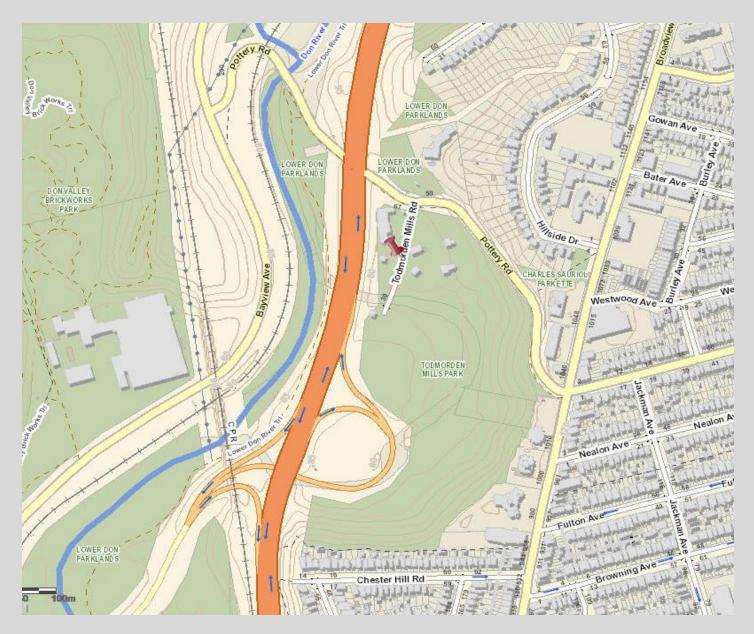


#### Where is Todmorden Mills Heritage Site and Wildflower Preserve?



### The site received designation as an Environmentally Significant Area in 2015





# "Todmorden Mills Wildflower Preserve"

- It is a City of Toronto nature park in the Don Valley.
- The core site is about 10 hectares.
- We are a charity founded in 1993 by Charles Sauriol and Dave Money.
- Our mandate is nature and habitat conservation.
- We are all volunteers.



Dave and Charles 1992

• Our direct action arm is our Stewardship Team.

Site 3. Cattails under the Bridge 2016 – 2018

### What we do:

We are involved in the process "of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed". (Society for Ecological Restoration International – Primer)





# What we do: Spring Cleanup





What we do: Outreach to Community and Visitors

- guided walks
- brochures
- •Website (under renewal..)
- attendance at Councillors' Environment Days
- •garden club visits
- special events at the site (Doors Open, Harvest Festival)
- •Native Plant sale



### Guided Walk - Toronto Field Naturalists



Bloodroot (Sanguinaria canadensis) The Preserve is located at 67 Pottery Road. Enter the path next to the shed at the back Parking lot. To enjoy your visit: wear long pants and shoes with socks up over the cuffs, and a long-sleeved shirt. Wear a hat, bring sunscreen, and bug spray if needed. To protect wildlife: dogs <u>on-leash</u>, no bikes, wild foraging or picking of plants. Thank you!

Todmorden Mills Wildflower Preserve

t's Spring!

Nature is awake!

Look for one of the earliest native spring

flower gently. There is a beautiful array of

greens for us to enjoy in the Preserve after

the dull browns and grays of the winter. At

the pond you may see bright yellow marsh

marigolds. The winter's hushed and quiet

sounds are gone and there is an abundance

of bird song in the Preserve: red-wing

warblers loudly proclaiming their presencel

blackbirds, kingfishers, catbirds and

vertically and cradle the delicate white

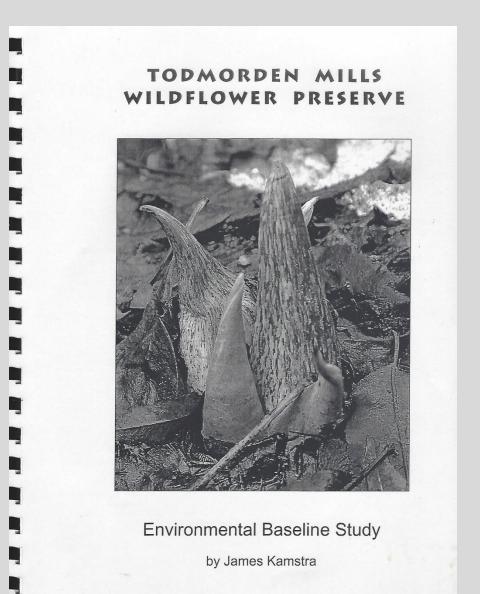
wildflowers: bloodroots. Their leaves stand

Todmorden Mills Wildflower Preserve In the meadow tall goldenrod bright yellow colour while New ers display that glorious purple nators harvest the last nectar s of the season. The staghorn turn a riot of bright reds. In strich fern leaves begin to look their dark fertile fronds are zig-zag goldenrods display their s, jewelweed its spotted orange hile the tiny flowers of the bloom in beautiful drifts at the trail. Seeds are abundant on all some fall to earth, others blow vind; some are eaten by wildlife, ick to you. Birds are flocking move - migration is underway. f change and colour has arrived.

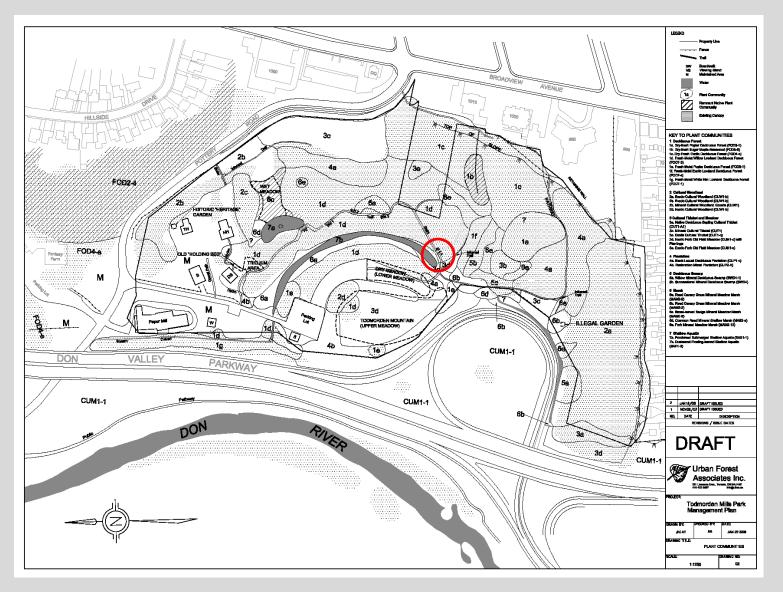
orn Sumac (Rhus typhina) a nature park, located at 67 Pottery. your visit: wear long pants and shoes er the cuffs, and a long-sleeved shirt. and bug spray. To protect wildlife: no bikes, wild foraging or picking of



### What we do: Assessment and Inventory



### What we do: Planning and Mapping...



### Plant Communities Map – Management Plan

### What we do: Control Invasive Plants

#### Table 1. Selection of Invasive Plants for Removal:

Common Name	Scientific Name	Type of Plant	Methods of Control	Time of Year	Notes	
Garlic Mustard	Alliaria petiolata	Biennial, a rosette of leaves formed during the first half of a two-year cycle)	Pull maturing plants in spring (mid-May) to prevent seed production. If the soil is soft enough, grasping the plant at ground level and gently pulling will usually tease out the root or use trowel tip. Garlic Mustard can resprout from the root crown. It is important to remove the entire <u>root crown</u> Pull rosettes in late fall to prevent flowering plants from developing from them in spring. Cover soil with oak leaves about one inch thick (late fall) to stifle germinating seedlings that have survived the summer.	Mid-May to Mid-June for second year plants Late fall – October/November for rosettes	80 to 90% of sprouted seedlings die. Let nature do this work and deal with the other 20% as rosettes. Dispose of on ground before flowering and if flowering -cut off head. Bag mature plants before seeds drop– send away in yard waste. (Experimental work – composting in black garbage bags) Biocontrols are in development	
Cardamine Impatiens	Cardamine Impatiens	biennial	As for Garlic Mustard	As for Garlic Mustard	Treat as for garlic mustard, same family	
Dame's Rocket	Hesperis matronalis	perennial	Dig out - has fibrous roots	End of May to Late July before seeds drop	Likes open forest understory Flowers May June	
Pale Swallowwort (Dog Strangling Vine)	Cynanchum rossicum	perennial	Dig out single or small patches in priority areas making sure to get the entire root crown. To prevent seeding, or to clear around planted trees or shrubs- mow, pull or weed whack areas highly infested. Cut off seed pods and bag. Glyphosate treatments twice during growing season, at onset of flowering and then two to three weeks later for heavy infestations	Mid June to Mid-July. Seed pods abundant by Mid-July	Can regenerate from root crown pieces Create forest: it is not as vigorous in shade Should work with other groups to find biocontrols for this plant A serious problem	

### What we do: Plant native vegetation

 Table 2. Aggressive Native Plants to Encourage:

Common Name	Scientific Name	Type of Plant	Aggressiveness	Reproduction	Notes
Bloodroot	Sanguinaria canadensis	perennial	moderate	Seeds By rhizomes	Partial Sun Likes oak leaf cover
Anemone	Anemone canadensis	perennial	strong	By very fertile seed By rhizomes	Likes somewhat acid soils Partial Sun to full sun
Ostrich Fern	Matteuccia struthiopteris	perennial	strong	By spores By rhizomes	Partial Shade to Light Shade Can form dense stands
Starry False Solomon's Seal	Maianthemum stellatum	perennial	moderate	Seeds, rhizomes	Partial Shade to Light Shade
Thimbleweed	Anemone virginiana	perennial	?	Seeds	Partial Shade to full sun Dry open woods and slopes in poor soil
Trout Lily	Erythronium americanum	perennial	?	By root offshoots Seeds	VIP - Likes neutral soil Partial Shade to Light Shade
Virginia Waterleaf	Hydrophyllum virginianum	perennial	strong	Seeds	Likes neutral to slightly acid rich soil Shade to Partial Shade Can easily be divided
Wild Columbine	Aquilegia canadensis	perennial	?	Seeds, rhizomes	Has a deep rootstock - survives droughts Partial Shade to Full Sun
Wild Ginger	Asarum canadense	perennial	?	Seeds, rhizomes	Likes moderately acid rich soil Cover with oak leaves Plant under oaks Partial shade to full sun
Zig-Zag Goldenrod	Solidago flexicaulis	perennial	strong	Seeds, rhizomes	Partial Shade to sunny

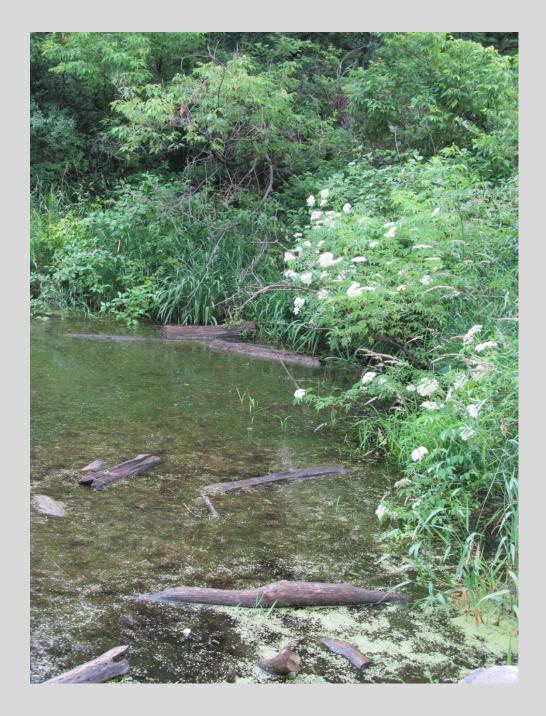
**1. Invasive plant control** – we use an Integrated Pest Management approach and work with the City of Toronto's Urban Forest Renewal staff. This means using all available tools to control the target species including manual and mechanical means such as digging and mowing, as well as occasional applications of low toxicity herbicides.

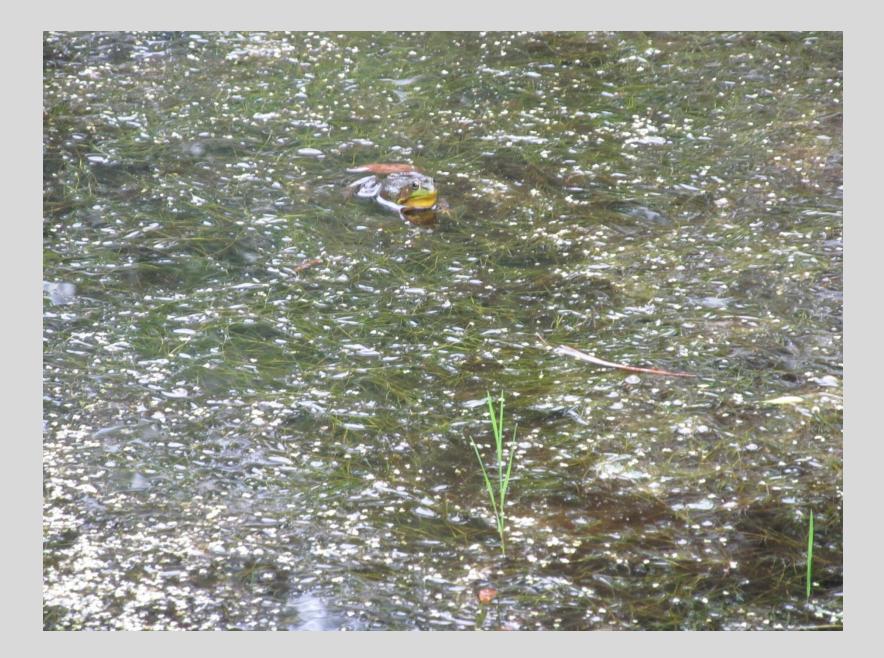
**2. Soil improvement** (decompaction, soil impoverishment to reduce nitrogen, mulching, structural improvements, garbage removal)

### Pond

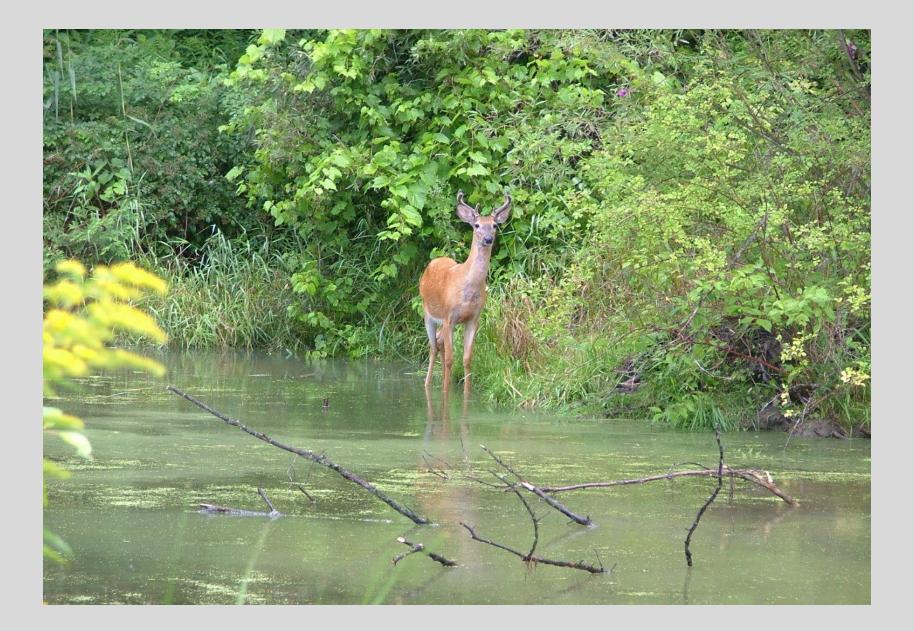


This is the native sedge: Carex trichocarpa (hairy-fruited sedge) in the Preserve. It is a natural remnant population. It is threatened by the expanding invasive Phragmites colony. It is provincially, regionally and locally rare.









### Phragmites Control - Pond Site



Removing seedheads, stomping it down and removing stems and roots Fall 2012 - 2013



Cutting Phragmites with a heavy tree pole pruner – not very effective...

### Pulling, cutting raking and removing stems and roots from the area September 2014











# Pond Site Fall 2014 – Tarping with thick landscape fabric



Summer 2016 – Dig (or spade) Phragmites at its most vulnerable time – when it is putting its energy into creating seed heads. The objective is to prevent photosynthesis reduce the spread. The tarping is still in place. The stems shown are coming up around the landscape fabric and in the shallow water at the pond's edge.

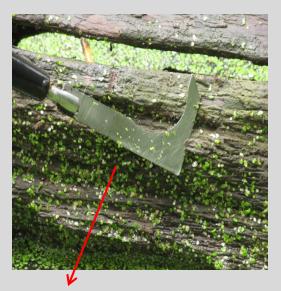












A very useful tool – a repurposed crack weeder







Progress...





Another useful tool! It's a repurposed raspberry caner. This tool allows cutting below the water surface – 'cut to drown' method.





### Site 2. Beside Don Valley Parkway







### Site 2. Beside Don Valley Parkway – Shading









# Summary of Methods being used at Todmorden Mills Wildflower Preserve to control Phragmites australis

- 1. Cut below ground (spading)
- 2. Cut to drown (in water)
- 3. Tarping (to prevent photosynthesis)
- 4. Herbicide spot treatments (to kill roots)
- Shading with coniferous trees (to reduce stem numbers and plant vigor)
- 6. Cut off seed heads (to prevent seed spread)

Thank you to our Community stewardship partners who help with cleanups, invasive control and plantings:

- Local middle school students
- York University Environmental Studies
- Toronto Historical Association
- City of Toronto Forest Renewal Staff
- City of Toronto Parks employees
- •Todmorden Mills Museum
- •TRCA advisors
- Toronto Field Naturalists
- Urban Forest Associates
- Toronto Parks and Trees Foundation



Thank you to great community partners...



Ontario

Trillium

Foundation



**TD Friends of the** Environment Foundation













...and many, many individuals over the years...