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*Is it appropriate to grow *Asclepias curassavica*, (Tropical Milkweed) in southern Ontario gardens?*



Asclepias incarnata - Swamp Milkweed

Asclepias curassavica, Tropical Milkweed is also known and sold by commercial growers with names such as “Silky Gold” Milkweed, “Mexican” Milkweed). Monarch butterflies have recently been listed as **Endangered**, by the Government of Canada, Committee on the Status of Endangered Wildlife in Canada, (Nov. 2016)¹. This situation is due to three major factors, which includes illegal logging in the forests of Mexico, climate change, and a lack of milkweed plants which are the only host plant and food source for the Monarch larvae. One key to boosting the Monarch population is to plant milkweed, and native milkweeds are simply the best choice for residents of Ontario. There are four types of milkweed varieties native to the Ontario region that are easily available through retailers or organizations. They are:

- *Asclepias syriaca* (Common Milkweed)
- *Asclepias verticillata* (Whorled Milkweed)
- *Asclepias incarnata* (Swamp milkweed)
- *Asclepias tuberosa* (Butterfly Milkweed)



Asclepias tuberosa - Butterfly Milkweed

The scarcity of native milkweed has led some growers to provide, and gardeners to plant *A. curassavica* (Tropical Milkweed), which dies off each fall in Ontario (hardy to zone 8). While this may seem a solution to attract butterflies without the drawbacks of some of our more aggressive native milkweeds, growing *A. curassavica* (Tropical Milkweed), has been noted in several studies to be a concern with respect to the annual Monarch migration and early die off of butterflies. The concern appears to be mainly in areas where the plant is able to survive the winter (e.g. southern U.S.). This is related partly to the fact that the monarchs remain in the area or delay migration because *A. curassavica* (Tropical Milkweed) is available as a food source. However, most concerning, is that larvae who rely on Tropical Milkweed as a single food source can build up a harmful parasite contained within plant. The Monarch caterpillars ingest the parasite when they eat the plant and as they emerge from the chrysalis as adults, they are covered with spores and are so weakened they are likely to die before finishing their migration. To make matters worse, these adult monarchs can then infect other plants and other monarchs. Here's an excerpt from the Science Magazine website.

*Tropical Milkweed hosts a "protozoan parasite called Ophryocystis elektroscirrha (OE). As caterpillars, monarchs ingest the parasite along with their normal milkweed meals, and when they hatch from their chrysalises they are covered in spores. "It's a debilitating parasite," Satterfield says. Infected monarchs are much weaker than their healthy counterparts and don't live nearly as long. In fact, if an OE-infected monarch tries to migrate, it will probably die long before it arrives in central Mexico"*¹.

Monarchs who stayed in the southern United States for the winter were five to nine times more likely to be infected with OE than migrating butterflies were, the team reports online today in the *Proceedings of the Royal Society B*.

In some winter breeding sites, 100% of monarchs they sampled were infected, Satterfield says. The work proves "absolutely definitively" that tropical milkweed is threatening the monarchs and their migration, Brower says. And the findings are particularly troubling for monarchs returning from Mexico in the spring, he adds. They pass right through these winter breeding sites and could lay eggs on infected milkweed while they are there or mate with infected butterflies. Infecting the returning monarchs with OE "is the last thing we want to do, particularly when the monarchs are in the low numbers that they are now," Brower says.² Also helpful is this response regarding the use of *A. curassavica* (Tropical Milkweed) in gardens from the Xerces Society. In conclusion, this article recommends growing only native milkweed.

"Is tropical milkweed (*Asclepias curassavica*) bad for monarchs?"

What is the Xerces Society's position on this milkweed species? Tropical milkweed is not native to the U.S. but is sold by many plant nurseries and is frequently planted in gardens. It is used as a host plant by monarchs (and other milkweed-associated butterflies) both where it has been introduced in the States and where it naturally occurs beyond U.S. borders. Yet, preliminary research suggests that tropical milkweed's presence in the U.S., particularly at southern latitudes, may encourage monarchs to lay eggs outside of their regular breeding season, thus disrupting their migratory cycle (Batalden & Oberhauser 2015), and increase the prevalence of monarch infection by the protozoan parasite *Ophryocystis elektroscirrha*, commonly referred to as "OE" (Satterfield et al. 2015). These potential negative impacts on monarchs stem from the fact that tropical milkweed may have foliage year-round when it grows where winters are mild and adequate moisture is available (such as in the Gulf States and parts of California). In contrast, the majority of native U.S. milkweeds are summer or fall-deciduous and do not have foliage during late fall and winter. Though tropical milkweed potentially remains evergreen when growing in the southern U.S., in regions where winter temperatures frequently fall below freezing, such as in the Northeastern U.S., tropical milkweed behaves as an annual species and is typically frost-killed. When this occurs, tropical milkweed does not have foliage during the winter and there is no potential for parasite spores to build up on the plants. To mimic this effect and prevent harm to monarch health, people who live in the southern U.S. and who already have tropical milkweed in their gardens are advised to cut the plants back to the ground during early fall. For additional information, please refer to this fact sheet and Q&A article by the Monarch Joint Venture. The Xerces Society recommends only planting locally native milkweed species, and thus we do not recommend planting tropical milkweed, even when sources of

¹ Gov. of Canada, COSEWIC Wildlife Species Assessments, November 2016, <http://www.cosewic.gc.ca/default.asp?lang=en&n=DD630173-1>, Accessed on April 9, 2017

native milkweed plants and seeds are scarce. Beyond concerns about tropical milkweed's potential negative impacts on monarch health, there is potential for the species to escape from cultivation, where growing conditions are favourable, and pose a threat to native plant communities.”³While the concerns in the above references are focused on regions where Tropical Milkweed has the ability to over-winter, it is difficult to determine if this is an appropriate milkweed choice in Ontario gardens. Overwhelmingly, groups who are tasked with preservation of monarchs and monarch habitat, recommend planting only milkweed native to the region.²

If you are concerned about the appearance or uncontrolled spread of our native milkweed species, here are some suggestions:

1. Remove the seed pods before the seeds disperse
2. Plant either *A. incarnata* (Swamp Milkweed), which has a net like root system or *A. tuberosa* (Butterfly Milkweed), which has a taproot system. Neither of these varieties spread as readily as *A. syriaca* (Common Milkweed) or *A. verticillata* (Whorled Milkweed), which spread by underground rhizomes. In addition, *A. tuberosa* (Butterfly Milkweed) has a smaller habit, more closely resembling *A. curassavica* (Tropical Milkweed). For further information, please visit the site of [The Monarch Joint Venture, Q&A about research related to tropical milkweed and monarch parasites](#),

I hope this helps in your understanding of using *A. curassavica* (Tropical Milkweed) in gardens.

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Further Reading

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Xerces Society, Milkweed FAQ, <http://xerces.org/milkweed-faq/>, Accessed on April 9, 2017.

² Science Magazine, Plan to Save Monarch Butterflies Backfires. Jan. 13, 2015, <http://www.sciencemag.org/news/2015/01/plan-save-monarch-butterflies-backfires>, Accessed on April 9, 2017.