



Lake County, Illinois, USA

Lake County Seed Collection Guide

Summer Wetland Forbs

Kelly Schultz¹, Dale Shields²

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, sow by Jan 1st for best results.

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: rubber band 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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Common Dandelion

Taraxacum officinale

ASTERACEAE



Photo: 5-15-20

Fluffy. Ubiquitous lawn weed, this species can escape into disturbed & mowed edges of preserves, but generally is not tough enough to compete in natural ecosystems. Lobed leaves with milky sap. Seeds & fluff 1 - 1.5" long. Do not collect.

Common Goat's Beard

Tragopogon pratensis

ASTERACEAE

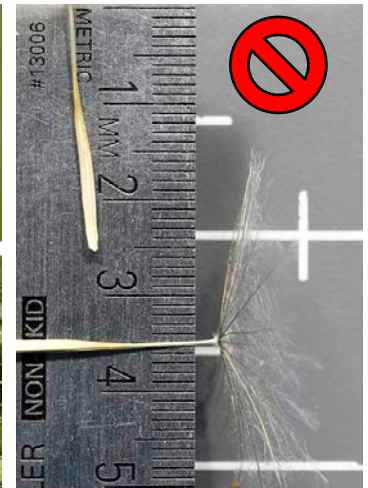
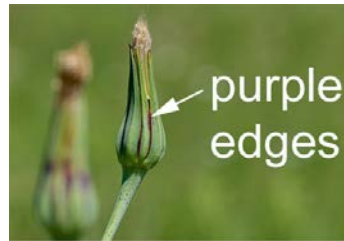


Photo: 6-18-20

Fluffy. Like a dandelion with an 80s makeover, this plant has big hair! Seed & fluff are several centimeters long. Fluff is feathery. Yellow flowers open in the morning & close in the afternoon. Curved leaf tips. Found along roadsides & other disturbed places.

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.

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Wild Strawberry

Fragaria virginiana

ROSACEAE

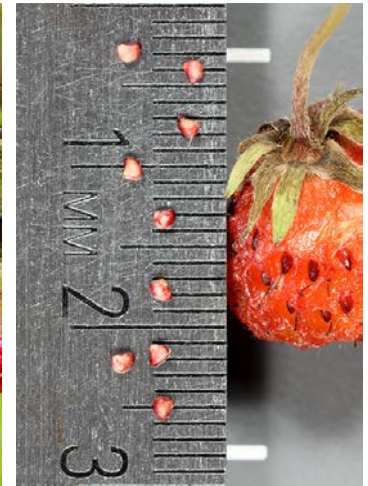


Photo: 7-5-19

Berries. This species creeps through a surprising variety of habitats. Dangling red berries are easily plucked when ripe. 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.

Indian Strawberry

Duchesnea indica

ROSACEAE

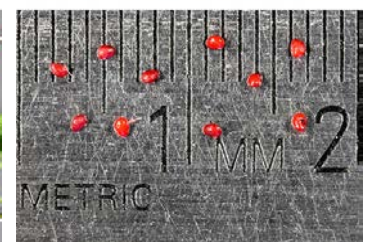
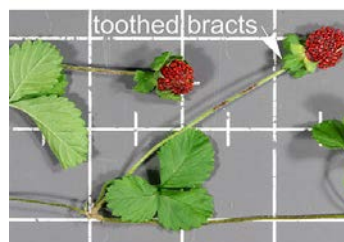


Photo: 9-2-20

Berries. Similar to *Fragaria*, but with a disappointingly tasteless fruit. Berries point up to the sky and seeds stick out on the berry surface (*Fragaria* fruits nod towards the ground, seeds embedded). Leaflets are a little smaller and the tooth at the apex sticks out. Leaflets branch off from the running stems like a daisy chain (*Fragaria* leaf stems connect at the base). Grows in disturbed habitats.

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.

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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.

Common Spiderwort

Tradescantia ohiensis

COMMELINACEAE

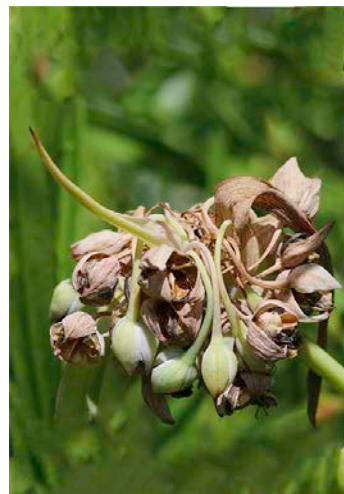


Photo: 7-10-17

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.

Curly Dock

Rumex crispus

POLYGONACEAE

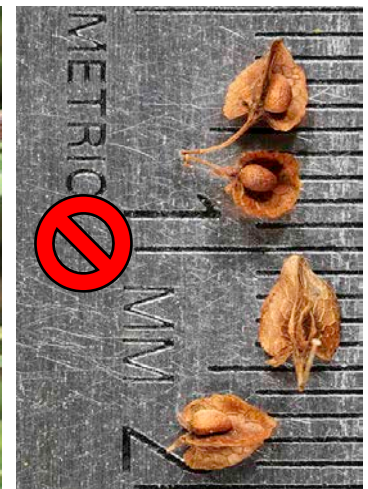


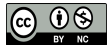
Photo: 7-17-19

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.

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Garden Ox-eye Daisy

Leucanthemum vulgare

ASTERACEAE

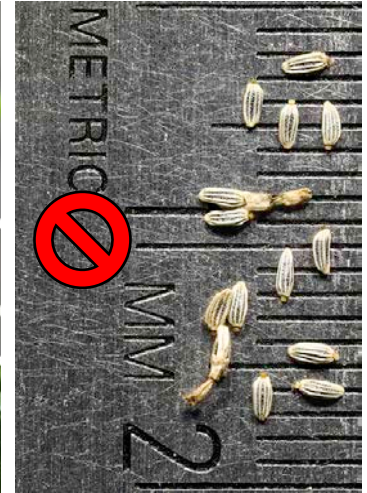


Photo: 7-17-20

Crumbly coneheads. These European white daisies often show up in generic “wildflower mixes” that include a lot of pretty, non-native flowers. Similar to the European Shasta daisy, this species has smaller heads (green cup of bracts under the flower are 2 cm or smaller in diameter, individual bracts are 3 mm wide or skinnier). Stem leaves have toothed-lobes. Do not collect or spread.

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.

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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.

Stout Blue-eyed
Grass

*Sisyrinchium
angustifolium*

IRIDACEAE

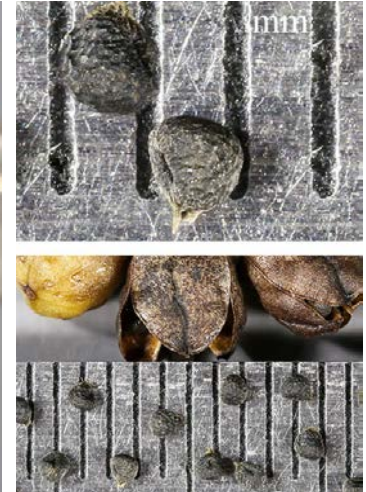


Photo: 7-26-19

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



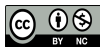
Photo: 7-31-18

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.

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Thimbleweed

Anemone cylindrica

RANUNCULACEAE

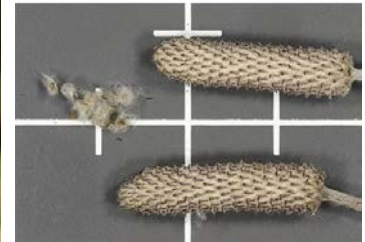


Photo: 8-1-17

Crumbly coneheads. The thimble-shaped cone fluffs up into a cottony 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

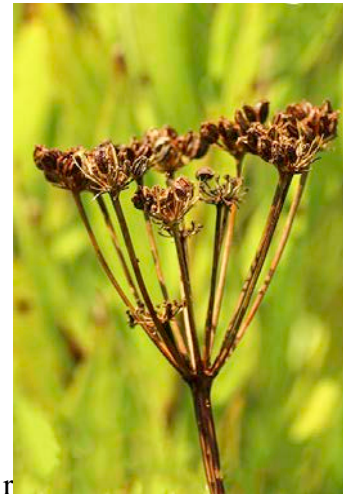


Photo: 8-1-17

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

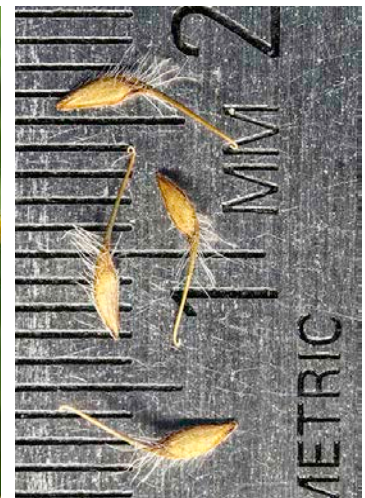


Photo: 8-2-18

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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Ohio Horse Mint

Blephilia ciliata

LABIATAE

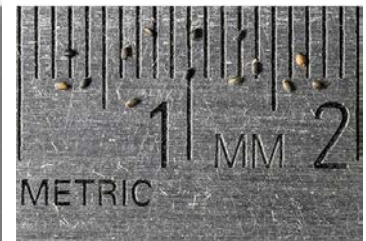


Photo: 8-5-18

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.

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 to mustard. 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

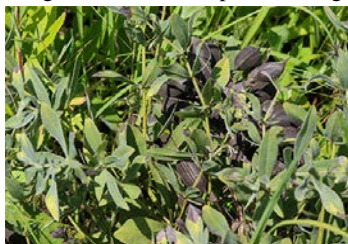


Photo: 8-10-18

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.

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Prairie Indian Plantain

*Arnoglossum
plantagineum*

ASTERACEAE



Photo: 8-14-20

Fluffy. This species of Indian plantain is easily distinguished by the leaf shape: unlobed plantain-shaped leaves, as the name suggests. Leaves have a thick succulent texture and distinct parallel veins. White flowers turn to oil-black seeds with bright white fluff. Plants about 1 m tall. Uncommon, found in fens and other wet to mesic prairies; rarely in gravel hill prairies.

Hedge Bindweed

Calystegia sepium

CONVULVULACEAE

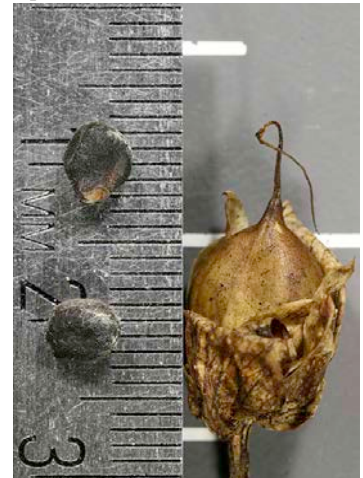


Photo: 8-16-20

Beaks. Grows in many habitats. Morning glory-type flowers, like a ball gown skirt. Note the greenery at the base of the flower: *Calystegia* (means "covered calyx") have 2 large bracts overlapping the smaller calyx; the calyx of European *Convolvulus* is clearly visible with 5 lobes. Leaves are elongated triangular arrowheads, and the gap between the 2 lobes is a thin triangle space, rather than a quadrate gap.

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.

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Smooth Beard
Tongue

Penstemon calycosus

SCROPHULARIACEAE



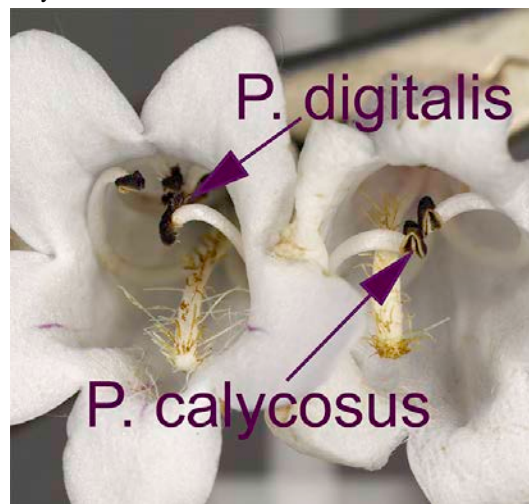
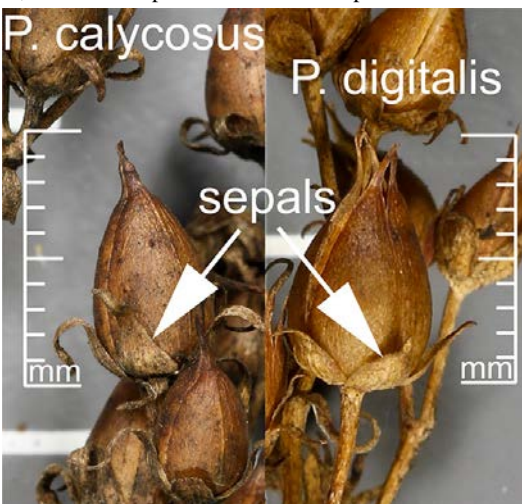
Photo: 8-21-18

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.

Penstemon calycosus

vs.

Penstemon digitalis



These sisters are hard to distinguish. *P. calycosus* sepals are longer, tapered, and tips often curl backwards. *P. digitalis* has ovate sepals that abruptly contract at the tip. It is easier to ID at flowering time. The dark anthers of *P. digitalis* have tiny stiff hairs on the backside (look closely); *P. calycosus* is hairless. *P. digitalis* flowers are white; *P. calycosus* are white or lavender. See Fall Prairie Forbs for *P. digitalis*.

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.