Lake Huron Coastal Dune Plants Guide

The GOOD, the BAD and the UGLY

The Lake Huron Centre for Coastal Conservation
2010

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Preface

Extended low lake levels on Lake Huron, since about 1998, have created conditions favouring vegetation growth, particularly in dunes areas. The last time an extended period of low levels has occurred on Lake Huron was in the 1930s. The second half of the 20th century was dominated by above average lake levels, which controlled the extend of plant growth to a narrow corridor.

While expansion of this plant corridor by native coastal vegetation is expected during periods of low lake levels, as a natural course of ecosystem development, there has also been an influx of non-native, invasive plants into the beach environment. Many of these plants are outcompeting native species and changing the ecology of the beach. One particularly aggressive plant, Common Reed (*Phragmites australis*) has become very problematic, and difficult to control.

Local residents and cottagers have identified the need for resources to be able to identify the good plants (native coastal plants that grow on our shores, and bad plants (non-native invasive plants that impact beach ecology). This catalogue of native and non-native plants is not an exhaustive list. It is intended to help people to identify some of the species that they would be most likely to encounter along Lake Huron. There may be other important native plant species that occur on our shores not identified in this resource book. If you are unsure whether a plant is native or non-native, consult the Coastal Centre, local conservation authority or Ministry of Natural Resources.

The list of invasive plants is current to 2010. Over time, it is anticipated that other invasive species will make their way to our shores. Encouraging the growth of native coastal plants will help to minimize openings where invasive plants could gain a foothold to our beaches. Some general suggestions for controlling invasive species are identified in this document. For the most part, the preferred approach is pulling and bagging the plants before they go to seed. In special circumstances, municipalities can apply to the Ministry of Natural Resources for a Letter of Opinion for the use of herbicides by licensed applicators. We do not recommend individual landowners to use herbicides for invasive species control. Contact your municipality if herbicide application is the only viable option.

Introduction

Southern Ontario's Lake Huron Shoreline contains many *native* plant species that have adapted over thousands of years to the coastline. The native plant species have survived for long time frames because they were able to adapt to local climate and soil changes (TRCA). There is a great amount of ecosystem biodiversity along Lake Huron's shorelines, including dunes, coastal wetlands and upland bluffs. Native plants are specifically designed to adapt to certain ecological conditions such as shade, sun, high moisture, specific soil types or topography. Coastal plants have adapted to extreme elements like wind, waves, temperature and lake-effect precipitation.

I*nvasive* species, introduced from beyond the local geographic area, have developed along Lake Huron's shorelines as people have developed and altered the coast. When invasive species are introduced to an area, they have the potential to out-compete the native vegetation, disrupting the native species' growth and development, inevitably pushing native species out of their existing ecosystem. When native species are forced out of their natural environment, it decreases biodiversity resulting in the displacement of plants and animals that relied on the native plants, altering the existing ecosystem in very negative ways.

Landscaping with Native Plants

Native plants are those considered to be indigenous to the area, meaning they originally or naturally occurred in that area and have evolved and adapted to the local climate, soils and wildlife over thousands of years. Native plants provide valuable habitats and food sources for birds, butterflies and mammals. Embracing native plant landscaping can help sustain the natural beauty of the local ecosystem. Native landscaping can be as small as your backyard or as large as a trail or waterfront. Before buying plants, ensure you have purchased local native plants. The benefits of landscaping with native plants include:

a) *Native plants save energy and reduce pollution.*
Native plants should not require any maintenance other than protecting them from human interference because they have already adapted to the local environment, saving you from watering or fertilizing your naturalized garden. They also attract beneficial insects that prey upon pests, eliminating the use of pesticides. Native plants reduce air pollution, improve water quality and reduce soil erosion. Native plants, unlike cultivate plants reduce air pollution because they do not require the maintenance of lawn equipment for upkeep, which is a large contributor to air pollution affecting global warming. Native plants improve local water quality because they filter contaminants out of runoff and reduce soil erosion by using their root systems to stabilize the surrounding soils.

b) *Native plants provide a diverse landscape*
Utilizing native plants in backyard landscaping promotes biological diversity. By converting a conventional, one plant, monoculture green grass lawn into a small meadow, increases the opportunity for beneficial native wildlife and insects.

c) *Native plants help the animals.* Native plants provide habitat and food for birds, butterflies and wildlife, promoting biodiversity, while mowed monoculture lawns provide little use for the majority of wildlife. Since many natural habitats are destroyed due to urban development, it is vital to create and maintain native plant habitats for local wildlife.

d) *Native plants can save money.* Since native plants are already adapted to local conditions they require less watering and do not require fertilizer, inevitably lowering the cost of maintaining gardens and lawns. A U.S. study in Wisconsin, estimated that over a 20 year period, the cost of maintaining a prairie or wetland totals $3,000 versus $20,000 per acre for turf grasses (Coastal Centre Newsletter, 2003).

How do I start my own native plant garden or convert some of my lawn to natural buffer?

The best way to obtain native plant species is to purchase them from environmental organizations to ensure they are from reputable sources. Many commercial nurseries only carry cultivated varieties with low genetic diversity therefore, it is important to ask where the plant originated and look for the scientific (Latin) name to ensure it is a native plant species (Toronto Parks and Recreation). Try to find plant species that were cultivated closest to your planting site.

The Coastal Centre has some helpful resource guides on native plant restoration, particularly in dune environments. Its "*Dune Planting Guide*, 2010" and "*Stewardship Guide for Lake Huron Coastal Dunes*, 2008" are available from the Centre.

Invasive Plants

Not all types of introduced plants are invasive, some are only an aggravation (such as the common dandelion) and do not have detrimental effects on the local ecosystem. Other plants such as Garlic Mustard or the Common Reed are considered invasive because they displace native species from their natural environment. Invasive plants tend to be aggressive plant species, forcing out native species. They are successful at inhabiting new areas because they have a high annual seed production, develop quickly and densely, tolerate a variety of growing conditions, spread denser underground roots and re-grow quickly even when disturbed by fire, cutting and digging. Invasive species have few natural predators in their new environment allowing them to thrive and multiply rapidly. They prefer disturbed areas, so places where people have disturbed a coastal habitat through beach access, using motorized vehicles in sensitive areas, or land clearing, offers openings where invasive plants can become established.

Spotted Knapweed *(Centaurea maculosa)*

Why have there been more plants growing in coastal areas over the last decade?

Lake levels play a key role in the amount of vegetation occupying beaches and dunes. During the 1970s, 80s and 90s, Lake Huron experienced above average lake levels, and storm wave activity kept vegetation to a narrow margin. Since 1998, levels dropped below average resulting in a wider beach area. The open soil provided an opportunity for plants to occupy further lakeward. This began the process of beach plant succession, (similar to forest succession). Beach plant succession continues until another natural disturbance or high water level occurs and removes all the developed plant species. However, it is important for this process of plant removal to occur naturally on the beach because it is necessary to have the exchange of sand occur between the beach and the water. The exception are non-native, invasive plants that can become established and alter the ecosystem.

How Can I Stop the Spread of Invasive Species?

In coastal areas it is important stop the spread of invasive plants from inland areas to the shoreline environment by checking your shoes, clothing, pet fur, beach gear, etc., when you enter and leave the beach to ensure unwanted plant seeds or root fragments are not accidently transported with you. It is also important to eliminate the use of machinery on the beach because often plant fragments or seeds are caught in the equipment allowing for accidental introduction into other areas of the coast.

In some areas invasive plants have dominated the beaches, forcing local residents and municipalities to take action to restore the beaches. Physical plant removal (digging, cutting) is the first recommended method of control invasive plants where this is possible. As a last resort, after all other methods have been exhausted, is herbicide use. If chemicals are used, it should be applied directly onto *only* the invasive plant. It needs to be applied by a Provincially licensed professional who is authorized by your local municipality. It is important that lay persons do NOT apply herbicide to invasive plants because if not applied at the proper concentration, could aid in the evolution of 'super-invasives' that become resistant to herbicides.

When physically removing invasive plants it is important to remove the whole plant from the ground, including the root system and seeds then bag the plant and remove the whole plant from the site to inhibit future growth. Some plants can re-establish themselves even if a root fragment is left behind, therefore, it may take multiple times to eradicate the invasive plant in its established location. Patience is the key.

If you have questions or concerns please contact your local Municipal office or The Lake Huron Centre for Coastal Conservation at coastalcentre@lakehuron.on.ca or www. lakehuron.on.ca or phone 519-523-4478.

Common Reed *(Phragmites australis)*
Early stage development

Common Reed *(Phragmites australis)*
Flowering stage

Why Is It Important to Keep Native Plant Species on the Beach?

It is especially important to keep native plant species on the beach because they maintain the fine sand grains that are enjoyed by recreational beach users. The native plants act to capture and store sand in dunes, and also prevent the sand from blowing off the beach during strong winds. Lake Huron's sandy beaches located from Point Clark northward to the Bruce Peninsula are unique because the original sand in these areas is relic and was deposited centuries ago.

Currently there is no eroding shoreline that is adequately supplying new sand materials to the beaches therefore it is vital that native beach plants to perform their function of maintaining our sand reserves. When the fine grained sand has been eroded from these beaches by wind, it cannot be recovered. The effects of removing native plants from the beach or not establishing native plants may not be seen on the beach for many years. Over time there is a gradual removal of fine grained sand, exposing larger sand granules underneath. During below average lake levels, wider beaches expose the sand to more wind erosion. Dune vegetation grows lakeward during this time, helping to accumulate wind blown sand and develop dunes. If the dune vegetation is not permitted to grow lakeward, wind blown sand would carry inland and build dunes vertically, or form sand drifts around cottages. In addition, with fine sands being allowed to blow away, our beaches would be left with coarse sands and gravels.

To ensure our property values and to protect the beaches that many people know and love, it is vital that local residents, cottagers and interested individuals protect the remaining beauty of our sandy shorelines for future generations.

NATIVE SPECIES

Wormwood
Artemisia campestris

Identification: -native biennial

-spiky clusters of pale yellow-green flowers

-silvery green leaves

-basal leaves pinnately lobed

-20-80cm tall

-tap rooted

Season: -blooms July-September

-seeds ripen September-October

Habitat: -open sites, sandy well drained soils

- dry or moist soils, can tolerate droughts

-semi shade to no shade

Propagation: -commercially available
-spread by seeds or cuttings in early spring

1st year of growth

2nd year of growth

Horsetail
Equisetum hyemale

Identification: -rush

-no bloom

-reed like

-hollow evergreen, unbranched stems with black bands

-90cm tall

Seasons: -seasonal

Habitat: -full sun to part shade

-wide range of soils

Propagation: -commercially available or by root division

Other: -attracts dragonflies

-spreads from colonies

-prefers open or disturbed areas

Baltic Rush
Juncus balticus

Identification: -rush

-rhizome

-pink/brown flowers

-10-50+flowers in a bunch

-clump forming

-dark green, wiry, round

-1.5-3mm thick

-100cm tall

Seasons: -blooms spring to mid summer

Habitat: -wet depressions, swales

-moist meadows along streams or lakes

-silt and clay loam to coarser sandy substrates

Propagation: -commercially available, divide in spring, space 25-30cm apart

Other: -excellent erosion control
-also known as *J. arcticus*

Beach Pea
Lathyrus japonicus

Identification: -pink-purple flowers

- fruit: elongated pod 5cm

-low sprawling leguminous plant

-30-60cm tall

Seasons: -flowers June -August

Habitat: -sandy shores

- sandy, loamy or clay well drained soils

-requires full sun, will not grow in the shade

Propagation: -seed

-root division in the spring

-it may not transplant well so care should be taken

Other: -fixes atmospheric nitrogen

-flowers are pollinated by bees, moths and butterflies

NATIVE SPECIES
PROVINCIALLY RARE

American Beach Grass; Marram Grass
Ammophilla breviligulata

Identification: -grass spikes

-20-60cm tall
-large tap root

Seasons: -blooms June-August

Habitat: -pioneer dune species which acts as a primary dune stabilizer
-tolerates burial by sands

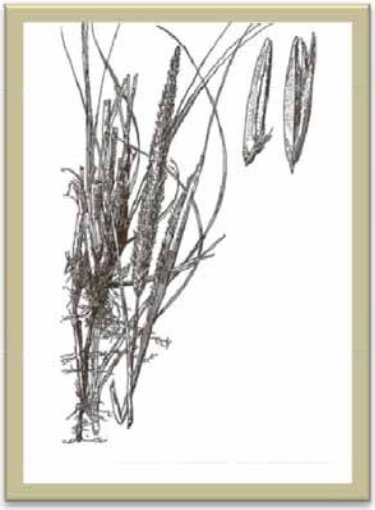
-full sun and dry conditions

Propagation: -commercially available but not recommended from nurseries.

-easily harvested and transplanted

Other: -most common foredune vegetation on Lake Huron dunes, with the exception of Sauble Beach

-important for erosion control



Common Milkweed
Asclepias syriaca

Identification: -pink drooping cluster flowers

-leaves are opposite, simple, broad, ovate-lanceolate

-1-2m tall

Seasons: -flowers June-August

Habitat: -open sites, sandy soil

Propagation: -can spread rapidly by rhizomes and by seeds

Other: -host plant for Monarch Butterfly larvae

-toxic to livestock

American Sea-rocket
Cakile edentula

Identification: -succulent annual

-white to purple racemes

-green fruit divided into two sections

-leaves are alternate, oblong, ovate and deeply scalloped to wavy serrated margin

-10-50cm tall

Seasons: -July to September

Habitat: -sandy beaches above high water line

Propagation: -by seed, in situ

Common Yarrow
Achillea millefolium

Identification: -white clustered flowers

-alternate compound leaves 7-12cm long leaves have fern-like leaflets

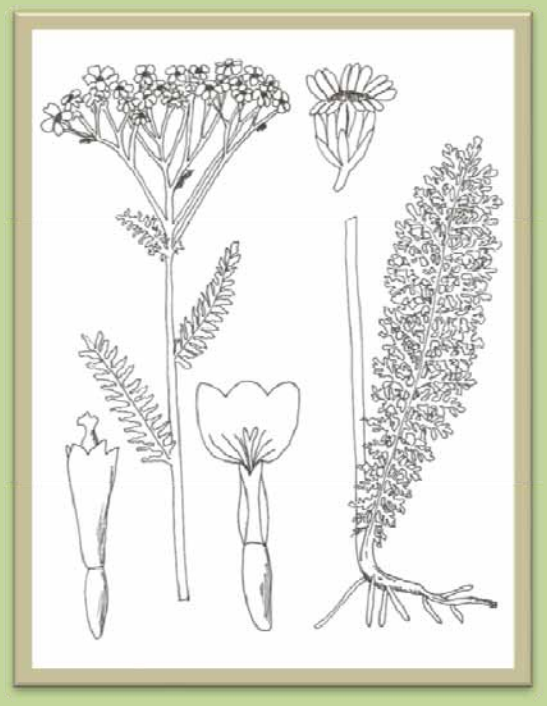
-90cm tall

Seasons: -flowers July-September

Habitat: -meadows, poorer soils

Propagation: -commercially available or by seed

Other: -fragrant foliage when crushed



Pearly-everlasting
Anaphalis margaritacea

Identification: -yellow white globe-like flowers

-leafy woolly stems, usually unbranched

-rhizomes

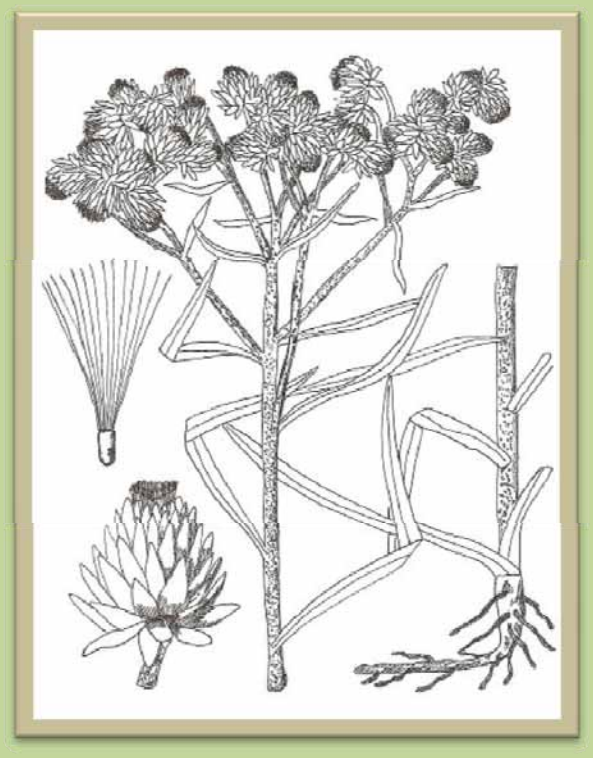
-30-90cm tall

Seasons: -June to October

Habitat: -moist to dry meadows

Propagation: -commercially available

Other: -attracts butterflies



Big Blue Stem
Andropogon gerardii

Identification: -tufted grass

-3 spikelets 'turkey foot'

-leafy base

-1.3-2.5m tall

Seasons: -blooms September to October

Habitat: -drought tolerant

-sun to partial shade

Propagation: -commercially available

-seed and root division

Other: -attracts butterflies and birds

-used for erosion control

(University of Texas, 2005)

(University of Minnesota, n.d)

Candle Anemone
Anemone cylindrica

Identification: -greenish white hairy thimble like flower

-green cone centre of flower

-whorled basal leaves

-30-90cm tall

Seasons: -June to July

Habitat: -open sandy woodlands

Propagation: -commercially available, by seed or root division

Other: -all parts are toxic

(Minnesota Wild) Flowers,2010)

(Minnesota Wild) Flowers,2010)

(Minnesota Wild) Flowers,2010)

Red or Cut-Leaf Anemone

Anemone multifida

Identification: -yellowish white within maroon coloured flowers

-clumping habit

-leaves are deeply cut into linear portions with a long petiole

-sparsely to abundantly hairy

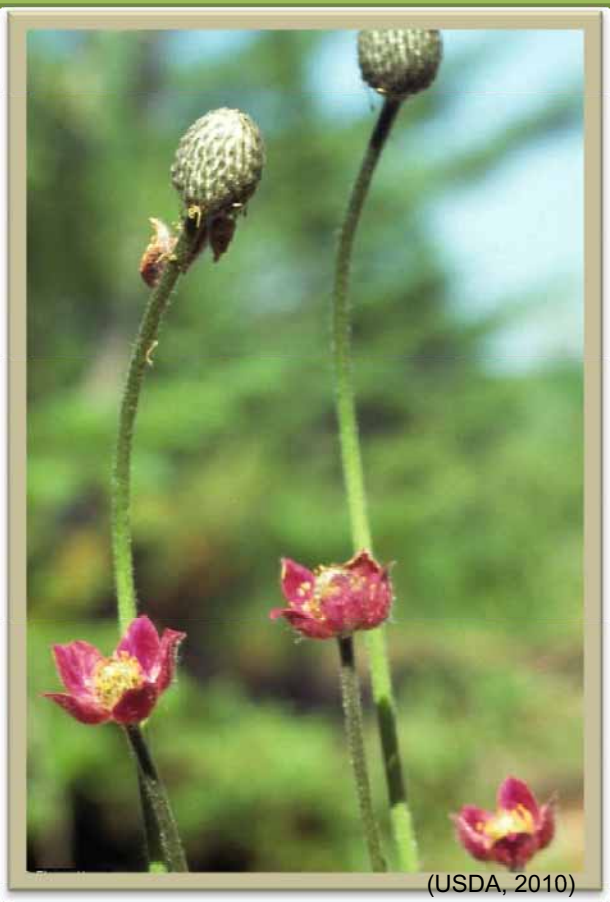
-15-50cm tall

Seasons: -flowers May to June

Habitat: -shores and rocky banks

Propagation: -commercially available, seed, root division

Other: -all parts are toxic



(USDA, 2010)

(USDA,2010)

Red Columbine
Aquilegia canadensis

Identification: -red flowers with yellow interior

-compound leaves with leaflets that have three rounded lobes

-60cm tall

Seasons: -blooms April to June

Habitat: -partly shaded to shaded woodlands and meadows

Propagation: -commercially available

-seeds

Other: -attracts hummingbirds

Lyre-leaved Rock Cress
Arabis lyrata

Identification: -biennial

-greenish white flowers

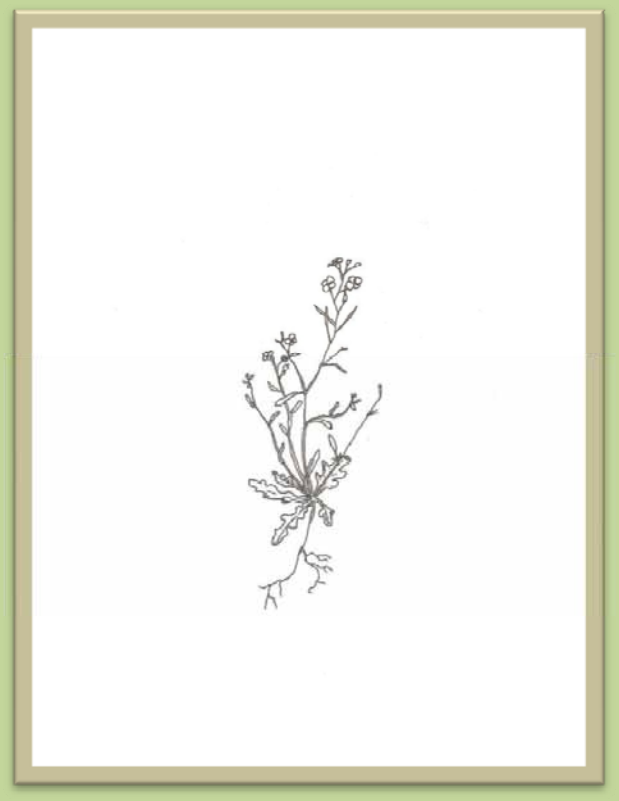
-rosette of basal leaves

-10-30cm tall

Seasons: -flowers May to July

Habitat: -rocky and sandy soils

Propagation: -commercially available



Swamp Milkweed
Asclepias incarnata

Identification: -deep pink cluster flowers

-leaves narrower than common milkweed

-milky sap

-120cm tall

Seasons: -flowers June to August

Habitat: -inter-dune wet areas

-sun

Propagation: -commercially available

(Ontario Wild Flowers, 2010)

(Ontario Wild Flowers, 2010)

Fringed Brome
Bromus ciliatus

Identification:
-grass, yellow flower
-drooping florets oat-like appearance
-clump forming grass
-150cm tall

Seasons:
-flowers July to August

Habitat:
-sun to part sun
-moist soils
-stream banks

Propagation:
-commercially available
-not rhizomatous

Other:
-often in association with conifers such as cedar

(University of Wisconsin, 2010)

(University of Wisconsin, 2010)

Low Calamint
Calamagrostis arkansana

Identification: -herbaceous perennial

-pale purple flowers

-egg shaped leaves along stems

-10-20cm tall

Seasons: -blooms May to August

Habitat: -inter-dune wet areas

Propagation: -commercially available

Other: -mint smelling

Northern Reedgrass
Calamagrostis inexpansa

Identification: -grass

-purple flower

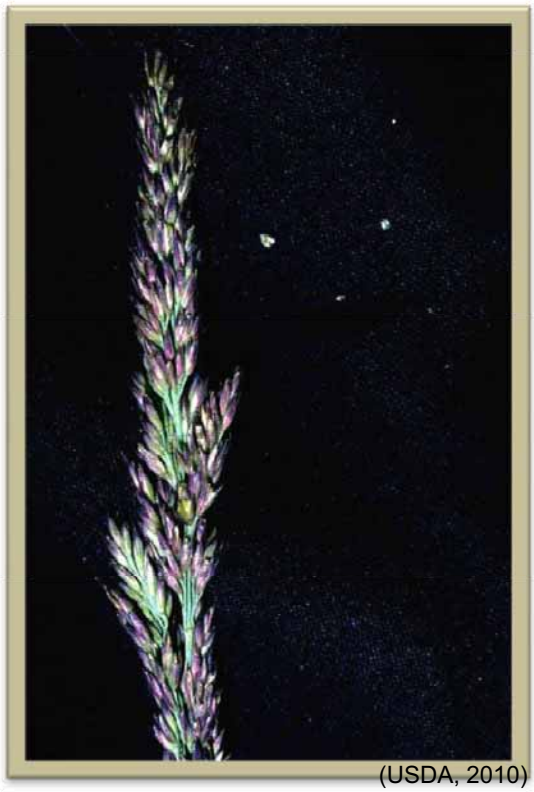
-dark green foliage

-1m tall

Habitat: -variety of open wet habitats

Propagation: - commercially available

Other:



(USDA, 2010)

(Silver Plains Project, 2010)

Harebell
Campanula rotundifolia

Identification: -blue or purple bell shaped flowers

-rounded basal leaves

-10-40cm

Seasons: -June to September

Habitat: -open dry meadows, rocky shorelines

,

-shade tolerant

Propagation: -commercially available
-seed
-root cutting
-stem cutting

(Connecticut Botanical Society, 2005)

(Connecticut Botanical Society, 2005)

Camas Lily
Camas esculenta

Identification: -purple flower

-30cm tall

Seasons: -blooms in June

Habitat: -sandy soils

-prefers acid soil

-semi shade

Propagation: -commercially available

-bulbs

Other: -pollinated by bees

(University of Oregon, 2009)

Bristleleaf Sedge
Carex eburnea

Identification: -sedge

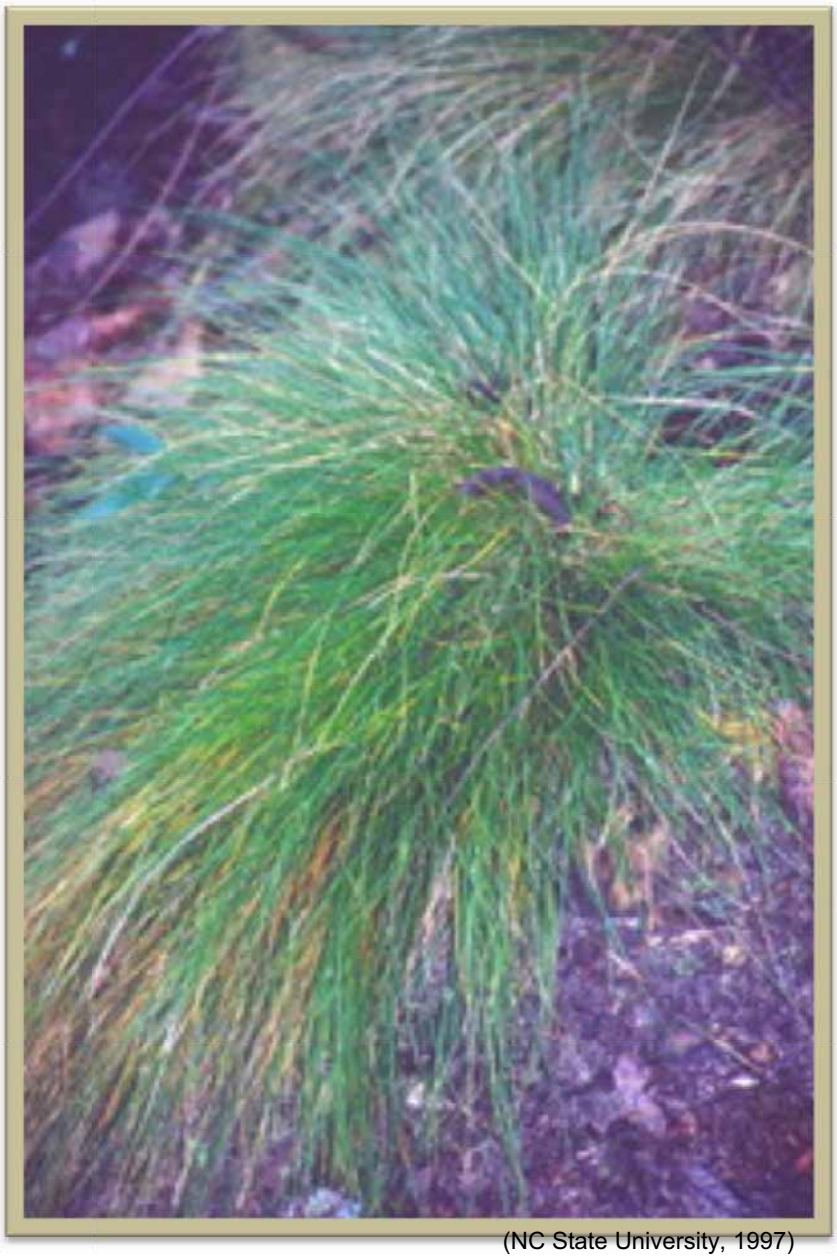
-green

-30cm tall

Seasons: -blooms in June

Habitat: -rocky and sandy outcrops

Propagation: -commercially available



(NC State University, 1997)

Northern Singlespike Sedge
Carex scirpoidea

Identification: -sedge

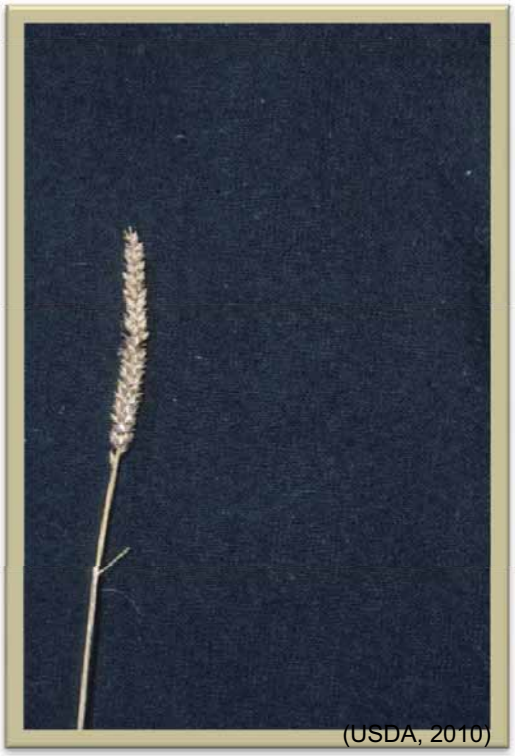
-ovate to lanceolate leaves

-long rhizomes

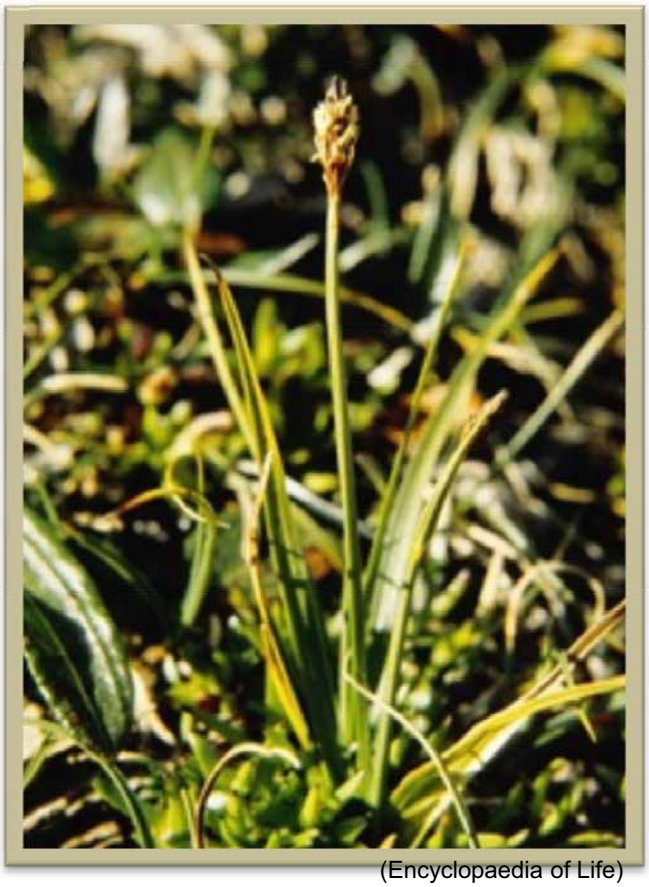
-45cm tall

Habitat: -rocky outcrops, sedge meadows, tolerates partial shade

Propagation: -bare root or seeds



(USDA, 2010)



(Encyclopaedia of Life)

Indian Paintbrush
Castilleja coccinea

(USDA, 2010)

Identification: -annual or biennial

-red bract blooms

-leaves with 3 narrow lobes

-30-60cm tall

Seasons: -blooms May to July

Habitat: -wet meadows

Propagation: -commercially available

Other: -difficult to transplant

(Pitchers Thistle, 2005)

Siberian Bugseed; Pallas' Bugseed
Corispermum pallasii

Identification: -annual forb

-tiny, 5 parted clustered flowers

-alternate, stalkless, linear to lanceolate leaves

-branches from base

-stems covered sparsely with hairs, becoming smooth

-10-45cm tall

Seasons: -flowers late summer to fall

Habitat: -sandy shores and dunes

Propagation: -from seeds

Other: -Provincially rare

(Katholieke Universiteit Leuven, 2008)

(Katholieke Universiteit Leuven, 2008)

Hairy Bugseed
Corispermum villosum

Identification:
-annual forb

-compact and dense flowers

-linear oblanceolate or linear leaves

-plants usually branched from the base

-densely or sparsely covered with hairs occasionally becoming smooth

-10-30cm tall

Seasons:
-flowers late summer to fall

Habitat:
-sandy shores and dunes
-occasionally adventive on roadsides and railways

Propagation:
-seeds

Canada Wild Rye
Elymus canadensis

Identification: -grass

-yellow, green or brown spike

-linear leaves

-60-100cm tall

Seasons: -flowers August to September

Habitat: -dry meadows, dunes and sandy shores

Propagation: -commercially available

-seeds

-root division

(USDA, 2010)

(USDA, 2010)

Flat-top Goldenrod
Euthamia graminifolia

Identification: -yellow flat-top flowers

-grass like leaves

-60-150cm tall

Seasons: -blooms July to September

Habitat: -sandy pannes between dunes, marsh edges, lake borders, prairies

-high organic, sandy soils

-drought tolerant

Propagation: -commercially available

-root division

Other: -plant is attractive to bees, butterflies and/or birds

(USDA, 2010)

(University of Wisconsin, 2010)

Rocky Mountain Fescue
Festuca sazimontana

Identification:
-grass
-panicle flower
-grass-like leaves
-basal habit
-25-50cm tall

Habitat:
-grassland-upland areas with sandy soils, requires full sun to partial shade

-drought tolerant

Propagation:
-seeds

Other:
-useful for erosion control on sandy gravelly soils,

-grows well in harsh conditions

(University of Wisconsin, 2010)

(University of Wisconsin, 2010)

Fringed Gentian
Gentiana procera

(Ontario Wild Flowers, 2009)

Identification: -blue or violet tubular flowers

-leaves opposite and narrow

-15-20cm tall

Seasons: -blooms in July

Habitat: -wetlands and bogs

Propagation: -commercially available

Blue Flag Iris
Iris versicolor

Identification: -blue flower

-10-100cm tall

Seasons: -blooms May-June

Habitat: -marshes, swamps, wet meadows, soils with high organic content and direct sunlight

Propagation: -commercially available

-single corms or bulbs can be divided or cut from the parent root system

Other: -provides good shoreline protection

-the root stock is food for aquatic rodents

(Ontario Wild Flowers, 2009)

(Ontario Wild Flowers, 2010)

(Ontario Wild Flowers, 2010)

Narrow- panicle Rush
Juncus brevicaudatus

Identification: -rush
-greenish-brown spike flowers
-grass-like leaves

Seasons: -blooms mid-summer to fall

Habitat: -found along emergent shorelines
-grows best in acidic or peaty moist soils

Propagation: -divides in spring

(University of California, Berkeley, 2010)

Dense Blazing-star
Liatris spicata

Identification: -grass-like leaves clumped at the base
-tall spike of rose coloured flowers
-90-120cm tall

Seasons: -blooms August to September

Habitat: -moist meadows

Propagation: -commercially available

Other: -attracts butterflies

Wood Lily
Lilium philadelphicum

Identification: -red-orange cup shaped flower

- long and narrow whorled leaves

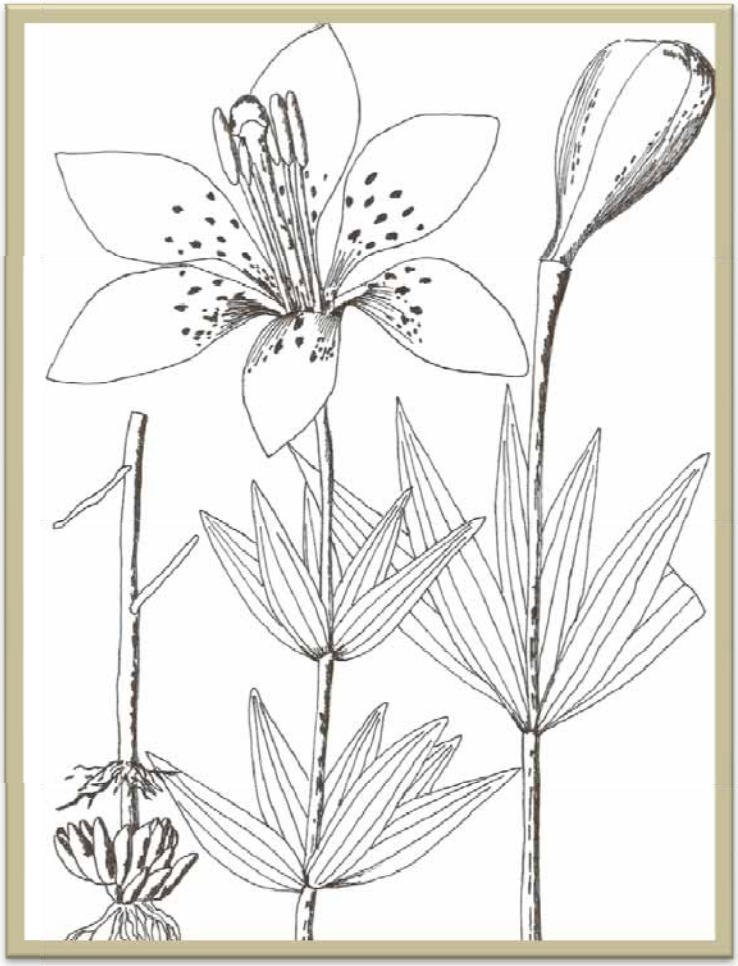
-30-90cm tall

Seasons: -blooms July to August

Habitat: -open woods, meadows, tolerates shade

Propagation: -commercially available

(Pitchers Thistle, 2005)



Evening Primrose
Oenothera biennis

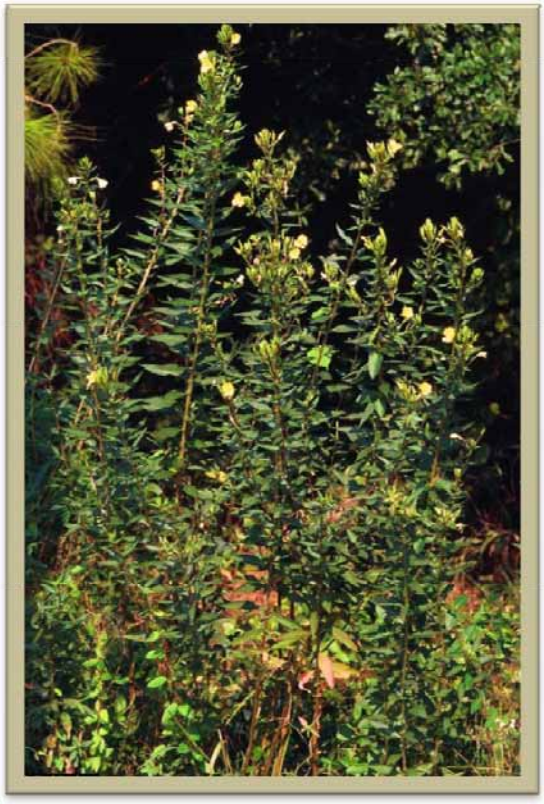
Identification:
- -biennial with yellow flowers
- -herbaceous forb, basal leaves forming rosettes
- -30-150cm tall

Seasons:
- -blooms spring to late summer

Habitat:
- -meadows
- -dry, moist sandy and loamy soils
- -prefers full sun and will not grow in shade
- -drought tolerant

Propagation:
- -commercially available
- -sow the seeds in situ from late spring to early summer

Other:
- -attracts bees, butterflies and moths
- -flowers open in the evening with a strong pleasant smell
- -flowers last only 1 or 2 days



False Solomon's Seal
Maianthemum stellata

Identification: -white flower

-30-60cm tall

Seasons: -blooms in early summer

Habitat: -an indicator of cool, moist environments
-adjacent to streams
-grows best on gravel to silty and sandy loam soils

Propagation: -commercially available
-seeds
-rhizomes

Other: -different from true Solomon's Seal in that it has its flowers at the end of the stem

(Talk About Wildlife, 2010)

Hairy Panic Grass
Panicum acuminatum

Identification: -grass

-olive green to purple tufted grass

-30-60cm tall

Seasons: -blooms July to September

Habitat: -found in wetlands, prairies and open woods

-grows best in sandy soils

Propagation: -seeds

Other: -also known as *Dichanthelium acuminatum var. acuminatum*

(Illinois Wild Flowers, 2010)

(Illinois Wild Flowers, 2010)

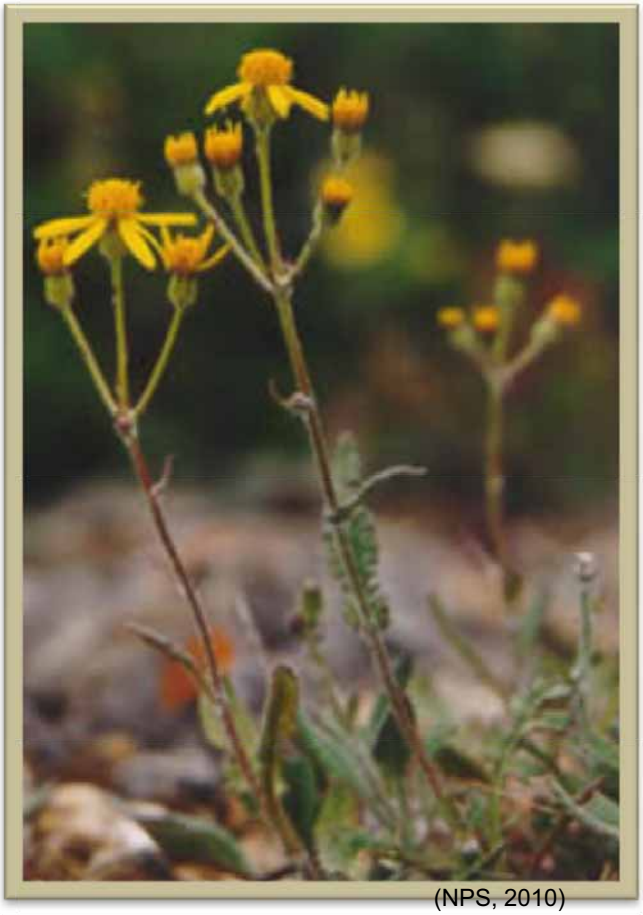
Groundsel
Senecio pauperculus

Identification:
- -long stalked
- -deep yellow ray and disk florets
- -basal, usually tufted
- -oblong lance-like
- -spatulate
- -oblong elliptic shaped scalloped or saw toothed leaves
- -30-60cm tall

Seasons:
- -late June to July

Habitat:
- -alvars and open woodland

Propagation:
- -commercially available
- -seeds
- -root cuttings



(NPS, 2010)

Ohio Goldenrod
Oligoneuron ohioense

Identification: -yellow flower

Seasons: -blooms July to September

Habitat: -wet fields, bogs and coastal fens

Propagation: -commercially available

(Ontario Wild Flower, 2010)

Silverweed
Argentina anserina

Identification: -low growing perennial
-spreads by creeping stolons, forms dense tangles
-leaves pinnately compound, leaves alternate
-leaves green with silver underside
-leaves dry out and become brown in winter
-buttercup like yellow flowers

Seasons: -blooms April to June

Habitat: -elevations below 150m in coastal areas
-above mean high water levels
-freshwater meadows and marshes
-wet soils

Propagation: -stolons, rhizomes
-seeds

Wild Phlox
Phlox divaricata

Identification: -pale blue purple clustered flowers

-leafy base

-0.5m tall

Seasons: -flowers April to June

Habitat: -open areas, woods, fields
-partial shade, shade
-moist soils

Propagation: -root division

-seeds

-root cuttings

Other: -attracts butterflies

Hairy Goldenrod
Solidago hispida

Identification: -yellow flower

-broadly oblanceolate to obovate or elliptic

-basal and proximal cauline leaves tapering to winged petioles

-20-100cm tall

Seasons: -August to October

Habitat: -woodland and forest edge

Propagation: -seeds

-root division

Other: -attracts bees and migrating butterflies

-shelter and food for many songbirds and small mammals

(Muma, 2009)

Little Bluestem
Schizachyrium scoparium

Identification:
- -grass
- -white/green or brown flower
- -fine textured silver-grey foliage
- -grows in clumps
- -60-90cm tall

Seasons:
- -flowers August to October

Habitat:
- -sheltered areas behind foredunes or in a meadow between dunes
- -tolerates dry conditions
- -full sun

Propagation:
- -commercially available
- -root dividing
- -readily reseeds

Other:
- -erosion control
- -attracts birds and butterflies

(Blue Stem, 2010)

NON NATIVE ('Naturalized') SPECIES

Lyme Grass
Leymus arenarius

Identification: -blue coloured spike grass

-coarse texture

-spreads in clumps

-rhizomes

-90-120cm

Seasons: -flowers May to July

-seeds ripen September to October

Habitat: -sandy, loamy, clay soils
-well drained soils
-dry, moist soils, can tolerate drought
-full sun

Propagation: -seeds

Other: -competes and poses threats to native coastal plants (can be invasive)
-increased with declining water levels

-holds unstable and eroding sands

-non native but has become a part of the natural environment over time

-in some areas of the Great Lakes it is becoming invasive where it is dominating native dune plant populations

Tall Fescue
Festuca arundinacea

Identification:	-perennial bunch grass
	-rolled leaves
	-flat leaves, smooth and shiny on underside, ribs on upper side
	-stems 90-120cm tall
	-panical 10-30cm tall
	-rapid germination
Seasons:	-long growing season
Habitat:	-pastures, damp grasslands, river banks coastal shorelines
	-tolerates poor soils
	-moist soils
Propagation:	-seeds
Other:	-may become weedy or invasive in some areas -only remove if it becomes a problem

Meadow Fescue
Festuca pratensis

Identification:
- -30-120cm tall
- -tufted spiked grass similar to tall fescue
- -green leaves, flat or rolled leaves

Seasons:
- -flowering June until July

Habitat:
- -meadows, roadsides, riversides
- -moist to dry soils
- -full to partial sunlight

Propagation:
- -seeds

Other:
- -introduced from Europe as pasturage or hay for farm animals
- -remove only if it becomes a problem

NATIVE SPECIES

Trees

Balsam Poplar
Populus balsamifera

Identification: - alternate toothed leaves

-large sticky bus with two scales

-buds are very fragrant when crushed

- care needs to be taken not to confuse this plant with the invasive Lombardy Poplar

-

Habitat: -dune pioneer species

-survives in harsh environments with low fertility

Other points: -attracts wildlife
- many kinds of wildlife use the twigs for food

Paper Birch
Betula papyrifera

Identification: -yellow/green blooms

-white peeling bark, slender trunk

-triangular/egg shaped simple leaves 8cm long

-up to 20m tall

-often multi-stemmed tree

Seasons: -blooms in April

Habitat: -intolerant of shade

-rolling upland terrain

-wide range of soils

Propagation: -commercially available

-rooted by cuttings or seeds

(B.C., 2010)

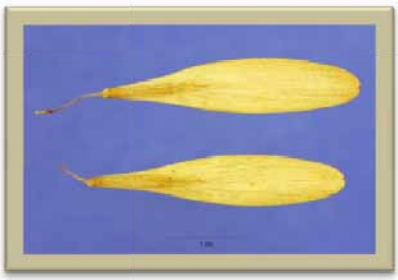
(USDA, 2010)

Green Ash
Fraxinus pemmsylvanica

Identification:
- -opposite, pinnately compound leaves
- -oval form leaves
- -clusters of fruit samaras
- -shallow roots
- -20m tall

Habitat:
- -wide range of soils
- -tolerates moist conditions
- -shade tolerant

Propagation:
- -commercially available



Tamarack/Eastern Larch
Larix laricina

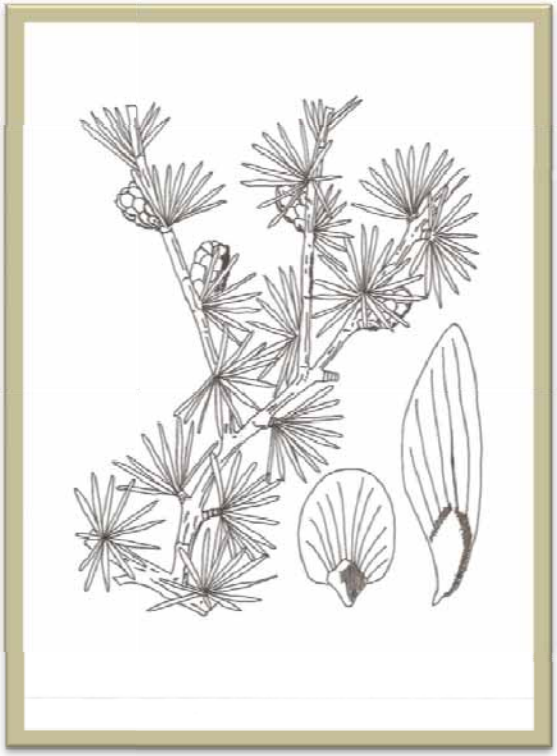
Identification:
- -deciduous conifer
- -flat-needled light green spikes
- -bark is scaly
- -grey to reddish brown
- -open pyramidal shape
- -15-25m tall

Seasons:
- -drops needles in the fall

Habitat:
- -found in cold poorly drained sites such as bogs, swamps, lake edges
- -requires full sun to partial shade

Propagation:
- -commercially available
- -easily propagated through cuttings from young trees or from seeds

Other:
- -casts a light shade
- -home for squirrels and birds



White Spruce
Picea glauca

Identification: -conifer

-needles 15-22mm long pointed but not sharp

-bluish green

-crown conical, irregular, densely foliated

-40m tall

-spread to 9m

Habitat: -found by streams and lake shores

-full sun to partial shade

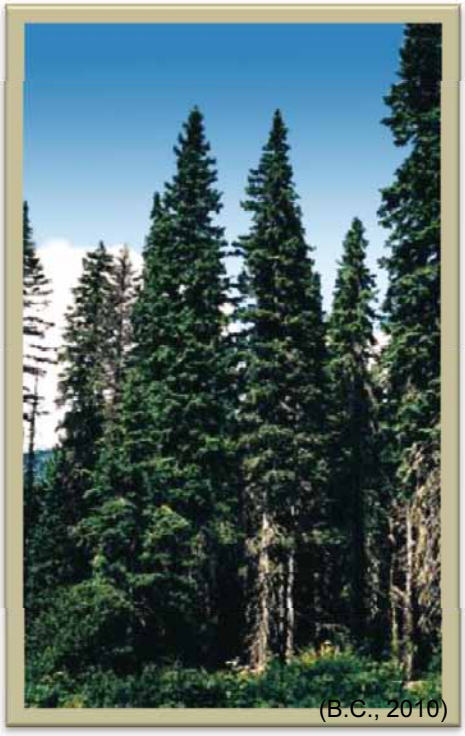
Propagation: -commercially available

Other: -excellent for nesting birds, good windbreak

(B.C., 2010)

(B.C., 2010)

(B.C., 2010)



(B.C., 2010)

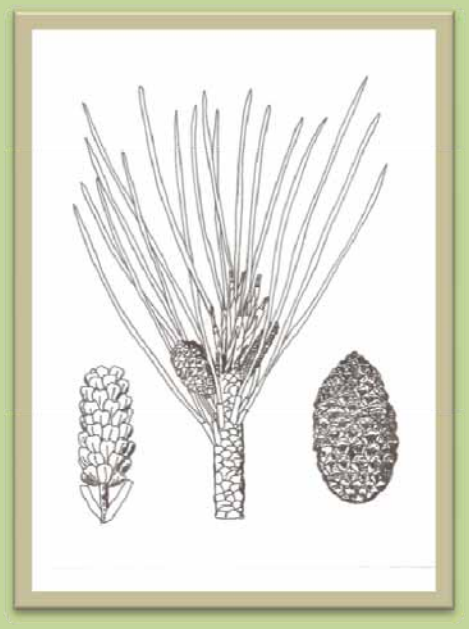
Red Pine
Pinus resinosa

Identification:
-conifer
-2 needled pine
-needles 10-16cm long
-pointed and shiny dark green
-bark reddish brown to pink
-23-32m tall
-6-12m spread

Habitat:
-found on outwash plains, level or gently rolling sand plains, low ridges adjacent to lakes and swamps

Propagation:
-commercially available

Other:
-natural stands are found to occur on sandy soils only



(Muma, 2009)

(Muma, 2009)

White Pine
Pinus strobus

Identification: -conifer

-5 needle pine

-needles 8-10 cm long

-soft and flexible

-30m tall, 10m spread

Habitat: -best on most fertile soils

-can be found on dry rocky to moist wet conditions

Propagation: -commercially available

Other: -Ontario's provincial tree

-good for nesting birds

(USDA, 2010)

(USDA, 2010)

(USDA, 2010)

Red Oak
Quercus rubra

Identification: -leaves with 9 bristle tipped lobes, underside pale

-deciduous tree, grey to dark grey bark

-acorn with flat cap

Seasons: -blooms in spring

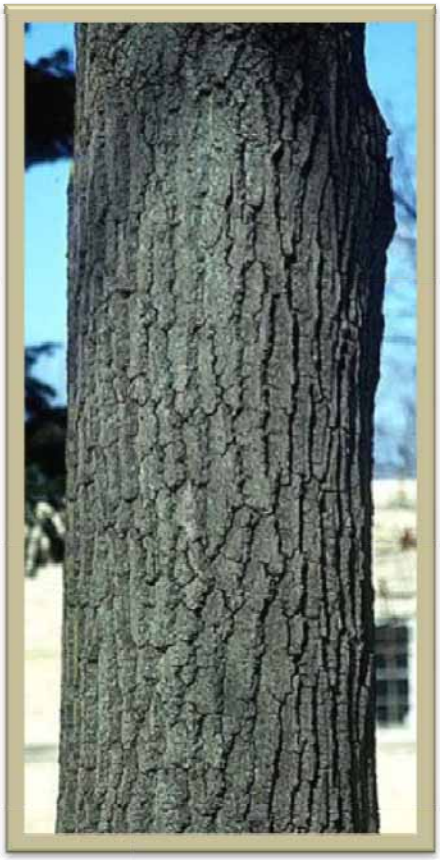
Habitat: -full sun

-sandy soils

-well drained soil, uplands

Propagation: -commercially available

Other: -fast growing for an oak



White Cedar
Thuja occidentalis

Identification: -evergreen, 15-38m tall

-scale like

-pointed leaves, opposite in alternating pairs (in 4 rows)

-bright green above and pale below

-flattened branchlets, in fan-shaped sprays

-seed cones are ellipsoid

Habitat: -wide ranging habitat from swamps to dry areas

Propagation: -commercially available

-bare root or seeds

Other: -good windbreak

NATIVE SPECIES

Shrubs

Bearberry
Arctostaphylos uva-ursi

Identification:	-broadleaf evergreen
	-white/pink flowers on a raceme bloom
	-paddle shaped leaves
	-thick and leathery leaves
	-bright red berries
	-30-90cm tall
Seasons:	-blooms May to June
	-cold tolerant
Habitat:	-sandy soil, beach transition zones
Propagation:	-commercially available
	-seed, softwood cuttings
Other:	-attracts butterflies and other wildlife

Grey Dogwood
Cornus foemina

Identification: -small white clustered flowers

-bright blue fruit

-twigs are reddish in colour and turn grey with age

-6m tall

Seasons: -blooms in July

Habitat: -Pinery, backdunes

Propagation: -commercially available or by seed

Other: -thicket forming

(University of Wisconsin, 2010)

Red-osier Dogwood
Cornus stolonifera

Identification: -white flat top clusters

- leaves opposite arcuately veined

-4-5m tall

-white fruit

Seasons: -May to July

Habitat: -tolerates sand burial

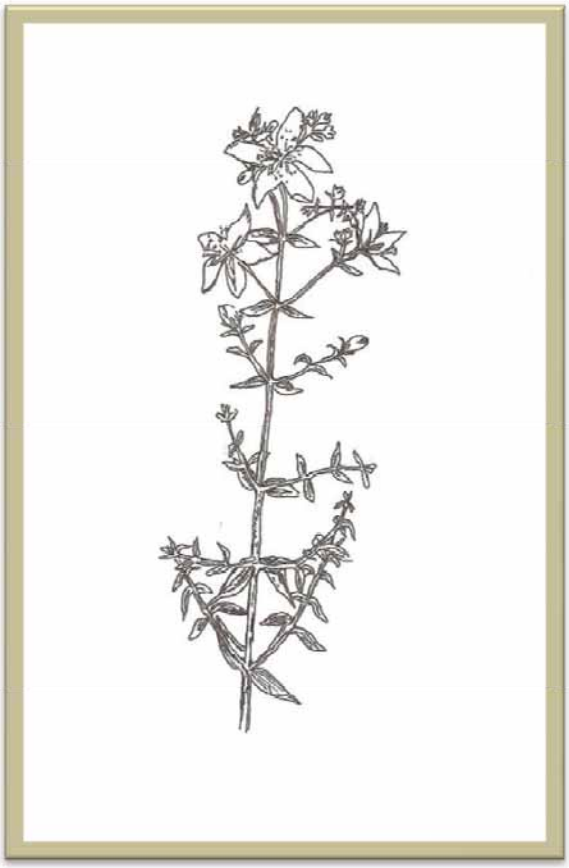
Propagation: -commercially available

Other: -also known as *Cornus sericea ssp. sericea*

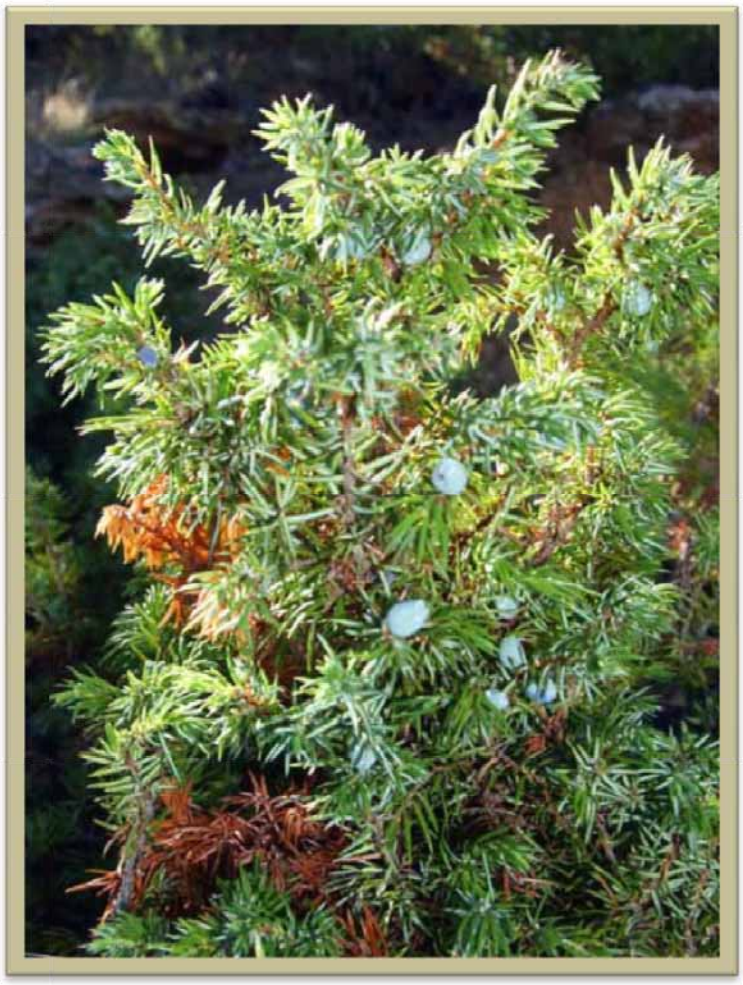
Kalm's St. John's Wort
Hypericum kalmianum

Identification:	-broadleaf evergreen
	-yellow flower
	-small narrow leaves
	-dense mound
	-60-100cm tall
Seasons:	-blooms July to August
Habitat:	-dunes and rocky lakeshores
	-prefers moist wet rich sandy loam
	-tolerates poor soils and some drought
	-full sun to partial shade
Propagation:	-commercially available
Other:	-good small shrub for mass planting -attracts butterflies and bees

(Ohio Nature, 2008)



Common Juniper
Juniperus communis



Identification: -evergreen

-blue waxy berry-like fruit

-reddish bark

-1m tall

Habitat: -open meadows, rocky shores

Propagation: -commercially available

Other: -berries favoured by birds

Creeping Juniper
Juniperus horizontalis

(Boreal Forest.org, 2009)

Identification:
- -evergreen
- -scale-like leaves
- -long trailing branches, short side branches
- -not prickly
- -blue berry-like fruit
- -less than 30cm tall

Habitat:
- -dry, rocky, sandy areas
- -tolerates sand burial
- -found in backdune
- -Pinery

Propagation:
- -commercially available

Other:
- -berries favoured by birds

Common Ninebark
Physocarpus opulifolius

Identification:
- -whitish-pink flowers
- -multi stemmed
- -upright and spreading with exfoliating bark to reveal several layers of reddish to light brown inner bark

Seasons:
- -blooms late spring and early summer

Habitat:
- -along streams, rocky banks, gravel bars, moist thickets
- -full sun to partial shade
- -able to tolerate a wide range of soil conditions

Propagation:
- -commercially available
- -spreads by underground runners

Other:
- -effective as a hedge or screen for use as erosion control on banks

(Weatherbee, 2006)

(Weatherbee, 2006)

Shrubby Cinquefoil
Potentilla fruticosa

Identification: -showy yellow flowers

-greyish green pinnately compound leaves

-90-120cm tall

Seasons: -June to September

Habitat: -moist meadow to dry

-between back dunes

-tolerates sand burial

-found as far south as the Pinery

Propagation: -commercially available

-seeds or softwood cuttings

Other: -good erosion control

-pest free

- maintenance free

-attracts butterflies

(Weatherbee, 2006)

Weatherbee, 2006)

Sand Cherry
Prunus pumila

Identification: -white flowers
-edible fruit (1cm)
-trailing and upright habit
-200cm tall

Seasons: -flowers in May

Habitat: -tolerates some burial
-full sun
-tolerates dry conditions

Propagation: -commercially available

Other: -attracts birds

(University of Wisconsin , 2010)

Fragrant Sumac
Rhus aromatica

Identification: -yellow catkin flowers

-trifoliate leaf

-1.8-3.5m tall

Seasons: -flowers April to June

Habitat: -back dune

-full sun

-tolerates dry conditions

Propagation: -commercially available or by seeds

-suckering growth

-looks best when planted in masses

Other: -attracts butterflies and other wildlife

(USDA, 2010)

Wild Rose
Rosa blanda

Identification:
- -single white or pink flower
- -pinnately compound leaves
- -1.3m tall

Seasons:
- -blooms in July

Habitat:
- -dunes and gravelly and rocky shores
- -sun to part shade

Propagation:
- -commercially available
- -seeds
- -stem cuttings

Other:
- -attracts birds

Sand Dune Willow/ Heartleaf Willow
Salix cordata

Identification:
-lance shaped leaves with base that is rounded to heart-shaped

-buds reddish brown

-fast growing

-3-4m tall

Habitat:
-typically found on dunes and along lakeshores

-grows on sandy, silty or gravelly soils

-does well also in wet, ill drained and intermittent flooded soils

Propagation:
-seeds or cuttings

Other:
-good for use as a low windbreak

-erosion control

Pussy Willow
Salix discolor


(USDA, 2010)


(USDA, 2010)

Identification:
- -oblong to narrow elliptic leaves
- -green surface and white lower surface of leaves
- -flattened reddish-purple buds
- -bark greyish-brown
- -5m tall, 4m spread, multi-stemmed

Seasons:
- -catkins in early spring

Habitat:
- -common to stream sides, ponds or low spots in the landscape
- -moist sandy, loamy and clay soils
- -tolerates dry soils
- -requires full sun to partial shade

Propagation:
- -commercially available
- -cuttings
- -seeds

Other:
- -weak-wooded but rejuvenates from roots easily

American Highbush Cranberry
Viburnum trilobum

Identification: -leaves opposite with 3 lobes

-fruit bright red

-white flowers

-3.5m tall

Seasons: -blooms in early June

Habitat: -wide range of soils

-tolerates moist conditions

Propagation: -commercially available

Other: -not to be confused with European Highbush (v. Opulus)

(California Oak Mortality Task Force, 2004)

(University of Saskatchewan, 2002)

NATIVE SPECIES

Rare
At Risk
Endangered

June Grass
Koeleria macrantha

Identification: -grass

-yellow bloom

-grey green

-clump forming

-30-90cm tall

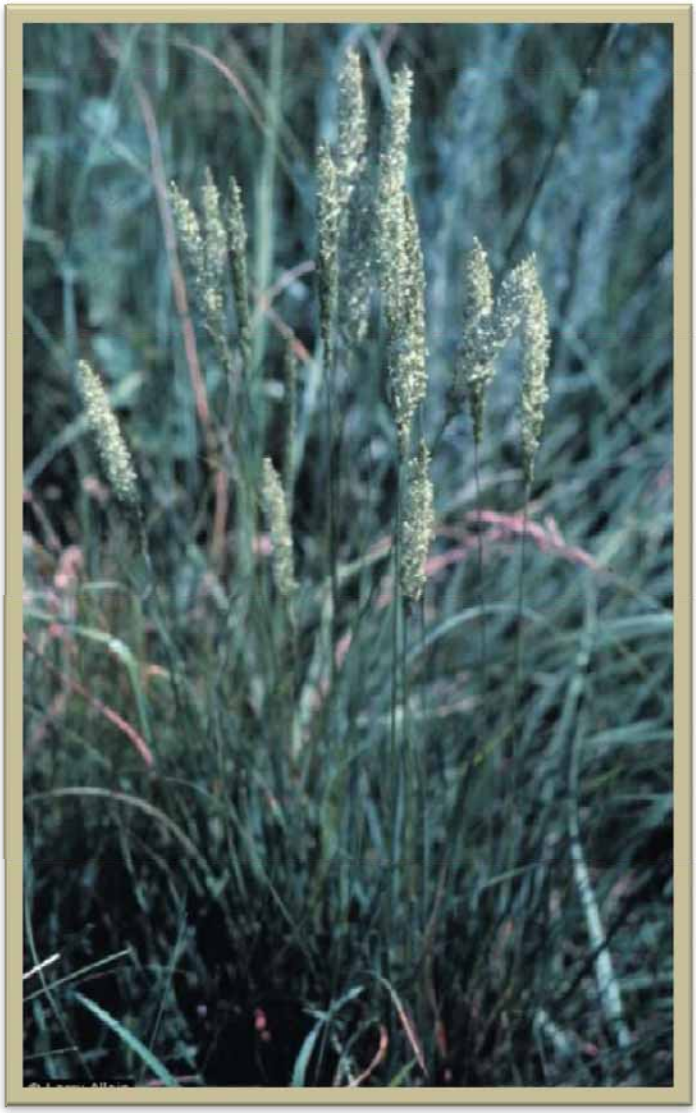
Seasons: -blooms April-June

Habitat: -prairies, stabilized dunes, openings in sandy woodlands, found in rocky Bur Oak stands

Propagation: -collect seeds in September

-mature plants may be divided

Other: -Provincially rare



Smooth Sand Sedge
Cyperus houghtonii

Identification: -sedge

-rhizomes

-v shaped leaves

-10-100cm tall

Habitat: -open sandy habitats

Propagation: -seeds or bare roots

Other: -Provincially rare

(University of Wisconsin, 2010)

(University of Wisconsin, 2010)

Rough Blazing-star
Liatris aspera

Identification: -spiked purple flowers
-stems zigzagged
-narrow green leaves
-20-60cm tall

Seasons: -blooms August to October

Habitat: -open sandy woodlands
-full sun
-tolerates dry conditions
-sandy prairies

Propagation: -commercially available
-seeds

Other: -attracts hummingbirds, butterflies
-Provincially rare

(EPA, 2007)

Slender Mountain-mint
Pycnanthemum tenuifolium

Identification: -whitish to lavender terminal flower with two-lipped petals with purple spots

-narrow leaves

-clump forming

-50-75cm tall

Seasons: -blooms June to September

Habitat: -prairie remnants

-open sandy woods

-old fields

Propagation: -commercially available

-seeds

-root division

Other: -mint smelling
-Provincially rare


(USDA, 2010)


(USDA,2010)

GLOBALLY RARE NATIVE SPECIES

Great Lakes Wheat Grass

Elymus lanceolatus/ Agropyron psammophilum

Identification: -silvery grey-green grass, long lived

-narrow spike leaf, fine texture

-grain fruit

-leaves 4-8mm wide, 30-90cm tall

-underground rhizomes

Seasons: -yellow blooms April

Habitat: - sheltered sand dune areas, sandy soils

-often on leeward side of foredune or in interdunal meadow

-low growth habitat

-found scattered from Point Clark to Manitoulin Island

Propagation: -seed 1/2” into sand in early spring

Other: -low maintenance dune stabilizer

-provincially rare, distribution so limited it could be considered globally rare

-attracts birds

Green Milkweed
Asclepias viviflora

Identification: -pale green cluster flowers

-leaves are variable in shape

-plants from dry sites have long narrow leaves, while plants from moist sites have round leaves

-60cm tall

Seasons: -flowers June through September

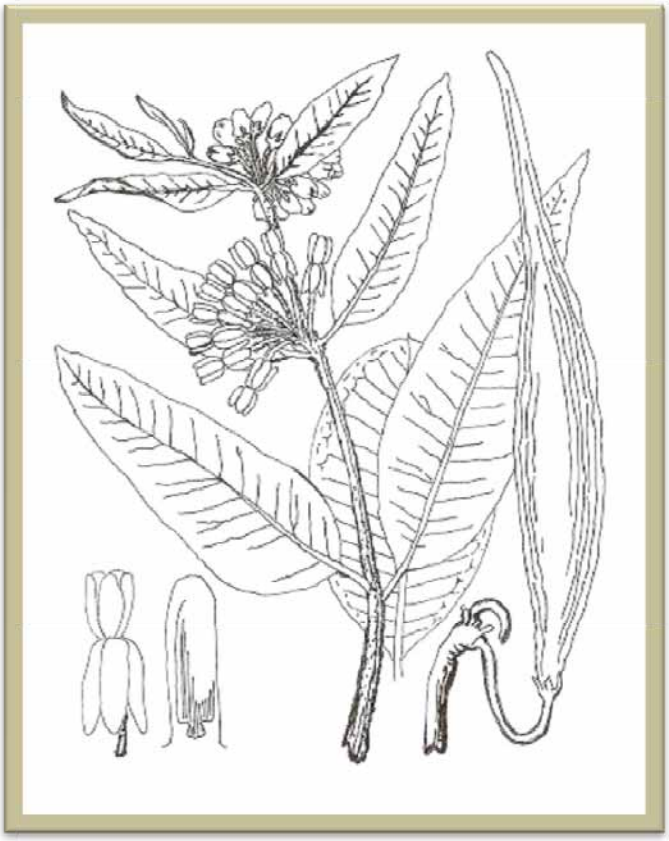
Habitat: -rare, usually found in high quality habitat in sand dunes

Other: -monarch butterflies feed on foliage

-causes skin irritation to humans

-Provincially rare

(OMAFRA, 2010)



Pumpelly's Brome
Bromus inermis ssp. pumpellianus

Identification: -grass

-bloom inconspicuous

-hairy leaves

-50-100cm tall

Habitat: -sand prairies

-sand beaches

Other: -rare in Ontario

Long-leaved Sand Reed
Calamovifa longifolia var. Magna

Identification: -grass

-brown flowers

-scaly underground roots

-long tapering pale green to straw coloured leaves

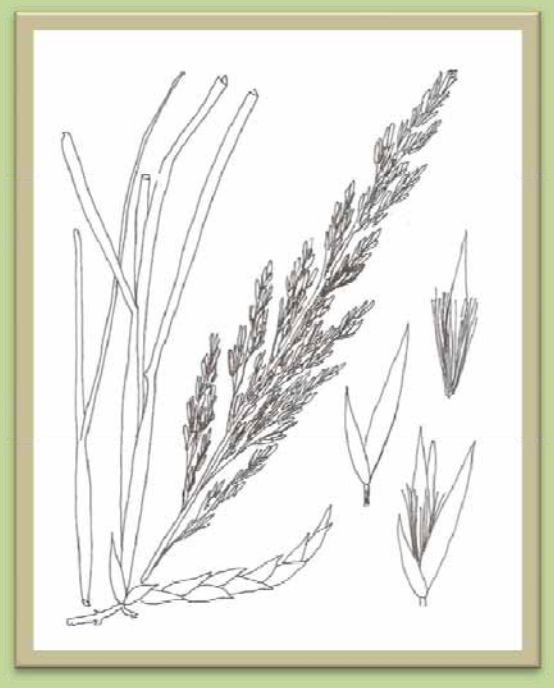
-30-180cm tall

Seasons: -flowers July to August

Habitat: -sandy shores
-drought tolerant

Other: -provincially rare

-endemic and globally rare



Pitcher's Thistle
Cirsium pitcheri

Identification: -pink blooms

-thistle-like leaves covered in white hairs

-1m tall

Seasons: -blooms mid summer

Habitat: -undisturbed sandy shorelines, dunes

Other: -endangered species
-protect and minimize disturbance in general vicinity
-8-10 year life cycle, flowering only in its final year.

Flowering stage

Rosette stage

Hill's Thistle
Cirsium hillii

Identification: -pink-purple flowers

-deep hallowed root system

-stems soft rigid and some hairs

-25-60cm tall

Seasons: -flowers July-August

Habitat: -alvars

-open limestone woodland, sand dunes, sandy woodlands, Manitoulin Island and west shore of Bruce Peninsula

Other: -threatened status
-Provincially rare

(Muma, 2009)

(Muma, 2009)

Bugseed
Corispermum hookeri

Identification: -brown/green flowers on a spike

-lance-like leaves

-hairy stem

Seasons: -August to September

Habitat: -sandy shores and dunes

Other: - Provincially rare

Large Yellow Lady's Slipper
Cypripedium pubescens

Identification: -yellow slipper-like flowers

-20-30cm tall

Seasons: -blooms in June

Habitat: -moist woods, bogs

Other: -do not transplant, will not survive

(Pitchers Thistle, 2005)

Lakeside Daisy
Hymenoxys acaulis

Identification: -yellow daisy-like bloom

-dark green slightly hairy foliage

-low growing clumps

-8-15 cm tall

Seasons: -blooms in May to early June

Habitat: -Bruce Peninsula

Other: -rare

(Pitchers Thistle, 2005)

Ontario (Cylindrical) Blazing-star
Liatris cylindracea

Identification: -herbaceous perennial

-linear leaves

-long raceme of purple flowers

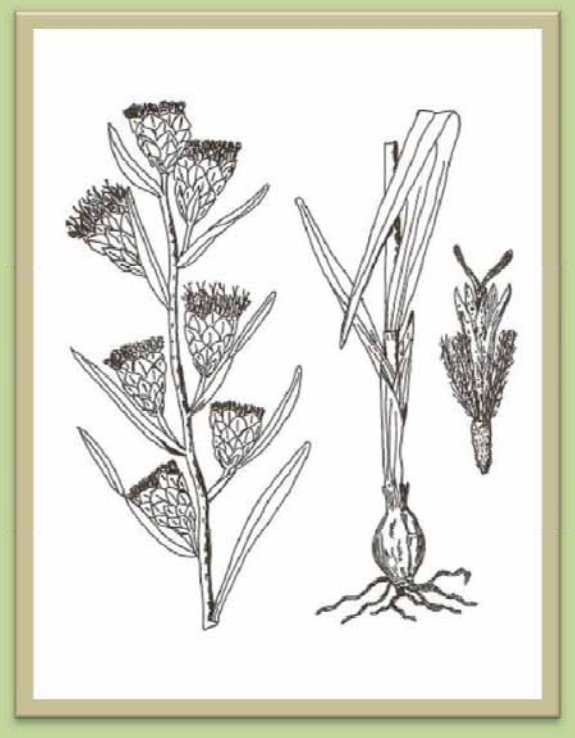
-30-90cm tall

Seasons: -blooms in August

Habitat: -dry sand, low dunes open pine woodlands, wet meadows, dry oak woods, alvars

Other: -Provincially rare

(USDA, 2010)



Bayberry Willow; Blue Leaf Willow
Salix myricoides

Identification: -strongly glaucous leaves

-green above and bluish white underneath

-3m (shrub) or 5m (tree)

Seasons: -flowers in May

Habitat: -sand dunes, sandy shores, gravelly shores, shoreline thickets

Propagation: -cuttings or seed

Other: -rare in Ontario

Plains Puccoon
Lithospermum caroliniense

Identification: -deep yellow tubular flowers in clusters

-grey-green linear leaves covered with stiff hairs

-30-90cm tall

Seasons: -blooms April to June

Habitat: -dunes, open sandy woodlands

Other: -sensitive status

(USDA, 2010)

Hairy Puccoon
Lithospermum canescens

Identification: -flat clustered 5 rounded petal like lobes on flowers at end of plant
-stems covered in long soft grey hairs

-underside of leaves very hairy, upper side of leaves are smooth

-30-90cm tall

Seasons: -blooms in spring

Habitat: -dunes, open sandy woodlands
-sun to part shade
-rocky open woods

Other: -sensitive status

Narrow-leaved (Fringed) Puccoon
Lithospermum incisum

Identification: -tubular yellow flowers

-narrow leaves

-less hairy than other puccoons

-30-90cm tall

Seasons: -blooms April to June

Habitat: -dune savannahs, sandy woodlands, open dry habitats

Other: -Provincially rare

(Ontario Wild Flowers,2010)

Pinedrops
Pterospora andromedea

Identification: -yellowish-brown, egg-shaped flowers

-reddish-brown leafless stems

-winged seeds

-30-100cm tall

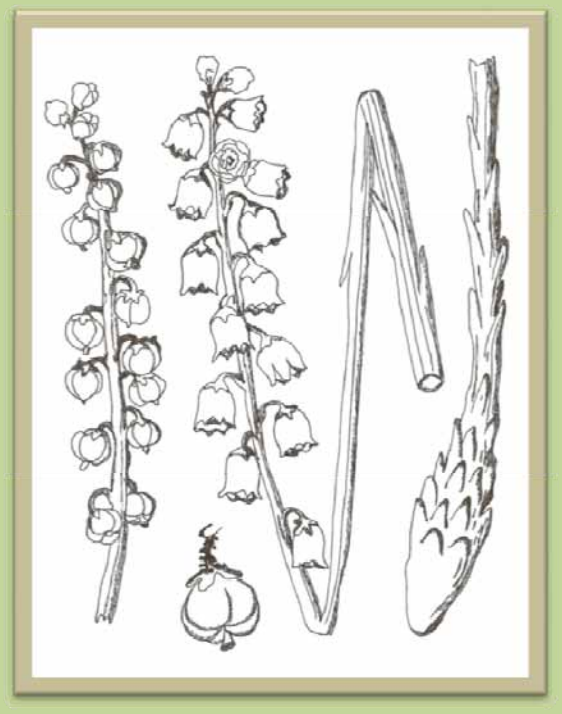
Seasons: -flowers June to August

Habitat: -humus-rich soil in pine forests

-occasionally in open sandy pine woods and savannahs

Other: -Provincially rare

(Ontario Wild Flowers,2010)



Houghton's Goldenrod
Solidago houghtonii/ Oligoneuron houghtonii

Identification: -yellow flowers

Seasons: -blooms summer to fall

Habitat: -alvars

-dunes

Other: -extremely rare in and outside of Ontario, occurs only at a few sites on the Bruce Peninsula & Manitoulin Island

(USDA, 2010)

Gillman's Goldenrod
Solidago simplex spp. Randii var. gillmanii

Identification: -yellow disk or ray florets

-narrow oblanceolate

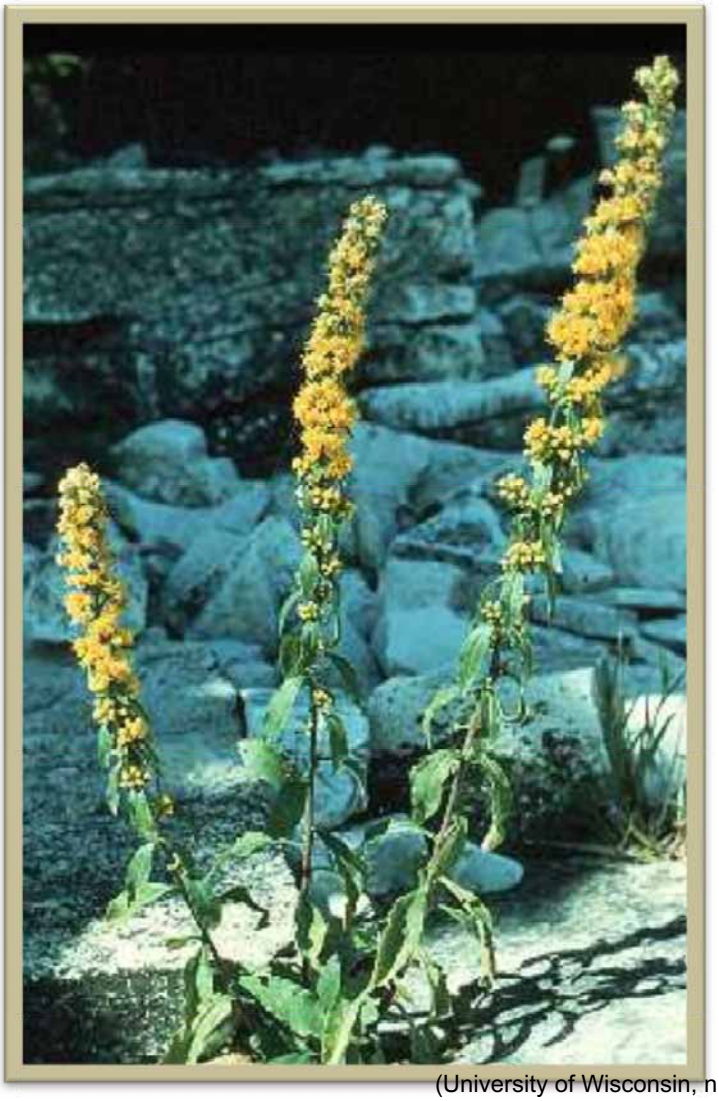
-basal and proximal cauline leaves

-margins often sharply serrate

-5-80cm tall

Habitat: -dunes and sandy shores

Other: -extremely rare



(University of Wisconsin, n.d)

Prairie Ragwort
Senecio plattensis

Identification: - light green stem, slightly rigid, white hairs
-basal oblong/oval leaves, 2 inches long, 1 inch across
-yellow upright flower clusters of 3-12 flowers
-daisy like
-0.5 to 1 foot tall

Season: -blooms mid to late spring and lasts about a month

Habitat: -full to partial sun
-mesic to dry conditions
-loamy, sand, clay or gravel soil
-open areas sandy forests, oak savannas, limestone glades

Propagation: -underground rhizomes

Other: -Provincially rare

(Illinois Wild Flowers, 2010)

(Illinois Wild Flowers, 2010)

Porcupine Grass
Stipa spartea

Identification: -grass

-yellow flowers, arching clumps

-60-120cm tall

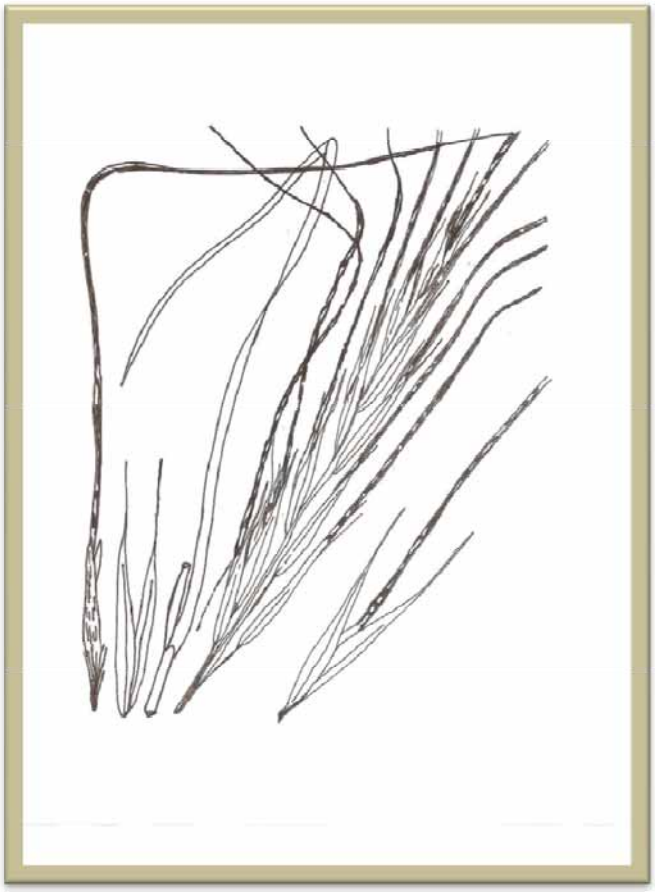
Seasons: -blooms April to May

-turns silvery white in fall

Habitat: -open stabilized dunes, sandy openings in dry deciduous/coniferous forest on dunes

Other: -rare

(USDA, 2010)



Invasive Species

Norway Maple
Acer platanoides

Identification: -leaves with 4-7 lobes

-dark green

-opposite

-bark is greyish with shallow grooves

-produces large quantities of seeds, germinates rapidly, crowds out native species

-60-100 feet in height

Season: -spring (April-May) clusters of yellow-green flowers appear before leaves grow

Habitat: -full sun, hot dry conditions
-hardy, tolerates extreme soils
-forests, wetlands, open areas, roadsides, vacant lots

Control Method: -remove bark around base of trunk, remove saplings with shears or chain saw

(Muma, 2009)

(Muma, 2009)

Goutweed
Aegopodium podagraria

Identification: -dense, 5 petal white flower flat-top clusters
-leaves with long petioles
-variegated leaves
-medium green leaves
-9 leaflets
-stem 1m tall

Seasons: -blooms in summer

Habitat: -disturbed habitats
-prefers light to moderate shade but is shade tolerant

Propagation: -rhizome
Control Method:-hand pull each stalk before seeds set, dig up root system
Other: -aggressive dense ground cover, displaces native species

(NPS, 2010)

INVASIVE SPECIES

Horse Chestnut
Aesculus hippocastanum

Identification: -bell shaped red/white flowers

-5-9 leaflets

-palmately compound leaves

-thorny round fruit

Control Method: -remove bark around base of trunk
-remove saplings with shears or chain saw

Garlic Mustard
Alliaria petiolata

Identification: - 4 petal cross-shaped white flowers on a stalk with terminal clusters
-toothed green leaves with a garlic odour when crushed
-1m high

Seasons: -sheds seeds in June

Habitat: -moist, shaded soils
-forests, roadsides

Propagation: -seeds, can remain viable in soil up to 5 years

Control Method:-hand pull, cut stems close to found with trimmer
-remove plant and entire root system

(NPS, 2010)

INVASIVE SPECIES

Sweet Woodruff
Asperula odorata

Identification: -white 4 lobed flowers
-bright green leaves in whorls, laceolate or elliptical
-stems hairy
-slender stalks
-20-23cm inches tall

Seasons: -blooms May to June

Habitat: -forests
-shady habitats

Propagation: -seeds
-root division

Control Method: -cut stems close to the ground with trimmer, dig up root system with spade

(Ontario Wild Flowers, 2009)

(Ontario Wild Flowers, 2009

Japanese Barberry
Berberis thunbergii

Identification: -yellow drooping flower clusters

-many stems

-green or red leaves

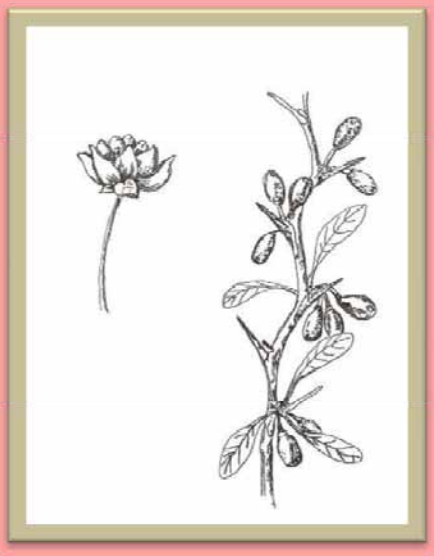
-bright red oblong fruit

Seasons: -blooms mid April to May

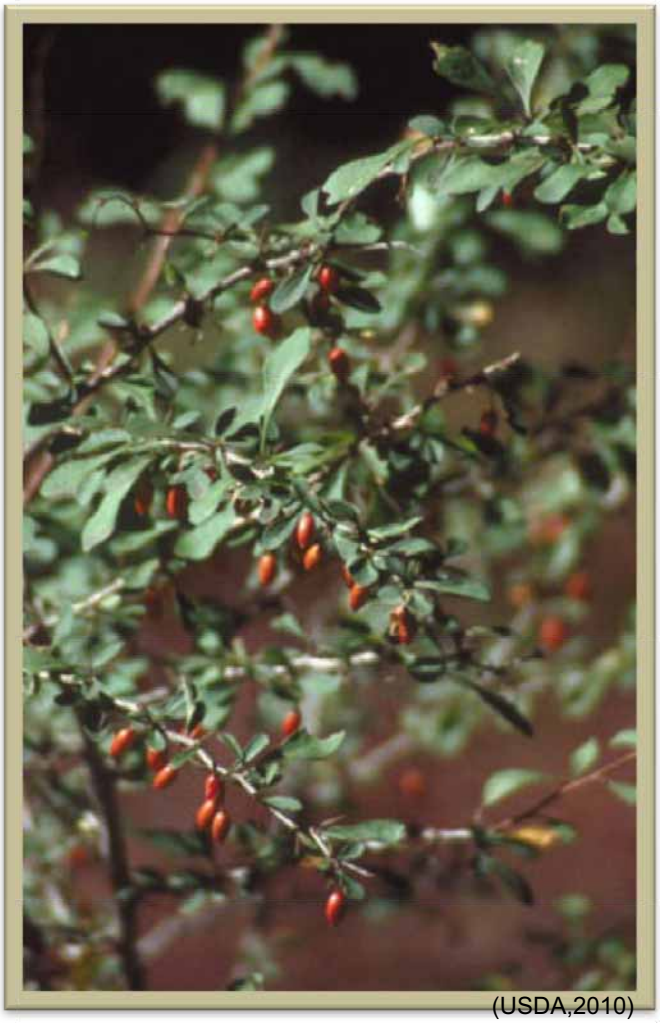
Habitat: -canopy forests, open woodlands, wetlands, pastures, meadows

-changes soil pH, nitrogen levels and biological activity in soils

Control Method:-remove bark around base of trunk, remove saplings with shears or chain saw



(USDA, 2010)



(USDA,2010)

European Barberry
Berberis vulgaris

Identification: -simple, alternate leaves, ovate or obovate

-yellow coloured flowers

-bright red fruit

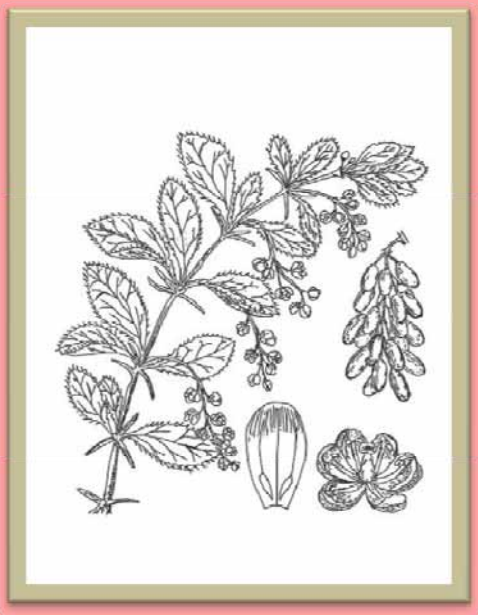
-fruit in bunches hanging below stem

-yellow coloured wood

Seasons: -flowers in summer

Habitat: -roadsides, fields, open areas

Control Method: -remove entire shrub, including roots and suckers



(Muma, 2010)

(Muma, 2009)

European Birch
Betula pendula

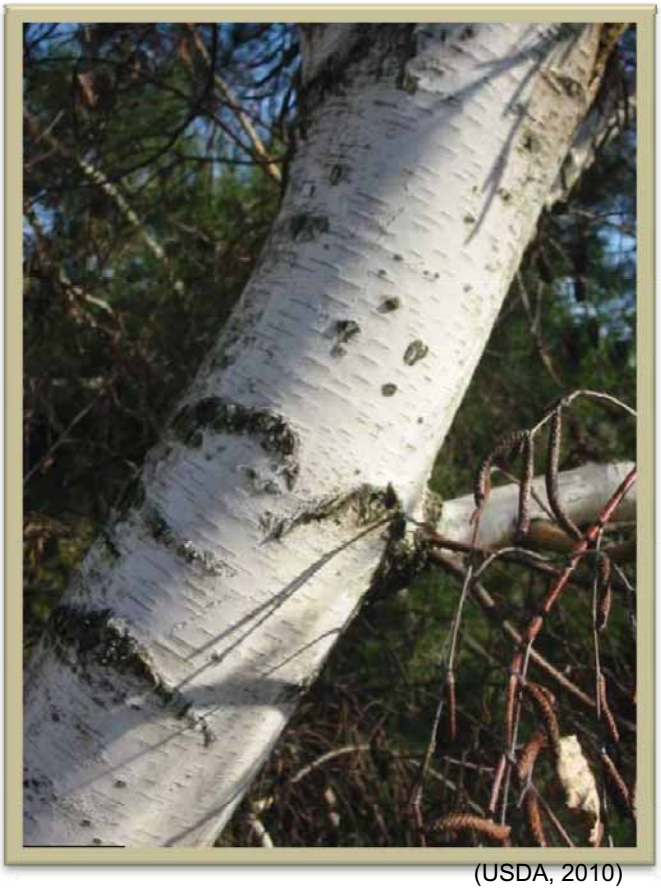
Identification: -triangular ovate leaves
-double-toothed
-3-7cm long
-white bark
-flowers catkins

Habitat: -bogs, marshes, lowlands

Control Methods: -remove bark around base of trunk,
-remove saplings with shears or chain saw

Other: -displaces native plants
-overshades

(USDA, 2010)



(USDA, 2010)

Oriental Bittersweet
Celastrus orbiculatus

Identification: -greenish-yellow flower clusters
-leaves alternate, simple

-round orange-yellow fruit

-shrub or vine

-smothers vegetation causing other plants to be over shaded or break

Seasons: -germinates in late spring

Habitat: -open sunny areas
-coastal areas, forest edges , fields, woodlots

Propagation: -spread by seeds, often dispersed by birds

Control Methods:-remove bark around base of trunk, remove saplings with shears or chain saw

(USDA,2010)

INVASIVE SPECIES

Crown Vetch
Coronilla varia or Securigera varia


(USDA, 2010)

Identification:
-white-purple flowers
-7-12 leaflets in pairs
-oblong
-dark green pinnate leaves, branches 60-70cm long
-multi-branch root system
-fruit bean-like
-grows 30-60cm tall

Seasons:
-blooms May to August

Habitat:
-full sun to partial shade
-sand, gravely, rocky soils, loams, clays
-road bank stabilizer, gravel bars of streams

Propagation:
-seeds
-rhizomes up to 300cm long

Control Method:
-dig up root system with spade, cut stems with trimmer
-spreads rapidly by creeping roots and seeds
-seeds can be viable or dormant for over 15 years

Dog-strangling vine
Cynanchum nigrum

Identification: -vine
-flowers purple with 5 lobes, star shaped
-leaves opposite, simple, twining stems, oval shaped

-fruits are skinny tapered pods, 2-3 inches long, turn green to light brown as they age

Seasons: -flowers June to July

Habitat: -uplands, rocky coastal areas, old fields, bush areas

-range of light and moisture conditions

Propagation: -seeds
-rhizomes sprout new plants, grows in clumps

Control method:-hand pull each stalk at ground level before seed set, remove roots to prevent resprouting

Other: -forms thick patches that crowd out native vegetation

(Muma, 2009)

Russian Olive
Elaeagnus angustifolia

Identification: -leaves narrow and oblong
-dull green
-olive-like fruit
-small fragrant flower clusters

Habitat: -develops in disturbed areas

Control Methods: -remove bark around base of trunk, remove saplings with shears or chain saw

Other: -forms a dense shrub area and takes over native plants

-closes open areas

(USDA, 2010)

(USDA, 2010)

Creeping Bellflower
Campanula rannculoides

Identification: -light purple 5 petaled flowers
-leaves alternate, simple, unevenly toothed
-flowers on one side of stem, leaves on the other
-lower leaves are cordate -oval and middle/upper leaves are ovate-lanceolate
-lower stem reddish colour, slightly hairy
-1m+ tall

Seasons: -flowers June to autumn

Habitat: -light sandy to medium loamy, well drained soils, pH neutral
-full sun, part shade or shade

Propagation: -seeds, rhizomes

Control Method: -dig up root system with spade, cut stems close to ground with shears

Other: -sneaks under fences and on sidewalks

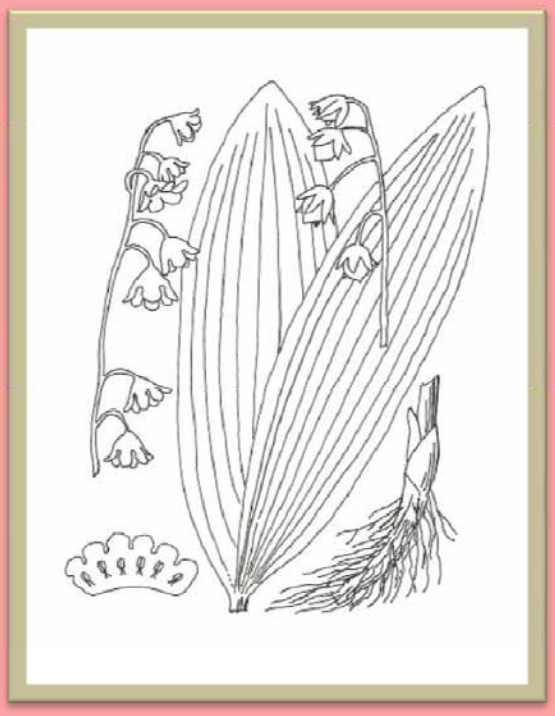
(Alberta Invasive Plants Council, 2010)

Lily of the Valley
Convallaria majalis

Identification: -white bell-shaped flowers
-2-3 basal leaves
-oblong dark green
-pale red berries
-up to 30cm tall

Seasons: -flowers from May to June

Habitat: -mixed forests
Control Method: -dig up root system with spade



(Invasives.org, 2010)

Autumn Olive
Elaeagnus umbellata

Identification: -oval, pointed silver leaves

-silvery underside of leaves

-fruit silver to red

Control Methods: -remove bark around base of trunk, remove saplings with shears or chain saw

Other: -invasive species in disturbed areas

(University of Wisconsin, n.d)

(University of Wisconsin, n.d)

(University of Wisconsin, n.d)

INVASIVE SPECIES

Leafy Spurge
Euphorbia esula

Identification: -leaves spirally arranged
-greenish-yellow flower clusters
-plant contains white milky latex, irritating skin of humans and livestock
-0.8 metres tall

Seasons: -blooms May-June

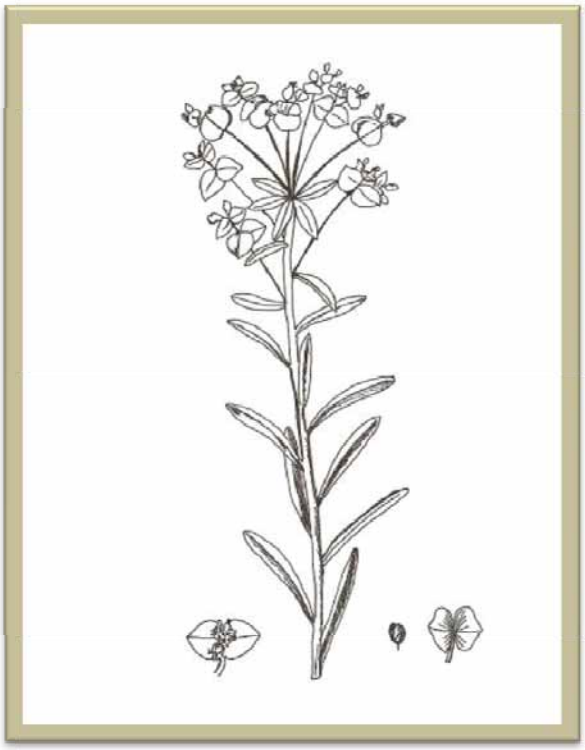
Habitat: -moist to dry soils
-disturbed sites (prairies, savannahs, pastures, fields, roadsides)

Propagation: -creeping rhizomes (5m or more)
-seeds (viable in soil for up to 7 years)
-regenerates from a small root piece, difficult to eradicate

Control Method: -cut stems close to the ground with trimmer

Other: -shades out native species and uses available water

(B.C. AGF, 2010)



INVASIVE SPECIES

Baby's Breath
Gypsophila paniculata

Identification: -leaves linear lanceolates
-white, pink or purple flowers
-stems are bluish-green, high branched near crown and stems are swollen at nodes, leaves grow from nodes
-deep taproot extending 4m allowing it to access groundwater in droughts
-in winter turns into tumbleweed spreading up to 1000 seeds per plant
-120cm tall

Seasons: -stems die off in winter and new stems sprout every spring
-blooms June to August

Habitat: -course soils, alkaline soils
-full sun, arid climates, drought tolerant
-sand dunes

Propagation: -seeds only

Control Method:-dig up root system with spade, before flowers set seeds

(B.C. AGF, 2010)

English Ivy
Hedera helix

Identification: -leaves alternate
-simple dark green leaf with white veins
-small yellow flowers
-groundcover or vine
-grows up to 10 years before producing flowers

Habitat: -woodlands, forest edges, fields, coastal areas
-does not grow well in extremely wet conditions, prefers moderate soil moisture
-usually associated with a land disturbance

Propagation: -spreads through vegetative growth, cut or broken stems root in soil
-seeds

Control Method: -hand pull each stalk, dig up root systems or cut stems close to ground with trimmer

Other: -dense growth and excludes native plants, vine climbs in search of light

INVASIVE SPECIES

Giant Hogweed
Heracleum mantegazzianum

Identification: -large, deeply cut leaves, sharp coarse teeth, leave width up to 1 metre
-stems covered in whisker like hairs with red and purple spots
-white umbrella like flowers up to 1.2 metres
-flowers only once in its lifetime
-height 1-5.5m tall

Seasons: -flowers June to August

Habitat: -roadsides, stream banks, waste areas

Propagation: -seed only

Control Method:-dig up root system with spade, cut stems with trimmer
-*Do not touch this plant, causes severe burns when in contact with your skin
-contact with eyes can cause temporary or permanent blindness

(Iowa State University, 2008)

(Invasive Plants, n.d)

(BBC, n.d)

INVASIVE SPECIES

Himalayan Balsam
Impatiens glandulifera

(B.C. AGF, 2010)

Identification: -lanceolate leaves opposite/whorled and toothed
-thick branched hollow stem
-fruit is club shaped
-red-pink clusters of flowers
-0.6-2m tall

Seasons: -flowers summer to early fall
-germinates late winter to early spring

Habitat: -moist areas along rivers, streams, lakes
-sun to partial shade

Propagation: -seeds, can germinate under water

Control Method: -dig up root system with spade, cut stems close to ground with shears, do not allow to set seed

Other: -suffocates native vegetation

INVASIVE SPECIES

Common Privet
Ligustrum vulgare

Identification: -white tubular 4 petal clustered flowers

-leaves opposite, simple

-black berry-like fruit

-smooth grey-brown bark

-3-5 m tall

Seasons: -flowers in late June

Habitat: -full sun to partial shade
-adaptable to dry and moist environments

Control Method: -remove bark around base of trunk, remove saplings with shears or chain saw


(Muma, 2009)

(Muma, 2009)

(Muma, 2009)

Moneywort (Creeping Jenny)
Lysimachia nummularia

Identification: -simple 5 petal yellow flower
-opposite leaves, pairs of oval leaves on stems
-up to 3 feet long
-ground cover

Seasons: -blooms late spring to late summer

Habitat: -full sun to partial shade
-moist conditions
-fertile loamy soil
-seeps, fens, ditches, woodlands, thickets, moist areas with black soil

Control Method: -dig up root system with spade, cut stems with trimmer

(Illinois Wildflowers, 2010)

Silver Dollar
Lunaria annua

Identification: -leaves cordate, coarsely toothed, oval shaped
-reddish-purple flowers
-stiff hairy stems
-seed pods silver coins
-60-90cm tall

Seasons: -blooms late spring, early summer

Habitat: -sandy, clay soils
-full sun, partial shade

Control Method: -dig up root system with spade, cut stems with trimmer

INVASIVE SPECIES

Purple Loosestrife
Lythrum salicaria

Identification: -tall plant, opposite leaves
-lance like leaves near top, heart shaped leaves at base
-purple flower on a spike
-square woody stem,
-grows to 1m tall

Seasons: -blooms June to September

Habitat: -wetlands, river and stream banks, ditches

Propagation: -underground stems, new stems emerge from previous year's stems

Control Method: -dig up root system with spade, cut stems with trimmer

Other: -crowds out native species

(NPS, 2010)

Sweet White Clover
Melilotus alba

Identification: -biennial, vegetative first year with small branched stems with clover leaves, second year plant is bushy grows 3-5 ft tall
-flowers dense at top of stem by a mini stalk
-leaves divided in three toothed leaflets

Seasons: -1st year found in late summer
-2nd year blooms late April to early May

Habitat: -direct sunlight or partial shade
-cannot tolerate complete shade
-calcareous or loamy soils
-open, disturbed habitats like prairies, savannas and dunes

Propagation: -tap root
-small hardy seeds that remain viable in soils for up to 30 years

Control Methods:- mechanical controls: hand pulling in late fall after development of 1st year buds, or in May or June before 2nd years flower controlled burns two years in a row
-pulling is easier when soil is wet
-cut plant plants and remove from natural area, may have to be repeated

Spotted Knapweed
Centaurea maculosa

(USDA,2010)

Identification:
-biennial plant- rosette in first year, flowering plant second year
-upright and branched stems, up to 1.5m tall
-rosette leaves up to 15cm long, deep lobes
-alternate leaves and are divided (feather like)
-pinkish purple flowers at end of branch, flowers base has black tips
oval brown seeds

Seasons:
-flowers May to late autumn

Habitat:
-well drained, light to coarse textured soils
-open dunes
-intolerant of dense shade, and intense moisture

Propagation:
-seed, self pollinating and cross pollinated by insects
-roots release a chemical inhibiting root growth of other plants

Control Method:
-dig up root system with spade, cut stems with trimmer
-wear gloves, may cause skin irritations

Wild Parsnip
Pastinaca sativa

Identification: -biennial
-leaves pinnately compound with 2-5 pairs of opposite, sharply toothed leaves
-smooth stems, reddish/green in colour, hollow stems
-yellow, umbrella shaped, flowers, 10-20cm across
-similar appearance to dill
0.5-1.5m tall

Seasons: -flowers May to late autumn

Habitat: -roadsides, meadows, abandoned fields

Propagation: -seed only

Control Method:-dig up root system with spade, cut stems with trimmer
-*Do not touch this plant, causes severe burns when in contact with your skin
-contact with eyes can cause temporary or permanent blindness


(OMAFRA, 2006)


(OMAFRA, 2006)


(OMAFRA, 2006)

INVASIVE SPECIES

Common Reed
Phragmites australis

Identification:
-reed, purplish in colour
-perennial
-tufted spike with white flowers, with a silky appearance
-very aggressive
-grows up to 4m tall

Seasons:
-flowers August to September
-seeds shed from November to January

Habitat:
-marshes. swamps, fens, wet beaches
-alkaline, slightly saline environments
-disturbed/pristine environments

Propagation:
-seeds (spread quickly to new locations)
-rhizomes dispersed by water, animals, machinery and humans
-breaking rhizomes may increase population and encourage spreading

Control Method:
-cut stems close to ground with trimmer or chainsaw, dig up root system if possible
-seed heads must be bagged and removed from site or burned
-cut mid August to interrupt flow of food from roots and the flower

INVASIVE SPECIES

Scots Pine
Pinus sylvestris

Identification: -evergreen
-2 needled bundles
-orange bark
-cones are conical to ovoid
-80-100 feet tall

Habitat: -open areas, open forests

Control Methods:-remove bark around base of trunk
-remove saplings with shears or chain saw

INVASIVE SPECIES

Silver (White) Poplar
Populus alba


(USDA,2010)

Identification: -3-5 lobed blue-green leaves

-seeds are white cotton fluff that spreads by wind travel

-young twigs covered in dense woolly hair

-smooth greenish-white bark that turns dark and rough with age

-can grow to 24m tall

Seasons: -blooms March to April

Habitat: -open woodlands, open areas, variety of soils

Propagation: -seeds, re sprouts easily

Control Methods: -remove bark around base of trunk, remove saplings with shears or chain saw

Other: -dense growth that crowds out native species

INVASIVE SPECIES

Black Poplar
Lombardi Poplar
Populus nigra

Identification: -thick and shiny diamond shaped leaves

-fast growing

-branches point upwards

-soft wood

Control Methods: -remove bark and phloem layer from 10cm band around trunk, do not damage xylem layer, may encourage suckering, check girdle for re-development of bark

INVASIVE SPECIES

Glossy Buckthorn
Rhamnus frangula

Identification: -small 5 petal white flowers
-alternate rounded dark green leaves that resemble dogwood
-showy red-black fruit
-slender stems

-3-5m tall

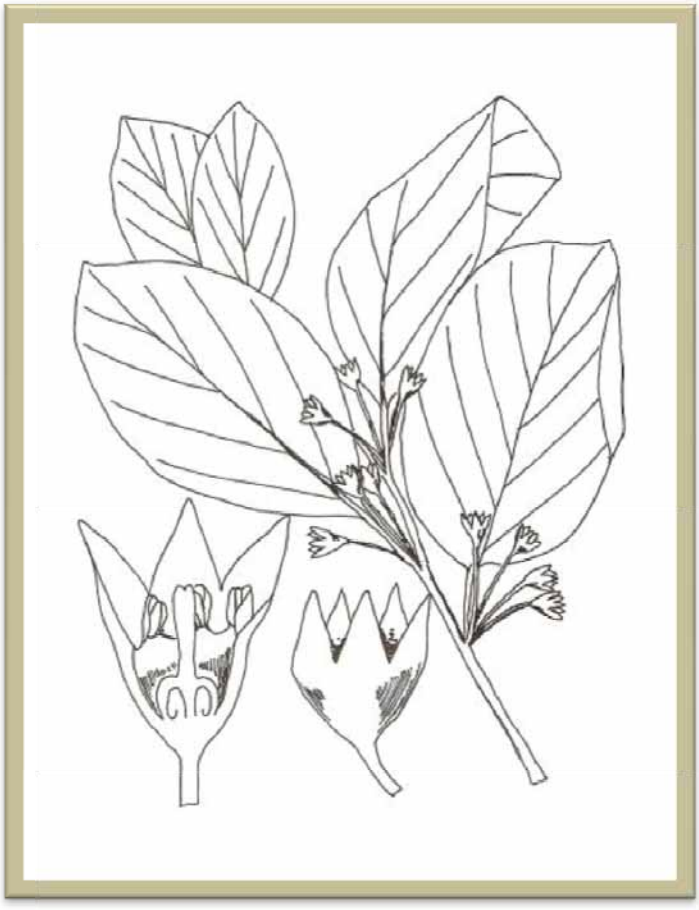
Seasons: -blooms in May
-berries July to September

Habitat: -full sun to part shade
-well drained soils

Propagation: -seed
-softwood cuttings

Control Method: -remove bark around base of trunk, remove saplings with shears or chain saw

(Brand, 2001)



Black Locust
Robinia pseudoacacia

Identification: -white fragrant flower in drooping clusters, alternate, pinnnately compound, oval

-bean like fruit, 2-4 inches long, with enclosed with 4-8 seeds

-leaves: alternate along stems, with 7-21 small leaves called leaflets

-bark of small sapling is smooth, green,
-bark of mature trees is dark brown, deep furrows and flat topped ridges

-fast growing, to approx. 26 m tall

Seasons: -blooms in May and June

Habitat: -early successional plant
-full sun, well drained soils
-disturbed areas like old fields, roadsides, woods

Propagation: -root suckering, stump sprouting
-physical damage to root system increases suckering and sprouting

Removal Methods: -remove bark around base of trunk, remove saplings with shears or chain saw

(NPS,2010)

INVASIVE SPECIES

Multiflora Rose
Rosa multiflora

(USDA,2010)

Identification: -pink, red, yellow or white flowers

-flowers develop into small, hard, round berries

-prickles, thorns

-leaves smooth on top and paler short hairs on underside

-1m tall

Seasons: -blooms in May or June

Habitat: -prairies, savannas, woodlands, forest edges

Control Method: -hand pull or dig up root system with spade

Other: -grows dense thickets and replaces native vegetation

European Mountain Ash
Sorbus aucuparia

Identification: -white flowers
-compound rounded to ovate leaves 11-17 leaflets
-bright scarlet to orange red berries
-underside of leaves are fuzzy

-bark light gray-brown

-grows 7-14m tall

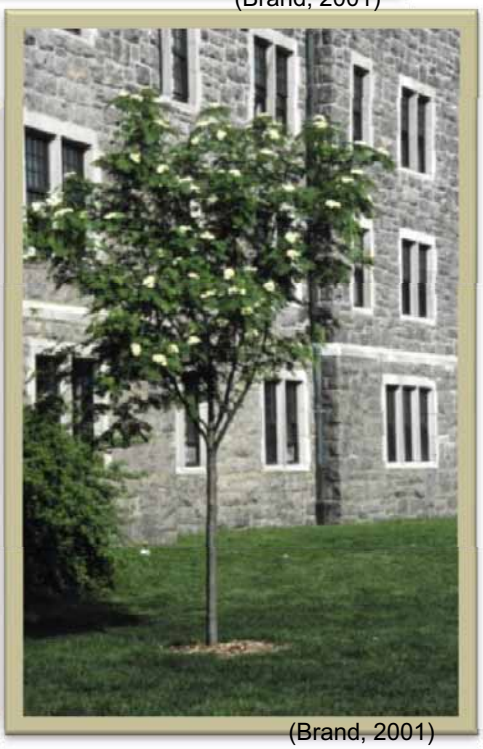
Seasons: -blooms in May
-fruit ripens in late August and September

Habitat: -prefers cool to cold climates, full sun
-avoids hot, dry areas
-well drained loamy acidic soils

Propagation: -seeds

Control Method:-remove bark around base of trunk, remove saplings with shears or chain saw

(Brand, 2001)



(Brand, 2001)

Red-seeded Dandelion
Taraxacum erythrospermum

Identification:
-basal leaves
-bright yellow flower
-smooth from hairs
-reddish dry seed on fluffy pappus
-5-30cm tall

Seasons: -blooms April to November

Habitat: -fields, lawns, disturbed sites

Propagation: -seeds

Control Method: -hand pull each stalk, dig up root system, do not allow to produce seeds

(University of Wisconsin, 2010)

INVASIVE SPECIES

Common Dandelion
Tarazacum officinale

Identification: -simple hollow stem
-basal leaves in rosettes at root crown
-bright yellow flower
-round fluffy white seed ball
-5-30cm tall

Seasons: -blooms mainly in spring but can have scattered blooms throughout summer

Habitat: -disturbed grounds
-low to mid elevations

Propagation: -seeds spread by wind
-taproot

Control Method:-hand pull each stalk, dig up root system, do not allow to produce seeds

(USDA, 2010)

Siberian Elm
Ulmus pumila

Identification: -dark green single toothed leaves

-darker green on top, lighter, hairless underneath

-leaves have pointed tip and have almost symmetrical “V” shape veins

-leaves alternate on stem

-fruit round and smooth

-drooping clusters of green petal-less flowers

-bark is rough, grey, brown, has slender crown

-16-22m tall

Seasons: -flowers in spring

Habitat: -stream banks, forested areas
-hardy, fast growth, survives in a variety of habitats (droughts, harsh cold winters)

Propagation: -seeds spread by wind, high germination rate

Control Methods: -remove bark around base of trunk, remove saplings with shears or chain saw

Other: -resistant to Dutch Elm Disease


(USDA,2010)

INVASIVE SPECIES

European High Bush Cranberry
Viburnum opulus

Identification: -yellow or white flower
-leaves opposite
-3 lobed, long pointed leaves
-bright red berries
-smooth gray bark
-4m tall

Seasons: -blooms late May to early July
-fruit ripens late July to August

Habitat: -moist, moderate alkaline soils
-river valleys, open woods

Control Method: -remove bark around base of trunk, remove saplings with shears or chain saw

(USDA, 2010)


(New Hampshire Government, 2010)

Wayfaring Tree
Viburnum lantana

Identification: -white umbrella shaped flowers
-leaves opposite, simple

-multistems, course stout branching

-naked, fuzzy buds

-clusters of green to red to blue-black berries

-bark light grey-brown

-grows 3-5m tall

Seasons: -blooms mid May
-berries change colour in August and September

Habitat: -full sun to partial shade
-can live in dry compacted soils

-best growth in fertile loamy soils

Control Method:-remove bark around base of trunk, remove saplings with shears or chain saw


(Brand, 2001)


(Brand, 2001)

Periwinkle or Myrtle
Vinca minor

(Brand-U Conn, 2001)

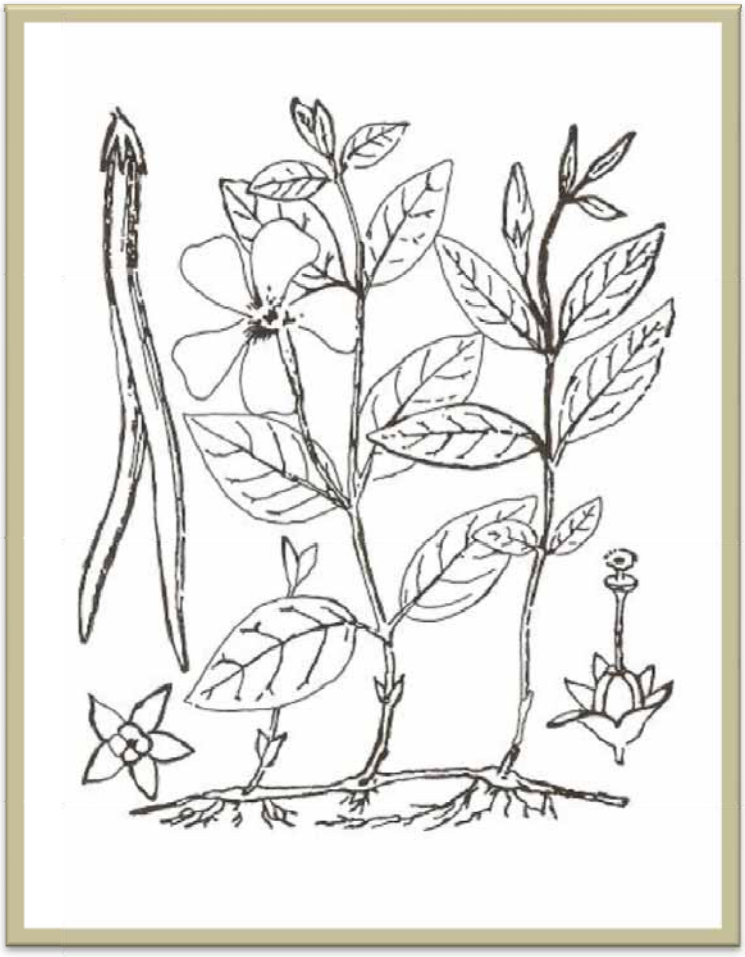
Identification: -short plant, thin, wiry stems
-dark glossy green foliage
-small purple flower, 5 small tubular, pinwheel-like petals
-leaves elliptical and lanceolate
-groundcover (invasive)
-up to 15cm tall

Seasons: -blooms in April and has sporadic blooming in the summer

Habitat: -partial sun to full shade
-rich, moist , well drained soils

Propagation: -rooted stem cuttings
-crown division

Control Method:-dig up root system with spade, cut stems with trimmer



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