



Thesium Arvense

Thesium arvense Horv.



flora.nhm-wien.ac.at

Overview:

Thesium arvense is a perennial herb of the Sandalwood Family and native to central China and central Europe.¹ The Sandalwood Family is primarily composed of root hemiparasites (obtains some nourishment from host but also photosynthesizes) and many are well known agronomic weeds, but little is known about its host range and selectivity in wild populations.³ Plants develop a tough taproot with some branching. The roots develop numerous haustoria: highly specialized root structures which penetrate the tissues of the host with short root hairs. It has been observed to grow quickly in the spring and tolerate flooding.⁴ It is difficult to pick out in grass communities when not in bloom.

Thesium's distribution in North America is very limited; recorded in only 2 locations in the U.S. and in Fish Creek Provincial Park on the southern fringe of Calgary. A research project in collaboration with St. Mary's University College is ongoing. The major focus of this project is to determine the "biology, phenology, reproductive potential, seed viability, and plants parasitized by *Thesium*" as well

as some control methods.⁴

Habitat:

It is commonly found in grassland habitats.³ Flora of China states its natural range as shady grasslands occurring 1600-2300 m in elevation.¹

Identification:

Stems: Are erect or ascending, furrowed and finely striate, growing 20-25 cm tall.¹ Stems are highly branched.²

Leaves: Are lance shaped, usually slightly sickle-shaped, 30-38 mm long and about 4 mm wide. Leaves are green with a paler green towards the edges, margins are entire, the apex acute/pointed, the bases have a margin extending to form a short petiole.¹

Flowers: Are borne on 5-6 cm raceme-like inflorescences, often branched, with one flower per axil. Bracts are oblong or narrowly boat-shaped, 7-10 x 1-2 mm, and inserted at the top of the pedicels (flower stem). Bracts are 1-veined with thickened margins and in-

curved when mature. Flowers have 5 petals, are white or greenish-white, 4-5 mm in diameter, and bell-shaped. Petals are triangular, about 2 x 1.2 mm, and the apex incurved.¹ The fruit is an ellipsoid nut, 2-3 mm long, with longitudinal ribs.²

Prevention:

Prevention is always the most effective method of invasive plant control. Knowing how to recognize *Thesium* is key to detecting new infestations, preventing their spread, and introduction to new areas. Seeds would be easily spread in soil and attached to foot or vehicular traffic.

Control:

Grazing: Unknown. Invasive plants should never be considered as forage.

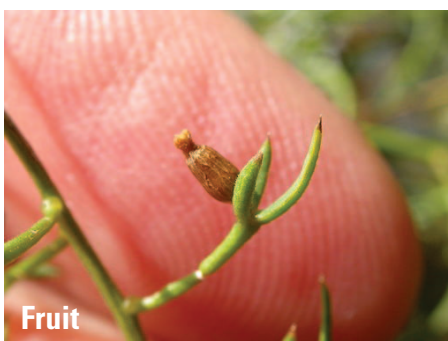
Mechanical: There is little information regarding mechanical control of *Thesium*, however it's possible that small, new patches may be hand dug, removing as much of the root as possible and monitoring for regrowth.

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Thesium Arvense (Continued)

Chemical: Currently no selective herbicides are registered for use on *Thesium arvense*. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: None researched to date.



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Old Dominion University Plant Site. <http://ww2.odu.edu>



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- 2 *Thesium - Thesium arvense*. Montana Field Guides. Montana Natural Heritage Program. Retrieved March 7, 2014 from http://FieldGuide.mt.gov/detail_PDSAN08020.aspx
- 3 Suetsugu, K., Kawakita, A., and Makoto, K. Host Range and Selectivity of the Hemiparasitic Plant *Thesium chinense* (Santalaceae). *Annual of Botany*, July 2008, vol. 102 issue 1:49-55 > <http://aob.oxfordjournals.org/content/102/1/49>. Accessed March 7th, 2014.
- 4 Fish Creek Provincial Park Research - 2013. St. Mary's University College. <http://stmu.ca/Research/FishCreek.html>. Accessed March 8, 2014.