



## Toronto Master Gardeners

Toronto Master Gardeners are trained volunteers dedicated to providing horticultural information to the public.

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## Toronto Botanical Garden

Toronto Botanical Garden is a volunteer-based, charitable organization whose purpose is to inspire passion, respect and understanding of gardening, horticulture, the natural landscape and a healthy environment.

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## Trillium

A strikingly beautiful wildflower, *Trillium grandiflorum* was formally recognized as Ontario's floral emblem in 1937. Traditionally botanists placed trilliums in the lily family (Liliaceae). However, modern botanists place them in a separate family, Trilliaceae. The Genus has 30 species of deciduous perennials that spread by rhizomes.

Trilliums have a number of characteristics in common. These erect plants have short stems, each with a whirl of three leaves (vary in form, colour etc.). They bear solitary terminal flowers (some on short stalks), described as cup-like or funnel-shaped, with three sepals and three inner petals. Flower colour varies with the species.

## Considerations Related to Choice

Although *Trillium grandiflorum* is the best known and recognized species, several other species can be grown for their leaf or flower form or flower colour.

## Cultural Considerations:

Plant in a moist, organically rich, well-drained soil that is loose, friable and neutral to mildly acidic. They like a soil rich in deciduous leaf mulch e.g. maple or birch (mulch annually). Trilliums prefer deep to partially shady conditions. Growing conditions will influence the mature height and spread of a plant.

## Location:

Trilliums can serve as one of the main elements of the woodland garden. Whether in small groups of 6 to 10 or large drifts of 30 to 50, they are a spectacular garden accent. In large groups trilliums can be an effective ground cover, shading out other plants. Native

flowers that go well with the white trillium are Virginia Bluebells, perfoliate Bellworts, yellow Lady's Slipper Orchids and Christmas Fern to name but a few.

Smaller species can be grown as rockery plants.

## Maintenance

If the soil is less than ideal and your trilliums look stunted, give them a fall and spring bonemeal application. Because soil compaction can be a problem, avoid transplanting around your trillium beds, especially when the shoots are just starting to come up in the fall and spring. Once established Trilliums are almost maintenance free.

## Recommended Species:

All species noted below are hardy to Zone 4 and accessible from reputable growers.

*Trillium grandiflorum* (Great white trillium): Grows 16 to 18 inches in height spreading up to 2 feet. Vigorous clump forming perennial with dark green ovate to rounded leaves (up to 12 inches long). Pure white flowers bloom in mid-spring with green sepals. These often fade to a pinkish colour. Flower petals (up to 3 inches long) are broad and ovate in shape, cupped at first then open widely. This is the 'classic' Ontario emblem.

*Trillium erectum* (Stinking Benjamin, Purple trillium, Squawroot or Brown Beth): Grows up to 20 inches in height, spreading up to 12 inches. Upright, vigorous perennial with mid-green broad leaves, ovate in form growing to 8 inches in length. In spring this species bears deep red-purple, but sometimes yellow or white flowers with green sepals tinted with a hint of purple. The petals are pointed, spreading and elliptic in shape, up to 3 inches in length. This species has an unpleasant scent

*Trillium undulatum* (Painted trillium, Painted wood lily): Grows from 4 to 12 inches high, (depending on the growing conditions) and spreads 6 to 8 inches. Clump forming perennial with narrow ovate tapered dark blue-green leaves up to 6 inches in length. The white or very pale pink flowers appear in late spring. The petals are wavy, about 1 1/2 inches long, and are marked with dark red V-shaped marks at the base. The dark green sepals also have a maroon margin.

*Trillium luteum* (Yellow trillium, Wood trillium): Grows up to 16 inches, spreading up to 12 inches. This clump forming, upright perennial has elliptic or oval shaped broad, and pointed mid-green leaves (up to 6 inches in length) with distinctive paler green markings. Blooming in spring, the golden or bronze-green flowers have a sweet scent with long narrow petals reaching 3 1/2 inches in length. The lance shaped sepals are mid-green.

Two dwarf species are recommended for rockery gardens and are hardy to Zone 5.

*Trillium nivale* (Dwarf white wood trillium, Snow trillium): Grows up to 5 inches with a spread of 4 inches. This compact dwarf species is clump forming. It has 1 1/2 inch long blue-green ovate shaped leaves with pure white 1 1/2 inch long oblong petals. The green sepals contrast nicely with the flowers that bloom in early spring.

*Trillium rivale*: Grows to 5 inches in height with a spread of up to 6 inches. This erect perennial has pointed, ovate shaped mid-green 1 1/2 inch long leaves. This species blooms in spring. The flower petals are white or pale pink and somewhat diamond to oval shaped. The 1 1/2 inch long sepals are green. This species is similar to *t. nivale* but easier to grow.

## Propagation

### *By seed:*

Seed should be sown in sterilized soil or soilless mix and put through two cold dormancy periods (7 to 9 degrees C.) for 3 months each with alternating warmer periods (15 -17 degrees C.) of 4 to 5 months. If greenhouse conditions are not available to achieve this double dormancy break, a cold frame can be used to accommodate trillium seed flats although it will probably take two winter and spring seasons to provide the required dormancy breaks. Three to five years may be required for plants to reach flowering size.

### *By root division:*

The trillium has a plug-like rhizome. In the dormant fall season divide root sections that have a shoot, using a sharp, sterilized knife.

## Diseases and Pests

Slugs and snails may be a nuisance.

Planting in wet or poorly drained soils should be avoided to prevent rot fungi damaging trillium rhizomes. Trilliums can also be affected by rust, smut and fungal spots.

"Greening Disease", which can cause bizarre flower patterns, is caused by mycoplasma organisms and spread by leafhoppers.

## Organic Management/Control Strategies

The City of Toronto adopted a new municipal by-law (spring 2004) that restricts the use of pesticides. For details about the by-law visit the Pesticide by-law page on Toronto Public Health's Web site at [www.city.toronto.on.ca/pesticides](http://www.city.toronto.on.ca/pesticides) or [www.toronto.ca/health](http://www.toronto.ca/health). Questions may be e-mailed to [pesticide@toronto.ca](mailto:pesticide@toronto.ca).

As a general rule, good cultural practices that ensure optimal growing conditions, and good air circulation should minimize the risk of disease. Healthy plants, grown in appropriate conditions are less stressed and less vulnerable.

- Use only clean garden tools.
- Maintain a chemical free garden, which will promote natural predators.
- Do not water over the heads of the plants, particularly in late afternoon.
- Rake up and destroy all diseased parts of plants and debris. Do not use this organic material as compost. For example, plants affected by "Greening Disease" should be removed.
- Use mechanical control methods such as non-insecticidal soap to remove leafhoppers. Hand pick slugs or snails. (see Slugs and Snails Fact Sheet).
- Visit your garden centre for natural controls (e.g. diatomaceous earth for slug control).

## Cautions/Considerations

- It is not recommended as a cut flower. These plants quickly wilt if cut and the effect on the parent rootstock could be lethal.
- Never remove Trillium from natural habitat. (See Wildflower Fact Sheet)

## References:

The Toronto Botanical Garden Weston Family Library is an excellent source for horticultural information.

Brickell, Christopher, Trevor Cole and Judith D. Zuk eds. *Readers Digest A - Z Encyclopedia of Garden Plants*. Montreal, Canada: The Readers Digest Association (Canada) Ltd, 1997.

Case Jr., Frederick W. and Roberta B. Case. *Trilliums*. Portland, Oregon: Timber Press, 1997.

Factsheets are produced by the Toronto Master Gardeners in association with the Toronto Botanical Garden. They provide introductory information about a broad range of horticultural topics and are intended for personal use and study purposes. Should your gardening group or organization wish to use multiple copies we ask that you inform the Toronto Botanical Garden at [info@torontobotanicalgarden.ca](mailto:info@torontobotanicalgarden.ca).

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