

BIOLOGICAL CONTROL

For Invasive Plants in the Okanagan-Similkameen

Invasive plants can cause serious economic and environmental problems. They aggressively outcompete desirable vegetation which reduces range and crop productivity, recreational enjoyment and habitat value. Established infestations are difficult to control and often persist for many years, costing landowners time and money.

What is Biological Control?

Biological control (aka biocontrol) reunites invasive plants with their natural enemies, predominantly insects and plant diseases. The bioagents are host-specific and **suppress** invasive plant infestations to a more environmentally and economically acceptable level. **Biocontrol will not eradicate infestations.**

Is My Property Suitable for Biocontrol?

It may be suitable if...

- Infestation size is over one acre
- The invasive plant outbreak will not be controlled using other methods, including pulling, mowing or chemical application
- There is no ongoing soil disturbance
- Biocontrol agents are available
- You are prepared for long term monitoring with support

How Does Biocontrol Reduce the Impacts of Invasive Plants?

- Weakens plants by destroying vital tissue
- Reduces plants' competitive ability
- Decreases seed production

Successful biocontrol may be achieved with one bioagent. But generally, more than one insect is required, impacting different parts of the plant throughout its lifecycle.

The Benefits

- Once established, insects will reproduce and move around on their own without the need for human intervention

The Downsides

- It can take a long time to notice a reduction in invasive plants
- It may not be effective

Bioagents may already be present on your property. Look for stunted growth and damage to the leaves, stems, seed heads or roots of invasive plants.



Common Species with Bioagents in the Okanagan-Similkameen



Dalmatian Toadflax



Mecinus janthiniformis



Black weevil. Adults chew distinct, small holes into the leaves, stems and growing tips. Females chew larger cavities into stems to deposit eggs. Larvae burrow and feed inside the plant stems.



Diffuse and Spotted Knapweed



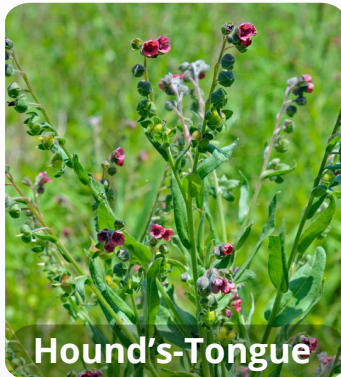
Larinus minutus

Small grey-brown weevil. Adults feed on leaves, rosettes and bolting stems. Larvae feed exclusively on seeds leaving a hollowed-out seedhead.



Cyphocleonus achates

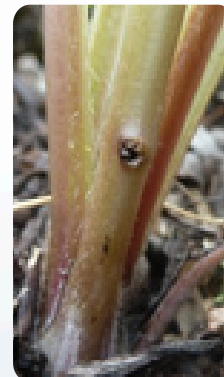
Large grey-brown weevil. Adults feed on leaves and stems. Larvae bore into the taproots and destroy vascular tissue. Heavy feeding causes gall-like swellings on the root.



Hound's-Tongue



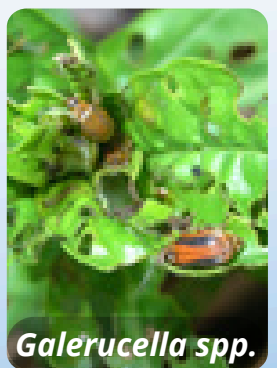
Mogulones crucifer



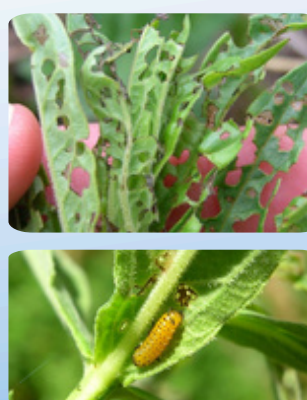
Blackish-brown weevil with white cross on back. Adults chew distinct oval holes in the leaves. Larvae bore into the roots and cause heavy feeding damage.



Purple Loosestrife



Galerucella spp.



Orange-brown or brown beetle with distinct dark lateral lines. Adults chew large chunks out of leaves. Yellow larvae feed on flower buds and foliage, leaving transparent "window panes".

Biocontrol is not an end point.

It is the starting point for shifting to an ecologically balanced, resilient plant community that relies on diverse, ongoing management.

To request bioagents or a property assessment contact: info@oasiss.ca

For more information visit: www.oiso.ca/biocontrol



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Okanagan and Similkameen
Invasive Species Society

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