A Pocket Guide to *Kansas Flint Hills Wildflowers and Grasses*

By Iralee Barnard

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Annual Broomweed

Cover Photo:
Butterfly Milkweed
©Jim Mason

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The author poses with 12-foot roots of Indian Grass.

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Purple Coneflower

Introduction

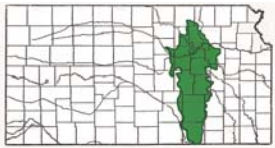
***T**he Flint Hills physiographic region stretches north and south nearly 200 miles through the eastern half of the state. It includes part of 20 counties and covers most of nine. The area is named for the chert or flint rock that covers the slopes. Because these rocky soils discouraged plowing, much of this region remains as native tallgrass prairie.*

Some 1,000 species of flowering plants and ferns are found in the Flint Hills, about half of the total for all of Kansas. They represent 110 plant families, the largest being the Aster Family with 145 species. Second largest is the Grass Family with approximately 125 species. With the changing seasons, the panorama of the landscape changes in both color and height. Bloom times shown for each species vary depending on latitude. Plants at the southern end of the Flint Hills will bloom sooner than those nearer Nebraska. The variety of distinctive wildflowers and grasses characterizes this unique ecosystem.

The Kansas Flint Hills hold the nation's last remaining expanses of tallgrass prairie. Prairie, a French word meaning "meadow," contains wildflowers and grasses that are not only beautiful but also serve many valuable ecological functions. Some of the benefits of native plants and plant species diversity include: 1) preventing soil erosion; 2) filtering percolating water through a network of perennial roots; 3) storing vast amounts of organic carbon that

Blue Wild-indigo *©Iralee Barnard*

would otherwise be oxidized to become a greenhouse gas; 4) providing food and habitat for wildlife; 5) providing excellent forage for livestock; 6) serving as a reservoir of useful herbs for potential medicinal plants; 7) adding beauty and color to our lives.



All of the plants in this guide except Sericea Lespedeza (see page 64) are native, which means they were here prior to European settlement. Since that time numerous plants have been introduced to the Great Plains from other parts of the world. Currently about 21 percent of the species of flowering plants and ferns in Kansas are introduced plants. Some are relatively innocuous, blending into the prairie ecosystem. Others are troublesome invaders, threatening the ecological integrity of the prairie.

Grazing and burning are traditions necessary to maintain prairie diversity, but excessive fire or grazing can be detrimental. Invasive species, indiscriminant use of herbicides and habitat fragmentation are the primary threats to Flint Hills native prairies.

The prairie is our home. It is the basis of our state's agricultural and ranching richness. It has much to offer and we still have much to learn about it. Enjoy and protect this irreplaceable legacy.

Leadplant

Amorpha canescens

©Jim Mason

■ *Leadplant*

Family/Longevity/Height: Bean/Perennial Shrub/2-4 feet

Description: This shrubby plant has leaves with 35-41 leaflets arranged alternately on the stem. Leaves are covered with soft hairs. Small, dark purple flowers are crowded on 2½-4-inch spikes.

Comments: The common name Leadplant and the species name *canescens* refer to the silvery-grey, lead-like appearance of the leaves. The genus name *Amorpha*, Greek for "deformed," refers to the flowers that have only one petal folded around the inner flower parts. The dried leaves were used for medicine and tea by the Plains Indians. Historically, Leadplant was extremely abundant on Kansas prairies. It is one of our most important native legumes. Roots can extend more than 15 feet into the soil. Leadplant is palatable to all classes of livestock. It grows in well-drained prairie soils and is found in the eastern three-quarters of the state.

Bloom Period: Jun | Jul

©Nancy Goulden

©Iralee Barnard

■ *Ground-plum Milk-vetch*

Ground-plum Milk-vetch

Astragalus crassicarpus

Family/Longevity/Height:
Bean/Perennial/6-8 inches

Description: Sprawling, stems have alternate leaves 2-4 inches long bearing 15-27 oval leaflets. The tubular, ¾-inch flowers are various shades of purple and are borne in clusters of as many as 24. Fruits, called legumes, are fleshy, smooth and round to 1 inch in diameter.

Comments: A large plant of Ground-plum Milk-vetch, also called "buffalo bean," can cover a 2-foot diameter area. The conspicuous fruits are succulent when young and edible raw or cooked. Fruits become deep-red as they mature. Cattle relish this plant, and it decreases in abundance in over-grazed native ranges. Ground-plum Milk-vetch is a characteristic species of well-drained, upland soil. It is found statewide but most commonly in the eastern half of Kansas.

Bloom Period:
Apr | May

©Iralee Barnard

©Iralee Barnard

Blue Wild-indigo

Baptisia australis

Family/Longevity/Height: Bean/Perennial/2-3 feet

Description: Stems and leaves are smooth and covered with a thin, whitish, waxy coating. Leaves are alternate and have three leaflets. Spreading branches are topped with an upright flower spike and large, pea-like blue to lavender flowers.

■ *Blue Wild-indigo*

Comments: While still standing, the entire plant turns black when it dries. The large seed pods are distinctive and conspicuous especially when black. Open a ripe seed pod, and you may not find seeds but possibly the larva of the wild indigo weevil. Blue Wild-indigo is avoided by cattle and deer because it is toxic. It is found in the eastern two-thirds of Kansas on open prairies. A related species, Plains Wild-indigo, has hairy leaves and stems and bears cream to yellow flowers that cascade from the sides of the plant.

Bloom Period: May | Jun

©David Welfelt

Wavy-leaf Thistle

Cirsium undulatum

■ *Wavy-leaf Thistle*

Family/Longevity/Height:
Aster/Biennial/2-3 feet

Description: Plants are erect with few branches. Stem and leaves are densely covered with matted white hair. Leaves are 4-12 inches long and deeply lobed with undulating edges armed with prickles. Purple to rose-lavender, thread-like, tubular flowers are crowded into single heads.

Comments: This native thistle is found statewide on upland prairies. The flowers are sweet-smelling and frequented by butterflies, bees and many other insects. American Goldfinches use the fluffy down from the seeds to line their nests. Cattle and horses will often nip the flower buds before they open. Wavy-leaf Thistle roots and stems are said to be tasty either cooked or raw after cleaning and removing spines. Tall Thistle is another native thistle sometimes mistaken for undesirable alien species.

Bloom Period:
Jun | Jul | Aug

©Kristen Hase

Purple Prairie-clover

Dalea purpurea

Family/Longevity/Height: Bean/Perennial/1-2 feet

Description: Many slender, upright stems grow from a single base. Leaves are ½-1½ inches long with five gland-dotted, narrow leaflets. Tiny, reddish-purple flowers open on a dense, cylindrical head.

Comments: This native legume is high in protein content and is eaten by domestic and wild grazers. Prairie-clover will decrease on heavily grazed native pastures. The flowers attract many insects including wasps, flies, beetles, skippers, green metallic bees, leaf-cutting bees and bumble bees. Purple Prairie-clover is host to a type of bee which requires the pollen of this plant only in order to develop properly. Like other legumes, prairie-clovers add nitrogen to the soil. Purple Prairie-clover is found throughout Kansas on rocky, open prairies. White Prairie-clover is a similar species with white flowers and somewhat larger leaves.

- *Purple Prairie-clover*

Bloom Period: Jun | Jul

©Iralee Barnard

©Chris Hase

■ *Dotted Gayfeather*

Dotted Gayfeather

Liatris punctata

Family/Longevity/Height:
Aster/Perennial/1-2 feet

Description: Several erect, stiff stems arise from a single, woody base. Narrow, gland-dotted, pointed leaves are numerous and spread along the stem. Densely crowded rose-purple flowers are produced in small, cylindrical heads at the ends of the stems.

Comments: Dotted Gayfeather is common on shallow soils nearly statewide. The flowers hold their color well when picked early and dried for winter bouquets. Gayfeather species are used by florists and are available from nurseries for home gardens. This deep-rooted plant is nutritious and palatable to livestock during early growth. It decreases in abundance on heavily grazed pastures. A closely related species, Rough Blazing-star, has button-like flower heads along the spike and is found only in the eastern half of Kansas.

Bloom Period:
Aug | Sep

©Jim Mason

Wild Bergamot Bee-balm

Monarda fistulosa

Family/Longevity/Height: Mint/Perennial/2-4 feet

Description: Toothed leaves are opposite on square upright stems. Lilac to rose-purple tubular flowers radiate from terminal heads that are surrounded by leafy bracts.

Comments: Wild Bergamot Bee-balm is dotted with glands that secrete aromatic oils. The citrusy fragrance is similar to that of bergamot oranges. Leaves make a pleasing but strong-tasting tea. Bumble bees, honey bees, hummingbird moths and butterflies are drawn to nectar found at the base of the flower tube. Recorded medicinal uses include relief from fever, sore throat, bronchitis, fungal infections and hookworms. Wild Bergamot Bee-balm grows along rocky ledges in open prairie in the eastern two-thirds of Kansas. Some species are cultivated as ornamentals.

- *Wild Bergamot Bee-balm*

Bloom Period: Jun | Jul

©Nancy Goulden

■ *Bread-root Scurf-pea*

Bread-root Scurf-pea

Pediomelum esculentum

Family/Longevity/Height:
Bean/Perennial/6-12 inches

Description: Single, hairy, erect stems arise from a tuberous root. Leaves alternate on the stem, each with five spreading leaflets. Flowers are blue-purple on spikes that stand out from the plant resembling a candelabra.

Comments: The swollen tap root of this plant, which may be as large as 2 inches in diameter, gives it the name "prairie turnip." The roots were collected in large quantities as food by the American Indians. Roots were eaten raw or cooked and dried to store for winter. As with several related plants, this scurf-pea distributes seeds by natural abscission. As the plant dries, the stem breaks away at the soil surface and the seeds are spread as the plant tumbles across the prairie. Bread-root Scurf-pea is found on upland prairies throughout Kansas.

Bloom Period:
May | **Jun**

©Iralee Barnard

■ *Wild Alfalfa*

Wild Alfalfa

Psoralidium tenuiflorum

Family/Longevity/Height:
Bean/Perennial/2-3 feet

Description: Erect stems support branching, spreading tops. Most leaves are composed of three leaflets. Small, blue or purplish flowers are clustered near the ends of branches with as many as 800 flower clusters on a single large plant.

Comments: Wild Alfalfa is widely but irregularly distributed. Thick stands give a distinct bluish hue to the landscape. This characteristic prairie plant has a branching root system that extends 6-10 feet into the soil. Because the roots of forbs vary in length, they draw nutrients from different soil levels and make them available to other plants. Bacterial nodules on the roots of Wild Alfalfa and other legumes produce nitrogen, which enriches the soil. Cattle will eat this plant only in early spring. Wild Alfalfa is locally common on prairies in the eastern half of the state.

Bloom Period:
Jun

©David Welfelt

■ *Fringe-leaf Ruellia*

Fringe-leaf Ruellia

Ruellia humilis

Family/Longevity/Height:
Acanthus/Perennial/6-12 inches

Description: Plants are covered with long, spreading hairs. Ovate leaves are opposite on slender, sprawling or ascending stems. Large, lavender, funnel-shaped flowers are usually solitary in the leaf axils.

Comments: The flowers of Fringe-leaf Ruellia are large and showy, but plants can be overlooked in dense prairie vegetation. Flowers tend to drop off easily when the plant is handled. Another name for this plant is "wild petunia" because of its resemblance to the garden plants. Plants are palatable to livestock. Caterpillars of the buckeye butterfly feed on the foliage. Plants are easily grown from seed. Fringe-leaf Ruellia can withstand extreme drought. It is found in the eastern half of Kansas and is common on upland prairies.

Bloom Period:
Jun | Jul

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■ *Blue Sage*

Blue Sage

Salvia azurea

Family/Longevity/Height:
Mint/Perennial/2-4 feet

Description: Stems are erect and square. Leaves are lance-shaped to linear and opposite. Showy blue, two-lipped flowers are borne on a spike at the top of the plant.

Comments: Long-tongued bees, especially bumble bees, use the broad lower lip as a landing platform. As it probes the flower tube for nectar, the bee pushes against the lower end of a see-saw-like structure containing pollen, causing the upper end of the see-saw to sweep down and deposit the pollen on the bee's back. Pollination occurs when the bee moves to another flower and pollen from the bee's back is brushed off onto the female part of the flower. The waving, blue flowers of Blue Sage are found in the eastern three-quarters of Kansas on upland prairies, roadsides and pastures.

Bloom Period:
Aug | **Sep**

©Bob Gress

■ *Ohio Spiderwort*

Ohio Spiderwort

Tradescantia ohiensis

Family/Longevity/Height:
Spiderwort/Perennial/2½-3½ feet

Description: Ohio Spiderwort is an upright plant with a bluish, waxy cast. Arched leaves are often 12 inches long. Flowers have three blue petals that wilt in the heat of the day.

Comments: Long, shining strings of juice produced when a stem is broken are reminiscent of a spider web, giving the spiderwort its name. It is also called "widow's tears" or "cow slobbers" because of this clear, stringy sap. Cattle find the plants palatable and nip them to the ground before they bloom. Heavy grazing eliminates spiderworts from pastures. Spiderworts are edible either raw in salads or cooked as a pot herb. The plants can be easily grown from seed. Ohio Spiderwort is found on open prairies throughout the eastern half of the state.

Bloom period:
May | **Jun**

©Eileen Horn

©Nancy Goulden

■ *Western Ironweed*

Western Ironweed

Vernonia baldwinii

Family/Longevity/Height:
Aster/Perennial/2-4 feet

Description: Short, dense hairs cover stiff woody stems. Leaves are oval or lance-shaped and up to 2 inches wide and 4 inches long. Leaves are alternate on the stem, hairy on the underside and toothed. Reddish-purple flowering heads are produced in flat-topped clusters.

Comments: Ironweed is named because of its toughness. It is bitter and not grazed upon by livestock. The chemical properties that impart the bitterness are the plant's defense against chewing insects, rodents and large grazing animals. Ironweed is a good rangeland indicator species. Ironweed will increase in abundance when the range is over-used but will decrease when management is improved. Swallowtails and sulphurs are among the butterfly visitors. Western Ironweed is found in pastures and roadsides statewide.

Bloom Period:
Jul | **Aug** | **Sep**

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■ *Illinois Tick-clover*

Illinois Tick-clover

Desmodium illinoense

Family/Longevity/Height:
Bean/Perennial/3-5 feet

Description: Stems are upright and glandular hairy. Leaves have three lance-shaped leaflets with undersides of hooked hairs and a conspicuous network of veins. Flowers are pea-shaped, pink fading to purple and borne on a tall stalk above the leaves.

Comments: The nearly round, flat, brown seed pods are tick-size and have hooked hairs that cling to clothing or fur, giving the plant the name "tick-clover." The "ticks" pictured are Hoary Tick-clover found in open woods and prairies. There are six similar species of tick-clover common in the Flint Hills. The seeds are food for upland game birds, and the plants are eaten by livestock. The deep roots add nitrogen to the soil. Illinois Tick-clover is found in upland prairies in the eastern half of Kansas.

Bloom Period:
Jul

©Bob Gress

©Jim Mason

Purple-coneflower

Echinacea angustifolia

■ *Purple-coneflower*

Family/Longevity/Height: Aster/Perennial/1-2 feet

Description: One to several stout, upright stems are covered with rough, spreading hairs. Leaf blades are roughly hairy with three prominent, parallel veins. Flower heads are solitary. Ray petals are 1½ inches long, purplish-pink and spreading with a dark spiny "cone" in the center.

Comments: This plant was used by the Plains Indians for medicinal purposes. The rootstock is known for its pain-reducing properties resulting in the common name, "toothache plant." This anesthetic quality was helpful with sore throat, stomach cramps, snakebite and all types of wounds. Recent studies conclude the plant produces an anti-inflammatory effect and stimulates the immune system. Purple-coneflower is favored by butterflies. It grows in the western three-quarters of Kansas on dry, upland prairies in rocky shallow soil. Pale Coneflower is a similar species with pale-pink, drooping petals.

Bloom Period:

Jun | Jul

©Iralee Barnard

©Bob Cress

■ *Rose Verbena*

Rose Verbena

Glandularia canadensis

Family/Longevity/Height:
Verbena/Perennial/6-12 inches

Description: Stems are spreading and branched. Leaves are ½-2 inches wide and 1-4 inches long, opposite, with irregularly cut margins. Tubular, five-lobed, rose-colored flowers are arranged in broad clusters.

Comments: Rose Verbena grows on rocky hillsides and roadsides in the eastern one-third of the state. Plants are low-growing and easily overlooked when not in flower. However, in bloom their bright, showy flowers cannot be missed. Most other closely related Flint Hills verbenas grow erect with narrow flower spikes. Hoary Vervain is a sturdy plant, growing 3 feet tall, which invades overgrazed pastures. Narrow-leaf Verbena is slender and delicate with spikes of pale blue-violet flowers.

Bloom Period:
Apr | May | Jun | Jul | Aug | Sep | Oct

©Iralee Barnard

©Iralee Barnard

Slender Bush-clover

Lespedeza virginica

■ *Slender Bush-clover*

Family/Longevity/Height:
Bean/Perennial/1½-2½ feet

Description: Stout, upright stems are branched above. Leaves are ½-1½ inches long, with three leaflets. Small, pink flowers are clustered at the top of the branches.

Comments: Slender Bush-clover has many ecological benefits in Flint Hills grasslands. It contributes protein to livestock forage, adds nitrogen to the soil and provides high quality food for wildlife. It can be confused with an undesirable alien species Sericea Lespedeza (page 64). The characteristics that distinguish Slender Bush-clover are: 1) plants are not so tall and thick they crowd out all other vegetation; 2) each leaflet is linear-oblong, widest in the middle, with branching veins; 3) flowers are pink to purple; 4) seed pods are larger, almost ¼ inch long.

Bloom Period:
Jun | **Jul** | **Aug** | **Sep**

©Kristen Hase

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■ *Cardinal Flower*

Cardinal Flower

Lobelia cardinalis

Family/Longevity/Height:
Bellflower/Perennial/2-4 feet

Description: Plants are erect and without hairs. Alternate leaves are lance-shaped with toothed margins. Tubular red flowers are two-lipped. The upper lip is two-lobed and the lower lip is three-lobed.

Comments: Although some parts are poisonous, this plant was used medicinally to treat nervous disorders, convulsions and asthma. The Cherokee used the roots to expel worms. The Ruby-throated Hummingbird is an important pollinator. Cardinal Flower is found nearly statewide and grows on wet hillsides, in draws or near running water. Blue Lobelia, a close relative with dark blue flowers, grows in similar open, wet habitats.

Bloom Period:
Aug | Sep | Oct

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©Iralee Barnard

■ *Cat-claw Sensitive-briar*

Cat-claw Sensitive-briar

Mimosa nuttallii

Family/Longevity/Height:
Bean/Perennial/1-1½ feet

Description: Stems are sprawling up to 2½ feet long and prickly. Leaves are 4 inches long and divided into many small, oblong leaflets. Flowers are in dense, ball-shaped, pink clusters and dotted with yellow pollen.

Comments: When the leaves of this plant are touched, they fold, thus the common name, "sensitive." Briar refers to the hooked prickles along the stem and fruit. The seed pods form in clusters and are long, slender, strongly ribbed and densely prickly. Sensitive-briar has high protein content and is relished by livestock. Cattle select this plant as a conditioner. Sensitive-briar is an important range condition indicator and considered a decreaser. Although usually rare in pastures, plants can be abundant in ungrazed meadows and prairie roadsides. Sensitive-briar is found on upland prairies and roadsides throughout the state.

Bloom Period:
Jun | Jul

©James Leiker

©Iralee Barnard

■ *Pink Smartweed*

Pink Smartweed

Persicaria bicornis

Family/Longevity/Height:
Buckwheat/Annual/2-4 feet

Description: Stems are smooth with many branches. Dark green leaves are 2-4 inches long, ½-1 inch wide and taper toward the tip. Small, pink flowers are clustered at the tips of the branches.

Comments: Smartweed fruits are produced in great quantity and are an important food for waterfowl and other wildlife. The pungent plant juices can irritate skin and eyes, causing a smarting sensation, which is the derivative for their common name. Another name is "knotweed" because of the swollen joints along the stem. Smartweeds are food for the larva of bronze copper butterflies. There are 18 related smartweed species in Kansas. Some of them have white flowers. Pink Smartweed grows in moist soil at pond margins, old buffalo wallows and in disturbed soils of wet ditches. It is found statewide.

Bloom Period:
Jul | Aug | Sep | Oct

©Nancy Goulden

©Nancy Goulden

■ *Annual Broomweed*

Annual Broomweed

Amphiachyris dracunculoides

Family/Longevity/Height:
Aster/Annual/1½-2½ feet

Description: Stems are single, woody at the base and branch freely at the top. Leaves are ½-2 inches long, narrow and drop early. Masses of tiny, yellow flowers cover the top of the bushy plant.

Comments: Broomweed is an excellent dye plant. By using different mordants, four strong colors result: rich brown, lemon yellow, vibrant orange and clear green. Few dye plants produce so many unique hues. As a pasture plant, Annual Broomweed is regarded as a weed. Cattle will not eat it and can get eye inflammation from the pollen. Large stands are often indicative of heavy grazing. Annual Broomweed is found on dry, disturbed, upland soils mostly in the eastern two-thirds of Kansas.

Bloom Period:
Aug | **Sep** | **Oct**

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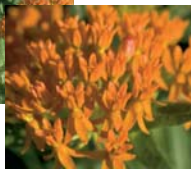

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■ *Butterfly Milkweed*

Butterfly Milkweed

Asclepias tuberosa

Family/Longevity/Height:
Milkweed/Perennial/1-2 feet

Description: Coarsely-hairy stems are upright and stout. Leaves are alternate and lance-shaped with coarse hairs. Yellow, orange or red-orange flowers are individually hour-glass shaped and clustered in showy heads.

Comments: Butterfly Milkweed has become a popular ornamental plant. Butterflies of all kinds perch on the flowers to sip nectar. The milkweed flower is highly specialized and unique. A vertical slit in the flower allows an insect's foot to slip inside. When the insect pulls its foot loose, it dislodges a saddlebag-like structure with two pollen sacs attached. The pollen, still attached to the insect's leg, is carried to the next plant and deposited when one of the pollen sacs slips inside the flower crevice. Butterfly Milkweed is found on prairies in the eastern two-thirds of Kansas.

Bloom Period:
Jun | **Jul**

©David Welfelt

■ *Maximilian's Sunflower*

Maximilian's Sunflower

Helianthus maximilianii

Family/Longevity/Height:
Aster/Perennial/3-6 feet

Description: Many tall, upright stems grow from a single base. Leaves have a rough surface, are usually folded lengthwise and curve down to a pointed tip. Flowers, with yellow ray petals and yellow center disks, are scattered along the upper half of the stem.

Comments: There are 11 species of sunflowers in Kansas, and nine occur in the Flint Hills. Maximilian's occurs in colonies and is prominent on heavier soils. Readily eaten by livestock, it is a desirable range plant and rare in most pastures. As with all the sunflowers, the seeds are an excellent wildlife food, supplying high quality protein for song birds and many small mammals. Maximilian's Sunflower is found in prairie hay meadows and along prairie roadsides statewide.

Bloom Period:
Aug | Sep | Oct

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■ *Long-beard Hawkweed*

Long-beard Hawkweed

Hieracium longipilum

Family/Longevity/Height:
Aster/Perennial/2-3½ feet

Description: Stems are upright, unbranched and covered with long, soft hairs. Large, oval leaves with conspicuous long, spreading hairs are crowded at the base of the stem. Tightly packed flower heads, borne at the top of wand-like stems, are pale yellow.

Comments: Hawkweed begins growth early in the spring. Rosettes of hairy leaves can be found in prairie hay meadows as early as March. Hawkweed leaves are a welcome sight when most other prairie plants are still dormant. The long hairs covering the leaves are soft to the touch. Hawkweed is never found in masses; instead, plants are widely scattered among the prairie grasses. Long-beard Hawkweed is found in the eastern half of the state on upland prairies.

Bloom Period:
Jul

©Irulee Barnard

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Grooved Flax

Linum sulcatum

■ *Grooved Flax*

Family/Longevity/Height:
Flax/Annual/1-2 feet

Description: Stems are erect, slender, woody at the base and branched at the top. Leaves are narrow and sharply pointed. Funnel-shaped, five-petaled flowers are yellow and loosely grouped at the tips of the branches.

Comments: "Grooved" refers to the longitudinally-furrowed branches. Petals fall from the flowers with only slight disturbance. A closely related species of *Linum* is cultivated as a source of linseed oil and fiber to make linen cloth. Grooved Flax is avoided by livestock because of its bitter taste. It has been used medicinally for several ailments including stomach distress, skin problems and as a topical astringent to treat burns and ulcers. Grooved Flax is widely distributed on uplands primarily in the eastern half of Kansas.

Bloom Period:
Jun | Jul

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■ *Carrot-leaf Wild Celery*

Carrot-leaf Wild Celery

Lomatium foeniculaceum

Family/Longevity/Height:
Parsley/Perennial/4-10 inches

Description: This plant is stemless. Leaves spread from the root crown. Leaves are triangular and finely dissected. Small, yellow flowers are crowded into broad heads.

Comments: This plant has a distinct, celery-like odor, and the leaves have a pronounced celery flavor. Prior to European settlement, the thick tap root of many species of *Lomatium* was highly prized in trading. The roots were eaten raw, baked, roasted and ground into meal and shaped into flat cakes. Carrot-leaf Wild Celery begins growth and reaches maturity in early spring. It is found in the eastern two-thirds of the state on prairie hillsides and rocky soils.

Bloom Period:
Apr | May

©Jim Mason

©David Welfelt

■ *Missouri Evening-primrose*

Missouri Evening-primrose

Oenothera macrocarpa

Family/Longevity/Height:
Evening-primrose/Perennial/8-12 inches

Description: Stems are spreading or ascending. Leaves are elliptic and can be up to 5 inches long. White, tightly pressed hairs on the surface give them a silvery appearance. Flowers are composed of four, large, yellow petals with a conspicuous, four-lobed, x-shaped stigma.

Comments: The name *macrocarpa*, meaning "large fruit," refers to the showy, 3-inch-long seed pods. The pods turn golden and shiny, with four wide wings that give pods a squared appearance when viewed on end. The flowers open in the evening and wither by noon of the following day. The flowers are pollinated at night by sphinx moths. Missouri Evening-primrose is found on shallow, rocky soil on prairies and bare roadside cuts in the eastern three-quarters of the state.

Bloom Period:
May | **Jun**

©Dwight Platt

■ *Plains Ragwort* ©Iralee Barnard

Plains Ragwort

Packera plattensis

Family/Longevity/Height:
Aster/Perennial/10-20 inches

Description: Stem is erect and branched above. Leaves are grouped mostly at the base and variable. Lower leaves are toothed, becoming smaller and more lobed above. Yellow-orange daisy-like flowers are grouped in a flat head at the top of the plant.

Comments: The ragged appearance of the leaves probably accounts for the common name used here. Ragworts and related plants have been used since ancient times to heal wounds and abscesses. American Indians eased the pains of childbirth with a preparation made from Plains Ragwort. Flies and small bees visit the flowers. Ragwort is avoided by cattle because of bitter-tasting chemicals produced by the plants. Plains Ragwort grows on open, upland prairies throughout most of the state.

Bloom Period:
Apr | May

©Jim Mason

©Ken Barnard

■ *Nuttall's Prairie-parsley*

Nuttall's Prairie-parsley

Polytaenia nuttallii

Family/Longevity/Height:
Parsley/Perennial/1-2½ feet

Description: Stem is erect and stout. Triangular leaves up to 6 inches long are heavily divided. Yellow to greenish-yellow flowers are small and crowded into domed heads.

Comments: The fruits of Nuttall's Prairie-parsley are oblong, flat, thick and corky. When mature, they are tan and resemble rolled oats. In early days, tea was made from the seeds to treat diarrhea. Nuttall's Prairie-parsley is found on upland prairies in the eastern one-third of Kansas.

Bloom Period:
May | **Jun**

©David Welfelt

©David Welfelt

■ *Compass Plant*

Compass Plant

Silphium laciniatum

Family/Longevity/Height:
Aster/Perennial/3-8 feet

Description: Upright stems are tall and stiff. Leaves are rough, leathery, deeply lobed and mostly at the base of the plant. Sunflower-like, yellow flowers are produced along the upper part of the stem.

Comments: The leaves are sometimes more than 1 foot in length and grow with edges aligned in a north-south direction, hence the common name. Another name, "rosinweed," refers to the gummy, resinous sap that appears when the stem is injured. When air dried, the sap was chewed as gum by American Indians. Prairie cicadas and Silphium beetles are specialist feeders of Compass Plant. This plant is an important range condition indicator; it is so sought after by cattle that it is rare in grazed pastures. It is locally common in prairie hay meadows and prairie roadsides in the eastern half of Kansas.

Bloom Period:
Jul | Aug

Missouri Goldenrod

Solidago missouriensis

©James Leiker

■ *Missouri Goldenrod*

Family/Longevity/Height: Aster/Perennial/1½-2 feet

Description: Upright stems are scattered in loose colonies among the grasses. Alternate leaves are lance-shaped and prominently three-veined. The small, yellow flowers are crowded into heads that curve to one side at the top of the plant.

Comments: The spherical galls commonly seen on goldenrod stems are caused by the goldenrod gall fly. The flowers are frequented by bees, butterflies, flies and beetles. Grasshoppers, moth larvae and leaf beetles feed on the foliage. These insect visitors are vital to the survival of newly hatched grassland birds. Many types of birds eat the goldenrod seeds. *Solidago* means "to make whole or sound," and attests to the medicinal properties of the plants. One of the earliest goldenrods to flower, Missouri Goldenrod is found on upland prairies statewide.

Bloom Period:

Aug | Sep | Oct

©Iralee Barnard

©Jim Mason

Tuberous Indian-plantain

Tuberous Indian-plantain

Arnoglossum plantagineum

Family/Longevity/Height:
Aster/Perennial/2-5 feet

Description: Stems are erect, smooth and grooved. Ovate leaves, mostly at the base of the plant, are thick and smooth with parallel veins. The flower heads are flat-topped with unusual looking white to cream-colored flowers.

Comments: It is hard to miss this plant standing tall above the grasses in June. The flower bracts are cylindrical and have winged ribs. The erect, brownish and yellow projections are the male and female flower parts. Below these and above the bracts are narrow, tightly-curled, petal lobes. The seeds are topped by a tuft of bristly hairs used for wind dispersal, which can scatter them great distances. Tuberous Indian-plantain prefers moist, clay soil but grows in a range of soil conditions on open prairies in the eastern half of Kansas.

Bloom Period:
Jun | Jul

©Eileen Horn

©Eileen Horn

Heath Aster

Heath Aster

Aster ericoides

Family/Longevity/Height:
Aster/Perennial/1-2½ feet

Description: Stems are thin, wiry and branched. Narrow, alternate leaves are ½-1 inch long. Masses of tiny, white, daisy-like flowers cover the plants late in the year.

Comments: *Aster* is the Greek word for "star." Heath Aster is the most common and hardiest of all the native asters. The tiny, daisy-like flowers are set so close together they look like white plumes. Heath Aster is palatable to livestock during early growth but becomes tough with maturity. Flowers are visited by a variety of wasps, bees, flies, beetles and butterflies. Heath Aster is found statewide on prairies, pastures and roadsides.

Bloom Period:
Sep | Oct

©Iralee Barnard

Pale Poppy-mallow

Pale Poppy-mallow

Callirhoe alcaeoides

Family/Longevity/Height:
Mallow/Perennial/8-12 inches

Description: Sprawling stems spread in all directions. Leaves are variable, sometimes triangular with scalloped edges but often deeply lobed. The five-petaled flowers are cup-shaped and white to pink.

Comments: *Callirhoe* is from the Greek meaning "beautiful," and is the name of an ocean nymph in Greek mythology. Cotton, hollyhocks and okra belong to the same family. The deep, thick taproot of the closely related Purple Poppy-mallow has long been cooked and eaten as a vegetable. Mallows are food plants for the larvae of gray hairstreak butterflies. Pale Poppy-mallow is common in the eastern half of Kansas on open prairies.

Bloom Period:
May | **Jun**

©Iralee Barnard

New Jersey Tea

New Jersey Tea

Ceanothus herbaceus

Family/Longevity/Height:
Buckthorn/Perennial Shrub/1½-2½ feet

Description: Woody stems are erect and many-branched. Leaves are alternate, oblong and prominently three-veined. White flowers with five, small, pipe-shaped petals (narrow at the base) are borne in round clusters at the branch tips.

Comments: As the name suggests, the leaves may be used to make a pleasing tea. The three-lobed fruits form in June and blacken with age. Seeds are eaten by birds. Plants are the larval host and nectar source for mottled duskywing butterflies. New Jersey Tea does not form thickets, but dense foliage provides shade, which is important to the survival of young grassland birds during summer heat. Often called "redroot," because of the root color, the roots fix atmospheric nitrogen, which makes it available to adjacent plants. New Jersey Tea grows on rocky upland slopes and ridges in the eastern two-thirds of Kansas.

Bloom Period:
Apr | May

©Iralee Barnard

©Bob Gress

Plains Larkspur

Plains Larkspur

Delphinium carolinianum

Family/Longevity/Height:
Buttercup/Perennial/2-4 feet

Description: Stems are stiffly erect. Leaves are deeply divided into narrow, finger-like lobes. White or bluish-white, spurred flowers are scattered along a tall, wand-like spike.

Comments: The petal-like projection from the back of the larkspur flower forms a hollow "spur" that suggests the long claw on a bird's foot. The lower two petals are bearded with long, white hairs. Larkspur lotion was once popular in American patent medicine for body lice. All parts of the plants are poisonous to humans and cattle, although sheep are not affected. Plains Larkspur is found statewide on open prairies.

Bloom Period:
May | Jun

©Iralee Barnard

©Iralee Barnard

■ *Illinois Bundleflower*

Illinois Bundleflower

Desmanthus illinoensis

Family/Longevity/Height:
Bean/Perennial/2-4 feet

Description: Stems are erect, branched and bushy. Alternate leaves are 2-4 inches long with many tiny, lance-shaped leaflets. Small, white flowers are crowded in spherical heads near the ends of the stems.

Comments: Illinois Bundleflower tolerates a wide range of soil conditions but is most common in moist soil statewide. The dark-brown, curved seed pods twist together forming a showy cluster. The pods stay on the plant into winter after the leaves have fallen. Bundleflower seeds provide high quality food for Northern Bobwhites, Greater Prairie-Chickens and other wildlife. This plant is a range condition indicator and is seldom seen in grazed pastures because of high palatability to livestock. It is locally abundant along roadsides and in ungrazed prairies.

Bloom Period:
Jul

©Mike Haddock

©Iralee Barnard

■ *Wedge-leaf Draba*

Wedge-leaf Draba

Draba cuneifolia

Family/Longevity/Height:
Mustard/Annual/3-6 inches

Description: Erect stems are slender and wiry. Leaves, produced mostly at the base of the plant, are coarsely toothed and covered with branched hairs. Flowers are four-petaled and white.

Comments: As is characteristic of the Mustard Family, draba flowers have four petals. The Wedge-leaf Draba fruits are narrow and held almost upright. When the ripe fruit capsules open, the tiny orange-brown seeds fall to the ground, leaving a thin, whitish tissue that is smaller but similar to the cultivated "silver dollar plant." Another relative is garden horseradish. One of our tiniest and earliest spring plants, Wedge-leaf Draba is found in dry, open soil on prairies in the eastern one-third of Kansas.

Bloom Period:
Mar | **Apr** | **May**

©Nancy Goulden

©Nancy Goulden

■ *Flowering Spurge*

Flowering Spurge

Euphorbia corollata

Family/Longevity/Height:
Spurge/Perennial/1-3 feet

Description: Stems are erect and diffusely branched above. Smooth margined, oblong leaves are alternate below and opposite above. Tiny flowers are surrounded by five, white, petal-like, cupped bracts.

Comments: A unique feature of the spurges is their "false" flowers. The apparent petals are really colored bracts. The flowers are tiny, borne in a cup-like structure and usually overlooked. The Christmas poinsettia, native to Mexico, is a spurge with showy, red, leafy bracts. Flowering Spurge blossoms attract mud daubers, paper wasps, spider wasps, flies and short-tongued bees. Seeds are eaten by Mourning Doves, Horned Larks and many other birds. Ants attracted to the edible appendage at the seed base help distribute the seeds. Flowering Spurge is found on upland prairies in the eastern half of Kansas.

Bloom Period:
Jul | Aug | Sep

©Eileen Horn

Snow-on-the-mountain

Snow-on-the-mountain

Euphorbia marginata

Family/Longevity/Height:
Spurge/Annual/1-3 feet

Description: Single stems are branched at the top. Leaves are oval-shaped, alternate on the stem and smooth. Flowers are small, white and surrounded by petal-like, white-margined bracts.

Comments: Considered weedy, Snow-on-the-mountain can be controlled by good range management practices. When picked or damaged, a milky juice flows from the plant. This substance can cause dermatitis and swelling. This sap is reported to cure warts. Cattle will not eat the plant, which is toxic. Snow-on-the-mountain is sometimes cultivated as an ornamental. It grows wild statewide in pastures and on roadsides, especially on disturbed sites.

Bloom Period:
Jul | Aug | Sep

©Iralee Barnard

©Nancy Goulden

Long-flower Butterfly-weed

Long-flower Butterfly-weed

Gaura longiflora

Family/Longevity/Height:
Evening-primrose/Annual/2-6 feet

Description: Erect, slender stems are branched above. Alternate leaves are elliptic in outline. Tubular, 1-inch flowers are white, becoming pink as the blossoms age.

Comments: On tall stems, flowers have the appearance of butterflies floating in the breeze. *Gaura* is from the Greek meaning "stately." Long-flower Butterfly-weed is pollinated by moths. It grows in the eastern one-third of the state along roadsides and in rocky, open prairies. Another common species, Velvety Gaura, has soft, wavy-edged leaves and small, rose-pink flowers.

Bloom Period:
Aug | Sep | Oct

©Iralee Barnard

©Iralee Barnard

American Licorice

American Licorice

Glycyrrhiza lepidota

Family/Longevity/Height:
Bean/Perennial/1½-3 feet

Description: Erect stems are mostly unbranched. Leaves are alternate with 11-19 oblong leaflets. Pea-like flowers are white to greenish.

Comments: American Licorice is found in prairies statewide and forms colonies from rhizomes. Fruits are reddish-brown burs with hooked spines, similar to cockleburs. Roots of licorice plants had many uses. Meriwether Lewis, on the 1804-1806 western expedition, reported the roots may be prepared by roasting and pounding slightly to produce an edible part with a flavor similar to sweet potato. Medicinally, the root was used in cough syrups. Commercial licorice flavoring is from a related European species.

Bloom Period:
Jun | Jul

©Phyllis Scherich

©Iralee Barnard

Round-head Bush-clover

Round-head Bush-clover

Lespedeza capitata

Family/Longevity/Height:
Bean/Perennial/2-4 feet

Description: Stems are stiffly erect. Leaves have three ovate leaflets that are 1-2 inches long. Small, cream to yellowish-white flowers are clustered at the tops of the plants.

Comments: Flowers are not showy. Mature clusters of persistent, reddish-brown, outer-flower "capsules" catch the eye. Leaves are often covered in fine, silvery hair, giving them a noticeable luster. This native legume produces high protein forage palatable to livestock. It is a decreaser on native ranges. Upland game birds, song birds and small mammals use the seeds for food. Caterpillars of the eastern tailed-blue butterfly feed on the foliage. Round-head Bush-clover grows on open prairies in the eastern half of Kansas.

Bloom Period:
Aug | Sep

©Nancy Goulden

Showy Evening-primrose

Showy Evening-primrose

Oenothera speciosa

Family/Longevity/Height:
Evening-primrose/Perennial/1-2 feet

Description: Stems are usually numerous and sprawling. Alternate leaves are oblong with slightly toothed to deeply lobed margins. Flower buds are nodding. Flowers have four, large, round white petals that fade to pink.

Comments: *Speciosa* means "glorious." Masses of the flowers along roadsides literally glow in the evening light. Flowers open in the evening and are pollinated by night-flying moths. The flowers fade by mid-morning. Plants are easy to grow in the garden and can be purchased from plant nurseries. Larvae of the white-lined sphinx moth eat the flower buds and leaves. The adults sip the nectar. Showy Evening-primrose is found primarily in the eastern half of the state along roadsides and on open prairies.

Bloom Period:
May | **Jun** | **Jul**

©Nancy Goulden

Cobaea Beardtongue

Cobaea Beardtongue

Penstemon cobaea

Family/Longevity/Height:
Figwort/Perennial/1-2 feet

Description: There may be one to several erect stems. Opposite, egg-shaped leaves are smooth and glossy with a pointed tip. Bell-shaped, white to lavender flowers are up to 2 inches long with purple stripes in the throat.

Comments: *Penstemon* means "five stamens." One stamen is sterile, bearded with a tuft of yellow hairs and projects from the flower throat, thus the name, "beardtongue." Another common name is "foxglove," because of its resemblance to *Digitalis*, the plant used to produce heart medicine. Eleven species of *Penstemon* occur in Kansas. New growth of Cobaea Beardtongue is eaten by livestock, especially sheep. It is found on prairie hillsides and rocky soil in the eastern two-thirds of Kansas.

Bloom Period:
May | **Jun**

©Jeff Hansen

©Bob Gress

Prairie Blue-eyed-grass

Prairie Blue-eyed-grass

Sisyrinchium campestre

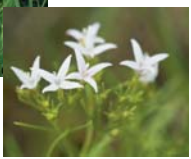
Family/Longevity/Height:
Iris/Perennial/6-10 inches

Description: Plants have a grass-like appearance. Leaves are flat and originate from short fibrous roots. Flower stalks arise from the ground. Flowers have six, pointed, white or pale blue tepals and are yellow at the center.

Comments: Although many members of this genus have deep blue flowers, in this species the flowers are pale blue or white. This plant has the appearance of a grass but is not a true grass. It is actually a member of the Iris Family. Examine the base of the plant to find the flat, spreading, fan-like arrangement of the leaves similar to the garden iris. Cattle avoid this species. Prairie Blue-eyed-grass grows on open prairies in the eastern half of the state.

Bloom Period:
Apr | May

©Iralee Barnard



©David Welfelt

■ *Narrow-leaf Bluet*

Narrow-leaf Bluet

Stenaria nigricans

Family/Longevity/Height:
Madder/Perennial/6-17 inches

Description: Many stems arise from the base. Opposite leaves are narrow and ½-1½ inches long. Small, funnel-shaped, white to bluish-white flowers with four spreading lobes are starry in appearance.

Comments: In Kansas there are few plants in the Madder Family, but it is a large family with over 6,000 species occurring nearly worldwide, with most found in the tropics. Coffee and quinine, the drug used to treat malaria, are the best known products of this family. Narrow-leaf Bluet is a hardy and widespread species. It is found throughout Kansas on rocky soils.

Bloom Period:
Jun | Jul

©Doug Wirtz

Flax-leaf Stenosiphon

Flax-leaf Stenosiphon

Stenosiphon linifolius

Family/Longevity/Height:
Evening-primrose/Biennial/3-6 feet

Description: Slender, erect plants are woody near the base. Leaves are narrow, about 2 inches long and often fall before flowering. Slender branches spread outward and are tipped with short clusters of white flowers.

Comments: The small bundles of delicate flowers, swaying in the breeze on nearly invisible stems, seem to defy gravity. At a distance, the bouncing, white flowers sometimes resemble popcorn popping. This is the only species in the genus of *Stenosiphon*. Its range includes five states in the central U.S. and northern Mexico. It is found on dry, rocky prairies throughout most of Kansas.

Bloom Period:
Aug | Sep

©Jim Mason

©David Welfelt

Nuttall's Death-camas

Nuttall's Death-camas

Toxicoscordion nuttallii

Family/Longevity/Height:
Lily/Perennial/1-2 feet

Description: Leaves arise from bulbs. Basal leaves are long, folded lengthwise, ½ inch wide and form a clump. Flower stalks, topped with greenish-white flower clusters, are erect from the center of the leaves.

Comments: All parts of the plant are poisonous to people and livestock. Plants and underground bulbs resemble wild onions but without the onion odor. Human poisonings have occurred from mistaking Nuttall's Death-camas for onions. Moth larvae of the *Eupithecia* genus feed exclusively on death-camas. They sequester the toxins for their own protection. Most animals avoid the plants. In May, after a spring pasture burn, few prairie plants are ungrazed, but one of them is death-camas. Nuttall's Death-camas is found on open prairies and rocky hillsides in the eastern one-third of Kansas.

Bloom Period:
May | **Jun**

©James Leiker

■ *Western Ragweed*

Western Ragweed

Ambrosia psilostachya

Family/Longevity/Height:
Aster/Perennial/1-2 feet

Description: Erect stems are branched. Leaves are deeply lobed and rough to the touch. Small, green flowers are inconspicuous. Male flowers, with yellow pollen, appear on stalks at the top of the stems. Female flowers are hidden in the axils of the upper leaves.

Comments: For people with hay-fever, ragweeds are a serious problem. Pollen, produced by the plants, is carried great distances by the wind. In pastures, ragweed is mostly ignored by cattle, but this plant has great ecological value for wildlife. Abundant and nutritious seeds remain available to wildlife throughout the winter. Moth larvae eat the foliage, as do numerous grasshopper species. These insects are important food for young grassland birds. Western Ragweed is common statewide.

Bloom Period:
Jul | Aug | Sep | Oct

©Iralee Barnard

White Sagewort

Artemisia ludoviciana

■ *White Sagewort*

Family/Longevity/ Height: Aster/Perennial/1-2 feet

Description: Erect stems and leaves are covered in woolly, white hairs. Leaves are alternate, lobed and highly variable in shape. Flowers are small and inconspicuous at the tops of the stems.

Comments: The crushed leaves of White Sagewort produce a sage-like aroma. *Artemisias* were believed to have magic powers and is still used in many of the Plains Indian rites and ceremonies. It is made into ceremonial tea. White Sagewort was also used to relieve a broad range of ailments. Branches can be dried and used in bouquets and wreaths. It is common in prairies nearly throughout the state.

Bloom Period: Aug | Sep

©Jim Mason

■ *Green Antelopehorn*

Green Antelopehorn

Asclepias viridis

Family/Longevity/Height:
Milkweed/Perennial/9-15 inches

Description: Stems are spreading. Leaves are ovate, 2-5 inches long and ½-2 inches wide. Large, five-parted, green flowers with purple centers are grouped at the tips of the stems.

Comments: Milkweeds get their name from the thick, white sap that oozes from the plant when broken. Most crawling or chewing insects have difficulty eating or living in the plants because even small punctures on the leaves or stem produce a gummy sap that hardens like glue. Soft, strong, bast fibers can be made into string, rope and nets, woven into fabric or made into paper. Milkweeds are the monarch butterfly larva's only food source. There are 22 species of milkweed in Kansas, and 11 occur in the Flint Hills. Green Antelopehorn is found on open prairies in the eastern two-thirds of the state.

Bloom Period:
May | Jun

©Bob Gress

©Bob Gress

Big Bluestem

Andropogon gerardii

■ *Big Bluestem*

Family/Longevity/Height:
Grass/Perennial/3-8 feet

Description: Stems are erect, round and often have a waxy, bluish color. Leaf blades are flat and sometimes inward rolled on the edges. Flower and seed heads are composed of 2-7 (usually three) 1½-4-inch-long branches.

Comments: The common name refers to the height and color of the stems. It is also called "turkey foot" due to the shape of the seed head and sometimes "beard grass" because of the white hairs within the seed heads. *Andropogon* means "man's beard" in reference to these white hairs. Big Bluestem is preferred by livestock over most other grasses. Because of the dominance and high forage value of this grass, the Flint Hills were once called the "bluestem pastures." After a fall frost, leaves turn shades of purplish-red. Big Bluestem grows statewide.

Bloom Period:
Jul | Aug | Sep | Oct

©Mike Haddock

©Iralee Barnard

Switch Grass

Panicum virgatum

■ *Switch Grass*

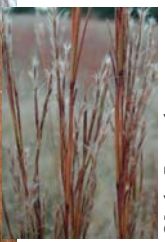
Family/Longevity/Height:
Grass/Perennial/3-6 feet

Description: Hollow stems arise from many scaly, creeping rhizomes. Bluish-green leaves are flat with a prominent midvein. Flowers are in diffusely branched pyramid-shaped heads 6-18 inches long.

Comments: When young, this grass provides good grazing, but as the stems become tough, their forage value decreases. Switch Grass produces high yields of hay. Seeds are eaten by many species of birds. Switch Grass plants make good winter cover for wildlife. Cultivars of this grass have been considered as a source of biofuel to replace gasoline. Plants turn shades of burnt-orange in the autumn after a frost. Switch Grass grows throughout Kansas.

Bloom Period:
Jul | Aug | Sep | Oct

©Barry Raugust



©Iralee Barnard

■ *Little Bluestem*

Little Bluestem

Schizachyrium scoparium

Family/Longevity/Height:
Grass/Perennial/2-3 feet

Description: Stems of this tufted bunchgrass are slightly flattened and purplish to bluish-green. Leaf blades are ⅛-¼ inch wide. Flowers and seeds are produced on numerous, short, spike-like branches along a slender stalk.

Comments: Big and Little Bluestem may constitute over 70 percent of the plant biomass in most native tallgrass prairies. Little Bluestem grows statewide on upland prairies. It starts growth in late spring. More than 20 species of skipper butterflies are common in the Flint Hills where Little Bluestem and other native grasses are necessary food sources for the larvae. Little Bluestem provides excellent cover for ground-nesting birds. Plants take on a pinkish-red cast in the fall. Little Bluestem was chosen as the official state grass of Kansas in 2010.

Bloom Period:
Aug | Sep

©Bob Gress

■ *Indian Grass*

Indian Grass

Sorghastrum nutans

Family/Longevity/Height:
Grass/Perennial/3-7 feet

Description: Plants form clumps from short, scaly rhizomes. Erect, hollow stems are unbranched and round. Leaves are wide, flat or somewhat keeled and constricted at the base. The flower heads are in dense, yellowish to tawny plumes, 8-12 inches long.

Comments: A major co-dominant with the bluestems, occasional flooding or burning increases the abundance of Indian Grass. Summer forage value is excellent, and it also provides fair forage for winter grazing. Indian Grass produces good hay if cut before maturity. Tall, golden, plume-topped stems are showy in dried arrangements. Indian Grass grows statewide in a variety of soil types.

Bloom Period:
Aug | Sep | Oct

©Iralee Barnard

©Mike Haddock

Prairie Cordgrass

Spartina pectinata

■ *Prairie Cordgrass*

Family/Longevity/Height:
Grass/Perennial/4-8 feet

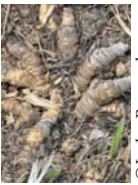
Description: Erect stems arise from tough, ⅜-inch thick spreading rhizomes that bind the soil. Leaf blades are flat and rough along the edges. Flower and seed heads have several 1½-4-inch-long branches arranged alternately in two rows parallel to the central spike.

Comments: In saturated soils, cordgrass grows in nearly pure stands. Because it forms dense colonies of tall vegetation, it is an important source of protective cover and nesting habitat for many wetland birds and other wildlife. Cordgrass prairie once covered thousands of acres along river lowlands and was cut for hay. Most cordgrass meadows have been plowed to grow annual crops. Prairie Cordgrass was used as roof thatch for Indian lodges and pioneer sod homes. It grows statewide in wet, clay soil.

Bloom Period:
Jul | Aug | Sep

©David Welfelt

©Iralee Barnard



©Iralee Barnard

■ *Eastern Gamma Grass*

Eastern Gamma Grass

Tripsacum dactyloides

Family/Longevity/Height:
Grass/Perennial/3-7 feet

Description: Stems are upright to spreading from thick, knotty rhizomes. Leaf blades are flat, ½-1 inch wide and smooth. Flower heads have 1-4 spike-like branches as long as 10 inches, with male flowers clustered above the female flowers.

Comments: Eastern Gamma Grass is a relative of cultivated corn. Teardrop-shaped seeds are hard, smooth and embedded along the lower flower branches. Seeds can be popped apart like beads. Most growth is in the spring. Eastern Gamma Grass makes excellent forage for all classes of livestock throughout the growing season but is not good for winter grazing. Rare in grazed pastures, it is locally common in hay meadows and along roadsides. It is most common in deep, moist soils throughout most of Kansas.

Bloom Period:
Jun | Jul

Sedges

Carex species

Sedges are perennial herbs often over-looked or mistaken for grasses. They differ from grasses in that "sedges have edges," which means the stem is triangular in cross-section, usually with three, well-defined edges seen and felt. Grass stems are round. When viewed from above, a sedge plant has three-ranked leaves, each leaf radiating from the stem approximately 120 degrees relative to the leaf below it. Grass leaves are two-ranked, each leaf radiating from the stem on the side opposite the leaf below it.

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Narrow-leaf Sedge, *Carex grisea* (forest and wet prairie)

Sedges comprise a large group of interesting and important species. Besides growing along edges of streams and ponds, they can be found in colonies on damp prairie slopes and low moist draws where they often compose a large portion of the vegetation.

Sedge fruits, called "achenes," are valuable food for wildlife, especially ducks and other waterfowl. Plants are used for food and

nest materials by beaver and muskrat. Sedge plants are important forage for livestock in native range and as hay. In the spring, deer seek out sedges as food.

Spikerush, umbrella sedge and bulrush are other large groups of grass-like plants that

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Mead's Sedge, *Carex meadii* (upland prairie)

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Bottle-brush Sedge, *Carex hystericina* (standing or running water)

belong to the Sedge Family. Some 30 species of *Carex* occur in the Flint Hills. They are most showy when fruit capsules ripen. A few ripen in early spring, but most mature in June. The different fruiting spikes in these photographs reveal the great variety in sedge species.

Invasive Plants

Many plants have been introduced to Kansas since the mid-1800s. Nearly 21 percent of the wild plant species growing in Kansas are considered introduced. Some of those species are invasive; aggressively competing with native plants, crowding them out and creating a monoculture.

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Sericea Lespedeza

Sericea Lespedeza

Lespedeza cuneata

Family/Longevity/Height: Bean/Perennial/2-5 feet

Description: Erect stems are many-branched. Leaves are alternate and crowded. Whitish, ¼-inch flowers are in small clusters in the leaf axils.

Comments: Sericea Lespedeza is one of the most troublesome invasive weeds in the Flint Hills Region. Once planted as a conservation plant for erosion control and as wildlife forage, it has

become a serious weed in the Flint Hills, interfering with natural ecosystem processes and decreasing plant species diversity. It is a perfect example of a species introduced with good intentions, but with unanticipated and severe consequences.

Sericea Lespedeza continues to spread. Accurate identification is important in recognizing and controlling invasive plants. There are seven native species of *Lespedeza* in Kansas. Sericea Lespedeza can easily be confused with desirable native plants, such as Slender Bush-clover (page 20) or Round-head Bush-clover (page 46).

These are the features to look for when identifying Sericea: 1) tall, bushy plants, often darker than surrounding vegetation; 2) each leaf has three leaflets and each leaflet is wedge shaped, narrow at the base and blunt at the tip with parallel veins; 3) small, pea-shaped flowers are white to cream with a purple splotch; 4) mature seed pods are brown, flat and oval in outline and less than ⅛ inch long.

Bloom Period:
Aug | Sep | Oct

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Round-head Bush-clover, Native

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Sericea Lespedeza, Invasive

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Slender Bush-clover, Native

References:

This booklet focuses on plant ecology, providing only brief descriptions of each plant. There are many excellent field guides, offering detailed descriptions, available at local book dealers and Kansas libraries. Reference lists and plant images are available at www.kansasnativeplantsociety.org and www.kswildflower.org. A few suggested references:

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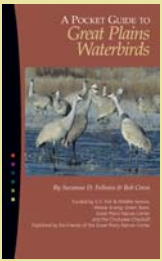

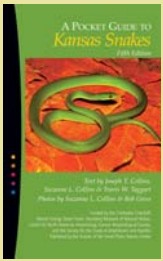

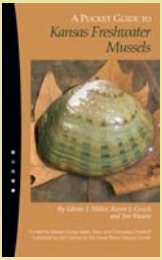

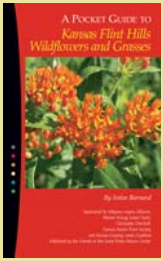

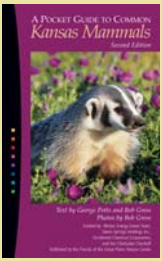

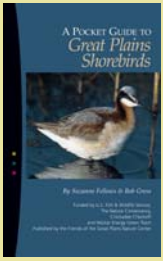

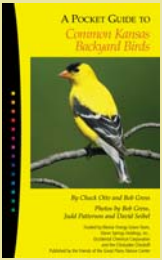

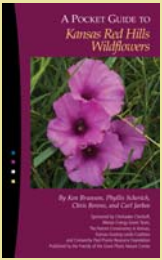

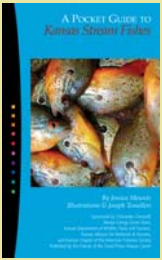

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Great Plains Nature Center

The Great Plains Nature Center is a cooperative project between the U.S. Fish and Wildlife Service, Kansas Department of Wildlife, Parks & Tourism, and the City of Wichita Department of Park and Recreation. The Nature Center features the Koch Habitat Hall, Owl's Nest gift shop, Coleman Auditorium, and 2 miles of Chisholm Creek Park nature trails. The Friends of the Great Plains Nature Center is a support organization formed to increase awareness and help sustain the Center's environmental education programs, organize and promote special events, recruit volunteers to assist staff, and raise funds for long-term viability. For more information visit the Great Plains Nature Center web site at www.gpnc.org. Please visit or contact us at Great Plains Nature Center, 6232 East 29th Street North, Wichita, KS 67220 or phone us at 316-683-5499.

Tallgrass Legacy Alliance

The Tallgrass Legacy Alliance (TLA) is a producer-driven, landscape-level initiative, designed for private landowners, with agency assistance, to manage the remaining Kansas tallgrass prairie in a manner that fiscally supports the ranching culture in an ecologically sound manner. The TLA's mission is to conserve and enhance the biological, economic and cultural well-being of the tallgrass prairie through a coalition of ranchers, agricultural and environmental organizations and public agencies. Visit the TLA website at www.tallgrasslegacy.org.

Westar Energy Green Team

Westar Energy, Inc. is the largest utility in Kansas serving nearly 681,000 customers with about 35,000 miles of transmission and distribution lines. Since 1989, their employees have operated an environmental team. The Green Team members volunteer hours to improve wildlife habitat through wetland creation and restoration and native grass and tree planting. They build bridges and trails and work to protect and reintroduce sensitive plant and animal species. The Green Team can be contacted at 785-575-8115 or brad_loveless@wr.com.

Chickadee Checkoff

The Chickadee Checkoff is a voluntary donation program for nongame projects sponsored by the Kansas Department of Wildlife, Parks & Tourism. Kansas taxpayers are able to contribute by assigning any amount they wish on the appropriate line on their individual state income tax form. Since 1980, the Chickadee Checkoff has distributed over $4 million to projects that help endangered species, assist in reintroduction efforts of sensitive species, support the popular Outdoor Wildlife Learning Sites program at schools and hundreds of other nongame conservation projects.

Kansas Native Plant Society

Kansas Native Plant Society (KNPS) was organized in 1978 with the mission to encourage awareness and appreciation of the native plants of Kansas. KNPS promotes many events and educational programs across the state. To find out more about KNPS field trips, quarterly newsletters and special programs, visit their website at www.kansasnativeplantsociety.org or write R.L. McGregor Herbarium, University of Kansas, 2045 Constant Ave, Lawrence, KS 66047-3729.

Kansas Grazing Lands Coalition

The Kansas Grazing Lands Coalition (KGLC) is a not-for-profit that holds educational events, and interacts with organized regional grazing groups such as the Tallgrass Legacy Alliance, Comanche Pool Prairie Resource Foundation, Kansas Graziers Association, and others to support local efforts to solve priority grassland issues. The Coalition helped birth the Kansas Prescribed Fire Council in 2008. Learn more by visiting www.kglc.org.

Iralee Barnard is a seasonal botanist at the Tallgrass Prairie National Preserve.