



Lake County, Illinois, USA

Lake County Seed Collection Guide

Fall Grasses and Kin

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.**

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.





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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*).





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Pale Green Sedge

Carex pallescens

CYPERACEAE

CAREX: POROCYSTIS

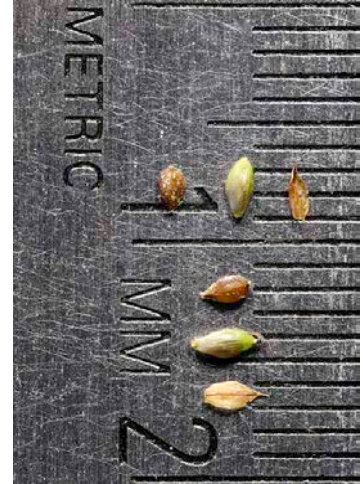


Photo: 8-26-20

A new record for the county, this rare species is similar to *C. hirsutella*. Both have hairy sheaths & leaves. This species has oval, glossy beakless perigynia, like little green river stones packed into a tight pine cone. Terminal spikelet is entirely staminate in this species. Found in a savanna edge near a railroad and in a prairie.

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.

Common Yellow Lake Sedge

Carex utriculata

CAREX: VESICARIAE

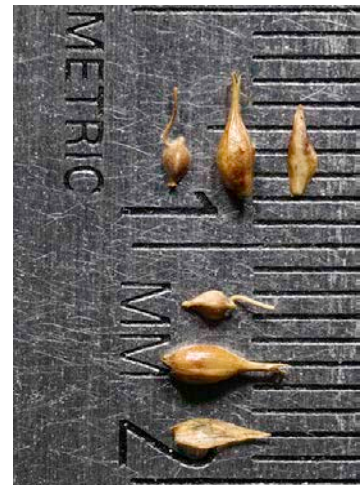
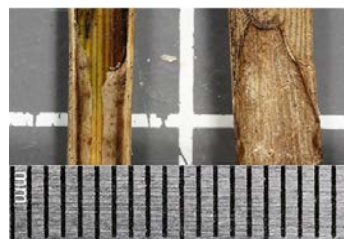


Photo: 9-16-20

A hairless *Carex*, with spongy bases of the stem. Terminal spikelets are all male (staminate). Pistillate spikes are sessile or sometimes short stalks (peduncles). Perigynia are yellow to brown and slightly inflated.



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Small Yellow Sedge

Carex cryptolepis

CYPERACEAE

CAREX:
CERATOCYSTIS

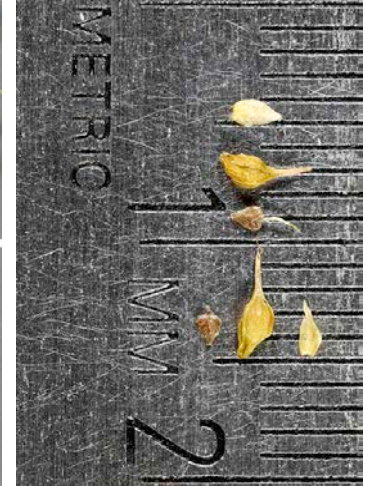
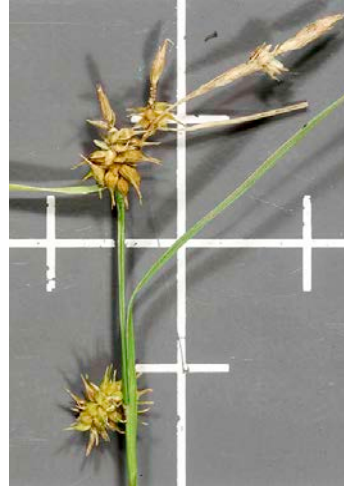


Photo: 9-18-19

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

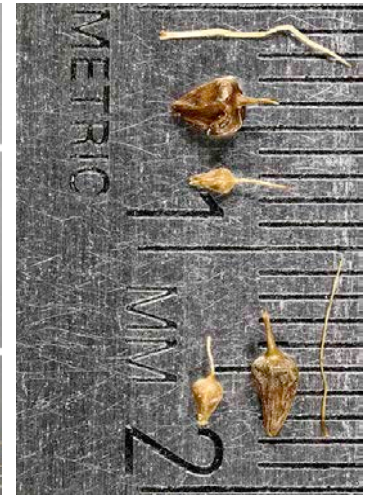


Photo: 9-20-17

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.

Common Bur Sedge

Carex grayi

CYPERACEAE

CAREX: LUPULINAE

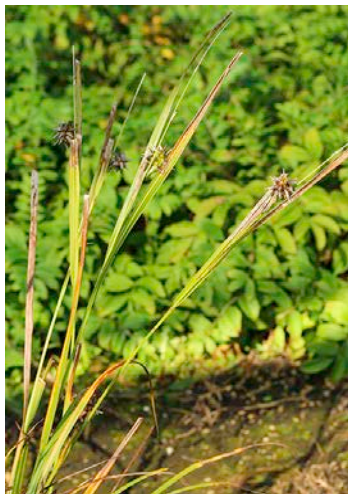


Photo: 9-20-17

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. grayi*.



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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*.

Blunt Spikerush

Eleocharis obtusa

CYPERACEAE

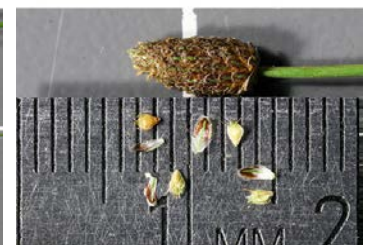


Photo: 10-4-20

This spikerush grows in a clump. Stem is far skinnier than the fruiting head. The tubercle (the triangular cap at the top of the seed) is about as wide as the seed, whereas other *Eleocharis* species have a dramatic change at the junction of tubercle and body. Brown seed preferred.



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Woolgrass

Scirpus cyperinus

CYPERACEAE



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

Woolgrass 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.

White Grass

Leersia virginica

POACEAE

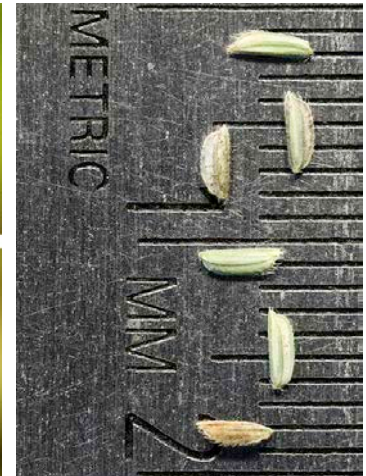


Photo: 9-4-18

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.

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.



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Knee Grass

Panicum dichotomiflorum

POACEAE

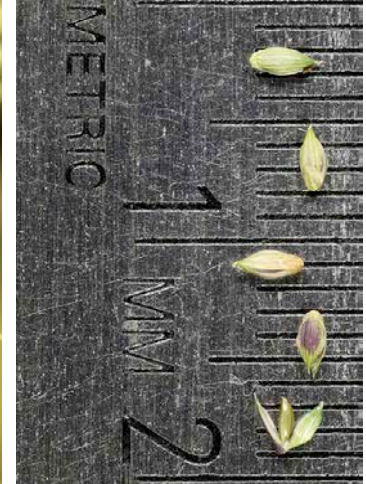


Photo: 9-12-18

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.

Ear-leaved Brome

Bromus latiglumis

POACEAE



Photo: 9-14-20

One of the hairy-seeded native woodland brome species. This one has “ears,” where the leaves clasp the stem. This feature may degrade late in the season, but you can also readily identify it by the vast number of nodes (the swollen joints in the stem). There are more than 10 nodes per stem (often 14+). Ripens a little later than other hairy woodland bromes.

Glossy-leaved Brome

Bromus nottowayanus

POACEAE

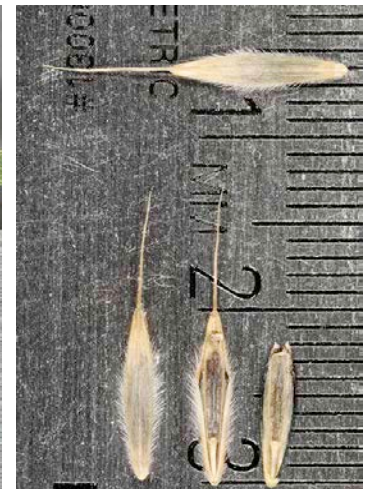
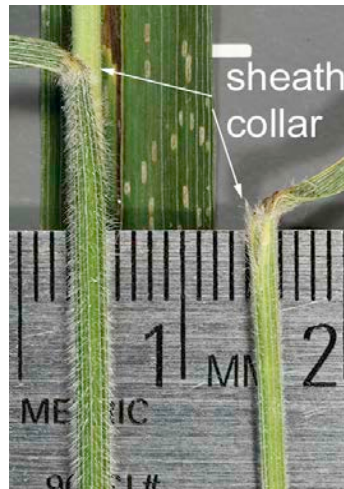


Photo: 9-20-17

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.



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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.

Side-oats Grama

Bouteloua curtipendula

POACEAE

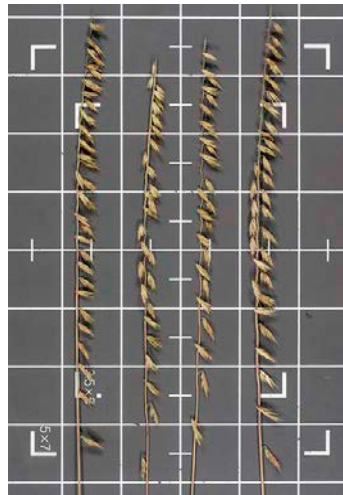


Photo: 9-19-17

Seeds dangle towards one side of the stem, typically pointing toward 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.

Common Wood Reed

Cinna arundinacea

POACEAE

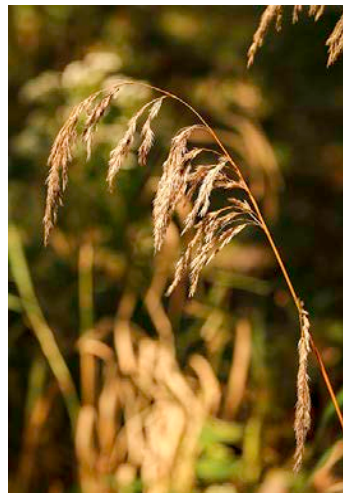


Photo: 9-20-17

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.



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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

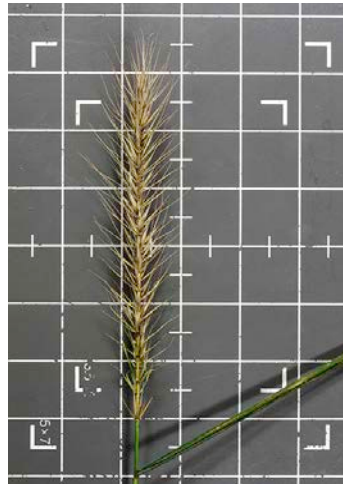


Photo: 9-30-17

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.

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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.

Sand Reed

Calamovilfa longifolia
var. *magna*

POACEAE



Photo: 10-2-20

Grows in Lake Michigan beaches. The pale empty glumes (the clamshell at the base of each spikelet) are left on the stalk after the seeds fall out. Seeds have long hairs, reaching more than 1/2 height of the seed. Sheaths are typically hairy, the ligule ('popped collar') is a hairy fringe, and lower sheaths are usually overlapping. Leaves are long, less than 12 mm wide, and the tips are skinny & rolled up.

Hairy Crabgrass

Digitaria sanguinalis

POACEAE

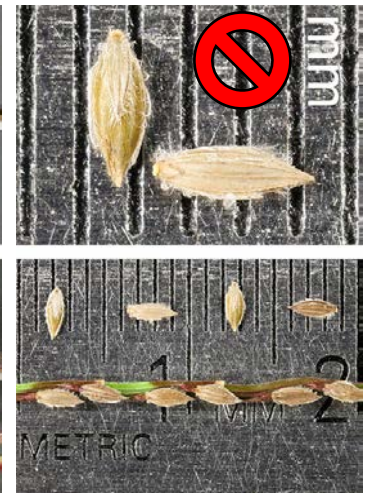
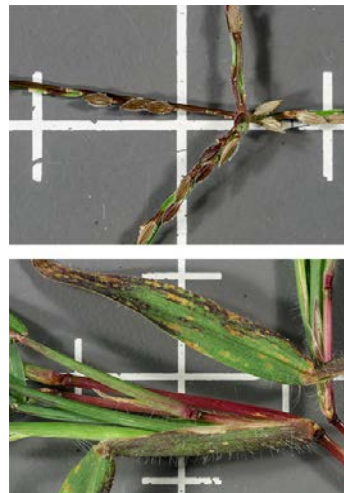


Photo: 10-11-19

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.



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Big Bluestem

Andropogon gerardii

POACEAE

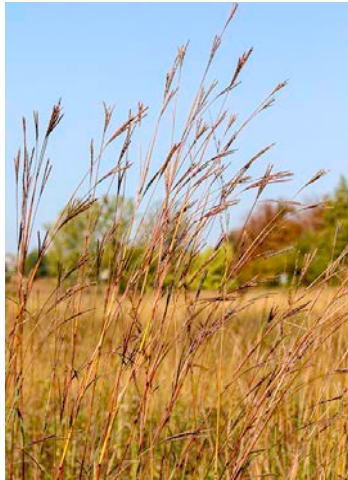


Photo: 10-9-17

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

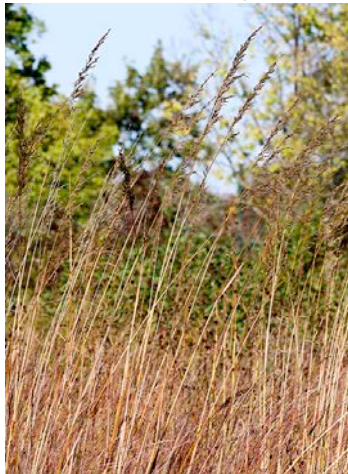


Photo: 10-9-17

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.

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 starry constellations on the prairie. Ripens sporadically – easily stripped by hand; return next week and more seeds will be ripe.



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Leafy Satin Grass

Muhlenbergia frondosa

POACEAE

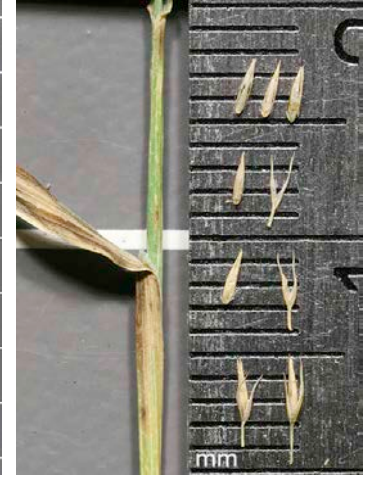


Photo: 10-16-17

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.

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.



Lake County, Illinois, USA

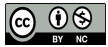
Lake County Seed Collection Guide

Fall Grasses and Kin

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Prairie Cordgrass

Spartina pectinata

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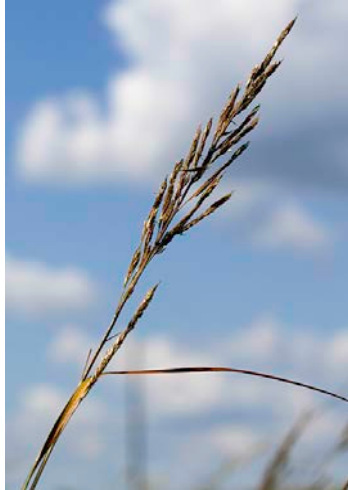


Photo: 10-18-19

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

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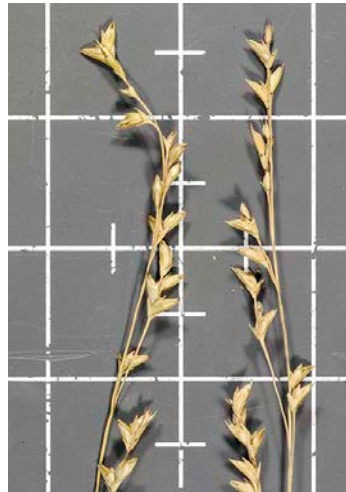


Photo: 10-24-19

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.