

Useful Plants of Schmeckle Reserve

Field Guide



Ben Tracey

Foreword

After four years of teaching ethnobotany at the University of Wisconsin-Stevens Point (Biology Department), substantial information about useful plants in Schmeckle Reserve has been gathered. Therefore, it was evident that a field guide was needed. Ben Tracey, a student enrolled in my Ethnobotany class in 2010, was enthusiastic about carrying out this project. After two semesters of intense literature review and on-site investigations, Ben authored this field guide. Because of his academic excellence, Ben by far surpassed my expectations for a college-level research project with this excellent work. This guide will become a textbook for future ethnobotany students and will be available at the Schmeckle Reserve Visitor Center for anyone with the desire to learn about useful plants of this area. Well done, Ben.

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Acknowledgements

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Introduction

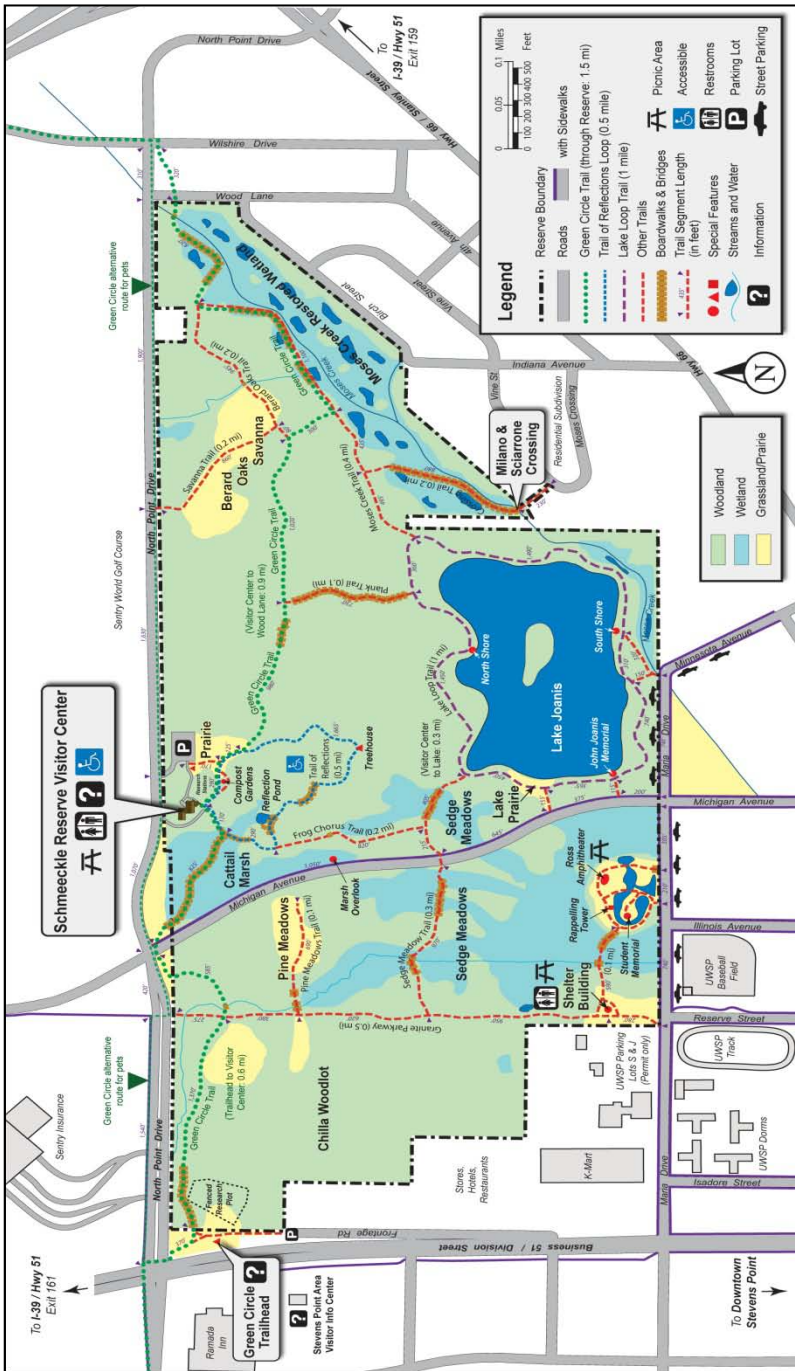
This is a guide for the uses of over 100 plants found in Schmeeckle Reserve at the University of Wisconsin-Stevens Point. It is intended to be an easy to use and understand field guide. Locations of each species within Schmeeckle reserve are noted with the plant descriptions and uses. However, this field guide is for educational purposes only; collection of plants within Schmeeckle is prohibited without written authorization from reserve staff. Use the reserve as a classroom to learn identification and habitat types of the plants.

All plants included in this book are easily found from existing trails in the reserve, so no “bushwhacking” off trail is necessary. Plants are listed alphabetically by common name, with scientific names and families noted. The index in the back of the book provides page references by family, common and scientific names. For those plants identified to species, their status is also noted (native or introduced, naturalized, and/or invasive). There is a brief description of the plant itself and at least one picture for each. Locations of the plant within the reserve are listed next according to trail names and landmarks denoted on the map. A complete trail map is included in the book. The map is then broken up into three sections, which are each enlarged on the following pages for easier reading. Larger trail maps are available at the Schmeeckle Visitor Center. All locations of a given plant species are not listed, but those that are should be easily understood and located by the reader. The uses are categorized by Edible, Medicinal, and Other. The plant part to be used is listed first in bold, followed by a description of the use.

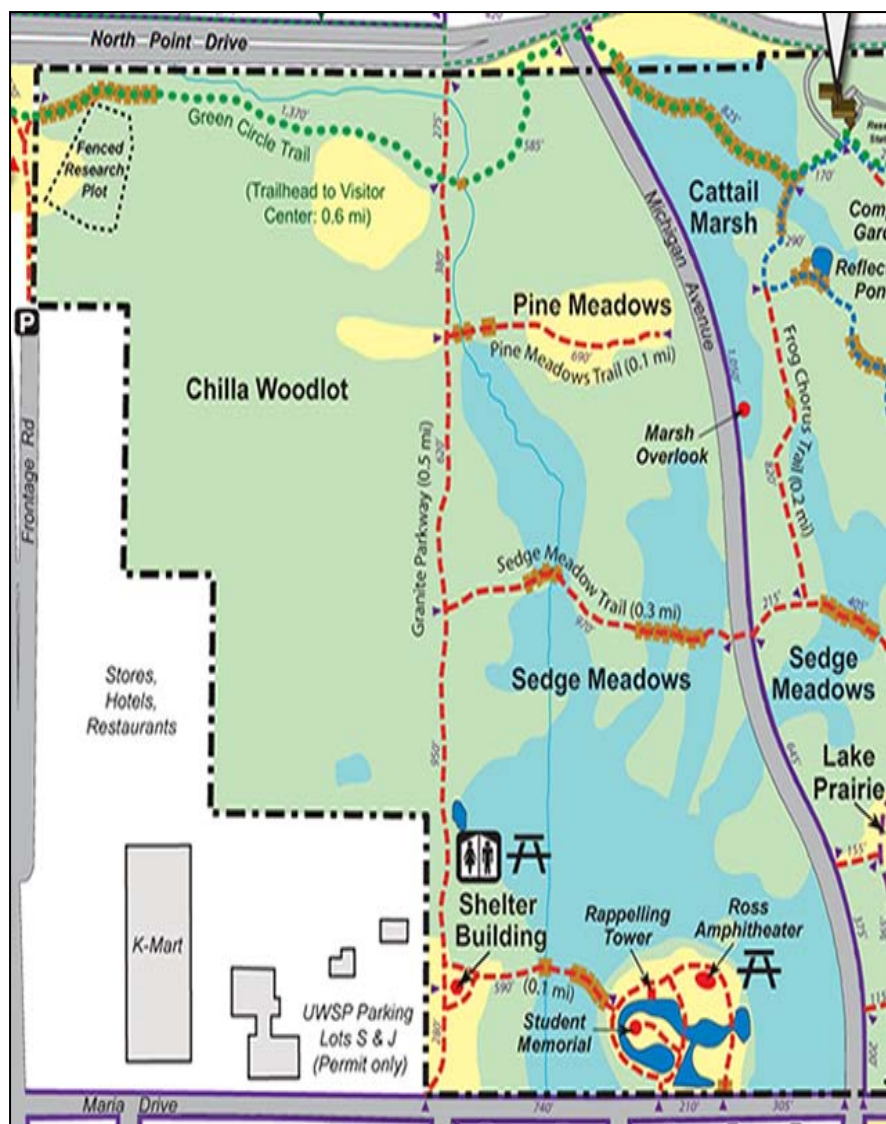
Some descriptions include time of year to harvest, detailed instructions for preparation, and detailed identification features to distinguish from look-alikes; others are very brief. All information was researched from various, credible sources to include field guides, books, and manuscripts. The detail of the plant use descriptions is based directly on the sources. Where significant details were left out, the reader is referred to the source of the information. The uses described in this book have not all been tested by the author, and therefore he cannot guarantee the efficacy and safety for all. Always use caution and common sense when ingesting wild plants. Sample a small amount of one plant and wait 24 hours to check for possible side effects. Sample only one at a time so any results or side effects can be positively attributed to one plant.

When harvesting wild plants, ensure you know for sure what plant you have before ingesting. Consult several sources and pay attention to key identification traits. If you are not 100% sure about the identity of a plant, do not ingest it; ask an expert instead. Harvest responsibly and sustainably, never taking more than can be replaced and with as little damage to the plant and its surroundings as possible. For more information on identification, sustainable harvesting, and foraging in general, see *The Forager’s Harvest* by Sam Thayer.

Trail Map of Schmeckle Reserve



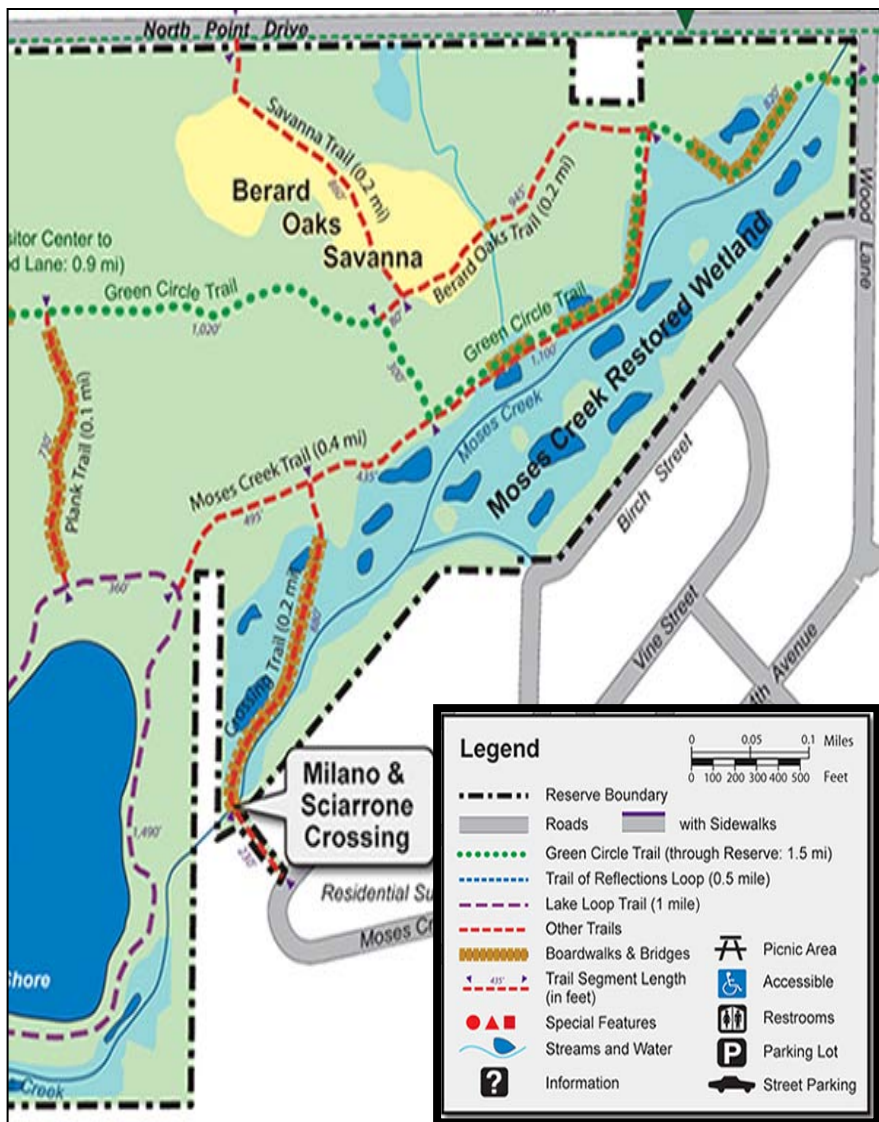
Trail Map of Western Schmeckle Reserve



Trail Map of Central Schmeckle Reserve



Trail Map of Eastern Schmeckle Reserve



Plant Accounts

Alder, tag (*Alnus incana*)

Family: Betulaceae

Status: Native

Description:

Tree/shrub; smooth gray-reddish brown bark with light lenticels; alternate oval-elliptical leaves with coarsely double toothed margins; male and female catkins; fruit is an oval cone-like cluster.



Location:

Wet areas, such as Cattail Marsh, Reflection pond, and around Lake Joanis.

Medicinal:

Root: Used in tea as astringent and coagulant for bloody stool.

Bark: Mild astringent properties; dry powder for dusting chafed skin; poultice to reduce swelling; tea as mouth wash for mouth sores and sore throats, to treat bloody urine and diarrhea, and injected into vagina for discharges and anus for hemorrhoids; juice of inner bark used externally to stop itching; bark eaten for sour stomach.



Other:

Bark: Used for dye; reportedly both for light yellow and reddish brown.

Arrow-wood (*Viburnum dentatum*)

Family: Caprifoliaceae

Status: Introduced

Description:

Shrub, up to 10' tall, usually multiple slender stems; opposite lustrous dark green leaves, coarsely toothed; flat-topped clusters of cream colored flowers; dark blue-black fruits.

Location:

Along Granite Parkway north of Shelter Building.



Other:

Stem: Used for arrow shafts. Also works well for bow drills for starting fires.

Ash

(*Fraxinus* spp.)

Family: Oleaceae

Description:

Tree; opposite pinnately compound leaves with 7-11 leaflets; flowers lack petals, light green-purplish, males in clusters, females in panicles; fruit is one-winged, flattened samara.

Location:

North Granite Parkway and south shore of Lake Joanis.

Edible:

Cambium: Scraped out in layers and cooked (said to taste like eggs) in green ash (*F. pennsylvanica*).

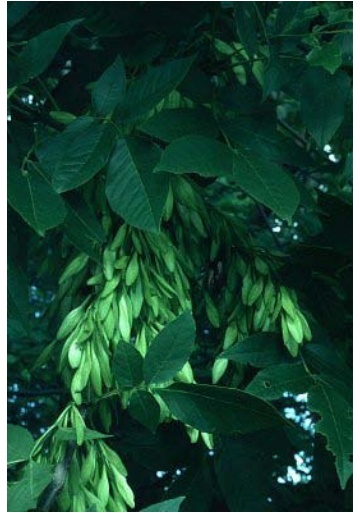
Medicinal:

Bark: Inner bark of green ash is astringent and a bitter tonic; of white ash (*F. americana*) used in tea as: emetic, laxative, tonic after childbirth, diuretic, and wash for sores, itching, lice, and snakebites; to remove bile from intestines and promote sweating, for stomach cramps and fevers. Inner bark chewed into poultice for sores.

Seed: aphrodisiac.

Other:

Wood: Used for bows and arrows, snowshoe frames, sleds, baskets, and cradle boards. Black ash (*F. nigra*) preferred for baskets; wood separated into strips along annual growth rings.



Aspen, big-toothed (*Populus grandidentata*)

Family: Salicaceae

Status: Native & potentially invasive

Description:

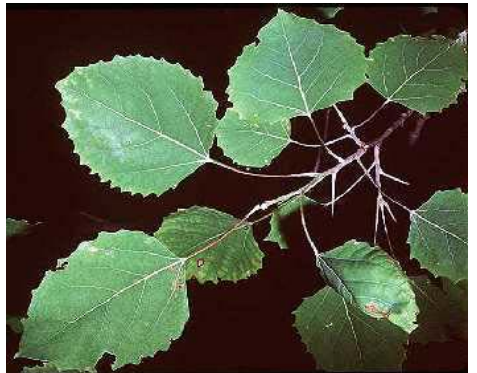
Tree; greenish-gray bark, furrows with age; alternate orbicular-ovate leaves, large blunt teeth, flattened petiole; catkins with fluffy “cotton-like” seeds in small capsules.

Location:

North of Shelter Building and East of Visitor Center on Green Circle Trail.

Edible:

Cambium: Scraped out in layers and cooked (said to taste like eggs).



Medicinal:

Bud: Stewed in bear fat to make aromatic salve for earaches, boils, wounds, and ulcers.

Root: Young roots in tea to stop bleeding.

Bark: Mixed with red oak bark to expel worms.

Aspen, quaking (*Populus tremuloides*)

Family: Salicaceae

Status: Native & potentially invasive

Description:

Tree; creamy yellowish-white bark, furrows and darker at base with age; alternate heart shaped-nearly round leaves, fine toothed margin, flattened petiole; catkins with small hairy seeds in small capsules.

Location:

Abundant throughout reserve.

Edible:

Bark: Inner bark eaten in spring, raw or cooked; baked into cakes.

Sap: Used as flavoring for wild strawberries.

Medicinal:

Bark: Inner bark of young trunk in poultice for cuts, wounds, sore arm/leg, and splints lined with inner bark to promote healing of broken bones. Used in tea/decoction/tincture (often with leaves) for rheumatism, fevers, colds, stomach pain, venereal disease, urinary problems, worms, hay fever, diabetes, to relieve pain, reduce arterial swelling, stimulate appetite, and as wash for gangrenous wounds, eczema, burns, and body odor. Mixed with red oak bark to expel worms. Bark contains salicin, which is anti-inflammatory, analgesic, and reduces fevers.

Root: Root bark in tea for excessive menstrual bleeding. Poultice of roots for cuts and wounds.

Other:

Wood: Used by Native American children for making toys.



Barberry, Japanese *(Berberis thunbergii)*

Family: Berberidaceae

Status: Introduced, naturalized, & potentially invasive

Description:

Thorny shrub; up to 8' tall; alternate spatulate leaves, entire margins, often clustered together on spur shoots above thorns; yellow-white flowers, 6 notched petals; fruit is elongate red berry, one-few seeds.

Location:

Berard Oaks Savanna and west on Green Circle Trail.

Edible:

Fruit: Berries collected in fall when full red color develops, very tart, used for jelly, in juices and sauces to add tartness.

Leaf: Chew to relieve thirst.



Basswood *(Tilia americana)*

Family: Tiliaceae

Status: Native

Description:

Tree; gray-brown bark, alternate large cordate leaves, serrate margins, unequal bases; pale yellow flower below a long arching leafy wing in a branched cluster; fruit is a round nutlet covered in gray-brown hair.

Location:

Small specimens along periphery of reserve. Large tree specimen across Maria Drive from Student Memorial between sidewalk and baseball field.

Edible:

Leaf: Mid spring-early summer; collect young leaves as they unfurl, should be less than half their full size, light green, and shiny; eat raw or cook.

Cambium: Early summer; remove bark and scrape soft cambium off of wood; eat raw.

Bud: Winter; pick off winter buds; eat raw.



Flower: Mid-summer; collect unopened flower buds, remove stems, eat as cooked vegetable. Unopened or opened flowers can be used to make tea.

Fruit: Late summer-fall; collect nuts, remove shell. Can be used for chocolate substitute.

Medicinal:

Flower: Flowers in tea used as mild sedative, stress reliever, to lower blood pressure, reduce fevers, calm the mind, and for headaches. Flowers mixed with leaves in tea for quieting coughs, relieving hoarseness, increasing perspiration, for stomach problems, and as antispasmodic. Approved in Germany for treatment of colds and cold-related coughs. Can also be used in lotions and creams for skin irritations. **CAUTION: should be consumed in moderation to prevent sensitivities.**

Other:

Bark: Inner bark excellent for cordage; when collected in spring, inner bark is easily separated (when sap is flowing); when collected in summer-fall, bark is soaked until inner bark separates from outer.

Wood: Used for cradles and baby boards by Native Americans.

Bayberry (*Myrica gale*)

Family: Myricaceae

Status: Native

Description:

Shrub; low growing, bushy, up to 6' tall; reddish-brown bark with prominent light lenticels; alternate narrow obovate leaves, toothed near tip, resinous and aromatic; yellow-green catkins in leaf axils; fruit is small, brown, pointed nut, occurs in tight clusters.



Location:

Southernmost Granite
Parkway at intersection with Maria Drive.

Edible:

Leaf: Early summer is best; dry and crumble leaves for use as seasoning in stews and sauces.

Fruit: Late summer-winter; berries used as seasoning. **CAUTION: wax reported to be toxic.**

Medicinal:

Root: Root bark used in tea as astringent, emetic, for diarrhea, dysentery, inflammation of mucous membranes, jaundice, scrofula, and ulcers. Root bark used in poultice for inflammation.

Leaf: Used in tea; drunk for fevers and as stimulant; used externally as wash for itching. Ground leaves used as snuff for headaches.

Bedstraw (*Galium* spp.)

Family: Rubiaceae

Description:

Perennial; many forms, such as erect, sprawling, matting, or climbing over other vegetation; many branches, often with fine hooked hairs at or below nodes (“clingy”); leaves whorled, usually in 4’s or 6’s, linear-lance-like, usually rounded or blunt tip; white-creamy flowers on branched clusters; ball-like fruit.



Location:

Green Circle Trail east of prairie.

Edible:

Greens: (All species) Spring-late summer; pick young greens when tender, eat raw or cooked. When older, boil leafy stems until tender (5-10 minutes).

Fruit: (All spp.) Mid-summer; pick fruits as they brown and use as coffee substitute: roast in oven at 300°F (150°C) until dark and crisp (~ 1 hour), grind/crush, simmer ¾ cup crushed fruit to 1 quart water until medium-dark brown.

Medicinal:

Whole plant: (All spp.) In tea as diuretic.

Bindweed, hedge (*Calystegia sepium*)

Family: Convolvulaceae

Status: Native

Description:

Perennial; trailing or twining vine; triangular leaves with arrowhead shape, deeply incised at base; white or lavender flowers, funnel-shaped, open during morning; long rhizomes.

Location:

Southeast Lake Joanis along trail.

Medicinal:

Plant: Intense laxative.

Root: Root or rhizome used as laxative, for jaundice, gallbladder ailments; thought to increase bile flow into intestines.



Birch, white

(*Betula papyrifera*)

Family: Betulaceae

Status: Native

Description:

Tree; bark creamy-chalky white, peeling in thin sheets; alternate ovate leaves with sharp point, rounded base, serrate, on spur shoots; catkins in 2's or 3's, cone-like fruit releasing 2-winged nutlets.



Location:

Abundant throughout reserve in wet areas and near Lake Joanis.

Edible:

Bark: Inner bark eaten fresh and used to make tea; called a substitute for the white man's tea by Native Americans.

Sap: Used to make syrup, beer, and was mixed with fish grease for food.

Medicinal:

Root: Used to flavor unpleasant medicines (has a sweet, wintergreen flavor) and used in tea for diarrhea. Root bark cooked with maple syrup for stomach cramps.

Leaf: Diuretic.

Twig: astringent; soaked to extract oils which are used to flavor unpleasant medicines.

Bark: Inner bark used in tea as enema for constipation. Bark contains Betulin, which has anticancer, antiviral, and anti-inflammatory properties.

Other:

Bark: Inner bark boiled to produce red dye. Bark has wide variety of uses by Native Americans, including: waterproof barriers (canoes, roofs, containers to carry and store maple syrup, etc.), baskets for storing berries, fish, and meat (keeps food from spoiling), writing/art medium, torches, and utensils.

Birch, yellow (*Betula alleghaniensis*)

Family: Betulaceae

Status: Native

Description:

Tree; bark reddish brown-yellowish- grayish with age, smooth, irregular flaking; alternate narrowly oval-oblong leaves, doubly serrate margins with sharp, coarse teeth; hanging catkins (male flower) and upright cone-like catkins (female flowers); fruit cone-like with hairy scales containing 2-winged nutlets; twigs give off wintergreen taste and smell when scratched.



Location:

East shore of Lake Joanis and south of Lake Prairie.

Edible:

Sap: Spring (3-4 weeks after maple sap flow begins); collect sap, drink raw or boil down for syrup; also used for beer.

Bark: Spring is best, but can be collected year round; collect red inner bark; can be eaten raw, but best boiled or dried and ground into flour. For tea, steep fresh or dried bark in water or birch sap (do not boil-will lose volatile wintergreen oil).

Twigs: Spring (best), year round; for tea, steep twigs in water or birch sap (do not boil).

Rhizome: Fall-spring; rhizome used for candy; dig up, wash, peel, slice into thin pieces (~1cm), boil in several changes of water, drain, dry, roll in sugar, eat.

Medicinal:

Twig: Soaked to extract oils, used to flavor unpleasant medicines.

Trunk: Saplings preferred for wigwam poles by Potawatomi.

Bittersweet, oriental (*Celastrus orbiculatus*)

Family: Celastraceae

Status: Introduced & potentially invasive

Description:

Perennial; climbing, woody vine; alternate elliptical-orbicular leaves, light green; small axillary flowers; fruits round, ripen to yellow then split to reveal scarlet seeds that persist into winter.



Location:

Granite Parkway Trail north of Shelter Building near first wetland area on east side of trail.

Edible:

CAUTION: fruit toxic, all parts potentially toxic.

Medicinal:

Root: Root bark tea used as diuretic, to induce sweating and vomiting, and for the pain of childbirth. Bark used externally in ointment for burns, scrapes, and skin eruptions.

Black locust (*Robinia pseudoacacia*)

Family: Fabaceae

Status: Introduced, naturalized, & invasive

Description:

Tree; gray-light brown bark, thick, fibrous, heavily ridged and furrowed; alternate pinnately compound leaves, 7-19 oval leaflets; showy white flowers in long hanging clusters; fruit is a flattened legume (pod), light brown, contains 4-8 kidney-shaped seeds.

Location:

Shelter Building west of trail.

Edible:

Flower: Early summer; harvest only fresh flowers (otherwise bitter), eat raw or cooked; look for yellow spot on upper petal: should be bright; if dull or faded it is too old. According to Sam Thayer they taste like sweet peas with a hint of vanilla.

Seed: Mid-late summer; collect pods when green or green and purple, remove seeds and boil.

Medicinal:

Bark: Stimulates vomiting and diarrhea. **CAUTION: toxic in large doses.**

Root: Causes vomiting and diarrhea, held in mouth for toothache, used in hot bath or sweat bath by some Native Americans.

Flower: Tea for rheumatism and as diuretic.



Black-eyed Susan

(Rudbeckia hirta)

Family: Asteraceae

Status: Native

Description:

Biennial/perennial; erect, hairy, 1'-3' tall; lower leaves lance-like, upper becoming more linear; flower 2"-3" wide, dark brown domed disk (center), 8-21 yellow rays, solitary heads; fruit is a dry seed.

Location:

Open prairie areas such as Prairie near visitor center.

Medicinal:

Leaf: Decoction used as diuretic and stimulant; used in sweat baths by Native Americans.

Root: Tea used internally for colds and worms, externally as wash for sores, snakebites, swelling. Root juices used for earaches. Root has immune-stimulant activity.

Other:

Flower: Yellow disk flowers boiled for yellow dye.



Bloodroot

(Sanguinaria Canadensis)

Family: Papaveraceae

Status: Native

Description:

Perennial; erect 3"-6"; large solitary basal leaf, 3-9 lobes, rubbery; white flower, 7 or more parted, solitary on stalk above leaf; stout rhizome with red juice.

Locations:

Flower bed in front of visitor center.

Medicinal:

Sap: Used for sore throat (Ojibwe would squeeze sap onto lump of maple sugar and hold sugar in mouth until dissolved), to warm stomach, and to stimulate gastric secretion, as expectorant, and in large doses to induce vomiting.

Root: Used as sedative, diuretic, tonic, stimulant, to promote menstrual discharge, and added to other medicine to strengthen their effect. Tea is used for skin diseases. Contains alkaloid Sanguinarine, which has been shown to have antiseptic, anesthetic, and anticancer activity; also said to cause glaucoma.

Other:

Root: Used to make dark yellow or orange colored dye, no mordant needed. Used by Ojibwe for face paint, fresh or dried.



Blue flag (*Iris versicolor*)

Family: Iridaceae

Status: Native

Description:

Perennial; erect, semi-aquatic-emergent, 2'-3' tall, stems equal to or slightly taller than leaves; basal, linear sword shaped leaves in flat, fan-like arrangement, V-shaped cross-section; Flower blue-purple, 6-parted, either no spot or greenish-yellow spot at base of sepals; fruit is a 3-celled, angled cylindrical capsule; plants form in clumps from thick rhizomes.



Location:

Open wetland areas and around Lake Joanis.

Edible:

CAUTION: leaves and roots toxic; may irritate gastrointestinal tract and eyes, cause nausea, headaches, and inflammation of throat and eyes, and may be fatal in large doses.

Medicinal:

Root: Used in **small amounts** in decoction or tea as a laxative and diuretic, to induce saliva and vomiting, to expel worms, to restore health, to stimulate bile flow and appetite, to stimulate and treat chronic problems with bowels, kidney, and liver, to cleanse blood, and to soothe sore throats and colds. Root used in poultice for swelling, sores, bruises, rheumatism, and as pain reliever. Fresh root contains furfural, which may irritate gastrointestinal tract and eyes, cause nausea, headaches, and inflammation of throat and eyes. Also contains iridin, which is toxic to humans and livestock.

Blueberry (*Vaccinium* spp.)

Family: Ericaceae

Description:

Perennial; erect shrub, 2"-14" tall, often in large colonies; narrowly elliptical to lance-like leaves, smooth-tiny sharp teeth on margins, some species soft and hairy, some hairless; white 5-parted flower, lobes shorter than tube; blue shiny berries with many seeds.



Location:

Abundant throughout reserve in upland forested areas, especially along the Trail of Reflections.

Edible:

Fruit: Mid-late summer; collect berries, eat raw, dry, or cook. *Note: there are about 35 species of blueberries in North America; all members of genus *Vaccinium* with blue or black berries are edible (taste varies). In Schmeekle Reserve, it is predominantly low sweet blueberry (*V. angustifolium*).

**Medicinal:**

Leaf: Used in tea as blood purifier, for colic, labor pains, and as tonic after miscarriages.

Flower: Flowers have been used to treat madness; they were burned and the fumes were inhaled.

Boxelder (*Acer negundo*)

Family: Aceraceae

Status: Native

Description:

Tree; thin gray-light brown bark with interlacing ridges; opposite, pinnately compound leaves, 3-5 leaflets, coarsely serrate-somewhat lobed; yellow-green flowers drooping in racemes; fruits are paired V-shaped samaras in drooping clusters; new growth often covered in white waxy layer.

Location:

South shore of Lake Joanis.

Edible:

Sap: Used to make sugar, syrup, mixed with maple sap to make cold drink, and mixed with inner shavings of animal hides to make candy.

Bark: Inner bark boiled until sugar crystallized out of it; used for sweetener. Inner bark can be dried and stored.

Medicinal:

Bark: Inner bark in tea to stimulate vomiting.



Bracken fern (*Pteridium aquilinum*)

Family: Dennstaedtiaceae

Status: Native

Description:

Perennial; erect fern; large triangular frond divided into 3 main parts, each part is bipinnately divided (pinnae further divided into blunt pinnules); mature stem is straw colored and stiff; spores on underside of fronds have brown velvety appearance; spreads by rhizomes and often forms dense colonies.



Location:

Granite Parkway, east along Green Circle Trail to Michigan Avenue, and in Berard Oaks Savanna.

Edible:

Plant: Spring; young curled shoots (fiddleheads) collected and cooked as vegetables by Native Americans. Ojibwe hunters would eat fiddleheads while deer hunting; they believed it covered their breath and allowed them to sneak close to deer (since deer also fed on these in spring).

Root: Rhizomes eaten boiled or steamed.

CAUTION: contains at least 3 carcinogens and is toxic in excess doses.

Medicinal:

Root: Used in tea to treat menstrual cramps and diarrhea; in decoction to expel worms and as laxative; considered astringent and tonic. Poultice used on burns, sores, and caked breasts.

Leaf: Dried leaves smoked on coals and inhaled to relieve headaches.

Brambles (*Rubus* spp.)

Family: Rosaceae

Description:

Perennial shrub; variable forms ranging from erect-drooping-trailing; thorns small and thin to large and stout; 3-5 parted toothed leaves from fuzzy to shiny; white 5-parted flowers, fruit is a berry ranging in color from red-black; includes blackberries, raspberries, and dewberries.



Location:

Abundant throughout reserve in upland areas, especially in Berard Oaks Savanna.

Edible:

Fruit: Mid-late summer; pick fruits as they ripen, eat raw or cooked (most are delicious raw).

Medicinal:

Stem: Stem of blackberry (*R. allegheniensis*) in decoction as diuretic.

Root: Roots have tonic and astringent properties. Root bark used in tea for sore eyes. Tea from red raspberry (*R. idaeus*) used for diarrhea, dysentery, to strengthen pregnant women, and aid in childbirth; active compound relaxes and stimulates uterus; leaf also used. Astringent root tea of black raspberry (*R. occidentalis*) used for diarrhea, dysentery, stomach pain, gonorrhea, back pain, and as a female and blood tonic.

Buckthorn, common (*Rhamnus cathartica*)

Family: Rhamnaceae

Status: Introduced, naturalized, & invasive

Description:

Tree; smooth gray-reddish brown bark with lenticels; sub-opposite elliptical-nearly oval leaves, finely serrated; small yellow-green flower, 4-parted, in small clusters; fruit is a round drupe, shiny black when ripe.

**Location:**

Overabundant throughout reserve.

Medicinal:

Fruit: Berries are strong laxative and emetic (often one berry can cause diarrhea and/or nausea).

Bark: Inner bark used as laxative.

Buckthorn, glossy (*Frangula alnus*)

Family: Rhamnaceae

Status: Introduced, naturalized, & invasive

Description:

Tree; smooth gray-brown bark with raised lenticels; alternate elliptical-oblong/obovate leaves, smooth margins; small inconspicuous yellow-green flower, bell-shaped, in leaf axils; fruit is a round drupe, red at first, shiny black when ripe.

Location:

Overabundant throughout reserve.

Medicinal:

Same as common buckthorn.



Burdock, common

(*Arctium minus*)

Family: Asteraceae

Status: Introduced, naturalized, & invasive

Description:

Biennial; erect, 1.5'-5' tall, branching, green to reddish-purple stem; alternate leaves with heart-shaped base, hollow petiole, basal leaves large (60+ cm long), smaller as they move upward on stalk, undulating margins; flowers are heads in clusters, pink-purple disk flowers, no ray flowers, bracts with curved hooks, located in upper leaf axils;



fruit is a round, bristly burr that clings like Velcro. During first year only a basal rosette of leaves forms, flowering stalk forms in second year.

Location:

Open, disturbed areas such as trails through Berard Oaks Savanna and near visitor center.

Edible:

Stem: Late spring-early summer; collect young shoots 1-3 feet tall (should not be stiff), cut at base, remove branches and leaves, peel off outer green rind, and eat inner opaque-whitish core raw or cooked (preferably cooked).

Petiole: Early summer; collect leaves before fully grown, remove leaf from petiole, peel off outer layer, and cook inner core.

Root: Mid-summer to early spring (includes over winter); collect taproots of plants with only basal rosette of leaves (no stem); best are medium sized plants (large plants have large, long taproots that are difficult to remove entirely); often the top of the root is darkened in color-remove this top section (too tough to eat); eat raw or cooked.

Medicinal:

Root: Used internally in tea, decoction, and tincture as tonic, diuretic, laxative, blood purifier; to induce sweating, dissolve urinary deposits, and restore health; for diabetes (high in inulin), rheumatism, gout, inflammation of mucous membranes, chronic skin diseases, digestion, gonorrhea, and for kidney and liver ailments. Used externally as salve/wash for skin eruptions, burns, wounds, hemorrhoids, and swelling. Bitter compounds are antibacterial. Commonly used as liver tonic.

Leaf: Tea of leafy branches used internally for vertigo, rheumatism, and measles; externally for hives, eczema, and other skin eruptions. Used in poultices for burns, ulcers, and sores. Has antibacterial and antiseptic properties.

Seed: Diuretic, antiseptic, Tea for sore throats, abscesses, insect bites, snakebites, flu, and constipation. Poulticed for bruises.

Flower: Antibacterial properties.

Bush clover, round-headed

(*Lespedeza capitata*)

Family: Fabaceae

Status: Native

Description:

Perennial; erect, 2'-4' tall, finely hairy, usually unbranched; alternate 3-parted leaves, oval-ovate leaflets, angling upward; white-cream flowers, 5-parted, with pink-purple throat, densely packed on round clusters, turn dark brown when mature; fruit is inconspicuous and yellowish.

Location:

Prairie and Lake Prairie.

Edible:

Leaf: Tea

Medicinal:

Plant: Plant extracts are effective in lowering cholesterol, have antitumor activity, thought to lower nitrogen levels in blood (for people with high nitrogen levels in urine), and contains several biologically active compounds.



Butter and eggs

(*Linaria vulgaris*)

Family: Scrophulariaceae

Status: Introduced, naturalized, & potentially invasive

Description:

Perennial; erect with creeping roots forming clones; many linear leaves, pale-green, narrowing towards base; orange-yellow flower, 5-parted (2 upper and 3 lower lobes), in raceme at top of stem, fruit is a round capsule with winged seeds.

Location:

Open areas such as Prairie and Lake Prairie.

Medicinal:

Plant: Whole plant dried and boiled in sweat lodges for a bronchial inhalant. Used internally as diuretic, laxative, and to treat dropsy and jaundice; externally in poultice for hemorrhoids.

Leaf: Tea used for laxative, strong diuretic, to reduce fevers, and for dropsy and jaundice; tea with milk used for insecticide.

Flower: Ointment used for hemorrhoids and skin eruptions.

Other:

Flower: Yellow dye.



Canada mayflower (*Maianthemum canadensis*)

Family: Liliaceae

Status: Native

Description:

Perennial; erect 4"-6" tall, unbranched but often zig-zags between leaves; alternate oval-oblong leaves with heart-shaped bases and pointed tips, solitary on nonflowering plants, 2-3 on flowering plants; white flower, 4-parted, in raceme, fruit is round berry, green with red spots when young, deep red when ripe.



Location:

Just west of Cattail Marsh and east of Prairie on Green Circle Trail.

Edible:

Fruit: Berries eaten by Potawatomi but preparation unknown.

Medicinal:

Plant: Tea for headaches, "to keep kidneys open during pregnancy," and as gargle for sore throats.

Root: Expectorant and to cause sneezing; used with spreading dogbane (*Apocynum androsaemifolium*) for same uses as plant (above).

Cattail (*Typha* spp.)

Family: Typhaceae

Description:

Perennial; erect, emergent semi-aquatic, 3'-9' tall; long linear leaves, as tall as stem, extend from base, D-shaped in cross section; flowers packed into dense, brown, cylindrical spikes; fruit is a tiny fluffy nutlet creating white fluff; spreads by rhizomes forming colonies.

Location:

Wet areas such as Cattail Marsh, Reflection Pond, and Lake Joanis.

Edible:

Rhizome: Late summer-early fall; harvest young lateral shoots off of main rhizome, eat raw or cooked (lateral shoot has white-cream color, smooth texture, no layers or roots, and the tip turns **sideways**, not up, without a bud).



Fall-late spring; collect rhizomes (run 2”-6” below surface, connecting plants), remove spongy layer and keep fibrous, starchy core (should be white-if tainted by mud or has orange-brown color, discard), eat as vegetable or grind into flour.

Stem: Spring-early summer; collect bases of young shoots (before flower), peel away outer sheath, eat core raw or cooked (preferably cooked).

Flower: Early summer; harvest top section of immature spike (will be enclosed in a sheath), should easily snap off by hand, boil or eat raw. Eat flower buds off of stalk like corn-on-the-cob.

Pollen: Early to mid-summer; harvest yellow pollen off of male spike (shake into bag or container, sift through cheesecloth), use immediately or dry for storage. Mix with flour for baking (not sticky enough to use alone) or use as flavoring.



Medicinal:

Root: Used in poultice for sores, wounds, burns, and inflammations; has astringent properties. Root infused in milk for dysentery and diarrhea.

Seed: Fluff used on burns and to prevent chaffing with babies.

Flower: Young flower heads eaten for diarrhea.

Other:

Leaf: Used to make large mats for the sides and roofs of lodges/wigwams.

Seed: Fluffy seed material used for mattresses and sleeping bags; pods were first boiled to remove bugs, then dried and fluff was stripped off. Ojibwe would throw fluff into the eyes of their enemies to blind them.

Root: Used for caulking leaks in boats.

Cedar, eastern red (*Juniperus virginiana*)

Family: Cupressaceae

Status: Native & potentially invasive

Description:

Evergreen tree; red-brown bark, peeling in long strips; both scale-like and needle-like leaves, often on same tree; small yellow-brown male cones in large groups, light blue-green female berry-like cone, green when young, turning dark blue with waxy covering when mature.

Location:

Near Visitor Center and Shelter Building.

Edible:

Cones: Berry-like cones used to flavor wild game, stews, soups, eaten to relieve thirst, and eaten by some as food.



Medicinal:

Leaf: Needles boiled or steamed and steam inhaled for headaches, head colds, sinus infections, congestion, and other respiratory ailments. Tinctures from green needles and berries used for bladder and kidney complaints.

Fruit: Tea for colds, worms, rheumatism, coughs, and to induce sweating. Chewed for canker sores.

Cherry, black
(Prunus serotina)

Family: Rosaceae

Status: Native

Description:

Tree; smooth bark when young, becoming nearly black and rough with age, with many horizontal lenticels; alternate oblong to lance-like leaves, finely serrated margins, small glands on petiole, shiny dark green above, pale dull green on underside; white flowers in hanging clusters; fruit is round, dark purple drupe, almost black when ripe.

Location:

Abundant throughout reserve.

Edible:

Fruit: Late summer-early fall; collect only fruits with dark purple-black color (avoid red); should be soft, juicy, and easily removed from stem when ripe; eat raw or cook into sauce or jam/jelly; contains hard pits like domestic cherries. Preferred by Ojibwe over other cherries.

Medicinal:

Bark: Inner bark tea or syrup used for coughs, colds, indigestion, respiratory problems, stomach problems, fevers, sore throat, diarrhea, lung ailments, pneumonia, poor circulation, and lack of appetite; has sedative, astringent, expectorant, tonic, and bitter properties. **CAUTION: bark should be harvested in spring; bark harvested in fall contains cyanide-like glycoside which can be highly toxic.**



Cherry, choke (*Prunus virginiana*)

Family: Rosaceae

Status: Native

Description:

Tree; smooth gray-brown bark, lenticels that develop into shallow fissures; alternate oblong-nearly oval leaves, finely serrated margins, small glands on petiole, shiny dark green above, pale dull green on underside; white flowers in loose terminal raceme; fruit is round, dark red-purple drupe.

Location:

Southeast corner of Lake Joanis; also throughout reserve.

Edible:

Fruit: Fruit collected similar to black cherries when berries are purple.

Bark: Used to make tea; drank regularly with meals by Menominee.

Medicinal:

Bark: Dried and used in tea for diarrhea and as eye wash; also used in poultice.

Fruit: Berries dried and used in tea for diarrhea, as tonic, to stimulate appetite, and treat bloody discharges of bowels.



Cherry, pin (*Prunus pennsylvanica*)

Family: Rosaceae

Status: Native

Description:

Tree; shiny red-brown bark, long horizontal lenticels; alternate lanceolate leaves, finely serrated margins; white flowers in small clusters; fruit is a red drupe, bright red when ripe.

Location:

North Granite Parkway.

Edible:

Fruit: Mid-late summer; collect bright red berries, eat raw (often very tart) or cook into sauces, jams/jellies, and pies.

Medicinal:

Fruit: Berries dried, ground up, and used in tea to treat diarrhea and dysentery.

Bark: Inner bark used in tea for coughs, colds, stomach problems, and as bitter tonic.



Chokeberry, black (*Aronia melanocarpa*)

Family: Rosaceae

Status: Native

Description:

Tree; smooth reddish brown bark with lenticels, diamond-shaped splits with age; alternate elliptical-obovate leaves, finely serrate margins, midrib has raised dark glands on top; white flower with 5 petals, in clusters at ends of twigs; fruit is a black and shiny pome (when ripe).



Location:

Sedge Meadow Trail.

Edible:

Fruit: Late summer-early fall (fruit may persist on trees into late fall, especially in urban areas); collect berries. When eaten whole they have very astringent taste; when cold-pressed into juice most astringent flavor is lost (contained in pulp)-fruit can be boiled down, but bitterness will remain. To cold press into juice, mix 3 gallons of berries with 3 quarts of water, mash, and strain.

Medicinal:

Fruit: Berries used in tea to treat colds; dried berries ground up and used to treat diarrhea and dysentery; have astringent properties.

Cinnamon fern (*Osmunda cinnamomea*)

Family: Osmundaceae

Status: Native

Description:

Perennial, large erect fern growing in clumps; 2 distinctly different frond types- fertile and sterile; sterile fronds are green, pinnately compound, pinnae are further divided into smaller pinnules that are not completely separate from one another, grow up to 1 m long, and have brown tufts of hair at base of pinnae; fertile fronds are shorter, narrower, turn into cinnamon color when mature, and hold spores; fiddleheads have very wooly stalk and curl (ostrich ferns have smooth stalk with a U-shaped groove running along entire length and brown papery flakes on curl; both are edible but ostrich ferns are generally preferred).



Location:

West of Cattail Marsh, Trail of Reflections, and around Lake Joanis.

Edible:

Plant: Mid-spring; young coiled fronds (fiddleheads) were relished by Menominee; they simmered fronds for 1 hour, discarded water and added fronds to soup stock and thickened with flour. The white base of the plant was eaten raw.

Cinquefoil
(Potentilla spp.)

Family: Rosaceae

Description:

Perennial; erect-creeping, most species with palmately-divided leaves into 3-7 toothed leaflets (often 5); 5 parted flower whitish-yellow to yellow, fruit is dry and seed-like.



Location:

Common along trail edges, especially on Green Circle Trail east of Visitor Center.

Medicinal:

Root: Astringent, tea of pounded roots used for diarrhea.

Club moss
(Lycopodium spp.)

Family: Lycopodiaceae

Description:

Perennial; erect leafy stems, sometimes tree-like, grow from horizontal stems running either above or below the surface; leaves are small, linear, and pointy; produces spores in cone-like structures at the ends of leafy vertical stems.



Location:

Common in moist forested areas such as western Trail of Reflections.

Medicinal:

Plant: Common club moss (*L. clavatum*) is used in tea for rheumatism, epilepsy, dysentery, kidney disorders, fever, weakness, postpartum pains, as a diuretic, and to stop/prevent convulsions or spasms.

Spores: Used as surgical and antiseptic healing powder, on exposed skin such as with chaffing, eczema, and lesions; stops bleeding by contracting tissues; used internally for diarrhea, dysentery, rheumatism, as a diuretic, gastric sedative, and as an aphrodisiac.

Columbine (*Aquilegia canadensis*)

Family: Ranunculaceae

Status: Native

Description:

Perennial; erect, 1'-3' tall; leaves are 2-3 parted into 3-parted segments, basal leaves on long petioles, cauline leaves sessile; orange-red/yellow flower, 5-parted, hanging, long, hollow red spurs above with petals protruding below; fruit is a small follicle.



Location:

Flower bed in front of visitor center.

Medicinal:

Plant: Astringent, diuretic, mild pain killer. **CAUTION: potentially poisonous.**

Root: Chewed or used in **weak** tea for diarrhea, stomach problems, uterine bleeding, to increase sweating, and as a diuretic; used by Ojibwe for jaundice, scurvy, and to promote skin eruptions with smallpox.

Seed: Tiny amount of crushed seed used for headaches and fevers; rubbed into hair to control lice.

Cottonwood (*Populus deltoides*)

Family: Salicaceae

Status: Native & potentially invasive

Description:

Tree; gray bark, thick ridges and deep furrows with age; alternate deltoid leaves with crenate-serrate margin, flattened petiole with glands near top; flowers are hanging catkins, fruits are cottony seeds in capsules.



Location:

Lake Joanis shorelines and along Maria Drive between Granite Parkway and Student Memorial.

Edible:

Bark: Spring; inner bark scraped and eaten raw.

Flower: Catkins eaten raw.

Medicinal:

Bark: Inner bark used for scurvy and as female tonic; contains salicin, which is antiinflammatory, analgesic, and reduces fevers.

Dandelion, common
(Taraxacum officinale)

Family: Asteraceae

Status: Introduced & naturalized

Description:

Perennial; erect 2"-12" tall, milky juice; basal leaves long, narrow, pinnately lobed, broader at tip, and in a rosette; yellow flower with only ray flowers, solitary on a long, hollow stalk from base; fruit is a brown achene on white, fluffy pappus.

Location:

Common along trails throughout reserve.



Edible:

Leaf: Mid-late spring; collect leaves, eat raw or cooked. Young leaves before flower are best, but edible year round; has bitter taste, increasing with age; boiling and draining will reduce bitterness (also reduces nutrient content but will still be extremely nutritious). Very high in vitamins A, K, and beta carotene; high in Vitamins C, E, riboflavin, thiamine, B6, folate, and minerals calcium, iron, potassium, and manganese.

Crown & bud: Early-mid spring; the crown is a funnel-shaped portion of leaves and buds growing up from the top of the taproot; when leaves are just beginning to grow, cut through the top of the taproot just below the crown (to keep crown intact); the young leaves should be yellowish-white and young flower buds will be present in the center of the crown; remove outer leaves, wash thoroughly, and eat raw or cooked. Sam Thayer recommends using a spoon with a stout handle and a narrow tip sharpened on the edges.

Stem: Mid-spring to early summer; harvest flower stems growing in shade or among tall grass/herbs; should be light green in color and have young blossoms; eat raw or cooked.

Flower: Spring-fall; harvest flowers and remove green bracts, can be eaten raw or cooked, batter-fried for fritters, or used to make wine or tea. Can be dried and stored for use in tea.

Root: Fall-early spring; dig up taproots when flower stalks are absent. Young roots (first year) can be eaten as vegetables (raw or cooked), older roots can be used to make coffee substitute: wash and dry roots, toast in oven at 325°F (163°C) for 20-60 minutes until brown and brittle, grind roasted roots, boil 1-2 teaspoons of ground root per cup of water for about 3 minutes.

Medicinal:

Root: Used in tea, decoction, and tincture for heartburn, constipation, for liver, gallbladder, kidney, and bladder problems, as a diuretic, appetite stimulant, tonic, blood purifier, and laxative; root is hypoglycemic and a weak antibiotic against yeast infections. For tea, fresh root teas are stronger than dried root tea.

Leaf: Tea used as tonic, digestive aid, appetite stimulant, and laxative.

Dogbane, spreading (*Apocynum androsaemifolium*)

Family: Apocynaceae

Status: Native

Description:

Perennial; erect 8"-32" tall, milky juice, branching, often with no main stem; opposite ovate leaves, pointed tips, drooping, usually hairy beneath; whitish-pink flower with pink stripes inside, nodding, petals curve backward, in cymes both terminally and in leaf axils, fruit is narrow pod with seeds on silky hairs, pods are paired.



Location:

Green Circle Trail east of intersection with Plank Trail.

Edible:

CAUTION: Toxic, all parts contain resins and glycosides which can affect the cardiovascular system in mammals.

Medicinal:

Root: Used as diuretic, urinary medicine, laxative, expectorant, and to induce vomiting and sweating; used regularly in small amounts in tea as contraceptive by both men and women. Ojibwe would place root on hot coals and inhale smoke for headaches and sore throats; they also used root and stem in tea, along with false spikenard (*Smilacina racemosa*) to keep kidneys free during pregnancy.

Leaf: Used to treat colic in babies.

Dogwood, red-osier (*Cornus sericea*)

Family: Cornaceae

Status: Native & potentially invasive

Description:

Shrub; red-green bark with many lenticels; twigs bright red with white pith; opposite ovate leaves, rounded at base, veins curve toward tips, smooth margins; small white flowers in flat-topped clusters; white berries in clusters on bright red pedicels.

Location:

Lake Joanis.

Edible:

Fruit: Berries eaten raw or dried and eaten as snack food; bitter taste, often mixed with other berries such as chokeberries or serviceberries/juneberries; also mixed with water and sugar for a dessert.



Elm, American (*Ulmus americana*)

Family: Ulmaceae

Status: Native

Description:

Tree; spreading, vase shaped crown; brown-gray peeling bark, with ridges and fissures; alternate ovate-oblong leaves, unequal bases, doubly serrate margins; small drooping clusters of inconspicuous flowers; fruit is a round, flat samara, looks like wafer, notched at apex.

Location:

Granite Parkway and south side of Lake Joanis.

Edible:

Bark: Red inner bark used like coffee by Cheyenne.

Medicinal:

Bark: Inner bark in tea for coughs, colds, internal bleeding, hemorrhoids, cramps, diarrhea, and to restore health after ailment; astringent, tonic, and diuretic properties.



Goat's beard (*Tragopogon* spp.)

Family: Asteraceae

Description:

Biennial; erect, 1'-3' tall, milky juice; alternate clasping leaves, narrow linear with pointed tips; yellow flower heads, ray flowers only with green bracts longer than rays, solitary flower on long stalk; fruit is a dry seed-like achene on white, fluffy pappus.

Location:

Prairie and Berard Oaks Savanna.

Edible:

Root: Fall-early spring; harvest roots from first year plants (basal rosette leaves only, no flower stalk), cook like vegetable or potato.

Leaf: Mid-late spring; in second year, young, upright, green leaves will sprout in center of basal rosette (before flower stalk appears); collect and eat raw or cook.

Stem: Mid-late spring; young shoots up to about 16 inches can be cut at base and eaten with attached leaves, raw or cooked.

Flower: Early to mid-summer; collect unopened flower buds and cook. ***NOTE:** Ensure the unopened flower is pre-flower and not post-flower; after flowering the flower will close back up, however they are much bigger, usually have white tufts showing at top, and the bracts will not be as tightly closed.

Peduncle: Early to mid-summer; the peduncle is the stem connecting the flower to the plant stem, they grow very fast and are therefore very tender; collect before flower bud opens. ***NOTE:** There is a short window of opportunity to collect peduncles; they grow very fast, just prior to flower buds opening.



Goldenrod (*Solidago* spp.)

Family: Asteraceae

Description:

Perennial; erect, 8"-72" tall, often forming large, dense patches, leafy stems; leaves narrow, tapering at both ends, often 3-veined, toothed/entire margins; flowers mostly yellow, in spreading clusters along arching branches; fruit is achene on fluffy pappus.

Location:

Abundant throughout reserve in open areas.



Edible:

Fruit: Fruits of many species, including Canada goldenrod (*S. Canadensis*), used for food, but preparation unknown.

Medicinal:

Leaf: Used to cleanse bowels, prevent/relieve flatulence, treat colic in infants, relieve spasms, as an intestinal astringent; many species used in sweat lodges by Native Americans; showy goldenrod (*S. speciosa*) considered the best blood purifier by Hocak; Canada goldenrod used as diuretic and to treat inflammation of lower urinary tract. **CAUTION: may cause allergies in some people.**

Flower: Flowers used to make infused oil (crushed flowers heated in oil in water bath/double boiler for 2-3 hours, then strained & stored in dark bottle) and used to massage body; flowers of Canada goldenrod used in tea for fevers and snakebites, crushed flowers chewed for sore throat; fragrant goldenrod (*S. graminifolia*) used by Ojibwe to treat chest pains.

Root: Root of Canada goldenrod used for burns.

Grape, river bank (*Vitis riparia*)

Family: Vitaceae

Status: Native

Description:

Perennial; climbing woody vine, tendrils wrap around nearby objects; alternate lobed leaves, generally sharp-pointed with coarsely serrated margins; small, inconspicuous greenish flowers in panicles; waxy purplish-black berries.

Location:

Granite Parkway, just east of Visitor Center, and south of Lake Joanis.

Edible:

Fruit: Late summer-early fall; collect berries and eat fresh, dry, or use to make juice. For juice: collect fruit, mash gently to not break seeds (they will release a bitter flavor), and strain through cheesecloth; let sit in cool place for 1-2 days, pour juice off of resultant gray sludge at bottom of container.

CAUTION: This sludge contains tartrate, which causes a sore mouth & throat if drank fresh, a painful burning sensation on skin after prolonged exposure (rinse hands/skin after contact), and can give an unpleasant texture and flavor to jelly and wine. Also avoid eating too many berries at one time.



Medicinal:

Leaf: Large fresh leaves used for bandages or poultice for wounds; antiseptic.

Twigs: Used in tea by Ojibwe to make afterbirth pass easily.

Sap: Spring; used for stomach and bowel problems and as hair tonic.

Root: Boiled and used as hair tonic.

Hairy sweet cicily
(Osmorhiza claytonia)

Family: Apiaceae

Status: Native

Description:

Perennial; erect 1'-3' tall, stem and leaves with fine, white hairs; leaves twice pinnately-divided, toothed or lobed, lower leaves with stalks, upper sessile; white flower, 5-parted, in compound umbels with long peduncles; fruit is a capsule with 2 seeds attached parallel to each other, with a barb protruding from the top.

Location:

West of Cattail Marsh along boardwalk.

Medicinal:

Root: Used in tea for sore throats, coughs, and to ease childbirth (has licorice flavor); tea used as wash for sore, red eyes; root also chewed for sore throat; poulticed for boils, cuts, sores, and wounds.



Hawthorn
(Crataegus spp.)

Family: Rosaceae

Description:

Tree; long, stiff thorns; gray-brown bark, smooth turning darker and scaly with age; alternate highly variable leaves, often lobed with serrate margins; small white flowers, 5 petals, in clusters near end of twig; fruit is a small pome, yellow-red when mature.

Location:

Shelter Building.

Edible:

Fruit: Late summer-fall; harvest fruits and eat raw, cook, or use in tea fresh or dried. There are many species of *Crataegus*, some with sweet fruits and some bitter; taste fruits from each plant before harvesting; bitter fruits can be made into jelly or sauce.



Medicinal:

Fruit: Tea used as heart tonic (dilates coronary vessels), to reduce blood pressure, and as an astringent.

Flower & Leaf: Approved in Germany for treating early stages of congestive heart failure.

Other:

Thorns: Used as sewing awls by Ojibwe.

Horsetail

(*Equisetum* spp.)

Family: Equisetaceae

Description:

Perennial, erect plant with hollow stems, conspicuous nodes giving it a jointed appearance; grows from rhizomes; with and without branches, branches whorled at or just below nodes; spores produced in a terminal cone-like strobilus, some on green branched stem and some on separate, shorter brown stems.



Location:

West of Cattail Marsh along boardwalk and near Reflection Pond.

Edible:

Root: Rootstocks of scouring rush (*E. hyemale*) was dried and eaten by Native Americans.

Medicinal:

Plant: Decoction or tea of scouring rush used for kidney trouble, to “clear up the system” after childbirth, as a mild diuretic, and to aid the body in calcium absorption; used externally to help keep skin, nails, and hair smooth, shiny, strong and healthy, and to stop bleeding. Wood horsetail (*E. sylvaticum*) also used for kidney trouble; both wood and field horsetail (*E. arvense*) used for dropsy.

Root: Given to teething babies.

Other:

Plant: Field horsetail fed to livestock to make their coats glossy; scouring rush used to scour kettles and pans.

Jewelweed, orange (*Impatiens capensis*)

Family: Balsaminaceae

Status: Native

Description:

Annual; erect, 2'-6' tall, branched near top, succulent, almost translucent, stems contain clear watery sap; alternate ovate leaves with broad teeth on margin, dull green, on petioles; orange-yellow flower, in clusters of 1-3 on drooping pedicels, conical shape with upper and lower petals and a spur, petals often have reddish dots or streaks; fruit is an oblong capsule with several seeds inside; when mature, the capsule will pop open and propel seeds when touched; found in wet sites.



Location:

Cattail Marsh, Sedge Meadow Trail, and on south side of Lake.

Edible:

Fruit: As the capsules mature, shake plant over tarp or fine net and separate seeds from the rest of the fruit; tastes like butternuts.

Medicinal:

Sap: Sap used to relieve rashes, burning/itching of poison ivy and nettles, insect bites, and rubbed on head for headaches; can be used fresh or boiled down to concentrate; loses medicinal properties quickly unless frozen.

Plant: Plant has diuretic, emetic, fungicide, antihistaminic, and anti-inflammatory properties. Tea of whole plant (except roots) used internally for chest colds, stomach cramps, inducing vomiting, restoring health from ailments, and as a diuretic; used externally for poison ivy/nettles rash (applied warm or frozen into ice cubes and applied cold) and used to soak a cloth which is wrapped on sprains, bruises, and sore areas (tea is boiled down to thicken and concentrate before cloth is soaked). A tincture of the whole plant (except roots) is added to a foot or tub bath to soothe rashes, sunburn, chickenpox, other skin irritations, athlete's foot, tired feet, and sprains (tincture: fill sterile jar with fresh and cleaned plant, press down until full, cover with apple cider or white vinegar, cover, shake, and let rest for 7-10 days; will last ~ 6 months). Poultice of plant used for wounds, sores, burns, eczema, insect bites, sprains, warts, and ringworm.

Other:

Plant: Whole plant is boiled to make orange-yellow dye.

Joe-Pye-weed

(*Eupatorium maculatum*)

Family: Asteraceae

Status: Native

Description:

Perennial, erect, 2'-7' tall, stems spotted or entirely purple; lance-shaped leaves, narrow towards petiole, sharply serrate, in whorls of 4-5; pink-purple flowers, ray flowers only, in flat-topped, branched cluster; fruit is a dry seed-like achene with white fluff.

Location:

Prairie.

Medicinal:

Leaf: Tea as tonic, diuretic, for dropsy, painful urination, gout, kidney infections, and rheumatism. Poultice used for burns.

Root: Used in teas and tinctures as diuretic, stimulant, astringent, and tonic; for urinary disorders, bloody urine, gout, to stimulate immune system, fevers, colds, chills, sore womb after childbirth, diarrhea, liver and kidney troubles, and externally as wash for rheumatism.



Lamb's quarters

(*Chenopodium album*)

Family: Chenopodiaceae

Status: Native

Description:

Annual; erect, 6"-50" tall; branched, stout, angular stem; alternate leaves, lower leaves broadly lanceolate, wider at base, irregular margins with large, blunt, dentate teeth that are widely spaced, green to bluish green with white mealy appearance; small white-greenish flower, densely packed onto spikes, appear ball-like; fruit is black, flattened seed that is covered by calyx.

Location:

Open, disturbed areas such as along trail near Prairie and parking lot.

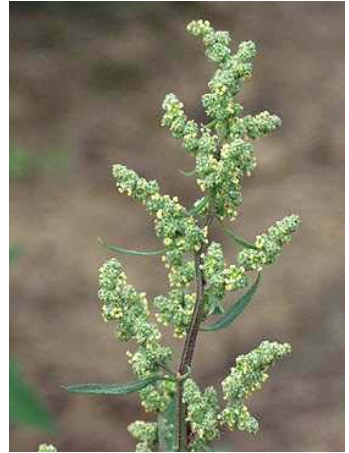


Edible:

Leaf: Late spring-late summer; harvest leaves and eat raw or cooked. Young leaves will be most tender, but leaves remain relatively tender after flower; upper leaves often have whitish powder that is better washed off before eating.

Stem: Late spring to mid-summer; harvest entire plant until they reach 6"-12"; after collect only tender tops of shoots until flower.

Seed: Late summer-winter; collect seeds; if still moist, dry promptly to avoid spoilage/mold; remove chaff by winnowing; boil seeds whole or grind; eat as mush or use with other flours.

**Medicinal:**

Plant: Use as medicinal food to treat scurvy; used as tonic and digestive aid.

Leaf: Eaten for stomach aches and to prevent scurvy; tea for diarrhea; poultice for burns.

Maple, red (*Acer rubrum*)

Family: Aceraceae

Status: Native

Description:

Tree; gray bark, lighter and smoother on young trees, becoming dark and rough; twigs red; buds blunt; bright red-yellow flower in hanging cluster; fruit is winged samara, occur in pairs, often reddish.

**Location:**

Abundant throughout reserve.

Edible:

Sap: Early to mid-spring; collect sap; drink fresh or boil down for syrup; generally considered not as good as sugar maple (lower sugar content), however, Hocak preferred it over sugar maple; can also be used as base for tea or to make maple sugar.

Seed: Mid-late summer; collect winged seeds; soak and remove wings, boil until tender, drain, season, and roast for 10-15 minutes.

Bark: Dried, pounded, sifted, and made into bread by Native Americans.

Medicinal:

Bark: Inner bark is used in decoction to wash and treat sore eyes and as astringent.

Other:

Bark: Traps were boiled in water with bark to cover scent of previous animals trapped.

Wood: Used to make dishes and utensils.

Maple, sugar (*Acer saccharum*)

Family: Aceraceae

Status: Native

Description:

Tree; brown bark, becoming darker with vertical grooves and ridges irregularly curling outward; twigs brown; buds sharp pointed; yellow-green flowers in hanging clusters; fruit is winged samara, occur in pairs, horseshoe-shaped.



Location:

Granite Parkway and south of Lake Joanis.

Edible:

Sap: Early to mid-spring; collect sap; drink fresh, boil down for syrup, use as base for tea, to make maple sugar, or ferment into alcoholic beverage; sugar maple is considered the best maple for making syrup and sugar due to a higher sugar content. Ojibwe made sap into vinegar and used this to cook venison, often adding maple sugar for a sweet-sour meat.

Seed: Mid-late summer; collect winged seeds; soak and remove wings, boil until tender, drain, season, and roast for 10-15 minutes.

Bark: Dried, pounded, sifted, and made into bread by Native Americans.

Medicinal:

Bark: Inner bark is used in tea as tonic, eye wash, diuretic, expectorant, blood purifier, to expel internal parasites (especially intestinal); for coughs and diarrhea. Used in decoction to wash and treat sore eyes.

Sap: Used as liver tonic and kidney cleanser, in cough syrup, and as spring tonic (popular with New Englanders).

Other:

Wood: Wood used by Ojibwe to make paddles for stirring maple sugar and wild rice (while parching/scorching), bowls, and other objects.

Milkweed, butterfly

(*Asclepias tuberosa*)

Family: Asclepiadaceae

Status: Native

Description:

Perennial; erect, 1'-3' tall, single stem or branched, hairy, with clear juice; alternate leaves on stem, but opposite on upper branches near inflorescence, linear to broadly linear, wider below the middle and tapering towards tip, smooth margins; flower is orange-yellow, 5-parted, in erect clusters (umbels); fruit is a pod containing many seeds with silky hairs.



Location:

Prairie and Lake Prairie.

Medicinal:

Root: Root pulverized for use in cuts, wounds, and on bruises. Fluid extract used as diuretic, to stimulate vomiting and sweating, to cleanse bowels, prevent and relieve flatulence, and in large doses as a laxative; use for pleurisy and pneumonia.

Milkweed, common

(*Asclepias syriaca*)

Family: Asclepiadaceae

Status: Native

Description:

Perennial, erect, 3'-6' tall, unbranched, milky white sap; opposite leaves, oblong-oval shaped, smooth margins, lightly hairy; light pink-purple flowers, 5-parted, in dense umbels on stalks coming from upper leaf axils, often drooping; fruit is a large, rough pod containing many seeds with silky hairs; often grows in colonies.



Location:

Abundant in open areas such as prairies and savanna.

Edible:

Stem: Late spring-early summer; collect young shoots 6"-14" before leaves are fully formed; stems should break easily when bent or pinched; boil until tender.

Flower: Mid-late summer; collect unopened flower buds, remove any insects, cook like vegetable. Ojibwe dried flowers for use in soups throughout the winter.

Fruit: Mid-late summer; collect young pods (<1.25 in.) and eat whole as cooked vegetable. For slightly larger, but still immature pods, remove the outer green rind and cook the inner white part (all the seeds should be completely white and the silk juicy). When boiled it has a "cheese-like" texture. *Note: pods that are too old are extremely tough and unpalatable.



Medicinal:

Root: Used in tea as laxative, diuretic, expectorant, sedative, to induce sweating, and used regularly in small amounts as a contraceptive by both men and women.

Sap: Used topically for warts and ringworm.

Other:

Stem: Stem fibers used for cordage; similar to, but not as strong as, spreading dogbane (*Apocynum androsaemifolium*).

Mountain Ash

(*Sorbus spp.*)

Family: Rosaceae

Description:

Tree; grayish brown bark with lenticels, scaly patches and cracks with age; stout twigs; hairy buds; alternate pinnately compound leaves, 11-15 leaflets with serrated margins; small white flowers in showy clusters; clusters of bright orange pomes, persistent into winter.



Location:

North and west of Lake Joanis on Lake Loop Trail.

Edible:

Fruit: Fall-winter; can eat fruits raw but better cooked into jellies or sauces; best after frost.

Medicinal:

Fruit: Ripe berries in tea to stimulate appetite, treat/prevent scurvy, and expel worms.

Bark: Inner bark in tea for colds, general debility, boils, diarrhea, tonsillitis, as a blood purifier, appetite stimulant, astringent, and tonic.

Mullein, common (*Verbascum Thapsus*)

Family: Scrophulariaceae

Status: Introduced, naturalized, & potentially invasive

Description:

Biennial; erect, rosette of basal leaves in first year, 1'-6' tall flowering stalk in second year, unbranched, covered in soft white hairs; leaves alternate on flowering stalk, entire margins, soft and hairy, lower leaves stalked, upper leaves extend onto stem; yellow flowers, 5-parted, densely clustered onto long, terminal spike; fruit is a small capsule containing small oblong seeds.

Medicinal:

Leaf: Tea for coughs, inflammation of mucous membranes, bowel problems, bladder or urinary tract problems, bloody urine, as a blood purifier, mild sedative, and externally for hemorrhoids; boiled and steam inhaled for inflamed tonsils and sore throat; smoked for respiratory problems such as asthma and bronchitis; crushed and inhaled or snorted for inflammation of mucous membranes and to revive someone who lost consciousness; heated leaves placed on skin to reduce swelling. Leaves have confirmed antiviral, mild expectorant, mild sedative, and anti-inflammatory properties; contain verbascoside, which has antiseptic, antitumor, antibacterial, and immunosuppressant activity; also contains small amounts of rotenone (used as pesticide for insects and fish) and coumarin (has anti-fungal, anti-tumor, and blood-thinning activities; used for anticoagulation medication and rodent poison). **CAUTION: Although generally believed to be safe, some sources warn against use if taking anticoagulation medication and overuse due to possible side effects from rotenone and coumarin.**

Flower: Diuretic and antispasmodic properties; used to treat tuberculosis; soaked in olive or mineral oil and used as ear drops for earaches. Flowers are preferred over leaves for most uses in Europe.

Root: Used for pulmonary diseases.

Other:

Seed: Used as narcotic fish poison; contain higher amounts of rotenone and coumarin than leaves or flowers.



Musclewood

(Carpinus caroliniana)

Family: Betulaceae

Status: Native

Description:

Small tree; smooth gray to bluish gray bark, heavily fluted-looks like muscles; alternate elliptical-ovate leaves, doubly serrate margins; flowers are yellow-green hanging catkins; fruit is a small ribbed nutlet on a leafy bract, clustered in long, hanging stalks.



Location:

West of Granite Parkway along Green Circle Trail.

Medicinal:

Bark: Tea is astringent and tonic; used for loss of appetite, diarrhea, and fever.

Other:

Bark: Used to make yellow dye.

Nettles, stinging

(Urtica dioica)

Family: Urticaceae

Status: Native

Description:

Perennial; erect, 1'-6' tall, **stinging hairs on stem and leaves**, found in colonies; opposite lance-shaped leaves that come to a sharp point, stalked, serrate margins; small greenish-cream colored flowers, densely packed onto long clusters in upper leaf axils; fruit is a small, dry seed-like achene.



Location:

West edge of Cattail Marsh, Granite Parkway, and west of Berard Oaks Savanna along Green Circle Trail.

Edible:

Leaf: Early spring-early summer; harvest the upper 2-3 pairs of leaves until the plant is about waist high (after this they become tough); boil and eat as green or chop into smaller pieces and use in soup (makes good broth); can be dried and stored; leaf tea drunk as tea or made into beer. Leaves are very high in vitamins, minerals, and protein.

Medicinal:

Leaf: Leaf tea as blood purifier, blood builder, diuretic, tonic, astringent; used for anemia, gout, rheumatism, poor circulation, enlarged spleen, mucous discharges from lungs, internal bleeding, diarrhea, dysentery. Studies suggest CNS-depressant, antibacterial, and mitogenic activity; inhibits effects of adrenaline.

Plant: High in iron; eat or drink tea for iron deficiency.

Nightshade, deadly
(*Solanum dulcamara*)

Family: Solanaceae

Status: Introduced, naturalized, & potentially invasive

Description:

Perennial; trailing or climbing semi-woody vine, stem purple when young, turning brown and woody with age; alternate leaves, triangular outline, 1 or 3 lobes, lower lobes ovate-cordate and much smaller; purple flower, 5-parted, with yellow cone (anthers) extending from center; fruit is a berry, green when young, turning to yellow, then orange, and finally bright red.

Location:

Cattail Marsh.

Medicinal:

Plant: Used externally for warts, tumors, skin eruptions, and rheumatism; has been used for gout, bronchitis, whooping cough, and to induce sweating; confirmed significant anticancer activity. **CAUTION: TOXIC; contains steroids, toxic alkaloids, and glucosides; can cause vomiting, vertigo, convulsions, weakened heart, and paralysis.** Stems contain less toxic alkaloids than rest of plant.



Oak, red
(*Quercus rubra*)

Family: Fagaceae

Status: Native

Description:

Tree; older bark gray with wide ridges and shallow furrows; alternate leaves, 7-11 **pointed lobes** with bristles at tips, sinuses extending 1/3 to 1/2 way to center; inconspicuous flowers, yellow-green hanging catkins (male) and axillary spikes (female); fruit is an oval-oblong acorn with a round, **flat cap**, covering ~1/4 of acorn.



Location:

Abundant throughout reserve.

Edible:

Fruit: Late summer-fall; collect acorns from either tree or ground (for acorns still on tree (late Aug.-Mid Oct.) use a long stick or climb tree to shake branches; acorns already on ground may be collected into winter, provided there is no snow cover); discard rotten or weevil infested acorns, remove and discard shells, then leach out tannins from nutmeat. Leaching: for whole or partial pieces, boil in several to many changes of water until nutmeat is no longer bitter; for ground nutmeat, either soak in cold water or percolate cold water through ground meal with several to many changes of water until meal is no longer bitter. For a detailed account of acorns, harvesting, leaching, and cooking, see *Nature's Garden* by Sam Thayer.

**Medicinal:**

Bark: Tea or decoction of inner bark is astringent and used as gargle for sore throat and inflamed tonsils, diarrhea, and mixed with apple bark to expel worms. Tea with aspen bark was also used to soak corn, which was fed to horses to expel worms. Bark contains tannic acid which is shown to be antiviral, antiseptic, growth depressant, antitumor, and carcinogenic (under certain conditions).

Other:

Bark: Boiled to make brownish dye.

Oak, white (*Quercus alba*)

Family: Fagaceae

Status: Native

Description:

Tree; older bark whitish-ashy, scaly or with irregular plates; alternate leaves, 7-10 **rounded lobes**, sinuses vary from deep to shallow; inconspicuous flowers, yellow-green hanging catkins (male) and reddish-green spikes (female); fruit is an oval-oblong acorn with a **bowl-shaped, warty cap**, covering ~1/4 of acorn.

**Location:**

Abundant throughout reserve.

Edible:

Fruit: Late summer-fall; same as for red oak except acorns harvested from ground must be collected shortly after falling (white oak acorns sprout soon after falling). For a detailed account of acorns, harvesting, leaching, and cooking, see *Nature's Garden* by Sam Thayer.

Medicinal:

Bark: Tea or decoction of inner bark used for diarrhea, dysentery, chronic mucous discharge, and as gargle for inflammation of throat and tonsils; used externally as wash for skin eruptions, hemorrhoids, poison ivy, rashes, burns, to stop bleeding, and injected into vagina to treat vaginal discharges. Bark contains tannic acid which is shown to be antiviral, antiseptic, growth depressant, antitumor, and carcinogenic.



Other:

Wood: Many uses by Native Americans, including awls for punching holes in birch bark when making canoes.

Onion, nodding
(Allium cernuum)

Family: Liliaceae

Status: Native

Description:

Perennial, erect, 1'-2' tall, arched stem growing from an elongated bulb, onion odor; leaves are thin and flat (grass-like), extending from near the base and shorter than stalk; white-pink flowers in a nodding round cluster (umbel); fruit is a capsule containing small black seeds.



Location:

Flower bed in front of Visitor Center.

Edible:

Bulb: Fall-spring; dig up bulb, eat as onion.

Stem: Spring-early summer; harvest young tops before flower, eat raw or cooked. **CAUTION: avoid any "onion-like" plant that lacks onion odor; some, such as death camas, are highly poisonous.**

Medicinal:

Plant: Poultice applied to chest for respiratory ailments.

Bulb: Used for colds, colic, and fevers by Chippewa.



Ostrich fern (*Matteucia struthiopteris*)

Family: Dryopteridaceae

Status: Native

Description:

Perennial fern, 1'-5' tall, noticeably different sterile and fertile fronds clustered together in a rosette; sterile fronds taller, tapering towards base (lowest pinnae very short); fertile fronds shorter, becoming dark brown, stiff, and often persistent through winter. Ostrich fern fiddleheads have one U-shaped groove running the entire length with brown papery flakes on coiled tops; interrupted and cinnamon ferns lack groove and have very woolly fiddleheads, both curl and stalk.



Location:

Moist, wooded areas.

Edible:

Stem: Mid-late spring (approximately at leaf-out of trees until leaves are fully formed); collect fiddleheads only while still tightly coiled on top, eat only tender portion (lower part of shoot usually tough) raw or cooked.

Medicinal:

Root: Menominee used tea to treat “whitish” urine.

Fruond: Used in poultice by Menominee, use unknown.

Other:

Fruond: Used for making beds by Native Americans while out hunting.

Partridge Berry (*Mitchella repens*)

Family: Rubiaceae

Status: Native

Description:

Perennial, creeping evergreen herb, often forming mats; opposite ovate-orbicular leaves, dark green with conspicuous white midvein; white flower, funnel-shaped, 4-parted, mostly occur in pairs, fuzzy petals; red berries in pairs.



Location:

Abundant throughout reserve along trails in wooded areas.

Edible:

Fruit: Collect berries; often dried individually or mashed into small cakes and then dried, later soaked in warm water for use in sauces or with corn bread; also used to make beverage.

Medicinal:

Plant: Tincture or tea drank to prepare uterus for childbirth, strengthen contractions, shorten labor, delayed, irregular, or painful menstruation, insomnia, dysentery, as a diuretic, and astringent; tea and salve used topically to treat sore nipples during breastfeeding, hemorrhoids, swelling, hives, arthritis, and rheumatism.

Pine, jack
(Pinus banksiana)

Family: Pinaceae

Status: Native

Description:

Evergreen tree; irregular shape, often with many dead branches; dark, scaly bark; needles ¾” to 1 ½” long, 2 per fascicle, twisted and divergent; yellow-green male cones in clusters at twig tips, female cones are oval and reddish, 1”-2” long, scales armed with small prickle, curved before opening.

Location:

Abundant throughout reserve.

Edible:

Bark: Inner bark eaten by Cree.

Medicinal:

Leaf: Needles ground and used to revive patients who are unconscious, to clear congested lungs, and to fumigate.

Sap: Used as base for ointments; obtained by boiling cones.

Other:

Roots: Spring; roots were traditionally collected by Ojibwe in spring and used for sewing birch bark canoes; roots are dug up, split into 2 halves lengthwise, soaked or boiled in water to make pliable, then bark is removed; stitching is sealed with pitch or boiled resin.

Sap: Used to caulk boats and canoes and for torches.



Pine, red (*Pinus resinosa*)

Family: Pinaceae

Status: Native

Description:

Evergreen tree; reddish-brown platy bark; needles 4" to 6" long, 2 per fascicle, snap cleanly when bent; round, light, red male cones in clusters at twig tips, females are reddish-brown to shiny chestnut color, ovoid cones, 1 ½"-2½" long, scales not armed with prickle.

Location:

Granite Parkway and west side of Lake Joanis.

Medicinal:

Leaf: Needles ground and used to revive patients who are unconscious.

Sap: Sap mixed with animal fat and used as salve to treat sores by Native Americans.

Other:

Sap: Used as waterproof caulk or glue for canoes, roofs, baskets, etc; sap was collected from a hole chopped into trunk, then boiled twice (second time with tallow).



Pine, white (*Pinus strobus*)

Family: Pinaceae

Status: Native

Description:

Evergreen tree; gray-brown scaly bark, long ridges and furrows with age; needles 3" to 5" long, 5 per fascicle, slender and flexible; yellow cylindrical male cones in clusters at twig tips, females light green with hints of red, long cylindrical cones, 4"-7" long, thick, rounded scales, resinous.



Location:

Abundant throughout reserve.

Edible:

Cone: Spring; Ojibwe collected young male cones and added to stew.

Bark: Inner bark can be eaten raw or cooked; also used to make beverage.

Medicinal:

Leaf: Needles ground and used to revive patients who are unconscious; chewed for oral hygiene; drank in teas to treat/prevent colds and scurvy, treat coughs, sore throats, and lung ailments; strong tea used for washing body, hair, and face; poultice for headaches and backaches. Tea is high in vitamin C.

Sap: Sap used as base for ointments, on sores for quick healing and to prevent scars, sore throats, drawing out boils, abscesses, rheumatism, broken bones, bruises, sores, and inflammation.

Bark: Inner bark tea for chest pain, colds, coughs, sore throats, and lung ailments; poultice for wounds, sores, headaches, and backaches.

Twig: Tea for kidney and lung ailments, and to stimulate vomiting.



Other:

Trunk: Used for making dugout canoes; preferred by some due to their longevity.

Plantain

(Plantago major)

Family: Plantaginaceae

Status: Introduced & naturalized

Description:

Perennial; erect, 6"-12" tall; leaves in basal rosette, elliptical-ovate, long petioles, 3-veins, firm texture; white-green flowers, leaf-like, densely packed onto long vertical spike; fruit is small seed-like achene.

Location:

Abundant throughout reserve along trails.

Edible:

Stem: Young, tender shoots cooked as vegetables.

Leaf: Young leaves cooked and eaten as greens.



Medicinal:

Leaf: Tea for coughs, diarrhea, dysentery, bloody urine, bronchitis, bronchial spasms, and to ease phlegm with tuberculosis; leaf soaked in warm water and used as bandage for bruises, sprains, sores, burns, bee stings, snake bites, skin inflammations, hemorrhoids, to stop bleeding, and to stimulate healing process; poultice also used like bandage; confirmed antimicrobial and bronchodilation action.

Root: Boiled to produce a slippery liquid; when someone is choking, the liquid is drunk to allow the object to be swallowed or coughed up.

Poison ivy

(*Toxicodendron* spp.)

Family: Anacardiaceae

Description:

Perennial; very variable form, climbing woody vine to small shrub with 1 to a few branches, 1'-3' tall, often forming colonies; alternate 3-parted leaves, somewhat-very shiny, smooth to large-toothed/shallow lobed margins; white flowers, 5-parted, in long clusters; fruit is a smooth drupe, whitish-yellow in color.



Location:

Berard Oaks Savanna.

Edible:

CAUTION: All parts contain oily resin with urushiol, which can cause rash and blisters.

Medicinal:

Root: Used as poultice on boils or swollen areas to draw out swelling, either topically or area was opened up first and a little poultice was placed inside opening; **CAUTION: Native Americans warned it is very dangerous without proper knowledge of its use, and only the most skillful medicine men used it.**



Ragweed

(*Ambrosia artemisiifolia*)

Family: Asteraceae

Status: Native

Description:

Annual; erect, 1'-3' tall, branched; lower leaves opposite, upper alternate, feather or fern-like, usually wider at base; small, round green flowers, later turning yellowish-green, densely packed onto long, terminal spikes; fruit is a small brown seed-like achene.



Location:

Disturbed areas, Prairie, and around parking lot.

Medicinal:

Leaf: Tea for fevers, nausea, mucous discharges, cramping; decoction to cleanse wounds; poultice to relieve inflammation; rubbed on insect bites, infected toes, minor skin eruptions, and hives, astringent and emetic properties.

Plant: Decoction with tops of plants used as wash for headaches.

Root: Root tea for menstrual problems and stroke.

Rattlesnake manna grass
(Glyceria canadensis)

Family: Poaceae

Status: Native

Description:

Perennial; semi-aquatic grass, erect solitary stems up to 3' tall; leaf blades linear, sheathed around lower stem; inflorescence is a drooping panicle with flowers clustered on branched, ovate spikelets.

Location:

First wetland north of Shelter Building on east side of Granite Parkway.



Medicinal:

Root: Tincture as diuretic, for female reproductive disorders, gonorrhea, hemorrhoids, bladder trouble, and rheumatism; poultice for snakebites and toothaches; root chewed to increase saliva flow.

Rose
(Rosa spp.)

Family: Rosaceae

Description:

Perennial shrub; erect, up to 4' tall, with/without thorns; alternate pinnately divided leaves, 3-7 oblong-rounded leaflets, coarsely toothed; flowers white-pink, 5-parted, either solitary or in wide clusters; fruit is red, berry-like hips.



Location:

Berard Oaks Savanna.

Edible:

Fruit: Late summer-early fall; collect hips, eat raw, cook, or steep for tea.

Medicinal:

Fruit: Reduces fevers and astringent, skin used by Ojibwe for stomach trouble and indigestion.

Flower: Dried, powdered, and used for indigestion.

Root: Used to treat diarrhea.



Rush

(*Juncus* spp.)

Family: Juncaceae

Description:

Perennial; erect, semi-aquatic to terrestrial, narrow, cylindrical stems; inconspicuous leaves (sheaths on stem) to flat linear leaves; flowers in variable terminal clusters; fruits are capsules.

Location:

Cattail Marsh and Lake Joanis.

Edible:

Plant: Food for animals.

Other:

Stem: Used to make mats.



Sedge

(*Carex* spp.)

Family: Cyperaceae

Description:

Perennial; semi-aquatic to terrestrial; erect, triangular, grass-like stems; leaves variable, often linear and w-shaped; flowers densely packed onto spikes; fruits are nutlets.

Location:

Abundant throughout reserve.

Edible:

Plant: Food for animals.

Other:

Stem: Used to line holes in ground to hide things.



Sensitive fern (*Onoclea sensibilis*)

Family: Dryopteridaceae

Status: Native

Description:

Perennial fern; sterile fronds up to 2' tall, yellow-green, 8-12 leaflets, pinnatifid, often with an undulating margin; fertile fronds up to 1' tall, erect, have inrolled bead-like structures, turn black-dark brown at maturity, often persist through winter; do not form conspicuous clumps.



Location:

Wet areas such as Cattail Marsh and Lake Joanis.

Edible:

Plant: Spring; young curled shoots (fiddleheads) cooked as vegetable.

Medicinal:

Root: Tea from dry root powder used to stimulate milk flow in nursing mothers.

Sorrel, red (*Rumex acetosella*)

Family: Polygonaceae

Status: Introduced, naturalized, & invasive

Description:

Perennial; erect, 4"-16" tall, erect, reddish-brown, angular or ridged stem; forms large patches; basal leaves 3-lobed, end lobe largest, elliptical-oblong, lower lobes triangular-oblong and rounded; leaves on stem are significantly smaller, alternate, linear-lanceolate, and sessile; small flower is red-yellow, 6-parted, many packed onto branched, spike-like clusters, fruit is a brown-golden brown seed.

Location:

Southwest of Lake Joanis.

Edible:

Leaf: Spring; eat young leaves as vegetables; rich in vitamins. **CAUTION: can be toxic in large amounts.**

Medicinal:

Leaf: Tea for liver tonic, cleansing herb in spring, fevers, inflammation, scurvy, and as diuretic; leaves are toasted and used in poultice for tumors and cysts; rich in cancer-preventative vitamins, contains 4 antimutagenic and 4 antioxidant compounds.

Root: Tea for diarrhea and excessive menstrual bleeding.



Spruce, white

(*Picea glauca*)

Family: Pinaceae

Status: Native

Description:

Evergreen tree; conical form; gray-brown scaly bark; needles $\frac{1}{4}$ "- $\frac{3}{4}$ " long, stiff, pointed but not sharp, on raised, woody peg (sterigma); male cones reddish turning yellow when they shed pollen, female cones $1\frac{1}{2}$ "- $2\frac{1}{2}$ " long, light brown, cigar shaped, rounded scales with smooth margins, hang down from branches.

Location:

West of Lake Joanis.

Edible:

Sap: Resin chewed like gum.

Bark: Spring; inner bark eaten, used to make beverage, and tea.

Medicinal:

Leaf: Dried needles used as inhalant and fumigator.

Bark: Inner bark used in poultice for wounds, cuts, and swelling.



Strawberry, wild

(*Fragaria virginiana*)

Family: Rosaceae

Status: Native

Description:

Perennial; erect, 4"-6" tall, spreads by hairy runners; basal leaves on long hairy petioles, 3-parted, leaflets similar in shape and size, serrate margins, oval-ovobate in shape; white flower, 5-parted, in clusters on stalks usually shorter than leaves; fruit is a red, juicy, roundish berry.



Location:

Abundant throughout reserve along trails.

Edible:

Fruit: Late spring-early summer; collect fruits not resting on ground and in areas where they do not collect dust or sand (it settles in the pits around the seeds and is difficult to remove), remove leafy calyx to eat whole or run through strainer for puree (much faster, especially for large quantities), eat raw or cook.

Medicinal:

Plant: Astringent and tonic for those recovering from an illness; used for children with weak bowels or bladders.

Root: Tea for stomach aches (especially good for babies), stomach and lung ailments, gonorrhea, irregular menstruation, and as diuretic.

Leaf: Tea for mild digestive issues, bladder and kidney ailments, jaundice, scurvy, diarrhea, gout, drunk by nursing mothers when either they or their child had diarrhea, and as diuretic and nerve tonic; fresh leaf tea for sore throats; used as wash for infants; highly astringent.

Sumac, staghorn

(Rhus hirta)

Family: Anacardiaceae

Status: Native & potentially invasive

Description:

Shrub or small tree; 4'-15' tall, young growth covered in dense, soft hairs; alternate pinnately compound leaves, 9-31 leaflets, serrated margins; small yellow-green flowers, on dense, upright, terminal clusters; fruit is a fuzzy, red drupe, also densely packed on upright clusters.

Location:

East of Lake Joanis and west of Granite Parkway along Green Circle Trail.



Edible:

Fruit: Berries can be eaten raw or used to make lemonade-like drink: steep berries in water (hot water like tea or set out in sun in cold water); berries can be dried and stored.

Medicinal:

Leaf: Astringent, tonic, and antiseptic; tea gargled for sore throat; tea drunk or cooked leaves eaten for stomach-ache, diarrhea, cramps, and to clean out digestive tract.

Fruit: Tea to reduce fevers, expel worms, for lung ailments, female disorders, as diuretic, and gargled for sore throat.

Bark: Tonic, astringent, and antiseptic; poultice used for sores and wounds.

Root: Root bark used as poultice to stop bleeding; root tea astringent.

Other:

Leaf: Mixed with tobacco for more pleasant smoke.

Root: Boiled to make yellow dye.

Wood: Used to make flutes: stick is split in half while green, holes are drilled into edges of each side as half circles, and then pieces are glued together.

Sweet fern

(*Comptonia peregrina*)

Family: Myricaceae

Status: Native

Description:

Perennial; small shrub; 2'-4' tall, densely branched; alternate linear leaf, coarsely irregularly toothed, dark green above, paler below, fragrant; male flowers are elongated, yellow-green, terminal catkins, female flowers are round catkins with reddish-brown bracts; fruit is a brown, ovoid nutlet, packed into burr-like clusters.

Location:

Abundant throughout reserve in open areas.

Edible:

Leaves: Tea with fresh or dried leaves.

Fruit: Early to mid-summer; collect nutlets while still tender (immature), separate nutlets from burrs, and eat raw.

Medicinal:

Leaf: Tea is astringent; used internally for dysentery, cramps, colic, diarrhea, and vomiting of blood; externally for rheumatism, to relieve itch from poison ivy rash, and to wash bleeding areas. Leaves can also be mixed with jewelweed (*Impatiens capensis*), crushed, and used on rashes. Native Americans used leaves in sweat baths for colds.

Plant: Whole plant has tonic, stimulant, and astringent properties and increases sweating.

Other:

Leaf: Used to line and cover berry pails and baskets to keep from spoiling; thrown on fire as mosquito repellent.



Sweet flag (*Acorus calamus*)

Family: Acoraceae

Status: Introduced &
naturalized

Description:

Perennial; erect,
emergent semi-aquatic,
up to 4' tall; long
aromatic rhizomes,
often forms colonies;
crowded basal leaves

are linear, long, sword-like, with prominently raised midvein, sweet smell; flower is greenish-yellow to brown, 6-parted, densely packed onto a semi-erect spadix in a diamond-shaped pattern, the spadix extends from the side of a leaf-like spathe; fruit is a brown berry.



Location:

First wetland north of Shelter Building on east side of Granite Parkway.

Edible:

Stem: Spring; collect tender shoots up to 1' tall, eat inner portion raw.

Root: Dried root chewed for taste by Dakota.

Leaf: Leaves and stalks eaten by Lakota.

Medicinal:

Root: Used for sore throat, stomach cramps, upset stomach, indigestion, and as an appetite stimulant; slices were candied for better tasting medicine; one source says to use only about 1 ½" of root; root is harsh and can cause sickness in larger quantities; dried root powdered and snorted up nose for inflammation of mucous membranes; has antispasmodic, anticonvulsant, and CNS-depressant properties; **CAUTION: can cause sickness in large doses; some strains contain the carcinogen beta-asarone.**

Other:

Blade: Used in construction of wigwams by Menominee.

Root: Root boiled; steam is insect repellent and decoction sprayed around tent/house to keep insects and snakes out.

Sycamore (*Platanus occidentalis*)

Family: Platanaceae

Status: Introduced

Description:

Tree; bark thin, mottled brown, green, tan, and white, exfoliating, "camouflage appearance"; large alternate leaves, 4"-8" wide, ovate with 3-5 lobes, toothed margins, petiole bases enclose buds; small flowers in dense round clusters; spherical fruit densely packed with small, winged seeds.



Location:

Granite Parkway.

Medicinal:

Bark: Inner bark for dysentery, colds, lung ailments, measles, coughs, as blood purifier, laxative, and to induce vomiting.



Thistle

(Cirsium spp.)

Family: Asteraceae

Description:

Biennial/perennial; erect, 1’-6’ tall, stems often spiny or densely hairy; alternate leaves on stem with/without basal rosette, lanceolate-oblong, pinnately-lobed, often spiny, some whitish below; flower heads with disk flowers only, pink-purple, one to many heads in clusters or on a stalk, flowers may have spiny-tipped bracts; fruit is an achene with white fluff.



Location:

Berard Oaks Savanna.

Edible:

Leaf: Spring-fall; collect leaves, peel off leafy portions from midrib (when done right, spines come off with it), eat midrib raw or cook.

Stem: Late spring-early summer; collect stalks that can easily be bent (typically 3’ or less in height), remove leaves and outer layer, eat core raw or cooked.

Root: Fall-early spring, collect roots from plants without a stalk (basal leaf rosettes only), eat raw or cooked.



Medicinal:

Leaf: Dried leaves used a diuretic and tonic.

Root: Tea for dysentery, diarrhea, “bowel tonic”, and to expel worms.



Vervain, blue (*Verbena hastata*)

Family: Verbenaceae

Status: Native

Description:

Biennial/perennial; erect, 1'-4' tall, square stem, hairy, branched near top; opposite lance-like leaves, coarsely serrated margin; deep blue-violet flowers, 5-parted, densely packed onto spikes in a terminal, branched cluster; fruit has 4 linear, reddish-brown nutlets.

Location:

Lake Prairie and flower bed at Visitor Center.

Medicinal:

Root: Tea as female tonic, for coughs, colds, fevers, bowel complaints, dysentery, stomach cramps, to clear up cloudy urine, and to cause vomiting in large doses; leaves used similarly but roots considered more active.

Flower: Expectorant, stimulates perspiration, and causes vomiting in large doses.



Virginia creeper (*Parthenocissus quinquefolia*)

Family: Vitaceae

Status: Native

Description:

Perennial; woody vine, climbing or sprawling as ground cover, branching tendrils with adhesive disks at ends; gray-brown bark with aerial roots, often orange-brown; alternate leaves, palmately compound, 5 elliptical leaflets, crenate-serrate margins, shiny green above, paler below, turn red in fall; small green flowers in clusters on long stems; fruit is a blue-black berry in clusters on long stems.

Location:

East of Visitor Center and east of Lake Joanis.

Edible:

Stem: Chippewa would cut stem, boil, peel, and the substance between the bark and wood was eaten; said to have sweet taste.

Root: Cooked and eaten by Ojibwe.



Medicinal:

Leaf: Tea to reduce fevers, as diuretic, astringent, for jaundice, as wash for swellings and poison-sumac rash, and mixed with vinegar for wounds and lockjaw.

Bark: Tonic, astringent, expectorant, and to restore health after ailment.

Root: Tea for diarrhea and gonorrhoea.

Twig: Tonic, astringent, expectorant, and to restore health after ailment.



Wapato

(Sagittaria latifolia)

Family: Alismataceae

Status: Native

Description:

Perennial; mostly erect, emergent aquatic, up to 4' tall; rhizomes and roots, roots tipped with tubers, often forms colonies; basal leaves, emergent leaves arrow-shaped, submerged leaves linear; parallel veins, smooth margins; white flowers in whorls of 2-3 at terminal end of flowering stalk, yellow stamens on males, green burr-like mass on females; fruit is a flattened, 3-angled, winged seed with a beak projecting outward.



Location:

East side of Lake Joanis along shoreline.

Edible:

Tuber: Fall-early spring; harvest tubers by stomping around in mud among wapato plants or rake mud back and forth with potato rake; once the mud is loosened at the tuber level (anywhere from 6 in. to 3 ft.) the tubers will float to surface; peel and cook like potatoes. Ojibwe would



harvest and steal tubers from beaver and muskrat caches; they would eat fresh or boil, slice, and hang on basswood cordage for winter storage.

Medicinal:

Tuber: Tea for fevers, indigestion, and as astringent; tubers pounded into pulp and used as poultice to clean wounds, sores, and boils.

Leaf: Tea for rheumatism and to wash babies with a fever; poulticed to stop milk production.

Wild ginger

(*Asarum canadense*)

Family: Aristolochiaceae

Status: Native

Description:

Perennial; erect, 2'-8' tall, very hairy, often forms colonies; usually 2 basal leaves, cordate-orbicular with heart- to kidney-shaped bases, hairy, smooth margins, stout, hairy petioles; red-brown solitary flower on a short, hairy stalk, whitish center, 3-parted, often concealed by leaves; fruit is a capsule.



Location:

Flower bed in front of Visitor Center.

Edible:

Root: Root dried and ground into powder for use as spice; Ojibwe claimed it would take away muddy taste in fish and make any meat dish digestible by anyone; also used to cook meat from an animal that died, to remove the danger of poisoning.

Medicinal:

Root: Tea for indigestion, coughs, colds, fevers, heart conditions, female ailments, throat ailments, nervous conditions, cramps, to relieve gas, promote sweating, help appetite and keep food down when sick, as an expectorant, and used regularly in small amounts as contraceptive; root was also chewed by the sick to allow them to eat and keep down food; called the “potato for sick people” by some Ojibwe.

Willow

(*Salix* spp.)

Family: Salicaceae

Description:

Tree or shrub; variable forms, often with multiple stems and/or wide spreading crown; alternate leaves, narrow, elliptical-oblong-lanceolate, often paler and/or whitish on underside; flowers on catkins, often fuzzy; fruit is a capsule containing many fuzzy or cottony seeds.



Location:

Cattail Marsh, Granite Parkway, Lake Joanis, and along Maria Drive between Granite Parkway and Michigan Avenue.

Medicinal:

Bark: Tea for headaches, pain relief, to reduce discomfort of arthritis, stomach issues, and to prevent the periodic return of diseases; used as poultice for sores; has astringent, pain relieving, and anti-inflammatory properties; contains salicin which acts similar to aspirin.

Twig: Chewed to promote oral hygiene.

Other:

Bark: Bark was peeled, toasted, reduced to flakes, and added to smoking mixture by Ojibwe.

Twig: Used for making games by children (such as hoops for ring toss and target games) and artists/spiritual objects such as dream catchers.



Winterberry
(Ilex verticillata)

Family: Aquifoliaceae

Status: Native

Description:

Perennial shrub; erect, up to 15' tall, multiple stems; smooth grayish brown bark, light lenticels on twigs; alternate oblong-lance shaped leaves, sharply toothed margin; greenish-white flower, 6-8-parted, clusters of several flowers in leaf axils; Fruit is a bright red-orange berry with a thick nutlet, often persistent into winter.

Location:

Cattail Marsh, Trail of Reflections, and Sedge Meadow Trail.

Edible:

Leaf: Used to make beverage.

Medicinal:

Bark: Used as tonic, astringent, for diarrhea, malignant ulcers, chronic skin eruptions, and substituted for quinine to treat periodical fevers.



Witchhazel

(*Hamamelis virginiana*)

Family: Hamamelidaceae

Status: Native

Description:

Small tree-shrub; often multi-stemmed; smooth gray-brown bark; alternate ovate-obovate leaves, irregularly wavy margin; bright yellow flower with long, linear petals (spider-like); fruit is a brown capsule with 2 shiny black seeds.

Location:

Green Circle Trail east of Prairie to Berard Oaks savanna.

Edible:

Leaf: Tea.

Twig: Tea.

Medicinal:

Bark: Tonic, antiseptic, astringent, and sedative properties; tea for sore mouth and hemorrhoids; decoction for bleeding, dysentery, excessive mucous discharges, and as laxative; also crushed and used as poultice.

Twig: Antiseptic; tea with/without leaves used as wash for rashes and skin irritations; decoction rubbed on legs to keep them limber and on back for back pain; twigs chewed for oral hygiene, toothaches, and bleeding gums; Potawatomi used twigs in sweat baths to cure sore muscles (placed twigs in water with hot rocks).

Leaf: Antiseptic, tonic, astringent, and sedative properties; tea used as wash for skin, hair (adds shine and vigor), and to flush eyes; added to bath to relieve sore muscles and fatigue; poultice for drawing out redness, calming itching and irritation, relieving eyestrain, and soothing eyes.



Wood sorrel, common

(*Oxalis stricta*)

Family: Oxalidaceae

Status: Native

Description:

Perennial; erect-drooping, 6"-24" tall; alternate leaves, 3-parted, leaflets heart-shaped; yellow flower, 5-parted, 2-7 flowers in branched cluster; fruit is a small, elongated capsule containing seeds, usually on erect stalks, slightly hairy.



Location:

Abundant throughout reserve along trails.

Edible:

Plant: Mid-spring to early fall; entire above ground portion of plant is edible, however best when young and tender (before flower); eat raw, has sour, lemon-like flavor; to make a lemonade-like drink, chop up plant in tiny pieces, steep in cold water, and strain; high in vitamins.

Medicinal:

Plant: Whole plant used as diuretic, liver tonic, to reduce fevers and bleeding, for urinary disorders, gonorrhea, scurvy, chronic inflammation of mucous membranes, and colic in babies.

Other:

Plant: Whole plant boiled for tan/buckskin colored dye.

Yarrow

(Achillea millefolium)

Family: Asteraceae

Status: Native

Description:

Perennial; erect, 8"-40" tall; unbranched except near inflorescence; alternate leaves, pinnately compound, feather-like appearance, long, lance-shaped; flowers consist of 5 white ray florets and 5 cream-yellow disk florets, flowers in round, flat-topped clusters (corymbs); fruit is an oblong, somewhat flattened seed.

**Location:**

Abundant throughout reserve along trails.

Edible:

Flower: Tea and beer.

Leaf: Tea.

Medicinal:

Plant: Tea of flowering plant used for colds, fever, anorexia, indigestion, gastric inflammations and internal bleeding; strong tea used externally as antiseptic wash and to stop bleeding; hemostatic and anti-inflammatory properties; over 100 biologically active compounds.

Flower: Tea used to break fevers and promote menstrual discharge, decoction to treat hair loss, poultice to stop bleeding, and smoke inhaled to break fever (Ojibwe placed flowers on coals and inhaled smoke).

Leaves: Tea used to break fevers and promote menstrual discharge, poultice for children's rashes, fresh tops rubbed on eczema sores, and leaves chewed to alleviate toothaches.

Root: Strong tea of roots and herbal parts used as contraceptive.

Other:

Plant: Stem, leaf, and flower placed inside fish cavity as preservative.

Glossary of Terms

Analgesic: pain reliever.

Antifungal: inhibits the growth or multiplication of fungi, or kills them.

Anti-inflammatory: reduces or neutralizes inflammation.

Antiseptic: prevents sepsis, decay, putrefication; kills germs, microbes.

Antispasmodic: prevents or relieves spasms or cramps.

Antiviral: inhibits growth or multiplication of viruses, or kills them.

Astringent: causes contraction of soft tissue; shrinking of mucous membranes or raw or exposed tissues; stops or reduces discharge.

Aphrodisiac: causes or increases sexual desire.

Cambium: soft tissue inside of bark.

CNS: central nervous system.

CNS-depressant: slows brain activity.

Decoction: a preparation made by boiling a plant part in water.

Diuretic: promotes the formation of urine by the kidney.

Emetic: stimulates vomiting.

Expectorant: helps bring up mucous and other materials from the lungs, bronchi, and trachea.

Fungicide: kills fungi.

Hemostatic: stops bleeding or hemorrhage.

Infusion: A preparation made by soaking/steeping a plant part in hot water, same as tea; can also soak in cold water for a cold infusion.

Mitogenic: affects cell division.

Mordant: a chemical that fixes a dye in or on a substance by combining the dye with an insoluble compound.

Poultice: a moist, normally warm or hot mass of plant material applied to skin, or with a cloth between skin and plant material, for medicinal purposes.

Stimulant: causes increased activity of another agent, cell, tissue, organ, or organism.

Tea: see **Infusion**.

Tincture: an alcoholic solution of plant parts made by soaking plant parts in alcohol; vinegar can also be used.

Tonic: Invigorates, restores, refreshes, or stimulates; has an overall positive medicinal effect.

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About the Author

Ben Tracey completed this book while he was a senior at the University of Wisconsin-Stevens Point. He graduated in 2011 with majors in Biology and Wildlife Ecology. His interest in edible and medicinal plants led him to the Ethnobotany course taught by Virginia Freire through the UWSP Biology Department, which eventually led him to this project.

