass

Hypoxis hirsuta

HYPOXIDACEAE

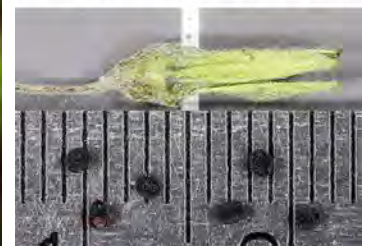
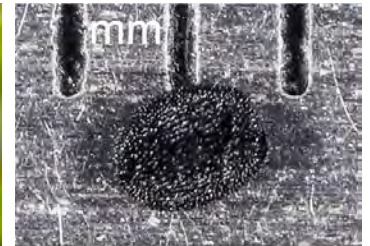


Photo: 6-9-18

Beaks. Not actually a grass at all, but distantly related to iris and lilies. The sunny yellow 6-petaled flowers morph into a closed up cluster of green sepals. By the time the seeds are ripe, the surrounding vegetation is several feet taller. Flag populations while they bloom. Collect the entire stem, and the tiny dark seeds will fall out. Sow within a couple of weeks to maximize viability.

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Balsam Ragwort

Packera paupercula

ASTERACEAE

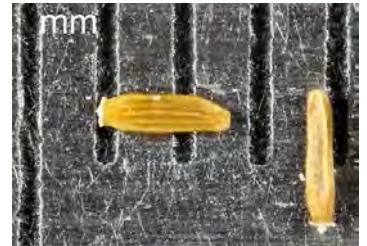


Photo: 6-14-19

Fluffy. Ideally collect when completely fluffy, but you can snip stems after the bright yellow ray florets have faded. *Packera* can generally be identified by examining the basal leaves & stem leaves; a couple of species also require looking at the flowering heads.

Prairie Violet

Viola pedatifida

VIOLACEAE

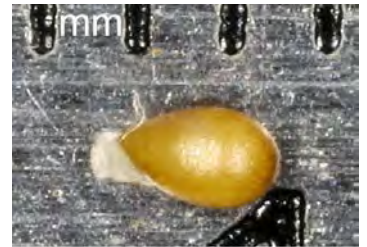


Photo: 6-19-17

Ballistic. Elaiosomes. Pods start out nodding, then raise their heads up to the sky, split open into 3rds, and shoot their seeds away. Collect when heads are aimed between the horizon & the sky. Most violet species have multiple rounds of seeds: initially from flowers (chasmogamous), but later they form flowers that never open (look like buds) and self-pollinate (cleistogamous) to produce additional seeds.

Hoary Puccoon

*Lithospermum
canescens*

BORAGINACEAE



Photo: 6-24-18

Shattering. These small "stoneseds" sit in the leaf axil (where the leaf meets the stem) in clusters of up to 4 seeds. Collect when seeds are loose on the stem. Germination is low with this species. Sow fresh with outdoor stratification for best success.

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Seneca Snakeroot

Polygala senega

POLYGALACEAE

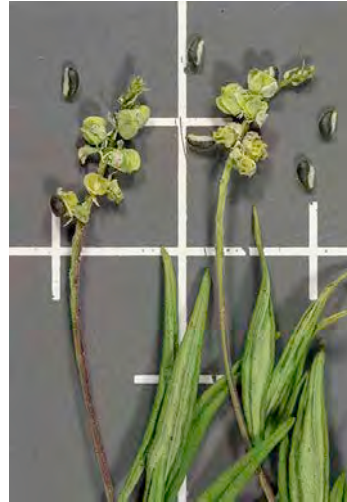


Photo: 6-24-18

Elaiosomes. Beaks. The green flattened capsules on this tiny conservative plant split open to release tiny black seeds. Seed must be sown fresh; it will not tolerate dry storage.

King Devil

Hieracium piloselloides

ASTERACEAE

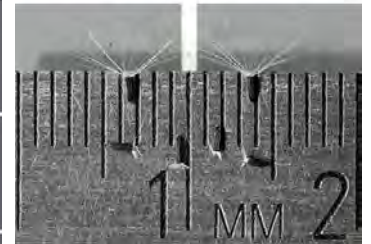


Photo: 6-26-19

Fluffy. The non-native hawkweeds have mostly leafless stems. This species has straight hairs only on the midrib and edges of the basal leaves (no hairs on the flat leaf surface). Multiple flower heads, leaves are tapered. This species is not as awful as the name might imply.

Prairie Alum Root

Heuchera richardsonii

SAXIFRAGACEAE



Photo: 6-27-18

Beaks. Mama's Boy, ripening over a few weeks. Look for little brown beaks, which open to spill out tiny black seeds (700,000 seeds/oz!) Snip the stalks when the beaks are brown and open. Be sure to hold the stem upright until you can safely spill it into your bag. Don't sneeze.

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Wild Strawberry

Fragaria virginiana

ROSACEAE

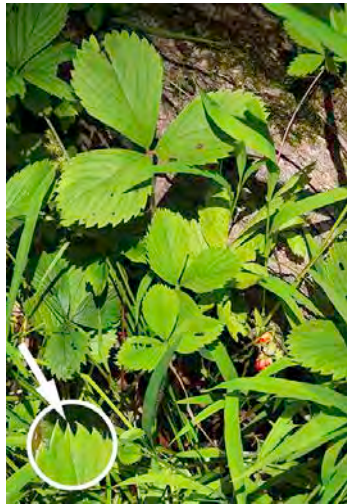


Photo: 7-5-19

Berries. This species creeps through a surprising variety of habitats. Identify this species by looking at the 3 leaflets: the tooth at the point should be shorter or equal height to the other teeth. Stems hairs are pressed flat. Dangling red berries are easily plucked when ripe.

False Toadflax
aka
Bastard Toadflax

Comandra umbellata

SANTALACEAE



Photo: 7-7-19

Shattering. One of our native hemiparasites, meaning this species will germinate on its own but requires a host plant to survive past the juvenile stage. Germination is low and information is limited. Rob Sulski reports best luck with green seeds sown fresh.

Prairie Phlox

Phlox pilosa
var. *fulgida*

POLEMONIACEAE

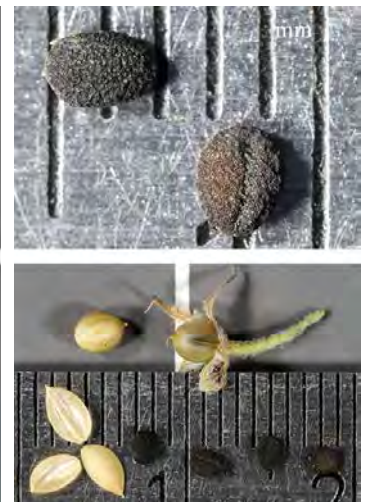


Photo: 7-7-19

Ballistic. The bright pink petals drop, revealing hard capsules. Capsules swell & turn green-beige, before splitting into 3 pieces & shooting the dark seeds away. Sepals often reflex (peel backwards) like a star shortly before catapulting. As flowers start to fade, cover with mesh hoods to capture seeds.

Summer Prairie Forbs

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Daisy Fleabane

Erigeron strigosus

ASTERACEAE

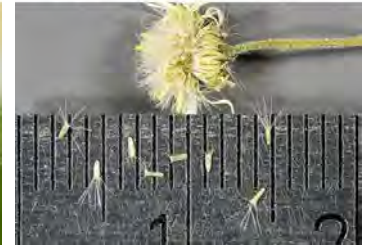


Photo: 7-7-19

Fluffy. Collect when fluffy, or the white ray florets have curled up and started to drop. This species acts as an annual or biennial, so recommended to collect only 10% of the population. Daisy fleabane has only a handful of skinny, toothless leaves on the upper stem, and appressed stem hairs, as opposed to the common annual fleabane (many leaves, wider & with teeth; longer, spreading hairs on the stem).

Annual Fleabane

Erigeron annuus

ASTERACEAE

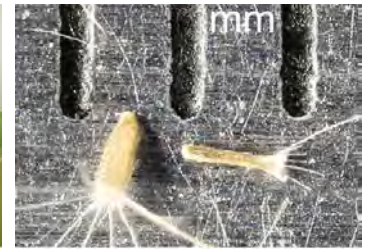


Photo: 8-2-18

Fluffy. This ultra-common native annual is most often found in disturbed soils. This species has leaves of various shapes tapering towards the stem (not clasping). Hairs are spreading (perpendicular to the stem). Not typically collected.

Common Spiderwort

Tradescantia ohiensis

COMMELINACEAE



Photo: 7-10-17

Beaks. Mama's Boy. Each flower reportedly blooms for a single morning, closing in the sunny afternoon. Luckily each stalk has dozens of flowers, extending the season of this royal purple beauty. Seeds also ripen sequentially; Mama's Boy due to weeks seed formation. Look for sepals changing from green to brown; target heads with at least 50% brown. Snip stalks. Sap can be itchy, but soap & water stops the itch.

Summer Prairie Forbs

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Curly Dock

Rumex crispus

POLYGONACEAE



Photo: 7-17-19

Shattering. Common weed in agricultural fields and disturbed soils. Leaves have wavy margins. Each seed is tucked inside a 3-part structure (the “valves”), with “grains” on the outside. Leaves are less than 7cm wide, valves less than 6mm long. There are native *Rumex* too.

Scurfy Pea

Psoraleidium tenuiflorum

FABACEAE

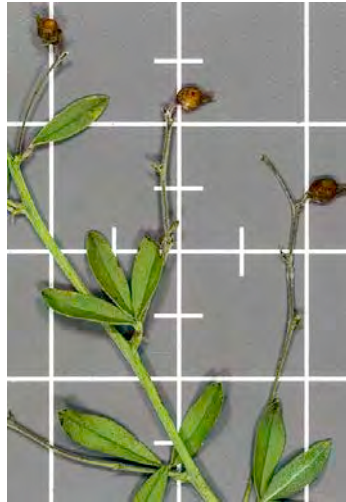


Photo: 7-23-17

Shattering. Pods of this conservative pea turn brown and drop off instead of splitting open like most legumes. Pick when they are brown and easily pull off with a gentle tug.

Field Thistle
aka
Canada Thistle

Cirsium arvense

ASTERACEAE



Photo: 7-24-18

Fluffy. A noxious weed from Europe (not Canada) that drinks Roundup and laughs in your face. Spreads by rhizomes & seeds. Readily identified by the sheer quantity of stems. Most other thistles are taller (head high) than this thigh- to waist-high plant. **DO NOT COLLECT.**

Summer Prairie Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Stout Blue-eyed Grass

Sisyrinchium angustifolium

IRIDACEAE

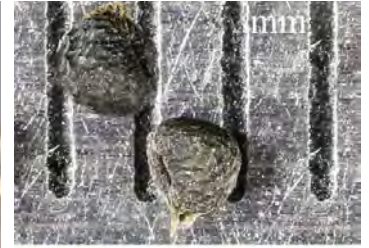
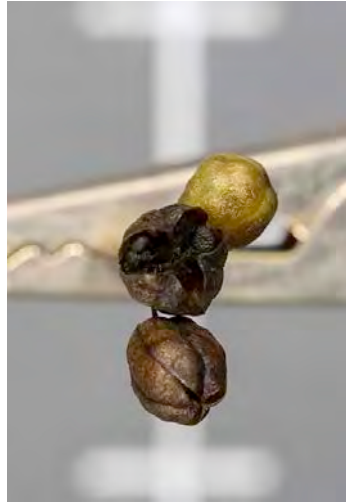


Photo: 7-26-19

Beaks. Seed capsules with parts in 3s & 6s are typical of lilies, irises, and other monocot relatives. This is another “grass” that is actually a flower, with vibrant blue-purple 6-pointed flowers and 3-parted capsules with tiny black seeds. Look for open capsules and collect the entire stalk; closed capsules on the same stem are not far behind. Closed capsules are slightly larger than the more common *S. albidum*.

Common Blue-eyed Grass

Sisyrinchium albidum

IRIDACEAE

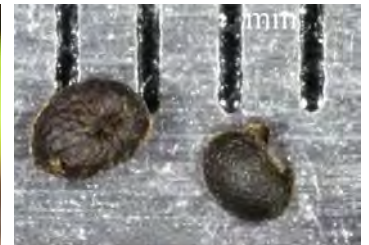


Photo: 7-31-18

Beaks. These have pale blue or white 6-pointed flowers and 3-parted capsules with tiny black seeds. Look for open capsules, and collect the entire stalk; closed capsules on the same stem are not far behind.

Crown Vetch

Securigera varia

FABACEAE



Photo: 7-30-18

Shattering. This weed is still marketed for erosion control & for bees, even though there are many natives with better manners that can offer those services. Pink & white flowers in a round “crown.” Paired opposite leaflets like other legumes. Sprawls & creeps. Tough to eradicate.

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Thimbleweed

Anemone cylindrica

RANUNCULACEAE

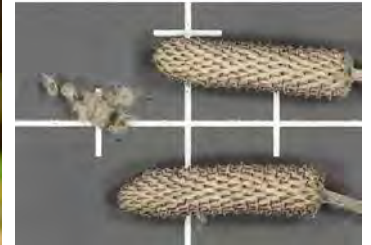


Photo: 8-1-17

Crumbly coneheads. The thimble-shaped cone fluffs up into a cotton mass when ripe. Look for loose cotton, strips easily by hand when ripe. *A. virginiana* has leaves that are less deeply lobed, thimbles are less slender (more like gumdrops), and typically found in partial to full shade.

Heart-leaved Meadow Parsnip

Zizia aptera

APIACEAE

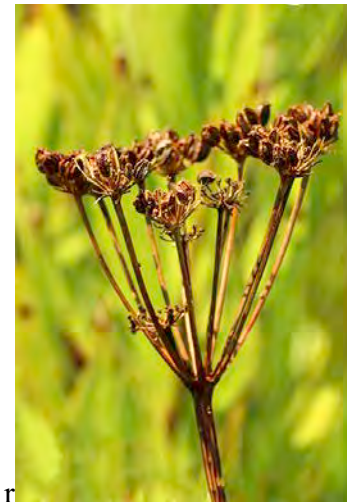


Photo: 8-1-17

Shattering. Mama's Boy. Very similar to the common golden Alexander (*Z. aurea*), with the same umbel (flat umbrella) arrangement of butter yellow flowers. This rarer species has heart-shaped leaves. Seeds turn brown and strip easily by hand. Savannas & prairie.

Yellow Avens

Geum aleppicum

ROSACEAE



Photo: 8-2-18

Hitchhikers. Snip head when the brown seeds stick to your clothes. One of a few yellow-flowered avens, this species has larger petals (more than 5 mm long), with sepals of the same length or shorter. 5 or more leaflets per stem leaf. Found in sedge meadows, fens, ditches, old fields.

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White Wild Indigo

Baptisia lactea

FABACEAE



Photo: 8-6-18

Beaks. Mama's Boy. Black pods split open to release seeds, ranging in color from chestnut to caramel. Weevils are a localized problem - sites have tons of weevils, or none. Collect pods & immediately freeze; weevils will hibernate. Weevils reanimate after thawing out, keep in freezer until processing time. Crush the pods (rolling pins, stomping). Use screens or a gentle fan to separate the seeds.

Cream Wild Indigo

Baptisia leucophaea

FACACEAE

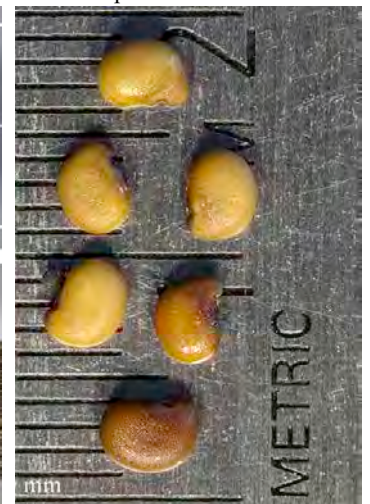


Photo: 8-10-18

Beaks. Mama's Boy. *B. leucophaea* is a shorter plant and has peach fuzz all over the leaves, pods, and calyx. Pods also have a long tapered point like an elf's shoe; *B. lactea* pods are ovals with abrupt tiny points. Collect black pods, crack open a few to check for weevils.

Ohio Horse Mint

Blephilia ciliata

LABIATAE

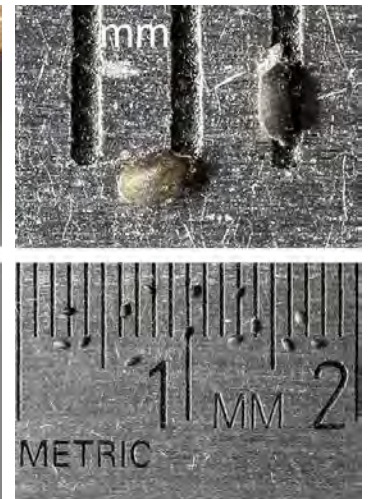


Photo: 8-5-18

Shakers. Mama's Boy. Similar to *Monarda*, a mint relative. The flowers fall off to reveal tubes (calyx) that contain the ripening seed. Tip the head into your hand and if tiny black seeds fall out, then snip the entire stalk. Tubes usually turn from green to brown as the seed ripens.

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Smooth Beard
Tongue

Penstemon calycosus

SCROPHULARIACEAE

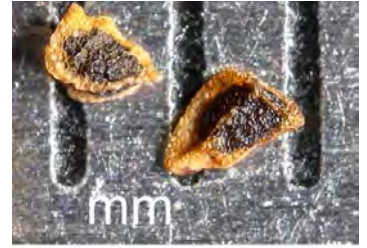


Photo: 8-21-18

Beaks. Mama's Boys. Tear-drop shaped capsules take a long time to turn from green to burgundy to brown and finally opening their beaks. Snip stems when beaks are open, or at least capsules are brown. Capsules are hard & stinky.



Butterfly Weed

Asclepias tuberosa

ASCLEPIADACEAE



Photo: 8-24-17

Milkweed. Collect when the vertical seam starts to split open. Can check with a *gentle* squeeze, the seeds must be brown inside. Milkweeds are tough to process. Best to clean them fresh (before fluff dries & expands). Otherwise use a shop vac with a light horsepower or the Monarch Watch's Seed Separator - free design online for a DIY milkweed separator.

Prairie Cinquefoil

Drymocallis arguta

ROSACEAE



Photo: 8-24-17

Beaks. This conservative species of dry and mesic prairies flowers like wild strawberry (five white petals around a yellow center) but 1 - 3 feet tall. Tons of tiny seeds form inside each little head. Tip the head into your hand and if seeds fall out, then snip the entire stalk.

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Culver's Root

Veronicastrum virginicum

SCROPHULARIACEAE

Photo: 8-25-17



Beaks! The brown "beads" on the stalk are often assumed to be the seed, but each is actually a tiny beak with tiny seeds. About 800,000 seeds/oz. Snip stalks when brown, carefully do not tip the stalk until it is over your bag. Tiny seeds can pass through no-see-um mesh.

Lead Plant

Amorpha canescens

FABACEAE

Photo: 8-31-17



Crumbly coneheads. This conservative semi-woody shrub loves dry to mesic prairies & savannas, especially in sandy soils. Can be woody below, with new herbaceous growth above. Look for stalks turning lead-gray and beginning to crumble & drop. Strip easily by hand.

Prairie Coreopsis

Coreopsis palmata

ASTERACEAE

Photo: 8-31-17



Coneheads. Like many sunflower-types, the color fades and the head turns brown-black. Any sign of green means the seed needs more time to ripen. Fully ripe seed heads can be broken open with your fingers, and seeds are brown with yellow/cream margins. Snip heads.

Lake County Seed Collection Guide

1

Summer Grasses and Kin

Kelly Schultz¹, Dale Shields²

version 2 8/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

Images ©2019 DJShields. Produced by: Dale Shields & Kelly Schultz ©Lake County Forest Preserve District [kschultz@lcpfd.org]

The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1” on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind.** For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed.**

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama’s Boys.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

Summer Grasses and Kin

Kelly Schultz¹, Dale Shields²

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Grasses and kin include plants in the Grass Family (Poaceae), Rush Family (Juncaceae), and Sedge Family (Cyperaceae). All of these species have long narrow, parallel-veined leaves and are wind-pollinated. These species are typically identified by their seeds, so any field guide of these species is essentially a seed guide. Check for ripeness with the “touch test” – if they are loose, then they are ripe. Strip by hand or snip stalks.

Cyperaceae (Sedge Family). *Sedges have edges*: stems are typically triangular, and the edges can be felt by rolling in your fingers. Leaves are 3-ranked: each leaf exits from a different side of the triangle, rotating around the stem. Some species have round solid stems, but are not jointed like grasses. Single seed in each flowering scale. The sheath is closed on the side opposite the leaf blade. The biggest group is the genus *Carex*, which has a single seed in a papery pouch called a perigynium. Other members of this family have naked seeds and go by common names such as bulrush, woolgrass, spike rush, nut rush, nut sedge, etc. Sedges are very tough to ID. The good news: very few sedges are bad, you can always collect a “woodland sedge mix.” Consult a sedge guide for ID; this guide is intended to highlight a few quick notes.



Juncaceae (Rush Family). *Rushes are round*: stems are typically round & solid. Some have flattened stems, but they are not jointed. Typically unbranched, simple stems. Three or more seeds in a three-sided capsule. Flower parts come in threes and sixes, most flowers are perfect, having both stamens and pistils. Leaves are thread-like or flat & linear. Many of our common species are relatively short (about knee-high), and appear delicately wiry. Common species include path rush, Dudley’s rush, and soft rush.



Poaceae (Grass Family). *Grasses are straws, with holes to the ground*: stems are typically round & hollow, like a reed. Some species have flattened stems. Grasses have jointed stems; the joints are called nodes and the stem is solid at that point. There is a single seed in each flowering scale. Leaves are 2-ranked, with each leaf exiting the stem on the opposite side of the one below. The sheaths are open or split on the opposite side from the leaf blade. Grasses can be 1-2’ tall (like poverty oat grass & June grass) or head height (like big bluestem) or even basketball player tall (like the invasive *Phragmites*).



Summer Grasses and Kin

Kelly Schultz¹, Dale Shields²

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Common Oak Sedge
aka
Penn Sedge

Carex pensylvanica

CYPERACEAE

CAREX: ACROCYSTIS

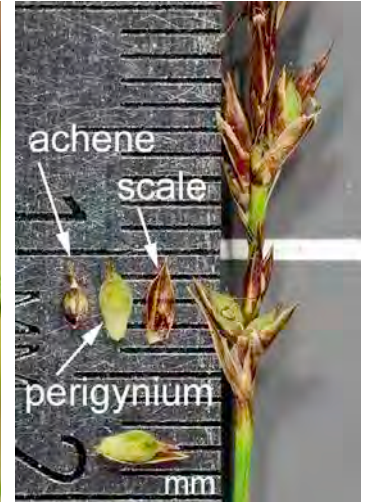


Photo: 6-2-18

Penn sedge is reportedly poor from seed. The truth is that they MUST be sown fresh and you need to cover a lot of ground to collect a decent quantity of these small seeds. Look for round beads, check with the touch test for ripeness. Spreads easily through vegetative reproduction.

Hairy Wood Sedge

Carex hirtifolia

CYPERACEAE

CAREX: HIRTIFOLIAE

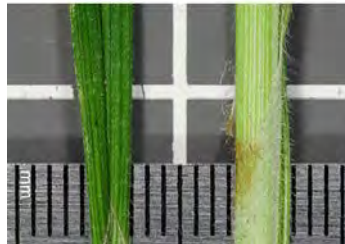


Photo: 6-10-19

Only a few woodland sedges are hairy short bunches. Hairy wood sedge has hairy stems, leaves, and perigynia. Like *C. blanda*, leaves have the accordion fold and similar stature. Perigynia are pointed (unlike the similar *C. hirsutella* with pinecone-like seed heads). Sow fresh.

Common Wood
Sedge

Carex blanda

CYPERACEAE

CAREX: LAXIFLORAE



Photo: 6-14-19

Well-named, this is an incredibly common sedges of the woods, and can grow in a variety of moisture levels. Perigynia are packed tightly on the stems. Check out the veins on the perigynia under magnification and note the bent “beak” (point at the end) to confirm ID. Sow fresh.

Summer Grasses and Kin

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Grass Sedge

Carex jamesii

CYPERACEAE

CAREX:
PHYLLOSTACHYAE



Photo: 6-14-19

A dense clump of leaves with short fruiting stems (shorter than the leaves) hiding inside. Perigynia are round and abruptly pinches (does not taper) to form the long beak. Leaves are up to 3.7 mm wide. Sow fresh.

Wood's Stiff Sedge

Carex woodii

CYPERACEAE

CAREX: PANICEAE



Photo: 6-14-19

A woodland sedge growing in clumps or loose rhizomatous colonies. Sheaths are red-purple, especially at the base. Limited flowering stalks. Perigynia are small like Penn sedge (*C. pensylvanica*) but the beaks are practically nonexistent on *C. woodii*. Sow fresh.

Purple-sheathed
Graceful Sedge

Carex gracillima

CYPERACEAE

CAREX:
HYMENOCHLAENAE

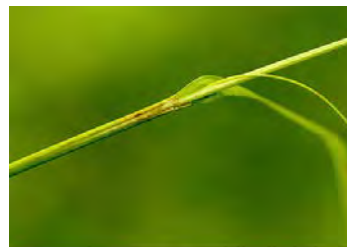
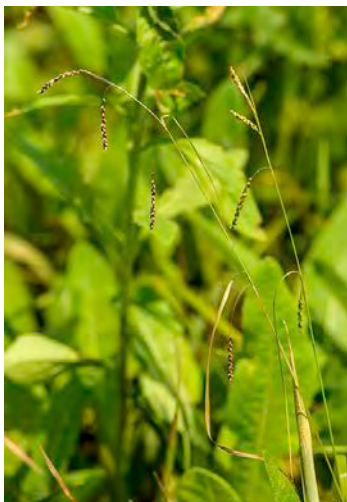


Photo: 6-20-18

One of a few species with graceful, dangly spikelets of seeds. As the name says, the sheath is purple, especially at the base. Perigynia are practically beakless. Grows in a surprising variety of shady habitats: rich mesic woodlands & savannas, flatwoods, bogs.

Summer Grasses and Kin

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Long-beaked Sedge

Carex sprengelii

CYPERACEAE

CAREX:
HYMENOCHLAENAE



Photo: 6-20-18

Another graceful, dangling sedge, but the spikelets have a prickly appearance, due to the long beaks & the long scales. Easy to strip by hand. Grows in rich mesic woodlands.

Plains Oval Sedge

Carex brevior

CYPERACEAE

CAREX: OVALES

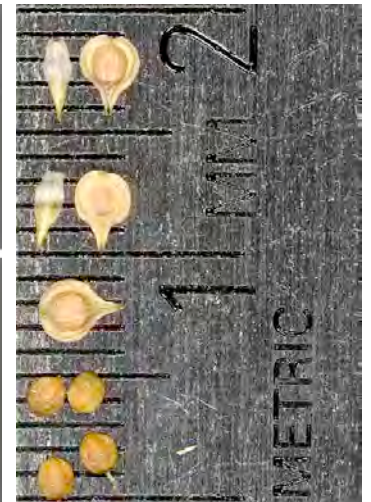
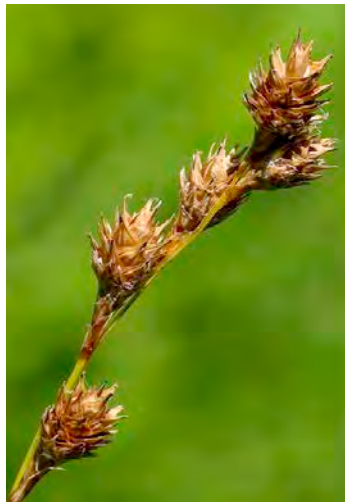


Photo: 6-24-17

Mama's Boy. Collect when light brown & crumbles easily by hand. Also called short-beaked sedge (the tapered point of the perigynia) which is noticeably shorter than most species. One of the difficult oval sedges – consult a good *Carex* book for the nuances.

Copper-shouldered Oval Sedge

Carex bicknellii

CYPERACEAE

CAREX: OVALES



Photo: 6-27-18

Mama's Boy. Collect when light brown & crumbles easily by hand. Seed looks like a fried egg - crumble the seed heads, and the achene shows through the thin perigynia like an egg yolk. Another "Oh no, Oval sedge!" but this has larger seeds and one of the few prairie sedges.

Summer Grasses and Kin

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Awned Graceful
Sedge

Carex davisii

CYPERACEAE

CAREX:
HYMENOCHLAENAE

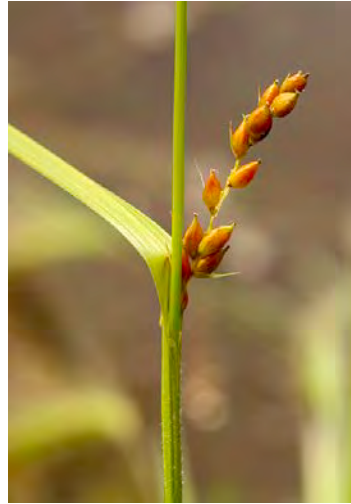


Photo: 6-27-18

This woodland sedge has chunky perigynia, which are bigger than most species this time of year. Sheaths are hairy, stems & leaves are sparsely hairy. Perigynia turn a variety of red, brown, beige colors when ripe, and plumper than many species, like a football.

Long-awned Bracted
Sedge

Carex gravida

CYPERACEAE

CAREX:
PHAESTOGLOCHIN



Photo: 6-27-18

Mama's Boy. This common species is also known as heavy sedge, with a thick, heavy stalk. The bract sticks out just under the spike. The spikelets (the little "pinecone" clusters of seeds) are tightly packed, with a slight separation of the lowest spikelets.

Short-headed Bracted
Sedge

Carex cephalophora

CYPERACEAE

CAREX:
PHAESTOGLOCHIN

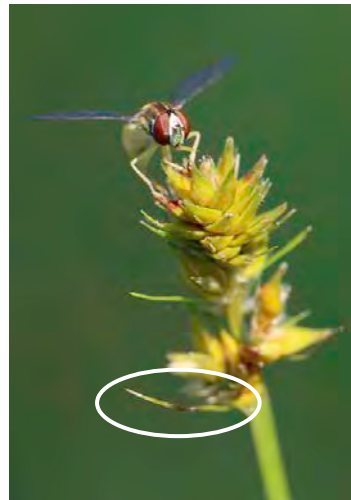


Photo: 7-5-19

Small clusters of terminal seeds, with little bracts sticking out under the spikelets, perpendicular to the stem. Collect when crumbles by hand. Grows in dry-mesic & mesic woodlands.

Summer Grasses and Kin

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Straight-styled Wood
Sedge

Carex radiata

CYPERACEAE

CAREX:
PHAESTOGLOCHIN

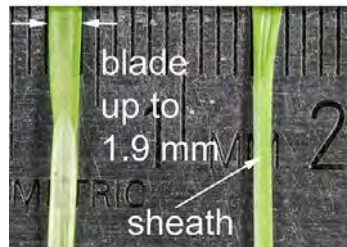


Photo: 7-4-2018

One of the “star sedges.” *C. radiata* & *C. rosea* look very similar! *Radiata* is more often in wetter shady spots; *rosea* is more likely in the upland. *Radiata* is generally in a looser, less dense/robust clump. Sow fresh for best results.

Curly-styled Wood
Sedge

Carex rosea

CYPERACEAE

CAREX:
PHAESTOGLOCHIN

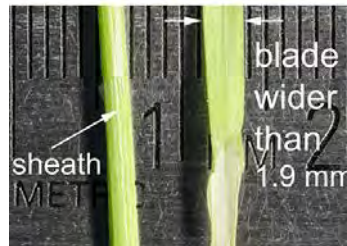


Photo: 7-6-2018

Radiata has *mostly* straight styles, *rosea* is all curly (check Apr/May). Leaves of *radiata* are *mostly* less than 2mm wide, leaves of *rosea* are *mostly* 2-3mm wide. Both species are great to have, and their habitats overlap. Seeds strip off easily by hand when ripe.

Pale Sedge

Carex granularis

CYPERACEAE

CAREX: GRANULARES



Photo: 7-10-19

Mama’s Boy. One of several species with seeds like little granules, this one is common in moist meadows, fens, and ditches. Grows in clumps. Consult a *Carex* book, specifically the sections for Granulares, Griseae, and Laxiflorae. Collect when it easily crumbles by hand.

Summer Grasses and Kin

Kelly Schultz¹, Dale Shields²

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Fuzzy Wuzzy Sedge
aka
Hairy Green Sedge

Carex hirsutella

CYPERACEAE

CAREX: POROCYSTIS

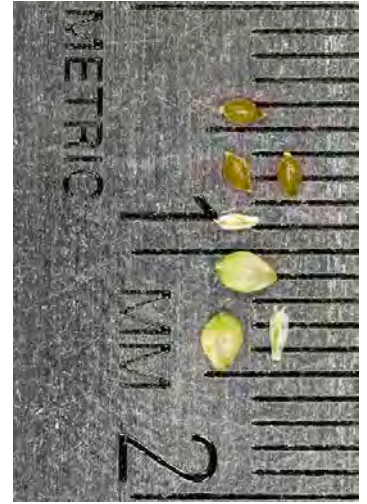


Photo: 7-18-17

One of a few hairy woodland sedges, this one forms loose clumps with wiry fruiting stems. Perigynia are hairless and clustered like rounded pinecones. Collect when easy to strip by hand, typically green.

Loose-headed Bracted
Sedge

Carex sparganioides

CYPERACEAE

CAREX:
PHAESTOGLOCHIN

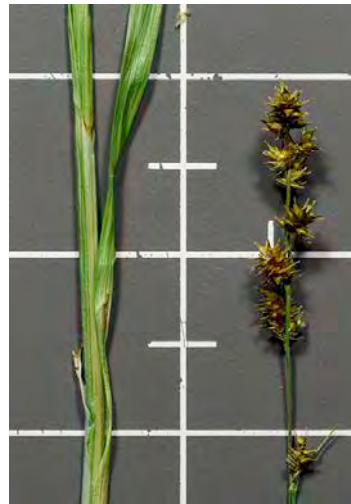
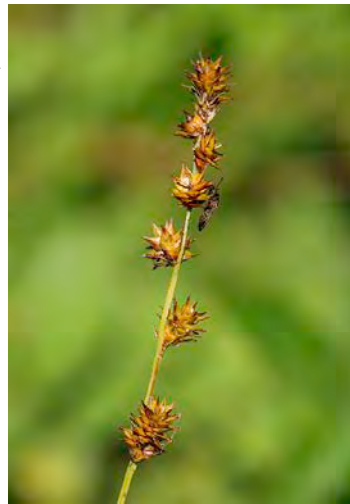


Photo: 8-5-17

Mama's Boy. Well-named for the loosely spaced spikelets of seeds. The seed stalks are taller than most woodland sedges, although they are often knocked flat to the ground by the time the seed is ripe.

Spreading Oval Sedge

Carex normalis

CYERACEAE

CAREX: OVALES



Photo: 8-8-2018

Mama's Boy. Another pesky oval sedge. This one typically has a kink in the stem above the lowest spikelet, pointing off towards the horizon. Shade preferred, but can grow in sun with wetter soils.

Summer Grasses and Kin

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Common Woodrush

Luzula multiflora

JUNCACEAE



Photo: 6-14-18

Beaks. Common woodrush is not common at all. Brown capsules open up to reveal tiny Oreo-colored seeds inside. Collect when capsules are brown and open. Sow fresh. Grows in savannas, open woodlands, and prefers mesic to dry-mesic soils.

Path Rush

Juncus tenuis

JUNCACEAE

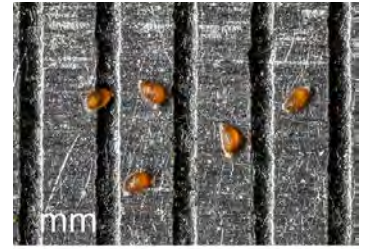


Photo: 8-3-18

An ultra-common rush, this wiry & resilient species often pops up in trampled paths (hence the name). Seed capsules turn beige & split open in 3 parts, shaking out teeny tiny seeds – note the seed photo shows them about as wide as the line on a millimeter ruler.

Slender Wedge Grass

Sphenopholis intermedia

POACEAE



Photo: 6-19-17

This native annual has feathery seed heads that turn creamy off-white when ripe. Seeds become very loose and can be stripped by hand or clipped. Does well in disturbance, fades away as more conservation natives take hold.

Summer Grasses and Kin

Kelly Schultz¹, Dale Shields²

version 2 8/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Porcupine Grass

Hesperostipa spartea

POACEAE

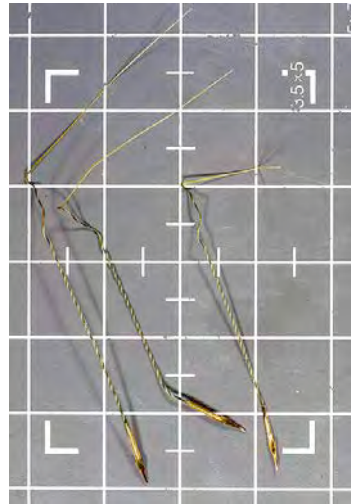


Photo: 6-24-18

Well-named with sharp pointy seeds, ouch! Seeds drill themselves into the soil, as the long awns (seed tails) twist with changing moisture. Look for dark awns contrasted against the pale glumes; seed will come off with a gentle tug. *Best stored with constant humidity, and for as short as possible. Forgotten bundles turn into a tangled nightmare.* If awns are removed, bury the seeds 3/4". Use a nail to make a hole.

Broad-leaved Panic Grass

Dichanthelium latifolium

POACEAE



Photo: 6-23-18

Dichantheliums, are tough to collect. The seeds will ripen sporadically on the same plant. Look for tiny purple florets at the apex of the seed; these are blooming and should not be collected. Seeds are hidden in glumes, like a hairy clamshell and are beige-ish when ripe. Note: all species that have been renamed *Dichanthelium* (literally "twice-flowering") will form more seeds later (August).

Prairie Panic Grass aka Leiberg's Panic Grass

Dichanthelium leibergii

POACEAE

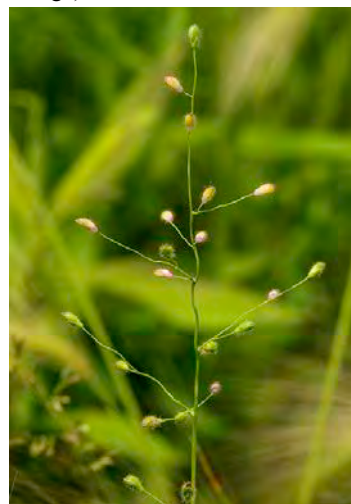


Photo: 6-27-18

Dichanthelium species are tough to collect & ID. This species has hairy spikelets, with some hairs more than 0.5 mm long. Strip the seeds with feather-light pressure, only a few seeds will be ripe each day. It takes patience & persistence to collect a quantity.

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Scribner's Panic
Grass

*Dichanthelium
scribnerianum*

POACEAE

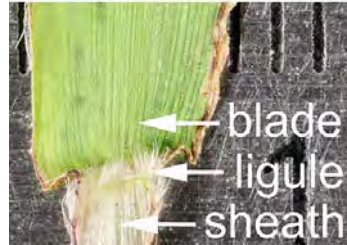
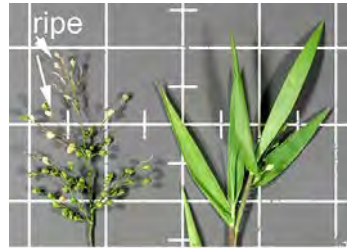


Photo: 7-3-19

Very similar to *D. leibergii*, but *D. scribnerianum* has smaller spikelets, 3.1 - 3.3 mm long (3.7 - 4 mm for *D. leibergii*), and spikelet has miniscule hairs, if at all (*D. leibergii* spikelet hairs can be 0.75 mm long). Ligule is a single row of hairs (no ligule on *D. leibergii*).

Common Panic Grass

*Dichanthelium
implicatum*

POACEAE

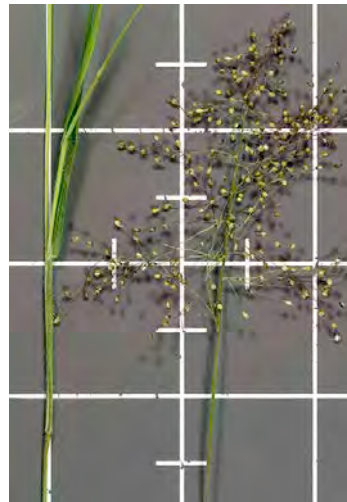


Photo: 7-10-19

This panic grass has much smaller seeds than Leiberg's & Scribner's. Common in disturbed & open places. Seeds are ripe when they are beige-ish and are best sown fresh. Panic grasses have seeds arranged in a panicle (xmas tree shape, and each branch has several branches)

Poverty Oat Grass

Danthonia spicata

POACEAE

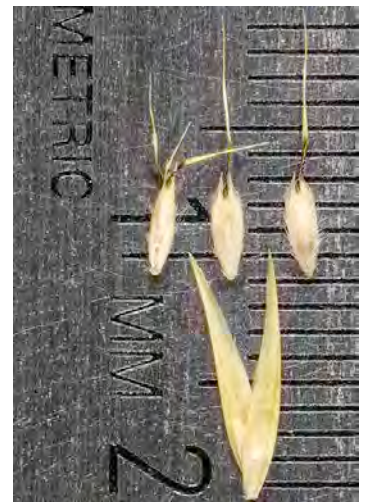


Photo: 7-1-18

Mama's Boy. Collect when beige & crumbles easily by hand. Named for its preference for impoverished soils. Look for tufts of curled basal leaves.

Summer Grasses and Kin

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Orchard Grass

Dactylis glomerata

POACEAE



Photo: 7-4-18

Introduced for grazing, this grass is most often in disturbed soils but can be found in better quality habitats. Looks similar to reed canary grass, but not as obnoxious. Spikelets are rounded and generally upright. Do not collect.

Nodding Fescue

Festuca subverticillata

POACEAE



Photo: 7-10-19

This native fescue is found in mesic woodlands. Usually in low abundance, it may be a short-lived perennial. The lowest seed stalk tends to 'nod' toward the ground, and the entire panicle nods towards the ground when ripe. Collect when beige and strips easily by hand.

Green Fowl Manna Grass

Glyceria striata

POACEAE



Photo: 7-16-2020

Mama's Boy. This common grass is found most often in wetlands, both in full sun and in shade, but can also be found in dry-mesic woodlands and muddy path edges. Flora moves this species from [FACW] to [FAC] for our region. Grass blades have a palm-look to them. Easy to collect: strip beige seeds when loose. Seeds feel granular. Var. *striata* has leaves 5mm wide or less, often folded; lemmas purplish.

Summer Grasses and Kin

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Hungarian Brome

Bromus inermis

POACEAE

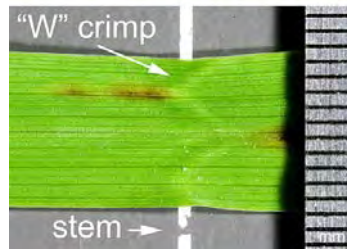


Photo: 7-24-18

A cool-season pasture grass that readily spreads by rhizomes to form a dense, clumping sod. Usually hairless (also called smooth brome) and has a W-shaped crimp about halfway up the blade. Crowds out natives & needs to be killed or reduced before native seeding can occur.

Bearded Wheat Grass

Roegneria subsecunda

POACEAE



Photo: 7-24-19

Mama's Boy. Collect when seeds are light brown. Glumes (the bottom two scales of a spikelet) may still be green. Bearded wheat grass has longer awns at the peak of the seeds.

Slender Wheat Grass

Roegneria trachycaula

POACEAE



Photo: 7-24-17

Mama's Boy. Collect when seeds are light brown. Glumes (clamshell as the base of the spikelet) may still be green. Awns (points at the end of the seed) are short to absent.

Summer Grasses and Kin

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version 2 8/2020

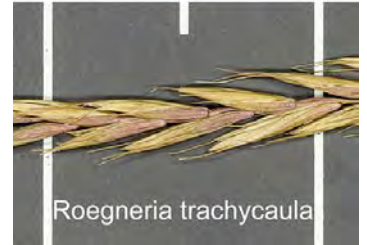
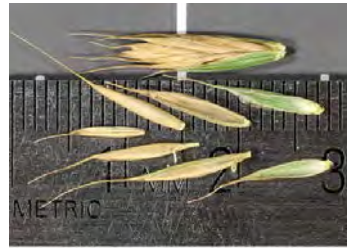
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Quack Grass
Elytrigia repens

vs.

Wheat Grass
Roegneria spp.



Don't confuse the invasive Quack Grass, *Elytrigia repens*, with Wheat Grass. Flora of the Chicago Region now separates these genera out from the *Agropyron* genus. *Elytrigia* stems grow from rhizomes so flowering stems are distributed in a patch. *Roegneria* stems are bunched (cespitose). *Elytrigia* spikelets are persistent and come off as a unit. *Roegneria* spikelets separate into individual florets easily.

Timothy

Phleum pratense

POACEAE

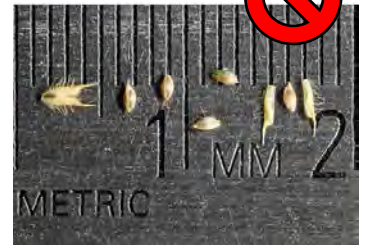


Photo: 8-4-18

Planted as a pasture grass, this species is found in disturbed soils and old Ag fields. The dense spike generally makes it easy to ID.

Silky Wild Rye

Elymus villosus

POACEAE

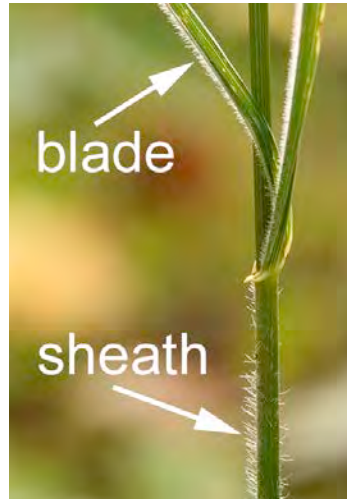


Photo: 8-9-18

Mama's Boy. Compared to other *Elymus* species, this native rye has silky, hairy leaves & sheaths, shorter spikelets of seeds, and typically ripens sooner. *E. virginicus* is upright (like wheat), *E. canadensis* arcs like a long frizzy ponytail. *E. riparius* has hairless sheaths.

Summer Grasses and Kin

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Bottlebrush Grass

Hystrix patula

POACEAE

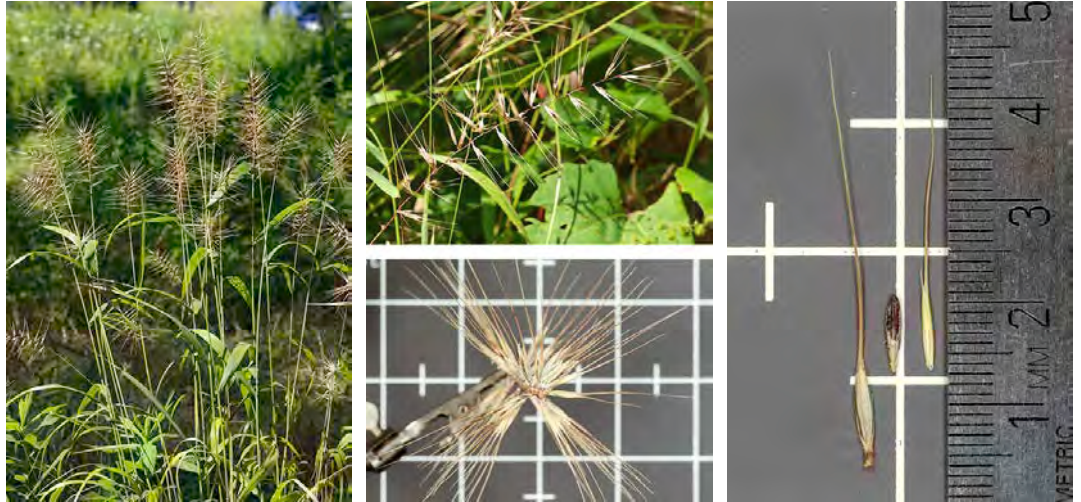


Photo: 8-16-17

Mama's Boy. A staple in woodland restoration and ideal for group workdays due to the clearly unique "bottle brush" forming an X from above. Strip by hand but wear gloves; the knobs where the seeds attach can be rough if collecting a large quantity.

Slender Satin Grass

Muhlenbergia tenuiflora

POACEAE



Photo: 8-30-17

This rare grass lives on morainic bluffs & ravines. It is well named; everything about this plant is slender and delicate. Collect when beige.

Lake County Seed Collection Guide

Spring Woodland Forbs

Kelly Schultz¹, Dale Shields²

version 2 6/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

Images ©2019 DJShields. Produced by: Dale Shields & Kelly Schultz ©Lake County Forest Preserve District [kschultz@lcfpd.org]

The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1” on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind**. For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed**.

Seed Groups

Time sensitive groups – seeds disperse in a few days or weeks due to wildlife, sensitivity to wind, etc.

Elaiosomes are “ant candy” attached to the seeds. Ants are strong and motivated, able to quickly carry the candy back to their home and tossing the heavy “candy wrapper” (seeds) into their compost piles. Check these species frequently; ants will rapidly collect all of the seeds. These seeds have higher germination when sown within a day or two.



Ballistic capsules catapult their babies away, up to 30 feet! Search YouTube for “exploding seeds” to see these in action. To harvest: learn the ripening sequence & harvest just before explosion; store in a *sealed* paper bag or mesh bag for a day or two. Another option is to cover the seed heads with mesh hoods (*after flowers wilt*) to contain the seeds. Snip the entire stem after the seeds have popped, and carefully open the hoods indoors.



Fluffy seeds are quite common, allowing for wind to efficiently move seeds over long distances. Collect when fluffy. It is ok to collect these seeds *slightly* early, by collecting entire stems with seeds that are either fully poofed or have dropped their ray florets (the colorful "petals"); snip the stems and let them poof in a paper or mesh bag. Spring fluffy seeds are typically more sensitive to strong weather.



Milkweed seeds are ripe when pods are split open & seeds are brown. Ignore the pod color. Pro tip: rubberband the unripe pods, to prevent seeds from flying away.



Berries turn a vibrant color when ripe, as an advertisement to the wildlife to EAT ME and disperse the seed. Collection window is small for some of these seeds. These species need to be sown fresh in damp soil OR cleaned & stored in plastic in the refrigerator (which maintains a higher level of humidity). The natural process of a seed stored in a juicy berry, followed by chewing, digestion, and dispersal in a pile of “fertilizer” means these seeds are not used to completely drying out.



Lake County Seed Collection Guide

Spring Woodland Forbs

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Mama's Boys will remain on the stem for a while. Ideal for forecasting future workdays.

Shakers drop seeds very close to the mother plant, when shaken loose by the wind or a passing critter. Usually a Mama's Boy, unless strong weather occurs.

Beaks are a subset of the shaker group, with seed capsules that split open like a beak when the seeds are ripe. Collect when beaks are open.

Coneheads are flowers with a cone-shaped center. Imagine these flowers without their colorful parts, and you know exactly what they look like when seeds are ripe. Seeds are inside the hard cone.

Crumbly Coneheads are cone-shaped or thimble-shaped. Softer than standard coneheads, they crumble when ripe and are easily stripped by hand.

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama's Boys.

Hitchhikers are easy to tell when ripe – they hitch a ride on your pants! Color can be an indicator, but not always.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

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Dutchman's Breeches

Dicentra cucullaria

FUMARIACEAE



Photo: 5-18-18

Elaiosomes. Beaks. A very cool flower, like white puffy pants hanging upside down on a clothesline. Green capsules swell to ~1/8" wide & split when ripe, seeds are oily black. Look for an open capsule and test the remaining ones with a *gentle* squeeze. Sow seed right away.

Sharp-lobed Hepatica

Hepatica acutiloba

RANUNCULACEAE



Photo: 5-18-18

Shattering. The sepals cup around the hairy seeds, hidden under the leaves and pointing downhill. Seeds are ripe when they fall off with a *gentle* touch; no force is necessary. Must sow fresh and viability is often low. *Hepatica* are some of the earliest flowers of the year.

Round-lobed
Hepatica

Hepatica americana

RANUNCULACEAE



Photo: 5-22-18

Shattering. Same treatment as *H. acutiloba*. White or lavender flowers pop up on fuzzy stalks, over a cluster of last year's leaves. Happiest on drier slopes, the low moisture and slow erosion reduces competition from other plants. Rare, collect 10%

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Spring Beauty

Claytonia virginica

PORTULACACEAE

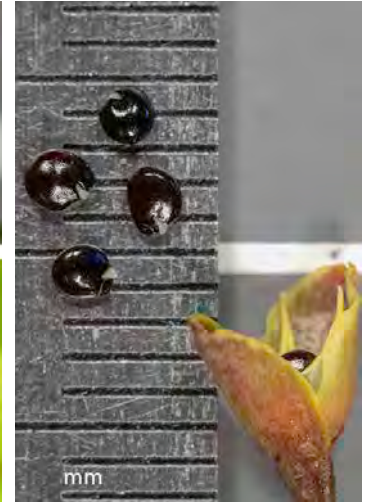
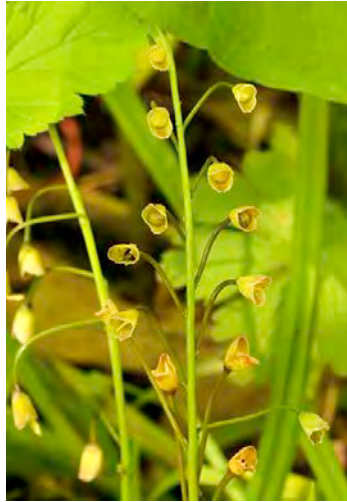


Photo: 5-22-18

Beaks. Elaiosomes. Looks like a bunch of tiny duckbills along the stem. Stem may be upright or flat on the ground. Inside the duckbills are capsules that will split open to drop out the seed. Collect when at least one of the capsules is open; the rest will open in the bag.

Wood Anemone

*Anemone
quinquefolia*

RANUNCULACEAE



Photo: 5-30-19

Shattering. This white flower grows in rhizomatous colonies. Usually 5 petals, and, 3 – 5 leaflets. Individual plants take years to flower; typical to see more leafy plants than flowering ones. Collect when green seeds are loose, by a *gentle* touch test. Sow fresh.

False Mermaid

*Floerkea
proserpinacoides*

LIMNANTHACEAE



Photo: 5-30-19

Shattering. This ephemeral plant forms delicate mats along the ground, especially in wet to mesic woodlands. Subtle blooms are easy to overlook, and the entire plant disappears by summer. Test seed ripeness with a *gentle* touch test. Collect 10%.

Spring Woodland Forbs

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White Trout Lily

Erythronium albidum

LILIACEAE

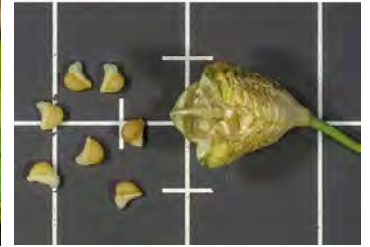


Photo: 6-1-18

Elaiosomes. Beaks. Capsules & stems usually detach and lie loose on the ground. Collect detached stems or open capsules. Seeds are honey or caramel colored when ripe. *E. americanum* (yellow trout lily) is less rarer in Lake Co.

Small-flowered
Buttercup

Ranunculus abortivus

RANUNCULACEAE



Photo: 6-3-18

Shattering. This common buttercup is found in woodlands, wet to dry. Flowers are tiny, about 1/4" across, with petals smaller than the green center disc. Lower basal leaves are kidney-shaped (most buttercups have lobed leaves). Collect when seeds are easily loosened.

Swamp Buttercup

Ranunculus septentrionalis

RANUNCULACEAE



Photo: 6-15-18

Shattering. The most common large-flowered buttercup, found in wet to mesic woodlands. Leaves are compound, with deep lobes. Stems are hairless or sometimes fine, pressed hairs. Collect when seeds are loose.

Spring Woodland Forbs

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False Rue Anemone

Enemion biternatum

RANUNCULACEAE



Photo: 6-3-18

Shattering. Beaks. Star-like clusters have an elongated point like an elf shoe. Collect when the beak opens (follicle – like a beak, but splits on one side) or the capsule is loose to the touch. Sow seed fresh. False Rue Anemone & Rue Anemone are often confusing when in flower, but the seeds are clearly different (see below).

Rue Anemone

Anemonella thalictroides

RANUNCULACEAE



Photo: 6-15-18

Shattering. *Thalictroides* is Latin for “thalictrum-like” and this is clear in the similarity of the seeds and leaves. The leaf arrangement & plant size is clearly different: a small whorl of leaves for this ankle-high species, and bushier for the shin- to knee-high *Thalictrum*.

Early Meadow Rue

Thalictrum dioicum

RANUNCULACEAE

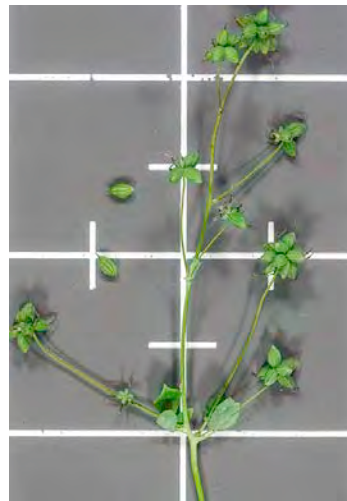


Photo: 6-24-2018

Shattering. Seeds are football-shaped with parallel striations. Collect when they fall off easily with a light touch – no force is necessary. Flowers are subtle and wind-pollinated. Sow fresh seeds asap for best germination.

Spring Woodland Forbs

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Bloodroot

Sanguinaria canadensis

PAPAVERACEAE



Photo: 6-8-18

Elaiosomes. The elaiosome is obvious in bloodroot, like a white gummy worm. Wear gloves to prevent the pod's yellow sap staining your fingers. Collect open capsules. Can give swollen pods (~ 1/2" wide) a *gentle* squeeze to see if it pops open to reveal the wine-colored seeds.

Wild Geranium

Geranium maculatum

GERANIACEAE



Photo: 6-13-17

Ballistic. Geranium aka cranesbill looks somewhat like a bird's long beak with 5 bumps at the bottom. These are 5 "ladles" that turn brown, then spring up to catapult the seeds away, finishing in a chandelier shape. Collect brown bills. Chandeliers no longer contain seed.

Toothwort

Dentaria laciniata

BRASSICACEAE



Photo: 6-15-18

Ballistic. Seed pods have a long and skinny shape (silique) found in many mustards (including the invasive garlic mustard). As it dries, one side peels back & curls up to send the green seeds flying. Look for an open silique, collect the rest. Pinch at base of pod to contain seeds.

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Dog Violet

Viola labradorica

VIOLACEAE

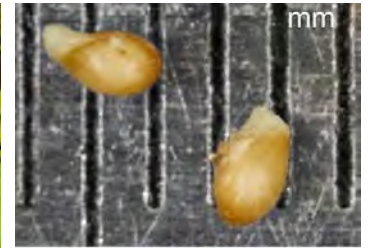
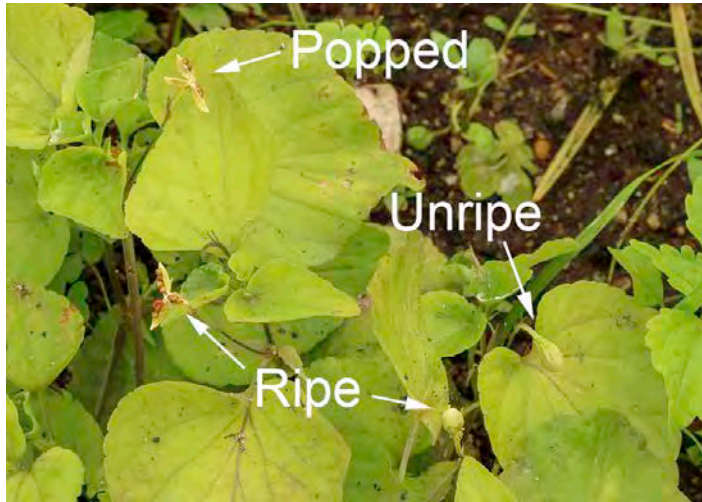


Photo: 6-19-17

Ballistic. Elaiosomes. Pods start out nodding, then raise their heads up to the sky, split open into 3rds, and finally shoot their seeds away. Collect when heads are aimed between the horizon & the sky. Most violet species have multiple rounds of seeds: initially from open flowers (chasmogamous), but later they form flowers that never open and self-pollinate (cleistogamous) to produce additional seeds. Sow fresh.

Smooth Yellow Violet

Viola pubescens
var. *scabriuscula*

VIOLACEAE



Photo: 6-23-18

Ballistic. For sessile (stemless) pods, check with a *gentle* squeeze or look for split capsules. Capsules will ripen at slightly different times, on the same plant. Common in mesic to dry-mesic woodlands, although usually scattered in small populations.

Jacob's Ladder

Polemonium reptans

POLEMONIACEAE

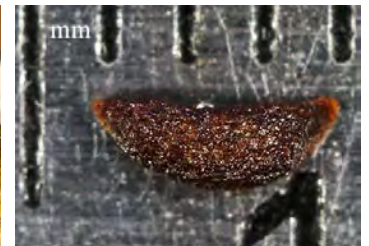
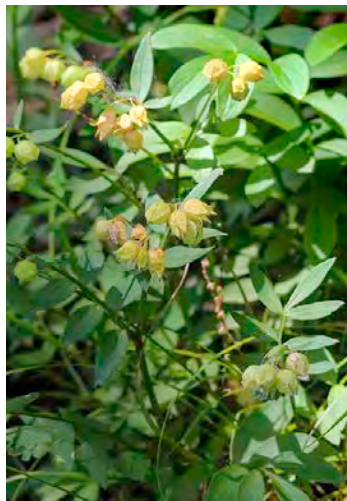


Photo: 6-15-18

Beaks. Inside the "Chinese lantern" of the calyx is a capsule that slowly turns from green to beige-yellow, and then opens to drop the seeds. Shortly before opening, capsule often becomes a little translucent and the brown-burgundy color of the seeds becomes visible. Peel back the papery lantern to check. Collect when the capsule is yellow-beige or translucent. Leaves are opposite pairs, like ladder rungs.

Spring Woodland Forbs

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Wild Hyacinth

Camassia scilloides

HYACINTHACEAE

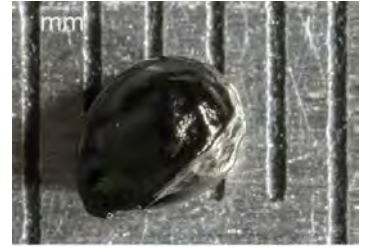


Photo: 6-23-18

Beaks. These lovely bulbs form a capsule that turns from green to beige-brown, and splits into 3 parts to reveal black seeds. Collect when the beaks open. Like many lily relatives, these are slow from seed. Flowers are charming 6-pointed stars, in pale blue-violet.

Wild Columbine

Aquilegia canadensis

RANUNCULACEAE



Photo: 6-24-17

Beaks. The follicles (seed capsules) look somewhat like the flower, but upside down. Collect when beaks open to reveal the oil-black seeds. Follicles will turn colors too, but the open beak is more important. Flowers are a bold red and yellow. Short-lived perennial.

Reflexed Wild Ginger

Asarum canadense
var. *reflexum*

ARISTOLOCHIACEAE



Photo: 6-24-18

Elaiosomes. The spade-shaped leaves make a lovely native groundcover. Burgundy flowers are hidden under the leaves, right on top of the soil. Capsules degrade into a mealy mess; collect when soft & mushy. Plants also divide & transplant easily.

Spring Woodland Forbs

Kelly Schultz¹, Dale Shields²

version 2 6/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Woodland Phlox

Phlox divaricata

POLEMONIACEAE



Photo: 6-24-17

Ballistic. The blue-purple petals drop, revealing hard capsules tucked in the center of the 5 sepals. Capsules swell & turn green-beige, before splitting into 3 pieces & shooting the dark seeds away. Sepals often reflex (peel backwards) like a star shortly before catapulting. After flowers start to fade, cover with mesh hoods to capture seeds

Fire Pink

Silene virginica

CARYOPHYLLACEAE

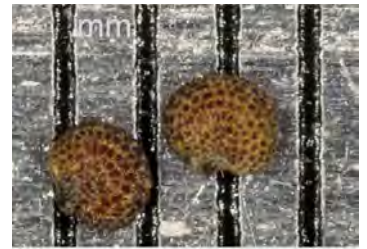


Photo: 6-24-17

Beaks. This rare plant has fiery red petals, notched at the tips. The peak of the sticky beak will split open and the brown seeds will easily spill into your hand. Short-lived perennial.

Twinleaf

Jeffersonia diphylla

BERBERIDACEAE



Photo: 6-24-18

Elaiosomes. Beaks. Pods are green & upright, then turn green-yellow and tilt toward the ground right before opening to spill the seeds out. Look for tilted pods; collect open capsules, or any that pop under *gentle* pressure. Entire population may ripen & drop in only a few days.

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Wood Sandwort

Moehringia lateriflora

CARYOPHYLLACEAE

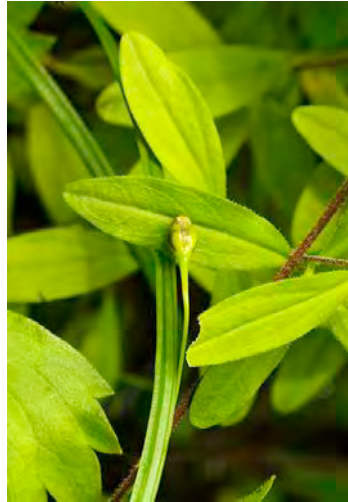


Photo: 6-28-19

Elaiosomes. Beaks. This white wildflower adds little pops of flowers, around ankle-high. Found in wet to dry-mesic woodlands and wet to mesic sand prairies. Collect open capsules, sow seed promptly.

Large-flowered Trillium

Trillium grandiflorum

TRILLIACEAE

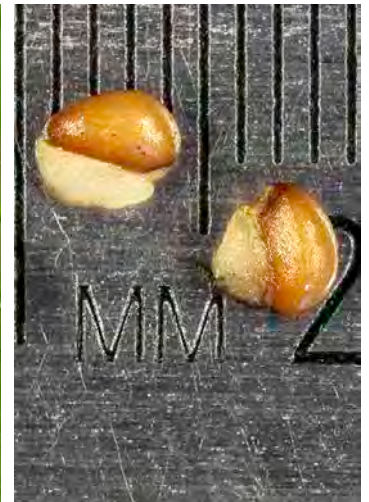


Photo: 7-16-18

Elaiosomes. Three bright white petals that fade to pink with age. Three leaves of solid green. Trillium capsules are ripe when their color fades to yellow-green/off-white & they easily pop off the stem. Sow fresh, takes 2 years to germinate.

Red Trillium
aka
Prairie Trillium

Trillium recurvatum

TRILLIACEAE



Photo: 7-23-18

Elaiosomes. Flowers are maroon-red petals around black anthers. Leaves are mottled shades of green. Common in woodlands & savannas; finding these in prairies typically indicates a historic woodland. Trillium capsules start to degrade when ripe, but not as mushy as wild ginger.

Spring Woodland Forbs

Kelly Schultz¹, Dale Shields²

version 2 6/2020

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Bellwort

Uvularia grandiflora

COLCHICACEAE



Photo: 6-29-18

Elaiosomes. Beaks. Cheery yellow flowers. Leaves are perfoliate (leaves surround the stem). Capsule splits into 3 parts (typical of lily relatives). Caramel colored seeds. Insects often chew into the capsules. Collect once the capsules have opened. Happiest on gravelly slopes.

Seed Guide Index – by Scientific Name

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<i>Abutilon theophrasti</i>	Fall Prairie Forbs	14
<i>Acorus americanus</i>	Summer Wetland Forbs	6
<i>Actaea pachypoda</i>	Summer Woodland Forbs	8
<i>Actaea rubra</i>	Summer Woodland Forbs	3
<i>Agalinis skinneriana</i>	Fall Wetland Forbs	13
<i>Agastache nepetoides</i>	Fall Woodland Forbs	11
<i>Agastache scrophulariifolia</i>	Fall Woodland Forbs	11
<i>Ageratina altissima</i>	Fall Woodland Forbs	7
<i>Agrimonia gryposepala</i>	Summer Woodland Forbs	10
<i>Agrimonia parviflora</i>	Summer Wetland Forbs	9
<i>Agrimonia rostellata</i>	Summer Woodland Forbs	10
<i>Alisma subcordatum</i>	Summer Wetland Forbs	7
<i>Alisma triviale</i>	Summer Wetland Forbs	7
<i>Alliaria petiolata</i>	Summer Woodland Forbs	5
<i>Allium burdickii</i>	Summer Woodland Forbs	6
<i>Allium canadense</i>	Summer Woodland Forbs	3
<i>Allium cernuum</i>	Fall Prairie Forbs	9
<i>Allium tricoccum</i>	Fall Woodland Forbs	15
<i>Amelanchier interior</i>	Woody Plants	3
<i>Amelanchier laevis</i>	Woody Plants	3
<i>Amelanchier x grandiflora</i>	Woody Plants	3
<i>Amorpha canescens</i>	Summer Prairie Forbs	14
<i>Amorpha fruticosa</i>	Woody Plants	11
<i>Amphicarpaea bracteata</i>	Fall Woodland Forbs	18
<i>Andropogon gerardii</i>	Fall Grasses and Kin	9
<i>Anemone canadensis</i>	Summer Wetland Forbs	9
<i>Anemone cylindrica</i>	Summer Prairie Forbs	11
<i>Anemone quinquefolia</i>	Spring Woodland Forbs	4
<i>Anemone virginiana</i>	Summer Woodland Forbs	6
<i>Anemonella thalictroides</i>	Spring Woodland Forbs	6
<i>Angelica atropurpurea</i>	Summer Wetland Forbs	5
<i>Antennaria howellii</i> subs. <i>neodioica</i>	Summer Prairie Forbs	4
<i>Antennaria plantaginifolia</i>	Summer Prairie Forbs	4
<i>Antenoron virginianum</i>	Fall Woodland Forbs	10
<i>Apocynum sibiricum</i>	Fall Prairie Forbs	14
<i>Aquilegia canadensis</i>	Spring Woodland Forbs	9
<i>Arisaema dracontium</i>	Fall Wetland Forbs	4
<i>Arisaema triphyllum</i>	Fall Woodland Forbs	5
<i>Arnoglossum atriplicifolium</i>	Summer Woodland Forbs	11

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<i>Artemisia campestris</i> subsp. <i>caudata</i>	Fall Prairie Forbs	18
<i>Asarum canadense</i> var. <i>reflexum</i>	Spring Woodland Forbs	9
<i>Asclepias incarnata</i>	Fall Wetland Forbs	13
<i>Asclepias sullivantii</i>	Fall Prairie Forbs	8
<i>Asclepias syriaca</i>	Fall Prairie Forbs	8
<i>Asclepias tuberosa</i>	Summer Prairie Forbs	13
<i>Asclepias verticillata</i>	Fall Prairie Forbs	9
<i>Asclepias viridiflora</i>	Fall Prairie Forbs	8
<i>Astragalus canadensis</i>	Fall Prairie Forbs	9
<i>Aureolaria grandiflora</i> var. <i>pulchra</i>	Fall Woodland Forbs	14
<i>Baptisia lactea</i>	Summer Prairie Forbs	12
<i>Baptisia leucophaea</i>	Summer Prairie Forbs	12
<i>Blephilia ciliata</i>	Summer Prairie Forbs	12
<i>Blephilia hirsuta</i>	Summer Woodland Forbs	10
<i>Boechera laevigata</i>	Summer Woodland Forbs	9
<i>Bolboschoenus fluviatilis</i>	Summer Wetland Grasses and Kin	9
<i>Boltonia asteroides</i>	Fall Wetland Forbs	7
<i>Bouteloua curtipendula</i>	Fall Grasses and Kin	7
<i>Brickellia eupatorioides</i> var. <i>corymbulosa</i>	Fall Prairie Forbs	13
<i>Bromus inermis</i>	Summer Grasses and Kin	13
<i>Bromus nottowanus</i>	Fall Grasses and Kin	7
<i>Calamagrostis canadensis</i>	Summer Wetland Grasses and Kin	13
<i>Caltha palustris</i>	Summer Wetland Forbs	3
<i>Camassia scilloides</i>	Spring Woodland Forbs	9
<i>Campanulastrum americanum</i>	Fall Woodland Forbs	5
<i>Cardamine douglassii</i>	Summer Wetland Forbs	3
<i>Carex annectens</i> var. <i>xanthocarpa</i>	Summer Wetland Grasses and Kin	4
<i>Carex bicknellii</i>	Summer Grasses and Kin	5
<i>Carex blanda</i>	Summer Grasses and Kin	3
<i>Carex brevior</i>	Summer Grasses and Kin	5
<i>Carex bromoides</i>	Summer Wetland Grasses and Kin	5
<i>Carex buxbaumii</i>	Summer Wetland Grasses and Kin	5
<i>Carex cephalophora</i>	Summer Grasses and Kin	6
<i>Carex crinita</i>	Fall Grasses and Kin	3
<i>Carex cristatella</i>	Summer Wetland Grasses and Kin	7
<i>Carex crus-corvi</i>	Summer Wetland Grasses and Kin	6
<i>Carex cryptolepis</i>	Fall Grasses and Kin	3
<i>Carex davisii</i>	Summer Grasses and Kin	6
<i>Carex frankii</i>	Fall Grasses and Kin	3

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<i>Carex granularis</i>	Summer Grasses and Kin	7
<i>Carex gravida</i>	Summer Grasses and Kin	6
<i>Carex grayi</i>	Fall Grasses and Kin	4
<i>Carex hirsutella</i>	Summer Grasses and Kin	8
<i>Carex hirtifolia</i>	Summer Grasses and Kin	3
<i>Carex hystericina</i>	Summer Wetland Grasses and Kin	8
<i>Carex intumescens</i>	Summer Wetland Grasses and Kin	8
<i>Carex jamesii</i>	Summer Grasses and Kin	4
<i>Carex lacustris</i>	Summer Wetland Grasses and Kin	6
<i>Carex lupuliformis</i>	Fall Grasses and Kin	4
<i>Carex lupulina</i>	Fall Grasses and Kin	4
<i>Carex muskingumensis</i>	Summer Wetland Grasses and Kin	8
<i>Carex normalis</i>	Summer Grasses and Kin	8
<i>Carex pellita</i>	Summer Wetland Grasses and Kin	4
<i>Carex pennsylvanica</i>	Summer Grasses and Kin	3
<i>Carex radiata</i>	Summer Grasses and Kin	7
<i>Carex rosea</i>	Summer Grasses and Kin	7
<i>Carex sartwellii</i>	Summer Wetland Grasses and Kin	5
<i>Carex scoparia</i>	Summer Wetland Grasses and Kin	7
<i>Carex sparganioides</i>	Summer Grasses and Kin	8
<i>Carex sprengelii</i>	Summer Grasses and Kin	5
<i>Carex squarrosa</i>	Summer Wetland Grasses and Kin	6
<i>Carex stipata</i>	Summer Wetland Grasses and Kin	3
<i>Carex stricta</i>	Summer Wetland Grasses and Kin	3
<i>Carex tenera</i>	Summer Wetland Grasses and Kin	3
<i>Carex tribuloides</i>	Summer Wetland Grasses and Kin	7
<i>Carex vulpinoidea</i>	Summer Wetland Grasses and Kin	4
<i>Carex woodii</i>	Summer Grasses and Kin	4
<i>Caulophyllum thalictroides</i>	Summer Woodland Forbs	8
<i>Ceanothus americanus</i>	Woody Plants	12
<i>Celastrus orbiculatus</i>	Woody Plants	11
<i>Celastrus scandens</i>	Woody Plants	11
<i>Cephalanthus occidentalis</i>	Woody Plants	15
<i>Chamaecrista fasciculata</i>	Fall Prairie Forbs	7
<i>Chelone glabra</i>	Fall Wetland Forbs	18
<i>Cicuta maculata</i>	Fall Wetland Forbs	6
<i>Cinna arundinacea</i>	Fall Grasses and Kin	7
<i>Circaea canadensis</i>	Summer Woodland Forbs	9

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<i>Cirsium altissimum</i>	Fall Woodland Forbs	14
<i>Cirsium arvense</i>	Summer Prairie Forbs	9
<i>Cirsium discolor</i>	Fall Prairie Forbs	10
<i>Cirsium muticum</i>	Fall Wetland Forbs	14
<i>Claytonia virginica</i>	Spring Woodland Forbs	4
<i>Clematis virginiana</i>	Fall Woodland Forbs	16
<i>Comandra umbellata</i>	Summer Prairie Forbs	7
<i>Conopholis americana</i>	Summer Woodland Forbs	3
<i>Coreopsis palmata</i>	Summer Prairie Forbs	14
<i>Coreopsis tripteris</i>	Fall Prairie Forbs	16
<i>Cornus obliqua</i>	Woody Plants	7
<i>Cornus racemosa</i>	Woody Plants	7
<i>Cornus sericea</i>	Woody Plants	7
<i>Corylus americana</i>	Woody Plants	8
<i>Cryptotaenia canadensis</i>	Summer Woodland Forbs	8
<i>Cuscuta polygonorum</i>	Fall Wetland Forbs	6
<i>Dactylis glomerata</i>	Summer Grasses and Kin	12
<i>Dalea candida</i>	Fall Prairie Forbs	4
<i>Dalea purpurea</i>	Fall Prairie Forbs	4
<i>Danthonia spicata</i>	Summer Grasses and Kin	11
<i>Dasistoma macrophylla</i>	Fall Woodland Forbs	14
<i>Dentaria laciniata</i>	Spring Woodland Forbs	7
<i>Desmodium canadense</i>	Fall Prairie Forbs	7
<i>Desmodium paniculatum</i>	Fall Woodland Forbs	6
<i>Desmodium perplexum</i>	Fall Woodland Forbs	6
<i>Dianthus armeria</i>	Fall Prairie Forbs	3
<i>Diarrhena obovata</i>	Fall Grasses and Kin	11
<i>Dicentra cucullaria</i>	Spring Woodland Forbs	3
<i>Dichanthelium implicatum</i>	Summer Grasses and Kin	11
<i>Dichanthelium latifolium</i>	Summer Grasses and Kin	10
<i>Dichanthelium leibergii</i>	Summer Grasses and Kin	10
<i>Dichanthelium scribnerianum</i>	Summer Grasses and Kin	11
<i>Digitaria sanguinalis</i>	Fall Grasses and Kin	9
<i>Dioscorea villosa</i>	Fall Woodland Forbs	12
<i>Dodecatheon meadia</i>	Summer Woodland Forbs	5
<i>Doellingeria umbellata</i>	Asters and Goldenrods	3
<i>Drymocallis arguta</i>	Summer Prairie Forbs	13
<i>Echinacea pallida</i>	Fall Prairie Forbs	3
<i>Echinacea purpurea</i>	Fall Prairie Forbs	3

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<i>Eleocharis erythropoda</i>	Summer Wetland Grasses and Kin	11
<i>Elymus canadensis</i>	Fall Grasses and Kin	8
<i>Elymus riparius</i>	Fall Grasses and Kin	8
<i>Elymus villosus</i>	Summer Grasses and Kin	14
<i>Elymus virginicus</i>	Fall Grasses and Kin	8
<i>Elytrigia repens</i>	Summer Grasses and Kin	14
<i>Enemion biternatum</i>	Spring Woodland Forbs	6
<i>Epilobium ciliatum</i>	Fall Wetland Forbs	7
<i>Epilobium coloratum</i>	Fall Wetland Forbs	7
<i>Erigeron annuus</i>	Summer Prairie Forbs	8
<i>Erigeron strigosus</i>	Summer Prairie Forbs	8
<i>Erythronium albidum</i>	Spring Woodland Forbs	5
<i>Eupatorium altissimum</i>	Fall Prairie Forbs	13
<i>Eupatorium perfoliatum</i>	Fall Wetland Forbs	15
<i>Eupatorium serotinum</i>	Fall Prairie Forbs	13
<i>Eurybia furcata</i>	Asters and Goldenrods	3
<i>Eurybia macrophylla</i>	Asters and Goldenrods	3
<i>Euthamia graminifolia</i>	Asters and Goldenrods	9
<i>Euthamia nuttallii</i>	Asters and Goldenrods	9
<i>Eutrochium maculatum</i>	Fall Wetland Forbs	12
<i>Eutrochium purpureum</i>	Fall Woodland Forbs	12
<i>Festuca subverticillata</i>	Summer Grasses and Kin	12
<i>Floerkea proserpinacoides</i>	Spring Woodland Forbs	4
<i>Fragaria virginiana</i>	Summer Prairie Forbs	7
<i>Gaura longiflora</i>	Fall Prairie Forbs	7
<i>Gentiana alba</i>	Fall Prairie Forbs	15
<i>Gentiana andrewsii</i>	Fall Wetland Forbs	11
<i>Gentianella quinquefolia</i> subsp. <i>occidentalis</i>	Fall Prairie Forbs	15
<i>Gentianopsis crinita</i>	Fall Wetland Forbs	11
<i>Geranium maculatum</i>	Spring Woodland Forbs	7
<i>Geum aleppicum</i>	Summer Prairie Forbs	11
<i>Geum canadense</i>	Summer Woodland Forbs	7
<i>Geum triflorum</i>	Summer Prairie Forbs	3
<i>Glyceria septentrionalis</i>	Summer Wetland Grasses and Kin	13
<i>Glyceria striata</i>	Summer Grasses and Kin	12
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<i>Helenium autumnale</i>	Fall Wetland Forbs	20

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<i>Heliopsis helianthoides</i>	Fall Prairie Forbs	11
<i>Hepatica acutiloba</i>	Spring Woodland Forbs	3
<i>Hepatica americana</i>	Spring Woodland Forbs	3
<i>Heracleum maximum</i>	Summer Wetland Forbs	5
<i>Hesperostipa spartea</i>	Summer Grasses and Kin	10
<i>Heuchera richardsonii</i>	Summer Prairie Forbs	6
<i>Hibiscus laevis</i>	Fall Wetland Forbs	4
<i>Hibiscus palustris</i>	Fall Wetland Forbs	4
<i>Hieracium piloselloides</i>	Summer Prairie Forbs	6
<i>Hieracium scabrum</i>	Fall Woodland Forbs	15
<i>Hieracium umbellatum</i>	Fall Prairie Forbs	6
<i>Hierochloa hirta</i>	Summer Wetland Grasses and Kin	12
<i>Hydrophyllum virginianum</i>	Summer Woodland Forbs	4
<i>Hylodesmum glutinosum</i>	Fall Woodland Forbs	6
<i>Hypericum ascyron</i>	Fall Wetland Forbs	17
<i>Hypericum kalmianum</i>	Woody Plants	13
<i>Hypericum perforatum</i>	Fall Woodland Forbs	17
<i>Hypericum prolificum</i>	Woody Plants	13
<i>Hypericum punctatum</i>	Fall Woodland Forbs	17
<i>Hypoxis hirsuta</i>	Summer Prairie Forbs	4
<i>Hystrix patula</i>	Summer Grasses and Kin	15
<i>Ilex verticillata</i>	Woody Plants	13
<i>Impatiens capensis</i>	Fall Wetland Forbs	3
<i>Impatiens pallida</i>	Fall Wetland Forbs	3
<i>Iris virginica</i> var. <i>shrevei</i>	Summer Wetland Forbs	8
<i>Jeffersonia diphylla</i>	Spring Woodland Forbs	10
<i>Juncus dudleyi</i>	Summer Wetland Grasses and Kin	11
<i>Juncus effusus</i>	Summer Wetland Grasses and Kin	11
<i>Juncus nodosus</i>	Summer Wetland Grasses and Kin	12
<i>Juncus tenuis</i>	Summer Grasses and Kin	9
<i>Juncus torreyi</i>	Summer Wetland Grasses and Kin	12
<i>Lactuca biennis</i>	Fall Woodland Forbs	4
<i>Lactuca canadensis</i>	Fall Woodland Forbs	4
<i>Lactuca floridana</i>	Fall Woodland Forbs	4
<i>Laportea canadensis</i>	Fall Wetland Forbs	5
<i>Leersia oryzoides</i>	Fall Grasses and Kin	5

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<i>Lespedeza frutescens</i>	Fall Woodland Forbs	15
<i>Liatris aspera</i>	Fall Prairie Forbs	16
<i>Liatris cylindracea</i>	Fall Prairie Forbs	16
<i>Liatris pycnostachya</i>	Fall Wetland Forbs	19
<i>Liatris scariosa</i> var. <i>nieuwlandii</i>	Fall Woodland Forbs	16
<i>Liatris spicata</i>	Fall Wetland Forbs	19
<i>Lindera benzoin</i>	Woody Plants	8
<i>Lithospermum canescens</i>	Summer Prairie Forbs	5
<i>Lithospermum latifolium</i>	Fall Woodland Forbs	12
<i>Lobelia cardinalis</i>	Fall Wetland Forbs	8
<i>Lobelia inflata</i>	Fall Woodland Forbs	13
<i>Lobelia siphilitica</i>	Fall Wetland Forbs	8
<i>Lobelia spicata</i>	Fall Prairie Forbs	10
<i>Lonicera reticulata</i>	Woody Plants	6
<i>Ludwigia polycarpa</i>	Summer Wetland Forbs	8
<i>Luzula multiflora</i>	Summer Grasses and Kin	9
<i>Lycopus americanus</i>	Fall Wetland Forbs	16
<i>Lycopus rubellus</i>	Fall Wetland Forbs	16
<i>Lycopus uniflorus</i>	Fall Wetland Forbs	16
<i>Lysimachia ciliata</i>	Fall Wetland Forbs	5
<i>Lythrum salicaria</i>	Fall Wetland Forbs	15
<i>Menispermum canadense</i>	Woody Plants	8
<i>Mentha canadensis</i>	Fall Wetland Forbs	17
<i>Micranthes pennsylvanica</i>	Summer Wetland Forbs	4
<i>Mimulus ringens</i>	Fall Wetland Forbs	8
<i>Moehringia lateriflora</i>	Spring Woodland Forbs	11
<i>Monarda fistulosa</i>	Fall Prairie Forbs	4
<i>Muhlenbergia frondosa</i>	Fall Grasses and Kin	10
<i>Muhlenbergia mexicana</i>	Fall Grasses and Kin	10
<i>Muhlenbergia tenuiflora</i>	Summer Grasses and Kin	15
<i>Oenothera biennis</i>	Fall Prairie Forbs	14
<i>Oligoneuron album</i>	Asters and Goldenrods	8
<i>Oligoneuron ohioense</i>	Asters and Goldenrods	8
<i>Oligoneuron riddellii</i>	Asters and Goldenrods	8
<i>Oligoneuron rigidum</i>	Asters and Goldenrods	9
<i>Osmorhiza claytonii</i>	Summer Woodland Forbs	4
<i>Osmorhiza longistylis</i>	Summer Woodland Forbs	4

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<i>Oxypolis rigidior</i>	Fall Wetland Forbs	6
<i>Packera aurea</i>	Summer Wetland Forbs	4
<i>Packera glabella</i>	Summer Wetland Forbs	4
<i>Packera paupercula</i>	Summer Prairie Forbs	5
<i>Panicum dichotomiflorum</i>	Fall Grasses and Kin	6
<i>Panicum virgatum</i>	Fall Grasses and Kin	6
<i>Pedicularis canadensis</i>	Summer Prairie Forbs	3
<i>Penstemon calycosus</i>	Summer Prairie Forbs	13
<i>Penstemon digitalis</i>	Fall Prairie Forbs	10
<i>Penthorum sedoides</i>	Fall Wetland Forbs	9
<i>Persicaria hydropiperoides</i>	Fall Wetland Forbs	14
<i>Persicaria punctata</i>	Fall Wetland Forbs	14
<i>Phalaris arundinacea</i>	Summer Wetland Grasses and Kin	13
<i>Phleum pratense</i>	Summer Grasses and Kin	14
<i>Phlox divaricata</i>	Spring Woodland Forbs	10
<i>Phlox glaberrima</i> var. <i>interior</i>	Summer Wetland Forbs	6
<i>Phlox pilosa</i> var. <i>fulgida</i>	Summer Prairie Forbs	7
<i>Phragmites australis</i>	Fall Grasses and Kin	11
<i>Phryma leptostachya</i>	Fall Woodland Forbs	16
<i>Physocarpus opulifolius</i>	Woody Plants	12
<i>Physostegia praemorsa</i>	Fall Prairie Forbs	12
<i>Physostegia speciosa</i>	Fall Wetland Forbs	9
<i>Physostegia virginiana</i>	Fall Prairie Forbs	12
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<i>Sisyrinchium angustifolium</i>	Summer Prairie Forbs	10
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PANIC GRASS, COMMON	Summer Grasses and Kin	11
PANIC GRASS, LEIBERG'S	Summer Grasses and Kin	10
PANIC GRASS, PRAIRIE	Summer Grasses and Kin	10
PANIC GRASS, SCRIBNER'S	Summer Grasses and Kin	11
PARSNIP, COW	Summer Wetland Forbs	5
PARSNIP, HEART-LEAVED MEADOW	Summer Prairie Forbs	11
PEA, COMMON PARTRIDGE	Fall Prairie Forbs	7
PEA, SCURFY	Summer Prairie Forbs	9
PETUNIA, PRAIRIE	Fall Prairie Forbs	18
PHLOX, MARSH	Summer Wetland Forbs	6
PHLOX, PRAIRIE	Summer Prairie Forbs	7
PHLOX, WOODLAND	Spring Woodland Forbs	10
PIMPERNEL, YELLOW	Summer Woodland Forbs	7
PINK, DEPTFORD	Fall Prairie Forbs	3
PINK, FIRE	Spring Woodland Forbs	10
PLANTAIN, COMMON WATER	Summer Wetland Forbs	7
PLANTAIN, LARGE-FLOWERED WATER	Summer Wetland Forbs	7
PRAIRIE SMOKE	Summer Prairie Forbs	3
PRIMROSE, COMMON EVENING	Fall Prairie Forbs	14
PUCCOON, HOARY	Summer Prairie Forbs	5
PUSSYTOES	Summer Prairie Forbs	4
RAGWORT, BALSAM	Summer Prairie Forbs	5
RAGWORT, GOLDEN	Summer Wetland Forbs	4
RASPBERRY, BLACK	Woody Plants	4
RASPBERRY, DWARF	Summer Wetland Forbs	5
RED STICKS	Woody Plants	7
REED, COMMON	Fall Grasses and Kin	11
REED, COMMON WOOD	Fall Grasses and Kin	7
ROSE, DOWNY ILLINOIS	Woody Plants	10
ROSE, EARLY WILD	Woody Plants	10
ROSE, PRICKLY PASTURE	Woody Plants	10
ROSINWEED	Fall Prairie Forbs	5

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COMMON NAME	Guide	Pg.
ROSINWEED, BALD	Fall Prairie Forbs	5
RUSH, CHAIRMAKER'S	Summer Wetland Grasses and Kin	10
RUSH, DARK GREEN	Summer Wetland Grasses and Kin	10
RUSH, DUDLEY'S	Summer Wetland Grasses and Kin	11
RUSH, JOINT	Summer Wetland Grasses and Kin	12
RUSH, PATH	Summer Grasses and Kin	9
RUSH, SOFT	Summer Wetland Grasses and Kin	11
RUSH, TORREY'S	Summer Wetland Grasses and Kin	12
RYE, CANADA WILD	Fall Grasses and Kin	8
RYE, RIVERBANK WILD	Fall Grasses and Kin	8
RYE, SILKY WILD	Summer Grasses and Kin	14
RYE, VIRGINIA WILD	Fall Grasses and Kin	8
SANDWORT, WOOD	Spring Woodland Forbs	11
SAXIFRAGE, SWAMP	Summer Wetland Forbs	4
SEDGE, AWL-FRUITED OVAL	Summer Wetland Grasses and Kin	7
SEDGE, AWNED GRACEFUL	Summer Grasses and Kin	6
SEDGE, BRISTLY CATTAIL	Fall Grasses and Kin	3
SEDGE, BROME TUSOCK	Summer Wetland Grasses and Kin	5
SEDGE, BROOM OVAL	Summer Wetland Grasses and Kin	7
SEDGE, BROWN FOX	Summer Wetland Grasses and Kin	4
SEDGE, COMMON BUR	Fall Grasses and Kin	4
SEDGE, COMMON FOX	Summer Wetland Grasses and Kin	3
SEDGE, COMMON HOP	Fall Grasses and Kin	4
SEDGE, COMMON LAKE	Summer Wetland Grasses and Kin	6
SEDGE, COMMON OAK	Summer Grasses and Kin	3
SEDGE, COMMON TUSOCK	Summer Wetland Grasses and Kin	3
SEDGE, COMMON WOOD	Summer Grasses and Kin	3
SEDGE, COPPER-SHOULDERED OVAL	Summer Grasses and Kin	5
SEDGE, CRESTED OVAL	Summer Wetland Grasses and Kin	7
SEDGE, CROWFOOT FOX	Summer Wetland Grasses and Kin	6
SEDGE, CURLY-STYLED WOOD	Summer Grasses and Kin	7
SEDGE, DARK-SCALED	Summer Wetland Grasses and Kin	5
SEDGE, FRINGED	Fall Grasses and Kin	3
SEDGE, FUZZY WUZZY	Summer Grasses and Kin	8
SEDGE, GRASS	Summer Grasses and Kin	4
SEDGE, HAIRY GREEN	Summer Grasses and Kin	8
SEDGE, HAIRY WOOD	Summer Grasses and Kin	3
SEDGE, KNOBBED HOP	Fall Grasses and Kin	4

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COMMON NAME	Guide	Pg.
SEDGE, LONG-AWNED BRACTED	Summer Grasses and Kin	6
SEDGE, LONG-BEAKED	Summer Grasses and Kin	5
SEDGE, LOOSE-HEADED BRACTED	Summer Grasses and Kin	8
SEDGE, NARROW-LEAVED CATTAIL	Summer Wetland Grasses and Kin	6
SEDGE, NARROW-LEAVED OVAL	Summer Wetland Grasses and Kin	3
SEDGE, PALE	Summer Grasses and Kin	7
SEDGE, PENN	Summer Grasses and Kin	3
SEDGE, PLAINS OVAL	Summer Grasses and Kin	5
SEDGE, PORCUPINE	Summer Wetland Grasses and Kin	8
SEDGE, PRAIRIE WOOLLY	Summer Wetland Grasses and Kin	4
SEDGE, PURPLE-SHEATHED GRACEFUL	Summer Grasses and Kin	4
SEDGE, RUNNING PRAIRIE	Summer Wetland Grasses and Kin	5
SEDGE, SHINING BUR	Summer Wetland Grasses and Kin	8
SEDGE, SHORT-HEADED BRACTED	Summer Grasses and Kin	6
SEDGE, SMALL YELLOW	Fall Grasses and Kin	3
SEDGE, SMALL-SEEDED FOX	Summer Wetland Grasses and Kin	4
SEDGE, SPREADING OVAL	Summer Grasses and Kin	8
SEDGE, STRAIGHT-STYLED WOOD	Summer Grasses and Kin	7
SEDGE, SWAMP OVAL	Summer Wetland Grasses and Kin	8
SEDGE, WOOD'S STIFF	Summer Grasses and Kin	4
SELF HEAL, WOOD	Summer Woodland Forbs	6
SENNA, WILD	Fall Wetland Forbs	5
SHOOTING STAR	Summer Woodland Forbs	5
SIDE-OATS GRAMA	Fall Grasses and Kin	7
SKULLCAP, HEART-LEAVED	Summer Woodland Forbs	7
SKULLCAP, PRAIRIE	Fall Prairie Forbs	11
SNAKEROOT, CANADIAN BLACK	Fall Woodland Forbs	7
SNAKEROOT, CLUSTERED BLACK	Fall Woodland Forbs	7
SNAKEROOT, SENECA	Summer Prairie Forbs	6
SNAKEROOT, WHITE	Fall Woodland Forbs	7
SNEEZEWEED	Fall Wetland Forbs	20
SOLOMON'S SEAL, DOWNY	Fall Woodland Forbs	13
SOLOMON'S SEAL, FEATHERY FALSE	Fall Woodland Forbs	10
SOLOMON'S SEAL, SMOOTH	Fall Woodland Forbs	13
SOLOMON'S SEAL, STARRY FALSE	Fall Woodland Forbs	10
SORREL, VIOLET WOOD	Summer Prairie Forbs	3
SPICEBUSH	Woody Plants	8

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SPIDERWORT, COMMON	Summer Prairie Forbs	8
SPIKERUSH, RED-ROOTED	Summer Wetland Grasses and Kin	11
SPRING BEAUTY	Spring Woodland Forbs	4
ST. JOHN'S WORT, COMMON	Fall Woodland Forbs	17
ST. JOHN'S WORT, GREAT	Fall Wetland Forbs	17
ST. JOHN'S WORT, KALM'S	Woody Plants	13
ST. JOHN'S WORT, MARSH	Fall Wetland Forbs	17
ST. JOHN'S WORT, SHRUBBY	Woody Plants	13
ST. JOHN'S WORT, SPOTTED	Fall Woodland Forbs	17
STICKSEED	Fall Woodland Forbs	5
STONECROP, DITCH	Fall Wetland Forbs	9
STRAWBERRY, WILD	Summer Prairie Forbs	7
SUMAC, NORTHERN	Woody Plants	14
SUMAC, SMOOTH	Woody Plants	14
SUNFLOWER, FALSE	Fall Prairie Forbs	11
SUNFLOWER, PRAIRIE	Fall Prairie Forbs	11
SUNFLOWER, WOODLAND	Fall Woodland Forbs	8
SWEET FLAG, AMERICAN	Summer Wetland Forbs	6
SWEET-FRUITED JUNE BERRY	Woody Plants	3
TEA, NEW JERSEY	Woody Plants	12
THIMBLEWEED	Summer Prairie Forbs	11
THISTLE, CANADA	Summer Prairie Forbs	9
THISTLE, FEN	Fall Wetland Forbs	14
THISTLE, FIELD	Summer Prairie Forbs	9
THISTLE, PASTURE	Fall Prairie Forbs	10
THISTLE, SWAMP	Fall Wetland Forbs	14
THISTLE, TALL	Fall Woodland Forbs	14
TICKTREFOIL, PANICLED	Fall Woodland Forbs	6
TICKTREFOIL, POINTED	Fall Woodland Forbs	6
TICKTREFOIL, SHOWY	Fall Prairie Forbs	7
TICKTREFOIL, TAKE-ANOTHER-LOOK	Fall Woodland Forbs	6
TIMOTHY	Summer Grasses and Kin	14
TOADFLAX, BASTARD	Summer Prairie Forbs	7
TOADFLAX, FALSE	Summer Prairie Forbs	7
TOOTHWORT	Spring Woodland Forbs	7
TOUCH-ME-NOT, PALE	Fall Wetland Forbs	3
TOUCH-ME-NOT, SPOTTED	Fall Wetland Forbs	3
TRILLIUM, LARGE-FLOWERED	Spring Woodland Forbs	11

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COMMON NAME	Guide	Pg.
TRILLIUM, PRAIRIE	Spring Woodland Forbs	11
TRILLIUM, RED	Spring Woodland Forbs	11
TURTLEHEAD	Fall Wetland Forbs	18
TWINLEAF	Spring Woodland Forbs	10
VELVETLEAF	Fall Prairie Forbs	14
VERVAIN, BLUE	Fall Wetland Forbs	18
VERVAIN, HAIRY WHITE	Fall Woodland Forbs	9
VERVAIN, HOARY	Fall Woodland Forbs	17
VETCH, CROWN	Summer Prairie Forbs	10
VIOLET, DOG	Spring Woodland Forbs	8
VIOLET, PRAIRIE	Summer Prairie Forbs	5
VIOLET, SMOOTH YELLOW	Spring Woodland Forbs	8
VIRGIN'S BOWER	Fall Woodland Forbs	16
WATER PEPPER	Fall Wetland Forbs	14
WATER PEPPER, MILD	Fall Wetland Forbs	14
WATERLEAF, VIRGINIA	Summer Woodland Forbs	4
WILLOWHERB, CINNAMON	Fall Wetland Forbs	7
WILLOWHERB, NORTHERN	Fall Wetland Forbs	7
WINGSTEM	Fall Wetland Forbs	20
WINTERBERRY	Woody Plants	13
WOODRUSH, COMMON	Summer Grasses and Kin	9
WOOLGRASS	Fall Grasses and Kin	5
WORMWOOD, BEACH	Fall Prairie Forbs	18
YAM, WILD	Fall Woodland Forbs	12

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Photo Date	COMMON NAME	Guide	Pg.
18-May	DUTCHMAN'S BREECHES	Spring Woodland Forbs	3
18-May	HEPATIC, SHARP-LOBED	Spring Woodland Forbs	3
22-May	HEPATIC, ROUND-LOBED	Spring Woodland Forbs	3
22-May	SPRING BEAUTY	Spring Woodland Forbs	4
30-May	ANEMONE, WOOD	Spring Woodland Forbs	4
30-May	MERMAID, FALSE	Spring Woodland Forbs	4
31-May	CRESS, PURPLE	Summer Wetland Forbs	3
1-Jun	LILY, WHITE TROUT	Spring Woodland Forbs	5
2-Jun	BUTTERCUP, HOOKED	Summer Wetland Forbs	3
2-Jun	BUTTERCUP, SMALL-FLOWERED	Spring Woodland Forbs	5
2-Jun	SEDGE, COMMON OAK	Summer Grasses and Kin	3
3-Jun	ANEMONE, FALSE RUE	Spring Woodland Forbs	6
5-Jun	RAGWORT, GOLDEN	Summer Wetland Forbs	4
6-Jun	MARIGOLD, MARSH	Summer Wetland Forbs	3
7-Jun	BETONY, WOOD	Summer Prairie Forbs	3
7-Jun	SORREL, VIOLET WOOD	Summer Prairie Forbs	3
8-Jun	BLOODROOT	Spring Woodland Forbs	7
8-Jun	CAT'S FOOT, SHORT-LEAVED	Summer Prairie Forbs	4
8-Jun	PRAIRIE SMOKE	Summer Prairie Forbs	3
9-Jun	GRASS, YELLOW STAR	Summer Prairie Forbs	4
10-Jun	SEDGE, HAIRY WOOD	Summer Grasses and Kin	3
12-Jun	SEDGE, COMMON FOX	Summer Wetland Grasses and Kin	3
13-Jun	GERANIUM, WILD	Spring Woodland Forbs	7
13-Jun	PUSSYTOES	Summer Prairie Forbs	4
13-Jun	SEDGE, COMMON WOOD	Summer Grasses and Kin	3
14-Jun	RAGWORT, BALSAM	Summer Prairie Forbs	5
14-Jun	SEDGE, GRASS	Summer Grasses and Kin	4
14-Jun	SEDGE, WOOD'S STIFF	Summer Grasses and Kin	4
14-Jun	WOODRUSH, COMMON	Summer Grasses and Kin	9
15-Jun	ANEMONE, RUE	Spring Woodland Forbs	6
15-Jun	CROWFOOT, SWAMP	Spring Woodland Forbs	5
15-Jun	JACOB'S LADDER	Spring Woodland Forbs	8
15-Jun	TOOTHWORT	Spring Woodland Forbs	7
17-Jun	GRASS, SWEET	Summer Wetland Grasses and Kin	12
18-Jun	SAXIFRAGE, SWAMP	Summer Wetland Forbs	4
19-Jun	GRASS, SLENDER WEDGE	Summer Grasses and Kin	9

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Photo Date	COMMON NAME	Guide	Pg.
19-Jun	SEDGE, NARROW-LEAVED OVAL	Summer Wetland Grasses and Kin	3
19-Jun	VIOLET, DOG	Spring Woodland Forbs	8
19-Jun	VIOLET, PRAIRIE	Summer Prairie Forbs	5
20-Jun	SEDGE, LONG-BEAKED	Summer Grasses and Kin	5
20-Jun	SEDGE, PURPLE-SHEATHED GRACEFUL	Summer Grasses and Kin	4
23-Jun	HYACINTH, WILD	Spring Woodland Forbs	9
23-Jun	PANIC GRASS, BROAD-LEAVED	Summer Grasses and Kin	10
23-Jun	VIOLET, SMOOTH YELLOW	Spring Woodland Forbs	8
24-Jun	COLUMBINE, WILD	Spring Woodland Forbs	9
24-Jun	GINGER, REFLEXED WILD	Spring Woodland Forbs	9
24-Jun	GRASS, PORCUPINE	Summer Grasses and Kin	10
24-Jun	MEADOW RUE, EARLY	Spring Woodland Forbs	6
24-Jun	PHLOX, WOODLAND	Spring Woodland Forbs	10
24-Jun	PINK, FIRE	Spring Woodland Forbs	10
24-Jun	PUCCOON, HOARY	Summer Prairie Forbs	5
24-Jun	SEDGE, PLAINS OVAL	Summer Grasses and Kin	5
24-Jun	SNAKEROOT, SENECA	Summer Prairie Forbs	6
24-Jun	TWINLEAF	Spring Woodland Forbs	10
26-Jun	KING DEVIL	Summer Prairie Forbs	6
27-Jun	ALUM ROOT, PRAIRIE	Summer Prairie Forbs	6
27-Jun	PANIC GRASS, PRAIRIE	Summer Grasses and Kin	10
27-Jun	SEDGE, AWNED GRACEFUL	Summer Grasses and Kin	6
27-Jun	SEDGE, COPPER-SHOULDERED OVAL	Summer Grasses and Kin	5
27-Jun	SEDGE, LONG-AWNED BRACTED	Summer Grasses and Kin	6
27-Jun	SEDGE, SMALL-SEEDED FOX	Summer Wetland Grasses and Kin	4
28-Jun	SANDWORT, WOOD	Spring Woodland Forbs	11
29-Jun	BELLWORT	Spring Woodland Forbs	12
29-Jun	SEDGE, COMMON TUSSOCK	Summer Wetland Grasses and Kin	3
1-Jul	GRASS, POVERTY OAT	Summer Grasses and Kin	11
1-Jul	SWEET-FRUITED JUNE BERRY	Woody Plants	3
3-Jul	PANIC GRASS, SCRIBNER'S	Summer Grasses and Kin	11
3-Jul	SEDGE, PRAIRIE WOOLLY	Summer Wetland Grasses and Kin	4

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Photo Date	COMMON NAME	Guide	Pg.
3-Jul	SEDGE, RUNNING PRAIRIE	Summer Wetland Grasses and Kin	5
4-Jul	GRASS, ORCHARD	Summer Grasses and Kin	12
4-Jul	SEDGE, DARK-SCALED	Summer Wetland Grasses and Kin	5
4-Jul	SEDGE, STRAIGHT-STYLED WOOD	Summer Grasses and Kin	7
5-Jul	BANEBERRY, RED	Summer Woodland Forbs	3
5-Jul	RASPBERRY, DWARF	Summer Wetland Forbs	5
5-Jul	SEDGE, SHORT-HEADED BRACTED	Summer Grasses and Kin	6
5-Jul	STRAWBERRY, WILD	Summer Prairie Forbs	7
6-Jul	SEDGE, CURLY-STYLED WOOD	Summer Grasses and Kin	7
7-Jul	FLEABANE, DAISY	Summer Prairie Forbs	8
7-Jul	ONION, WILD	Summer Woodland Forbs	3
7-Jul	PHLOX, PRAIRIE	Summer Prairie Forbs	7
7-Jul	TOADFLAX, FALSE	Summer Prairie Forbs	7
8-Jul	BUTTERWEED	Summer Wetland Forbs	4
8-Jul	SEDGE, BROME TUSOCK	Summer Wetland Grasses and Kin	5
9-Jul	ANGELICA, GREAT	Summer Wetland Forbs	5
10-Jul	PANIC GRASS, COMMON	Summer Grasses and Kin	11
10-Jul	RASPBERRY, BLACK	Woody Plants	4
10-Jul	SEDGE, PALE	Summer Grasses and Kin	7
10-Jul	SPIDERWORT, COMMON	Summer Prairie Forbs	8
12-Jul	SEDGE, COMMON LAKE	Summer Wetland Grasses and Kin	6
15-Jul	CICELY, SMOOTH SWEET	Summer Woodland Forbs	4
15-Jul	FESCUE, NODDING	Summer Grasses and Kin	12
15-Jul	JUNEBERRY, ALLEGHENY	Woody Plants	3
16-Jul	INLAND JUNEBERRY	Woody Plants	3
16-Jul	TRILLIUM, LARGE-FLOWERED	Spring Woodland Forbs	11
17-Jul	DOCK, CURLY	Summer Prairie Forbs	9
18-Jul	CANCER ROOT	Summer Woodland Forbs	3
18-Jul	CICELY, HAIRY SWEET	Summer Woodland Forbs	4
18-Jul	SEDGE, FUZZY WUZZY	Summer Grasses and Kin	8
18-Jul	WATERLEAF, VIRGINIA	Summer Woodland Forbs	4
22-Jul	GOOSEBERRY, MISSOURI WILD	Woody Plants	5
23-Jul	GRASS, GREEN FOWL MANNA	Summer Grasses and Kin	12
23-Jul	MAYAPPLE	Summer Woodland Forbs	5

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Photo Date	COMMON NAME	Guide	Pg.
23-Jul	PARSNIP, COW	Summer Wetland Forbs	5
23-Jul	PEA, SCURFY	Summer Prairie Forbs	9
23-Jul	TRILLIUM, PRAIRIE	Spring Woodland Forbs	11
24-Jul	BROME, HUNGARIAN	Summer Grasses and Kin	13
24-Jul	GRASS, BEARDED WHEAT	Summer Grasses and Kin	13
24-Jul	GRASS, REED CANARY	Summer Wetland Grasses and Kin	13
24-Jul	GRASS, SLENDER WHEAT	Summer Grasses and Kin	13
24-Jul	PHLOX, MARSH	Summer Wetland Forbs	6
24-Jul	SEDGE, CROWFOOT FOX	Summer Wetland Grasses and Kin	6
24-Jul	THISTLE, FIELD	Summer Prairie Forbs	9
26-Jul	BLACKBERRY, KITTATINNY	Woody Plants	4
26-Jul	BLUE-EYED GRASS, STOUT	Summer Prairie Forbs	10
28-Jul	MUSTARD, GARLIC	Summer Woodland Forbs	5
29-Jul	SHOOTING STAR	Summer Woodland Forbs	5
30-Jul	BULRUSH, REDDISH	Summer Wetland Grasses and Kin	9
30-Jul	GRASS, QUACK	Summer Grasses and Kin	14
30-Jul	RUSH, SOFT	Summer Wetland Grasses and Kin	11
30-Jul	VETCH, CROWN	Summer Prairie Forbs	10
1-Aug	ANEMONE, EASTERN TALL	Summer Woodland Forbs	6
1-Aug	BLACKBERRY, HIGHBUSH	Woody Plants	4
1-Aug	BULRUSH, RIVER	Summer Wetland Grasses and Kin	9
1-Aug	PARSNIP, HEART-LEAVED MEADOW	Summer Prairie Forbs	11
1-Aug	SEDGE, NARROW-LEAVED CATTAIL	Summer Wetland Grasses and Kin	6
1-Aug	THIMBLEWEED	Summer Prairie Forbs	11
2-Aug	AVENS, YELLOW	Summer Prairie Forbs	11
2-Aug	FLEABANE, ANNUAL	Summer Prairie Forbs	8
3-Aug	RUSH, PATH	Summer Grasses and Kin	9
3-Aug	SELF HEAL, WOOD	Summer Woodland Forbs	6
4-Aug	TIMOTHY	Summer Grasses and Kin	14
5-Aug	LEEK, CHICAGO	Summer Woodland Forbs	6
5-Aug	MINT, OHIO HORSE	Summer Prairie Forbs	12
5-Aug	MINT, WOOD	Summer Woodland Forbs	10

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5-Aug	SEDGE, CRESTED OVAL	Summer Wetland Grasses and Kin	7
5-Aug	SEDGE, LOOSE-HEADED BRACTED	Summer Grasses and Kin	8
6-Aug	INDIGO, WHITE WILD	Summer Prairie Forbs	12
6-Aug	BULRUSH, RED	Summer Wetland Grasses and Kin	9
7-Aug	SEDGE, BROOM OVAL	Summer Wetland Grasses and Kin	7
8-Aug	CONEFLOWER, PALE PURPLE	Fall Prairie Forbs	3
8-Aug	GRASS, BLUE JOINT	Summer Wetland Grasses and Kin	13
8-Aug	RUSH, DUDLEY'S	Summer Wetland Grasses and Kin	11
8-Aug	SEDGE, AWL-FRUITED OVAL	Summer Wetland Grasses and Kin	7
8-Aug	SEDGE, BROWN FOX	Summer Wetland Grasses and Kin	4
8-Aug	SEDGE, PORCUPINE	Summer Wetland Grasses and Kin	8
8-Aug	SEDGE, SPREADING OVAL	Summer Grasses and Kin	8
9-Aug	CHERRY, CHOKE	Woody Plants	6
9-Aug	RYE, SILKY WILD	Summer Grasses and Kin	14
9-Aug	SKULLCAP, HEART-LEAVED	Summer Woodland Forbs	7
10-Aug	CURRANT, WILD BLACK	Woody Plants	5
10-Aug	GRAPE, RIVERBANK	Woody Plants	6
10-Aug	INDIGO, CREAM WILD	Summer Prairie Forbs	12
10-Aug	MEADOW RUE, PURPLE	Summer Wetland Forbs	6
10-Aug	SEDGE, SHINING BUR	Summer Wetland Grasses and Kin	8
13-Aug	RUSH, DARK GREEN	Summer Wetland Grasses and Kin	10
15-Aug	BULRUSH, GREAT	Summer Wetland Grasses and Kin	10
15-Aug	BUR REED, COMMON	Summer Wetland Forbs	7
15-Aug	GOOSEBERRY, PRICKLY WILD	Woody Plants	5
15-Aug	PLANTAIN, LARGE-FLOWERED WATER	Summer Wetland Forbs	7
15-Aug	RUSH, CHAIRMAKER'S	Summer Wetland Grasses and Kin	10

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Photo Date	COMMON NAME	Guide	Pg.
15-Aug	SWEET FLAG, AMERICAN	Summer Wetland Forbs	6
16-Aug	BLUE FLAG	Summer Wetland Forbs	8
16-Aug	DOGWOOD, GRAY	Woody Plants	7
16-Aug	GRASS, BOTTLEBRUSH	Summer Grasses and Kin	15
16-Aug	GRASS, FLOATING MANNA	Summer Wetland Grasses and Kin	13
16-Aug	HORSE GENTIAN, EARLY	Fall Woodland Forbs	3
16-Aug	LOOSESTRIFE, FALSE	Summer Wetland Forbs	8
16-Aug	PIMPERNEL, YELLOW	Summer Woodland Forbs	7
16-Aug	PLANTAIN, COMMON WATER	Summer Wetland Forbs	7
16-Aug	RUSH, JOINT	Summer Wetland Grasses and Kin	12
16-Aug	SPIKERUSH, RED-ROOTED	Summer Wetland Grasses and Kin	11
17-Aug	BLUE-EYED GRASS, COMMON	Summer Prairie Forbs	10
17-Aug	BROOKWEED	Summer Wetland Forbs	8
17-Aug	SEDGE, SWAMP OVAL	Summer Wetland Grasses and Kin	8
21-Aug	BEARD TONGUE, SMOOTH	Summer Prairie Forbs	13
22-Aug	HORSE GENTIAN, LATE	Fall Woodland Forbs	3
23-Aug	AVENS, WHITE	Summer Woodland Forbs	7
24-Aug	ANEMONE, MEADOW	Summer Wetland Forbs	9
24-Aug	BUTTERFLY WEED	Summer Prairie Forbs	13
24-Aug	CINQUEFOIL, PRAIRIE	Summer Prairie Forbs	13
24-Aug	HONEWORT	Summer Woodland Forbs	8
24-Aug	MEADOWSWEET	Summer Wetland Forbs	9
25-Aug	AGRIMONY, SWAMP	Summer Wetland Forbs	9
25-Aug	BANEBERRY, WHITE	Summer Woodland Forbs	8
25-Aug	COHOSH, BLUE	Summer Woodland Forbs	8
25-Aug	CULVER'S ROOT	Summer Prairie Forbs	14
25-Aug	GOLDEN ALEXANDERS	Summer Woodland Forbs	9
25-Aug	NIGHTSHADE, ENCHANTER'S	Summer Woodland Forbs	9
26-Aug	CRESS, SMOOTH BANK	Summer Woodland Forbs	9
28-Aug	CAMPION, STARRY	Summer Woodland Forbs	11
30-Aug	AGRIMONY, BEAKED	Summer Woodland Forbs	10
30-Aug	AGRIMONY, TALL	Summer Woodland Forbs	10
30-Aug	GRASS, SLENDER SATIN	Summer Grasses and Kin	15
30-Aug	RUSH, TORREY'S	Summer Wetland Grasses and	12

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		Kin	
31-Aug	CLOVER, PURPLE PRAIRIE	Fall Prairie Forbs	4
31-Aug	COREOPSIS, PRAIRIE	Summer Prairie Forbs	14
31-Aug	INDIAN PLANTAIN, PALE	Summer Woodland Forbs	11
31-Aug	LEAD PLANT	Summer Prairie Forbs	14
2-Sep	LETTUCE, BLUE	Fall Woodland Forbs	4
2-Sep	PINK, DEPTFORD	Fall Prairie Forbs	3
2-Sep	SEDGE, FRINGED	Fall Grasses and Kin	3
2-Sep	WOOLGRASS	Fall Grasses and Kin	5
4-Sep	GRASS, WHITE	Fall Grasses and Kin	5
4-Sep	HONEYSUCKLE, YELLOW	Woody Plants	6
4-Sep	STICKSEED	Fall Woodland Forbs	5
4-Sep	TOUCH-ME-NOT, SPOTTED	Fall Wetland Forbs	3
5-Sep	CABBAGE, SKUNK	Fall Wetland Forbs	3
5-Sep	TOUCH-ME-NOT, PALE	Fall Wetland Forbs	3
7-Sep	BERGAMOT, WILD	Fall Prairie Forbs	4
7-Sep	CONEFLOWER, YELLOW	Fall Prairie Forbs	5
7-Sep	JACK-IN-THE-PULPIT	Fall Woodland Forbs	5
7-Sep	ROSWINEED, BALD	Fall Prairie Forbs	5
7-Sep	SNAKEROOT, CLUSTERED BLACK	Fall Woodland Forbs	7
7-Sep	TICKTREFOIL, POINTED	Fall Woodland Forbs	6
9-Sep	HAWKWEED, CANADA	Fall Prairie Forbs	6
10-Sep	BELLFLOWER, TALL	Fall Woodland Forbs	5
10-Sep	GREEN DRAGON	Fall Wetland Forbs	4
10-Sep	PEA, COMMON PARTRIDGE	Fall Prairie Forbs	7
11-Sep	ARTICHOKE, JERUSALEM	Fall Woodland Forbs	8
11-Sep	GAURA, COMMON	Fall Prairie Forbs	7
11-Sep	MOONSEED	Woody Plants	8
11-Sep	TICKTREFOIL, SHOWY	Fall Prairie Forbs	7
12-Sep	CARRION FLOWER, UPRIGHT	Fall Woodland Forbs	9
12-Sep	DROPSEED, PRAIRIE	Fall Grasses and Kin	6
12-Sep	GERMANDER, CANADIAN	Fall Woodland Forbs	8
12-Sep	GRASS, KNEE	Fall Grasses and Kin	6
12-Sep	HAZELNUT, AMERICAN	Woody Plants	8
12-Sep	LOOSESTRIFE, FRINGED	Fall Wetland Forbs	5
12-Sep	MALLOW, NORTHERN ROSE	Fall Wetland Forbs	4
12-Sep	MILKWEED, PRAIRIE	Fall Prairie Forbs	8
12-Sep	NANNYBERRY	Woody Plants	9

Seed Guide Index – by Photo Date

Photo Date	COMMON NAME	Guide	Pg.
13-Sep	VERVAIN, HAIRY WHITE	Fall Woodland Forbs	9
14-Sep	SPICEBUSH	Woody Plants	8
15-Sep	LETTUCE, WOOD	Fall Woodland Forbs	4
15-Sep	ROSE, PRICKLY PASTURE	Woody Plants	10
15-Sep	SNAKEROOT, CANADIAN BLACK	Fall Woodland Forbs	7
15-Sep	SOLOMON'S SEAL, FEATHERY FALSE	Fall Woodland Forbs	10
16-Sep	SUNFLOWER, WOODLAND	Fall Woodland Forbs	8
17-Sep	MILKWEED, SHORT GREEN	Fall Prairie Forbs	8
18-Sep	BITTERSWEET, CLIMBING	Woody Plants	11
18-Sep	SEDGE, SMALL YELLOW	Fall Grasses and Kin	3
19-Sep	MILKVETCH, CANADIAN	Fall Prairie Forbs	9
19-Sep	SIDE-OATS GRAMA	Fall Grasses and Kin	7
20-Sep	ASTER, FLAT-TOP	Asters and Goldenrods	3
20-Sep	ASTER, FORKED	Asters and Goldenrods	3
20-Sep	BROME, GLOSSY-LEAVED	Fall Grasses and Kin	7
20-Sep	FIGWORT, LATE	Fall Woodland Forbs	11
20-Sep	GROMWELL, AMERICAN	Fall Woodland Forbs	12
20-Sep	HYSSOP, PURPLE GIANT	Fall Woodland Forbs	11
20-Sep	INDIAN TOBACCO	Fall Woodland Forbs	13
20-Sep	JOE PYE WEED, PURPLE	Fall Woodland Forbs	12
20-Sep	JUMPSEED	Fall Woodland Forbs	10
20-Sep	ONION, NODDING WILD	Fall Prairie Forbs	9
20-Sep	REED, COMMON WOOD	Fall Grasses and Kin	7
20-Sep	RYE, VIRGINIA WILD	Fall Grasses and Kin	8
20-Sep	SEDGE, BRISTLY CATTAIL	Fall Grasses and Kin	3
20-Sep	SEDGE, COMMON BUR	Fall Grasses and Kin	4
20-Sep	SENNA, WILD	Fall Wetland Forbs	5
20-Sep	SNAKEROOT, WHITE	Fall Woodland Forbs	7
20-Sep	YAM, WILD	Fall Woodland Forbs	12
21-Sep	NETTLE, WOOD	Fall Wetland Forbs	5
21-Sep	SOLOMON'S SEAL, SMOOTH	Fall Woodland Forbs	13
22-Sep	DOGWOOD, BLUE-FRUITED	Woody Plants	7
22-Sep	RED STICKS	Woody Plants	7
23-Sep	DODDER, KNOTWEED	Fall Wetland Forbs	6
23-Sep	HEMLOCK, WATER	Fall Wetland Forbs	6
24-Sep	HYSSOP, YELLOW GIANT	Fall Woodland Forbs	11
24-Sep	LETTUCE, WILD	Fall Woodland Forbs	4

Seed Guide Index – by Photo Date

Photo Date	COMMON NAME	Guide	Pg.
25-Sep	TICKTREFOIL, TAKE-ANOTHER-LOOK	Fall Woodland Forbs	6
26-Sep	WILLOWHERB, NORTHERN	Fall Wetland Forbs	7
27-Sep	ARROWHEAD, SHORT-BEAKED	Fall Wetland Forbs	10
27-Sep	ASTER, FALSE	Fall Wetland Forbs	7
27-Sep	CARDINAL FLOWER	Fall Wetland Forbs	8
27-Sep	CUP PLANT	Fall Wetland Forbs	10
27-Sep	GRASS, RICE CUT	Fall Grasses and Kin	5
27-Sep	GRASS, SWITCH	Fall Grasses and Kin	6
27-Sep	IRONWEED, COMMON	Fall Wetland Forbs	11
27-Sep	MERMAID WEED	Fall Wetland Forbs	9
27-Sep	MINT, COMMON MOUNTAIN	Fall Wetland Forbs	10
27-Sep	MONKEY FLOWER	Fall Wetland Forbs	8
27-Sep	OBEDIENT PLANT, SHOWY	Fall Wetland Forbs	9
27-Sep	ROSWINEED	Fall Prairie Forbs	5
27-Sep	STONECROP, DITCH	Fall Wetland Forbs	9
28-Sep	ASTER, CALICO	Asters and Goldenrods	6
28-Sep	BEARD TONGUE, FOXGLOVE	Fall Prairie Forbs	10
28-Sep	DOCK, PRAIRIE	Fall Prairie Forbs	6
28-Sep	GENTIAN, CLOSED	Fall Wetland Forbs	11
28-Sep	INDIGO BUSH	Woody Plants	11
28-Sep	LOBELIA, PALE-SPIKED	Fall Prairie Forbs	10
28-Sep	MILKWEED, WHORLED	Fall Prairie Forbs	9
28-Sep	NETTLE, TALL	Fall Wetland Forbs	12
28-Sep	SKULLCAP, PRAIRIE	Fall Prairie Forbs	11
28-Sep	SOLOMON'S SEAL, STARRY FALSE	Fall Woodland Forbs	10
28-Sep	THISTLE, TALL	Fall Woodland Forbs	14
30-Sep	CLOVER, VIOLET BUSH	Fall Woodland Forbs	15
Sep-39	CUCUMBER, WILD	Fall Wetland Forbs	12
30-Sep	FOXGLOVE, YELLOW FALSE	Fall Woodland Forbs	14
30-Sep	GOLDENROD, BLUE-STEMMED	Asters and Goldenrods	10
30-Sep	GOLDENROD, ZIG-ZAG	Asters and Goldenrods	10
30-Sep	HAWKWEED, ROUGH	Fall Woodland Forbs	15
30-Sep	JOE PYE WEED, SPOTTED	Fall Wetland Forbs	12
30-Sep	LEEK, WILD	Fall Woodland Forbs	15
30-Sep	RYE, RIVERBANK WILD	Fall Grasses and Kin	8
2-Oct	GOLDENROD, SWAMP	Asters and Goldenrods	12
2-Oct	LOPSEED	Fall Woodland Forbs	16

Seed Guide Index – by Photo Date

Photo Date	COMMON NAME	Guide	Pg.
2-Oct	RYE, CANADA WILD	Fall Grasses and Kin	8
3-Oct	FOXGLOVE, PALE FALSE	Fall Wetland Forbs	13
3-Oct	LADY'S TRESSES, NODDING	Fall Wetland Forbs	13
3-Oct	LOBELIA, GREAT BLUE	Fall Wetland Forbs	8
3-Oct	TICKTREFOIL, PANICLED	Fall Woodland Forbs	6
4-Oct	ASTER, ARROW-LEAVED	Asters and Goldenrods	4
4-Oct	ASTER, NEW ENGLAND	Asters and Goldenrods	6
4-Oct	BLAZING STAR, SAVANNA	Fall Woodland Forbs	16
4-Oct	CARRION FLOWER, COMMON	Fall Woodland Forbs	9
4-Oct	CLOVER, ROUND-HEADED BUSH	Fall Prairie Forbs	12
4-Oct	CLOVER, WHITE PRAIRIE	Fall Prairie Forbs	4
4-Oct	COMPASS PLANT	Fall Prairie Forbs	6
4-Oct	GOLDENROD, ELM-LEAVED	Asters and Goldenrods	12
4-Oct	SUNFLOWER, PRAIRIE	Fall Prairie Forbs	11
6-Oct	ASTER, BIG-LEAF	Asters and Goldenrods	3
6-Oct	OBEDIENT PLANT	Fall Prairie Forbs	12
6-Oct	OBEDIENT PLANT, PRAIRIE	Fall Prairie Forbs	12
6-Oct	ROSE, DOWNY ILLINOIS	Woody Plants	10
7-Oct	BLADDERNUT	Woody Plants	12
8-Oct	BONESET, TALL	Fall Prairie Forbs	13
8-Oct	GOLDENROD, EARLY	Asters and Goldenrods	11
8-Oct	SOLOMON'S SEAL, DOWNY	Fall Woodland Forbs	13
8-Oct	TEA, NEW JERSEY	Woody Plants	12
9-Oct	ASTER, SMOOTH BLUE	Asters and Goldenrods	5
9-Oct	BLUESTEM, BIG	Fall Grasses and Kin	9
9-Oct	GENTIAN, FRINGED	Fall Wetland Forbs	11
9-Oct	GOLDENROD, OHIO	Asters and Goldenrods	8
9-Oct	GOLDENROD, SMOOTH GRASS-LEAVED	Asters and Goldenrods	9
9-Oct	GOLDENROD, STIFF	Asters and Goldenrods	9
9-Oct	GRASS, INDIAN	Fall Grasses and Kin	9
9-Oct	MILKWEED, COMMON	Fall Prairie Forbs	8
9-Oct	MILKWEED, SWAMP	Fall Wetland Forbs	13
9-Oct	NINEBARK	Woody Plants	12
9-Oct	ROSE, EARLY WILD	Woody Plants	10
9-Oct	THISTLE, FEN	Fall Wetland Forbs	14
9-Oct	THISTLE, PASTURE	Fall Prairie Forbs	10
9-Oct	WILLOWHERB, CINNAMON	Fall Wetland Forbs	7

Seed Guide Index – by Photo Date

Photo Date	COMMON NAME	Guide	Pg.
11-Oct	BONESET, COMMON	Fall Wetland Forbs	15
11-Oct	CRABGRASS, HAIRY	Fall Grasses and Kin	9
11-Oct	HORSE GENTIAN, ILLINOIS	Fall Woodland Forbs	3
11-Oct	SEDGE, COMMON HOP	Fall Grasses and Kin	4
11-Oct	SEDGE, KNOBBED HOP	Fall Grasses and Kin	4
11-Oct	VIRGIN'S BOWER	Fall Woodland Forbs	16
11-Oct	WATER PEPPER, MILD	Fall Wetland Forbs	14
11-Oct	WINTERBERRY	Woody Plants	13
12-Oct	CONEFLOWER, PURPLE	Fall Prairie Forbs	3
12-Oct	IVY, POISON	Woody Plants	14
12-Oct	VELVETLEAF	Fall Prairie Forbs	14
13-Oct	ASTER, BUSHY	Asters and Goldenrods	4
13-Oct	BONESET, FALSE	Fall Prairie Forbs	13
13-Oct	GOLDENROD, LATE	Asters and Goldenrods	11
13-Oct	GOLDENROD, OLD-FIELD	Asters and Goldenrods	11
13-Oct	LETTUCE, SMOOTH PRAIRIE	Fall Wetland Forbs	15
13-Oct	PRIMROSE, COMMON EVENING	Fall Prairie Forbs	14
13-Oct	SUNFLOWER, FALSE	Fall Prairie Forbs	11
13-Oct	VERVAIN, HOARY	Fall Woodland Forbs	17
14-Oct	ST. JOHN'S WORT, KALM'S	Woody Plants	13
14-Oct	ST. JOHN'S WORT, SHRUBBY	Woody Plants	13
15-Oct	HEMP, SMOOTH INDIAN	Fall Prairie Forbs	14
15-Oct	HOG PEANUT, UPLAND	Fall Woodland Forbs	18
16-Oct	ASTER, AROMATIC	Asters and Goldenrods	6
16-Oct	ASTER, HEATH	Asters and Goldenrods	5
16-Oct	COREOPSIS, TALL	Fall Prairie Forbs	16
16-Oct	GRASS, LEAFY SATIN	Fall Grasses and Kin	10
16-Oct	GRASS, WOOD SATIN	Fall Grasses and Kin	10
16-Oct	HOREHOUND, STALKED WATER	Fall Wetland Forbs	16
16-Oct	MALLOW, HALBERD-LEAVED ROSE	Fall Wetland Forbs	4
17-Oct	BONESET, LATE	Fall Prairie Forbs	13
17-Oct	REED, COMMON	Fall Grasses and Kin	11
18-Oct	ASTER, CROOKED-STEM	Asters and Goldenrods	7
18-Oct	CORDGRASS, PRAIRIE	Fall Grasses and Kin	11
18-Oct	LOOSESTRIFE, PURPLE	Fall Wetland Forbs	15
18-Oct	ST. JOHN'S WORT, COMMON	Fall Woodland Forbs	17
19-Oct	ST. JOHN'S WORT, SPOTTED	Fall Woodland Forbs	17
20-Oct	GOLDENROD, CANADA	Asters and Goldenrods	10

Seed Guide Index – by Photo Date

Photo Date	COMMON NAME	Guide	Pg.
20-Oct	GOLDENROD, HAIRY GRASS-LEAVED	Asters and Goldenrods	9
21-Oct	BUGLEWEED, NORTHERN	Fall Wetland Forbs	16
21-Oct	COWBANE	Fall Wetland Forbs	6
21-Oct	GOLDENROD, RIDDELL'S	Asters and Goldenrods	8
21-Oct	MINT, WILD	Fall Wetland Forbs	17
21-Oct	ST. JOHN'S WORT, MARSH	Fall Wetland Forbs	17
21-Oct	VERVAIN, BLUE	Fall Wetland Forbs	18
21-Oct	WATER PEPPER	Fall Wetland Forbs	14
24-Oct	ASTER, STIFF	Asters and Goldenrods	8
24-Oct	BLAZING STAR, CYLINDRICAL	Fall Prairie Forbs	16
24-Oct	FOXGLOVE, MULLEIN	Fall Woodland Forbs	14
24-Oct	GENTIAN, YELLOWISH	Fall Prairie Forbs	15
24-Oct	GRASS, BEAK	Fall Grasses and Kin	11
24-Oct	ST. JOHN'S WORT, GREAT	Fall Wetland Forbs	17
24-Oct	WORMWOOD, BEACH	Fall Prairie Forbs	18
25-Oct	ASTER, DRUMMOND'S	Asters and Goldenrods	4
25-Oct	BLACK-EYED SUSAN, NARROW-LEAVED	Fall Prairie Forbs	17
25-Oct	BLACK-EYED SUSAN, SWEET	Fall Prairie Forbs	17
25-Oct	BLAZING STAR, ROUGH	Fall Prairie Forbs	16
25-Oct	BLUESTEM, LITTLE	Fall Grasses and Kin	10
25-Oct	BROWN-EYED SUSAN	Fall Woodland Forbs	19
25-Oct	GOLDENROD, SHOWY	Asters and Goldenrods	12
26-Oct	ASTER, SHORT'S	Asters and Goldenrods	7
26-Oct	GOLDEN GLOW, WILD	Fall Wetland Forbs	18
29-Oct	GAY FEATHER, PRAIRIE	Fall Wetland Forbs	19
29-Oct	TURTLEHEAD	Fall Wetland Forbs	18
30-Oct	ASTER, MARSH	Asters and Goldenrods	5
2-Nov	ARROWWOOD, MAPLE-LEAVED	Woody Plants	9
2-Nov	BUTTONBUSH	Woody Plants	15
2-Nov	HOREHOUND, COMMON WATER	Fall Wetland Forbs	16
2-Nov	LETTUCE, TALL WHITE	Fall Woodland Forbs	18
2-Nov	LETTUCE, WHITE	Fall Woodland Forbs	18
2-Nov	SNEEZEWEED	Fall Wetland Forbs	20
2-Nov	WINGSTEM	Fall Wetland Forbs	20
4-Nov	BITTERSWEET, ORIENTAL	Woody Plants	11
4-Nov	GAY FEATHER, MARSH	Fall Wetland Forbs	19

Seed Guide Index – by Photo Date

Photo Date	COMMON NAME	Guide	Pg.
6-Nov	ASTER, BRISTLY	Asters and Goldenrods	7
8-Nov	GENTIAN, STIFF	Fall Prairie Forbs	15
8-Nov	PETUNIA, PRAIRIE	Fall Prairie Forbs	18
3-Dec	BLACK HAW	Woody Plants	9
25-Dec	SUMAC, NORTHERN	Woody Plants	14
25-Dec	SUMAC, SMOOTH	Woody Plants	14

Fall Woodland Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

Images ©2019 DJShields. Produced by: Dale Shields & Kelly Schultz ©Lake County Forest Preserve District [kschultz@lcfpd.org]

The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1" on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind**. For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed**.

Seed Groups

Time sensitive groups – seeds disperse in a few days or weeks due to wildlife, sensitivity to wind, etc.

Elaiosomes are “ant candy” attached to the seeds. Ants are strong and motivated, able to quickly carry the candy back to their home and tossing the heavy “candy wrapper” (seeds) into their compost piles. Check these species frequently; ants will rapidly collect all of the seeds. These seeds have higher germination when sown within a day or two.



Ballistic capsules catapult their babies away, up to 30 feet! Search YouTube for “exploding seeds” to see these in action. To harvest: learn the ripening sequence & harvest just before explosion; store in a *sealed* paper bag or mesh bag for a day or two. Another option is to cover the seed heads with mesh hoods (*after flowers wilt*) to contain the seeds. Snip the entire stem after the seeds have popped, and carefully open the hoods indoors.



Fluffy seeds are quite common, allowing for wind to efficiently move seeds over long distances. Collect when fluffy. It is ok to collect these seeds *slightly* early, by collecting entire stems with seeds that are either fully poofed or have dropped their ray florets (the colorful "petals"); snip the stems and let them poof in a paper or mesh bag. Spring fluffy seeds are typically more sensitive to strong weather.



Milkweed seeds are ripe when pods are split open & seeds are brown. Ignore the pod color. Pro tip: rubberband the unripe pods, to prevent seeds from flying away.



Berries turn a vibrant color when ripe, as an advertisement to the wildlife to EAT ME and disperse the seed. Collection window is small for some of these seeds. These species need to be sown fresh in damp soil OR cleaned & stored in plastic in the refrigerator (which maintains a higher level of humidity). The natural process of a seed stored in a juicy berry, followed by chewing, digestion, and dispersal in a pile of “fertilizer” means these seeds are not used to completely drying out.



Lake County Seed Collection Guide

Fall Woodland Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Mama's Boys will remain on the stem for a while. Ideal for forecasting future workdays.

Shakers drop seeds very close to the mother plant, when shaken loose by the wind or a passing critter. Usually a Mama's Boy, unless strong weather occurs.

Beaks are a subset of the shaker group, with seed capsules that split open like a beak when the seeds are ripe. Collect when beaks are open.

Coneheads are flowers with a cone-shaped center. Imagine these flowers without their colorful parts, and you know exactly what they look like when seeds are ripe. Seeds are inside the hard cone.

Crumbly Coneheads are cone-shaped or thimble-shaped. Softer than standard coneheads, they crumble when ripe and are easily stripped by hand.

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama's Boys.

Hitchhikers are easy to tell when ripe – they hitch a ride on your pants! Color can be an indicator, but not always.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

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Early Horse Gentian

Triosteum aurantiacum

CAPRIFOLIACEAE



Photo: 8-16-18

Berries. Look for bright orange or orange-red fruit, like thumbnail-sized tomatoes sitting in the leaf axils (where the leaf & stem intersect). The longest stem hairs of this typical variety are shorter than 1.5mm, and some of them have glands at the end. Poor from seed.

Illinois Horse Gentian

Triosteum aurantiacum
var. *illinoense*

CAPRIFOLIACEAE



Photo: 10-11-18

Berries. Very similar to *T. aurantiacum*. This variety has “longer” stem hairs (greater than 1.5mm) and the hairs do not have glands. Poor from seed. All of our *Triosteum* species are found in savannas and open woodlands.

Late Horse Gentian

Triosteum perfoliatum

CAPRIFOLIACEAE



Photo: 8-22-18

Berries. This species is easily ID'd by the perfoliate leaves (stem perforates the leaves). *T. aurantiacum* can have some skinny leaf tissue surrounding the stem, but *T. perfoliatum* typically has more than 1” around the stem. Fruit is bright orange to orange-red. Poor from seed.

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Blue Lettuce

Lactuca biennis

ASTERACEAE

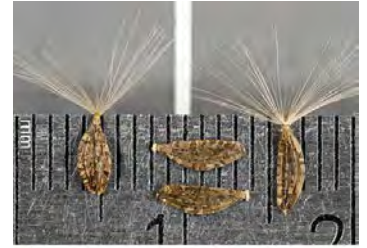


Photo: 9-2-17

Fluffy. *Lactuca* species have thin milky sap, like dandelions. The flowers of this species are blue, yellow, or white. Pappus (seed fluff) is “sordid” meaning a dirty off-white. Leaves are lobed, and the midvein can be smooth or hairy, but not prickly. Open woodlands & savannas.

Wood Lettuce

Lactuca floridana

ASTERACEAE

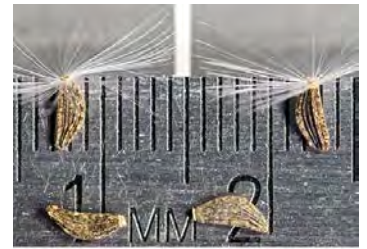
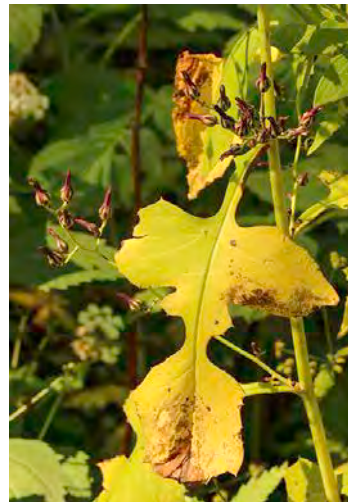


Photo: 9-15-18

Fluffy. The pappus (seed hairs) are sessile (attached directly to the seed, without a stalk). Fluff is white. Purple-tipped green scaly bracts directly behind each flower are usually shorter than 15 mm. Woodlands, savannas, and remnant wetlands.

Wild Lettuce

Lactuca canadensis

ASTERACEAE

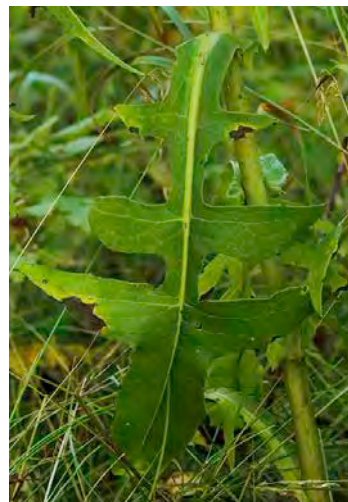


Photo: 9-24-19

Fluffy. Pappus is white, but separated from the seed by a stalk. Green scaly bracts behind each flower are usually shorter than 15 mm. Stems are green, plant is often more than 1m tall. Seeds are elliptical-shaped, usually with 1 clear nerve (line), but definitely less than 4 nerves. A weedy species that will grow just about anywhere.

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Stickseed

Hackelia virginiana

BORAGINACEAE



Photo: 9-4-18

Hitchhikers. Native, but that's about the only good thing you can say about this species. Ubiquitous and bothersome, the hardest hitchhiker to remove from socks and worse after laundering. Leaves are large & almond-shaped with a rough matte texture. Disturbed & rich woodlands.

Jack-in-the-Pulpit

Arisaema triphyllum

ARACEAE

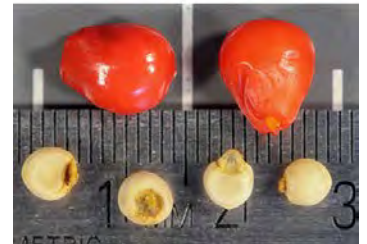


Photo: 9-7-18

Berries. Mama's Boy. Best known for the 3 leaflets & namesake flower, but leaves are often gone by harvest. The aggregate fruits resemble a tomato-red raspberry on steroids. Seeds are tough to ID from its sister, *A. dracontium*. Jack is more common, growing in mesic and moist woods. Green dragon grows in moist to wet woods. The juice can reportedly cause skin & stomach irritation; wear gloves to process.

Tall Bellflower

Campanulastrum americanum

CAMPANULACEAE



Photo: 9-10-17

Shakers. Mama's Boy. This is one of our few native annuals, with lovely periwinkle-purple flowers. Green capsules form, turn beige, and then pores open to shake out the tiny seeds. Collect when open pores are visible. As with all annuals, collect only 10%.

Fall Woodland Forbs

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Pointed Ticktrefoil

Hylodesmum glutinosum

FABACEAE

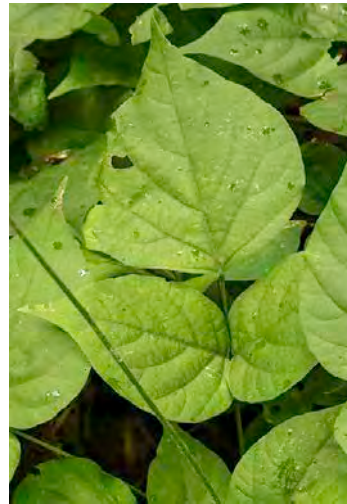


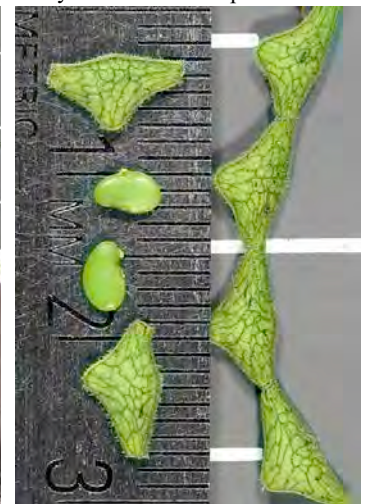
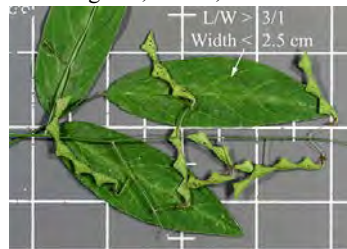
Photo: 9-7-18

Hitchhikers. Mama's Boy. This species strongly prefers rocky well-draining soils in Lake Co, but can be found in mesic and wet-mesic soils. Leaves are broader than its sisters. Individual seeds ("articles") on the legume seed chain ("loments") are lopsided half-moons. Collect when plump "ticks" stick to your clothes; good germination whether the seeds are green, brown, or in-between. Easy to remove from pants.

Panicled Ticktrefoil

Desmodium paniculatum

FABACEAE



Photos: 10-3-17, 9-7-19

Hitchhikers. Mama's Boy. This woodland ticktrefoil has elongated leaves, the longest 3x longer than wide, and less than 2.5 cm wide. Thin, sparse hairs on the veins & leaf face ("laminae"). Individual "ticks" are triangular, up to 9 mm long, and more than half as wide as long.

Take-another-look Ticktrefoil

Desmodium perplexum

FABACEAE

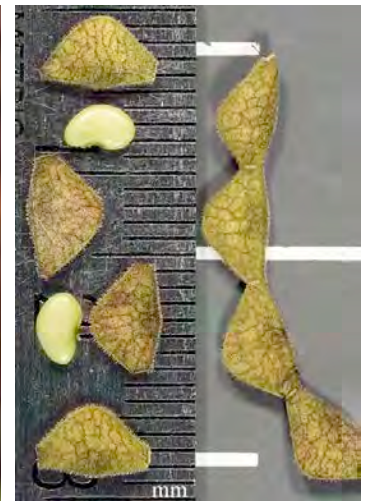


Photo: 9-25-19

Hitchhikers. Mama's Boy. Grows alongside *D. paniculatum*, inspiring the name *perplexum*. Individual "ticks" are similar to the previous: also triangular, up to 9 mm long, and more than half as wide as long. Widest leaves are wider than 2 cm and/or less than 3x long as wide. Stems have straight, spreading hairs; often some shorter, bent hairs mixed in too. Collect when "ticks" start hitchhiking on your pants.

Fall Woodland Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Clustered Black Snakeroot

Sanicula odorata

APIACEAE

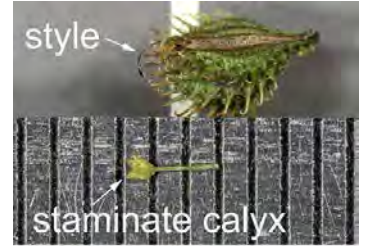


Photo: 9-7-18

Hitchhikers. Mama's Boy. *Sanicula* species require detailed examination to ID. This one has a style that recurves out beyond the hooked bristles. Calyx lobes of staminate flowers (the greenery behind the male flowers) are a blunt triangle shape (deltate). Leaves are typically grouped 3-5. The Latin name references a strong smell, but it seems the only odor is a faint fragrance from the flowers.

Canadian Black Snakeroot

Sanicula canadensis

APIACEAE

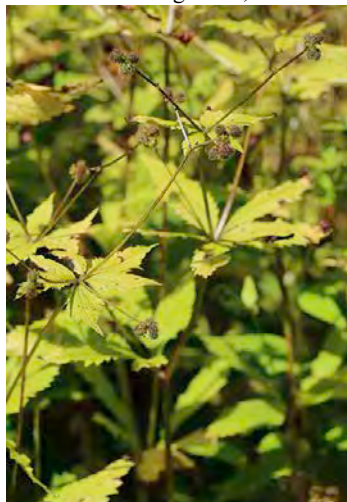


Photo: 9-15-18

Hitchhikers. Mama's Boy. This species has a short style hiding in the hooked bristles. Staminate calyx lobes are spiky. Leaves are in 3s, or deeply cleft to look like 5. Several genera have "snakeroots" that supposedly cured snake bites, but we recommend seeing a doctor instead.

White Snakeroot

Ageratina altissima

ASTERACEAE



Photo: 9-20-17

Fluffy. A completely unrelated snakeroot. Grows abundantly in disturbed woodlands but gives way to conservative species over time. Collect when poofy. This species is notorious for killing Abe Lincoln's mother; don't let your milking cows eat this plant.

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Jerusalem Artichoke

Helianthus tuberosus

ASTERACEAE



Photo: 9-11-19

Coneheads. Composite flowers, such as sunflowers, may have fertile ray florets (the “petals”), disk florets (the “eye”), or both. *Helianthus* species have fertile disks only, so the seeds are throughout the center of the head. Birds like to eat seeds of sunflower-relations; collect promptly. Break open the head to see if seeds are dark, then snip heads. Once heads are completely brown, many of the seeds are gone.

Woodland Sunflower

Helianthus divaricatus

ASTERACEAE

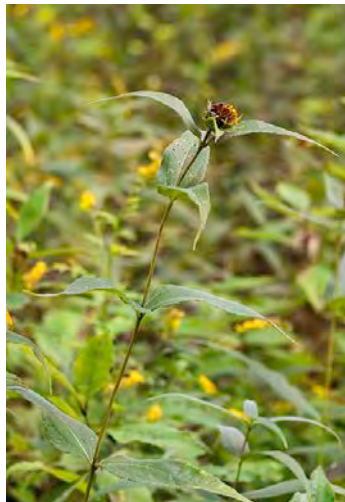


Photo: 9-16-19

Coneheads. Same guidance as for *H. tuberosus*. Most native *Helianthus* are prone to weedy behavior, so sow them thoughtfully. Sure beats buckthorn and provides food for butterflies & birds, but not advised for delicate woodlands. This species has hairless stems and leaves are sessile or have tiny petioles (less than 0.7cm). Lateral veins in the leaves immediately split from central vein (less than 1 mm from petiole).

Canadian Germander

Teucrium canadense

LAMIACEAE



Photo: 9-12-17

Shakers. Mama’s Boy. This species is a mint-relation with square stems, irregular pale pink-purple flowers, and seeds forming in the calyx cups. Up to 4 rusty seeds per cup. Watch seed color & snip stalks; the cup color is unimportant. Var. *occidentale* has spreading hairs.

Fall Woodland Forbs

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Upright Carrion
Flower

Smilax ecirrhata

SMILACACEAE

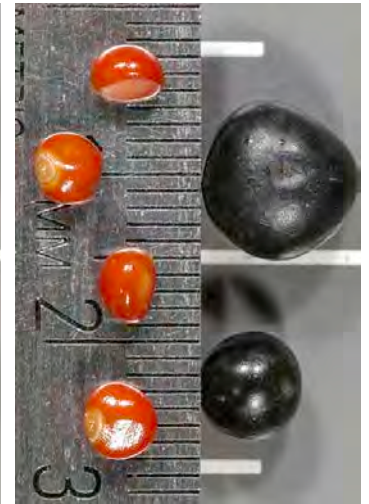
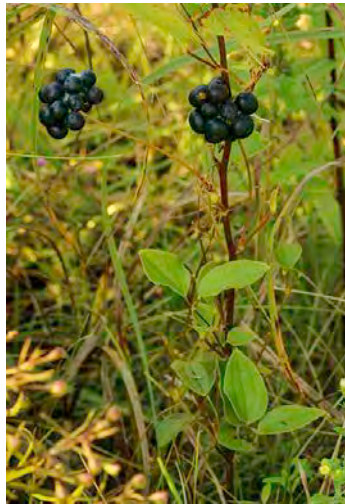


Photo: 9-12-18

Berries. *Smilax* species have clusters of dark purple-black fruits. This species lacks prickles, stands upright, typically shorter than 0.5 m, and less than 25 flowers per head. Unusual to see such colorful seeds hidden inside a berry.

Common Carrion
Flower

Smilax lasioneura

SMILACACEAE



Photo: 10-4-17

Berries. Similar to the previous species, but taller/longer (rambling well over 1 m). No prickles. Pubescent hairs (short-hairy) on the underside of the leaves. Commonly more than 25 flowers & berries per head.

Hairy White Vervain

Verbena urticifolia

VERBENACEAE



Photo: 9-13-18

Shakers. Common species in mesic to dry-mesic savannas & woodlands. Spikes of tiny white flowers (single spike to dozens) branch out at the top of the plant. After flowers fade, 4 brown seeds form in each calyx (cup). Lower leaf surfaces are thinly to densely hirsute (stiff, straight hairs). Var. *leiocarpa* has velutinous (velvety) hairs. Consult Flora for hybrids, vervains like to mix it up.

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Feathery False
Solomon's Seal

Smilacina racemosa

CONVALLARIACEAE

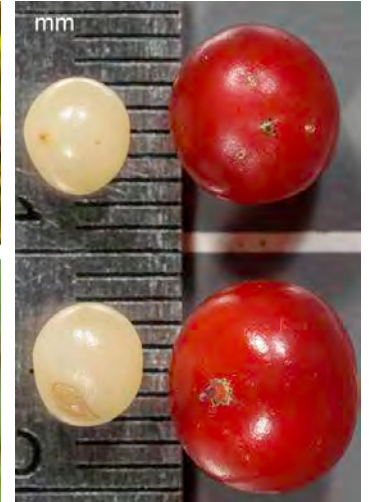
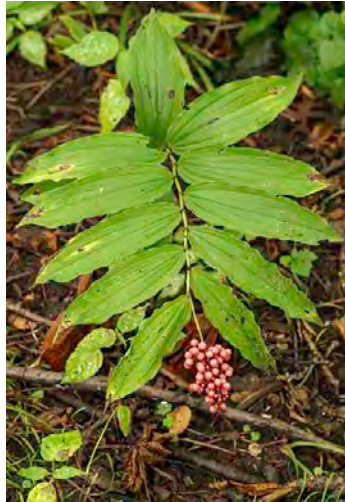


Photo: 9-15-18

Berries. Mama's Boy. False Solomon leaves look very similar to "true," but the flowers/fruit are clustered at the terminal end of the plant and berries are red. Collect clusters that are mostly red; speckled red berries are half-ripe.

Starry False
Solomon's Seal

Smilacina stellata

CONVALLARIACEAE

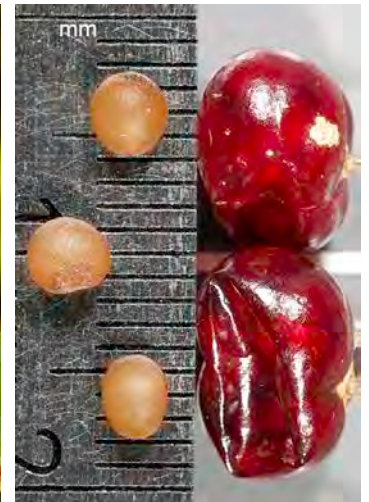


Photo: 9-28-19

Berries. "Starry" has 6-pointed star flowers. Half-ripe berries have beach ball stripes, which also resembles a 6-pointed star from the right angle. Fully ripe berries are a deep cranberry red. Compared to the previous species, *S. stellata* is more upright & leaves are skinnier.

Jumpseed
aka
Virginia Knotweed
aka
Woodland Knotweed

*Antenoron
virginianum*

POLYGONACEAE

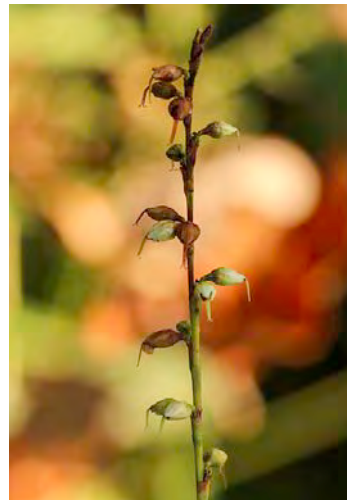


Photo: 9-20-17

Hitchhikers. Mama's Boy. This ultra-common plant has several English & Latin names. Stems have knobby sheathed elbows like other smartweeds/knotweeds. Elongated spikes with tiny white flowers ripen to beaked seeds that jump onto your clothes, hanging on by the beak. No need to remove the papery shells for germination. The seeds are brown when ripe, look for pale brown shells. .

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Late Figwort

Scrophularia marilandica

SCROPHULARIACEAE

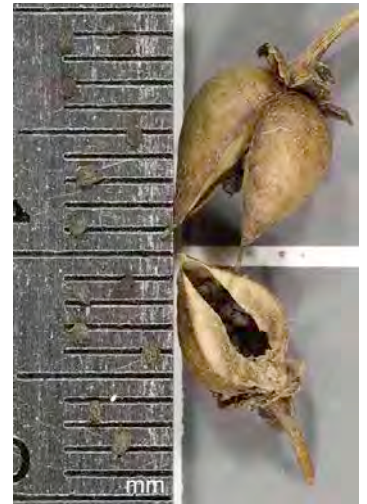
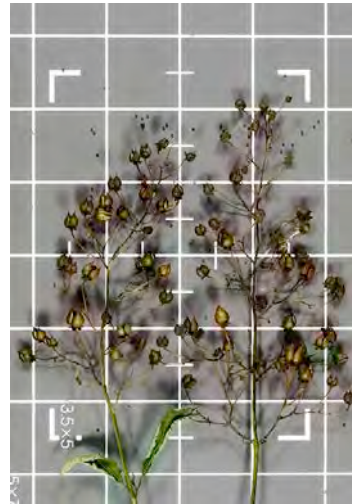


Photo: 9-20-17

Beaks. Mama's Boy. In the extended family of the mints, with square stems. Small green & burgundy flowers and a dark purple sterile stamen, good for many pollinators. Brown teardrop capsules open to release tiny seeds. *S. lanceolata* blooms earlier, sterile stamen is green.

Purple Giant Hyssop

Agastache scrophulariifolia

LAMIACEAE

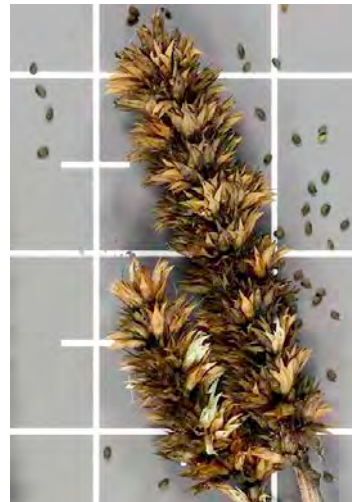


Photo: 9-20-17

Shakers. Mama's Boy. These mint-relatives have square stems & irregular flowers. "Purple" often blooms white, but sometimes pale lavender. Stems are hairy on the square angles. Leaves are a medium green. Snip heads when they are mostly brown, seeds easily spill out.

Yellow Giant Hyssop

Agastache nepetoides

LAMIACEAE



Photo: 9-24-19

Shakers. Mama's Boy. Yellow hyssop has yellow/cream-colored flowers, stems are typically smooth and hairless. Stems & leaves are a brighter yellow-green; seed spikes & mature stems are a little skinnier than its sister.

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Wild Yam

Dioscorea villosa

DIOSCOREACEAE

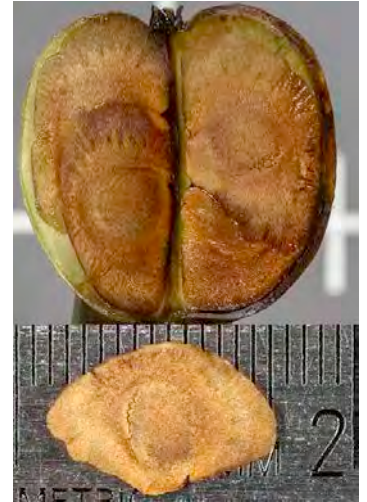


Photo: 9-20-17

Shakers. This vine has heart-shaped leaves & subtle green flowers. Look for 3-finned propellers, ripening from green to beige/brown, and finally splitting open along the bottom to release 2 papery seeds from each fin. Often does not flower & found creeping along the ground. Flowers & seed are more likely when plants grow on woodland edges (more sunlight) and when climbing. Rodents sometimes eat the seeds.

Purple Joe Pye Weed

Eutrochium purpureum

ASTERACEAE



Photo: 9-20-17

Fluffy. Mama's Boy. This tall perennial has big heads of brown fluffy seeds. The stems are green, or purple at the leaf axils only; *E. maculatum* (its wetland sister) has stems that are purple or purple-spotted throughout. Rounded & tall heads, often in 2 layers. *E. maculatum* has single layer, flat-topped heads. Legends claim that Joe Pye was a talented & altruistic Native American medicine man.

American Gromwell

Lithospermum latifolium

BORAGINACEAE



Photo: 9-20-17

Shattering. Mama's Boy. Aka stoneseed or woodland puccoon. Seeds look like little white-gray pearly stones. Long collection window; you can pluck the seeds off long after the leaves are gone. Good germination with directly sowing outdoors in the fall.

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Indian Tobacco

Lobelia inflata

LOBELIACEAE



Photo: 9-20-17

Shakers. This annual *Lobelia* is uncommon. Species name refers to the inflated seed capsules. Tiny pale purple flowers and tiny seeds (500,000 seeds/oz). Germinates well in the low-competition of a greenhouse tray, but in the wild it is a special treat. Collect 10%

Smooth Solomon's Seal

Polygonatum biflorum

CONVALLARIACEAE



Photo: 9-16-19

Berries. Mama's Boy. True Solomon's Seal species hides its flowers under the leaves, with a "blueberry" fruit. This is the more common of the "true" species, with smooth leaves. Deer candy, like many lily-relatives; this has been moved into a more distant relation in the mayflower family.

Downy Solomon's Seal

Polygonatum pubescens

CONVALLARIACEAE

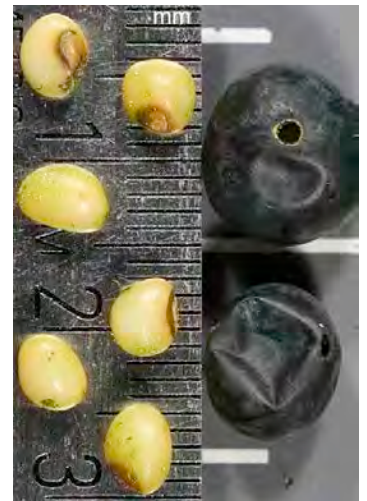


Photo: 10-8-19

Berries. This state threatened species has tiny peach fuzz on the underside of the leaves. Plants are usually smaller than its more common sister. Wet-mesic and mesic woodlands. Like other Solomon's Seals and lilies, these seeds have decent germination but take years to mature.

Fall Woodland Forbs

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Tall Thistle

Cirsium altissimum

ASTERACEAE



Photo: 9-28-19

Fluffy. One of the good thistles. Native thistles are never abundant, but are equally desirable to insects & birds. Leaves are typically unlobed in this species, green on top and a bright bleached woolly white beneath. Snip heads, process with a machine or pluck seeds with tweezers.

Yellow False
Foxglove

*Aureolaria
grandiflora
var. pulchra*

OROBANCHACEAE



Photo: 9-30-17

Beaks. Mama's Boy. These plants have sunny yellow trumpet flowers. Hemiparasitic (germinate solo but need their host to reach maturity). ID *Aureolaria* by checking stems, leaves, and seed capsules for hairs, the length of the pedicels (flower stalks). Short-lived perennials.

Mullein Foxglove

*Dasistoma
macrophylla*

OROBANCHACEAE



Photo: 10-24-19

Beaks. Mama's Boy. An annual or monocarpic perennial (flowers once then dies). *Dasistoma* means "woolly-mouthed" referring to the dense hairs in the trumpet's throat. Flowers, seed capsules, and pedicels (flower stems) are slightly smaller than *A. grandiflora*. Collect 10%

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Wild Leek

Allium tricoccum

ALLIACEAE

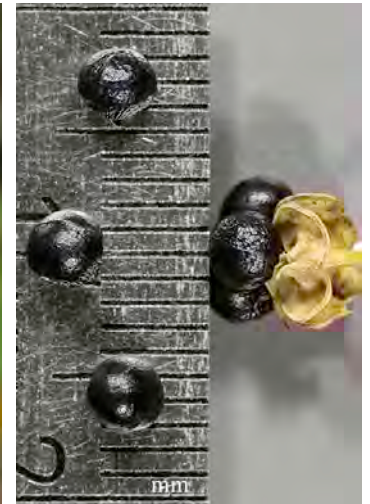


Photo: 9-30-19

Shattering. Mama's Boy. Black pearls hiding in the shady understory. Species name means "3-seeded," referring to the triplicate clusters of seed. Differs from *A. burdickii* by having red petioles & leaf sheaths, ripening slightly later, and a few more seeds per stalk. Unripe leek seeds are covered in a light green shell, which splits & turns beige. Poor from seed, but spreads locally by bulbs. Poaching is a problem.

Rough Hawkweed

Hieracium scabrum

ASTERACEAE

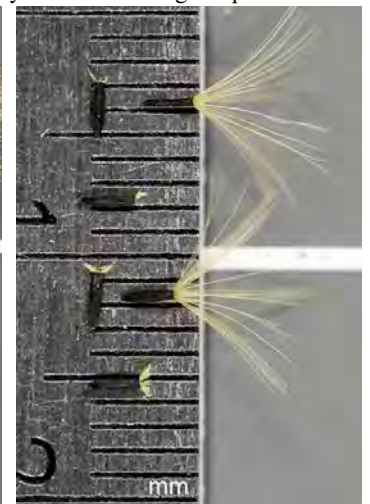
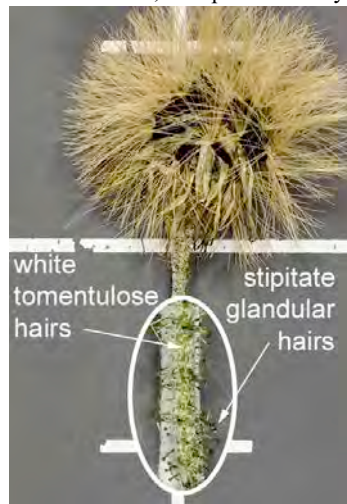


Photo: 9-30-17

Fluffy. Like many dandelion-like flowers, hawkweeds are often ignored. This conservative (C = 7) species likes mesic to dry habitats, often in sandy/gravelly soils. Leafy stems. Hairy throughout, stem hairs of two types: black glandular (lollipop) hairs and tiny fuzzy white hairs. Seeds are shaped in columns (not tapered) with tawny (amber-orange) pappus.

Violet Bush Clover

Lespedeza frutescens

FABACEAE



Photo: 9-30-17

Shattering. Mama's Boy. This delicate plant loves mesic to dry oak savannas. Distinguished from other *Lespedezas* by its height, and flowers on short stalks that are longer than the leaflets. Showy flowers are chasmogamous (cross-pollinated) and tiny cleistogamous (self-pollinating, resembling closed buds) form in axils. Note: the former name of *L. violacea* has been reassigned to a different species.

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Lopseed

Phryma leptostachya

PHRYMACEAE

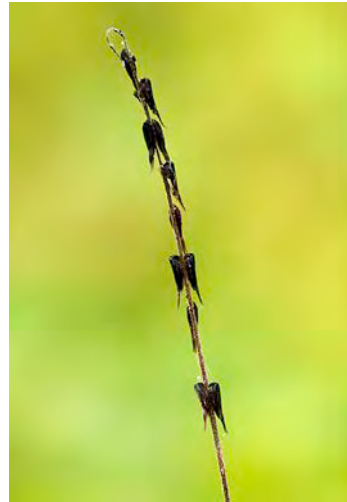


Photo: 10-2-17

Hitchhikers. Mama's Boy. The only species in this genus for the entire country, with paired seeds that dangle like a lop-eared rabbit or beagle ears. Cute little pink & white flowers, happiest in rocky/sandy soil. Snip stems or strip with a gloved hand.

Savanna Blazing Star

Liatris scariosa
var. *nieuwlandii*

ASTERACEAE

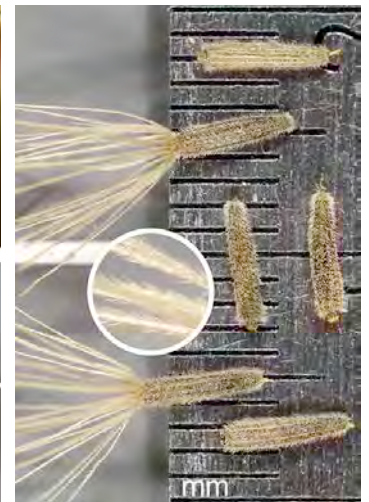


Photo: 10-4-17

Fluffy. Like many true savanna species, this is an uncommon plant. The pink-purple flowers have unusually long stalks (pedicels), ripening to a light brown poof. *Flora* notes different textures of the pappus hairs of *Liatris* species, which can be observed under magnification.

Virgin's Bower

Clematis virginiana

RANUNCULACEAE

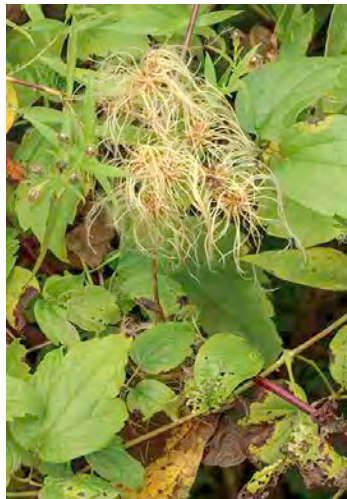


Photo: 10-11-18

Shattering. Mama's Boy. One of two native *Clematis* vines. This one has small white flowers & seeds like prairie smoke. Leaves in 3s rather than 5s. Dioecious (need male & female plants). Uncommon in the region but locally abundant. Ripe seeds are easily tugged loose.

Fall Woodland Forbs

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Hoary Vervain

Verbena stricta

VERBENACEAE



Photo: 10-13-17

Shakers. Mama's Boy. Hoary refers to the grayish hairs (think: hoarfrost). 1-3 tightly packed spikes per plant. Leaves more than 2 cm wide, without petioles (or at most 5 mm long). Test by tipping spike into your hand; skinny seeds will fall out when ripe. Snip stalks.

Common
St. John's Wort

Hypericum perforatum

HYPERICACEAE



Photo: 10-18-19

Beaks. Mama's Boy. A common European species with translucent dots in the leaves (hold up to the sun for quick ID) and bushy with many branches. Black glands are primarily on the margins of petals. Leaves less than 1 cm wide. Seeds usually longer than 1 mm. *Hypericum* species were reportedly used on the eve of St. John's day to ward off evil spirits. Common. Do not collect.

Spotted
St. John's Wort

Hypericum punctatum

HYPERICACEAE



Photo: 10-19-19

Beaks. Mama's Boy. A native species with dots in the petals like *H. perforatum*, but with only a few branches (if any). Dots of black glands are evident throughout petals, sepals, stems, and leaves. Larger leaves wider than 1 cm. Seeds mostly shorter than 1 mm.

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Upland Hog Peanut

*Amphicarpaea
bracteata*

FABACEAE



Photo: 10-15-18

Ballistic. This native vine crawls all over the surrounding vegetation like a kudzu wannabe and is locally annoying. White & lavender flowers become pea-pods; cleistogamous flowers (closed flowers that self-fertilize) grow on low stolons (runners) that form “peanuts.” Var. *comosa* is hairier. Butterflies & hummingbirds feed on it, and reportedly the passenger pigeon did too.

White Lettuce

Prenanthes alba

ASTERACEAE

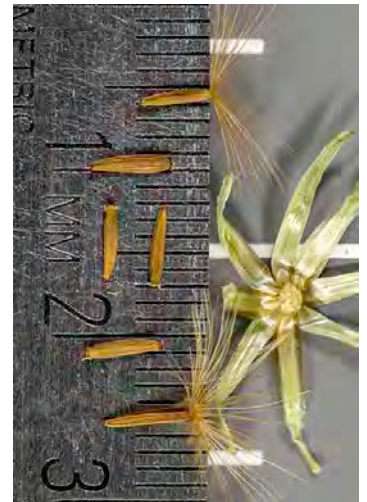


Photo: 11-2-18

Fluffy. Mama’s Boy. Another genus of lettuce with milky sap. Flowers are dangling trumpets. Seeds have rusty pappus (fluff) and typically 8 bracts around the seeds (and cupped around the flowers). Flowers are white & pink/purple. Collect 10%, biennial/short-lived perennial.

Tall White Lettuce

Prenanthes altissima

ASTERACEAE



Photo: 11-2-18

Fluffy. Mama’s Boy. Contrary to the name, this species is usually shorter than *P. alba*. Fluff is honey to cinnamon colored, with 5 bracts. All *Prenanthes* species have variable leaf shapes; ID by flowers or seeds. Flowers are green-yellow. Collect 10%

Fall Woodland Forbs

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Brown-eyed Susan

Rudbeckia triloba

ASTERACEAE



Photo: 10-25-17



Coneheads. Mama's Boy. The name is apparent after the conehead is empty of seeds. Snip heads that are dark almost black, or crumble to see if seeds come out. Favors savannas & woodland edges. Leaves with 3-lobes ("triloba"). *Rudbeckia* spp are quick to flower in restorations.

Lake County Seed Collection Guide

Fall Wetland Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1” on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind.** For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed.**

Seed Groups

Time sensitive groups – seeds disperse in a few days or weeks due to wildlife, sensitivity to wind, etc.

Elaiosomes are “ant candy” attached to the seeds. Ants are strong and motivated, able to quickly carry the candy back to their home and tossing the heavy “candy wrapper” (seeds) into their compost piles. Check these species frequently; ants will rapidly collect all of the seeds. These seeds have higher germination when sown within a day or two.



Ballistic capsules catapult their babies away, up to 30 feet! Search YouTube for “exploding seeds” to see these in action. To harvest: learn the ripening sequence & harvest just before explosion; store in a *sealed* paper bag or mesh bag for a day or two. Another option is to cover the seed heads with mesh hoods (*after flowers wilt*) to contain the seeds. Snip the entire stem after the seeds have popped, and carefully open the hoods indoors.



Fluffy seeds are quite common, allowing for wind to efficiently move seeds over long distances. Collect when fluffy. It is ok to collect these seeds *slightly* early, by collecting entire stems with seeds that are either fully poofed or have dropped their ray florets (the colorful "petals"); snip the stems and let them poof in a paper or mesh bag. Spring fluffy seeds are typically more sensitive to strong weather.



Milkweed seeds are ripe when pods are split open & seeds are brown. Ignore the pod color. Pro tip: rubberband the unripe pods, to prevent seeds from flying away.



Berries turn a vibrant color when ripe, as an advertisement to the wildlife to EAT ME and disperse the seed. Collection window is small for some of these seeds. These species need to be sown fresh in damp soil OR cleaned & stored in plastic in the refrigerator (which maintains a higher level of humidity). The natural process of a seed stored in a juicy berry, followed by chewing, digestion, and dispersal in a pile of “fertilizer” means these seeds are not used to completely drying out.



Lake County Seed Collection Guide

Fall Wetland Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Mama's Boys will remain on the stem for a while. Ideal for forecasting future workdays.

Shakers drop seeds very close to the mother plant, when shaken loose by the wind or a passing critter. Usually a Mama's Boy, unless strong weather occurs.

Beaks are a subset of the shaker group, with seed capsules that split open like a beak when the seeds are ripe. Collect when beaks are open.

Coneheads are flowers with a cone-shaped center. Imagine these flowers without their colorful parts, and you know exactly what they look like when seeds are ripe. Seeds are inside the hard cone.

Crumbly Coneheads are cone-shaped or thimble-shaped. Softer than standard coneheads, they crumble when ripe and are easily stripped by hand.

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama's Boys.

Hitchhikers are easy to tell when ripe – they hitch a ride on your pants! Color can be an indicator, but not always.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

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Spotted
Touch-me-not
aka
Orange Jewelweed

Impatiens capensis

BALSAMINACEAE

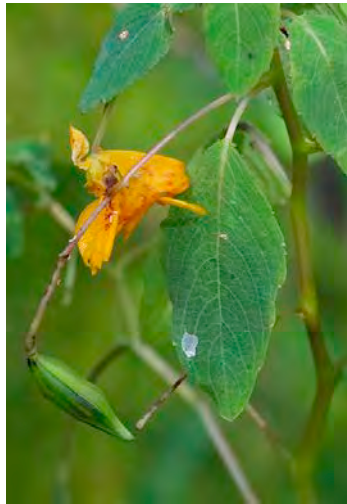


Photo: 9-4-18

Ballistic. These plants are named for their explosive seeds. Fun to play with! Plump pods burst from the slightest touch, startling even when you expect it. Collect carefully – grab pods with a firm grip or snip stalks and bag immediately. This is the more common species. Annual.

Pale
Touch-me-not
aka
Yellow Jewelweed

Impatiens pallida

BALSAMINACEAE



Photo: 9-5-19

Ballistic. Easiest to ID *Impatiens* by flower color. This species is larger overall; largest leaves are typically 8+ cm long. Can grow in sunny moist places like *I. capensis*, but also mesic woodlands. The sap is reportedly useful in washing off poison ivy oils. Annual, collect 10%

Skunk Cabbage

Symplocarpus foetidus

ARACEAE



Photo: 9-5-19

Berries. This awesomely weird plant blooms around February but doesn't ripen until August. Look for chunky fruit, looks more like a mushroom or a meteorite. Collect soft, dark fruits. Fruits naturally degrade and release brownish nuts that can float. Seeds may germinate right away. Also known for its contractile roots that pull the plant deep into the muck, flowers that can melt snow, and an odor flies love.

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Green Dragon

Arisaema dracontium

ARACEAE



Photo: 9-10-19

Berries. Grows a “dragon’s wing” of leaves; the flower is a green head with a long yellow tongue of “flame”! In fruit, it looks like its brother Jack-in-the-Pulpit (see Fall Woodland Forbs) and they can grow next to each other in wetter woodlands. Look for remnants of leaves or flag one species earlier in the season. Fruits are a bright tomato-red when ripe. Process these seeds with gloves; skin irritation is possible.

Northern Rose Mallow

Hibiscus palustris

MALVACEAE

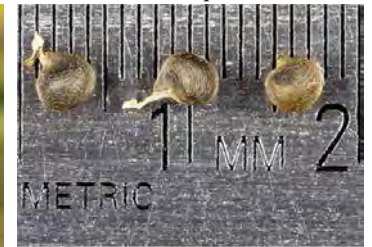


Photo: 9-12-17

Beaks. Mallows are our own little piece of Hawaii, except native to IL! Stunning big flowers in shades of white & pink. This species has ovate leaves (broader at the base tapering to a pointed tip). Seeds are hairless, chocolate brown. Collect open pods.

Halberd-leaved Rose Mallow

Hibiscus laevis

MALVACEAE

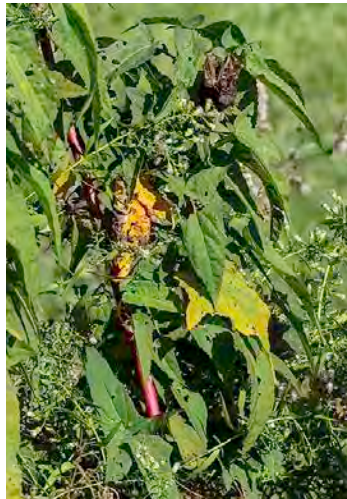


Photo: 10-16-17

Beaks. This species has triangular pointed leaves with lobes at the base like a cross-guard of a weapon. (Whether this resembles a halberd is debatable.) Seeds are rusty & fuzzy. Both species have large capsules that split open like a brown orange, 5 segments. Collect open pods.

Fall Wetland Forbs

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Fringed Loosestrife

Lysimachia ciliata

MYRSINACEAE



Photo: 9-12-17

Beaks. This yellow loosestrife has cilia (fringes) on the leaf petiole. Leaves are broad, round bases. Globe-shaped capsules turn brown & split open at the top. Seeds are small rounded wedges. Seed quality can vary; bigger globes tend to have better quality (fewer aborted) seeds.

Wild Senna

Senna hebecarpa

CAESALPINIACEAE



Photo: 9-20-17

Beaks. The 2 native *Senna* species have bright yellow flowers that pollinators love. The differences are subtle: the gland on the petiole (leaf stem) and hairs on the pod can assist with ID. Easiest way is to look at the seeds: this species has broad seeds with wide wings (kind of like a stingray). *S. marilandica* has pointed oval seeds, like small watermelon seeds. The legumes don't always split open, collect brown pods.

Wood Nettle

Laportea canadensis

URTICACEAE



Photo: 9-21-18

Shattering. One of several nettle species that stings, don't touch without gloves! This plant is important for butterflies, including the Question Mark, Comma, and Red Admiral. Leaves are wide. Fruit are terminal (at the top of the plant). Self-sows readily. Rarely collected.

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Water Hemlock

Cicuta maculata

APIACEAE

Photo: 9-23-19



Shattering. Mama's Boy. White flowers, reminiscent of its cousin, Queen Anne's lace. Seeds are small, chunky, and striped, 3-4 mm long. Leaves are double compound (branches of leaves are subdivided with their own branches of leaves). Toxic to humans (don't eat it!) but good for swallowtail butterflies & other wildlife.

Cowbane

Oxypolis rigidior

APIACEAE

Photo: 10-21-18



Shattering. Mama's Boy. Another cousin of *Cicuta*, this species has larger seeds (5-6 mm long) that are papery and almost flat. Leaves are compound (divided only once). Ripe seeds are beige with black stripes in the center, and easily plucked by hand. Wet habitats, sun & shade.

Knotweed Dodder

Cuscuta polygonorum

CUSCUTACEAE

Photo: 9-23-19



Beaks. Mama's Boy. Dodders are parasitic annuals, most noticeable in summer when the orange "silly string" vines start crawling over host plants. The dodder spirals around a host, attaches, and the viny bits disappear. Check dark brown/black capsules to see if the seed has ripened to brown. Collect 10%. Dodders can be helpful to keep their hosts - typically common (aggressive) native plants - in check.

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Northern
Willowherb

Epilobium ciliatum

ONAGRACEAE



Photo: 9-26-18

Fluffy. Willowherbs have delicate white or pink flowers. A long skinny seed pod splits to release tiny seeds on long hairs. *E. ciliatum* & *E. coloratum* both have leaves with serrated edges; *E. ciliatum* has little nubs instead of full teeth. Annual or short-lived perennial, collect 10%

Cinnamon
Willowherb

Epilobium coloratum



Photo: 10-9-18

Fluffy. Cinnamon gets its name from the cinnamon-colored fluff; *E. ciliatum* has white fluff. Both species have stems that are hairless or may have lines of hairs. Annual or short-lived perennial, collect 10%.

False Aster

Boltonia asteroides

ASTERACEAE

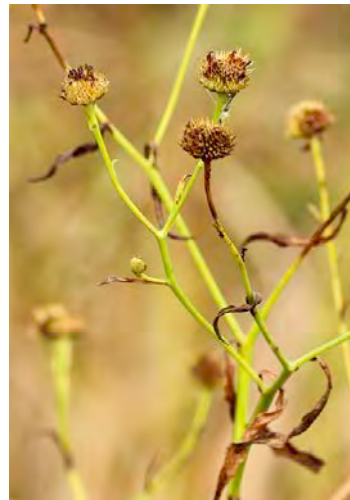


Photo: 9-17-17

Coneheads. In flower, this looks like an aster or a tall fleabane, but the seeds are clearly very different. Collect when easily crumbles by hand. Rhizomatous, can be locally aggressive; best used in wetlands with other aggressive species. Great for insects & pollinators.

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Cardinal Flower

Lobelia cardinalis

LOBELIACEAE

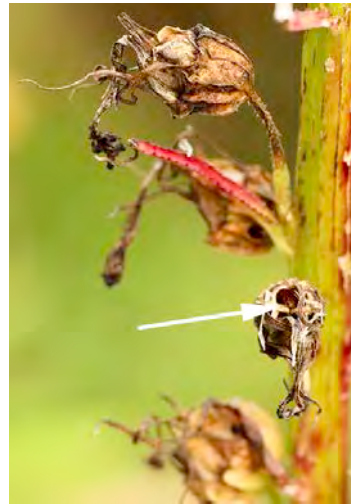


Photo: 9-27-17

Beaks. The bold red flowers make this species a favorite of hummingbirds & humans alike. Far more subtle in seed, look for light brown capsules that open with 2 chambers (like a pig nose). All *Lobelia* species have tiny seeds: 500,000 - 900,000 seeds/ounce.

Great Blue Lobelia

Lobelia siphilitica

LOBELIACEAE



Photo: 10-3-17

Beaks. *L. siphilitica* & *L. cardinalis* are tough to tell apart after flowering, and they can grow side by side. Examine the calyx (green bracts behind the flower): *L. cardinalis* has skinny, needle-like spikes that abruptly stop, making almost a right angle. *L. siphilitica* bracts widen at the base like shoulders, and are hairier; hairs on pedicels (flower stalks) are longer. This species was once thought to cure syphilis (it doesn't).

Monkey Flower

Mimulus ringens

SCROPHULARIACEAE



Photo: 9-27-17

Beaks. Royal purple flowers that look like a monkey's face (if you squint. Really hard). Oval capsules form inside the pointed calyx. Collect brown capsules, the teeny tiny seeds (2,300,000 seeds per ounce!) will easily fall out when ripe.

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Ditch Stonecrop

Penthorum sedoides

PENTHORACEAE

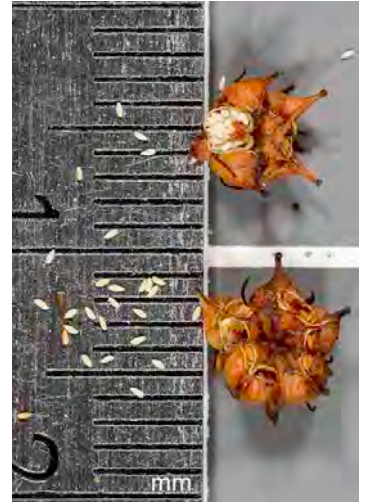


Photo: 9-27-17

Beaks. This short wetland plant with an unattractive name has cute little white flowers on branching octopus arms, followed by capsules full of teeny tiny seed (1,300,000/oz). Collect crumbly capsules, which can be pink or brown. Only member of the genus.

Showy Obedient
Plant

Physostegia speciosa

LAMIACEAE



Photo: 9-27-17

Shakers. Mama's Boys. Similar to the other obedient plant species, but leaves are bigger & broader (usually 2.3cm or wider) and the teeth are more coarse (more than 2 mm deep on the short side). This species is more likely in shady places than its sisters.

Mermaid Weed

*Proserpinaca
palustris*

HALORAGIDACEAE



Photo: 9-27-17

Shattering. This species likes marshes and is often found in the muddy flats after the water recedes. Upper leaves are linear with serrated edges; submersed leaves are feathery, resembling seaweeds. Seeds are chunky and are easily plucked when ripe.

Fall Wetland Forbs

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Common
Mountain Mint

*Pycnanthemum
virginianum*

LAMIACEAE

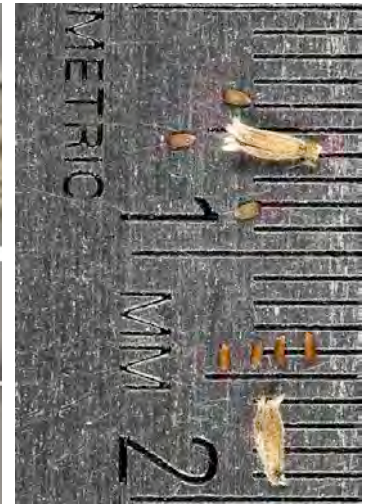


Photo: 9-27-17

Shakers. The first *Pycnanthemum* species was named in the mountains; our species carry over the English name despite our flatlander habitats. This common species happily lives from dry-mesic to wet conditions & supports a wide variety of pollinators. Look for grayish heads; tip them into your hand & seeds will easily spill out of the clustered tubes when ripe. Smells lovely!

Short-beaked
Arrowhead

Sagittaria brevirostra

ALISMATACEAE



Photo: 9-27-17

Crumbly Coneheads. Arrow-shaped leaves. Contrary to the name, the beak is longer than many in the region. Bright white flowers. Seeds are ripe when brown & easily crumble by hand. This species has a long, curved beak on the seed (longer than 0.3 mm long, up to 1.5 mm long); the opposite side of the seed is rounded with subtle, broad teeth and/or waviness.

Cup Plant

Silphium perfoliatum

ASTERACEAE



Photo: 9-27-17

Coneheads. *S. perfoliatum* is well named, with its perfoliate leaves (stem perforates the leaves) that cup & hold water. Like all *Silphium*, collect brown heads. Note the seeds are sandwiched between the outer sandpapery bracts & the skinny inner florets.

Fall Wetland Forbs

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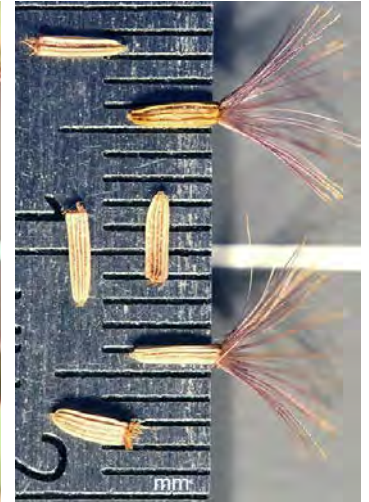
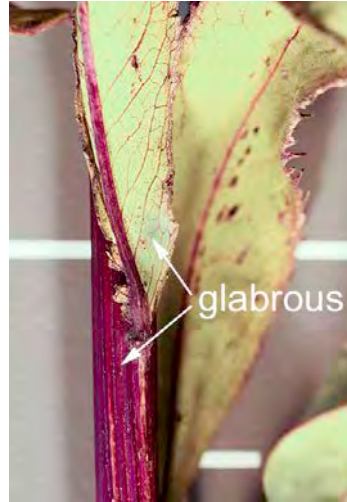
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Common Ironweed

Vernonia fasciculata

ASTERACEAE

Photo: 9-27-17



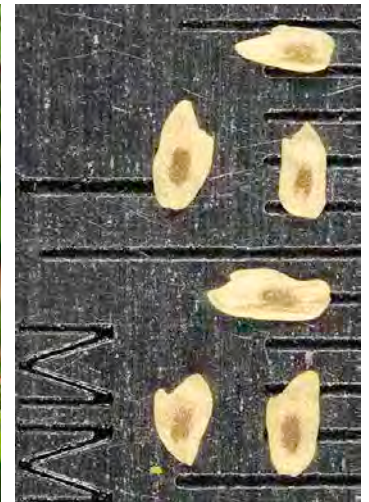
Fluffy. Found throughout the region, this species has hairless leaves; stems are hairless (glabrous) or nearly so. Bright hot purple-pink flowers turn to rusty-brown puffs. Collect when fluffy. It has been given a boost in Flora, C = 8 (formerly 5). Possibly named for the iron-tough stem, or for the rusty pappus color.

Closed Gentian
aka
Bottle Gentian

Gentiana andrewsii

GENTIANACEAE

Photos: 9-28-18, 10-14-18



Beaks. These late season blooms go from bright blue, to plum purple, to paper bag brown. Plump duck bills are full of tiny “fried egg” seeds. Collect open beaks. Hard to ID from *G. alba* at harvest time; this species has small ragged serrations at the top of the papery shell; *G. alba* has chunkier teeth. This species is slightly more likely in wetter habitats, but they can grow together. See the Fall Prairie Forbs Guide.

Fringed Gentian

Gentianopsis crinita

GENTIANACEAE

Photo: 10-9-19



Beaks. Like its *Gentiana* & *Gentianella* cousins, this species forms a long duck billed capsule full of tiny seeds. Lives as an annual/biennial, collect 10%. Seeds are bristly. Flowers are pretty, fringed blue-purple. *G. virgata* is a smaller species; upper leaves are slender & linear.

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Tall Nettle

Urtica gracilis

URTICACEAE



Photo: 9-28-18

Beaks. This species has opposite leaves, with a lance-like shape (usually 3x long as wide, or longer). Other nettles in the region have fatter leaves or alternate leaves. Butterflies, moths, and other insects like it. Common in moist areas and one of the stinging species. The sting eases in hours, faster if you wash up. The sap of jewelweed, which often grows nearby, can also be used to ease the sting. Rarely needs collecting.

Wild Cucumber

Echinocystis lobata

CUCURBITACEAE



Photo: 9-30-17

Beaks. *Echinocystis* means “spiny bladder” an appropriate name for the fruit! A non-edible green fruit that dries to an airy shell and opens at the base to release seeds. Annual, collect 10%. Likes wet communities with partial to full sun, and something to climb.

Spotted Joe Pye Weed

Eutrochium maculatum

ASTERACEAE



Photo: 9-30-19

Fluffy. Mama’s Boy. This perennial has big heads of brown fluffy seeds. Flat-topped heads. Stems are purple or purple-spotted throughout; *E. purpureum* (its woodland sister) has stems that are purple at the axils only, or all green. When in doubt: label seed with the habitat.

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Pale False Foxglove

Agalinis skinneriana

OROBANCHACEAE

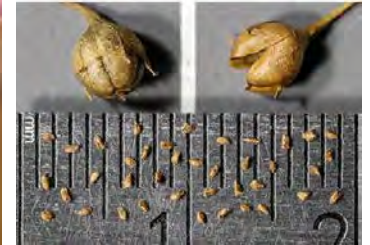
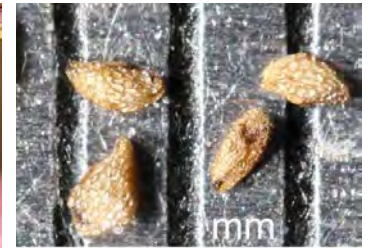


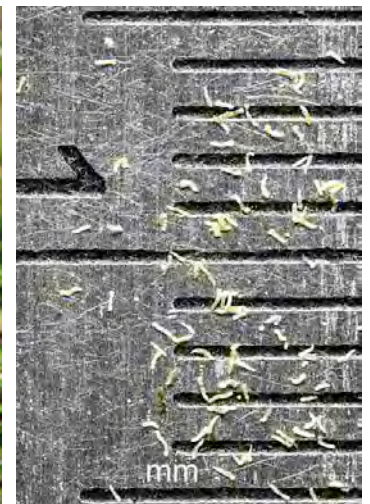
Photo: 10-3-18

Beaks. *Agalinis* species are hemi-parasitic with graminoid hosts. Hot pink flowers. Pedicels (flower stems) are typically more than 6 mm long. Plant specimens remain light colored after drying (does not blacken), seeds are light brown, calyx is net veined. Annual, collect 10%

Nodding
Lady's Tresses

Spiranthes cernua

ORCHIDACEAE



Photos: 9-12-18, 10-3-18

Beaks. Lady's tresses are 'common' native orchids. Blooms are arranged in double spirals up the short stalk, popping up to bloom in fall. *Spiranthes* are tough to ID; examine flower lips, sepals, sheaths, and presence/absence of leaves at flowering time. Orchids will not germinate without a specific fungus; collect & sow thoughtfully. Seeds are dust-like, note the image above shows mm markings!

Swamp Milkweed

Asclepias incarnata

ASCLEPIADACEAE



Photo: 10-9-18

Milkweed. The bright pink flowers become finger-wide pods. The primary milkweed in wetlands. It is hard to mistake this species, unless handed a bag of pods. Similar sized pods to *A. tuberosa*, but those pods have peach fuzz and *A. incarnata* has smooth pods.

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Fen Thistle
aka
Swamp Thistle

Cirsium muticum

ASTERACEAE

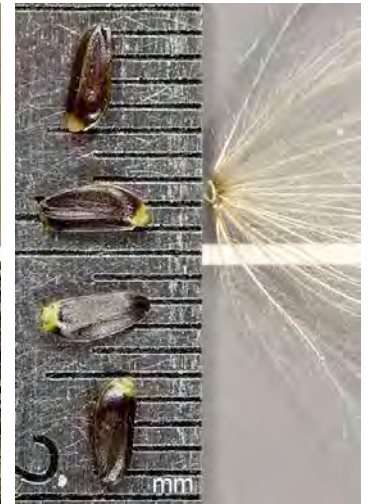


Photo: 10-9-19

Fluffy. A tall native thistle. Mature leaves are green above & below. Vibrant purple-pink flowers, loves moist prairies & fens. Lacks the painful spikes on the phyllaries (the bracts forming the cup under the fluff). Biennial, collect 10%. Native thistles are loved by insects & birds, without the obnoxious behavior of their invasive siblings.

Mild Water Pepper

*Persicaria
hydropiperoides*

POLYGONACEAE

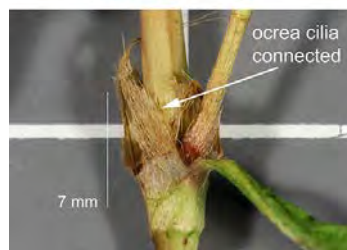
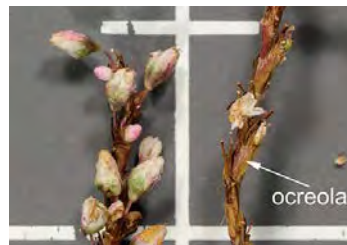


Photo: 10-11-18

Shattering. Mama's Boy. The water pepper/smart weed group is challenging to ID. Look at the broad sheaths wrapping the stem joints (ocrea) and similar sheaths in the floral spikes (ocreaola). Narrow down the ID with flower color & arrangement, cilia (fringes on edges), and hairs.

Water Pepper

Persicaria punctata

POLYGONACEAE



Photo: 10-21-18

Shattering. Mama's Boy. The green calyx surrounding the seeds (and the base of the flower) is dotted ("punctate"). Common in wetlands. Collect *Persicaria* when the seeds are dark. Removing the green calyx is not necessary for sowing, but it's a good check for ripeness.

Fall Wetland Forbs

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Common Boneset

Eupatorium perfoliatum

ASTERACEAE



Photo: 10-11-18

Fluffy. The perfoliate leaves encasing the stem were historically taken as a divine sign that this plant could set bones. White flowers ripen to dark seeds with white pappus (fluff); sometimes brown dried florets remain attached. Collect when poofy. Great for pollinators.

Smooth Prairie Lettuce

Prenanthes racemosa

ASTERACEAE



Photo: 10-13-18

Fluffy. One of two *Prenanthes* found in prairies, this species has smooth lower stems. Blooms are pinkish (*P. aspera* has creamy flowers). Both species have honey colored pappus (seed fluff). This species prefers moist prairies & fens. Collect 10% (biennial/short-lived perennial).

Purple Loosestrife

Lythrum salicaria

LYTHRACEAE



Photo: 10-18-19

Shakers. This pretty devil is invasive in wetlands across most of the county. A single mature plant annually produces 1-2 million seeds. The good winged loosestrife (*L. alatum*) is much smaller, with fewer blossoms and fewer tubes of seed. *L. salicaria* has large leaves in opposite pairs or whorls of 3. Leaves have unique veins: parallel to the edge and feather veins inside. Illegal to sell in IL, yet gardeners still plant it.

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Northern Bugleweed

Lycopus uniflorus

LAMIACEAE

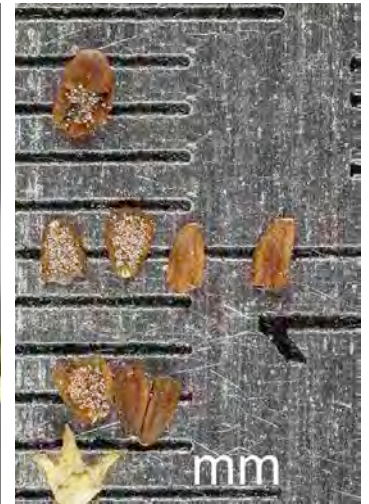


Photo: 10-21-17

Shattering. The bugleweed/horehound species can be tricky to ID. They resemble wild mint (*Mentha*) but without the minty odor. In seed: look at the length of the spiky calyx lobes relative to seed; this species has lobes shorter than the seed. Four nutlets sit together in each cup, the combined surface of the 4 is warty but the outer ridge is slightly higher. Collect when brown. Seeds often have shiny oil droplets.

Stalked
Water Horehound

Lycopus rubellus

LAMIACEAE



Photo: 10-16-17

Shattering. This rare species has calyx lobes longer than the seed, and the surface of the 4 combined seeds is wavy and uneven. Both *L. rubellus* & *L. uniflorus* can also spread by stolons, which may be visible aboveground. The other species have underground rhizomes.

Common
Water Horehound

Lycopus americanus

LAMIACEAE



Photo: 11-2-17

Shattering. This common species has skinnier leaves and the lobes are deeper fingers (more than just teeth). The 4 seeds create a flat surface with a ridged outer margin, and calyx lobes are longer than the seeds. Water horehounds were used for coughs, much like the similar looking Common Horehound (from Europe, Asia, & Africa). Old fashioned horehound candies made from the non-native species are still sold today.

Fall Wetland Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Wild Mint

Mentha canadensis

LAMIACEAE



Photo: 10-21-18

Shakers. Similar to *Lycopus*, but leaves have a lovely minty smell. White flowers are clustered around the leaf axils, calyx (the cup) turns from green to brown, and seeds easily fall out when ripe. A refreshing wetland native.

Marsh

St. John's Wort

Triadenum fraseri

HYPERICACEAE

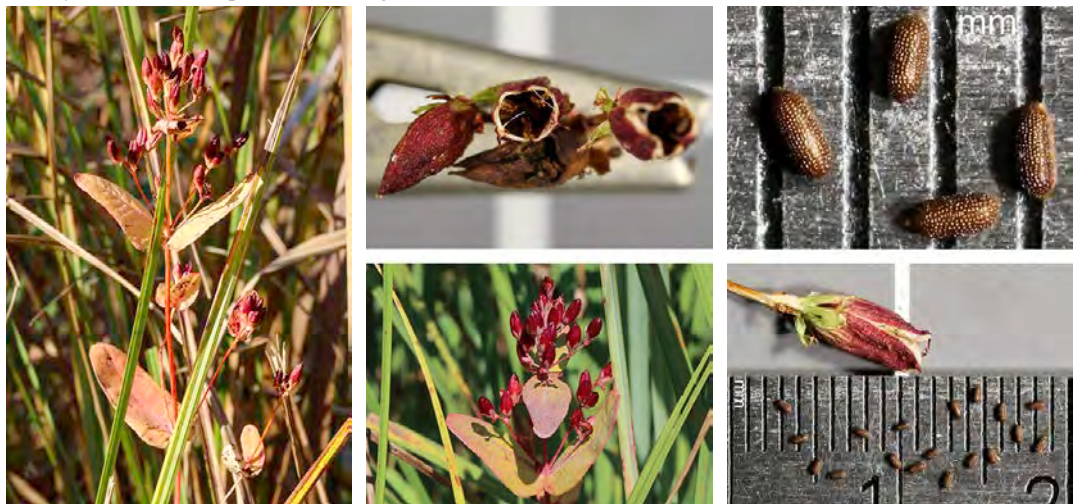


Photo: 10-21-17

Beaks. Mama's Boy. The pink-flowered St. John's worts have been split from the yellow-flowering *Hypericum*. Both *Triadenum* species can be found in Lake Co. *T. fraseri* has shorter sepals (less than 5 mm long). *T. virginicum* has sepals about half the length of the capsule.

Great
St. John's Wort

Hypericum ascyron

HYPERICACEAE



Photo: 10-24-19

Beaks. Mama's Boy. Great big flowers (3+ cm across) and great big capsules (1+ cm long)! This plant is herbaceous, not woody. Grows in wet prairies, sedge meadows, and fens. Collect open capsules.

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Blue Vervain

Verbena hastata

VERBENACEAE



Photo: 10-21-18

Shakers. Mama's Boy. The purple-blue flowers are fantastic for pollinators. The closely spaced, slender brown spikes are hard to mistake, often a dozen per stalk. Calyces (cups) are tightly packed & overlap. Prefers wet prairies & sedge meadows.

Wild Golden Glow
aka
Green Coneflower

Rudbeckia laciniata

ASTERACEAE

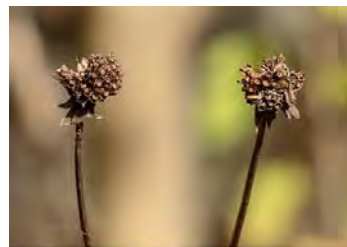


Photo: 10-26-17

Coneheads. Mama's Boy. This *Rudbeckia* is drastically different from its Susan sisters – much taller (up to 3m) with a green eye instead of black. Leaves have 3-7 deeply cut lobes; *laciniata* means cut, or lacerated. Snip brown heads.

Turtlehead

Chelone glabra

SCROPHULARIACEAE

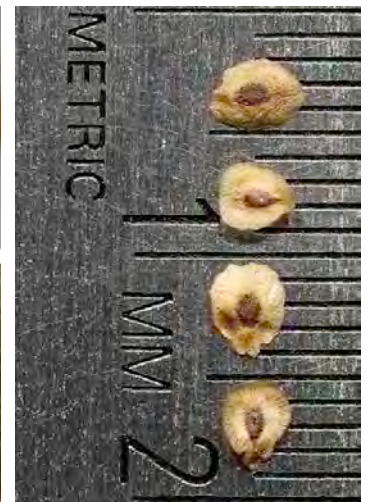


Photo: 10-29-17

Beaks. Reportedly named for the flower's resemblance to a turtle's head, but the seed capsule is arguably a better inspiration for the name. Capsules are initially green with a distinct closed mouth (seam), which splits and opens up. Seeds are small papery "fried eggs" and shake out on windy days. Important host plant for Baltimore Checkerspot butterflies.

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Prairie Gay Feather
aka
Prairie Blazing Star

Liatris pycnostachya

ASTERACEAE

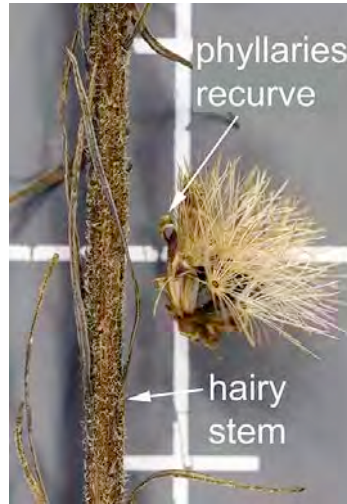


Photo: 10-29-19

Fluffy. Easily confused with *L. spicata*: both species pack their flowers densely on a spike, both can grow in mesic & wet prairies. *L. pycnostachya* has hairy stems. Phyllaries (bracts behind the flower) are bent backwards during flowering; hard to judge at harvest time. Flora labels this species FACW.

Marsh Gay Feather
aka
Marsh Blazing Star

Liatris spicata

ASTERACEAE

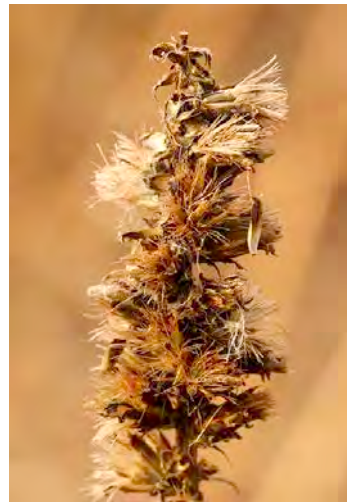


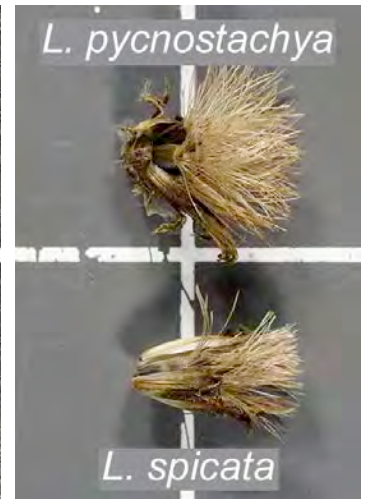
Photo: 11-4-19

Fluffy. Primarily in wetlands, but can also be found in mesic prairies and even dry-mesic prairies. Flora reclassified this species as FAC. Stems are hairless or a few sparse hairs. Check the phyllaries; during flowering time, these green floral bracts are pressed flat to the head.

Liatris pycnostachya

vs.

Liatris spicata



Stem hairiness can be the most useful indicator at harvest time. Bracts are tougher to view at harvest time: they relax, the open poof obscures them, and the head readily crumbles to release the seed. *L. pycnostachya* bracts taper; *L. spicata* abruptly contracts to a point.

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Sneezeweed

Helenium autumnale

ASTERACEAE



Photo: 11-2-17

Crumbly Coneheads. Ripe chocolate brown heads easily crumble by hand. Stems are winged. Common to see yellow (unripe) and ripe heads on the same plant. *H. flexuosum* (non-native) has brown “eyes.” Rare var. *canaliculatum* has extra-long leaves without any serrations. The straight species has serrations; leaves are less than 7 times as long as wide. This plant was used as snuff, to sneeze out evil spirits.

Wingstem

Verbesina alternifolia

ASTERACEAE

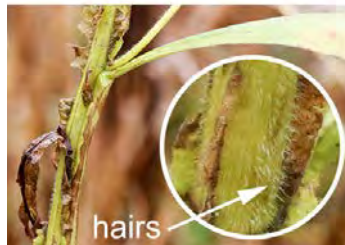
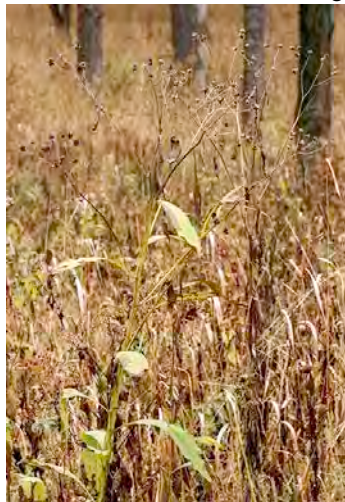


Photo: 11-2-17

Crumbly Coneheads. This tall wildflower can be very aggressive – use only in areas where other natives are equally aggressive! Stems have wings and are fuzzy. Seeds look like little butterflies. Great for pollinators, reportedly attractive to the rusty patched bumblebee (but so are other native flowers).

Lake County Seed Collection Guide

1

Fall Prairie Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

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Images ©2019 DJShields. Produced by: Dale Shields & Kelly Schultz ©Lake County Forest Preserve District [kschultz@lcpfd.org]

The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1” on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind.** For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed.**

Seed Groups

Time sensitive groups – seeds disperse in a few days or weeks due to wildlife, sensitivity to wind, etc.

Elaiosomes are “ant candy” attached to the seeds. Ants are strong and motivated, able to quickly carry the candy back to their home and tossing the heavy “candy wrapper” (seeds) into their compost piles. Check these species frequently; ants will rapidly collect all of the seeds. These seeds have higher germination when sown within a day or two.



Ballistic capsules catapult their babies away, up to 30 feet! Search YouTube for “exploding seeds” to see these in action. To harvest: learn the ripening sequence & harvest just before explosion; store in a *sealed* paper bag or mesh bag for a day or two. Another option is to cover the seed heads with mesh hoods (*after flowers wilt*) to contain the seeds. Snip the entire stem after the seeds have popped, and carefully open the hoods indoors.



Fluffy seeds are quite common, allowing for wind to efficiently move seeds over long distances. Collect when fluffy. It is ok to collect these seeds *slightly* early, by collecting entire stems with seeds that are either fully poofed or have dropped their ray florets (the colorful “petals”); snip the stems and let them poof in a paper or mesh bag. Spring fluffy seeds are typically more sensitive to strong weather.



Milkweed seeds are ripe when pods are split open & seeds are brown. Ignore the pod color. Pro tip: rubberband the unripe pods, to prevent seeds from flying away.



Berries turn a vibrant color when ripe, as an advertisement to the wildlife to EAT ME and disperse the seed. Collection window is small for some of these seeds. These species need to be sown fresh in damp soil OR cleaned & stored in plastic in the refrigerator (which maintains a higher level of humidity). The natural process of a seed stored in a juicy berry, followed by chewing, digestion, and dispersal in a pile of “fertilizer” means these seeds are not used to completely drying out.



Lake County Seed Collection Guide

Fall Prairie Forbs

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Mama's Boys will remain on the stem for a while. Ideal for forecasting future workdays.

Shakers drop seeds very close to the mother plant, when shaken loose by the wind or a passing critter. Usually a Mama's Boy, unless strong weather occurs.

Beaks are a subset of the shaker group, with seed capsules that split open like a beak when the seeds are ripe. Collect when beaks are open.

Coneheads are flowers with a cone-shaped center. Imagine these flowers without their colorful parts, and you know exactly what they look like when seeds are ripe. Seeds are inside the hard cone.

Crumbly Coneheads are cone-shaped or thimble-shaped. Softer than standard coneheads, they crumble when ripe and are easily stripped by hand.

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama's Boys.

Hitchhikers are easy to tell when ripe – they hitch a ride on your pants! Color can be an indicator, but not always.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

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Pale Purple
Coneflower

Echinacea pallida

ASTERACEAE



Photo: 8-8-18

Coneheads. Mama's Boy. Colorful "petals" (ray florets) and the orange of the disc florets (cone) disappear, leaving behind a dark spikey cone. Snip dark heads, ideally when a few seeds have fallen out of the conehead. *E. pallida* seeds look like candy corn - gray with a brown stripe at the kernel end; *E. purpurea* is solid gray. The sturdy spikey heads are best processed by machine, or wearing thick gloves, or pliers.

Purple Coneflower

Echinacea purpurea

ASTERACEAE



Photo: 10-12-17

Coneheads. Mama's Boy. The colorful "petals" (ray florets) of this composite flower have a deeper fuchsia hue than the aptly named "pale" sister. *E. purpurea* is overabundant in restorations due to its appeal to gardeners & pollinators alike; the less showy sister was historically the more common. Broader leaves, slightly later & longer blooming time, and stripe-less seeds distinguish this species from *E. pallida*.

Deptford Pink

Dianthus armeria

CARYOPHYLLACEAE



Photo: 9-2-19

Beaks. This bright pink wildflower hails from Europe, notably from the Deptford district in London. Likes disturbed areas. The tiny pops of color are attractive, but don't spread this non-native.

Fall Prairie Forbs

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White Prairie Clover

Dalea candida

FABACEAE



Photo: 8-31-17

Crumbly Coneheads. Mama's Boy. The prairie clovers bloom with tuts of flowers, from the bottom to the top of the spike. These legume seeds are ripe when the thimble starts to crumble. Collect when easy to strip by hand.

Purple Prairie Clover

Dalea purpurea

FABACEAE



Photo: 8-31-17

Crumbly Coneheads. After the clovers stop blooming, it can be tough to tell the sisters apart. Purple (*D. purpurea*) has skinnier leaflets – slender as pine needles; leaflets of white (*D. candida*) are 2-3 times wider. *D. candida* seeds are enclosed in a dry papery hull, black & tan colored; *D. purpurea* has fuzzy hulls, gray-peachy colored. Seeds do not need to be de-hulled, especially if sown in fall.

Wild Bergamot

Monarda fistulosa

LAMIACEAE

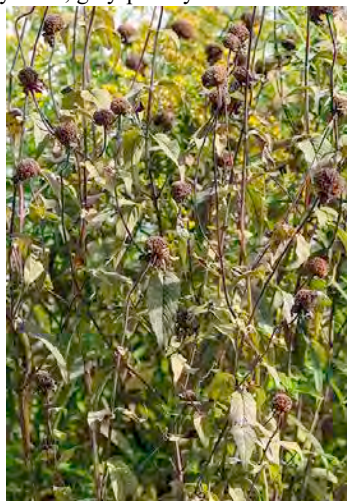


Photo: 9-7-17

Shakers. Mama's Boy. This common wildflower is found in prairies & savannas. Similar odor to the citrus fruit of the same name, which is popular as an essential oil & in Earl Gray tea. Lavender florets drop off, leaving the tube-shaped calyx behind. Tip the head into your hand, seeds fall out of the tubes when ripe. Popular with many pollinators, including the rusty patched bumblebee.

Fall Prairie Forbs

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Yellow Coneflower
aka
Gray-headed
Coneflower

Ratibida pinnata

ASTERACEAE

Photo: 9-7-17



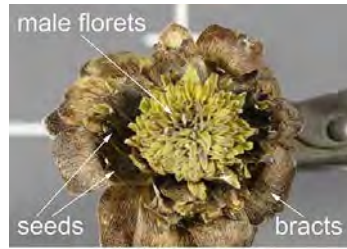
Crumbly Coneheads. Mama's Boy. A great seed for group workdays! Ripe seeds easily crumble & strip by hand. The seeds are graphite-gray, tucked between lighter gray chaff. Seeds have a refreshing odor, usually described as citrus-like.

Rosinweed

Silphium integrifolium

ASTERACEAE

Photo: 9-27-17



Coneheads. *Silphiums* have composite flowers with fertile ray florets & sterile discs (the sunflower "eye"). This is key for locating the seeds: the flat seeds are sandwiched between sandpapery outer bracts and the inner skinny male florets. Collect when seeds are brown/beige; green seeds will not ripen any further (see examples of ripe and unripe seed in var. *neglectum*, below).

Bald Rosinweed

Silphium integrifolium
var. *neglectum*

ASTERACEAE

Photo: 9-7-17



Coneheads. There are now 3 varieties of rosinweed recognized in our area. Look at the bracts (greenery behind the flower). In the typical species, the bracts (aka phyllaries) are rough with fine hairs, but hairs lack glands. (Glandular hairs look like lollipops). The varieties have glandular hairs on the bracts; var. *deamii* also has soft hairs all over leaf undersides; var. *neglectum* has hairless leaves or hairy veins only.

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Prairie Dock

Silphium terebinthinaceum

ASTERACEAE



Photo: 9-28-17

Coneheads. This *Silphium* has the ginormous elephant ear leaves that are fun to stomp on in fall. Seed heads are smaller than its sisters. Avoid nodding heads; seeds have aborted due to weevil damage. Can hybridize with compass plant (“compass dock”).

Compass Plant

Silphium laciniatum

ASTERACEAE

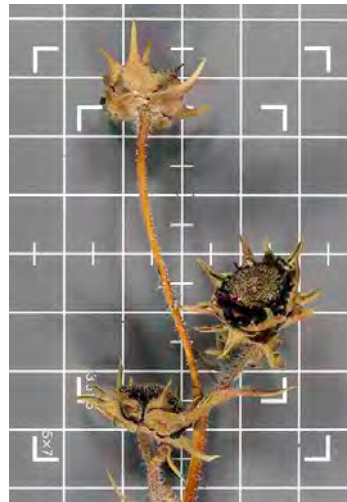


Photo: 10-4-17

Coneheads. Collect seeds when they are shades of brown or beige; the unusual burgundy color in this seed photo is likely a sign of abnormally cold weather. Like all sunflower-relations, birds love to eat these seeds; don't delay too long in collecting.

Canada Hawkweed

Hieracium umbellatum

ASTERACEAE

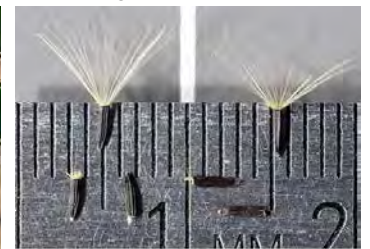


Photo: 9-9-18

Fluffy. Hawkweeds, like all dandelion-imitators, are often overlooked. This conservative species (C = 8) has more leaves on the stem than any other in the area, with over 24 leaves per stem. Likes wet-mesic to dry-mesic prairies and dry-mesic to dry savannas.

Fall Prairie Forbs

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Common
Partridge Pea

*Chamaecrista
fasciculata*

CAESALPINIACEAE

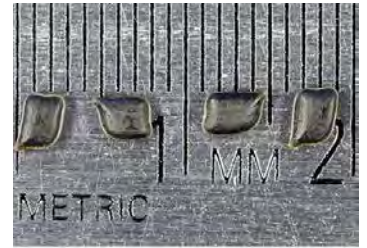


Photo: 9-10-17

Ballistic. This annual wildflower is very successful in restorations. The bright yellow flowers look similar to *Senna* and are popular with pollinators. Skinny pods split & spiral open to catapult the seeds away. Collect when pods are brown, store in a closed paper or mesh bag.

Showy Ticktrefoil

*Desmodium
canadense*

FABACEAE

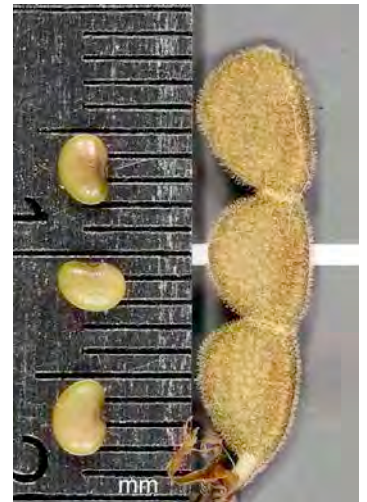


Photo: 9-11-17

Hitchhikers. Mama's Boy. Common in prairie restorations. Leaves are longer than they are wide, the seed "ticks" will be in chains of 3 or more. Leaf underside is hairy across the surface and especially on the veins. The loment (complete pod) is made up of individual "articles" ("ticks") that are rounded rather than triangular. De-hulling is not necessary, especially with fall sowing. Collect when they hitchhike.

Common Gaura

Gaura longiflora

ONAGRACEAE



Photo: 9-11-17

Shattering. This annual/biennial species does well in prairie restorations & disturbed old field soils. The white & pink flowers give way to little football shaped seeds. Examine the stem hairs: this species has stem hairs that are curly, appressed (flattened), or strongly ascending. *G. biennis* has straight spreading hairs (perpendicular to the stem) and Flora suggests this is native a little to the south. Collect 10%

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Common Milkweed

Asclepias syriaca

ASCLEPIADACEAE



Photo: 10-9-17

Milkweed. Milkweeds are especially popular due to their importance to monarchs. *Asclepias* are ripe when the pod splits; ignore the pod color. This is by far the most common species and can be identified by the large pods (follicles) covered with soft hooks. Leaves are fuzzy underneath. *A. sullivantii* has waxy pods (often ridges & points but no hooks); leaves are waxy-hairless, pink leaf vein is common.

Prairie Milkweed

Asclepias sullivantii

ASCLEPIADACEAE

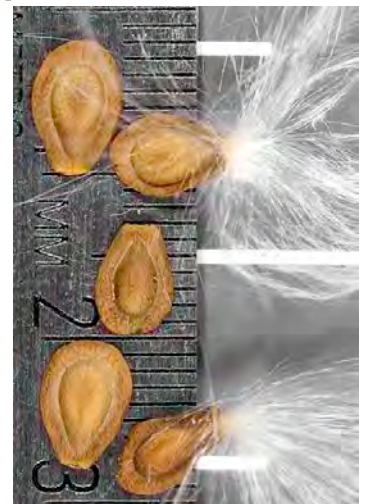


Photo: 9-12-17

Milkweed. The biggest challenge is often the processing. A few options: 1. Collect when pods first split but have not puffed; seeds are easy to remove by hand at this early stage. 2. DIY seed separator from <https://MonarchWatch.org> 3. A gentle shop vac (low horsepower for smaller seeded species), adding a vortex dust separator helps 4. Sow seed with poof. 5. Do not use fire to clean the seed, it kills it.

Short Green
Milkweed

Asclepias viridiflora

ASCLEPIADACEAE



Photo: 9-17-19

Milkweed. This rare milkweed is shorter than most species, often 1.5 feet tall, and leaves are skinny & elongated. Pods (follicles) are located in the leaf axils rather than the top of the plant. Coma (milkweed seed hairs) are sordid (dirty off-white); most species are bright white.

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Whorled Milkweed

Asclepias verticillata

ASCLEPIADACEAE



Photo: 9-28-17

Milkweed. This milkweed loves old fields, a survivor species that is great for early restorations. Skinniest pods of the native species. Skinny leaves whorl around the stem, reminiscent of pine needles, although may be absent by harvest time. Seeds are smaller than other milkweeds.

Canadian Milkvetch

Astragalus canadensis

FABACEAE

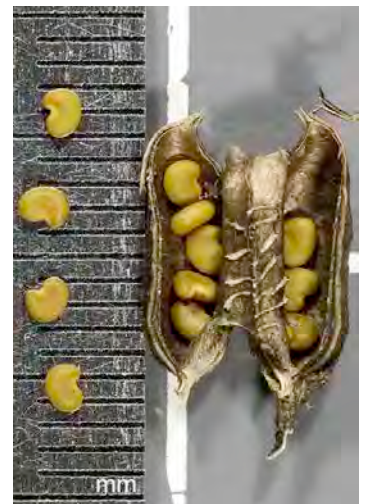


Photo: 9-19-17

Beaks. This species was historically uncommon, but is the most easily *Astragalus* found from native nurseries and has been successfully seeded into restorations. Plants have few hairs, and they are connected in the middle rather than attached at the base of the hair. Snip clusters of black pods; the apex of the pod should be open. The creamy-white flowers are attractive to bees. Deer & weevils can be a problem.

Nodding Wild Onion

Allium cernuum

ALLIACEAE



Photo: 9-20-17

Beaks. Globes of *Allium* flowers are familiar to gardeners; this native one has little flowers that can be pale purple to white. The main stem has a bend right behind the head, inspiring the common name. Look for clusters to split open in 3s, revealing the black seeds inside.

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Pasture Thistle

Cirsium discolor

ASTERACEAE



Photo: 9-23-19

Fluffy. Native thistles are just as attractive to pollinators and birds as the non-native species, but these are far less aggressive! *Discolor* refers to the 2-tone leaves (green above, white underneath). Lobed leaves. Tall like bull thistle, but without big spines on stem. Pale purple flowers. This species likes medic to dry-mesic prairies, savannas, and old fields. Collect heads when fluffy. Biennial, collect 10%

Pale-spiked Lobelia

Lobelia spicata

LOBELIACEAE

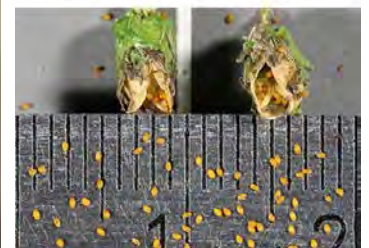
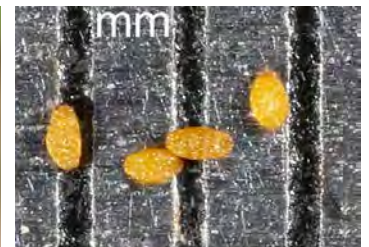


Photo: 9-28-18

Beaks. This diminutive plant is a sister to blue lobelia, with miniature pale blue flowers. The beaks of *Lobelias* often open up to look like pig noses, with 2 channels within the beak. Seeds are tiny – 1 ounce contains 900,000 seeds! Snip stalks when beaks open.

Foxglove Beard
Tongue

Penstemon digitalis

SCROPHULARIACEAE



Photo: 9-28-18

Beaks. This species seeds successfully into prairie & savanna restorations. Look for rusty-brown pods that have split open. The pods are memorably stinky (don't store in a closed container) and are unusually hard; best processed with a machine, strong rolling pins, or stomping.

Fall Prairie Forbs

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Prairie Skullcap

Scutellaria leonardii

LAMIACEAE



Photo: 9-28-18

Shakers. Skullcaps hold their seeds on a little “scoop shovel” with a cap on top. The cap falls off, and the seed will fall to the ground with rain or a passing animal. Collect when caps are beige or loose. This diminutive species lives in prairies & open savannas. Formerly a variety of *S. parvula*. This species has revolute leaf margins (edges are rolled under) & glandless hairs; *S. parvula* has flat leaves and glandular hairs.

Prairie Sunflower

Helianthus pauciflorus

ASTERACEAE



Photo: 10-4-18

Coneheads. Slender seeds are contained within the conehead; snip dark heads. Rough leaves & reddish stems. Leaves are opposite and nearly stalkless, mostly at the bottom half of the stem. Phyllaries (greenery behind the flower) have tiny fringes but are otherwise hairless.

False Sunflower

Heliopsis helianthoides

ASTERACEAE

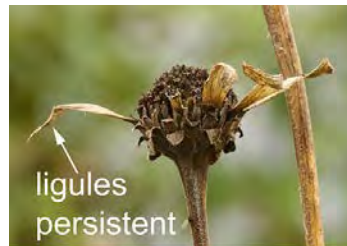


Photo: 10-13-17

Coneheads. Slender seeds are contained within the conehead; snip dark heads. “True” sunflowers have fertile disc florets (the sunflower “eye”). This species is named “False” because it has both fertile ray & disc florets. The ligules, or ray florets, hang on after the color fades.

Fall Prairie Forbs

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Round-headed
Bush Clover

Lespedeza capitata

FABACEAE



Photo: 10-4-17

Shattering. Mama's Boy. This legume is seeded extensively in prairie restorations. Showiest in fall, with chocolate brown heads contrasting against its green leaves. Snip dark heads. Almond-shaped hulls contain individual beans; de-hulling is not necessary with fall sowing.

Prairie Obedient Plant

*Physostegia
praemorsa*

LAMIACEAE



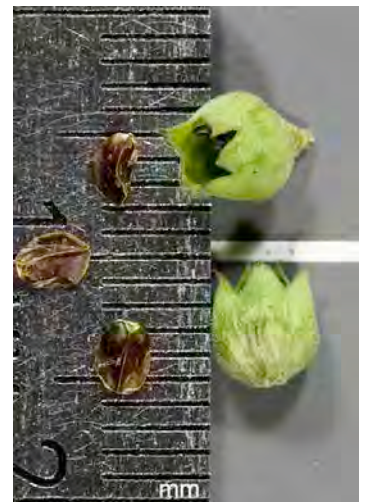
Photos: 9-15-19, 10-6-19

Shakers. Mama's Boy. Obedient plant species are fun to play with: the flowers can be nudged around the stem and they obediently stay put. *P. praemorsa* leaves are less than 1.5 cm wide. Flowers are more than 2.4 cm long. Often has multiple empty bracts that did not flower.

Obedient Plant

*Physostegia
virginiana*

LAMIACEAE



Photos: 9-15-19, 10-6-19

Shakers. Mama's Boy. *Physostegia* bloom from bottom to top; seeds ripen in the same sequence. Up to 4 seeds per cup (the calyx). Collect when seeds are fully brown; cup color is unimportant. Common to have mix of plump viable seed and wrinkly empty seed. *P. virginiana* leaves are less than 2.3 cm wide. Flowers less than 2.4 cm long. Most bracts have flowers (less than 3 empty bracts per stalk).

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Tall Boneset

*Eupatorium
altissimum*

ASTERACEAE

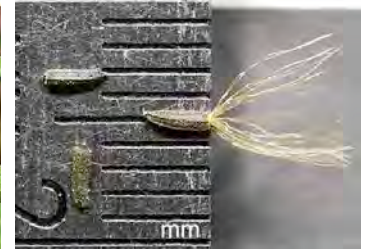


Photo: 10-8-18

Fluffy. Collect when poofy, easy to pluck off of the plant. Stems are hairy throughout. Leaves are stalkless or slight stalks attaching to the stem, but never perfoliate (growing completely around the stem). Leaf is usually serrated on the pointed half, but not the back half of the leaf.

Late Boneset

*Eupatorium
serotinum*

ASTERACEAE



Photo: 10-17-18

Fluffy. The only *Eupatorium* with petioles (leaf stems) longer than 5 mm. Nearly hairless lower stem. Dense coating of white hairs on the phyllaries (bracts behind the flower), and resinous glands (dots) on the leaf underside help distinguish this from the other *Eupatorium* species.

False Boneset

*Brickellia
eupatorioides
var. corymbulosa*

ASTERACEAE



Photo: 10-13-18

Fluffy. This species is quickly identified as False because the leaves are alternate, whereas true *Eupatorium* have opposite or whorled leaves. Flowers are similar to the other bonesets, except this species has creamy flowers instead of white. Phyllaries (greenery behind the flower) are strongly striped. Pappus (seed poof) is feathery; most species have straight-haired pappus. Pappus is bright white.

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Velvetleaf

Abutilon theophrasti

MALVACEAE



Photo: 10-12-19

Shattering. This is a common agriculture weed and a sign that your soils were likely farmed. Heart-shaped leaves are velvety soft. This flower gives way to more competitive species; it's not a top priority for eradication.

Common Evening
Primrose

Oenothera biennis

ONAGRACEAE



Photo: 10-13-19

Beaks. Mama's Boy. This sunny yellow primrose missed the memo about blooming in the evening. Loves disturbed soils; this is an early pioneering native species. Self-sows easily, rarely need to collect this one.

Smooth Indian Hemp

Apocynum sibiricum

APOCYNACEAE



Photo: 10-15-18

Milkweed. Not a milkweed but similar seed dispersal: pods split open and seeds fly away on their attached fluff. A locally aggressive low-quality native; this is rarely collected. Leaves are sessile (stalkless) or close to it; most *Apocynum* species have petioles of 3mm or longer. Leaves are hairless on both sides; var. *farwellii* is hairy on the underside of the leaf. Prone to hybridizing with other *Apocynum* species.

Fall Prairie Forbs

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Yellowish Gentian
aka
Cream Gentian

Gentiana alba

GENTIANACEAE



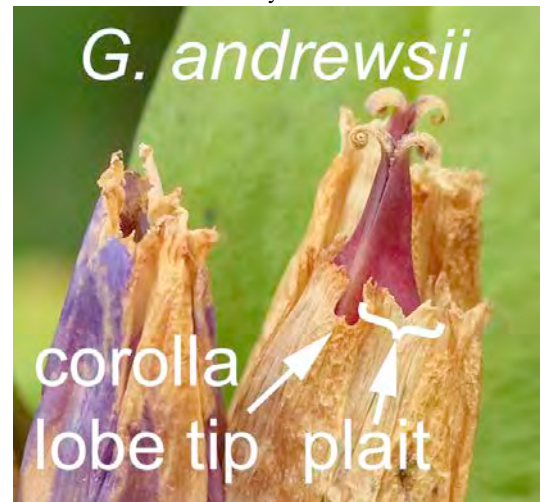
Photo: 10-24-19

Beaks. The closed cream flower fades to paper bag brown and a pair of plump duck bills emerges. Collect when the beak starts to open. Tiny papery seeds look like a beige fried egg. Hard to ID from *G. andrewsii*; if both species are present, easiest to flag while blooming. Leaf margins can be keyed with a 10x lens: smooth for *G. alba* and fringed hairs for *G. andrewsii*. Consult Flora for hybrids and varieties.

Gentiana alba

vs.

Gentiana andrewsii



The petals of these species are connected by a membrane called a “plait” to form a bottle-shaped flower. (Imagine webbed toes. Plaits are like the webbing, fused between the lobes.) *G. alba* petals (corolla lobes) extend beyond the plaits, giving a toothed edge. *G. andrewsii* has a ragged serration, the plaits extend beyond the top of the rounded lobe. These often lose the blue-purple color by the time the seed is ripe.

Stiff Gentian

Gentianella
quinquefolia
subsp. *occidentalis*

GENTIANACEAE



Photo: 11-8-19

Beaks. This petite annual/biennial has sweet little purple flowers and forms duck bills of seed, similar its *Gentiana* & *Gentianopsis* relations. Like many short-lived species, it packs a lot of blooms into its quick life. Collect 10%. Seeds are tiny beads, look for open beaks.

Fall Prairie Forbs

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Tall Coreopsis

Coreopsis tripteris

ASTERACEAE

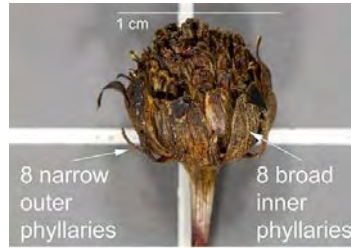


Photo: 10-16-17

Coneheads. Mama's Boy. One of 3 *Coreopsis* native to the area, and the other 2 are less than 2' tall. *Tripteris* (3-winged) refers to the leaflets of 3. Look for dark heads. They will be easy to crumble up by hand when ripe.

Cylindrical Blazing Star

Liatris cylindracea

ASTERACEAE



Photo: 10-24-17

Fluffy. The shortest of our native *Liatris* and found in gravelly & sandy soils. Flower heads usually on short pedicels (stalks) but can be sessile (stalkless). Most *Liatris* pappus (seed fluff) is unbranched or barbed hairs; this species has a pappus that looks like a feather duster.

Rough Blazing Star

Liatris aspera

ASTERACEAE

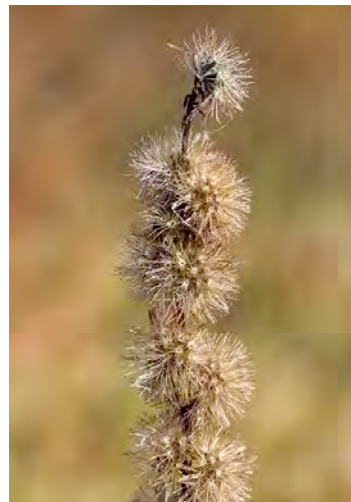


Photo: 10-25-17

Fluffy. This dry-mesic species can be found in the same location as *L. cylindracea*, but this species is usually taller with sessile (stalkless) flowerheads. The green floral bracts at the base of the flowerhead are rounded (hard to see once fully poofed. Wildflower guide books illustrate this feature). Straight soft pappus on seed. Tiny hairs on leaves; a new variety (var. *intermedia*) has hairless leaves.

Fall Prairie Forbs

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Narrow-leaved
Black-eyed Susan

Rudbeckia hirta
var. *pulcherrima*

ASTERACEAE

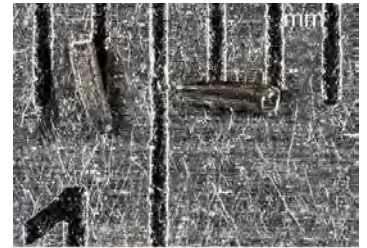


Photo: 10-25-17

Coneheads. Mama's Boy. This beauty blooms quickly after seeding, yet gives way to conservative species, making it a restoration favorite. *Hirta* ("hairy") describes the leaves, stems, and even the greenery under the flower. Seeds look like graphite from a mechanical pencil. This variety has stem leaves less than 3 cm wide; the straight species has some wider leaves and is present in fewer counties, according to Flora.

Sweet Black-eyed
Susan

Rudbeckia
subtomentosa

ASTERACEAE



Photo: 10-25-17

Coneheads. Mama's Boy. Similar seed & head to regular black-eyed Susan, but this is a taller plant & leaves are primarily 3-lobed. Sweet odor (similar to sweet grass & the obnoxious sweet clover). A showy flower suitable for savannas & prairies. Snip dark heads.

The Susans

Rudbeckia spp.

ASTERACEAE

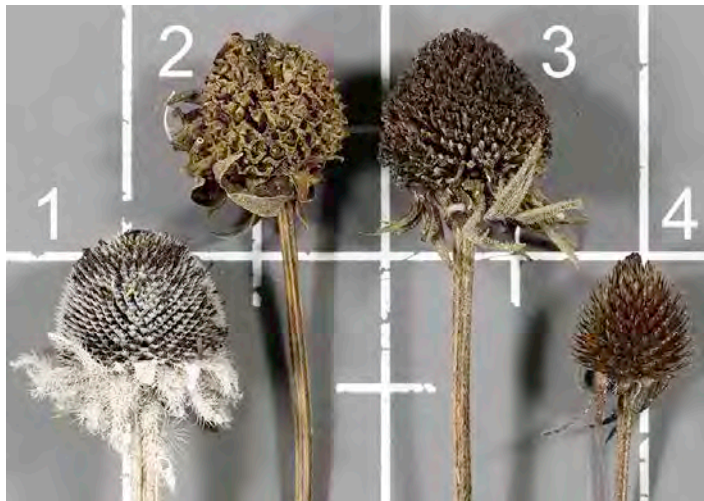


Photo: 11-16-19

Here are four common "Susan" seed heads and seeds side-by-side. They are: 1) Black-eyed Susan (*R. hirta*), 2) Wild Golden Glow (*R. laciniata*), 3) Sweet Black-eyed Susan (*R. subtomentosa*), and 4) Brown-eyed Susan (*R. triloba*). The seed shots show two seeds and two bracts from each species.

Fall Prairie Forbs

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Beach Wormwood

Artemisia campestris
subsp. *caudata*

ASTERACEAE



Photo: 10-24-19

Shattering. This short-lived species loves sandy soils. Less hairy than many of its sisters, and leaves are slender and divided. Look for downward facing heads; seeds are enveloped by the bracts. May need to process against a screen to release the seeds from the bracts. Plump seeds are preferred over wrinkly ones.



Prairie Petunia

Ruellia humilis

ACANTHACEAE

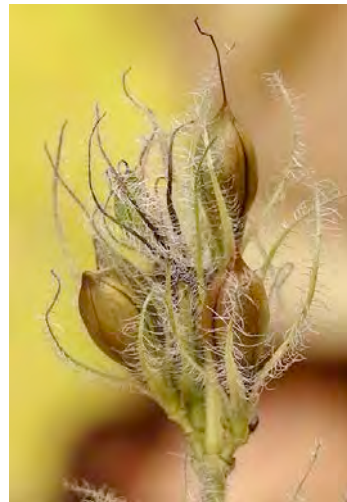


Photo: 11-8-18

Ballistic. This sweet perennial has lavender flowers at the top of the stem and also in the leaf axils. Individual flowers open intermittently on the stalk; pods form in the same sequence. Pods turn from green to brown, then snap open to catapult seed away. Collect brown unopened pods (green pods will not ripen once picked). Seeds are flat silver dollars, in shades of brown and gray.

Lake County Seed Collection Guide

Fall Grasses and Kin

Kelly Schultz¹, Dale Shields²

version 2 7/2020

¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

Images ©2019 DJShields. Produced by: Dale Shields & Kelly Schultz ©Lake County Forest Preserve District [kschultz@lcpfd.org]

The pictures in this guide were assembled to help restoration volunteers identify ripe seeds of native species. The squares are 1” on a side in the indoor shots with white squares on the gray background. The seed shots are on a metric scale (mm divisions). Names used are those of Flora of the Chicago Region by Gerould Wilhelm and Laura Rericha. Our heartfelt thanks go to Laurie Ryan of the McHenry County Conservation District for her review.

Harvest notes

Successful collection of viable seed requires an understanding of when to collect, how to collect, how to store, how to process, and when to sow. Determine these criteria and have a plan before harvesting seeds, especially of uncommon species. The species are listed in order of the photo dates, so will give an approximate time for collection, but collection dates vary according to local weather effects on blooming and pollinators; proximity to Lake Michigan; slopes; sun vs shade, etc. Many seed harvest charts are available with collection dates, but it is best to scout each site rather than relying on historic dates.

Seeds collected before mid-June should be sown right away. They are intolerant of dry storage and most of them require both warm & cold treatments to stimulate germination. Late June seeds are more tolerant of dry storage; sow these seeds soon, but you can let them dry for a few weeks. Seeds ripening July and later can be held for fall/winter sowing.

Collect ethically & sustainably. Everything is protected in forest preserves, including seeds. Collection is only allowed by staff and volunteers in our restoration programs. If you are collecting within those programs, it is important to avoid overharvesting wild populations. For perennials: **leave 50% behind.** For annuals, biennials, rare, threatened, or endangered species: **collect only 10% of the seed.**

Shattering seeds can be tough to visually judge for ripeness. Use a *gentle* touch test to see if the seeds easily loosen. Spring seeds remain green (perhaps for camouflage) and swell slightly. Fall seeds typically turn brown or beige when ripe. Often found in colonies, these seeds do not travel far on their own. Some of these species drop quickly & are not Mama’s Boys.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.



Fall Grasses and Kin

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Grasses and kin include plants in the Grass Family (Poaceae), Rush Family (Juncaceae), and Sedge Family (Cyperaceae). All of these species have long narrow, parallel-veined leaves and are wind-pollinated. These species are typically identified by their seeds, so any field guide of these species is essentially a seed guide. Check for ripeness with the “touch test” – if they are loose, then they are ripe. Strip by hand or snip stalks.

Cyperaceae (Sedge Family). *Sedges have edges*: stems are typically triangular, and the edges can be felt by rolling in your fingers. Leaves are 3-ranked: each leaf exits from a different side of the triangle, rotating around the stem. Some species have round solid stems, but are not jointed like grasses. Single seed in each flowering scale. The sheath is closed on the side opposite the leaf blade. The biggest group is the genus *Carex*, which has a single seed in a papery pouch called a perigynium. Other members of this family have naked seeds and go by common names such as bulrush, woolgrass, spike rush, nut rush, nut sedge, etc. Sedges are very tough to ID. The good news: very few sedges are bad, you can always collect a “woodland sedge mix.” Consult a sedge guide for ID; this guide is intended to highlight a few quick notes.



Juncaceae (Rush Family). *Rushes are round*: stems are typically round & solid. Some have flattened stems, but they are not jointed. Typically unbranched, simple stems. Three or more seeds in a three-sided capsule. Flower parts come in threes and sixes, most flowers are perfect, having both stamens and pistils. Leaves are thread-like or flat & linear. Many of our common species are relatively short (about knee-high), and appear delicately wiry. Common species include path rush, Dudley’s rush, and soft rush.



Poaceae (Grass Family). *Grasses are straws, with holes to the ground*: stems are typically round & hollow, like a reed. Some species have flattened stems. Grasses have jointed stems; the joints are called nodes and the stem is solid at that point. There is a single seed in each flowering scale. Leaves are 2-ranked, with each leaf exiting the stem on the opposite side of the one below. The sheaths are open or split on the opposite side from the leaf blade. Grasses can be 1-2’ tall (like poverty oat grass & June grass) or head height (like big bluestem) or even basketball player tall (like the invasive *Phragmites*).



Fall Grasses and Kin

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Fringed Sedge

Carex crinita

CYPERACEAE

CAREX: BICOLORES



Photo: 9-2-17

This conservative species grows in wet to mesic woodlands and marshes. Seed spikes dangle, with long bristle-like scales giving a fringed appearance. Plants are tall (often 1.5 m), larger leaves can be 1 cm wide. Typically separate pistillate (female) and staminate (male) spikes.

Small Yellow Sedge

Carex cryptolepis

CYPERACEAE

CAREX:
CERATOCYSTIS



Photo: 9-18-19

This state threatened sedge is easily overlooked due to its small stature - usually less than 6" tall. Named for the yellowy perigynia (papery seed shells). Very similar to *C. viridula*, another state threatened species, and hybridization between these 2 is possible. *C. cryptolepis* is slightly bigger - often an inch taller; perigynia ~ 1 mm broader. Formerly C = 9 & 10; now C = 4 & 5. Mostly sandy/gravelly wet prairies.

Bristly Cattail Sedge

Carex frankii

CYPERACEAE

CAREX: SQUARROSAE



Photo: 9-20-17

Spiky cucumbers of seeds; they turn brown & crumbles when ripe. Perigynia are similar to *C. squarrosa*; individual perigynia are shaped like a skinny bell pepper (most *Carex* taper to a beak). Northern end of its range. Prefers a long stratification (cold treatment) for germination.

Fall Grasses and Kin

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Common Bur Sedge

Carex grayi

CYPERACEAE

CAREX: LUPULINAE

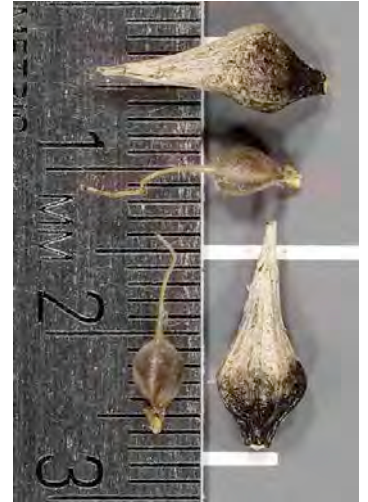
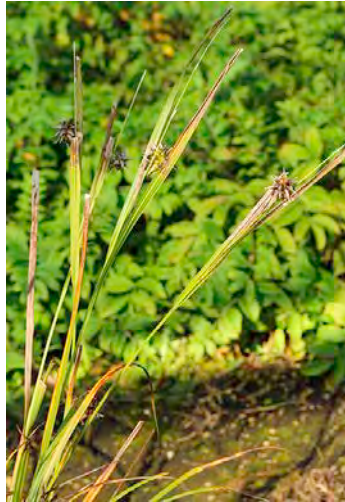


Photo: 9-20-17

One of the “super sedges” with large seeds - a great group of *Carex* for beginners because you can see all of the features without magnification. A “medieval mace” of seeds, usually at least a dozen seeds per mace. Achenes (seeds) are rounded. Also spelled *C. grayii*.

Common Hop Sedge

Carex lupulina

CYPERACEAE

CAREX: LUPULINAE



Photo: 10-11-18

No doubt this species was named by a thirsty botanist. The clusters of spiky perigynia sort of look like hops when they are dangling downwards, or perhaps after enjoying a hoppy beverage. Common in flatwoods and other partially shady wet places. The achene (seeds inside the papery perigynia) has worn elbows, but no knobs on the corners.

Knobbed Hop Sedge

Carex lupuliformis

CYPERACEAE

CAREX: LUPULINAE



Photo: 10-11-18

The rare sister (C = 10) to *C. lupulina*. This species often has slightly longer spikelets (more seeds per spikelet). The achenes have obvious knobs, like a Popeye elbow, which can be felt by pressing the perigynia between fingers. When in doubt, it is the more common *C. lupulina*.

Fall Grasses and Kin

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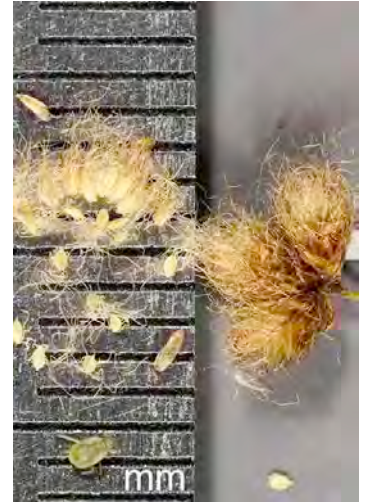
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Woolgrass

Scirpus cyperinus

CYPERACEAE



Photos: 9-2-17, 10-19-19

Wool grass is not a grass, nor part of a sheep, but the ripe seeds are clustered in a soft, woolly, cotton-candy puff. Look for off-white seeds in a cloud of rusty-colored, loose fluff. Collect when it is a loose cloud and easy to strip by hand.

Rice Cut Grass

Leersia oryzoides

POACEAE

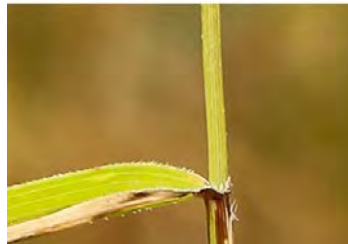


Photo: 9-27-17

This grass is well-named and quickly identified by bare skin while walking through wetlands. Usually about 3 feet tall, seeds are in a sparse panicle. *Leersia* species have white fuzzy nodes, like bracelets, along the stem. Good for skippers, birds, and deterring off-trail humans. Collect loose seeds. Seeds look bristly, but they don't bite like the leaves.

White Grass

Leersia virginica

POACEAE



Photo: 9-4-18

This is the gentler, smaller sister (shin to knee high) to *L. oryzoides*, and lacks the cutting edges. Often found in muddy, shady places after spring waters recede. Or trailside. Does not like competition. Same fuzzy white nodes as its sister. Seeds are slender, small, and often white. Strip by hand when loose. Takes time to collect quantity, likely why this seed is not commercially available.

Fall Grasses and Kin

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Knee Grass

Panicum dichotomiflorum

POACEAE



Photo: 9-12-18

This annual is common to disturbed places. The stem sheaths are hairless (an uncommon trait in this genus) and stems are “geniculate” near the base (like a bent knee - think genuflecting). Good for skippers & birds. A rare sister found in IN has smaller seeds & longer pedicels.

Switch Grass

Panicum virgatum

POACEAE

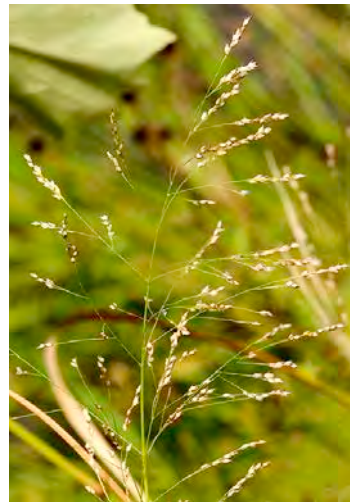


Photo: 9-27-17

One of the common tall grasses (usually 4-6' tall) in prairie restorations, and the tallest *Panicum* in the area. Once considered for biofuel, this perennial grass provides food for skippers & other insects, birds, as well as small & large mammals. This species has straight, hairless stems. Collect when seeds are loose & easily stripped by hand.

Prairie Dropseed

Sporobolus heterolepis

POACEAE



Photo: 9-12-17

A staple in prairie restorations and a sign of a high-quality remnant. Big fountains of grass blades make this the most ornamental-looking native prairie grass. Smells like popcorn on warm summer days. Increased seed production after burns and easily stripped by hand when ripe. Best sown within 6 months of harvest. Decent germination, but slow to reach mature size; installing plants can be preferred over seed.

Fall Grasses and Kin

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Side-oats Grama

Bouteloua curtipendula

POACEAE

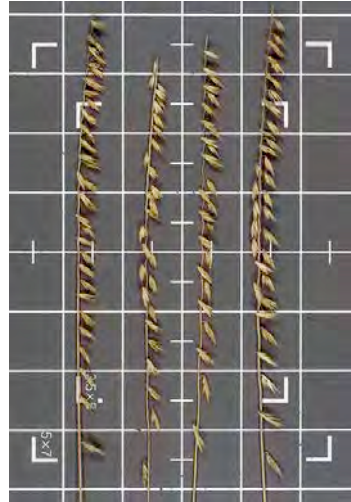


Photo: 9-19-17

Seeds dangle towards one side of the stem, typically pointing towards the ground at harvest time. Vibrant red anthers are stunning & a beautiful reminder that grasses bloom too. A short grass (1-3' tall). Seeds are beige & easy to strip by hand when ripe.

Glossy-leaved Brome

Bromus nottowayanus

POACEAE



Photo: 9-20-17

One of several tall hairy woodland brome grasses. Sources disagree. Flora includes *B. ciliatus* (lemmas hairy on margins only); *B. latiglumis* (flared lobes at base of leaf that clasp the stem); *B. pubescens* (sheath uniformly hairy & 2nd glume 3-nerved); and *B. nottowayanus* (sheath collar is hairier than rest of sheath & 2nd glume is 5-nerved). Many specimens formerly called *B. purgens/pubescens* are reclassified here.

Common Wood Reed

Cinna arundinacea

POACEAE



Photo: 9-20-17

This pretty, feathery grass is common in wet & mesic woodlands. *Arundinacea* means reed, which is why it shares a species name with the evil reed canary grass. The ligule (the 'popped collar' of the leaf sheath) is often purple-reddish. Strip loose seeds by hand or snip heads.

Fall Grasses and Kin

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version 2 7/2020

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Virginia Wild Rye

Elymus virginicus

POACEAE



Photo: 9-20-17

Seeds are tightly packed & upright, like an idealized wheat stalk. The base of the seed spike is typically wrapped by the leaf sheath. Spikelets are hairless (or at most, sandpapery). Flora includes 2 regionally rare subspecies. Collect beige seeds; don't be deterred by the green bracts.

Riverbank Wild Rye

Elymus riparius

POACEAE



Photo: 9-30-17

The glumes (the empty scales that cup the fertile seeds) are skinnier than most species, less than 1 mm wide, and persist on the spike after the florets have fallen. Similar to *E. villosus*, which ripens earlier, has spikes that are 5-12 cm long, and hairy lemmas. *E. riparius* spikes are generally 8-20 cm long, and lemmas are hispidulous (tiny hairs, visible with magnification).

Canada Wild Rye

Elymus canadensis

POACEAE



Photo: 10-2-17

This common grass will grow just about anywhere and is a fantastic native cover crop - fast to grow, but gives way to more conservative species. Easily ID'd by the long awns on the seed, which resembles a frizzy ponytail from a distance. Spike typically starts straight, but curves late in the season. Easy to strip by hand when ripe.

Fall Grasses and Kin

Kelly Schultz¹, Dale Shields²

version 2 7/2020

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Big Bluestem

Andropogon gerardii

POACEAE



Photo: 10-9-17

Illinois' official state grass and a tallgrass prairie icon. Easily ID'd by height (usually 5-7') and the upside-down "turkey foot" of seeds. Flowers with bright yellow anthers, and the stem nodes are shades of blue, purple, and red. Ripe seeds are easily stripped by hand. This species, along with Indian grass, are the most commonly used tall grasses in prairie restorations.

Indian Grass

Sorghastrum nutans

POACEAE

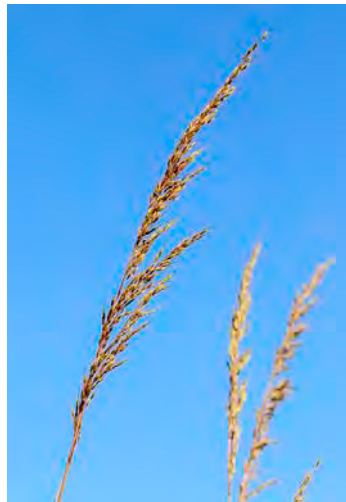
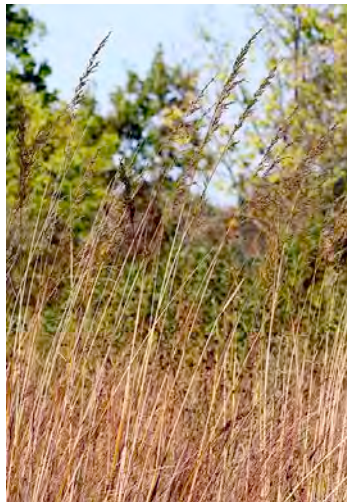


Photo: 10-9-17

This species has coppery, feathery seed spikes, which is one possibility for the name. Another legend claims this grass was the first to pop up after a native tribe moved on. Many land managers hold off on installing tall prairie grasses until after a diverse mix establishes; these species can be overly dominant, an easy way to identify older restorations. Seeds are soft and enjoyable to collect, adding to their abundant use.

Hairy Crabgrass

Digitaria sanguinalis

POACEAE

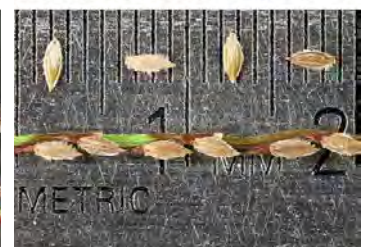
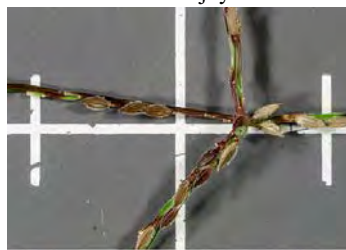


Photo: 10-11-19

Crabgrass is well known by lawn-lovers. Broad grass blades sprawl low to the ground like crab legs or fingers ("digitaria"). Almost all crabgrass species are non-native weeds found in disturbed places. The exception is the rare *D. filiformis*, an upright plant in sandy savannas.

Fall Grasses and Kin

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Leafy Satin Grass

Muhlenbergia frondosa

POACEAE



Photo: 10-16-17

This species is quite leafy, tends to have many branches, and sprawls as the season goes on. Plant is typically hairless, other than a few wispy hairs at the base of the seed. Spreads by seeds and scaly rhizomes. Valued by wildlife. Flora notes some historic mentions of *M. mexicana* should be referred here. These species are often called “muhly grasses.”

Wood Satin Grass

Muhlenbergia mexicana

POACEAE

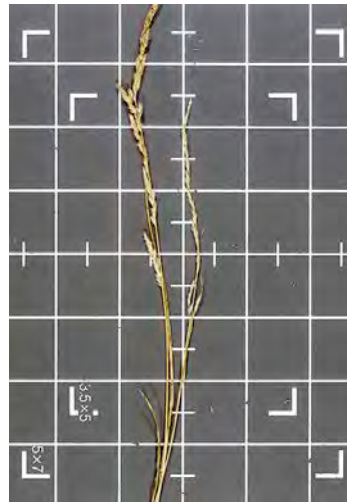


Photo: 10-16-17

Another branching leafy satin grass (sometimes called “leafy satin grass” – always double check your references for muhlies), but stems are rough with teeny tiny hairs just beneath the nodes. Lemmas have long hairs at the base, and are awnless (or at most, tiny awns less than 5 mm long). Panicle of flowers are slender, usually less than 5 mm broad.

Little Bluestem

Schizachyrium scoparium

POACEAE

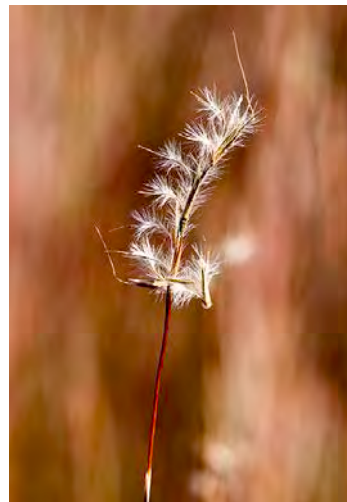


Photo: 10-25-17

Similar to big blue, little bluestem also has purple-blue stems, especially the stem nodes. Seeds are fluffy white & excellent at catching the sunlight like stary constellations on the prairie. Ripens sporadically – easily stripped by hand; return next week and more seeds will be ripe.

Fall Grasses and Kin

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Common Reed

Phragmites australis

POACEAE

Photo: 10-17-18



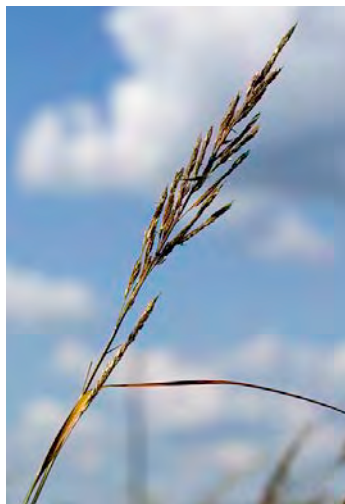
Evil. Tall (up to 15'!) with dense feathery heads. Primarily spreads by rhizomes. References disagree on seed viability; possibly related to self-incompatibility vs. cross-pollinated seed. There is a native species (formerly a subspecies) which is less aggressive, has reddish stems & more spindly heads. See the excellent minnesotawildflowers.info our local specimens all appear to be the non-native invasive species.

Prairie Cordgrass

Spartina pectinata

POACEAE

Photo: 10-18-19



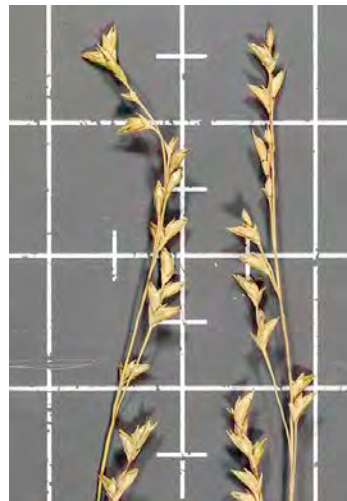
This common native wetland grass is readily identified by its height, the tightly packed fingers of seeds, and leaves that are sharp enough to cut. Seed viability is low, likely due to self-incompatibility and insects. Spreads well by rhizomes.

Beak Grass

Diarrhena obovata

POACEAE

Photo: 10-24-19



A rare grass of mesic woodlands. Seeds are unusually large for a native grass, chunky with a neck, like a bent bottle. Seeds are often weighing down the long skinny branches. Spreads by rhizomes too. Collect when seeds are beige & easy to remove.

Asters and Goldenrods

Kelly Schultz¹, Dale Shields²

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Remembering the scientific names of asters and goldenrods used to be easier. Asters were in the *Aster* genus; goldenrods were in the *Solidago* genus. Now they have been split into many genera, thanks to DNA research. They have been divided by flower arrangement, and the leaf shape and arrangement. The genera in our region are described below. They are still members of the composite family (Asteraceae), and the native species have both ray and disc flowers. The tightly packed disc flowers make up the “eye” in the center, and what many people call petals are actually fertile ray florets aka ligules. The seeds have pappus (fluff) attached to them, which helps them fly away on the wind. Their leaves are simple – not deeply divided or lobed, but may be serrated – and attached alternately to the stem, or at the base of the plant.

Doellingeria asters have a flat-topped or umbrella-shaped floral array, and the ray flowers are white with yellow disc florets. The leaves are elliptic. Basal and lower stem leaves wither by the time seed is ready. In our area, flat-top aster is the only member of this genus.

Eurybia asters have a flat-topped or umbrella-shaped floral array with white to purple rays and discs that start yellow and turn purplish or brownish. The basal and stem leaves are heart-shaped.

Symphotrichum includes most of our aster species. The floral arrangement can be any shape except flat-topped, such as club-shaped or oval or pyramidal. Ray flowers are white or some shade of blue or purple. Disc flowers usually start yellow and fade to purple or brown. Alternate leaves on stem are of various shapes, but not deeply lobed or incised.

Oligoneuron goldenrods have a flat-topped or umbrella-shaped floral array. If the ray flowers are white it's an aster; if the ray flowers are yellow it's a goldenrod. Leaves are simple and largest at the base, gradually reducing up the stem. Stiff aster is lumped in with these goldenrods because of its tendency to hybridize with the other members of this genus.

Euthamia goldenrods are also flat-topped goldenrods. Leaves are alternate on the stem with the lower ones dropping early, no basal leaves. The stems sprout from creeping rhizomes (horizontal roots).

Solidago goldenrods have floral arrays that are taller than wide – not flat-topped nor umbrella-shaped. Flowers are yellow. Leaves are simple, not deeply lobed or incised, and alternate. Most of our goldenrods remain in this genus.



Do Not Collect. This symbol is placed on images of non-native & invasive native seeds, which have been included as comparisons for similar native species. Do not collect these species, unless you are collecting for removal.

Asters and Goldenrods

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Flat-top Aster

*Doellingeria
umbellata*

ASTERACEAE

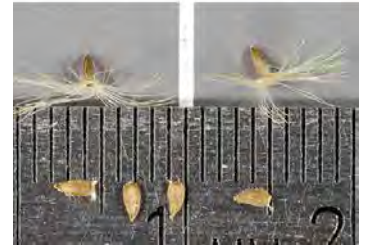


Photo: 9-20-17

Fluffy. Mama's Boy. *Doellingeria* are flat-topped asters without heart-shaped leaves or skinny linear leaves; this is the only species in our region. White flowers. Leaves are alternate, with the unusual venation seen in purple loosestrife (a pair of veins parallel to the edge and feather veins inside). Likes fens and wet to wet-mesic prairies. Can tolerate a little shade but happier in full sun. Off-white pappus.

Forked Aster

Eurybia furcata

ASTERACEAE



Photo: 9-20-17

Fluffy. Mama's Boy. *Eurybia* are flat-topped asters with heart-shaped leaves. This state threatened species has rough leaves. Basal leaves are typically smaller than your hand, and the stem leaves are fairly similar in size. Like many composite flowers, this species is self-incompatible but has decent seed production with cross-pollination. Flowers are white, pappus (seed fluff) is off-white.

Big-leaf Aster

Eurybia macrophylla

ASTERACEAE



Photo: 10-6-18

Fluffy. Mama's Boy. Often a carpet of leaves bigger than your hand. A few flowering stalks with smaller leaves. Happiest in well-drained soils in canopy openings. Flowers white tinged purple; one of the first asters to bloom. Spreads by rhizomes and has allelopathic effects.

Asters and Goldenrods

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Drummond's Aster

Symphotrichum drummondii

ASTERACEAE

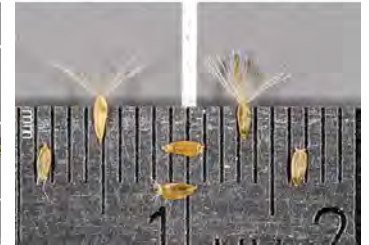


Photo: 10-25-17

Fluffy. Mama's Boy. Heart-shaped leaves with chunky teeth and winged petioles. Upper leaves tend to have rounded rather than heart-shaped bases. Stem is uniformly covered in tiny grayish hairs, especially on the upper half. Often blooms lavender-blue but can be white.

Arrow-leaved Aster

Symphotrichum urophyllum

ASTERACEAE

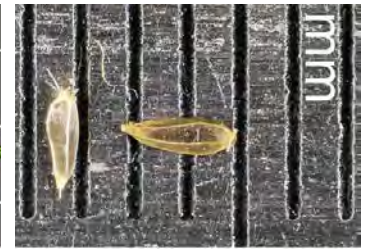


Photo: 10-4-17

Fluffy. Mama's Boy. Very similar to the more common *S. drummondii* (former variety), with heart-shaped leaves with winged petiole. *S. urophyllum* differs with stems that are hairless, or at most, hairs in the floral branches only. Phyllaries (individual floral bracts) are practically linear (*S. drummondii* phyllaries have a dilated diamond shape in the green band). This species often blooms white.

Bushy Aster
aka
Rice-button Aster

Symphotrichum dumosum

ASTERACEAE



Photo: 10-13-19

Fluffy. Mama's Boy. This uncommon species favors sandy soils. Small white flowers and small upper leaves. Somewhat like the more common *S. ericoides*, but flowers are less dense and phyllaries (floral bracts) are hairless. Flowers are dotted around the plant, but solitary on the end of short branches. Plants often lean, but flowers still face the sky. Leaves are linear.

Asters and Goldenrods

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Heath Aster

*Symphotrichum
ericoides*

ASTERACEAE



Photo: 10-16-17

Fluffy. Mama's Boy. Usually this species is readily ID'd by its petite stature (often 6-12" tall), packed with tiny flowers, and tiny leaves. But grown in decent soil with medium nutrition, this species can be MUCH bigger. If in doubt: ray florets ("petals") are typically less than 20 per flower head; involucre (green floral "cup") are no more than 5 mm tall; heads are densely packed and mostly on one side of the branch.

Smooth Blue Aster

*Symphotrichum
laeve*

ASTERACEAE



Photo: 10-9-17

Fluffy. Mama's Boy. A waxy blue-green color to the stem and leaves, especially early in the season. Leaves with a smooth almost rubbery feel. Upper leaves clasp the stem, lower leaves narrow to a winged petiole, usually no serrations. Upper leaves are smaller than lower ones. Loves mesic to dry prairies and inhabits sunnier openings in savannas. Pappus (seed fluff) is off-white, usually tinged with amber or rose.

Marsh Aster

*Symphotrichum
lanceolatum
var. interior*

ASTERACEAE

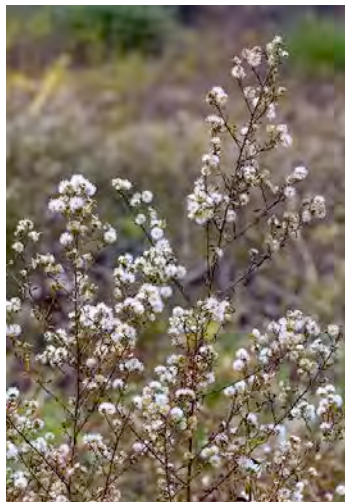


Photo: 10-30-18

Fluffy. Mama's Boy. A common species, tall and dense with white flowers. Spreads by rhizomes and seed. Stems are hairless, or at most hairy in lines on the upper half. Leaves are hairless. The "eye" of the flowers (disc florets) matures from yellow to burgundy. Pappus (fluff) is white to amber. Similar to straight species, but this variety has smaller involucre (cup of bracts under the flower), less than 4 mm high.

Asters and Goldenrods

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Calico Aster
aka
Side-flowering Aster

*Symphotrichum
lateriflorum*

ASTERACEAE



Photo: 9-28-17

Fluffy. Mama's Boy. "Calico" refers to the color-changing "eye," although this trait occurs in other asters too. Side-flowering ("lateriflorum") refers to the flowers all growing on one side of the branches, usually facing up towards the sun. Many tiny white flowers on short stalks. Common in wet to dry-mesic woodlands and savannas, also wet to wet-mesic sunny habitats. See Flora for fen variety.

New England Aster

*Symphotrichum
novae-angliae*

ASTERACEAE

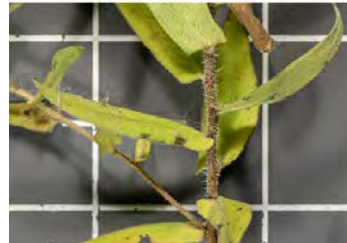
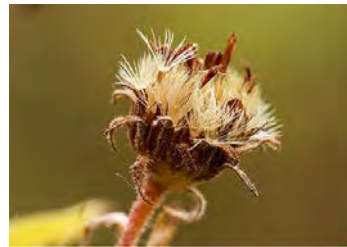


Photo: 10-4-17

Fluffy. Mama's Boy. A versatile aster, this species grows in full sun to partial shade, wet to dry-mesic soils. One of only a few native asters with vibrant royal purple flowers; rare to see other colors in natural populations of this species. Leaves clasp the stem. Stem and leaves are hairy. Floral branches and bracts have some glandular (lollipop) hairs. Achenes (seeds) are hairy, and the pappus (seed fluff) is brown.

Aromatic Aster

*Symphotrichum
oblongifolium*

ASTERACEAE



Photo: 10-16-17

Fluffy. Mama's Boy. This uncommon aster loves rocky, calcium-rich, dry soils. A bushy dome of woody stems covered in royal purple flowers. Crushed leaves have a balsam-like aroma. One of the last to bloom, this species is great for pollinators and native gardening. Small leaves dominate; larger leaves are less than 1cm wide and 6 cm long. Brown pappus (seed fluff).

Asters and Goldenrods

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Crooked-stem Aster

*Symphotrichum
prenanthoides*

ASTERACEAE



Photo: 10-18-18

Fluffy. Mama's Boy. Clasping leaves with serrated teeth and a "waist" in the leaf. Floral branches and floral bracts are usually hairless. This rare aster is commercially available and appearing in restorations beyond its historic distribution. Found in shady damp places. Flowers are a pale lavender-blue or sometimes white. Pappus is cinnamon colored.

Bristly Aster

*Symphotrichum
puniceum*

ASTERACEAE



Photo: 11-6-18

Fluffy. Mama's Boy. Often a red-purple stem. Longer leaves are more than 5 cm long and clasp the stem. Flower color varies. Floral bracts are hairless. Underside of main leaves have hairs on the main vein and upper stems have short bristly hairs (*S. firmum* is nearly hairless all over.) Pappus is white.

Short's Aster

*Symphotrichum
shortii*

ASTERACEAE



Photo: 10-26-18

Fluffy. Mama's Boy. Heart-shaped leaves with smooth margins (usually no serrations) and skinny petioles without wings. Loves mesic to dry woodlands and savannas. Flowers are blue-purple and pappus (seed fluff) is tan.

Asters and Goldenrods

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Stiff Aster
aka
White Goldenrod

Oligoneuron album

ASTERACEAE



Photo: 10-24-19

Fluffy. Mama's Boy. This species has bounced between *Aster* and *Solidago* for years. Flowers are white, but it has successfully hybridized with 2 *Oligoneuron* goldenrods. Most likely to be found on sandy, well-draining prairies. The pale gray pappus color is unusual. Stiff, flat, linear leaves. Flat-topped arrangement of flowers & seeds; leaves are larger at the base and decrease in size up the stem.

Ohio Goldenrod

Oligoneuron ohioense

ASTERACEAE

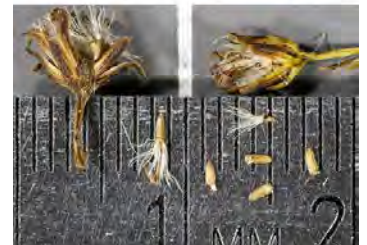


Photo: 10-9-19

Fluffy. Mama's Boy. A fen-loving goldenrod, this species is a little more conservative than *O. riddellii*. Leaves are flat and have blunter tips. Hairless throughout. Like all *Oligoneuron* species, this species has a flat-topped arrangement of flowers & seeds; leaves are larger at the base and decrease up the stem.

Riddell's Goldenrod

Oligoneuron riddellii

ASTERACEAE



Photo: 10-13-18

Fluffy. Mama's Boy. Another fen-lover, but this goldenrod has arching, pointed leaves that are typically folded along the keel of the central leaf vein. The main stalks and leaves are hairless, but the short floral branches are hairy. Leaves decrease in size on the upper stem.

Asters and Goldenrods

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Stiff Goldenrod

Oligoneuron rigidum

ASTERACEAE



Photo: 10-9-17

Fluffy. Mama's Boy. A familiar species to many prairie enthusiasts. Hairy spinach-shaped leaves that start out cuddly-soft and stiffen with age. White pappus, relatively large heads. As with all *Oligoneuron* species, a flat-topped arrangement of flowers & seeds; leaves are larger at the base and decrease in size up the stem.

Smooth Grass-leaved
Goldenrod

*Euthamia
graminifolia*

ASTERACEAE

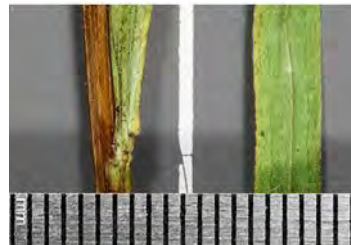
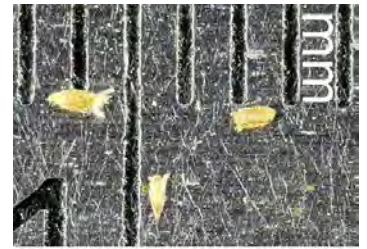
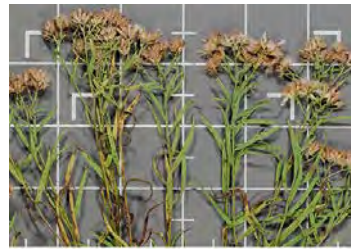


Photo: 10-9-19

Fluffy. Mama's Boy. *Euthamia* species have flat-topped flower arrangements with linear leaves of similar size, primarily along the stem rather than basal leaves, and the lower leaves quickly drop. Larger leaves on this species are more than 4 mm wide, often with 5+ veins. Stems are hairless, or at most, sparse hairs in lines on the lower stem.

Hairy Grass-leaved
Goldenrod

*Euthamia
nuttallii*

ASTERACEAE



Photo: 10-20-17

Fluffy. Mama's Boy. Formerly a variety of *E. graminifolia*, this species has the same leaves and flat-topped arrangement of yellow flowers. Differs by having small hairs throughout the plant, although sometimes the outer branches are hairless.

Asters and Goldenrods

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Blue-stemmed
Goldenrod

Solidago caesia

ASTERACEAE



Photo: 9-30-17

Fluffy. Mama's Boy. A species of rich mesic woods, and can also be found in savannas. Seeds are clustered in leaf axils. Stem has a light blue waxy coating (glaucous). Elongated, lance-shaped leaves are sessile (stalkless). More clusters of flowers & seeds than *S. flexicaulis*.

Canada Goldenrod

Solidago canadensis

ASTERACEAE

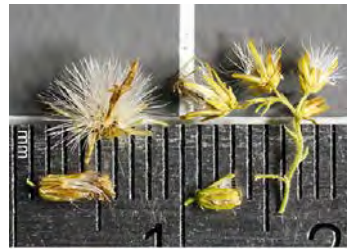


Photo: 9-30-17

Fluffy. Mama's Boy. Good for pollinators and it's native, but that's about all the nice things you can say. Happy in disturbed soils and many habitats. Dense plumes of flowers. Leaves have parallel veins, slightly smaller going up the stem. Hairy stem, but lower stem can go bald with age. Spreads by rhizomes too. Differs from *S. altissima* by height of involucre (green cup under flower). Don't collect either species.

Zig-zag Goldenrod

Solidago flexicaulis

ASTERACEAE



Photo: 9-30-17

Fluffy. Mama's Boy. This species has flowers/seeds in the clusters of the leaf axils (where stems & leaves meet). Leaves are broad serrated ovals with a point and winged petioles. Stem has a slight zigzag between axils. Mesic woodlands and mesic microhabitats in wetter woods.

Asters and Goldenrods

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Late Goldenrod

Solidago gigantea

ASTERACEAE



Photo: 10-13-18

Similar to *S. canadensis*, but hairless (or nearly so) on the main stems. Hairy on the floral branches. Like *S. canadensis* and *S. altissima*, the shape of the floral plume varies; often pyramid-shaped (wider on bottom) but can be wider in the middle or even club-like. The name isn't terribly helpful; blooming time overlaps with other goldenrods and while it is tall like its sisters, it is not a giant (*gigantea*).

Early Goldenrod

Solidago juncea

ASTERACEAE



Photo: 10-8-18

Fluffy. Mama's Boy. Usually the first goldenrod to bloom, but flowering time overlaps with other species. Stems are hairless, including the floral branches. Basal rosettes are common. Typically 1 – 3 veins per leaf and lower leaves present at flowering time.

Old-field Goldenrod

Solidago nemoralis

ASTERACEAE



Photo: 10-13-17

Fluffy. Mama's Boy. The petite "bent Xmas tree" goldenrod, old-field is like a hunched old man. Common to old fields, dry prairies, and savannas. Occasionally in a compact plume rather than a long Xmas tree, just to test you. Hairy throughout. Short (usually less than 2 feet). Measure floral stalks (pedicels) and involucre (cup of floral bracts) to confirm ID against *S. nemoralis haleana* and *S. decemflora*.

Asters and Goldenrods

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¹Lake County Forest Preserve District, ²Volunteer Stewardship Network

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Swamp Goldenrod

Solidago patula

ASTERACEAE

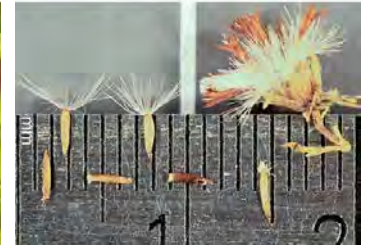
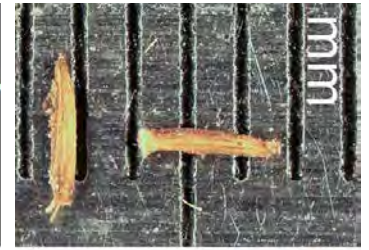
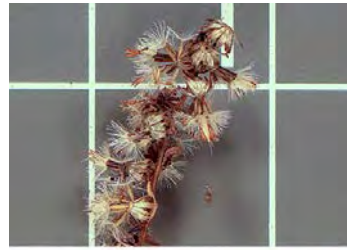


Photo: 10-2-17

Fluffy. Mama's Boy. This species seems happiest growing near gently flowing water, often on a slightly drier rise, in fens or flatwoods. Big (3.5+ cm wide), rough basal leaves. Leaf size shrinks as they move up the stem. Elongated branches of flowers, longer than *S. ulmifolia*.

Showy Goldenrod

Solidago speciosa

ASTERACEAE

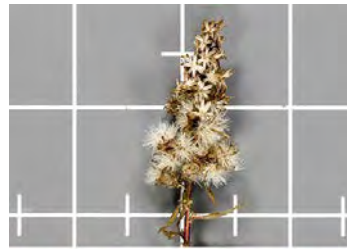


Photo: 10-25-17

Fluffy. Mama's Boy. Aptly named, this is the showiest of the native goldenrods and the best suited for native gardening. Stems typically a bold crimson late in the season. Xmas tree of flowers. Leaves are entire (lacking any teeth or lobes) on most of the leaves. Grows in little clumps. See Flora for variations. Herbarium specimens can be confused with *S. uliginosa*, but habitat easily separates them in the wild.

Elm-leaved Goldenrod

Solidago ulmifolia

ASTERACEAE

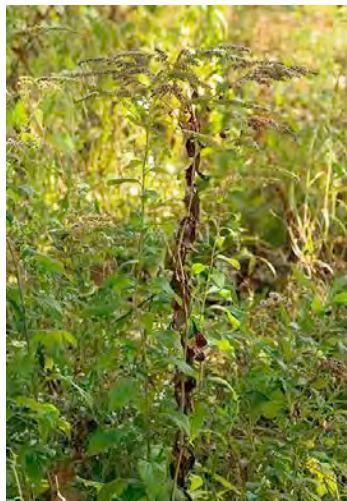


Photo: 10-4-17

Fluffy. Mama's Boy. Flowers are on long branching arms, like exploding fireworks. Leaves are broader than many goldenrods, but a far cry from an elm leaf. Leaves are feather-veined; many goldenrods species have parallel veins. Woodlands and savannas.