



Lake County, Illinois, USA

Lake County Seed Collection Guide

Spring Woodland 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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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

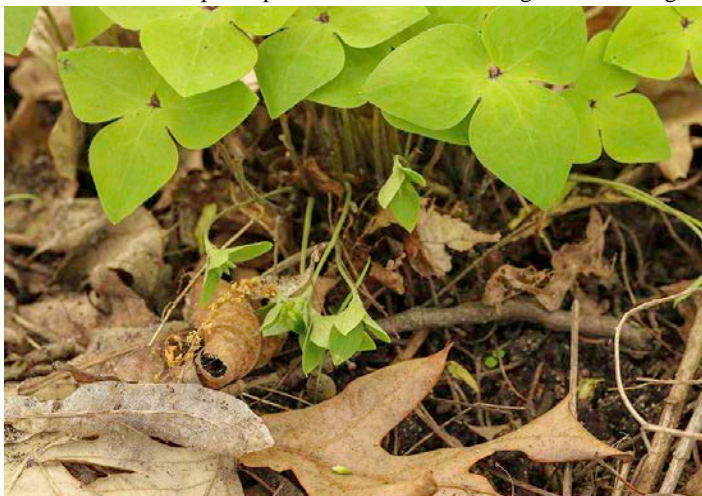


Photo: 5-18-18

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

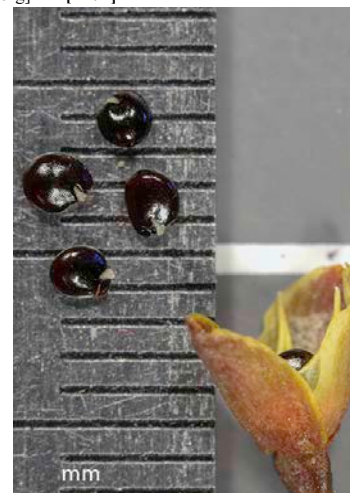
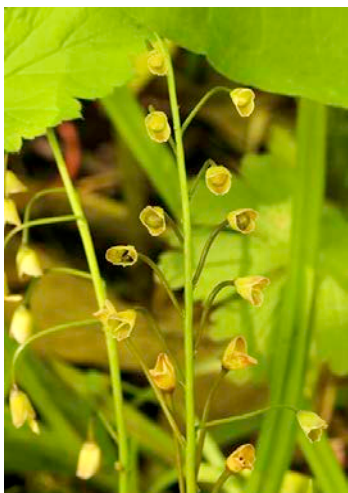


Photo: 5-22-18

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.

Siberian Squill

Scilla siberica

HYACINTHACEAE

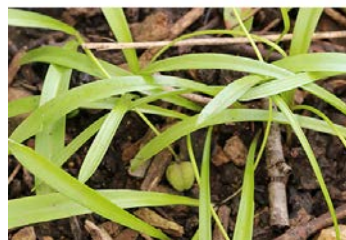
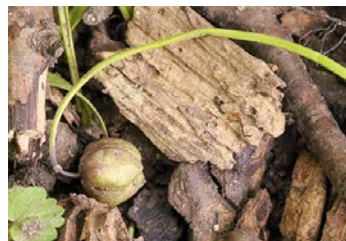


Photo: 5-29-20

Elaiosomes. This common blue flower pops up in lawns and escapes into woodlands. Flowers are 6 petals, occasionally white. Leaves are grass-like. Do not collect. Plant *Hepatica*, *Mertensia*, or *Camassia* instead.

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.

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False Mermaid

*Floerkea
proserpinacoides*

LIMNANTHACEAE

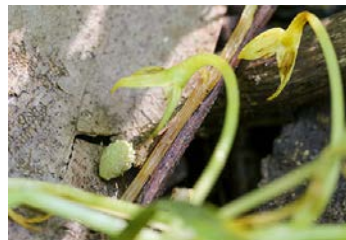


Photo: 5-30-19

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%.

White Trout Lily

Erythronium albidum

LILIACEAE

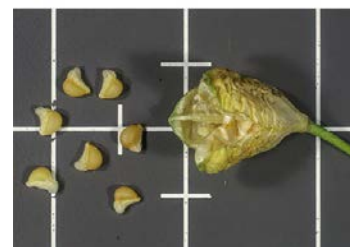


Photo: 6-1-18

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 common in Lake Co.

Bloodroot

*Sanguinaria
canadensis*

PAPAVERACEAE

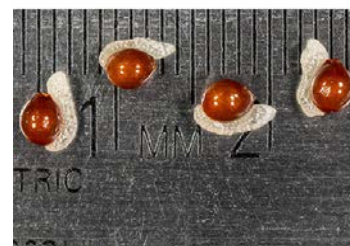


Photo: 6-8-18

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.



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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

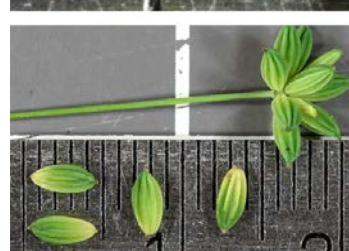
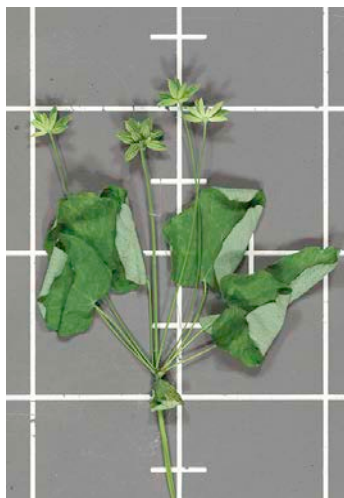


Photo: 6-15-18

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.



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Small-flowered Buttercup

Ranunculus abortivus

RANUNCULACEAE

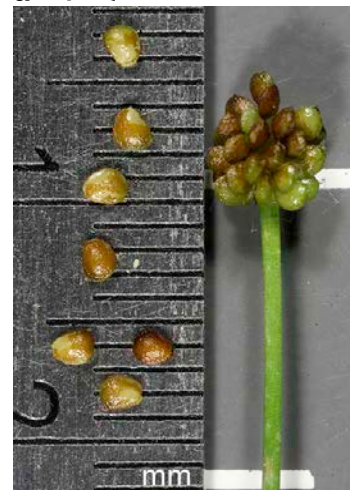
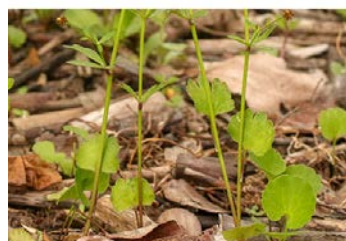


Photo: 6-3-18

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.

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.

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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.

Jacob's Ladder

Polemonium reptans

POLEMONIACEAE

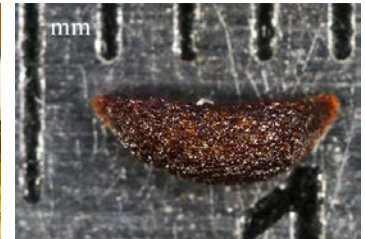


Photo: 6-15-18

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.

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.

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Dog Violet

Viola labradorica

VIOLACEAE

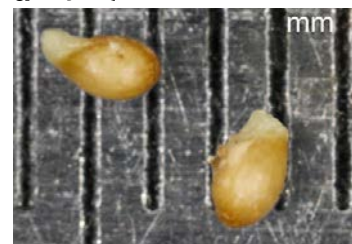
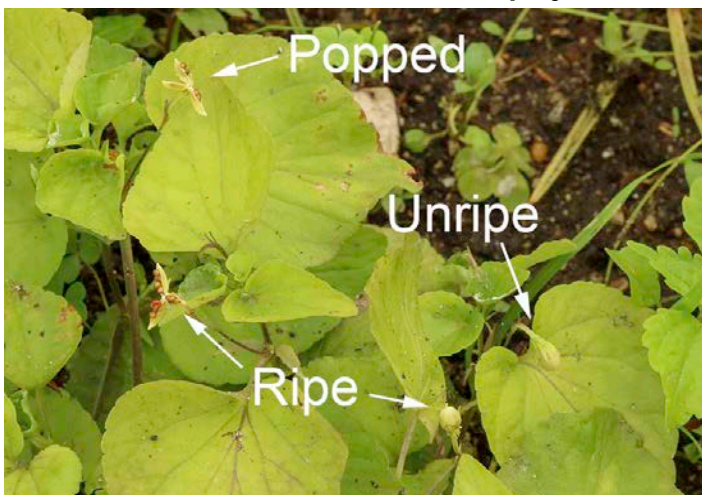


Photo: 6-19-17

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.

Wild Columbine

Aquilegia canadensis

RANUNCULACEAE

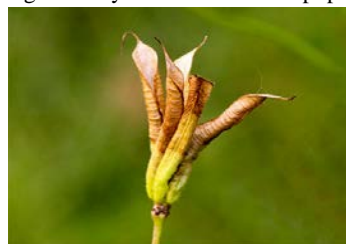


Photo: 6-24-17

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.

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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.

Twinleaf

Jeffersonia diphylla

BERBERIDACEAE

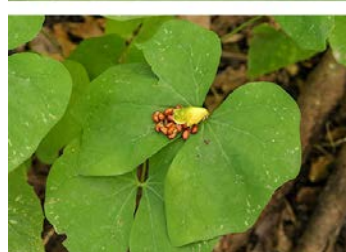


Photo: 6-24-18

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.

Woodland Phlox

Phlox divaricata

POLEMONIACEAE

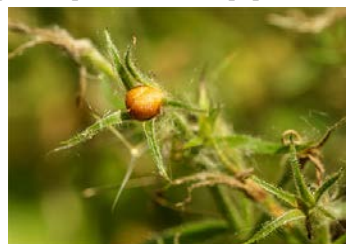


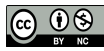
Photo: 6-24-17

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

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Fire Pink

Silene virginica

CARYOPHYLLACEAE

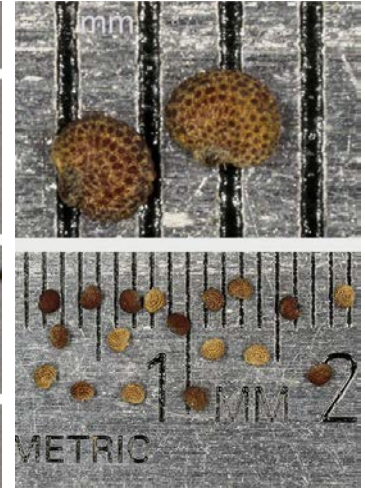


Photo: 6-24-17

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.

Wood Sandwort

Moehringia lateriflora

CARYOPHYLLACEAE

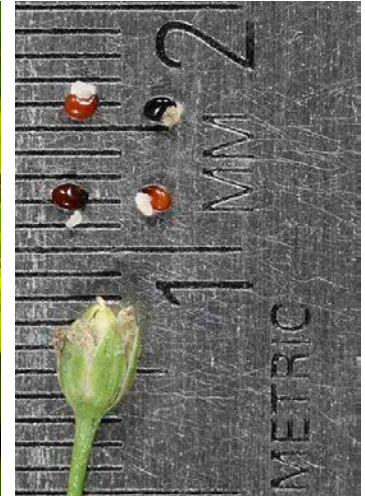
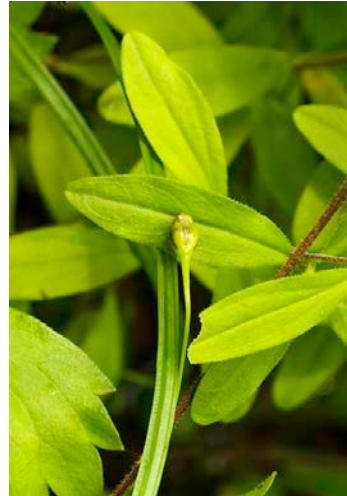


Photo: 6-28-19

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.

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.

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Large-flowered Trillium

Trillium grandiflorum

TRILLIACEAE

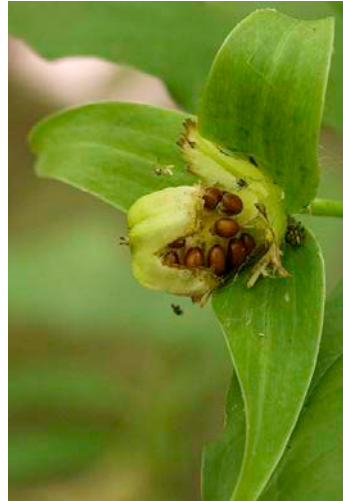


Photo: 7-16-18

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.

Prairie Trillium aka Red 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.