

The background of the slide features a close-up photograph of several bright yellow, daisy-like flowers with numerous thin petals. Some flowers are in full bloom, while others are still green buds. The background is a soft-focus green, suggesting a natural outdoor setting. The text is overlaid on this image in a large, white, bold font with a black outline.

# Why Should I Care About Invasive Species?

**How YOU can help prevent the spread  
of invasive species in the Yukon**



Yukon Invasive Species Council  
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Cover photo: Perennial sow-thistle. Irina Lapina

# Why Should I Care About Invasive Species?

## And how YOU can help prevent the spread of invasive species in the Yukon.

If you are involved with horticulture, farming, mining, forestry, oil & gas activity or road construction use this brochure to find out how you can avoid contributing to the problem of invasive species in the Yukon.

Use this brochure to learn how invasive species could affect hunting, fishing, boating, gardening, hiking, biking, ATV and horseback riding, ecotourism and other recreational activities in the Yukon.

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**To learn more, please read on!**

# A "GROWING" PROBLEM

Invasive species are quickly spreading across North America. Some already have entered the Yukon, more will come in if we don't act now.

- Some invasive plants can cause safety problems along Yukon roadsides.
- Invasive plants can displace important native vegetation and agricultural crops.
- Invasive plant and animal species can alter or displace wildlife habitat.
- Many invasive species lack natural predators.
- Some invasive species can bring diseases and insect pests along with them.
- Some invasive species can be toxic and harmful to domestic animals and wildlife.
- Land disturbance can increase the spread of invasive plants.
- Invasive plants can also alter fire intensity and frequency, alter soil chemistry, alter water quality and reduce ecosystem services.
- Invasive species can form thick underbrush in forests, on riverbars and meadows and spoil your enjoyment of outdoor activities.
- Control and management of invasive species is expensive - the longer we wait the more expensive it will get.
- Invasive animals and plants are a major threat to biodiversity on the planet.



Sweetclover plants along roads obstruct signage and general visibility.

Photo: L. Freese



Although foxtail barley is native to the Yukon, it is potentially invasive.

Photo: B. Bennett

**NOW is the time to act before it gets worse.  
YOU can be part of the solution.**

# WHAT IS AN INVASIVE SPECIES?

An invasive species is an organism (plant, animal, fungus, or bacterium) that is not native to an area and has negative effects on our economy, our environment, or our health. Not all species introduced (non-native) from other places are harmful. The term “invasive” is reserved for the most aggressive species that reproduce rapidly and cause major changes to the areas where they become established.



La Biche River southeast Yukon at the Kotaneelee gas pipeline right of way, July 2004. It is possible that sweetclover was brought in on heavy equipment. Once established, this species can expand along the length of a river, covering gravel bars.

Photo: B. Bennett

## Here are some of the consequences

Although there are relatively few invasive species in the Yukon, invasive plants are becoming a problem. A good example is sweetclover. This tall plant (reaching over 2 meters) has been spreading steadily along roads and right-of-ways and has crept into river drainages. It can cause safety problems along roads by limiting sight distance and attracting deer, elk and moose. Where sweetclover invades river systems, there is a loss of naturally bare gravel bars, displacing campers and impacting the birds, insects, animals and other plants that depend on the riparian habitat.



Kudzu, a plant from Japan, was introduced to the southern United States where it loves the climate and envelopes whole landscapes. Kudzu has recently been reported in Ontario.

Photo: USGA

Elsewhere in North America the consequences of invasive species are more severe. With more extensive farming, urban development, the use of seaports and airports and a milder climate, invasive species are more abundant and widespread. The cumulative annual cost in Canada of managing invasive plants was estimated

to be between \$13.3 and \$34.5 billion. Socio-economic impacts include lost incomes, expensive management, reduced land values, allergies and disease. Invasive species can be a threat to species at risk where they alter critical habitat (Canadian Food Inspection Agency, CFIA).

## YISC'S ROLE

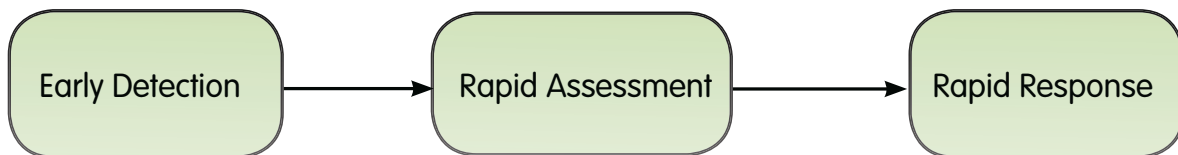
The Yukon Invasive Species Council (YISC) is a non-profit organization that works to minimize the negative ecological, social and economic impacts caused by the introduction, establishment and spread of invasive species. Members include representatives from government, the private sector and industry as well as concerned residents. Together we are working on prevention, early detection and rapid response.

YISC believes a proactive approach is needed to reduce or eliminate the spread of invasive species in the Yukon. When different land users work together, the spread of invasive species can be prevented or their effects minimized.

In the Yukon we can still prevent invasive species from becoming widespread. Acting now means control is manageable and affordable.

Membership is open to everyone willing to work collaboratively.

**Early detection and rapid response is the most efficient and cost effective approach to invasive species control.**



**Contact the Yukon Invasive Species Council for more information or if you would like to join YISC:  
[Info@yukoninvasives.com](mailto:Info@yukoninvasives.com)**

**YISC works closely with the Yukon government to identify and report invasive species.**

Report your sightings with GPS-coordinates or exact location to:  
Wildlife Viewing Biologist  
Phone: 867-667-8291  
Toll free (in Yukon): 1-800-661-0408, ext. 8291  
E-mail: [wildlife.viewing@gov.yk.ca](mailto:wildlife.viewing@gov.yk.ca)

# WHY SHOULD I CARE? I AM A GARDENER

Planting an invasive plant in your garden may lead to its spread into the wild and the displacement of native species. Many invasive plants started out as garden plants because they grow fast and cover up bare spots. However, not all introduced garden plants are invasive. Some only do well with cultivation and never spread.

Invasive plants often spread rapidly because they do not have any natural predators to keep them under control. Some invasive plants such as oxeye daisy or toadflax, once established in your garden are tenacious and nearly impossible to get rid of if you want to plant something else.



This oxeye daisy infestation in a backyard in Whitehorse started out as one single plant.

Photo: D. van de Wetering

## If I am a gardener, what can I do?

- Learn to recognize which plants are invasive and don't plant them. Choose alternatives.
- Notify your garden centre if you find them selling a plant that is known to be invasive.
- Do not buy "wildflower mixes" unless you know for sure that they do not contain invasive species.
- Do not transplant plants from other regions without knowing if they are invasive or not.
- Watch carefully for unwanted plants in soil, root balls etc.
- Dispose of invasive plants carefully (see page 17).



Toadflax is a popular garden plant but invasive in the Yukon!

Photo: B. Bennett

**If you don't know it,  
don't grow it**

For a list of the invasive plants go to page 30.

# I RUN A GARDEN CENTRE OR LANDSCAPING BUSINESS



Crested wheat grass and other invasive plants such as oxeye daisy have been introduced through the horticulture and landscaping trades as plants, seed mixes and erosion control mixes.

Photo: S. Gottermann

As a garden centre owner or landscaper you have the potential to inadvertently introduce invasive species on a large scale. There are few hardy introduced species that will grow in the Yukon. Those that do thrive may be invasive.

**Prevention is the most cost effective and efficient way to combat invasive plants.** Many invasive plants have accidentally been introduced as hitchhikers carried in soil, as seeds, or in other plant products. Some insect pests and fungal diseases have also been accidentally introduced in the soil or on plants sold in garden centers.

Customers will appreciate that you care about their gardens and the well being of the environment. Set an example as a local specialist.

## If I run a garden centre or landscaping business, what can I do?

- Learn which plants are invasive and can cause problems.
- Do not sell seed mix (e.g. wildflower mix, erosion control mix) unless you are absolutely sure that they do not contain seed of invasive plants.
- Sell soil that is certified "weed-free" and sterilized.
- Educate your customers about the problems with invasive plants.



Reed canary grass can be invasive and has been used in landscaping.

Photo: B. Bennett

# I AM A BACKCOUNTRY USER



ATV and other recreational users can unknowingly introduce invasive plants.

Photo: A. Altherr

Invasive plants can spoil your enjoyment of the backcountry because they can modify natural ecosystems. Seeds and fruits are readily transported into the backcountry attached to clothing, shoes, socks, bicycle chains and tire treads. They can spread quickly on trails and invade campsites. Domestic animals (especially horses) are the main sources of invasive plants into the backcountry – either through

feces or feed. ATVs, horses and bicycles that do not stay on established trails can cause disturbance of the ground cover thus exposing soils, which contributes to the spread of invasive plants.

Some invasive plants are toxic and could cause medical problems for wildlife, domestic animals and people. Many invasive plants are prickly, reducing your comfort and degrading your favourite camping sites.

## If I am a backcountry user, what can I do?

- Learn to recognize or identify invasive plants.
- Report any new sighting on trails and especially in the backcountry to local land managers as soon as possible.
- Avoid walking, camping, or riding in infested areas.
- Groom your animals (and yourself) after passing through infested areas and dispose of the seed/plant parts VERY carefully (see “How to dispose of invasive plants” on page 17).
- Clean equipment (ATVs, bicycles), horses hooves and clothing before going onto trails in the backcountry, especially after being in infested areas.
- Where possible, stay on established trails to minimize the amount of soil disturbance.
- Feed your horses certified ‘weed-free’ food for a minimum of 12 hours before leaving and do not take contaminated feed into the backcountry.
- On your overnight dog sledding trip take certified weed-free straw, or as a second choice, locally grown straw.



Seeds may be transported on animal fur or clothing such as socks.

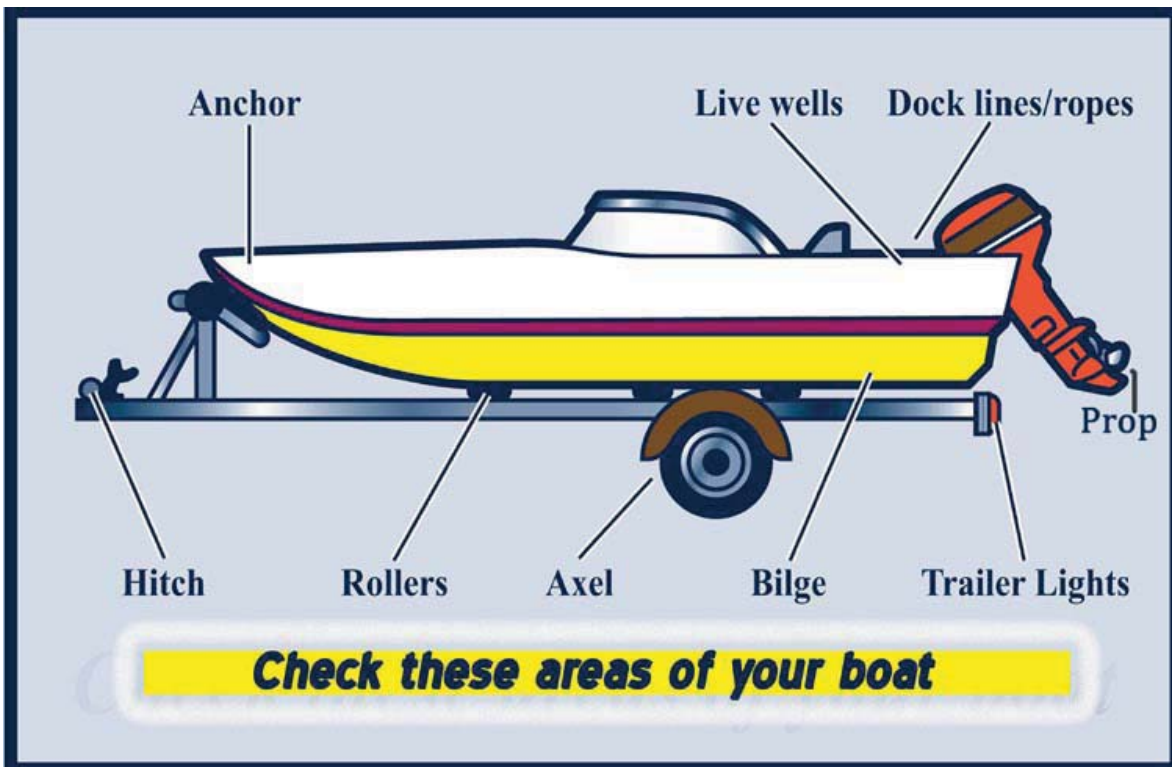
Photo: P. Long, K-L Services

# I AM A BOATER AND ANGLER

Today, most lakes and waterways in the Yukon are free of invasive aquatic species, but there are some introduced fish species in the territory. For example, a species of stickleback was accidentally introduced into two pothole lakes in the 1970s. Also, rainbow trout in McIntyre Creek and the Yukon River near Whitehorse resulted from lake stocking in the 1950s. The effects of the rainbow trout and sticklebacks on native species have not been studied.

Aquatic invasive species in other parts of the country continue to have huge environmental and economic impacts. For instance, aquatic plants can clog intakes on motors and pumps and form thick beds in shallow water. Invasive species have also been linked to fish kills by using up the oxygen in the water. Invaders can reduce the diversity of native invertebrates which could affect the birds, mammals and fish which depend on them.

Aquatic invasive species, be they plants like Eurasian water-milfoil, algae, or aquatic animals like zebra and quagga mussels, may be spread by watercraft or by fishing gear such as felt soled waders. Watercraft (and their trailers) with live bait wells and engine or drive systems that contain water usually pose a larger risk than smaller boats.



Adapted from: Sea Grant Pennsylvania

## **If I am a boater or angler, what can I do?**

- Learn to recognize invasive aquatic plants and fish.
- Report any sighting of invasive species to Environment Yukon's Freshwater Fisheries unit.
- Check all your equipment for plants, dirt and mud.
- Clean and dry your boat and all your gear including waders before entering another water body.
- Drain the water, bilge and bait containers before leaving the area.
- Use only cured (preserved) baits when fishing. In Yukon it is unlawful to use or possess any live fish for use as bait. In Kluane National Park and Reserve it is illegal to use live or dead fish, or any parts thereof, as bait.
- Never release plants or animals into water bodies unless they came from that water body immediately before the release. Moving fish from one body of water to another is illegal.
- Do not clean fish from one water body in another water system.
- Choose wading boots wisely: felt soled wading boots stay moist for a long time and have been implicated in the spread of aquatic invasive species in other jurisdictions. Alaska is among the jurisdictions banning their use. Alternative footwear is now available.
- Do not dump the contents of aquariums into local waters or the sewer system.

### **Report aquatic invaders to Environment Yukon**

E-mail: [environmentyukon@gov.yk.ca](mailto:environmentyukon@gov.yk.ca)

Phone: 867-667-5652

1-800-661-0408 (local 5652)



## I AM A FARMER

Invasive plants can create large economic losses by reducing crop quality, decreasing pasture palatability and increasing costs for weed control. Some species (e.g. spotted knapweed) can deplete soil health by killing essential soil microbes. Some plants that have become invasive were first grown as farm crops or as soil enhancers. Others have come in accidentally with seed mixes and soils. Invasive plants may bring undesirable insects and diseases along with them. Some introduced plants used in agriculture are not particularly aggressive (e.g. alsike clover) but may spread to disturbed roadsides where they can attract deer or elk. This can cause safety problems along roads, such as vehicle collisions with wildlife.



Creeping thistle is a persistent perennial weed that causes significant crop yield losses.

Photo: I. Lapina

Grasslands are particularly susceptible to invasive plants. Invasive plants can deplete nutrients and moisture in grasslands, make areas more susceptible to fire and erosion, reduce palatable plants in pasture, as well as change soil chemistry.

Some invasive plants are toxic to livestock and humans and may cause liver damage, fatal nerve disorders, or photosensitization of exposed skin. Others have thorns, prickles or awns (bristle-like appendages) that cause serious irritation of the skin, eyes, mouth and ears. Livestock and wildlife can transport seeds, fruits and plant parts of invasive plants (as well as insects) into new native grasslands.

### **If I am a farmer, what can I do?**

- Learn how to identify invasive plants.
- Dispose of introduced plants (weeds) carefully and clean seeds and plant parts from farm equipment.
- Avoid importing and using weedy hay for livestock feed; examine the fields your hay comes from and make sure there are few weeds.
- Avoid planting species for soil enhancement that are known to cause problems in the Yukon (e.g. sweetclover). Use less aggressive species.
- If invasive plants are established in your fields, mow them before they flower to avoid seed production.
- Please report any sighting of invasive species in pastures (especially new ones) to the Yukon government's Agriculture Branch as soon as possible.

### **Report your plant and insect invaders to the Agriculture Branch**

E-mail: [agriculture@gov.yk.ca](mailto:agriculture@gov.yk.ca)

Phone: 867-667-5838

1-800-661-0408 (local 5838)

# I AM A GUIDE/OUTFITTER OR ECOTOURISM OPERATOR



Photo: R. Schmitt

Your clients are interested in seeing wilderness, wildlife habitat and wildlife in its natural state. Invasive plants and animals can destroy or displace natural ecosystems. Invasive plants can out-compete native species, especially rare and endangered ones and may introduce harmful diseases to native wildlife. Clients, equipment (planes, motorboats, rafts, canoes, tools, etc.) and pack horses and their feed may

introduce invasive species into the Yukon backcountry. Weedy plants that have come in with the horse feed are often found around guide-outfitter camps in the Yukon. Although not all plants are invasive, it only takes one seed to start a problem.

## If I am a guide/outfitter or ecotourism operator, what can I do?

- Learn how to recognize invasive species and report any sighting in the wilderness as soon as possible, including ticks and disease.
- Make sure all equipment is cleaned and free of seed and plant material before going into the backcountry.
- Use weed-free pelleted feed or hay and start feeding this at least 12 hours before taking your horses into the backcountry.
- Educate your clients about the problems caused by invasive plants.
- If you find invasive species, dispose of them appropriately (see "How to dispose of invasive plants," page 17)

Report your sighting with GPS-coordinates or exact location to:

Yukon Invasive Species Council

Email: [info@yukoninvasives.com](mailto:info@yukoninvasives.com)

# I WORK IN MINERAL, OIL OR GAS EXPLORATION, HARVEST FORESTS OR BUILD ROADS

Disturbances to the natural landscape can create an environment in which invasive plants easily spread. The presence of invasive plants can increase the cost of closing down an industrial site or be costly to manage when road sides or right-of-ways are affected.

Invasive plants, seeds and other plant parts travel on equipment stored and used in weedy areas. When the equipment is used on a new site, the seeds fall on the ground and can easily get established. Disturbing or reworking a weedy area will result in spreading of the seeds and plants. During site reclamation invasive plants can be introduced by using a weedy or an inappropriate seed mix.

## If I am a resource developer, what can I do?

- Learn to recognize invasive species and report any occurrences to government land managers as soon as possible.
- Minimize disturbance of the natural vegetation and exposure of mineral soils.
- Avoid unnecessary compaction of soils.
- Avoid disturbing weed infested soil (road sides) or remove and contain the soil to avoid spreading the weed seeds.
- Clean equipment thoroughly before moving to a new site, particularly high seed and soil catchment areas like tracks, wheel wells, mulching blades etc.
- Use native species (or consider using natural succession) to reclaim your site.
- Test your seed mix for weed content and don't use the seed if there are invasive plants present in the mix.
- Talk to knowledgeable local experts.



Vegetation trapped in brush-cutting equipment. Seeds could easily be transported in this manner.

Photo: M. Brunner



Heavy equipment might compact and disturb soil.

Photo: G. Brunner



Foxtail barley likes to invade disturbed sites.

Photo: G. Brunner

# MYTHS ABOUT INVASIVE SPECIES

## **Myth #1: Invasive plants are not really a problem in the Yukon.**

Sweetclover is already causing safety issues along Yukon highways by blocking sightlines for both animals and drivers. Control of the problem is costly.

This same plant may be spreading along river gravel bars displacing the natural riparian ecosystem and eventually causing problems for wildlife and occasionally campers and boaters.

Examples of invasive plants that are spreading into Yukon farm lands include narrow-leaved hawkbeard and perennial sow-thistle.

## **Myth #2: All introduced (or non-native) species are invasive.**

Many introduced species are not invasive and will only grow under cultivation or in disturbed soils (e.g. pansies, wheat). However some are, or may become, a major concern (e.g. oxeye daisy, knapweed).

## **Myth # 3: I live in an urban area, and what I plant in my garden will not spread into the wilderness.**

Seeds from your garden can be dispersed over very long distances by natural means (birds, wind, animal fur) or by human means (your clothes, yard work, hiking boot treads, car, ATV and bicycle tires, domestic animals, boat propellers etc.).

Your garden could be the source of an outbreak. The best way to prevent the spread of invasive plants is to avoid planting them.

## **Myth # 4: Cutting, pulling and mowing will control all invasive plants.**

This is true only in some instances. Small infestations of some species may be removed by hand-pulling. Plants must be pulled, mowed or cut at the right time - during flowering is often best.

Many invasive plants are seed-bankers – they produce many seeds (e.g. 100,000 per plant per year), which drop to the ground and remain viable in the soil for over 20 years or more (e.g. knapweed). Hand pulling of large infestations of these plants leaves large patches of disturbed soil which will then be re-colonized by the banked seeds. A one-time treatment is not enough. In those situations combining cutting with herbicides can be an effective treatment.

### **Myth # 5: Biological control is the best solution.**

Because we may not like the idea of using herbicides and pesticides to control invasive species, biological control is often touted as being a better option. However, biological control should only be used as long as the control organism (often some type of insect) only attacks the target invasive species and not any native species. Please contact the Yukon Agriculture Branch at (867) 667-5838 prior to using biological control.

### **Myth # 6: Because it is cold in the Yukon, invasive plants and animals will not survive.**

Certain invasive species are already doing well in the Yukon. Oxeye daisies are a prime example. If the climate gets warmer, more species that previously could not survive here may thrive.

### **Myth # 7: Not a lot of plants grow well in the Yukon, so we should grow what ever will grow.**

This is a dangerous philosophy that could ultimately lead to large economic and environmental losses if invasive plants are introduced. There are a variety of plants that grow well and overwinter at Yukon latitudes. Learn how to take advantage of species that can beautify your garden without the possibility of spreading into the natural landscape.

#### **How to dispose of invasive plants**

- Place plants and plant parts in a clear plastic bag and leave to roast in the sun to kill the seed, because many plants continue to produce seed even after pulling or dead-heading (e.g. thistles, knapweed and daisies).
- Bring the plastic bags to the landfill, where they should be buried as soon as possible.
- Burning in your garden is not the best solution: Some plant seeds will only be killed by the high temperatures made by an incinerator (e.g. spotted knapweed).
- Do not "recycle" garden debris into a public park or natural area.
- Avoid composting invasive plants, as this may not kill them.



# INVASIVE PLANTS FOUND IN THE YUKON

Perennial sow-thistle (*Sonchus arvensis*)  
Creeping thistle (*Cirsium arvense*)  
Oxeye daisy (*Leucanthemum vulgare*)  
Common tansy (*Tanacetum vulgare*)  
Spotted knapweed (*Centaurea stoebe*)  
Narrowleaf hawkbeard (*Crepis tectorum*)  
Scentless chamomile  
(*Tripleurospermum perforata*)  
Leafy spurge (*Euphorbia esula*)  
Foxtail barley (*Hordeum jubatum*)  
Altai wild rye (*Leymus angustus*)  
Crested wheat grass (*Agropyron cristatum*)  
Smooth brome (*Bromus inermis*)  
Quackgrass (*Elymus repens*)  
Reed canary grass (*Phalaris arundinacea*)  
Bird vetch (*Vicia cracca*)  
Lucerne (*Medicago falcata*)  
Sweetclover (*Melilotus officinale*)  
Great butter-and eggs (*Linaria vulgaris*)  
Dalmatian toadflax (*Linaria dalmatica*)  
Didymo algae (*Didymosphenia geminata*)

## Foxtail Barley: a special case

Foxtail barley (*Hordeum jubatum*) is considered a native species in the Yukon. It is, however, opportunistic and spreads rapidly across the Yukon landscape, both along roads and in agricultural situations. The Yukon public has voiced concern about this plant due to its socio-economic impacts: it is harmful to livestock, horses and pets; it reduces crop yields and it forms 'monocultures' in once-diverse native ecosystems thus affecting ecotourism.



Pretty but invasive: Oxeye daisy infestation along the Alaska Highway near Rancheria.

Photo: T. Omtzigt



Bird vetch is now known from most Yukon communities and is particularly problematic in Dawson City

Photo: Yukon Government

# INVASIVE PLANTS TO WATCH FOR

## **Creeping thistle** *Cirsium arvense*

Previously named Canada thistle, this species is native to Europe, Asia and Africa. It is an aggressive invader of roadsides and natural grasslands as well as crop and pasture lands. It readily reproduces from fragments of roots and stems, so pulling and cutting can encourage it to spread. It is capable of producing up to 40,000 light fluffy seeds per plant which are wind dispersed over very long distances. Seeds may remain viable in the soil for up to 20 years and germinate when the soil is disturbed.



Photo: I. Lapina

Thistle seeds can mature after pulling or cutting, so plants should be placed in clear plastic bags and left to roast in the sun before disposal. While not a big problem yet in the Yukon, thistles are a major problem in neighbouring provinces and states. The major source in Yukon is believed to be accidental introduction from weeds in potted plants.

## **Spotted knapweed** *Centaurea stoebe* **and other knapweeds**

Spotted knapweed is a biennial or short-lived perennial with attractive pink-purplish flowers and gray hairs all over the leaves and stem. They resemble thistles without the prickles. This is one of the most problematic invasive plants in North America. It loves dry, well-drained, disturbed soils, readily invades grasslands and farm fields and has taken over 40,000 hectares of rangeland in British Columbia. This species can dominate a site because its roots produces chemicals that inhibit the growth of other plants. These chemicals also destroy natural soil microbes that are essential for the health of the soil ecosystem.



Photo M. Rasy, Univ. of Alaska, Bugwood

Large plants can produce up to 20,000 seeds per plant, and one third of these remain viable in the soil after eight years. The seeds are spread primarily by humans on vehicles, machinery and contaminated animal feed. A small patch of knapweed was removed from Haines Junction and plants have been seen near the Yukon/BC border south of Carcross and near the Morley River southeast of Teslin.

## **Oxeye daisy** *Leucanthemum vulgare*

Oxeye daisy has pretty white flowers and divided leaves that have an unpleasant odour (like creosote) when crushed.

Avoided by most animals and toxic to some herbivorous insects, this plant is very invasive and will rapidly take over poor, dry soils on disturbed roadsides, in gardens, in farm pastures and hayfields causing serious forage losses. It is abundant in gardens in Whitehorse and Dawson City and sometimes sold at local garden centers (sometimes mislabeled as Shasta daisy).



Photo: A.Altherr

This plant is also often sold in wildflower seed mixes. It has escaped from gravel pits and plans are underway to treat several well-established populations along the Alaska Highway near Rancheria and Johnson's Crossing. People are encouraged to report sightings. Gardeners are advised not to buy or share this plant and to remove any oxeye daisies from their gardens. A good alternative is cosmos.

## **Common tansy** *Tanacetum vulgare*



Photo: L. Freese

Common tansy is a robust perennial that grows in clusters and forms flat-topped heads of bright yellow, button-like flowers. Common tansy has been found in several Yukon communities and is often used as a hardy garden plant. The plant emits a strong pungent smell when crushed. It is mildly toxic to humans and livestock. It invades disturbed soils along roadsides, in gardens and farm fields, along riverbanks and beaches. One large plant can produce up to 50,000 seeds per year. The plant also spreads by root fragments. Once it gets established, the common tansy spreads

very rapidly, as happened in northwest B.C.

in recent years. It is already causing serious problems in B.C. and Alberta and is rapidly advancing up Highway 37. In Haines, Alaska it is invading beach meadows.



Photo: B. Bennett

## White or yellow sweetclover

*Melilotus officinalis*

A member of the pea family, white or yellow sweetclover is a well known invasive plant in the Yukon. It has become a serious problem along roadsides where it attracts animals and hides them from view. The cost of mowing and treating roadsides infested with this plant is mounting yearly. Sweetclover may also invade natural riverside gravel bars throughout Alaska and Yukon and displace native vegetation and wildlife habitats, as well as cause problems for river recreation.

Once established, the plants are tricky to control as one plant is capable of producing over 300,000 seeds per year and these may remain viable in the soil for

many years (80% viable after 30 years). Although these plants can be used as green fertilizer because they fix nitrogen, Yukon farmers are encouraged to use something less invasive.

## Perennial sow-thistle *Sonchus arvensis*

Perennial sow-thistle and other related sow-thistles are tall plants with flowers that look like large (up to 1 meter tall) dandelions. They are highly invasive in disturbed habitats, especially along roadsides and can rapidly move into farm fields where they reduce crop and forage quality. Producing many fluffy, wind-blown seeds (3,000-14,000 per plant) this plant can spread very rapidly. Because it has very deep and horizontal root system, it is difficult to pull and readily comes back from root fragments. It is established in the Whitehorse area north to Carmacks, in Johnson's Crossing, in the Destruction Bay area and at the Kotaneelee gas plant. At present, sow-thistle is localized enough in the Yukon that it can be controlled, however herbicide treatment will be required to eliminate established stands.



Photo: I. Lapina

## **Leafy spurge** *Euphorbia esula*

This rather attractive yellowish-green plant with very small flowers is occasionally sold as a garden ornamental. It is one of the most invasive plants in North America. The only known patch in the Yukon is being controlled. Leafy spurge is highly competitive and produces chemicals that inhibit the growth of other plants. Once it is established it rapidly forms monocultures. It readily infests native pasturelands, reducing wildlife forage and habitat, as well as biological diversity. Over 1.24 million hectares of land are currently affected in Canada and the U.S. It is extremely difficult to eradicate because of its extensive underground rhizomatous root system. When it is pulled or dug, bits get left behind and quickly re-sprout. The plant is also nasty to handle because it exudes milky latex that can cause skin irritation and blindness if it comes in direct contact with eyes.



Photo: B. Bennett

## **Toadflax or butter-and-eggs** *Linaria vulgaris*, *L. dalmatica*

Common toadflax (*L. vulgaris*) is widespread in Yukon gardens and is spreading onto our roadsides. The attractive bright yellow and white flowers look like snapdragons. The numerous leaves are narrow and somewhat waxy or succulent. This plant is aggressive and tenacious because of its extensive underground stems which are very tiny and break easily when pulled.

A close relative with larger, showier flowers, the Dalmatian toadflax (*L. dalmatica*) has become a much bigger problem in B.C. and other parts of North America because it readily spreads into grassy rangelands. It is mildly toxic and lowers the forage value of infested areas. It is hard to get rid of because of its fragile root system. Only one patch of Dalmatian toadflax has been reported in the Yukon so far (near Rancheria). Dalmatian toadflax is taller, with waxy, heart-shaped leaves clasping the stem.



Photo: B. Bennett

## **Meadow hawkweed** *Hieracium caespitosum*

Yellow and orange hawkweeds have become a huge problem in B.C. and Alberta, and are now a problem in Alaska as well. Meadow hawkweed has recently been found along the Alaska Highway west of Watson Lake. The biggest problem with meadow hawkweed is that it is very similar in appearance to some native hawkweeds. Because people mistake hawkweeds for dandelions on long stalks, they tend to be overlooked until they have become widespread and difficult to control.



Photo: B. Steward

## **Orange hawkweed**

*Hieracium aurantiacum*

Orange hawkweed has very pretty, deep burnt-orange flowers and is one of the worst nuisance species in agricultural and natural areas. Favouring disturbed, poor, dry soils, they move in rapidly to roadsides, waste areas, farm fields and garden lawns. Once established they can take over in 2-3 years by producing chemicals to inhibit other plants. In B.C. orange hawkweed is reducing the forage value of pasture, crop and rangelands.



Photo: L. Wilson

Cutting or digging is ineffective because plants rapidly reproduce from root fragments. Mowing does not work because the low basal (located near the base of a plant stem) leaves are so close to the ground. Herbicides will work; there are no bio-control agents available yet.

For plant identification use [www.invasiveplantcouncilbc.ca](http://www.invasiveplantcouncilbc.ca) or [akweeds.uaa.alaska.edu](http://akweeds.uaa.alaska.edu)

**Report your sighting with GPS-coordinates or exact location to:**

Yukon Invasive Species Council

Email: [info@yukoninvasives.com](mailto:info@yukoninvasives.com)

## OTHER PROBLEM PLANT SPECIES TO WATCH FOR

**Eurasian water-milfoil** (*Myriophyllum spicatum*) – aquatic

**St. John's wort** (*Hypericum perforatum*) – often sold as ground cover

**Cheat grass** (*Bromus tectorum*) – used for roadside greening and erosion control

**May tree** (*Prunus padus*) – very popular garden ornamental

**Bladder campion** (*Silene vulgaris*) - an escaped garden plant in the Dawson region

**Ornamental jewelweed** (*Impatiens glandulifera*) - known from BC and Alaska

**Garlic mustard** (*Alliaria petiolata*) - known from BC and Alaska

**Purple loosestrife** (*Lythrum salicaria*) - a common wetland invader

**Marsh plume thistle** (*Carduus acanthoides*)

# INTRODUCED ANIMALS IN THE YUKON

## Terrestrial Animals

While invasive plants are of serious concern in the Yukon, we have no invasive animals yet. However, we now have introduced mammals that call the Yukon home, including house mice, feral horses and feral cats. There are also some introduced insect species here, like the striped alder sawfly (*Hemichroa crocea*).

The garden earthworm, which is spreading rapidly elsewhere, does not show a progressive movement in the Yukon.

Research is underway to determine the level of invasiveness and effects of introduced species on natural ecosystem processes.

The public is encouraged to report any non-native animal species.

## Birds

- Rock Dove
- House Sparrow
- European Starling

Although European Starlings likely do displace a few individual cavity nesters, they are fairly rare and the population has been stable over the last 20 years.



A small breeding population of House Sparrows became established in downtown Whitehorse.

Photo: C. Eckert

The Eurasian Collared Dove has been reported recently and might become established. All of the introduced species occur in low numbers and therefore are not expected to have a remarkable impact on native species.

## Aquatic Animals

Threespine stickleback were accidentally introduced into two pothole lakes (i.e., into closed systems) and are not expected to spread further. Rainbow trout were introduced into open systems including McIntyre Creek and the Yukon River near Whitehorse. To date, rainbow trout have not spread beyond this region, but no monitoring of their distribution is taking place at this time.

**Report sightings:**  
Environment Yukon  
Wildlife Viewing Biologist  
Phone: 867-667-8291

## HOW YOU CAN HELP

- Learn how to identify invasive plants that are causing, or may cause problems in Yukon information can be found at: [www.invasiveplantcouncilbc.ca](http://www.invasiveplantcouncilbc.ca) or [www.akweeds.uaa.alaska.edu](http://www.akweeds.uaa.alaska.edu)
- Be clean – make sure your clothing, boots, vehicles, bicycles, ATVs, boats and animals are all free of plant seeds, plant parts, mud, soil, or contaminated water before going into areas that do not have invasive plants.
- Clean all machinery, equipment, clothes and brush animals **before** leaving an infested area.
- Avoid hiking, camping, boating and recreating in infested areas.
- Report new infested sites immediately so that they can be cleaned up quickly - remember - **Early Detection, Rapid Response**.
- Drive, walk, ride, hike only on established trails and roads and minimize creating new soil disturbances.
- Don't buy or plant invasive plants or seed mixes - don't plant a problem.
- Remove and dispose of invasive plants very carefully. Don't dump garden waste in the bush.
- Volunteer in local invasive plant control programs (e.g. community weed pulls).

Pass it on – tell your friends, family and co-workers about the problem.

Check out our website for more information:

[www.yukoninvasives.com](http://www.yukoninvasives.com)



Weed pull events are to fight the spread of invasive plants.

Photo: B. Bennett

# ADDITIONAL INFORMATION

## Yukon

- Government of Yukon  
[www.environmentyukon.gov.yk.ca/wildlifebiodiversity/invasivespecies.php](http://www.environmentyukon.gov.yk.ca/wildlifebiodiversity/invasivespecies.php)

## British Columbia

- Invasive Plant Council of B.C. (IPCBC), Invasive Plant Strategy for British Columbia [www.invasiveplantcouncilbc.ca/about-us/the-strategy.ca](http://www.invasiveplantcouncilbc.ca/about-us/the-strategy.ca)
- Northwest Invasive Plant Council of B.C (NWIPC) [www.nwipc.org/index.php](http://www.nwipc.org/index.php)
- Northeast Invasive Plant Council of B.C. (NEIPC)
- B.C. Ministry of Forests Alien Plant Program (IAPP) [www.for.gov.bc.ca/hra/plants/application.htm](http://www.for.gov.bc.ca/hra/plants/application.htm)
- Field Guide to noxious and other selected weeds of B.C., 4th ed. 2002.  
[www.agf.gov.bc.ca/cropprot/weedguid/weedguid.htm](http://www.agf.gov.bc.ca/cropprot/weedguid/weedguid.htm)

## Alberta

- Alberta Invasive Plant Council (IAPC) [www.invasiveplants.ab.ca](http://www.invasiveplants.ab.ca)
- Alberta Government [www.invasivespeciesinfo.gov/plants/images.shtml](http://www.invasivespeciesinfo.gov/plants/images.shtml)
- For Alberta's "Weed Wise, Gardening in Alberta" see [www.invasiveplants.ab.ca/Downloads/27x9%20WWbrochure.pdf](http://www.invasiveplants.ab.ca/Downloads/27x9%20WWbrochure.pdf)

## Canada

- Canadian Invasive Species list [www.invasivespecies.gc.ca/english/view.asp?x=1](http://www.invasivespecies.gc.ca/english/view.asp?x=1)
- Invasive Plants of Canada (IPCAN) [www.geocompendium.grid.unep.ch/reference\\_scheme/final\\_version/GEO/Geo-2-080.htm](http://www.geocompendium.grid.unep.ch/reference_scheme/final_version/GEO/Geo-2-080.htm)
- Invasive Alien Species Partnership Program (IASPP) and Strategy for Canada [www.cbin.ec.gc.ca](http://www.cbin.ec.gc.ca); or [www.ec.gc.ca/eee-ias](http://www.ec.gc.ca/eee-ias)
- Nature Serve [www.natureserve.org](http://www.natureserve.org)

## Alaska

- AKEPIC – Alaska Plant Information Clearinghouse. 2005. Invasive Plants of Alaska. Alaska Association of Conservation Districts, Anchorage, Alaska.
- Alaska Committee for Noxious and Invasive Plants Management (CNIPM) [www.cnipm.org](http://www.cnipm.org)
- Alaska Invasive Species Working Group (AISWG) [www.uaf.edu/ces/aiswg](http://www.uaf.edu/ces/aiswg) or [www.alaskainvasives.org](http://www.alaskainvasives.org)
- Alaska Natural Heritage Program, [www.akweeds.uaa.alaska.edu/](http://www.akweeds.uaa.alaska.edu/)
- Invasive Species in Alaska: Alaska Dept. Fish and Game [www.adfg.state.ak.us/special/invasive/invasive.php](http://www.adfg.state.ak.us/special/invasive/invasive.php)
- UAF Co-operative Extension Service, [www.alaska.edu/uaf/ces/](http://www.alaska.edu/uaf/ces/)
- USDA Forest Service [www.fs.fed.us/](http://www.fs.fed.us/)

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AKEPIC – Alaska Plants Information Clearinghouse. 2005. Invasive Plants of Alaska. Produced in cooperation between U.S. Dept. Int., U.S. Dept. Agric., Alaska Soil and Water Cons. Dist., U. Alaska Fairbanks Coop. Ext. Program and Alaska National Heritage Program. Alaska Association of Conservation Districts Publishing, Anchorage, Alaska.

CAFI – Canadian Food Inspection Agency. Canadian Invasive Plant Framework. 2007. [www.inspection.gc.ca/english/plaveg/invenv/consult/iaspole.shtml](http://www.inspection.gc.ca/english/plaveg/invenv/consult/iaspole.shtml)

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Harrington, T.B. and S.H. Reichard (Tech. Eds.) 2007. Meeting the Challenge: Invasive Plants in Pacific Northwest Ecosystems. USDA For. Serv. Gen. Tech. Rep. PNW-GTR-694

Invasive Plant Council of B.C. 2007. Minimizing the Impacts of Invasive Plants in Horticulture, Report #4 [www.invasiveplantcouncilbc.ca](http://www.invasiveplantcouncilbc.ca)

Invasive Plant Council of B.C., 2007. Summary of Invasive Alien Plant Best Management Practices Used by Non-Provincial Government Agencies across B.C. unpubl. doc. [www.invasiveplantcouncilbc.ca](http://www.invasiveplantcouncilbc.ca)

International Union for Conservation of Nature (IUCN), workgroup on invasive species, ISSG [www.issg.org/](http://www.issg.org/)

Midwest Invasive Plant Network. Why Should I care about Invasive Plants?  
[www.mipn.org](http://www.mipn.org)

Midwest Natural Resources Group. 2008. Recommended Best Management Practices for Non-native Invasive Species. [www.invasivespeciesinfo.gov/toolkit/preventionbmp.shtml](http://www.invasivespeciesinfo.gov/toolkit/preventionbmp.shtml)

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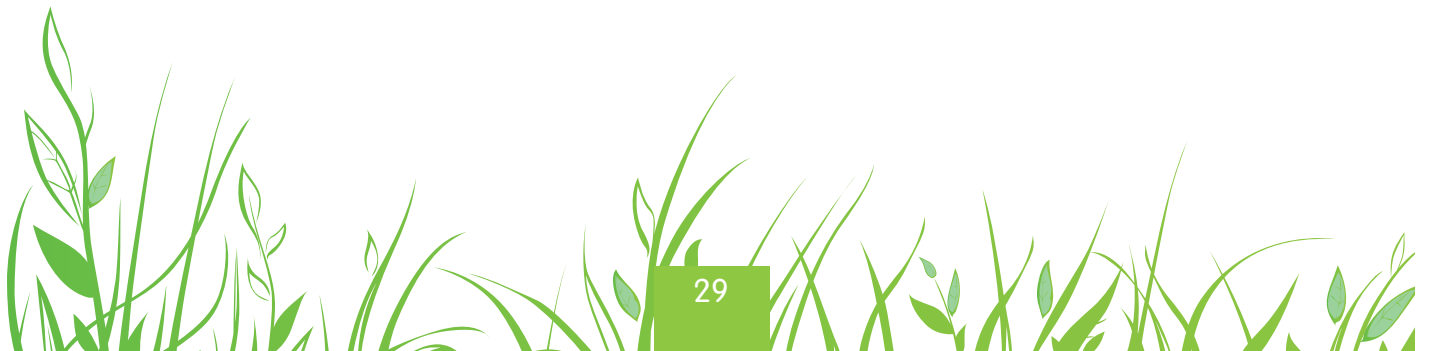
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## ACKNOWLEDGEMENTS

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## DO NOT PLANT A PROBLEM

These plants are often supplied by community greenhouses or arrive as seeds and straw. These species are known to escape from cultivation and become invasive.

Butter & eggs, toadflax (*Linaria vulgaris*)  
Caragana (*Caragana arborescens*)  
Common mullein (*Verbascum thapsus*)  
Common tansy (*Tanacetum vulgare*)  
Creeping bellflower (*Campanula rapunculoides*)  
Creeping buttercup (*Ranunculus repens*)  
Dalmatian toadflax (*Linaria dalmatica*)  
Diffuse knapweed (*Centaurea diffusa*)  
Field scabious (*Knautia arvensis*)  
Honeysuckles (*Lonicera tatarica*)  
Golden virgin's-bower (*Clematis tangutica*)  
Hound's tongue (*Cynoglossum vulgare*)  
Japanese knotweed (*Polygonum cuspidatum*)  
Leafy spurge (*Euphorbia esula*)  
May tree (*Prunus padus*)  
Orange hawkweed (*Hieracium aurantiacum*)  
Ornamental jewelweed (*Impatiens glandulifera*)  
Oxeye daisy (*Leucanthemum vulgare*)  
Purple loosestrife (*Lythrum salicaria*)  
Reed canary grass (*Phalaris arundinacea*)  
Spotted knapweed (*Centaurea stoebe*)  
St. John's wort (*Hypericum perforatum*)  
Sweet rocket, dame's rocket (*Hesperis matronalis*)  
Bird vetch (*Vicia cracca*)  
Meadow hawkweed (*Hieracium caespitosum*)

**Yukon Invasive Species Council (YISC)**

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**For free distribution only**

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Canada 

**Yukon**  
Government