# **Dalmatian Toadflax Biocontrol Factsheet**



Dalmatian toadflax plant

Dalmatian toadflax leaves



Dalmatian toadflax flowers

#### HOW THEY WORK:

Biological control agents (typically insects) weaken the target plant's seed production and overall plant integrity by feeding on the seed heads, and other parts of the plant, such as their root systems. Biocontrol will not typically get rid of your weeds all together. It is a long-term control strategy and results are usually seen over numerous years.

## **Biocontrol Agents**

### Mecinus janthiniformis

**TYPE OF AGENT:** Stem-mining beetle (weevil) **COLLECTABILITY: Mass ORIGIN:** Macedonia

#### **INVASIVE PLANTS ATTACKED:**

Dalmatian toadflax (Linaria dalmatica)

#### **BIOCONTROL AGENT LIFECYCLE:**

Jan	Feb	Mar	Apr	May	Jun	Ji	ul	Aı	ıg	Sep	,	Oct	Nov	Dec
Overwintering				Adult	All Stages		Larva		Larva /Pupa		Pupa		Overwinter ing	

#### Larva:

They are white to yellowish in colour with pale brown head capsules and "C " shaped. Larvae mine stems which significantly contributes to the plants' inability to maintain vigour and reproduce by affecting water and nutrient flow.

#### Adult weevils:

Measure 3.2 - 6.0 mm in length and black to somewhat blue coloured weevils appearing slightly metallic when young. The weevils have long snouts and the males have strongly toothed front femurs. Adult feeding prevents flowering and kills the shoot tips. Adult weevils are found along the plant stem and leaves most notably in May and June.



M. Janthiniformis larvae



M. Janthiniformis adult



M. Janthiniformis adult feeding damage

#### More Information:

Classical biocontrol is a long term management tool used in integrated pest management (IPM). IPM involves selecting from a range of manual, mechanical, chemical, cultural and biological control methods to match the management requirements of a specific site. The goal is to maximize effective control and to minimize negative environmental, economic and social impacts. Biocontrol is an important tool in the IPM toolkit. It involves controlling invasive plants, by introducing natural enemies.

The biocontrol's listed are tertiary insects regulated by the BC Ministry of Forests. There are currently 5 Dalmatian toadflax biocontrol agents that have been released in BC. The information in this factsheet was created using the Province of British Columbia Government's Biocontrol resources found at <u>www.gov.bc.ca/invasiveplants.</u>





For more information about the TNRD's biocontrol program and how to request insects contact us!

Phone: 1-877-377-8673 Email: invasiveplants@tnrd.ca Website: www.tnrd.ca/invasiveplants