Invasive Species to look out for in Yukon

Help reduce the spread of invasive species in Yukon by spotting, reporting and removing these high risk species

Yukon Invasive Species Council

The Yukon Invasive Species Council (YISC) is a registered non-profit society formed to prevent the introduction and manage the spread of invasive species in Yukon.
We're helping protect Yukon's environment and economy from the negative impacts of invasive species by:

- Educating and advising the public and professionals about invasive species and their risk to ecosystems and economies.
- Encouraging, promoting, and supporting research on invasive species.
- Improving territory-wide guidance on invasive species management.
- Collaborating with other jurisdictions on invasive species issues.

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YISC
Yukon Invasive Species Council

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Invasive Species

Invasive species are organisms that are not native to an area and have negative effects on our economy, our environment, or our health.

This booklet highlights some of the worst invasive species in Yukon and those we want to prevent from establishing.

Help reduce the spread of invasive species by spotting, reporting and removing these high risk species.

Invasive species can spread rapidly to new areas and will often out-compete native species as there are no predators or diseases to keep them under control. Invasive species can disrupt ecosystem processes and ultimately impact natural and agricultural resources. Invasive species can also threaten biodiversity.

Not all non-native plants become invasive.

The cost of controlling invasive species can be considerable. Yukoners are currently in the enviable position of preventing invasive species infestations before they become so widespread that control is costly and eradication impossible. Everyone can help reduce the spread of invasive species. We're counting on you!

Photo: A. Skrutkowski

What can I do?

Learn to identify invasive species. It is important to recognize these species and to control small infestations before they become wide-spread.

Play Clean Go: People and equipment can spread invasive species from human disturbance outwards. Clean your gear before entering and leaving natural areas!

Clean Drain Dry: Help protect our waters when you move between water bodies. **www.env.gov.yk.ca**

Plant wise: Some horticultural plants will jump the garden fence. Select carefully which plants to grow. For a list of recommended alternatives check **www.yukoninvasives.com**

Report: If you come across a plant or creature you don't recognize: Take a photo, get an accurate location and e-mail us at **info@yukoninvasives.com**

or post your observation on iNaturalist

Definitions

alternate leaves: arranged alternatively along the stem.

annual: completing its life history in one year.

biennial: requiring two years to complete its life history.

basal leaves: leaves in a rosette at the base of the plant.

perennial: lasting many years (example: roses).

native: originating, growing or produced in a certain place or region; indigenous.

noxious: plant species that have been designated by law.

one-sided spike: flowers arranged on one side of the stem.

Leaf clasping the stem

persistent: refers to a plant part that exists and persists for a long period of time during the life of the plant.

rhizome: a robust, horizontal underground stem that can give rise to a new plant. Also called rootstalk.

stolon: also called runner. An elongated, above ground creeping stem that can root and give rise to a new plant (e.g. strawberry).

taproot: the main, descending root of a plant that has a single, dominant main stem.

tendril: a slender twining coil used to grasp objects for support.

weed: considered undesirable, unattractive, or troublesome, especially when growing where it is not wanted, as in a garden.

Foxtail Barley (*Hordeum jubatum*)

is considered a native species in most parts of Yukon. It is, however, opportunistic and spreads rapidly across the landscape. Foxtail Barley is harmful to livestock, horses and pets; it reduces crop yields and forms monocultures.


A. Altherr

Tufted Bird Vetch

Vicia cracca

Description: Multiple weak stems and compound leaves with tendrils (that allow the plant to attach to other plants or objects) characterize this perennial plant. The distinct purplish/blue flowers are arranged in a one-sided spike and turn into brown or black seed pods once matured.

Vetch seeds disperse by the ballistic action of drying seed pods. Tufted Bird Vetch is spreading effectively via seeds and by underground horizontal rootstocks.

Habitat and distribution: It is found in most Yukon communities.

Similar species: Purple Vetch (*V. americana*) is the only native Yukon vetch and is found as far north as the Dempster Highway. Purple Vetch has fewer flowers (3-9) per bunch than Tufted Bird Vetch (10-30).

Impact: This plant can overgrow herbaceous vegetation and climb over shrubs like alder and willow. It is known to invade undisturbed sites including spruce forests and south-facing slopes. Due to the fixation of nitrogen it may change the soil composition.

Control: Hand-pulling can be effective for small infestations, but the area has to be monitored and retreated for several years. Mowing and herbicide control can also be used effectively, especially for larger areas.


A. Altherr

Creeping Thistle
Cirsium arvense

Description: Creeping Thistle is native to Europe, Asia and Africa. This perennial plant can form new shoots from deep and extensive horizontal roots. Male and female flowers occur on separate plants.

Habitat and distribution: Known from the Haines Highway south of Haines Junction, the Takhini Hotsprings, Tagish Lake and the La Biche River. It has occasionally been found in potted garden plants in Whitehorse and Teslin.

Similar species: Leafy Thistle (*Cirsium foliosum*) is a rare native species found throughout southern Yukon. Leafy Thistle is a biennial with a large flower head, and a stout carrot-like taproot. It grows in wet areas, usually near rivers.

Impact: It is one of the most invasive species in North America and is a noxious weed in most jurisdictions throughout Canada and the USA, including Alaska. Creeping Thistle competes directly with native plants for nutrients and water; it also produces chemicals that help displace native vegetation. It is an aggressive agricultural weed that has the potential to reduce crop yields by 100%.

Control: Like all perennial plants, Creeping Thistle requires depletion of nutrient reserves in the root system, prevention of seed production, and prevention of dispersal. If roots are cut or broken off new plants may sprout.

Mountain Bluet
B.Pagcaz

Spotted Knapweed
B.Legler

Spotted Knapweed

Centaurea stoebe

Description: Biennial or short-lived perennial. They can grow up to 120 cm. They resemble thistles but don't have spiny leaves and stems. They have many basal leaves. This species reproduces entirely by seed.

Habitat and distribution: Spotted Knapweed has been reported from the Alaska Highway near Bear Creek and Hays Creek, the Carcross Desert, and just south of Yukon border on Tagish Lake.

Similar species: Mountain Bluet (*Centaurea montana*), which is invasive, is often purchased as an ornamental. It has been found in Atlin. Corn Flower (*Centaurea cyanus*) is an annual garden plant that is sometimes found in commercial "wildflower" mixes. It is occasionally found on roadsides and is currently not known to persist.

Impact: Spotted Knapweed is a restricted noxious weed in BC. Knapweeds like well-drained soils and may invade undisturbed grasslands and produce chemicals that hinder growth and germination of other plants, reducing biodiversity and changing community structure. Also, grazing animals dislike the bitter taste of knapweed.

Control: The seeds of knapweed continue to mature after pulling. Put plants into clear garbage bags and then leave them in the sun to kill off the plants and roast the seeds. Bring the bags to the landfill for disposal. Burning in a brush fire will not destroy the seeds of Spotted Knapweed.


B. Legler
L. Freese

Orange Hawkweed

Pilosella aurantiaca

Description: Orange Hawkweed is a perennial herb with fibrous roots. It grows up 20-90 cm tall. The leaves form a basal rosette, occasionally with one or two small leaves on the stem. Leaves and stems are covered in soft bristly hairs that stand erect. The flowers are bright orange-red, with heads 1 cm in diameter.

Habitat and distribution: This plant has not been reported in Yukon but is known from across Canada, from Labrador to British Columbia and is widespread in the USA. Currently known from a roadside location along the Haines Highway.

Similar species: When not flowering, the leaves and stems might be mistaken for other species of hawkweeds such as Tall Hawkweed (*P. piloselloides*).

Impact: Orange Hawkweed spreads by stolons, rhizomes, and seed. Forming dense mats in forb meadows and wetlands to the exclusion of native species, it lowers species diversity and reduces the forage value of grasslands for grazing animals. It can invade undisturbed sites and is therefore considered one of the worst nuisance species in agricultural and natural areas.

Control: Scattered plants can be dug up. For serious infestations (large patches), chemicals are recommended.

A. Altherr

Common Tansy
Tanacetum vulgare

Description: Common Tansy is an attractive robust perennial plant that grows up to 150 cm tall and forms flat-topped heads of bright yellow, button-like flowers. The plant emits a strong pungent smell when crushed. It is mildly toxic. It grows well in full sun and usually in disturbed sites such as roadsides, riverbanks and beaches. It is considered a noxious weed in some areas of BC and Alberta.

Habitat and distribution: Presently known from Whitehorse, Marsh Lake, Kathleen Lake and the Alaska, Klondike, and Robert Campbell highways. It has been sold as a hardy garden plant.

Similar species: Lake Huron Tansy (*Tanacetum bipinnatum*) is a native species found on the shores of the Yukon and Porcupine rivers. It grows 60 cm tall and has 2-4 heads.

Impact: Common Tansy can grow along ditches and streams and restrict water flow. The plant is somewhat poisonous to humans and livestock.

Control: Small infestations can be controlled by pulling; larger plants may have to be dug up. The seeds continue to mature after pulling. Put plants into clear garbage bags, leave them in the sun to kill off the plants and roast the seeds. Herbicide control may be required in large populations. Protective clothing should be worn when dealing with this invader.

A. Altherr

Common Toadflax

Linaria vulgaris

Description: Also known as Greater Butter-and-Eggs**,** this very attractive plant resembles a yellow perennial snap-dragon. It is widely found in gardens and invading roadsides in most Yukon communities. It is usually less than 50 cm tall, persistent and mildly toxic. These plants are restricted noxious weeds in Alaska.

Habitat and distribution: Greater Butter-and-Eggs has been found in most communities, primarily from intentional garden plantings. It is widespread in the Whitehorse and Dawson areas, and along the South Canol Road in the Quiet Lake area, Watson Lake and Haines Junction. It mainly spreads through yard waste.

Similar species: Dalmatian Toadflax (*Linaria dalmatica*) is much more invasive. It is currently not known to grow in Yukon.

Impact: Toadflax is a persistent and aggressive invader and may form dense colonies and suppress native grasses and other perennials. It contains a poisonous glucoside that is moderately poisonous to livestock. It is known to alter local pollination ecology and reduce yields in croplands.

Control: Perennial plants require depletion of nutrient reserves in the root system, prevention of seed production and prevention of dispersal. Common Toadflax reproduces both by seed and roots in Yukon.

B. Bennett

Narrowleaf Hawksbeard

Crepis tectorum

Description: With dandelion-like yellow flowers, this annual plant grows a single, sometimes branched stem from a small taproot that is easily pulled. The normally 20 to 60 cm high plant has alternate leaves that get smaller toward the top. Basal leaves are stalked and toothed; stem leaves are stalkless and mostly linear.

Habitat and distribution: Narrowleaf Hawksbeard occurs throughout Yukon along all the major highways. This species has been found over 1 km from roadways and along rivers. This plant does not compete well in undisturbed sites, but readily colonizes frequently disturbed sites such as roadsides and along rivers.

Similar species: Spiny Sow Thistle (*Sonchus asper*) is known only from Whitehorse, Haines Junction and the La Biche River. This is also an annual plant with a short taproot.

Impact: Each plant produces more than 49,000 seeds; open areas and disturbed sites are readily colonized. This is a particularly problematic species for agriculture, reducing crop values and yields.

Control: Annual plants require prevention of seed production and prevention of dispersal. Narrowleaf Hawksbeard is easily pulled by hand, however these pulled plants will continue to mature, so they should be placed in clear plastic bags to roast the seeds. Mechanical and chemical methods can also be used to control this plant. It is a prolific seed producer that once established is hard to remove.

A. Altherr

Perennial Sow-thistle

Sonchus arvensis

Description: This perennial plant can grow to 2 meters tall. It has extensive rhizomes (up to 2 m long). Flowers are 2-5 cm wide. The base of the leaves wraps around the stem.

Habitat and distribution: It is particularly a problem for agricultural producers. In natural areas it has been known to invade beaches and lake shores. Primarily in the Whitehorse area as far north as Carmacks but has been reported from Destruction Bay, Johnson's Crossing and the Kotaneelee gas plant. In recent years it has begun to spread rapidly along highway corridors.

Similar species: Umbellate Hawkweed (*Hieracium umbellatum*) does not have clasping leaves and has smaller flowering heads. Narrowleaf Hawksbeard (*Crepis tectorum*) an annual plant with short taproot occurs throughout southern Yukon.

Impact: Perennial Sow-thistle is considered a noxious weed in BC, Alberta and Alaska. Perennial Sow-thistle may modify or retard the successional establishment of native species. It can dramatically reduce water resources and possibly decrease native plant diversity.

Control: The extensive root system makes it difficult to remove the plant by hand. It is best done when the plants are at an early stage of development. If roots are cut or broken off new plants may sprout. Herbicide may be the best option.

M. Schuffert

Tall Hawkweed
Pilosella piloselloides

Description: This is a perennial plant with erect stems up to 1 m tall. Stems exude a white milky sap when broken. Leaves are concentrated in a basal rosette (occasionally with one or two smaller leaves on the stems). The yellow dandelion-like flower heads are clustered, each head is small, approximately 1 cm in width.

Habitat and distribution: Tall Hawkweed is becoming wide spread in the vicinity of Watson Lake and is known from the Morley and Rancheria areas. It is also found on the Klondike Highway in British Columbia.

Similar species: Flowers can look similar to Narrowleaf Hawksbeard (*Crepis tectorum*), Umbellate Hawkweed (*Hieracium umbellatum*), and Perennial Sow-thistle (*Sonchus arvensis*).

Impact: A very adaptable species, Tall Hawkweed can grow in a wide range of habitats. It spreads using rhizomes and seed. Though usually found on disturbed sites, it has been documented in undisturbed natural ecosystems. Tall Hawkweed is considered a noxious weed in the United States. It is found through much of British Columbia and also reported in Alberta and Alaska.

Control: Scattered plants can be dug up. For serious infestations (large patches), chemicals are recommended. Mowing will not prevent vegetative spread of plants.

A. Altherr

Oxeye Daisy
B. Legler

Scentless Chamomile
B. Legler

Oxeye Daisy

Leucanthemum vulgare

Description: Oxeye Daisy is a shallow-rooted perennial daisy. It has large white flowers with yellow centers. Although it is listed as an invasive weed in 8 states and 4 provinces, it is still used as a garden plant, including here in Yukon, and is commonly included in "wild flower mixes". It is particularly problematic in BC and SE Alaska.

Habitat and distribution: Oxeye Daisy has been found in the communities of Dawson, Watson Lake, Whitehorse, Johnson's Crossing, Mount Lorne, and Haines Junction. It has been found along the Alaska Highway, the Haines and Atlin roads and at Morley and Rancheria rivers.

Similar species: Shasta Daisy (*Leucanthemum maximum*) is a cousin to the Oxeye Daisy that grows 15-30 cm taller and has larger flowers. The two daisy species are suspected to hybridize. Scentless Chamomile (*Tripleurospermum inodorum*) is an invasive, large daisy-like plant which can be separated by its thin dill-like leaves and fibrous roots.

Impact: Oxeye Daisy can form dense colonies and replace up to 50% of grass species in a pasture. Grazing animals avoid it. Dense infestations increase the potential for soil erosion.

Control: Put plants into clear garbage bags and then leave them in the sun to kill off the roots and roast the seeds.

A. Altherr

White Sweetclover
Melilotus albus

Description: Sweetclover is an annual or biennial plant that can grow 2 m tall from a taproot but is usually less than 1 m. Flowers are small, they grow at the end of branches.

Habitat and distribution: It rapidly colonizes gravelly well-drained soils such as roadsides, waste areas and river banks and bars. White Sweetclover is widespread throughout southern Yukon. It is known along much of the Alaska, North Klondike, Robert Campbell, and Top-of-the-World highways and 30 km up the Dempster Highway.

Similar species: Yellow Sweetclover (*Melilotus officinalis*), the yellow coloured relative, is widespread throughout southern Yukon, though not as abundant as White Sweetclover.

Impact: A single plant can produce 300,000 seeds which remain viable in the soil or under water for many years. It can form large monospecific stands, overgrow and shade native species. It will degrade natural grasslands.

Control: Plants should be pulled or cut before or during flowering. First-year plants may re-grow and can be cut again. Pulling or cutting will have to be repeated over a number of years to deplete the seed bank. If mature seed is not present, plants can be left where they are pulled. The plants quickly die once removed from the soil.

Quagga Mussel (*Dreissena bugensis*)
Amy Benson, U.S. Geological Survey, Bugwood.org;

Zebra Mussel (*Dreissena polymorpha*)
Randy Westbrooks, U.S. Geological Survey, Bugwood.org;

Zebra Mussel
Quagga Mussel

Description: Zebra and Quagga mussels are fingernail-sized freshwater molluscs that attach to objects and other organisms. Their shells generally have alternating light and dark bands. Zebra Mussels (less than 0.5 cm) have a "D" shaped shell which allows them to sit flat on their sides. Quagga Mussels are rounder in shape (up to 4 cm). The reproductive cycles of these invasive mussels allow for successful and rapid infestation. One female can produce up to one million eggs. Eggs develop into a free-swimming planktonic larvae, which can float in the water column for three to four weeks before settling on a hard surface where it develops a shell. Both mussels can survive out of water for up to five days.

Habitat and distribution: Not present in Yukon. The risk of zebra mussels spreading to Yukon is real: 2 out of 5 boats entering Yukon come from jurisdictions already with mussel infestations. Studies indicate that mussels can survive in Yukon waters.

Similar species: The native Yukon Floater does not attach to surfaces.

Impact: Zebra and Quagga mussels are capable of straining one litre of water per day to consume the microscopic plants and animals, called plankton, found in it. They selectively filter for certain types of green and brown algae, while they reject blue-green algae. This results in higher concentrations of blue-green algae in the algal community, which can become toxic to aquatic life.

Spotter's Network

YISC
Yukon Invasive Species Council

Early detection and rapid response are our best defense against the spread of invasive species.

How to Report:

Spotter's Network Yukon

1. Your contact information
Name, email address, phone number

2. A sample/picture
Close-up & habitat photos OR pressed dried plant samples

3. Infestation description
What species did you see? How many? How big is the area affected? Where there seeds present?

4. Location description
GPS coordinates (Lat/Long or UTMs and map datum); Description of the location

A sample or very clear picture is needed in order to verify the sighting!

Report sightings to: info@yukoninvasives.com

OR

Take a photo and report an invasive species by using iNaturalist Canada www.inaturalist.ca or upload it using the iNaturalist app.

iNaturalist