#### Knautia arvensis







Photo Credits: Fornax, Wikimedia Commons (leaf); Prazak, Wikimedia Commons (plants); Mentifisto, Wikimedia Commons (flower)

#### **FIELD SCABIOUS**



Introduced as an ornamental and medicinal uses
Mature plants unpalatable to livestock
Invades open dry grassy areas disturbed and undisturbed
Difficult to eradicate

Photo Credits: Michael H. Lemmer Wikimedia Commons (flower)

## Lythrum salicaria





Eric Coombs, Oregon Department of Agriculture, Bugwood.org (plant)

Photo Credits: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org (flower);

#### **PURPLE LOOSESTRIFE**



This species is an aggressive invader of wetland, riparian and marsh habitats. Forms dense stands replacing native vegetation communities.

**RUSSIAN KNAPWEED** 

Acroptilon repens

**Noxious** 

Photo Credits: John D Byrd Mississippi State University Bugwood.org (blooms); Rob Routledge Sault College Bugwood.org (stem)

# DIFFUSE KNAPWEED Centaurea diffusa Prohibited



SQUARROSE KNAPWEED

Centaurea virgata

Prohibited



**WAVY LEAVED THISTLE** 

Cirsium undulatum

**NATIVE** 

Photo Credits: Cindy Roche Bugwood.org (diffuse); Steve Dewey, Utah State University, Bugwood.org (squarrose)

SPOTTED KNAPWEED

Centaurea stobe

Prohibited



Photo Credits: Rob Routledge Sault College Bugwood.org (Spotted); Steve Dewey, Utah State University, Bugwood.org (Russian)

BULL THISTLE

Cirsium vulgare

Noxious



Photo Credits: John Cardina, The Ohio State University (bull); easterncoloradowildflowers.com (wavy leaved)

# NODDING THISTLE Carduus nutans Novious



Noxious Noxious



**CANADA THISTLE** 

Cirsium arvense

Photo Credits: Ricky Layson Photography Bugwood.org (nodding); Mary Ellen (Mel) Harte Bugwood.org (Canada)

This is a Prohibited Species in Saskatchewan please report

**Report To**: Local Rural/Urban Municipalities, Weed Inspectors, Landowners **Email**: invasives.imap@gov.sk.ca

Sign Up for a free iMap Invasives account:

https://imapinvasives.natureserve.org/imap/login.jsp

Contact: B



Beryl Wait Invasive Species Coordinator Saskatchewan Conservation Data Centre 112 Research Drive, Saskatoon, SK S7N 3R3 306-933-6436 (W) beryl.wait@gov.sk.ca

#### **Distinguishing Characteristics**

- Stem erect and hairy
- Leaves hairy and coarsely toothed
- Flower heads range from violet-blue to pale blue to white in color growing on the end of a long leafless stalks
- Ring of narrow green bracts below flower head
   A Fact Sheet specific to this species can be found at Saskatchewan Conservation Data Centre www.biodiversity.sk.ca

#### **Reporting Contacts**

#### This is a Noxious Species in Saskatchewan please report

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#### **Distinguishing Characteristics**

- Long narrow spike (raceme) of numerous pink to purplish flowers comprised of six petals
- Stem square
- Leaves clasping, narrowly lanceolate, opposite in cureat arrangement/orientation

A prolific seed producer whose tiny seeds are easily spread by water, wind, wildlife and humans. Cut flower stalks prior to seed production

More Information on this species can be found at Saskatchewan Conservation Data Centre Website

#### **KNAPWEED FLOWER COMPARISON**



Russian Knapweed far left; Spotted Knapweed center left; Diffuse Knapweed center right; Squarrose Knapweed far right

Photo Credits: Steve Dewey, Utah State University, Bugwood.org (flowers)

#### **KNAPWEED BRACT COMPARISON**



Spotted Knapweed bracts (left) with black spot Diffuse Knapweed bracts (center) with small erect awn Russian Knapweed bracts (right) no awn transparent margins

Squarrose Knapweed bracts (not shown) awn reflexed/bent

Photo Credits: Steve Dewey, Utah State University, Bugwood.org (bracts)

#### THISTLE FLOWER AND LEAF COMPARISON



Nodding Thistle upper left Canada thistle lower left Bull Thistle upper right Scotch Thistle lower right Wavy not shown

Photo Credits: Steve Dewey Utah State University Bugwood.org (comparison photos)

#### THISTLE BRACT COMPARISON



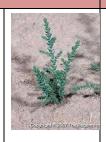
Nodding Thistle upper left Canada Thistle lower left Bull Thistle upper right Scotch Thistle lower right Wavy not shown

Photo Credits: Steve Dewey Utah State University Bugwood.org (comparison photos)

## **Tamarix** species







#### **SALTCEDAR**



Photo Credits: Steve Dewey, Utah State University (plant); Joseph M. DiTomaso, University of California – Davis Bugwood.org (flowers, seedling)

Photo Credits: Steve Dewey, Utah State University, Bugwood.org (flower); Bonnie Million Bureau of Land Management Bugwood.org (branch)

# Anoplophora glabripennis





O shaped holes Targets broad leaf prefers maple

**ASIAN LONGHORNED BEETLE** 



Shiny black with prominent irregular white spots
Distinct blueish-white legs
Long black and white banded antennae
1to2x body length

Photo Credits: Kenneth R. Law USDA APHIS PPQ Bugwood.org (life stages); Dennis Haugen USDA Forest Service Bugwood.org (external damage)

Photo Credits: Dennis Haugen, USDA Forest Service Bugwood.org (closeup)

## **Distinguishing Characteristics**



Distinguishing Prussian Carp from "naturalized" Goldfish which have lost their distinctive gold coloring and or genetic hybrids/clones may require genetic testing

# GOLDFISH Carassius auratus



PRUSSIAN CARP Carassius gibelio



Photo Credits: Alberta Environment and Parks (group)

Photo Credits: OFAH/OMNR Invading Species Awareness Program Illustration by Joe Tomelleri

### **Butomus umbellatus**





Photo Credits: Leslie J. Mehrhoff University of Connecticut Bugwood.org (bulblets); Chet Neufeld Native Plant Society of Saskatchewan (plant and leaves)

#### **FLOWERING RUSH**



Photo Credits: Leslie J. Mehrhoff, University of Connecticut Bugwood.org (flower)

This is a Prohibited Species in Saskatchewan please report

**Report To**: Local Rural/Urban Municipalities, Weed Inspectors, Landowners **Email**: invasives.imap@gov.sk.ca

Sign Up for a free iMap Invasives account:

https://imapinvasives.natureserve.org/imap/login.jsp

Contact:

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Saskatchewan Conservation Data Centre
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306-933-6436 (W)
beryl.wait@gov.sk.ca





#### **Distinguishing Characteristics**

- Young stems slender, smooth and reddish-brown
- Leaves scale like, alternate overlapping, resembles cedar or juniper foliage, turns yellow-orange in fall.
- Flowers small pink to white in long (several cm) clusters.
- Sold as an ornamental shrub "Pink Shower"
   A Fact Sheet specific to this species can be found at Saskatchewan Conservation Data Centre www.biodiversity.sk.ca

#### **Basic Information**

- The Asian Long Horned Beetle attacks nearly all broad leaved trees including Poplar, Elm, Birch and willows.
   Maple (Acer) trees are preferred.
- Adults emerge in late May to July, chew a shallow oval pit and deposit an egg (single adult lays 100 eggs) develop into larvae (1 week to several months)
- The resulting larvae feed on the cambium and then tunnel deeper in to the tree eventually killing it.
   More Information on this species can be found at Saskatchewan Conservation Data Centre Website

#### **Basic Prevention**

DON'T MOVE LIVE FISH TO NEW WATERS
DON'T USE LIVE BAIT OR DUMP LIVE BAIT OR AQUARIUMS
INTO WATER BODIES

DON'T STORE, DISPOSE, OR RELEASE PETS OR AQUARIUM CONTENTS OUTDOORS INTO STREAM, LAKES, RIVERS OR FLUSH DOWN TOILETS, INTO STORM DRAINS OR TREATMENT/STORAGE/STORMWATER PONDS KEEP WATER GARDENS, PONDS, AQUARIUMS ISOLATED FROM NATURAL SYSTEMS

#### **Reporting Contacts**

This is a Prohibited Species in Saskatchewan please report Report To:

Local Rural/Urban Municipalities, Weed Inspectors, Landowners

Email sightings to: <a href="mailto:invasives.imap@gov.sk.ca">invasives.imap@gov.sk.ca</a>
Please include the following information

**Who**: John Doe along with **Contact Information** (email preferred) **Where**: GPS co-ordinates or an exact land location or address

When: the date of the sighting/observation

Habitat: wetland, ditch etc.

Additional Details: number, life stage, controls

Please include a **Photo** (preferred) or collect and press a specimen for

"confirmation" or observations will remain "unconfirmed"

#### **Distinguishing Characteristics**

- Flowers grown in umbel shaped clusters of whitishpink flowers.
- Leaves are sword-like, triangular in cross section, up to 1.5m in height, spongy, reddish tinge at base.
   Leaf tips spirally twisted, under water leaves limp.
- Hand dig and dispose of with care. Avoid disturbing root system until fragments can be captured.

A Fact Sheet specific to this species can be found at Saskatchewan Conservation Data Centre www.biodiversity.sk.ca

#### Centaurea solstitialis







Photo Credits: Mary Ellen (Mel) Harte Bugwood.org (leaf, stem); Charles Turner USDA Agricultural research Service Bugwood.org (plant)

#### **YELLOW STARTHISTLE**



Photo Credits: Steve Dewey, Utah State University, Bugwood.org (flower)

# Agrilus planipennis





shaped holes **Targets** Ash trees

### **EMERALD ASH BORER**



Photo Credits: ); Debbie Miller USDA Forest Service Bugwood.org (distance); Debbie Miller USDA Forest Service (hole)

Photo Credits: David Cappaert, Bugwood.org (closeup)

## Dreissena bugensis and Dreissena polymorpha





Photo Credits: Amy Benson US Geological Survey Bugwood.org (size zebra); United States Environmental Protection Agency Great Lakes National Program Office USEPA (infestation)

## **QUAGGA AND ZEBRA MUSSELS**



zebra right)



#### Lilioceris lilii





Photo Credits: Richard A. Casagrande University of Rhode Island Bugwood.org (larvae and eggs)

### **LILY LEAF BEETLE**



Photo Credits: Lisa Tewksbury, University of Rhode Island Bugwood.org (adult)

Report To: Local Rural/Urban Municipalities, Weed Inspectors, Landowners

Email: invasives.imap@gov.sk.ca

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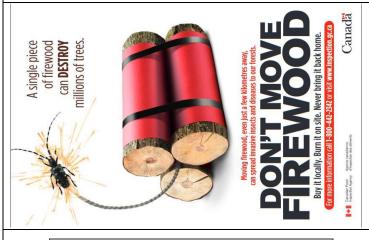
Contact:

Beryl Wait



Invasive Species Coordinator Saskatchewan Conservation Data Centre 112 Research Drive, Saskatoon, SK S7N 3R3 306-933-6436 (W)

beryl.wait@gov.sk.ca





## **Reporting Contacts**

Email sightings to: <a href="mailto:invasives.imap@gov.sk.ca">invasives.imap@gov.sk.ca</a>
Please include the following information

Who: John Doe along with Contact Information (email preferred) Where: GPS co-ordinates or a exact land location or address

When: the date of the sighting/observation

Habitat: natural (western prairie lily, native grassland) or

Introduced (Asiatic Lily) modified setting (garden, ditch)

Additional Details: number, life stage, controls

Please include a **Photo** (preferred) or specimen for "confirmation" or

observations will remain "unconfirmed"

#### **Distinguishing Characteristics**

- Stem erect and branching, grayish-to blue gray in color, covered in fine white cottony hairs
- Leaf bases extend down the stem to form a fringe
- Single flower heads yellow with long sharp yellowish spines

A Fact Sheet specific to this species can be found at Saskatchewan Conservation data Centre www.biodiversity.sk.ca

#### **Basic Information**

- The Emerald Ash Borer targets Ash (Fraxinus) trees
- In late May early June adults emerge from characteristic D-shaped holes, feed on foliage for two weeks prior to mating and egg laying
- The resulting larvae burrow into the tree's growth cambium layer where it continues to feed

More Information on this species can be found at Natural Resources Canada http://www.nrcan.gc.ca/forests/fire-insects-disturbances/top-insects/17607

#### **Basic Prevention**

Prior to returning home, coming to visit or moving between waters within the province make sure to CLEAN DRAIN DRY ALL YOUR EQUIPMENT

To report suspect invasive species, please contact the nearest Ministry of Environment Office or call the TIP Line
1-800-667-7561

More Information on these species can be found at Publications Saskatchewan http://publications.gov.sk.ca Zebra and Quagga Mussels Fact Sheet

#### **Basic Prevention**

This species targets true lilies which includes *Lilium*. Hand picking/ squashing/ killing adults, eggs and larvae is the primary suggested method of control. For recommended methods and treatments consult experienced sources.

Soil and plants appear to be the primary sources of transmission. Don't transplant bulbs and plants with soil. Treat or wash bulbs. Check growth media and plants for adults, eggs and larvae.

## Tanacetum vulgare







Photo Credits: Mary Ellen (Mel) Harte, Bugwood.org (leaf); Michael Shephard, USDA Forest Service, Bugwood.org (plant)

#### **COMMON TANSY**



This perennial species reproduces from seed and short rhizomes. It establishes, persists and spreads due to its unpalatability (toxic alkaloids)

Photo Credits: Mary Ellen (Mel) Harte, Bugwood.org (flower); Steve Dewey Utah State University Bugwood.org (flower and leaf)

## Gypsophila paniculata





Photo Credits: Joseph M. DiTomaso University of California – Davis, Bugwood.org (plant and stem)

#### **BABY'S-BREATH**



An ornamental that has escaped cultivation. Once established difficult to control. Invades pastures and rangeland competes with forage species.

Photo Credits: Joseph M. DiTomaso University of California – Davis, Bugwood.org (flower)

# OXEYE DAISY Leucanthemum vulgare Noxious



White daisy-like flower (petals cup)
Leaves wider, entire with coarse
toothed/lobed margins
Stems solitary to sparingly branched,
usually glabrous, and sage like odor
Leaves egg to spoon shaped, pinnately
lobed or toothed
All parts have a unpleasant odor

Photo Credits: Mary Ellen (Mel) Harte, Bugwood.org (oxeye plant)

# SCENTLESS CHAMOMILE Matricaria perforata Noxious



White daisy-like flower (petals droop)
Stems below flowers usually smooth and hairless

Leaves alternate, odorless when crushed and divided into numerous narrow thread-like segments

Fine very dissected/divided foliage

Fine very dissected/divided foliage Pulpy flower cups

Photo Credits: K. George Beck and James Sebastian, Colorado State University, Bugwood.org (scentless plant)

#### JAPANESE BROME Bromus japonicus Noxious



Long awns bent and plant is tan at maturity
Leaves covered with soft distinct thin hair
Inflorescence usually drooping to one side when
mature.Panicle with spikelets borne at the ends of
long branches. Seed with twisted awn
Tends to grow in wetter sites than downy brome
Awns is equal or shorter than its seed and curls up
when mature, result awn pointed outward
perpendicular to the seed head, spikelet
appearance minature wheathead

Photo Credits: Matt Lavin Wikimedia commons (inflorescence)

# DOWNY BROME Bromus tectorum Noxious



Open drooping panicle with long straight awns Downy brome is reddish color at

maturity

Awn is straight and longer than

Awn is straight and longer than seed grows parallel to the long axis of the seed, give the spiklet an overall "V" shaped appearance

Photo Credits: Tom Heutte, USDA Forest Service, Bugwood.org (inflorescence)

#### This is a Noxious Species in Saskatchewan please report

**Report To**: Local Rural/Urban Municipalities, Weed Inspectors, Landowners **Email**: invasives.imap@gov.sk.ca

Sign Up for a free iMap Invasives account:

https://imapinvasives.natureserve.org/imap/login.jsp

Contact: Beryl Wait



Invasive Species Coordinator
Saskatchewan Conservation Data Centre
112 Research Drive, Saskatoon, SK S7N 3R3
306-933-6436 (W)
beryl.wait@gov.sk.ca

#### **Distinguishing Characteristics**

- Foliage deeply and pinnately divided with toothed margins
- Leaves arranged alternately along the main stem
- Leaves deeply divided into numerous leaflets with toothed edges
- Stems often dark brown to purple in color when mature
- Flowers yellow, numerous "button-like", lacking prominent ray petals

#### **Reporting Contacts**

#### This is a Noxious Species in Saskatchewan please report

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306-933-6436 (W)
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#### **Distinguishing Characteristics**

- Stems smooth (not hairy) covered in waxy coating (rubbery texture/look), swollen nodes
- Leaves linear and opposite hairless with a prominent midvein
- Inflorescence open panicle, lacking bracts beneath the flowers
- Numerous tiny white flowers
- Delicate/fine round "bushy" shape
- Erect numerously branched plant

# SHASTA DAISY Leucanthemum X superbum ORNAMENTAL

White daisy-like flower
Leaves entire with finely toothed margin
A popular ornamental which tend to be taller,
larger more robust plant (bushy) later
blooming, with larger flowers than Oxeye
reputedly lacks invasive tendency of Oxeye
some reports contradict this and reports of
evasive hybrids are reported as well

m PLANT LEAF COMPARISON







Oxeye Daisy Leaf (left) Scentless Chamomile Leaf (right Shasta Daisy (center)

Photo Credits: John Ruter University of Georgia (Shasta); Cape May Plants An Identification Guide (Shasta leaf)

Photo Credits: Ohio State Weed Lab, The Ohio State University (oxeye leaf); Robert Videki, Doromicum kft., Bugwood.org (scentless chamomile leaf)

#### **Reporting Contacts**

#### These are Noxious Species in Saskatchewan please report

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#### **BROME INFLORESCENCE COMPARISON**



Japanese Brome (left) More fine, blunter ligule, panicle less droopy, spikelets more compact Downy Brome (right)



Photo Credits: North Dakota State University NDSU Extension Service (Japanese and Downy comparison)

#### **Arctium minus**









#### **COMMON BURDOCK**



Photo Credits: Theodore Webster USDA Agricultural Service Bugwood.org

Photo Credits: Mary Ellen (Mel) Harte, Bugwood.org (plant, leaves); Ansel Oommen, Bugwood.org (infloresence)

## Pastinaca sativa







Photo Credits: Rob Routledge Sault College Bugwood.org (leaf); John Cardina The Ohio State University Bugwood.org (flower)

#### **WILD PARSNIP**

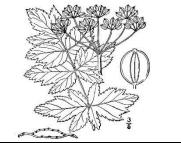




Photo Credits: Rob Routledge, Sault College, Bugwood.org (plant); Ohio State Weed Lab Bugwood.org (Leaf)

#### **CYPRESS SPURGE Euphorbia cyparissias Noxious**



Leaves whorled appearance Smaller more numerous flowers Fruits turn a peach-orange-red color in fall

**LEAFY SPURGE** Euphorbia esula **Noxious** 



Leaves not in whorls Long and strap shaped Modified leaf forms cup shaped "flower" "Flowers" yellow-green in color "Flowers" larger Milky sap in all parts of the plant

Photo Credits: Leslie J. Mehrhoff, University of Connecticut Bugwood.org (cypress)

Photo Credits: Robert Videki Doronicum Kft Bugwood.org (leafy)

#### **DALMATIAN TOADFLAX** Linaria dalmatica **Prohibited**







Photo Credits: K. George Beck and James Sebastian Colorado State University (plant, leaf); Bob Nowierski Montana State University Bugwood.org (flower)

#### **COMMON TOADFLAX** Linaria vulgaris **Noxious**





Photo Credits: Wendy VanDyk Evans Bugwood.org (flower); Bonnie Million National Park Service Bugwood.org (leaves)

#### This is a Noxious Species in Saskatchewan please report

Report To: Local Rural/Urban Municipalities, Weed Inspectors, Landowners

Email: invasives.imap@gov.sk.ca

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Contact:

Beryl Wait



Invasive Species Coordinator Saskatchewan Conservation Data Centre 112 Research Drive, Saskatoon, SK S7N 3R3 306-933-6436 (W) beryl.wait@gov.sk.ca

#### **Distinguishing Characteristics**

- Tall biennial. Stem stout, grooved, rough
- Basal leaf stems hollow. Leaves large alternating heart shaped, wavy margins, pubescent underside
- Flowers purple, sessile or short stalked Flower clumps spread out along the stem with very few branches in clump
- Flower bracts in a whorls each curving to form a velcro like hook (less than 2.5cm)

#### **Reporting Contacts**

#### This is a Noxious Species in Saskatchewan please report

**Report To**: Local Rural/Urban Municipalities, Weed Inspectors, Landowners **Email**: invasives.imap@gov.sk.ca

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#### **Distinguishing Characteristics**

- Yellow flowered umbel
- Pinnate leaf with clasping leaflets and leaflets lanceolate with lobed and serrated margins

#### **CAUTION**

is known to contain furocoumarins that can make the skin sensitive to light.

Development of burns and blisters (up to 48 hours after and sensitivity lasting for months), after handling plants and exposure to sunlight have been reported

#### **Reporting Contacts**

#### These are Noxious Species in Saskatchewan please report

Report To: Local Rural/Urban Municipalities, Weed Inspectors, Landowners Email: invasives.imap@gov.sk.ca

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#### SPURGE PLANT COMPARISON



Milky sap in plant parts Cypress Spurge (left) Leaves appear whorled Leafy Spurge (right) Leaves not in whorls

Photo Credits: Leslie J. Mehrhoff University of Connecticut (comparison)

## **Reporting Contacts**

These are Prohibited and Noxious Species in Saskatchewan please report Report To: Local Rural/Urban Municipalities, Weed Inspectors, Landowners Email: invasives.imap@gov.sk.ca

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Contact: Beryl Wait



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#### TOADFLAX PLANT COMPARISON



Stems erect hairless, No milky sap
Pale green
Yellow snap dragon like flowers
Common Toadflax left
Narrow lance shaped leaves
Dalmatian Toadflax right
ovate broad to heart shaped clasp stem
Hybrid in middle

Photo Credits: Elizabeth Goulet Cornell University Bugwood.org (comparison)

# **COMMON CATTAIL** Typha latifolia



#### **NARROW LEAVED CATTAIL** Typha angustifolia **INVASIVE**







Photo Credits: Mary Ellen (Mel) Harte Bugwood.org (no gap close-up); Beryl Wait Common Cattail on left, Narrow Leaved Cattail on right (center photo)

Photo Credits: Beryl Wait (close-up), Common Cattail on left, Narrow Leaved Cattail on right (center photo), gap between male and female flowers (right)

**EUROPEAN COMMON REEDGRASS** 

Phragmites australis ssp. australis

#### **NATIVE COMMON REEDGRASS** Phragmites australis ssp. americanus **NATIVE**











References: Invasive Phragmites – Best Management Practices Ontario Ministry of Natural Resources 2011

Photo Credits: Michigan State University Extension

#### **COW PARSNIP** Heracleum lanata **NATIVE**









**GIANT HOGWEED** Heracleum mantegazzianum **Prohibited** 







Photo Credits: Dr. James Altland - Oregon State University (stem and leaf); minnesotawildflowers Peter M. Dziuk (plant)

**NORTHERN WATERMILFOIL** Myriophyllum sibericum **NATIVE** 



Native species have fewer leaflets 14(5-10), and can form a turion, apical meristem rounded, leaflet length not equal (forming rounded apex to leaf), foliage does not collapse with removed from water, sparse branching near surface

Please note the identification between the various species of watermilfoil can be difficult there are other native watermilfoil species attention to differences in leaflet pairs, bract length and turion buds can be defining

Photo Credits: John Halpop - Montana State University Extension (leaf comparisons)

#### **EURASIAN WATERMILFOIL** Myriophyllum spicatum **Prohibited**

Guzik University of Silesia plant; Robert Videki Doronicum Kft stem Bugwood.org



In general has more 14(12-20) leaflet pairs, and reduced bracts on the inflorescence Leaflet length mostly equal (square shape) Foliage collapse (hangs limp) when removed from water

Dense branching near water surface Stem branching near water surface Apical meristem flat No winter bud (turion)

Photo Credits: John Halpop - Montana State University Extension (leaf comparisons)

# INVASIVE CATTAIL Distinguishing Characteristics

- Leaves taller and narrower than common cattail
- There is a gap between female and male flowers
- Is more aggressive and can outcompete common cattail especially in disturbed areas
- Longer narrower, firmer "cattail"
- Foliage dark blue-green in color
- Watch out for Hybrid Cattail (*Typha glauca*) exhibit characteristics of both species
- Still some debate whether species is native or not

# NATIVE CATTAIL Distinguishing Characteristics

- Leaves shorter and wider than narrow leaved cattail
- There is no gap between the female and male flowers
- Shorter wider, softer "cattail"
- Foliage yellow-green in color
- Watch out for Hybrid Cattail (Typha glauca) exhibit characteristics of both species

# INVASIVE PHRAGMITES Distinguishing Characteristics

- Grows in stands that are extremely dense, usually crowds out other species
- Taller can reach height of up to 5 meters, rigid
- Stems are tan or beige in color, rough and dull with bluegreen leaves and larger dense seed heads
- Leaf sheaths remain attached difficult to remove
- Lower glume 2.6 to 4.2 mm (less than 4mm)
- Flowering Intermediate (August to September)

References: Michigan State University Extension https://mnfi.anr.msu.edu/phragmites/phragmites-native-non-native.pdf

# NATIVE PHRAGMITES Distinguishing Characteristics

- Grows in stands that are usually not as dense as the invasive species, Well established stands are frequently mixed with other plant species
- Stems usually no taller than 2 meters, highly flexible
- Usually stems are reddish-brown, smooth and shiny yellow-green leaves and smaller sparser seed heads
- Lower glume 3.7 to 7 mm (greater than 4 mm)
- Flowering Early (July to August)

References: Distinguishing Native and Exotic Forms of Common Reed (*Phragmites australis*) in the United States Jil Swearingen, Kristin Saltonstall 2010

# **INVASIVE GIANT HOGWEED Distinguishing Characteristics**

- Very large up to 5 m tall. Stem single stout (5 cm diameter) and hollow with dark reddish-purple spots (Prominent purple blotches, Distinct coarse bristly hairs)
- Leaves large and deeply lobed with sharply toothed margins (prominently spiked edges), coming off main stem with little to no leafstalk
- Flowers white large umbels with rounded tops up to 1 m (30-90 cm) wide, 50-150 clusters
- CAUTION sap can cause very severe, painful blisters and burns (photodermatitus)

# NATIVE COWPARSNIP Distinguishing Characteristics

- Cow Parsnip, leaves less spikey and smaller, not as tall (only 1-2 m tall) flower heads smaller 20 cm (10-30 cm) wide, fewer clusters (15-30)
- Leaf lobes shaped like a hand with fingers, fuzzy undersides, leaf blade separated from main stem by a leaf stalk
- Stem green, few to no purple spots, soft and fuzzy hairs
- CAUTION sap combined with exposure to sunlight causing blisters and burns (photodermatitus) have been reported

#### WATERMILFOIL LEAF COMPARISON



Eurasian Watermilfoil (left)

Northern Watermilfoil (right)



Photo Credits: Gary Fewless Cofrin Center for Biodiversity Herbarium (single leafs)

#### WATERMILFOIL PLANT COMPARISON





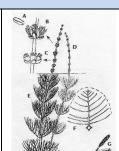


Photo Credits: Gary Fewless Cofrin Center for Biodiversity Herbarium (plants); Illustrations Hilary Parkinson (Eurasian left) Northern (right)

#### **BASIC DIRECTIONS**

#### **SPECIES INFORMATION CARDS**

Each Set of Pages is meant to be printed off on a double sided page.

Each Page can then be trimmed along the top, bottom and sides and then cut along the line between each species and folded in half to form a card about the size of a standard credit card

The upper left corner can then be hole punched and threaded on a key chain to form a handy photo reference