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.
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.
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.
White Prairie Clover

*Dalea candida*

FABACEAE

Photo: 8-31-17

Crumbly Coneheads. Mama’s Boy. The prairie clovers bloom with tutus 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 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.
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.
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.
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%
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 poofed; 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.
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.
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.
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.
Round-headed Bush Clover

*Lespedeza capitata*

FABACEAE

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

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

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).
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.
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.
Yellowish Gentian
aka
Cream Gentian

*Gentiana alba*

GENTIANACEAE

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

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.
**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.
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.
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.