

A List of Native Thistles
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First some context and credits

Why Plant Native Thistles?

Planting thistles provides food for many beneficial insects and birds. They are beautiful and can take niches away from invasive composites such as Russian Thistle.

According to Marian Munroe et al 1 <https://ojs.library.dal.ca/NSM/issue/view/508>
there are no thistles native to Nova Scotia.

Listed here are thistles native to the North East North America, the Prairie Provinces and Great Plains, and lastly West of the Rocky mountains. When I grow prairie or Carolinian species here I find they behave well, are well suited and vigorous and yet do not become overly competitive or invasive. The birds and insects seem to know what to do with plants from anywhere east of the Rocky mountains.

In general I disagree with the naming of species after colonial Europeans. Ornithology is moving toward naming plants after the intrinsic characteristics of the specimen, and botany should do the same.

All information here is abridged from the Xerxes society for the conservation of invertebrates. The longer document can be found here:

<https://xerxes.org/publications/guidelines/native-thistles-conservation-practitioners-guide>

Xerxes might have seeds.

Though there is no reliable way to 100% flawlessly distinguish invasive and native thistles, often the native thistles are a little less spiny.

The boundaries of thistle species are unclear, and hybridization is possible, creating hybridization complexes more than species. They arrived in the Americas only around 2 million years ago and are still evolving rapidly.

True thistles (the genus *Cirsium*) They only have disc florettes and no ray florettes. Most are biennial. None are perennial.

Notes for observing and identifying a native thistle: Are the leaves simple? How is the leaf margin: entire, toothed, double-toothed, forked or lobed?

Eastern North America Newfoundland to Prairies, Carolinas

Cirsium Altissimum Tall thistle
ENA ESA



Cirsium discolor
Mb -Ontario, ENA



Cirsium drummondii Dwarf thistle
ENA



C. flodmanii prairie thistle
Great Lakes, SW States, Prairie to Quebec



Cirsium helenoides Melancholy thistle
Eurasia, Iceland, Greenland, Alps
Cold, arctic and alpine environments.



Cirsium pitcheri Pitcher's thistle
ENA Ontario sand dunes



Cirsium pumilum

C p x Hillii Hill's Thistle

Ontario sand, savannah, open woodland, gravel, alkaline barrens. Not suitable for acid soils.

C p x pumilum Pasture Thistle



C scariosum x scariosum Meadow thistle, elk thistle, cardon ecailleux

Alberta, BC, to Eastern California. Introduced to Quebec



Cirsium vinaceum Virginia thistle
SE north to NJ
Probably hardy to USDA zone 7 and warmer and
not suitable for Nova Scotia



South East Carolinas to Florida

C carolinum Carolina thistle SE
C horridulum
C engelmannii blackland thistle SE
C lecontei Black thistle SE
C muticum Swamp thistle SE
C repandum Sand hill thistle SE
C texanum SE

South West: Four Corners states, Yukon to Mexico

C arizonicum Arizona thistle SW
C a x bipinnatum, four corners thistle
C a x chellyense Navajo thistle
C a x rothrockii Rothrock's thistle
C a x tenuisectum desert mountain thistle
C barnebyi SW
C brevifolium palouse thistle SW
C canescens prairie/ platte thistle PSW prairie
C clavatum Fish lake thistle SW
C c x americanum Rocky mountain fringed thistle
C c x osterhoutii SW
C eatonii SW
C e x clokey
C e x eriocephalum
C e x murdockii
C e x peckii
C e x viperinum
C inamoenum Greene's thistle SW
C grahamii SW
C joannae Utah

C longistylum Long style thistle
 Montana
C mohavense Mojave thistle
C ochrocentrum x *ochrocentrum* Yellow spine thistle SW Midwest
 C o x *martini* Martin's thistle
C ownsbeyi SW
C parryi SW
C perplesans Adobe hills thistle
C prateriens Lost thistle, Palo Alto thistle
P pulcherrimum Wyoming thistle
 C p x *aridum* Cedar rim thistle
C remotifolium x *remotifolium* remote livead thistle SW
 C r x *odontolepis* Pacific fringed thistle
 C r x *rifulare* Klamanth thistle
C rydbergii alcove thistle 4 corners
C scariosum x *scariosum* Elk thistle SW
 C s x *americanum* Dinnerplate thistle
 C s x *citrunum* La Graciosa thistle
 C s x *colorense* Colorado thistle
 C s x *congdonii* Rosette thistle
 C s x *robustum* Shasta Valley thistle
 C s x *thorneae*
 C s x *tolyabense*
C tracyi SW 4 Corners
C turneri Tx, Mex
C undulatum wavyleaf thistle SW NW Mex
C wheeleri SW
C wrightii SW

Pacific South West: California and Mexico, Pacific North West, California to BC

C andersonii Anderson's, PSW
C andrewsii Franciscan, PSW
C brevistylum, PNW, PSW
C ciliolatum Ashland thistle, PSW
C crasskaule Slough thistle, PSW
C cymosum peregrine thistle, PSW
 C c *canovirens*, SW PSW
C douglasii California swamp thistle PSW
 C d *bereri*, PSW
C edule Hall's thistle, PNW
C quercetorum Alameda thistle, California
C foliosum leafy thistle PNW Rocky mountains
C fontinale foundain thistle PSW
 C f x *campylon*
 C f x *obispoense*
C hookerianum white thistle NW PNW

C hydrophilum PSW
C kamtschaticum Kamchatka thistle, Siberia
C occidentale cobwebby thistle
C o californicum California thistle CA
C o candidissimum snowy thistle SW
C o compactum cobwebby thistle
C o coulteri Coulter's thistle
C o lucianum Cuesta Ridge thistle
C o venustum Venus thistle
C rhotophilum Surf thistle california

Some Other non native thistles

Silybum marianum milk thistles
Onopordum scotch thistles
Echinops globe thistles.
Centarecea

Non Asteraceae

Cardueae/ Cynareae

Non native thistles and lookalikes

Centaurea star thistles

Centaurea solstitialis yellow star thistle

Centaurea calcitrapa red star thistle

***Carlina* carline thistles**

Apiaceae the carrots

Eryngium heterophyllum mexican thistle

Papaveraceae the poppies

Argemone mexicana flowering thistle

Amarantheceae amaranth family

Kali tragus Russian thistles

Centaurea stoebe

Carduus nutans musk thistle

Cirsium arvense canada thistle



Allelopathic. Vigorous native plants might outcompete *C. arvense* like *Monarda fistulosa*, *Elymus canadensis*, Canada wild rye, purple prairie clover *Dalea purpurea*, *Zizia aurea*, golden alexanders and Canada wild rye/slender Wheatgrass *Elymus trachycaulus*. Vigorous covercrops like sudan grass might help.

Cirsium vulgare bull thistle

Cirsium palustre marsh thistle

Cirsium acanthoides plumeless thistle. For this and the above two, tillage or chop and drop before blooming are used, or cover crops.

C. brevistylum cluster thistle

Wildlife support

Thistles host goldfinches and indigo buntings as well as being an important part of this complete prairie grassland and Mississippi bank stability (Xerces is based in the US). Native thistles only flower

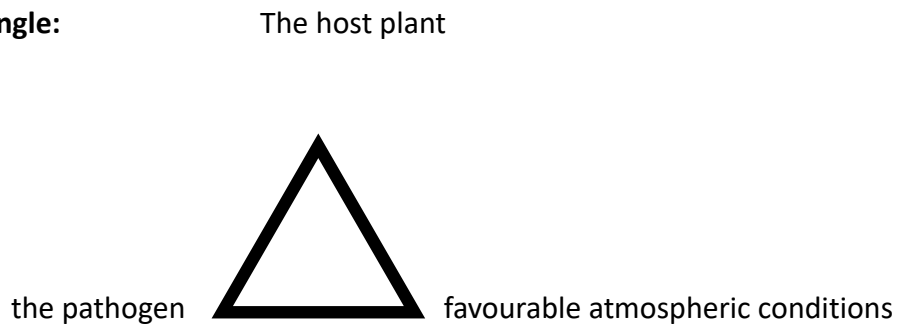
once, reproducing by seed. Because of this they provide valuable resources; pollen (protein) and nectar (carbs) to their pollinators. Thistles support bumblebees, beetles, moths, and butterflies including monarchs. The hollow stems allow for bumblebees' winter nests. The leaves and bodies of thistles feed fruit flies, other flies, weevils, leaf bugs, grasshoppers, tree hoppers and caterpillars. They encourage helpful bug predators like ladybugs, lacewings, and insectivorous birds. Insect diversity is important for ecosystem health, keeps pest predators fed, and encourage charismatic wildlife we like, like birds. Some of these insects are native and endangered themselves. These insects, when supported, can keep down populations of invasive thistles. Many songbirds use soft thistledown to line their nests.

Native thistles are threatened by introduced thistles, insects introduced to control introduced thistles, and habitat loss. Thistles are found in low densities in their preferred range of highly disturbed areas. Fire increases native thistles by reducing leaf litter that suppresses germination of new baby thistles. Bison (and cows) helped native thistles by reducing their competition and fertilizing them with poop. Native thistles are threatened by mowing beside highways before they bloom, and efforts to eradicate invasive thistles.

Growing thistles

Before collecting thistle seeds, check if this is legal. As always, don't take more than 1/5 of the seeds or seed heads and when planting, try a cold moist period, and hold pots over a year. Try also freezing, and gibberellic acid. If you are spring planting, do it before the last frost or in warm regions before the rain ends. Xerxes has yet to do a study on the conditions needed to grow each native thistle, but they want to! If you grow these and have success, maybe contact them. Plant them 2 per square foot: close planting prevents weeds. They are outcompeted by grasses.

The disease triangle:



Fun fact, Xerxes prefers the use of a shop vac to clean (thresh and winnow) thistle seeds, finding the seeds collect at the bottom of the vac while the floss remains stuck to the filter.

The authors found viability in Tall Thistle seeds that were in a refrigerator for 2.5 years and at room temperature for an additional six months.

Harrington's rule: seed viability doubles for every degree fahrenheit lower until freezing, and seed viability doubles for every percentage less of moisture between 5% and 14%.

If you live in the United States you may be eligible for compensation for growing native thistles by the

NRCS Environmental Quality Incentives Program. The USDA Farm Service Agency will help with rent payments of farmers who will maintain sensitive areas without cropping them.

Prepare the site by spraying with glyphosate, solarizing with a clear plastic sheet or repeated shallow tilling for a year. If planting into established prairie try a seed drill at 1/4". They respond well to thoughtful burning and grazing regimes. Try interpretive signage to encourage preservation of our native thistles.

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