

Saltcedar (*Tamarix ramosissima*, *Tamarix chinensis*, *Tamarix parviflora*)
Designation: Regional Category 2

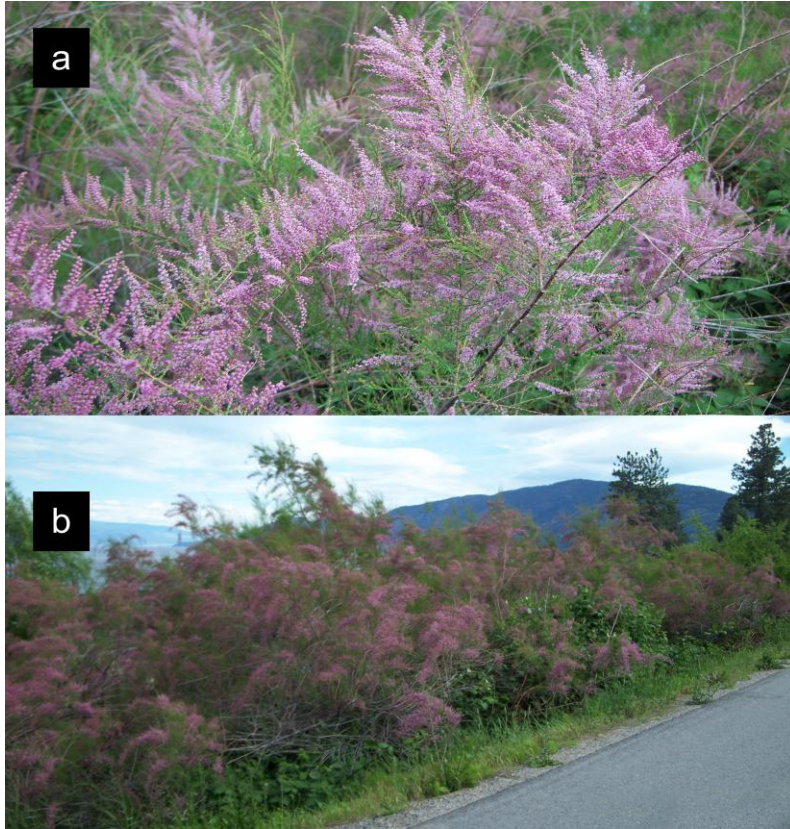


Figure 1: a) Flowers, b) Roadside saltcedar. Photo credits: R. Mueller.

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Overview:

Saltcedars are deciduous, shrubs or small trees and are native to Northern Europe and temperate and tropical Asia. It was introduced to the western United States as an ornamental in the 1800's. Saltcedar is now established or known in many desert regions of the western US, including Washington, Idaho and Montana. *Tamarix ramosissima* is sold as an ornamental under the name "Pink Cascade" tamarisk in some BC nurseries. A related species, *Tamarix parviflora*, is listed as rarely found in BC. Both are aggressive ornamentals that should be prevented from escaping cultivation.¹

Habitat: Saltcedar grows in many soil types but prefers fine-textured soils. It tolerates a wide range of soils, but is intolerant of shade. It mainly inhabits the riparian areas of waterbodies.

Reproduction: Reproduce by seed but can also sprout vegetatively from buried stem or branch pieces.

Dispersal: Produces massive quantities of tiny seeds which have a short viability but can germinate very quickly in a broad range of conditions.

Regional Distribution: Recorded sites in Nelson, Trail and Montrose. Likely on private land throughout the Central Kootenay. Inventory is required to determine scope.

Provincial Distribution: Found throughout the southern and central Interior. Inventory is required to determine scope.

Identification^{2,3,4}

Flowers: Small, pale pink to white.

Stem: A few to several stems per plant, looks like a shrub.

Leaves: Are bright green, diamond shaped, scale-like, alternate, look like cedar foliage. Leafs turn colour in the fall.

Seeds: Produces 600,000 seeds per plant per year.

¹ <http://www.agf.gov.bc.ca/cropprot/saltcedar.htm>

² http://www.sccws.com/sccws2010/Watershed_Literature/Salt%20Cedar%20Fact%20Sheet.pdf

³ <http://www.nps.gov/grca/naturescience/exotic-tamarisk.htm>

⁴ <http://www.agf.gov.bc.ca/cropprot/saltcedar.htm>

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Roots: Creates large taproots that uptake vast amounts of water, up to 200 gallons per day.

Similar Native Species

Cedar (*Cedrus spp.*)

Impacts

Ecological: Saltcedar invades streambanks, lakeshores and wetlands. It crowds out native species, easily form large patches and crowd out all native plants, leading to drastically lower native woody and herbaceous plant abundance and composition. It creates deposits of salt, damaging the quality of the soil it inhabits. Areas where Saltcedar is found become saline and unsuitable for most native plant species.

The large taproot that this plant possesses allows it to reduce water tables and drains wetlands with its high water usage. This plant can interfere with the water cycle and increase the frequency, intensity and effect of fires and floods.⁵

Economic: It is estimated that the presence of saltcedar in western United States will cost between \$7 and \$16 billion US dollars in lost ecosystem function over the next 55 years!⁶

Integrated Pest Management (IPM)^{7,8}

IPM is a decision making process that begins with the identification and inventory of invasive plant populations, assessment of the risks that they pose, and development of well-informed management options from monitoring to site treatment.

Prevention and Early Detection:

- Select a non-invasive alternative such as, common juniper (*Juniperus communis*) instead of salt cedar for your restoration project or water garden. Additional options can be found by downloading the Invasive Species Council of Manitoba 2012 *Grow Me Instead* guide from: <http://invasivespeciesmanitoba.com/site/index.php?page=saltcedar>

⁵ <http://www.fs.fed.us/database/feis/plants/tree/tamspp/all.html>

⁶ http://www.sccws.com/sccws2010/Watershed_Literature/Salt%20Cedar%20Fact%20Sheet.pdf

⁷ http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96483_01

⁸ Invasive Species Council of BC (ISCBC), 2012, www.bcinvasives.ca

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- Avoid accidentally introducing non-native plants to surrounding water bodies by installing water gardens a safe distance away. Ensure water gardens are not allowed to overflow to wetlands, streams or rivers.
- Properly dispose of garden and yard waste by double bagging and disposing of it at your local landfill.
- Prevent plants from spreading from existing populations by washing vehicles, boots and animals that have been in infested areas.
- Report plants infestations found in remote locations to 1-888-WEEDSBC or 250.352.1160.

Mechanical Control: Mowing, chaining, ripping and bulldozing have been found to be unsuccessful due to extreme re-growth. The only known effective treatment is chemical control.

Chemical Control: Visit the Integrated Pest Management Program website at www.env.gov.bc.ca/epd/ipmp/ prior to completing any chemical treatments.

Biological Control: No biological control agents are currently available.

Restoration Substitutes

Rocky Mountain Juniper (*Juniperus scopulorum*)
 Smoke Bush (*Cotinus coggygria*)
 Pacific Ninebark (*Physocarpus capitatus*)
 Birchleaf Spirea (*Spiraea betulifolia subsp. lucida*)

Legislation and Regulations

There is a growing network of partnerships and collaborations among all levels of government, industry, regional invasive plant committees, and concerned individuals to address unwanted aquatic invasive plants.⁹ In addition, there is numerous legislation and regulations that pertain to aquatic invasive plants.

Federal: The *Fisheries Act*¹⁰ specifies that it is an offence to harmfully alter, disrupt, or destroy fish habitat, including streamside vegetation. It is also an offence to move or introduce aquatic organisms (including plants) to new habitats. The purpose of the *Fisheries Act* is to conserve and protect Canada's fisheries resources, including fish habitat. It applies to all Canadian fisheries waters, including ditches,

⁹ Invasive Species Council of BC (ISCBC), 2012

¹⁰ <http://laws.justice.gc.ca/en/F-14/>

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channelized streams, creeks, rivers, marshes, lakes, estuaries, coastal waters and marine offshore areas. It also applies to seasonally wetted fish habitat such as shorelines, stream banks, floodplains and intermittent tributaries and privately owned land. It is an offence to damage fish habitat or put harmful substances such as pesticides into water frequented by fish, including includes pesticide drift. Fisheries and Oceans Canada (DFO) and Environment Canada administer this legislation.

The *Migratory Birds Convention Act*¹¹ prohibits the deposit of any substance harmful to migratory birds to any area frequented by migratory birds. This includes pesticides deposited on water and land. The Canadian Wildlife Service of Environment Canada administers this legislation.

Provincial: In BC, invasive plant management on all lands (Crown and non-Crown) is regulated by the BC *Weed Control Act*¹², and the management of specific Crown lands is regulated by the *Forest and Range Practices Act*¹³, the *Community Charter*¹⁴, and the *Integrated Pest Management Act*¹⁵.

In addition, in BC the ownership of water is vested in the Crown as stated in the *Water Act*¹⁶, the primary provincial statute regulating water resources.

Section 9 of the *Water Act* requires that a person may only make “changes in and about a stream” under an Approval; in accordance with Part 7 of the Water Regulation, including Notification where required; or under a Water Licence or Order. Notifications are typically used for works that do not involve any diversion of water, may be completed within a short period of time and will have minimal impact on the environment or third parties. Notifications are the responsibility of the Environmental Stewardship Division of the Ministry of Forests, Lands and Natural Resource Operations. Contact Front Counter BC for more information at www.frontcounterbc.gov.bc.ca/contact/.

Useful Links

- Alberta Invasive Plant Council: www.invasiveplants.ab.ca
- Central Kootenay Invasive Plant Committee: www.ckipc.ca
- E-Flora BC, Electronic Atlas of the Plants of BC: www.eflora.bc.ca
- Grand Canyon National Park, www.nps.gov/grca/naturescience/exotic-tamarisk.htm

¹¹ <http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>

¹² <http://www.agf.gov.bc.ca/cropprot/noxious.htm>

¹³ <http://www.for.gov.bc.ca/code/legislation.htm>

¹⁴ http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/03026_00

¹⁵ http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_03058_01

¹⁶ http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96483_01

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- Invasive Species Council of BC: www.bcinvases.ca
- Invasive Species Council of Manitoba:
www.invasivespeciesmanitoba.com/site/index.php?page=saltcedar
- Ministry of Forests and Range Invasive Alien Plant Program:
www.for.gov.bc.ca/hra/plants/index.htm
- Ministry of Forests and Range Invasive Alien Plant Program:
www.env.gov.bc.ca/epd/ipmp/index.htm
- Ministry of Agriculture: www.agf.gov.bc.ca/cropprot/weedguid/weedguid.htm
- Society for Ecological Restoration BC Chapter: www.serbc.ca
- Tipi Mountain Native Plants: www.tipimountain.com
- Weeds BC: www.weedsbc.ca

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