

**Garden of
Native
Prairie Plants**

**Botony and
Ethonobotony**

by Penny Dodd &
Marion Jankunis

From the earliest Cro-Magnon medicine woman, to the medieval monk with his physic garden, to today's naturopath, people have sought out plants for medicinal purposes. Perhaps less spiritual, but no less inquisitive and experimental, gardeners and gatherers from across the ages have dedicated much of their lives to finding plants that could be used for food, clothing, shelter and ornament. Certainly, nomadic people depended on the plants they could find in order to sustain themselves. Over the past twenty-five thousand years, the First Nations people of the prairie developed a knowledge and understanding of the local plants that could help or harm them.

The historic relationship between First Nations people and the plants they used was complex. Dr. Alex Johnston reports that the Blackfoot knew and used about one hundred and eighty-five species of plants for purposes of "religion and ceremony, crafts and folklore, birth control, medicines, horse medicines and diet." Many of these plants can be found in *The Garden of Native Prairie Plants*, created to commemorate the centenary of the Lethbridge and District Horticultural Society, on the grounds surrounding the Galt Museum & Archives.

The information presented here describes the plants in the Garden, along with their uses by First Nations people. If your interest has been piqued, acquire one of the books cited in the references below, and let your feet take you into the Garden, and then to the grasslands and the hills beyond to observe these plants in their natural environment.

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What's in a name?

To fully describe any particular plant, we can place it into the phylogenetic system devised by botanists. This system is as follows, in increasing order of group size:

- Species - the plants of a single type
- Genus - a group of related species
- Family - a group of related genera
- Order - a group of related families
- Class - a group of related orders
- Subdivision - a group of related classes
- Division - a group of related subdivisions

Placing *Geum triflorum* Pursh (three flowered avens) into this scheme would look like this:

- Species - triflorum
- Genus - Geum
- Family - Rosaceae
- Order - Rosales
- Class - Dicotyledoneae
- Subdivision - Angiospermae
- Division - Spermatophyta

Note that all of the group names, with the exception of the species, are capitalized, and that all group names are italicized. This is by convention. Also note that the person who first described the plant is credited after the botanical name. In the above example, this is Pursh. When referring to a particular plant in books or conversation, we often just use the genus and species designations, knowing that the other designations are implied.

The common name or names of a plant tend to be descriptive of some characteristic of the plant, and are not assigned scientifically. In the above example, the name, 'three flowered avens' refers to the usual appearance of clusters of three blossoms per stem in this species.

Shrubs and Vines

Amelanchier alnifolia

saskatoon



Photo by Penny Dodd



Photo by Marion Jankunis

Ethnobotany

This 1-4 m tall shrub forms colonies that are very common in coulees and open woodlands. In May it produces racemes of white flowers 8-12 mm across that by early summer have matured into a sweet and juicy berry-like fruit. Blue-purple with a bloom, or powdery coating, the fruit may be up to 10 mm in diameter.

According to Johnston, the saskatoon “was probably the most important vegetable food of the Blackfoot. The berries were used in great quantities in soups, stew, and meats, and were dried for winter use.” (38) Linda Kershaw claims that cakes of dried berries could weigh as much as 7 kg. (69) A favourite dessert of the Blackfoot people, reported by both Johnston (38) and Royer (56), was a mixture of berries with bison fat and blood.

Hungry Wolf reports its Blackfoot name is Real Berry, and that it had special significance because it ripened at “the time that many tribes gather traditionally for their annual encampments and ceremonials.” (12) So important was this food that the people moved their camps to areas of high production. Manyberries, in south-eastern Alberta, is an example of one such appropriately named location.

Because the wood is hard, heavy and quite straight, the saskatoon was also valued as material for arrows, pipe stems, basket rims and tipi closure pins. (Kershaw 69) Johnston describes the elaborate process used by the Blackfoot to turn saskatoon shoots into arrows; it required the use of sandstone and bison bone or horn to shape, polish and groove the wood. (38)

Botony

Growth habit and range: The saskatoon is a tall shrub to small tree growing to a height of 1 to 5 meters. This woody plant is common and found in open woods and coulee ravines throughout the province, often forming a thicket.

Description: The bark is dark brown and smooth on young shoots and greyish on older parts of the plant. The dark green leaves are alternate on the stems, measure 1 to 5 cm in length, and are simple and rounded in shape, with short serrations of the margin at the tip. In fall, the leaves turn orange or red.

The fragrant white flowers are borne in a raceme which appears in May or June. Each blossom measures 8-12 mm in diameter, and has 5 slender, curving petals and up to 20 yellow stamens. The sweet, red to purple berry-like pome fruits ripen in July. Each fruit measures up to 10 mm in diameter and contains many seeds. These fruits are high in iron and copper.

Artemisia cana
sagebrush



Photo by Penny Dodd

Ethnobotany

This inhabitant of dry hillsides and eroded slopes of the grasslands is a gnarled shrub, 30-150 cm tall. Johnston reports that its silver-grey hairy leaves, 1-3 cm long, were chewed to relieve thirst and that “a decoction of leaves was taken as a tonic and was said to be effective as a hair restorer.” (56)

Botony

Growth habit and range: Sagebrush is a common shrub with gnarled stems which grows to 30-150 cm in height. It occurs on dry sites throughout the prairies.

Description: The young bark is covered with silvery hairs, and the older bark is grey-brown and shredding in texture. The fragrant, grey-green leaves are alternate on the stems, are 1-3 cm in length and are linear to lanceolate in shape, with a smooth margin. Each leaf is covered with fine silvery hairs on the top and under surfaces. These hairs help to decrease moisture loss.

The small flowers are borne in a panicle in July and August, and are yellow in colour. Only tubular florets are present, and these are surrounded by greyish, hairy bracts. The fruit is a smooth, brown achene with yellow spots, measuring 1-2 mm in length.

Clematis ligusticifolia

western clematis



Photo by Penny Dodd

Ethnobotany

Clusters of small white flowers in June create a mound of white in coulees and ravines where this vine climbs, spreading 3-6 metres over fences, shrubs and trees. In late summer and fall, clusters of feathery seed heads develop that hang on the vines into the winter.

The sap of this plant contains a glycoside, ranunculin, that causes severe skin reactions in some people. (Kershaw 244) However, its bark is effective as a tea to treat fever, and its chewed leaves as a treatment for colds and sore throats. (Johnston 35)

Botony

Growth habit and range: This plant is a common, woody climbing vine up to 6 meters in length found growing over shrubs and trees in moist sites in the southern part of the province.

Description: The multiple stems are slender and covered with shredding, greyish-brown bark. The leaves are opposite on the stems, and are a dark green colour. Each leaf has a long stalk which helps to anchor the plant by twining around the stems of other plants. The leaves are divided into 5 deeply toothed leaflets, each measuring 5-6 cm in length and up to 2 cm in diameter. The leaf surfaces bear fine hairs.

The small (20 mm in diameter), white flowers appear in July and August. Each flower is comprised of 4 sepals, each measuring up to 15 mm in length. The flowers occur in panicles - male plants bear only staminate flowers, while female plants bear pistillate flowers with sterile stamens. The fruit is an achene having a long, feathery style measuring 2.5-5 cm long. The fruits form a fluffy head which persists into the winter.

Cornus sericea ssp. sericea
red osier dogwood



Photos by Penny Dodd

Ethnobotany

Common along riverbanks and in moist meadows, the 1-3 m tall shrub often has bright red bark. In June it produces clusters of flat topped white flowers that mature into white berries 4-6 mm across.

While juicy, the edible fruit is very bitter and sour, but according to Kershaw it was eaten fresh, sometimes mixed with sweeter fruit such as saskatoons, or dried for later use. (83) Johnston reports the inner bark was “made into a tea, and taken for various complaints.” (49) Kershaw clarifies: the tea treated digestive disorders because of its laxative effect, and analysis of the inner bark has shown it contains coronic acid, an analgesic. (83)

Johnston describes an elaborate procedure required to turn the inner bark into material that was added to tobacco. The outer bark was warmed and scraped off, then the inner bark peeled upward into curly clusters—still attached to the branch—six or eight inches long. The branch was then driven into the ground over hot coals, and the curls roasted until dry. Johnston further reports that one researcher into Blackfoot customs claims the Blackfoot did not use this tobacco additive. (49) As smoking material, the bark was said to be “both aromatic and pungent, and to have a narcotic effect that caused stupefaction.” (Kershaw 83)

Cornus sericea may have been complicit in another human vice. Johnston explains that gambling wheels were made by covering a circle of split beaver teeth with dogwood bark. (49)

Botony

Growth habit and range: Red osier dogwood is a common, multi-stemmed shrub growing to a height of up to 3 meters, which occurs in moist sites throughout the province. It often forms a thicket.

Description: This plant is notable for the smooth, red bark of young twigs, which becomes greyish and roughened on older stems. The leaves are a simple, oval shape, with a smooth margin, and they occur opposite each other on the stem. Each leaf measures 4-12 cm in length, and shows prominent, linear veins ending in a sharply pointed leaf tip, and a short leaf stalk. The leaf colour is dark green on the top surface, and lighter on the somewhat hairy under surface. In autumn, the foliage turns red to purple in colour.

The tiny, creamy to greenish flowers are borne in a flat-topped cluster measuring 2-5 cm in diameter in May and June. Each of the four sepals per flower is 2-3 mm in length. The flower center is yellow, with four white stamens. The fruits are white to green or blue-tinged, berry-like drupes each measuring 6-9 mm in diameter. One or two seeds are produced per fruit. The fruits have a bitter taste, but are edible.

Crataegus chrysocarpa
fireberry hawthorn

Photograph not currently available.

Ethnobotany

This shrub or small tree reaches 1-5 m in height, and has many stout thorns, 2-7 cm long, along its branches. Clusters of white flowers in May mature into red or orange berry-like pomes about 1 cm across—like very small apples. The fruits, called haws, and the spines on the branches are combined in the common name—hawthorn

Kershaw describes the haws as edible but seedy, mealy and tasteless. First Nations people ate them fresh, dried or added to pemmican. The fruit contains compounds that affect blood pressure and heart rate. (64)

Royer and Dickinson report that “native peoples made probes, awls and fish hooks from the sharp spines....” (57)

Botony

Growth habit and range: This is a somewhat common, round headed, heavily branched shrub or small tree growing to 1-5 meters in height. It is found on coulees, open woods and river valleys in the prairie and aspen parkland of the southern portion of the province.

Description: The twigs of this plant have a unique zig-zag configuration. The branches bear slender, sharp thorns each measuring up to 7 cm in length. Older bark is grey and has a shredding texture. The leaves are dark green, somewhat shiny, simple and alternate on the stems. The under surface of the leaves tends to be somewhat hairy, particularly along the veins. The leaves are 2.5-5 cm in width and may be divided into 3-4 lobes. The leaf margin is double-toothed.

The flowers occur in May, June and July, and are held in clusters at the ends of the branches. Each flower is comprised of five 8 mm long petals of white, yellow or pink colour, 5 green sepals, and 5-25 yellow stamens. The fruit is a red to orange, berry-like pome called a ‘haw’, which measures about 1 cm in diameter. Many large seeds are contained in this apple-like fruit.

Elaeagnus commutata
wolf willow, silverberry



Photos by Penny Dodd

Ethnobotany

In late May and early June, the small yellow flowers of this grey-leaved, 1-4 m tall shrub, perfume the air with a fragrance reminiscent of jasmine. The wood, however, is not good for a campfire: when burned, it gives off an odour of human excrement.

The mature fruits are dry and mealy, and the Blackfoot used them as food only in times of famine. (Johnston 46) The fruit is very similar to the fruit of its relative, the Russian olive, a non-native invasive tree. The seed is a relatively large, elongated, ribbed pit. Kershaw explains how decorative beads were made by boiling the fruits to remove the pulp, and, "while the seeds were still soft, a hole was made through each. They were threaded, dried oiled and polished." (86)

Hungry Wolf explains further that, to finish the beads, fat was put in a fire, and the strung beads were held in the greasy smoke until they turned black. Then they were polished to a dark, shiny finish with a piece of soft buckskin. (7)

Botony

Growth habit and range: This common shrub occurs on moist plains, ravines and coulees, especially in the southern part of the province. It shows an erect to spreading growth habit to a height of up to 4 meters, and often forms a spreading colony.

Description: The young bark shows rust-coloured to silvery scales, and the older bark is grey-brown in colour. The leaves are up to 10 cm in length, a simple oblong shape, occur alternately on the stem, and are silvery-green in colour. The margin is smooth, but the leaf contour is somewhat wavy. The leaf tip is blunt to pointed, and there is a short leaf stalk.

The strongly aromatic flowers occur in groups of 3 or 4 in the leaf axils or at the base of the current years' twig growth in May and June. Each tubular flower measures up to 15 mm in length and has four lobes which are yellow inside and silver coloured on the outside. Four stamens are present, but there are no petals. The fruits are a grey-green, mealy, berry-like drupe measuring 10-12 mm in length. The fruit contains a single, stony seed.

Prunus virginiana
chokecherry



Photos by Penny Dodd

Ethnobotany

A small tree or shrub up to 6 m tall, the chokecherry is very common in ravines and open woodlands throughout the prairies. White flowers in a dense cylindrical raceme 5-15 cm long mature to astringent purple black fruit.

Europeans turn these fruit into jelly and country wine, but the Blackfoot had many uses for the whole plant. Like saskatoon berries, the "berries were used in soups, stews, eaten raw, or pounded stones and all, and mixed with pemmican....The bark was boiled and the decoction, with sweet cicely and valerian, was used in the treatment of dysentery...[and the] dried inner bark ...[was boiled and] drunk while warm to cure a cold." (Johnston 39) Johnston also reports that "the dried root was chewed and placed in wounds to stop bleeding." (39)

According to Hungry Wolf, chokecherry wood also had important uses. It is hard, and was used for pipe stems, tipi pegs and arrows. As it does not absorb water once it is dry, it makes a good in rain or snow. (10-11)

Botony

Growth habit and range: This common, spreading shrub or small tree is found in moist, protected ravines and open woodlands throughout all but the most northern areas of the province. It grows to a height of 2-6 meters.

Description: The younger bark is smooth and red-brown in colour. Older bark is greyish and rough. The dark green leaves are obovate or oval in shape, tapering to a sharp tip. The leaf margin is finely toothed. Each leaf is held on a 5-15 mm petiole (leaf stalk) and measures 6-10 cm in length.

The fragrant flowers appear in May and June and are borne in dense, pendulous, cylindrical racemes measuring 5-15 cm in length. Each flower measures 1 cm in diameter and is held on a 4-8 mm long pedicel. Each of the five petals is white to cream in colour and 2-4 mm in length. The stamens are yellow-tipped and number 20-25 per flower. The fruit is a small, dark purple, shiny, berry-like drupe measuring 8-10 mm in diameter. Each fruit contains a single large stone-like seed. The fruits are edible but have a sour taste. The fruit may be used to make wine, jelly and syrup.

Rhus trilobata
skunkbush



Photos by Penny Dodd

Ethnobotony

On south facing coulee slopes or river banks, this small shrub (1-2 meters high), has dense clusters of small yellow flowers at the end of its branches in May before any leaves appear. The flowers have a faint but unpleasant odour, hence the common name. The fruit that develops is an orange red-berry, 5-6 mm in diameter, lightly covered with sticky hairs.

The fruit is strongly acidic tasting, but Royer and Dickinson claim the berries “can be eaten raw or cooked and can serve as an emergency survival food in winter.” They also say the leaves were mixed with tobacco. (66)

Both Kershaw (79) and Hungry Wolf (6) report its use to make a black dye. The leaves were boiled to create the dye, and the wood ash was used to set the dye. Kershaw mentions other uses of the twigs. They were woven into sun shades or hats, or shaped into an owl that, when hung near the top of the tipi, would move with the flow of air. Mothers used this to scare their children into good behaviour—a type of First Nations boogiemer. (79)

Johnston reports one desperate and futile use of *Rhus trilobata* by the Blackfoot: “The dried berries were ground and dusted on the pustules of smallpox....” (42)

Botony

Growth habit and range: This is a somewhat common shrub found on exposed, south-facing hillsides on the prairies, and stream banks in the southern half of the province. It is a heavily branched, spreading plant which grows to a height of 1-2 meters.

Description: The young bark is reddish and slightly hairy, and becomes greyish and smoother with age. The green leaves are alternate on the stems and measure up to 7

cm in length. The petiole is long and reddish coloured, and the under surface of the leaf is pale green in colour. The leaf is three-lobed, and displays a rounded to shallowly scalloped margin on each of the fan to wedge-shaped leaflets. The leaves have a faint scent which has been likened to that of a skunk by some, and lemonade by others. In autumn, the leaves turn purple to red.

The flowers are tiny and occur in terminal clusters near the tips of the branches before the leaves appear in spring (mid May). Each flower displays 5 yellowish petals, 5 united sepals and 5 stamens. The flowers too are malodorous. The fruit is a round, shiny red to orange berry-like drupe measuring 5-8 mm in length. Each fruit contains a single, flattened, yellowish seed measuring about 5mm in diameter.

Ribes aureum
golden currant



Photo by Marion Jankunis



Photo by Penny Dodd

Ethnobotany

The common name of this 1-2 m tall shrub refers to the showy red-tipped yellow blossoms that smell strongly of cloves. Unlike other currants, the stems of the golden currant lack spines. The tart, juicy fruit ripens in July, and may vary from pale yellow to shades of red or black. It is often speckled with tiny yellow bristles.

The pectin-rich fruits make excellent jam and jelly, as well as wine. Van Bruggen reports that the Sioux used them in pemmican, and that probably other tribes used them similarly. (20)

Botony

Growth habit and range: This is a somewhat uncommon, heavily branched, rounded to erect shrub growing to 1-2 meters in height, which is found in moist sites in the southern-most parts of the province.

Description: The young bark is reddish and smooth to hairy in texture. Older bark becomes smooth and grey. The leaves are fleshy and pale, yellowish green in colour, with three wedge-shaped lobes and a smooth, ovoid to shallowly scalloped margin to each leaflet. The leaves measure 2-5 cm long and wide and are held on a petiole.

The flowers have a clove like scent and occur in ascending or hanging racemes in May and June. Each tubular flower is about 1 cm in length and displays five spreading tan-yellow petals at the distal end. Often, the petals are orange-tipped. The fruit is a black, red or yellow berry measuring up to 8 mm in diameter. The remnant of the flower persists at the distal tip of each berry. Each fruit contains several small seeds.

Rosa arkansana

prairie rose

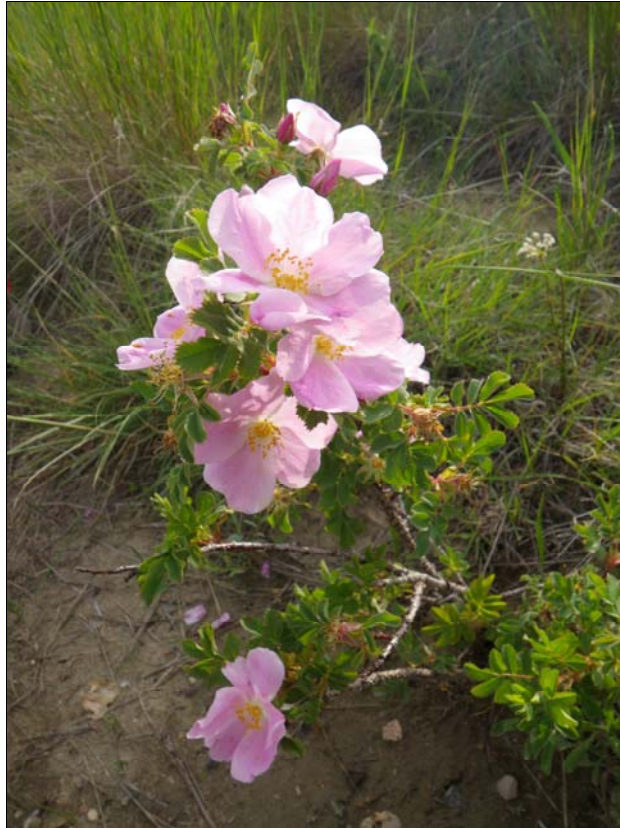


Photo by Marion Jankunis



Photo by Penny Dodd

Ethnobotany

Most parts of the rose are edible—flower buds, petals, young leaves—but the hips are most nutritious. An analysis of the composition of rose hips revealed that 100 grams of hips contained 69,550 International Units of vitamin A (Johnston 42), and three hips can contain as much vitamin C as an orange. (Kershaw 72) Because the hips are so seedy, and the seeds are covered with hairs that can cause digestive irritation (i.e. an itchy bum), some tribes considered rose hips famine food. (Kershaw 72)

Hungry Wolf explains that cooked hips mixed with fat were one of a baby's first solid foods, and that rose hip soup was considered a good soup for children. (12)

Botony

Growth habit and range: This is a common, low shrub growing to a height of 20-30 cm. It occurs on hills and other well-drained, open sites on the prairies throughout the province.

Description: The bark is red-brown in colour and densely covered with prickles. The leaves are dark green and pinnately compound. The leaflets number 9-11 per leaf, are usually smooth and shiny, and measure 2-5 cm in length. The flowers appear in June and July and occur in corymbs of 2 or 3 flowers. Each blossom displays five broad, white to light pink to dark pink petals which measure 1.5-2.5 cm in length. Five sepals and numerous yellow stamens are also present. The fruit is a rounded, dull orange to red structure called a 'hip' which contains a number of hairy, dry achenes. The petals and hips are high in vitamins A and C, calcium, phosphorus and iron and are used to make tea.

Symphoricarpos albus
snowberry



Photos by Penny Dodd

Ethnobotany

This 30-75 cm tall shrub spreads by suckers to form a low thicket in moist areas. Two or three pale pink, bell-shaped flowers occur in small clusters at the end of stems and in the axils of the greyish green leaves. The waxy, white 6-10 mm berry-like fruit give this plant its common name.

This plant contains an alkaloid, and the fruit is considered inedible. Some First Nations people said the fruits “were the ghosts of saskatoons, part of the spirit world and not to be eaten by the living.” (Kershaw 239)

Johnston reports that the twigs made arrow shafts, and the shrubs were used as brooms. (55)

Botony

Growth habit and range: This is a common, erect, heavily branched shrub growing to a height of 50-150 cm, and spreading to form a dense thicket. It is found in dry open woodlands, on hillsides and in coulees, ravines and river valleys of the aspen parkland and prairies.

Description: The young bark is green to light reddish in colour, and this matures to a grey-brown colour. Older bark has a shredding texture. The 3-6 cm long leaves are simple and opposite each other on the stems. The uppermost surface of the leaf is a deep grey-green colour, occasionally with a purplish tinge, while the under surface is

paler green, with hairy veins. The leaf shape is a broad oblong and the margin varies from smooth to wavy to lobed.

The flowers appear in June and July and occur in small clusters at the tips of the branches and in the leaf axils. Each flower is an urn-shaped, light pink structure measuring 4-10 mm in length. The flower shows 4-5 lobes at the tip and five united sepals. Four or 5 stamens and a single hairy style protrude from the flower. The fruit is a white berry-like drupe with a greenish tinge, measuring 6-10 mm in length. The fruits are densely clustered, turn a purple colour in the autumn, and often persist on the shrub over winter. The fruits are believed to be poisonous.

Wildflowers

Allium cernuum
nodding onion



Photo by Penny Dodd

Ethnobotany

On dry slopes, the cluster of pinkish white flowers nods at the end of a round stem 10-50 cm tall. When crushed, the leaves and stalks smell strongly of onion.

Johnston reports the nodding onion and its relatives, prairie onion and wild chives, were all used by the Blackfoot. Gathered in May and June, they were eaten raw, cooked with meat, or dried for future use. He also relates Captain Meriwether Lewis' reaction to the prairie onion in western Montana: "I met with great quantities of a small [sic] onion

about the size of a musquit [sic] ball and some even larger; they were crisp, white and well flavoured. I gathered about half a bushel of them before the crews arrived.' " (23)

Botony

To be added soon

Allium textile
prairie onion



Photo by Penny Dodd

Ethnobotany

Found on the dry prairie, at 5-25 cm tall with white to pale pink flowers, the prairie onion is a small cousin to the nodding onion. The bulb's mesh-like outer covering gave rise to its species name *textile*.

Wilkinson cautions that eating too much prairie onion can cause stomach upset ⁽¹⁵⁾, but the "great quantities of small onion" that Captain Meriwether Lewis collected was, in fact, *Allium textile*. (Johnston 23)

This plant is not currently in the garden, but we hope it is coming soon.

Botony

To be added soon.

Anemone multifida
cut-leaved anemone, windflower



Photo by Penny Dodd

Ethnobotany

The leaves of the windflower look very similar to those of the prairie crocus, and both grow in the same habitat. The plant may be from 15-50 cm tall with solitary flowers that are usually white or pink and from 12-20 mm across. They have five petal-like sepals, and look like a simple flower. The rounded seed head matures into a cottony mass.

According to Johnston, “the ‘cotton’ from the ripe seed heads was burned on hot coals and the smoke was inhaled for headaches.” (35)

Botony

To be added soon.

Antennaria parvifolia

pussytoes



Photo by Marion Jankunis



Photo by Penny Dodd



Photo by Marion Jankunis

Ethnobotany

The common name of this plant accurately describes the white blossoms; they feel soft and rounded like the pads of a kitten's foot. The flowering stems, mostly less than 15 cm tall, grow out of the dense spreading mat of small grey leaves.

No ethnobotanical use of this plant is recorded. However, Wilkinson reports the closely related species, *Antennaria rosea*, which has pink or rose coloured flower heads, were used by the Blackfoot. Children chewed the leaves for their favour, and they were incorporated into tobacco mixtures. (241)

Botony

Growth habit and range: This plant is a common, mat-forming perennial found on dry, open sites throughout the prairies. It grows to a height of 15-25 cm.

Description: The leaves are basal and spatulate in shape, measuring 1.5 cm in length. The leaves are light grey-green in colour and are densely covered with fine hairs. The stems are upright, bear a few smaller, linear stem leaves and a small cluster of flowers at the tip. Each flower is comprised of whitish disk (tubular) florets and tan bracts. Male and female flowers occur on separate plants. The bloom time is June to July. The fruit is a dry, bristly achene measuring 1-1.5 mm in length.

Artemisia frigida

silver sage, pasture sage



Photo by Penny Dodd

Ethnobotany

Common on the grasslands, this perennial has a woody base, but the new growth is soft and silky. Its silver grey foliage is very aromatic when handled. Growing 15-50 cm high, the stalks end with inconspicuous yellow flowers borne in loose racemes.

According to Wilkinson, the Blackfoot made a smudgy fire of the green plants to repel mosquitoes, and placed branches under the bedding to discourage bedbugs. (246) Johnston reports a less obvious use. He writes, "The Cheyenne knew the species as *He-e-wa'-nost* or woman's weed, as it was used by the women during the period of their menses as a tea....The name, *Kaksamis* or she sage, suggests that Blackfoot women used it for the same purpose." (56) Hungry Wolf adds that its most important use was as a menstrual pad (18), and that it was crushed and rubbed on as a deodorant. (7) He identifies one other use in personal hygiene: its leaves, being soft, were also "the most common form of 'toilet paper' in primitive times." (18)

Johnston also reports its use as a medical treatment for ailments ranging from mountain fever to heartburn to colds and coughs, and its use in Blackfoot religious ritual. (56)

Botony

Growth habit and range: This plant is an upright perennial herb with a somewhat woody base which is commonly found on open sites throughout the prairie and aspen parkland regions. It grows to a height of 15-50 cm.

Description: The soft, grey-green leaves occur alternately on the stem, are 1-3 cm long and divided two to three times into linear segments. The silvery leaf colour is due to the many dense, fine hairs that cover the surface. A sage-like scent is emitted when the leaves are touched. The flowers are small and yellowish in colour, and are borne in racemes on the upper stems from July to September. Only 2-3 mm long disk florets are present, and these are covered by hairy bracts measuring 2-4 mm in length. The fruit is a smooth, yellow to brown achene measuring about 1 mm in length.

Asclepias speciosa
showy milkweed



Photo by Marion Jankunis



Photo by Penny Dodd

Ethnobotany

Showy milkweed is well named: its purple-pink flowers are displayed near the end of tall stalks in round clusters 5-7 cm across, and a white sticky juice pours out if its stems or leaves are wounded. The dramatic seed pods are soft, large (7-10 cm) ovals that release seeds dispersed by the wind on long silky hairs.

Milkweed is a favourite food of monarch butterfly larvae. The toxin cardiac glycoside from the plant concentrates in both larvae and adult butterflies, and protects them from predators. Even taking a bite of a monarch's wing will result in the predator vomiting.

Despite its toxicity, the plant is edible if it is boiled in fresh water, using two or three changes of water. Very small stalks (10-15 cm tall) can "be used like asparagus and firm young pods...like okra." (Kershaw 146) Kindscher reports that "sometimes [a tribe] stayed on the prairies during their western hunting and gathering trips long enough to eat the delicious young pods." (56)

The plant has many medicinal uses. According to Wilkinson, "Alberta's Blood tribe used an extract from the plant as a poultice on swellings. (187) Kershaw reports additional medicinal uses. The milky sap was used to treat skin problems—cuts, burns, infections, ringworm and even warts and calluses. The root, both fresh and powdered, was taken as a sedative, and used for digestive disorders, intestinal worms, kidney problems,

rheumatism, asthma, venereal disease and as a contraceptive. Seeds were used to draw poison from snakebite or added to salves to treat sores. Kershaw reports the “dried juice from broken stems provided chewing gum.” (146) And, according to Kindscher, “the dried pods served as spoons.” (56)

Botony

To be added soon.

Astragalus bisulcatus

two-grooved milk-vetch

Photograph not currently available.

Ethnobotony

No ethnobotanical use of this plant is recorded.

Botony

This many stemmed plant may grow to 60 cm in height with several stalks per stem. The deep purple-blue flowers form a dense, narrow and blunt-topped mass at the top of each stem. The common name refers to the smooth seed pod that has two grooves on its top. This is one of the milk-vetches that contains a toxic alkaloid, and accumulates selenium when it grows in alkali soil. It can be fatally poisonous to livestock that eat it.

This plant is not currently in the garden, but we hope it is coming soon.

Astragalus crassicarpus
ground plum



Photos by Marion Jankunis

Ethnobotony

The 20-35 cm stems of ground plum sprawl across the dry grassland. Its leaves are composed of many leaflets that are smooth on top and hairy below. Typical sweet-pea type flowers are white with the keel, or bottom portion of the flower, having a purple tinge. The seeds are in distinctive, round pods 15-25 mm across

These pods become dark purplish-brown and hard as they mature, but when they are young they are red and fleshy. According to Johnston, these "fleshy pods were eaten both raw and boiled." (39) Jennings reports the boiled roots were "used as a toothpaste, and as treatment for insect bites. The dried and powdered roots were used as a coagulant to stop bleeding."⁽¹⁶⁸⁾

Botony

To be added soon.

Astragalus drummondii
Drummond's milk-vetch

Photograph not currently available.

Ethnobotany

No ethnobotanical use of this plant is recorded.

Botony

This plant has many stems 30-60 cm high, and each produces three or four stalks of drooping white flowers about 2 cm long. The dark grey-green leaflets number 25-30 per leaf, and are densely hairy on the bottom, but smooth on top.

Astragalus gilviflorus
cushion milk-vetch



Photo by Marion Jankunis

Ethnobotany

The leaves of this mat-forming plant are a distinguishing feature—they are compound, with three leaflets, like a clover. The leaves are clustered thickly around the base of short-stemmed white flowers, partially obscuring the pea-shaped blossoms.

Royer and Dickinson report that the dry seed pods are “great noisemakers”, and were used as ceremonial rattles by people of the First Nations. (235)

Botony

Will be added soon.

Astragalus laxmannii var. *robustior* (syn. *A. striatus*)
ascending milk-vetch

Photograph not currently available.

Ethnobotany

According to Wilkinson, "The long roots of some milk-vetch species were eaten by some North American natives." (109)

Botony

This erect or spreading perennial with its grey-green leaves may be up to 40 cm tall. Its round cluster of flowers can be white or pale reddish to purple.

Astragalus pectinatus
narrow-leaved milk-vetch



Photo by Penny Dodd

Ethnobotony

No ethnobotanical use of this plant is recorded.

Botony

This plant has several stems that grow from one clump. The stems may be 30-40 cm long, but they are partly lodged, and reach upward about 15-20 cm. The cream-white flowers form clusters at the end of the stalks. The leaves of this milk-vetch are distinctive—they are numerous, narrow linear leaflets 2-6 cm long.

This is another of the milk-vetches that contains a toxic alkaloid, and accumulates selenium when it grows in alkali soil. It can be toxic to livestock that eat it.

This plant is not currently in the garden, but we hope it is coming soon.

Campanula rotundifolia

harebell



Photo by Penny Dodd

Ethnobotany

With a nodding, bell-shaped blue blossom at the end of a slender stem, typically 20-35 cm tall, the harebell blooms in July and August. It grows on grassy slopes and open areas. One of over two hundred and fifty *Campanula* species worldwide, this particular one is the famous “bluebell of Scotland”. The milky white sap of the plant is easily observed by plucking a single leaf-tip.

The Cree people dried the roots of harebell to use as a compress to stop bleeding and reduce swelling. The roots were chewed to relieve heart ailments. (Royer and Dickinson 363)

Botony

Growth habit and range: Harebell is a common, upright perennial herb with multiple stems which can be found throughout the prairies on moist to dry sites. This plant grows to a height of 10-50 cm.

Description: The basal leaves are few in number, occur on a long stalk, are rounded in shape, and measure 10-25 mm long. The stem leaves are linear to oblong and 1-5 cm in length. The flowers are borne in a nodding, terminal raceme of 3 or 4 flowers, are blue in colour and bell-shaped. The 5 pointed petals of each flower are joined to form the bell-shaped corolla. Each blossom measures 15-25 mm in length and is associated with a shiny green calyx at its' base. Flowering time is June to September. The fruit is a papery capsule measuring up to 1 cm in length. This structure contains the many shiny, brown seeds.

Comandra umbellata

pale comandra



Photo by Penny Dodd

Ethnobotony

According to Wilkinson, some First Nations people ate the raw berry, and children sucked the nectar from the flowers. (48) However, the fruit may cause nausea

Botony

This plant of dry open grasslands grows 15-25 cm tall. It is semi-parasitic: its roots attach themselves to other plants from which they obtain water and nutrients. The round terminal clusters of cream or pinkish flowers form in May and June. The sepals of each flower are partly fused, creating ball shaped blossoms. The fruit is a round, hard, olive-green berry with one large seed.

This plant is not currently in the garden, but we hope it is coming soon.

Coryphantha vivipara
ball cactus, pincushion cactus



Photo by Marion Jankunis



Photo by Penny Dodd

Ethnobotany

This inhabitant of the dry prairie forms spiny cushions 3-20 cm across. It can produce flowers when the plant is so small that its blossom is bigger than it is. Flowers are purple-red, and 3-5 cm across. In fall the ripe fruit becomes sweet and juicy and reminiscent of

kiwi. They are especially sweet after a light frost, and anyone who has ever eaten one knows that First Nations people would have found them a tasty treat, too.

Botony

Growth habit and range: This is a low growing, cushion-like plant which is commonly found on south-facing hillsides and open sites in the southeastern portion of the province.

Description: This succulent plant displays stout, thick stems or cylindrical tubercles from which arise a cluster of 3-8 red-brown, radiating, main spines, each measuring 12-20 mm in length, and 10-20 smaller, and more slender, marginal spines. The tubercles function as stems and the spines are modified leaves.

The flowers arise between the tubercles and each measures 3-5 cm in diameter. Each flower is comprised of many fuchsia to deep red petals, many greenish sepals and many central, yellow stamens. The flowers appear from June to August, but each blossom lasts only one or two days. The fruit is a green, grape-like berry measuring 1-2 cm in length, which ripens in late September and is edible. The berry contains many small (1-2 mm), brown seeds.

Dalea candida
white prairie clover



Photo by Marion Jankunis

Ethnobotany

This low growing, often prostrate, plant has narrow leaves, and dense, cylindrical flower spikes at the end of the flowering stalks.

Wilkinson reports that prairie-clover was used by the Blackfoot. The leaves were bruised, steeped in water and applied to wounds, and were made into tea and potions to prevent disease. (121)

Botony

Growth habit and range: This herbaceous perennial plant shows an erect growth habit, and is common on dry sites in the southern half of the province. This plant grows to a height of 25-50 cm and it is multi-stemmed.

Description: The smooth leaves are grey-green in colour, pinnately compound and comprised of 5-9 linear to oblong, blunt leaflets, each measuring 5-15 mm in length. The flowers appear from June to August, and occur on the stem tips. The blossoms are clustered on a thick, cylindrical head measuring up to 5 cm in length. Flowering proceeds from the bottom of the head upward. Each white flower measures just 4-6 mm in length, and the protruding stamens are yellow. The fruit is a 3-4 mm long pod which contains one or two brown seeds.

Dalea purpurea
purple prairie clover



Photo by Marion Jankunis

Ethnobotany

This low growing plant has narrow leaves, and dense, cylindrical flower spikes at the end of the flowering stalks.

Wilkinson reports that prairie-clover was used by the Blackfoot. The leaves were bruised, steeped in water and applied to wounds, and were made into tea and potions to prevent disease. (121)

Botony

Growth habit and range: Unlike white prairie clover, this plant often shows a prostrate to decumbent growth habit. It is also common on dry sites in the southern portion of the province. This plant grows to a height of up 25-50 cm and it is multistemmed.

Description: The smooth leaves are grey-green in colour, pinnately compound and comprised of 3-5 linear leaflets, each measuring 5-15 mm in length. The flowers appear from June to August, and are clustered on a 5 cm, cylindrical head at the stem tip. Flowering proceeds from the bottom of the head upward. Each fuchsia to purple flower measures just 4-6 mm in length, and the protruding stamens are yellow. The fruit is a 3-4 mm long pod which contains one or two brown seeds.

Erigeron caespitosus

tufted fleabane



Photo by Marion Jankunis

Ethnobotany

This deep-rooted perennial forms small tufts, or clumps, of basal grey-green leaves and many stems 10-30 cm tall. The flower heads, one to three or four per stem, are 2-3 cm across with many (up to one hundred) narrow, white ray florets that look like thin petals around a yellow centre.

According to Wilkinson, the plant contains volatile, turpentine-like oil, and “the smoke of burned plants is said to repel gnats and fleas.” (259) Perhaps this is an explanation for the common name. She further reports “the liquid from the boiled roots and leaves was used to treat many ailments such as rheumatism, haemorrhoids and gonorrhoea. The Cree boiled the plant and drank the resulting tea as a diarrhea remedy.” (259)

Botony

Growth habit and range: This is a tufted, herbaceous perennial which occurs on dry sites and hillsides of the southern portion of the province. This erect plant grows to a height of 10-30 cm.

Description: The leaves of this plant are grey-green in colour, and hairy and have a smooth margin and three longitudinal veins. The basal leaves are stalked, oblong to lanceolate in shape, and 2.5-7 cm in length, while the stem leaves have no stalk and are smaller and linear to oblong in shape.

The daisy-like flowers appear from June to August and are borne singly or in small numbers at the stem tips. Each flower measures up to 2.5 cm in diameter and is comprised of 60-90 white (or sometimes blue or pink) ray florets each 5-15 mm in length and 1-2.5 mm wide, and a central cluster of yellow disk florets. Three to 4 series of bracts surround the base of each flower. The fruit is an achene, measuring 1-2 mm in length, which has a bristly pappus.

Erigeron compositus
compound fleabane



Photo by Marion Jankunis



Photo by Penny Dodd

Ethnobotany

No ethnobotanical use of this plant is recorded.

The flowers of this small plant are very similar to those of the tufted fleabane (*Erigeron caespitosus*), but sometimes the blossoms have just the yellow central disk florets without the white ray florets. Also this plant is usually shorter, being only 5-15 cm tall. The distinctive feature of compound fleabane is its finely divided leaves.

Botony

Growth habit and range: This is a somewhat uncommon, low, tufted perennial herb which is found on hillsides and dry sites on the prairies. This plant grows to a height of 2-15 cm.

Description: The grey-green, hairy leaves are predominantly basal in location, and are divided into 3 linear lobes. The flowers appear from June to August and are borne singly at the stem tips. Each flower measures 10-15 mm in diameter and is composed of 60-90 white (rarely blue or pink) ray florets and a central cluster of yellow disk florets. Sometimes, the ray florets are absent. Three to 4 series of bracts surround the base of each flower. The fruit is an achene with a bristly pappus. The seed itself measures 1-2 mm in length.

Fragaria virginiana
wild strawberry

Photograph not currently available.

Ethnobotony

Look for small white blossoms, later bright red fruit, on runners that spread across the ground. They grow best in gravelly soil. The scientific name *Fragaria* means fragrant, and refers to the smell of the ripe fruit. Anyone who has eaten the small red berries knows the wild fruit is delicious, with much more flavour than domestic fruit.

The fruit was highly prized by all First Nations people, and “the Dakota even called their lunar month corresponding to June *Wazhushtecha-hu* or the moon when strawberries are ripe.” (Kindscher 117) Johnston reports the Hand Hills in Alberta were called *Oht-tchis-tchis*, or Strawberry Hills, by the Blackfoot. (38)

As the fruit is very juicy, many researchers claim it was only used fresh. But Kindscher reports that, “the artist George Catlin, after visiting the Mandan in 1832...stated that: ‘Great quantities of wild fruit of different kinds are dried and laid away in Store for the winter season, such as buffalo berries, service berries, strawberries, and wild plums.’” (117)

Johnston (38) and Wilkinson (101) report the leaves, both fresh and dried, were infused into a tea, and the roots were used as a diarrhea remedy.

Botony

Will be added soon.

Fritillaria pudica
yellow bell



Photo by Marion Jankunis

Ethnobotony

Blooming in early spring, this charming little flower is well described by its common name. The blossom, up to 35 mm long by 10 mm wide, nods at the top of 10-30 cm tall stems.

Although many members of the lily family are poisonous, the fleshy bulbs and tiny bulblets (which have been called 'root rice') are edible either raw or cooked. First Nations

people collected them in early spring and used them fresh, or dried them for winter use.
(Kershaw 109)

This plant is not currently in the garden, but we hope it is coming soon

Botony

To be added soon.

Gaillardia aristata

blanket flower



Photo by Marion Jankunis



Photo by Penny Dodd

Ethnobotany

Large, bright yellow flowers, surrounding a central disk of crimson, are showy at the ends of 20-60 cm stems. What appear to be petals are actually individual flowers called ray florets. This member of the daisy family blooms from June to August across the prairies on dry hillsides and in open areas.

First Nations people across western Canada used this plant. As reported by Wilkinson, "The Alberta Stoney people drank a tea of gaillardia to relieve menstrual problems, and the Blackfoot used the root to treat human gastroenteritis and saddle sores in horses. The Okanagan steeped the whole plant in water to treat venereal diseases." (261)

Botony

Growth habit and range: This plant is an erect, herbaceous perennial which is commonly found on dry, open sites throughout the southern portion of the province. Gaillardia grows to a height of 20-60 cm.

Description: This plant exhibits coarsely hairy stems and leaves. The basal leaves are stalked, oblong to spatulate in shape, 5-12 cm in length, and occasionally are shallowly

and incompletely divided into lobes. The stem leaves lack stalks and are smaller in size. The flowers are borne singly at the stem tips, and are 3-7 cm in diameter, daisy-like blooms. Each flower is comprised of 10-18, wedge shaped yellow ray florets measuring 1-3 cm in length, which display 3 apical lobes and a reddish or purplish base, and a central, rounded cluster of red to purple disk florets. The fruit is a three-sided achene covered by papery scales.

Gaura coccinea
scarlet butterfly weed



Photo by Marion Jankunis

Ethnobotany

According to Royer and Dickinson, "Plains tribes used this plant to treat burns, inflammations and general body pains." (277)

Botony

This slender, 10-30 cm tall, flower is not very showy because the blossoms are small and open only one or two at a time. Also, it fully opens only at night. Typical of night blooming flowers, which are pollinated by moths, the protruding stamens are conspicuous and, in this plant, red-tipped.

This plant is not currently in the garden, but we hope it is coming soon.

Geum triflorum

three-flowered aven, prairie smoke



Photos by Marion Jankunis

Ethnobotany

On the dry open prairie, the stem rises 20-40 cm above basal leaves, and supports three nodding, purplish-pink flowers. By late June, the seed-heads have formed erect clusters of feathery styles. Large patches of these plants that have gone to seed look like a smoky haze drifting across the prairie, hence their common name, prairie smoke.

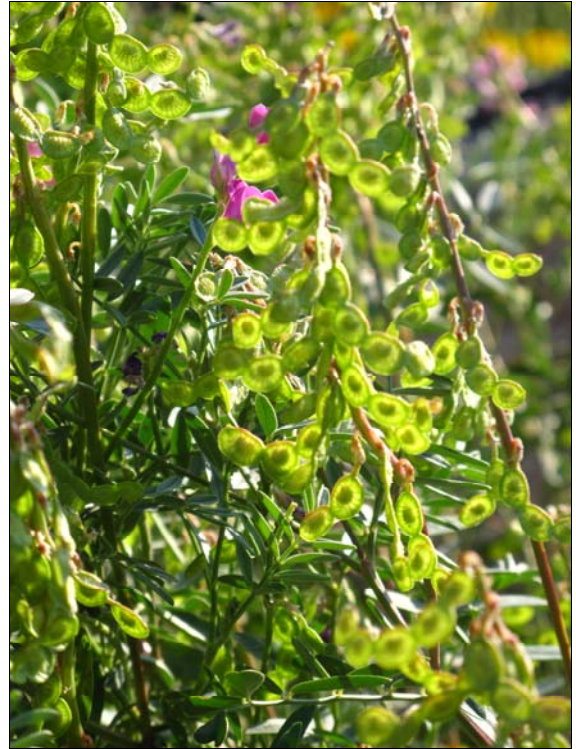
The roots, ripe seeds and dried leaves were used by the First Nations people. A decoction made from the boiled roots was used to treat sore or swollen eyes; the aromatic oils from the crushed seeds were used for perfume, and dried leaves were mixed with other medicines and used as a tonic. (Johnston 39)

Botony

Growth habit and range: This is an erect perennial herb which is commonly found on open prairie sites. This plant grows to a height of 15-40 cm.

Description: The 15-20 cm long leaves are basal, pinnately compound, and bright green in colour. The alternate, wedge-shaped leaflets are narrowly toothed. The flowers appear in spring (mid-May to July) and are usually borne in groups of three (but may occur singly or in groups of up to 5) atop a slender reddish stem. A few small stem leaves are often present. Each upright to nodding flower measures 12-20 mm in diameter, and displays purplish sepals and small pink to yellowish petals. The fruit is an achene with a 2-5 cm long, feathery style.

Hedysarum boreale
northern hedysarum



Photos by Penny Dodd

Ethnobotany

Three species of *Hedysarum* grow on the prairies. They are sometimes referred to as sweet-vetch or sweet-broom. Typically, their pea-like flowers grow in long slender wand-like clusters. Northern hedysarum's reddish purple flowers often grow in one sided clusters up to 15 cm long. When they go to seed, the pod-like fruit is in segments with one seed in each segment.

Kershaw reports that the roots of some species were an important food for many First Nations people. Young roots have a sweet licorice flavour if eaten raw, and taste like carrots if cooked. (134)

Wilkinson cautions that the roots of this species are "extremely poisonous." (115) But Kershaw offers this explanation for the plant's reputation:

In 1852, Sir John Richardson, an Arctic explorer, reported that all of his men who mistook northern sweet-vetch for the edible alpine sweet-vetch became ill. However, this story appears to be the only reference to the plant's toxicity. It is possible that toxicity varies with location, but this case of poisoning could also have resulted from confusion with another similar-looking plant, such as locoweed. (135)

Botony

Growth habit and range: This is an erect to decumbent, perennial herbaceous plant which is occasionally found in moist sites in prairies and ravines. This plant grows to a height of 20-50 cm.

Description: The stems are thin and weak. The leaves are alternate, pinnately compound and comprised of hairy, ovoid leaflets which number 9-13 per leaf. Flowering occurs in June and July. The pea-like flowers are borne in a 15 cm terminal raceme of 12-20 individual flowers which are red-purple in colour and are somewhat reflexed or drooping. Each flower measures 12-15 mm in length. The fruit is a smooth pod measuring 2-3 cm in length which is divided into a number of compartments called 'loments' by constrictions between the seeds. The seeds are dark coloured, kidney-shaped and up to 3 mm in length. The roots of this plant are poisonous.

Hymenoxys richardsonii
Colorado rubber plant



Photo by Marion Jankunis

Ethnobotany

This plant's common name likely originates in the milky latex secreted by its roots. A distinguishing feature is the mostly basal leaves that are divided into three to seven narrow segments. The flowers, about 2 cm across, form a flat topped yellow cluster.

Wilkinson reports, "The Blood used this plant to treat headaches, colds and liver ailments, to colour arrow shafts and to fix dyed materials." (272)

Botony

Will be added soon.

Liatris punctata
dotted blazing star



Photo by Marion Jankunis

Ethnobotany

A late summer splash of pinkish-purple on a dry, sandy hillside, or even the edge of a gravel road, draws attention to the dotted blazing star flower. The plant grows as a clump, 10-30 cm tall, with the flowers in a dense cluster along the top half of each stalk.

First Nations people called the plant "crow root" because they thought crows and ravens ate the root. They consumed the carrot-flavoured root in spring, and they made a tea from it for stomach aches. The boiled root was also applied to swellings. (Johnston 59)

Botony

Growth habit and range: This plant is an erect to decumbent, perennial herb which is commonly found on open sites and hillsides in the southern portion of the province. This plant grows to a height of 10-30 cm, and often is found in clustered groups.

Description: The leaves are alternate on the stems, stiff and linear, and measure 5-15 cm in length and 2-4 mm in width. The surface is covered with tiny dot-like depressions, and the leaf margins are hairy. The flowers appear from July to September, and are clustered on a dense, erect spike which measures 15 mm in width. Each flower head is comprised of 4-6 red-purple tubular florets, which together measure 12 mm in diameter. The fruit is a 6 mm long, pointed, ribbed greyish achene with a cluster of radiating, short bristles (pappus) at the distal end.

Linum lewisii

blue flax



Photo by Penny Dodd



Photo by Marion Jankunis

Ethnobotany

Named for the explorer Captain Meriwether Lewis, this plant is a member of the flax family. The scientific name *Linum* acknowledges flax as the source of linen fibre. The pale blue flowers, 20-35 mm across, which occur in clusters atop 20-60 cm stems, last only one day.

Medicinally, the fresh crushed leaves were used by First Nations people as an eye poultice, and to treat boils. The Thompson people of British Columbia used flax as a shampoo. (Wilkinson 127)

Botony

Growth habit and range: This is an erect perennial herb which may be branched at the base, and which is commonly found on dry sites throughout the prairie and parkland. The slender stems of this plant grow to a height of 20-60 cm.

Description: The leaves are alternate, linear, smooth, grey-green in colour, and numerous on the delicate, narrow stems. Each leaf measures about 10-25 mm in length. Several stalked, nodding flowers occur on the ends of the stems and upper branches from May to August. The flowers are short-lived, blue and each measure 10-25 mm in diameter. Each flower is comprised of 5 delicate, rounded, wedge-shaped petals which display darker, radiating fine lines, and a yellowish zone at the base. The stamens are whitish and delicate and number 5. The fruit is a stout, rounded, compartmentalized capsule measuring 5 mm in diameter which contains 8-10 shiny, dark brown seeds.

Linum rigidum
yellow flax

Photograph not currently available.

Ethnobotany

No ethnobotanical use of this plant is recorded.

Botony

Most often found in sandy soils, the yellow flax, at 15-40 cm tall, is smaller than blue flax. Its linear leaves are few in number, stiff or rigid (as the scientific name suggests) and are easily broken off the stem. The flowers are a smaller, yellow version of their blue relative's blossom.

Lygodesmia juncea

skeleton weed

Photograph not currently available

Ethnobotany

This plant's stiff stems, with narrow inconspicuous leaves, account for its common name. One bright pink flower head develops at the end of the 15-20 cm tall stem. It grows on ridges and dry areas.

Johnston reports the Blackfoot had a number of uses for the plant:

An infusion of the stems was used to treat sore eyes. A tea made from the foliage was given to nursing mothers to increase a scanty milk flow. The juice that exuded from broken stems was permitted to harden, then gathered and chewed for its flavor. A decoction was drunk for relief of heartburn. ⁽⁶¹⁾

This plant is not currently in the garden, but we hope it is coming soon.

Mentzelia decapetala
sand-lily, evening star

Photograph not currently available

Ethnobotany

Growing to 60 cm tall on eroded hillsides or dry banks, these thistle-like plants produce fragrant creamy-white flowers with five petals and five petal-like stamens. This explains their name *decapetala*, or ten petals. The flowers, a dramatic 7-10 cm across, open at night as they are pollinated by moths.

Although a related plant with bright yellow flowers was a respected medicinal plant used by the Cheyenne in Montana, no ethnobotanical use is recorded for the species that is found in Alberta.

This plant is not currently in the garden, but we hope it is coming soon.

Monarda fistulosa

wild bergamot



Photo by Marion Jankunis

Ethnobotony

This member of the mint family is easily recognized as such by its square stems. Its distinctive fragrance, similar to the oil of the bergamot orange used to flavour Earl Grey tea, is its other distinguishing feature, and the reason for its common name. Fairly common throughout the prairies in sheltered places such as coulees and shrubby areas, it grows 30-75 cm tall with purple-pink flowers forming a head-like cluster at the top of the stems.

As the classic herbal tea of the prairie, many people have enjoyed this plant. The First Nations people made a tea from the blossoms for eyewash, from the leaves and blossoms for stomach pains, and from the leaves to be drunk after childbirth. Boiled leaves were also applied to acne. Another use for the dried flowers was as a potpourri. (Johnston 51) According to Hungry Wolf, the leaves were packed around sore teeth. (23)

Botony

Growth habit and range: This is an erect perennial herb which is somewhat common on moist hillsides and shady places in the southern half of the province. It grows to a height of 60-100 cm.

Description: This plant is part of the mint family and as such has a strong, spicy fragrance. The leaves are grey-green, hairy, oval to lanceolate in shape, 2-10 cm in length, and are opposite on the squarish stems. Flowering occurs from June to September. The 3-6 cm in diameter, rose-purple flowers are held at the stem tips and are comprised of numerous, irregularly shaped, tubular florets. The fruit is a cluster of 4 smooth, brownish, 2 mm long nutlets, each of which contains a single seed.

Musineon divaricatum

leafy musineon



Photo by Penny Dodd

Ethnobotany

No ethnobotanical use of this plant is recorded.

Botony

This low growing plant has shiny leaves that look like flat leaved parsley, and bright yellow flowers that form an umbrella-like cluster. It grows on dry, exposed slopes.

This plant is not currently in the garden, but we hope it is coming soon.

Oenothera caespitosa

butte primrose, gumbo primrose



Photo by Marion Jankunis

Ethnobotony

Showy, sweet-scented white (fading to pink) blossoms, up to 8 cm across open above this low-growing leafy rosette, found on dry hillsides of gumbo or clay soil. Blossoms occur through summer from June to August. The flowers, which are pollinated by moths, open at night, and each blossom lasts only one day.

The Blackfoot called this plant *Ap-aks-ibokn* for "wide leaves" or *Oks-pi-poku* for "sticky root", and used the crushed root, applied wet, to sores and swellings. (Johnston 48)

Botony

Growth habit and range: This plant is a low growing perennial which is found on dry hillsides and gumbo flats throughout the southernmost prairies. It grows to a height of up to several cm.

Description: This plant is stemless, with clustered, bright green, basal leaves which are lanceolate in shape and 7-20 cm long. The leaf margin may be toothed or wavy. The

white, scented flowers appear from June to August. The blossoms measure 3-8 cm in diameter and are held on short stalks above the root crown. Each flower is comprised of 4 heart-shaped petals, each up to 4 cm in length, 4 sepals, one long stigma and 8 yellowish stamens. The flowers open in morning, close at night and fade to a pink colour. The fruit is an oblong capsule measuring about 3 cm in length.

Opuntia polyacantha
prickly pear cactus



Photo by Yvonne Bruinsma

Ethnobotany

On eroded slopes in the driest conditions, this cactus with its flat, paddle-shaped segments (12-15 cm across) can spread into a clump that measures 1 m or more wide. The thorns, 1-5 cm long, are dangerous as they can pierce leather, and will cause severe discomfort if stepped on. The large, showy yellow flower matures into a prickly fruit, 30 mm long, that is very seedy.

According to Wilkinson, "Cactus is high in calcium, phosphorus and vitamin C and is said to taste like raw cucumber or green beans....and the dried seeds can be ground into flour or used as a thickener." (137)

Royer and Dickinson make an assertion, corroborated by Johnston, that "To treat rheumatism, the Blackfoot inserted the spines of this cactus into the flesh of the patient, then set them afire and let them burn to the surface of the skin. This treatment helped the patient to forget about his aches and pains." (273) A less painful medicinal use was to bind wounds with a dressing made of peeled stems.(Johnston 45-46)

Blackfoot artists had an interesting use for this plant: freshly cut stems were rubbed over a painted design, and the mucilaginous juices acted as a sizing to fix the colours. This sticky juice could also clear water of suspended particles—a freshly cut stem being placed in a container of muddy water. (Johnston 46)

The prickly pear features in the Blackfoot legend, known as The Seven Stars, where it is said that " 'when it is dark we will scatter prickly-pears around the lodge [as protection from a sister who had turned into a bear].' " (Johnston 46)

Botony

Growth habit and range: This is a prostrate, succulent plant which is commonly found on dry sites throughout the southern portion of the province. This plant forms a mat and grows to a height of up to 15 cm.

Description: The stems are flattened, roughly the shape of an inverted pear, and measure up to 12 cm wide. The leaves are modified to clusters of narrow, sharp ended spines which measure up to 3.5 cm in length. The flowers appear in June and July and are yellow to pink in colour and 5-8 cm in diameter. Each flower is comprised of many waxy petals up to 3.5 cm long, a single green stigma and many orange stamens. The fruit is a red, spiny, edible berry measuring up to 3.5 cm in length, which contains many irregularly flattened, pale coloured seeds which are 5 mm in maximum dimension.

Oxytropis sericea
early yellow locoweed



Photo by Marion Jankunis

Ethnobotany

Blooming early in the season when range grasses are just beginning to grow, pale yellow pea-shaped flowers appear, above basal leaves, on stems 10-50 cm tall. Johnston reports the Blackfoot called this plant "rattle weed", as the ripe seed pods rattle loudly when shaken, and that the leaves were chewed to alleviate sore throat. Despite this use, Johnston says that several locoweed species are poisonous, and that animals may become so addicted to the plant that they eat little else. As a result, early yellow locoweed, which "is common in the Porcupine Hills of southwestern Alberta ...likely has caused locoism and death of many Peigan ponies in the past." (40)

Kershaw explains these toxic qualities. Locoweeds contain alkaloids, and some species take up selenium from alkali soil. Symptoms of toxicity include depression, loss of coordination and excitability. Locoweeds also cause heart disease, fluid retention, diarrhea, birth deformities and miscarriages. (248)

According to Wilkinson, the flowers were used as bedding and flooring in the sweatshouses of the Okanagan people. (120)

Botony

To be added soon.

Pediomelum esculentum

Indian breadroot



Photo by Marion Jankunis

Ethnobotany

Formerly known as *Psoralea esculenta*, Indian breadroot has bluish-purple pea-shaped flowers densely clustered on stems that are covered with white, silky hairs. A short plant, only 10-30 cm tall, it looks like a stunted lupine. Its scientific name *esculentum* means edible, and refers to the thick tuberous root—the feature that made this plant important to all people who lived on the plains. The root is rich in starch and sugar, and was eaten raw, roasted, sun-dried and ground into meal to mix with other foods. Teething children were given a root to chew on. (Wilkinson 122)

According to Johnston, a location on the Blood Reserve is called Wild Turnip Hill or Turnip Butte because Indian breadroot grows very well on the sandy, well drained soil. An area near Cowley, AB was known to the Blackfoot as Many Prairie Turnips. The Cree also gathered the roots, and early European travellers and settlers called it *pomme de prairie* or prairie potato. For a time in the early 1800s, it was cultivated experimentally in France as a substitute for potatoes. (41)

Botony

To be added soon.

Penstemon albidus, *Penstemon nitidus*
white beardtongue, smooth blue beardtongue



Photo by Marion Jankunis



Photo by Penny Dodd

Ethnobotony

Beardtongue flowers are tubular, and have two lips with the top lip divided into two lobes, and the bottom into three lobes. Many species have a sterile stamen that is covered with hair, hence the common name. Smooth blue beardtongue (*P. nitidus*) is a showy plant with thick leaves covered with a greyish bloom, and flowers that occur in dense clusters at the leaf axils on the top portion of the stem. Each blossom, up to 20 mm long, is sky blue with a purplish base. The flowers of white beardtongue are larger, up to 25 mm long, and are covered with sticky hairs, but each cluster has fewer blossoms than blue beardtongue.

The Blackfeet called beardtongue “tastes-like-fire”, and made a tea from it to treat stomach aches and cramps, and to stop vomiting. (Hungry Wolf 17) Wilkinson reports that the Navajo people, in Arizona, treated rattlesnake bite with the pounded wet leaves of some beardtongue species. (223)

Botony

Growth habit and range: This plant is an erect, herbaceous perennial which is common on flats and hillsides in the southern third of the province. Blue beardtongue may be branched and grows to a height of up to 30 cm.

Description: The leaves are smooth, oval, fleshy, grey-green in colour and opposite on the stems. A waxy 'bloom' covers the leaf surfaces. The lowermost leaves are largest at 10 cm in length. The flowers appear in May and June and are held in dense clusters in the axils of the upper leaves. Each blossom is 20 mm in length, and tubular, with a purple base and blue distal end which flares to 5 shallow, rounded lobes. The fruit is a rounded, inflated capsule up to 14 mm in length which contains the many wrinkled brown seeds, which each measure up to 4 mm in length.

Phlox hoodii
moss phlox



Photo by Marion Jankunis

Ethnobotany

Blooming as early as April, this wildflower's common name is appropriate. The plant forms a mat of short, woolly leaves that look like moss, and has typical phlox flowers about 10 mm wide.

Royer and Dickinson report the white flowers were used by the Blood tribe to make a yellow dye. (313)

Botony

Will be added soon.

Pulsatilla patens
prairie crocus



Photo by Penny Dodd

Ethnobotany

Widespread and common across prairie grasslands and in the Rocky Mountains, this flower is among the first to bloom in spring. It is distinctively covered with silky hairs, and legend tells that the Great Spirit gave the crocus its fur coat to keep it warm during cold spring nights. (Royer and Dickinson 184) The Blackfoot name, *Napi*, or old man, refers to the grey, silky, ripe seed-heads that look like the grey heads of old men. (Johnston 35)

According to Kershaw, all parts of the plant are poisonous, and irritating to the skin if externally applied. (244) Both Kershaw (244) and Johnston (35) claim that the leaves were used as a counter-irritant for rheumatism, bruises and sore muscles.

Some herbalists today prescribe an alcohol extract as an anti-depressant sedative; however, Kershaw cautions this should not be used during pregnancy. (244) Hungry Wolf reports the Blackfoot made a tea from the roots to speed childbirth, or to cause abortion. (18)

Botony

Growth habit and range: This is a low growing, but erect herbaceous perennial plant which is widely found on open prairie sites in the southern portion of the province. It grows to a height of 8-20 cm.

Description: Prairie crocus is one of the first flowers to appear on the prairie in spring. The flowers appear before the leaves, from April to June. Each blossom is borne on a densely hairy stem, is coloured pale purple to blue or occasionally white, and measures 4-6 cm in diameter. There are 5-7 elliptical, petal-like sepals, one long, greenish, soft style and numerous yellow stamens per flower. The leaves are mostly basal, finely divided, and of a grey-green colour due to the presence of many hairs. Each flowering stem bears a whorl of similar leaves which are situated just below the flower. The fruit is a club-shaped achene measuring 3-4 mm in length, with an attached 2-4 cm long feather-like style.

Ratibida columnifera
prairie coneflower



Photos by Marion Jankunis

Ethnobotony

Prairie coneflower blossoms are composed of a grey to purple central cone or cylinder surrounded by a skirt of yellow "petals", which are actually individual flowers known as ray florets. Occasionally a form of this plant (*R. columnifera* var. *pulcherrima*) occurs where the ray florets are dark bronze instead of yellow. The flowers stand tall at the tips of 30-70 cm stalks. These showy plants thrive in dry grasslands, disturbed areas and roadsides.

The central cone, covered with tiny individual flowers called disk florets, is edible, and reportedly tastes like corn. The Blackfoot used the roots to produce a yellow or orange dye. (Wilkinson 281)

Botony

Growth habit and range: Prairie coneflower is an erect herbaceous perennial plant commonly found on dry sites throughout the southern third of the province. It grows to a height of 25-60 cm.

Description: The leaves are alternate on the stem, green to grey-green in colour, covered with short hairs, and 3-10 cm in length. They are mostly present on the lower portions of the grooved stems and are deeply divided into several lobes. The flowers appear from July to September and are borne on the ends of the branched stems. Ray

florets are bright yellow (rarely purple to brown) in colour, 1-3 cm in length, deeply notched at the tip, and number 3-7 per blossom. The disk florets are grey to purple in colour and are held on an elongated, central, conical head measuring up to 4 cm in length. The fruit is a flattened, grey, hairy achene measuring 2 mm long.

Senecio canus

silver groundsel, prairie groundsel

Photograph not currently available

Ethnobotony

The word silver in the common name and the scientific name *canus* refer to the leaves, which are grey-green with a covering of white, fuzzy hair. The bright yellow daisy-type flowers with yellow centres occur in a small cluster at the end of 40 cm tall stems.

Common groundsel and some other groundsels are poisonous due to the presence of alkaloids. Wilkinson warns the chronic use of groundsels in herbal tea may cause liver cirrhosis. She states that some groundsels have been used by First Nations people to ease the pain of childbirth and to treat wounds. (284)

Botony

Will be added soon.

This plant is not currently in the garden, but we hope it is coming soon.

Sisyrinchium montanum

blue eyed grass



Photo by Penny Dodd

Ethnobotany

This little plant is in the iris family, and looks so much like grass it is overlooked when it's not in bloom. In moist grasslands it grows 10-30 cm tall with a cluster of up to five purple-blue flowers at the end of the stems. Each flower lasts only one day. The name *Sisyrinchium* means "swine snout"—the Greek name for a plant whose roots were relished by pigs.

Kimball and Lesica report that First Nations people "used the plant to relieve digestive disorders; modern herbalists use it to treat menstrual problems." (195)

Botony

Will be added soon.

Smilacina stellata

star-flowered Solomon's-seal



Photo by Penny Dodd

Ethnobotony

Typical of the lily family, the leaves of this plant have many parallel veins. They clasp onto opposite sides of the 15-50 cm tall stems. At the tip of the stem, small white flowers appear in a loose cluster. Each flower has six petals, and when the fruit first develops, it is a green berry with six purplish-black stripes.

Royer and Dickinson report that First Nations people gathered and dried the roots in the fall, then ground them into a powder that was applied to wounds to stop bleeding. ⁽¹²³⁾ However, according to Wilkinson, it was a related plant, *Smilacina racemosa*, false Solomon's-seal, that was used by the Blackfoot and the Blood—the roots as a wound dressing and the berries to induce abortion. ⁽²⁵⁾

Botony

To be added soon.

Solidago missouriensis

low goldenrod



Photos by Penny Dodd

Ethnobotany

This low growing goldenrod is the earliest to bloom. Its smooth, reddish stems are 15-50 cm tall, and the small yellow flowers form a plume shaped cluster near the top of the stem. It grows in dry, sandy soil, and is attractive to butterflies.

According to Kershaw, goldenrod has been used for food and medicine. It was called 'woundwort' during the Crusades because of its ability to stop bleeding. (184) However, no ethnobotanical use of this plant is recorded.

Botony

Growth habit and range: This erect perennial herbaceous plant is commonly found on dry sites on the prairies. The plant grows to a height of 15-50 cm and often occurs in a spreading cluster.

Description: The leaves are linear to lanceolate in shape and 2-10 cm long. The stems and leaves are smooth and green, but may have a red tinge. Marginal hairs may be present on the leaves. The leaves are alternately placed on the stem, or are basal. The stem leaves are smaller and more linear than the oblong, stalked, basal leaves. The bright yellow flowers appear in July and August and are borne in a short, terminal panicle measuring 5-7 cm long. Each flower is 3-5 mm in length. The fruit is a small achene which displays whitish bristles.

Sphaeralcea coccinea
scarlet mallow



Photo by Marion Jankunis

Ethnobotony

This tough little plant can grow where nothing else will—on the edge of gravel roads, eroded hillsides and badlands. The plant with its grey-green leaves spreads by creeping roots, and develops short stems with terminal clusters of orange to brick-red simple flowers, 10-25 mm across.

According to Kershaw, the crushed leaves are mucilaginous, and were used as a dressing on sores and wounds. Also, the roots were chewed, and then placed on wounds to stop bleeding and to promote healing. ⁽¹⁴⁰⁾ Johnston reports a very interesting use: “Medicine men of some tribes rubbed the paste over their hands and arms. The coating that resulted protected the skin from scalding and enabled the medicine man to mystify onlookers by reaching into a pot of boiling water to retrieve a bit of meat.” ⁽⁴⁵⁾

Botony

Growth habit and range: This herbaceous perennial plant has an erect to semi-erect growth habit and is commonly found on hillsides and exposed sites on the prairies. It grows to a height of 15-20 cm.

Description: The leaves are alternate on the stem, have long stalks, and are deeply divided into several lobes. The leaf colour is grey-green due to the presence of dense clusters of hairs. Each leaf measures up to 4 cm in length. The flowers appear in June and July and are held in small clusters at the ends of the stems. Each blossom is comprised of 5 pale orange to red petals which each measure 10-20 mm in length, and which are notched at their distal ends. The fruit is a 10 compartmented, hairy capsule containing one seed per cell. Each seed is 1-2 mm in length, black and kidney-shaped.

Symphyotrichum ericoides var. *pansum* (syn. *Aster pansus*)
tufted white prairie aster



Photo by Penny Dodd

Ethnobotany

This inhabitant of dry, open grassland produces many flower heads near the ends of 50 cm tall branches that are often lodged. Each flower has 10-20 white petal-like ray florets about 7 mm long surrounding a yellow centre.

Royer and Dickinson report, "The Blackfoot used the smoke from smouldering asters to revive unconscious patients. The Cree dried and powdered the scented roots and applied the dust to cuts." (408)

Botony

To be added soon.

Symphotrichum laeve
smooth blue aster



Photo by Penny Dodd

Ethnobotany

Growing 30-100 cm high, smooth blue aster is common through the prairies. Numerous flower heads, 2-3 cm across with 20 or more blue ray florets, form a branched cluster at the end of the stout, hairless stems. The thick, hairless leaves often have a whitish bloom.

Although people can develop allergic rashes after contact with asters, some First Nations people used a smoke smudge of smooth blue aster to revive the unconscious and in sweat baths. (Wilkinson 251)

Botony

Growth habit and range: This erect, perennial herbaceous plant is commonly found on moist, open sites throughout the prairie and parkland of the province. It grows to a height of 30-120 cm.

Description: The leaves are alternately placed on the stem, and are a dark, blue-green colour with a whitish, waxy bloom. The leaves are oval to oblong in shape and up to 15 cm long. The leaf margin is smooth to toothed. The lower leaves display winged leaf stalks, and the upper leaves clasp the stem. The flowers appear from July to September and form loose clusters on the upper stems. Each flower is comprised of 20 or more purple to blue ray florets measuring 1 cm in length, and a central disk of yellow to red tubular florets. Overall, each flower measures 2-3 cm in diameter. The fruit is a 3mm long, flattened achene of brown colour, with a bristly pappus.

Tetraneris acaulis
butte marigold



Photo by Marion Jankunis

Ethnobotany

No ethnobotanical use of this plant is recorded.

Botony

This showy little plant, up to 30 cm tall, has bright yellow flower heads 2-3 cm across, and silvery grey basal leaves. It grows on eroded hillsides and coulees.

Thermopsis rhombifolia
buffalo bean, golden bean



Photo by Marion Jankunis

Ethnobotony

This member of the pea family can turn hillsides bright yellow in early spring. Racemes of typical pea-shaped flowers develop on the top portion of the 15-40 cm stems, followed by conspicuous, curled seed pods, which hold up to a dozen seeds. These seeds contain a poisonous alkaloid that causes severe illness.

The Blackfoot called this plant *Wudzi-eh-kay*, or buffalo flower. The appearance of its blossoms was a sign that the buffalo bulls were in prime condition. This knowledge was also held by the Flathead people, who crossed over the mountains into Blackfoot territory to hunt for bulls. (Johnston 41-42)

Botony

Growth habit and range: This plant is an erect, herbaceous perennial which commonly occurs on grassy, exposed sites throughout the prairies. Buffalo bean grows to a height of 15-40 cm.

Description: The stems are generally not branched. The leaves are alternately placed on the stem, and there are oppositely placed, clasping, leaf-like stipules also. The leaves are compound, with 3 leaflets per leaf, and are blue-green in colour, with a waxy, whitish bloom or hairs on the surface. Each leaf measures up to 4 cm in length. The 1-2 cm long flowers appear in May and June and are a bright yellow colour. The flower shape is pea-like, and the blossoms are held in short terminal clusters. The fruit is a flattened, curved pod which measures 4-8 cm in length. The seeds are kidney-shaped and brown, smooth and 3-4 mm in length.

Townsendia hookeri
prairie townsendia



Photo by Yvonne Bruinsma

Ethnobotony

No ethnobotanical use of the plant is recorded.

Botony

This inhabitant of dry grasslands forms a round rosette of grey-green leaves with very short stemmed daisy-like white flowers up to 18 mm wide.

Viola nuttallii

yellow prairie violet



Photo by Marion Jankunis

Ethnobotany

One of the earliest wildflowers to bloom, yellow prairie violet brightens the grasslands in spring. The yellow flowers have purple veins, and are often reddish-purple on the outside. Its somewhat hairy leaves are lance-shaped.

This writer's sources contain no specific references to uses of the yellow prairie violet by the First Nations people, but Hungry Wolf reports the Blackfoot used the early blue violet (*Viola adunca*) as a poultice and as a tea for children with breathing problems. (19)

Kershaw describes the edible and medicinal uses of wild violets. The roots, fruits and seeds are inedible causing stomach and intestinal upset, nervousness and respiratory and circulatory depression, but the stems, leaves and blossoms are edible. They are reported to be rich in vitamin A and vitamin C. Some violets contain salicylic acid. Among other uses, the plants have been used to make medicinal teas for treating bronchitis, asthma, heart palpitation and fevers; gargles and syrups for relieving sore throats and coughs; and poultices, salves or lotions for treating bruises, rashes, boils and eczema. (13)

Botony

To be added soon.

Grasses

Achnatherum hymenoides

Indian ricegrass



Photos by Penny Dodd

Ethnobotany

This grass grows up to 60 cm tall with flower clusters 10-20 cm long. After blooming, it forms slender, forked branches with large seeds. It is an important grass in sandy soil as it binds the soil and is very resistant to wind action. It is palatable to livestock and can tolerate fairly heavy grazing. It is a cool-season grass with large seeds that ripen early in the summer.

Although other First Nations people gathered the seeds, especially in times of famine, to be cooked and ground into a meal (Hungry Wolf 30), there is little evidence that the Blackfoot used grains. Grinding stones have been found in the foothills of the Bearpaw and Little Rocky Mountains, Montana, but only rarely occur in the Lethbridge region. (Johnston 22)

Botony

Growth habit and range: This is a densely tufted, cool season grass which grows to a height of 30-60 cm. It is found widely on sandy soils and slopes of the prairie and parkland regions of the province.

Description: The green blades are 2-5 mm wide and each up to 50 cm in length. The flowers occur in an extensively branched panicle 10-20 cm long, which displays one flower at the end of each branch. The seeds are oval, brown-black in colour with long white hairs, and each measures 3-5 mm in length.

Bouteloua gracilis
blue grama grass



Photo by Marion Jankunis

Ethnobotony

Although it is only 20-50 cm high, blue grama is the most important range grass of the Canadian Prairies and Northern Great Plains. With its one-sided seed spike that looks like an eyelash, it is a very easy to identify. It's quite drought tolerant, and provides a major part of the diet of range animals during dry periods.

First Nations people used this grass to forecast the severity of the coming winter: the harshness of the winter corresponded with the number of seed spikes per stem. Only one spike per stem signalled a mild winter ahead. (Johnston 19)

Botony

Growth habit and range: This is a warm season, densely tufted, erect grass which grows to a height of 20-50 cm. Short scaly rhizomes are present. This grass is commonly found on grassy plains of the prairie and parkland regions.

Description: The blades are up to 3 mm wide and vary from light green to dark green to reddish in colour. The blades are often twisted and curled. One to three flower spikes develop on each stem, and these measure 2.5-5 cm in length. The straight, brown-purple spikelets (flowers) form 2 rows on one side of the spike. As the spikes mature, they become straw-coloured and curved upward. The seeds are each 3-4 mm in length.

Festuca scabrella
rough fescue



Photo by Penny Dodd

Ethnobotany

One of the important grasses of the prairies of the southern Rocky Mountains and foothills, rough fescue forms large tussocks with stems 40-120 cm tall and seed heads 10-20 cm long.

Fescue and other grasses that make up “prairie wool” (a regional term used to describe native prairie grasses) are less nutritious than alfalfa. Compared with alfalfa, fescue contains only one-third as much protein, and is less digestible. (Johnston 24) However, bison thrive on poorer quality feed than can cattle, and fescue grasslands were essential in the life of the Blackfoot.

Botony

Growth habit and range: This is a tufted, erect, cool season grass which grows to a height of 30-60 cm. Short rhizomes are present. It is commonly found on grasslands and open wooded areas in the southwestern and northwestern portions of the province.

Description: The blades are 1-2.5 mm wide, grey-green in colour, somewhat pubescent and flat to curled inward on the edges. The flowers occur in a panicle which is narrow to open in character and 8-15 cm long. Each seed is 7-8 mm long.

Hesperostipa comata

needle-and-thread grass, spear grass



Photo by Penny Dodd

Ethnobotany

Very common across the prairies, this grass grows in small dense tufts 30-60 cm tall. Its flowers form in a cluster, called a panicle, 10-20 cm long. The seeds have a sharp end (the needle), and are attached to an awl, or bristle, which is 10-15 cm long (the thread) that twists and curls. It is a very important forage grass in the drier parts of the grasslands.

The Blackfoot called the grass *Okut-see* or spear grass, and knew that bison cows were in prime condition for hunting when the seed-bearing stems of the grass, with their mature seeds, tipped over and flattened onto the soil. (Johnston 22)

Botony

To be added soon.

This plant is not currently in the garden, but we hope it is coming soon.

Hierochloa odorata

sweetgrass



Photo by Penny Dodd

Ethnobotany

Sweetgrass occurs in wet areas throughout the prairie. The stem is 30-60 cm high, with leaves 5 cm long and 2-6 mm wide. The seed heads are 10-15 cm long. The amazing quality of this grass is its wonderfully sweet fragrance. Evidence of the enthusiasm the Blackfoot felt for this grass is in the four names they gave it—all meaning fragrant smell. The presence of coumarin (an aromatic organic compound that delays or prevents blood from clotting) accounts for its lingering fragrance. (Johnston 20)

The grass was dried then braided, and used in many ways. For personal grooming, it was braided into clothing and carried in leather sachets, or women wore the braid around their heads. Water in which it had been soaked was used to wash hair. Ceremonially, it was burned on a small altar found in many lodges. It was used in the Sun Dance ceremony, and it was mixed with tobacco in ceremonial smoking. Finally, it had medicinal uses. Smoke from burning leaves was inhaled to treat colds. Even horses benefited from its properties as it was used to treat saddle sores. (Johnston 21-22)

Botony

Growth habit and range: This is a cool season, rhizomatous grass which is commonly found on wet sites on the prairies. It grows to a height of 30-60 cm.

Description: The blades are 2-6 mm wide and up to about 5 cm in length, dark green and shiny. The flowers occur in an open, golden yellow, shiny panicle which is 10-15 cm long, pyramidal in shape and up to 7 cm wide at its' base. Each brownish seed is 4 mm in length.

Koeleria macrantha
prairie Junegrass



Photos by Penny Dodd



Ethnobotony

Junegrass is a good forage grass that occurs in scattered stands. It grows 10-50 cm high with a spike-like flower cluster up to 10 cm long that is pale green tinged with purple. After the seeds have set, the entire seed stalk becomes golden yellow. (Van Bruggen 10)

Botony

Growth habit and range: This is a densely tufted, erect, cool season grass which grows to a height of 10-50 cm. It is widespread on the grasslands of the prairies.

Description: This grass shows blue-green blades which are 1-4 mm in width, and flat to curled inwards on the edges. The blades may be hairy, and they display a blunt tip. The flowers occur in a 3-10 cm long, narrow panicle which is spike-like. Each seed is 3-4 mm in length.

Muhlenbergia cuspidata
plains muhly

Photograph not currently available

Ethnobotony

Look for plains muhly on slopes and crests of moderately to strongly eroded hillsides. This slender, wiry grass grows 15-35 cm tall with the flowers in July in very slender panicles up to 10 cm long. In the Lethbridge area, this grass is sometimes parasitized by an insect, causing a malformation of the seeds that become swollen and bent to the side.

Botony

To be added soon.

This plant is not currently in the garden, but we hope it is coming soon.

Nassella viridula
green needle grass



Photos by Penny Dodd

Ethnobotany

Green needle grass is a tufted perennial with slender stems that grow up to 90 cm tall. It is a cool-season grass that is valuable for forage in both early spring and fall. (Van Bruggen 11)

Botony

Growth habit and range: This is a loosely tufted, cool season, erect grass which grows to a height of 50-100 cm. It is commonly found in moderately dry to moist areas throughout the prairie and parkland regions of the province.

Description: The blades are flat, dark green, somewhat shiny, 2-5 mm wide, and up to 25 cm long. The flowers occur in a narrow panicle measuring 10-20 cm in length. Each seed is dark in colour and measures about 5-6 mm long.

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