



Lake County, Illinois, USA

Lake County Seed Collection Guide

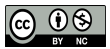
Summer Wetland Forbs

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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 Richa. 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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Purple Cress

Cardamine douglassii

BRASSICACEAE

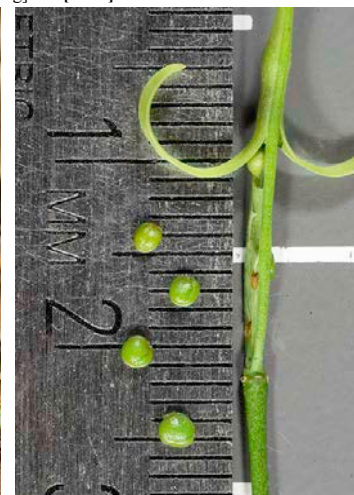


Photo: 5-31-19

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

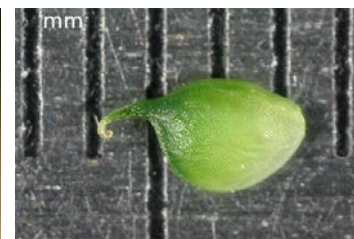


Photo: 6-2-18

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

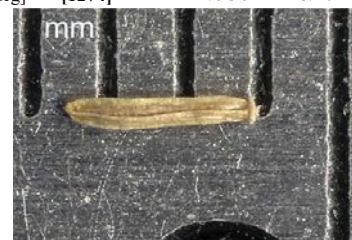
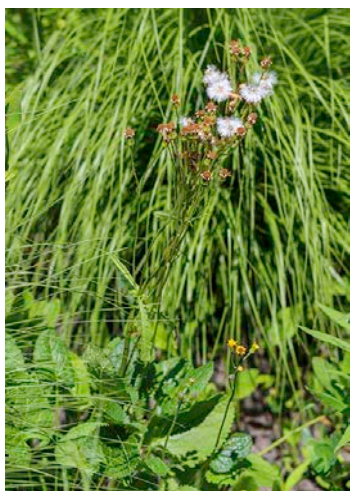


Photo: 6-5-18

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 pennsylvanica

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.

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Dwarf Raspberry

Rubus pubescens

ROSACEAE

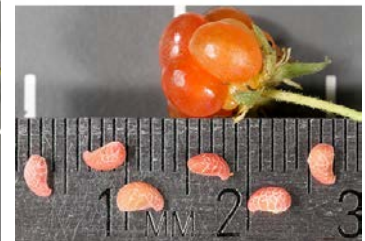
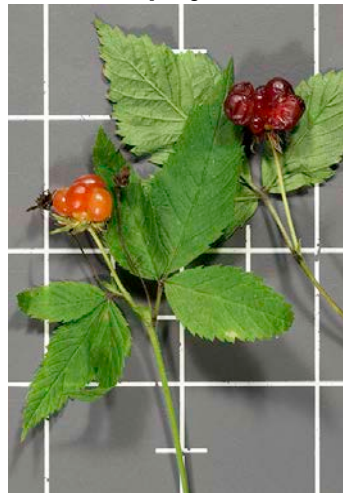


Photo: 7-5-19

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

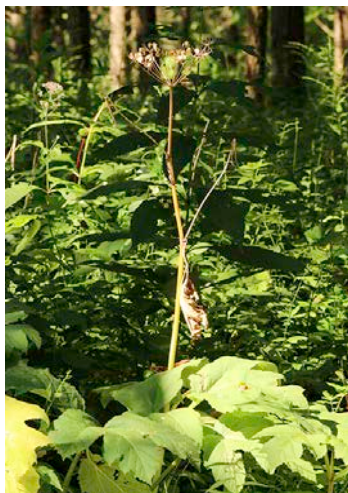


Photo: 7-23-17

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

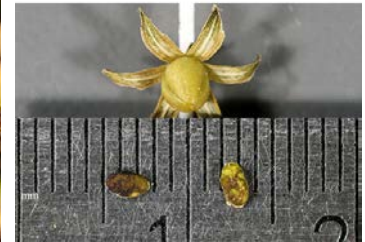


Photo: 7-24-19

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.

Rough Aven

Geum laciniatum

ROSACEAE

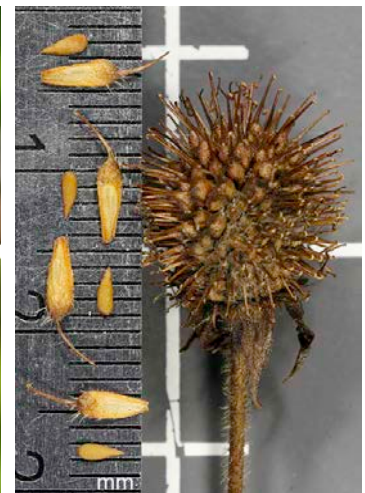


Photo: 8-11-20

Hitchhikers. Coneheads. This common white flower is found in a variety of wet to mesic habitats. Leaves come in a variety of shapes, sometimes scalloped 3 lobes, or 5 simple leaflets, or 5 leaflets deeply divided into lacy delicacy. Pluck the seeds to reveal the receptacle, which is hairless for this species. Stems and floral branches are hairy. Often observed on socks, rarely collected intentionally.

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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.

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

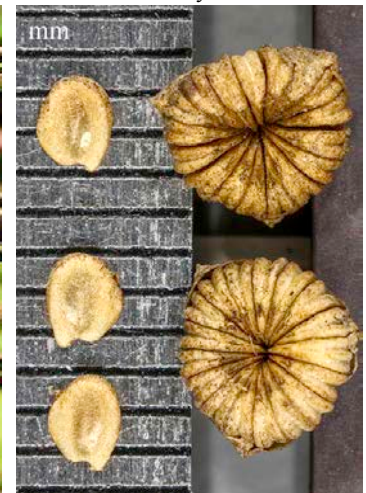


Photo: 8-15-17

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.

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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.

Blue Flag

Iris virginica var. *shrevei*

IRIDACEAE

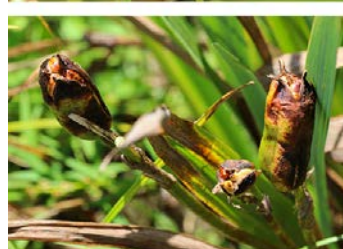
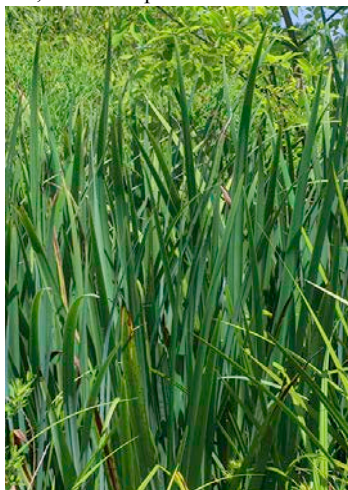


Photo: 8-16-18

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.



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Brookweed

Samolus parviflorus

SAMOLACEAE

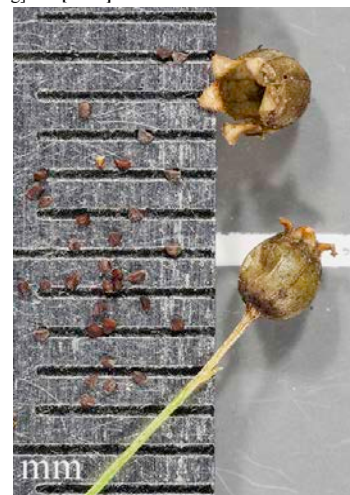


Photo: 8-17-19

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.

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.



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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.

Small Hairy Willowherb

Epilobium parviflorum

ONAGRACEAE

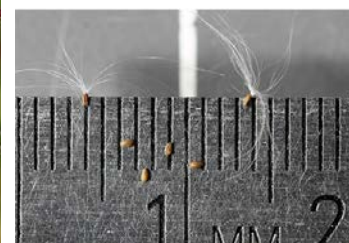


Photo: 8-25-20

Fluffy. Fluffy seeds are released from a 4-part capsule. Seeds of willowherbs are attached to long silky hairs. Tiny delicate flowers, typically pink. For willowherbs with serrated leaf margins, the non-native ones have hairy stems. The other non-native willowherb has large (1 cm or bigger), hot pink flowers.