

CROSS POLLINATION

Halton Master Gardeners Monthly Newsletter
NOVEMBER 2022 | VOL. 15 ISSUE 10

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Halton Region
Master Gardeners



Blue Beech *Carpinus caroliniana*

Other Common Names: American hornbeam, Ironwood or Musclewood

By Janet Mackey, Halton Master Gardener

This tree caught my eye in the Dundas Driving Park one 'early snow' day in late fall. The catkins were almost sparkling in the sunlight against the newly fallen snow. Looking to identify this tree I thought *catkins*! ...it must be a birch of some kind. Then I looked at the fallen leaves...maybe it was a beech? Finally, I examined the bark which was smooth and sinewy, like well-developed muscles. *Ahhh, musclewood*. This is a tree known by so many names. It is indeed in the birch (Betulaceae) family. I first encountered it several years earlier, in a moist, fully shaded valley on the *Main Loop* trail in Dundas Valley Conservation Area. Resting in a flood zone where the nearby creek routinely overflowed its banks each spring, this musclewood was a large, multi-stemmed shrub. Again, what mostly stood out was the smooth, rippled bark. I recently learned that *Carpinus caroliniana* is being planted by the City of Hamilton as a street tree in full sun locations. Not long ago, I found it growing adjacent to a condo near Bloor Street in Toronto! A very adaptable tree, indeed, and one you just might want to include in your garden.

Cultural Requirements

American hornbeam tolerates a wide range of growing conditions-- wet soil, clay, full sun, shade--and it's even tolerant of drought once established. The only location which is not advised is one with

Image: Janet Mackey

Continued on next page

BLUE BEECH (CONT'D)

compacted soil, so perhaps it's not well-suited to a new building site. In addition, it's known to be slow growing and somewhat difficult to transplant because of its deep spreading, lateral roots.

Seeds and Fruit

Blue beech is [monoecious](#), producing male and female reproductive structures on the same plant but on separate flowers. Male and female wind-pollinated flowers appear in spring on separate slim cylindrical clusters called catkins. At about four inches, the female catkins are a bit longer than the males and eventually form clusters of winged nutlets (fruit).



catkins

Images: [North Carolina Extension](#)

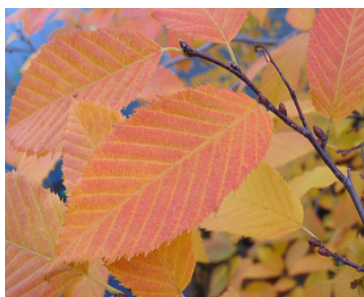


fruit (winged nutlets) of
Carpinus caroliniana

Supports Biodiversity

According to the [National Wildlife Federation](#) blue beech is used as a host plant by 78 species of butterflies and moths, including luna moths, walnut sphynx moths, polyphemus moths and eastern tiger swallowtail butterflies. (A zip code from a nearby northern New York county was used with the NWF tool.)

In addition, the seeds, buds, and catkins are eaten by a variety of songbirds, grouse, turkeys, and squirrels. Young trees may need protection from browsing by cottontails, deer, and beaver which also enjoy this tree. 🌸



The beautiful fall colour of blue beech.



Polyphemus moth



A blue beech growing next to Bloor Street in Toronto.

Image: Janet Mackey



The distinctive bark of blue beech

Image: [Univ. of Minnesota - Urban Forestry Lab](#)



The native range of blue beech in shown in green.

Image: Wikipedia Commons

NOVEMBER 'TO-DO' LIST

by Claudette Sims, Halton Master Gardener

- ☐ **Stems & Seedheads** – Refrain from cutting back perennials. Stems not only offer shelter for cavity-dwelling native bees and beneficial insects but also collect snow to insulate and protect plants. Seed heads provide food for birds and winter interest for everyone.
- ☐ **Bulbs** – Plant spring-flowering bulbs such as crocus, tulip, hyacinth and daffodil as long as the soil is workable. Water bulbs after planting. You may also have time to divide and replant overcrowded spring bulbs and [fall crocus](#) that have finished blooming.
- ☐ **Bare Soil** – Protect bare soil from erosion and winter sun with a layer of organic matter, e.g., compost, leaves, straw, mulch or manure. [Avoid tilling](#) which destroys soil structure and soil organisms and encourages weeds to germinate.
- ☐ **Trees** – Deciduous trees can be planted now until freeze up of soil. Watch this great [video on planting trees](#). Find native tree suggestions for our south-western area at this [Tree Atlas](#) link.
- ☐ **Lawn and Weeds** – Rake or “mow” leaves and remove to garden beds. Leave some leaves uncut for beneficial insects and pollinators who overwinter in leaf litter. Keep on weeding as long as the soil is workable. When mowing is done for the season, clean the mower and sharpen blades.
- ☐ **Invasive Plants** – Remove any [common buckthorn](#) and [garlic mustard](#) seedlings. Continue to hand pull, rake, or cut off weeds at ground level with a sharp spade or garden tool. Remove seedheads to reduce the seed bank in your soil.
- ☐ **General Garden Care** – Empty and store or cover pots and watering cans in a dry place to avoid damage from freezing. Turn off outside water connections and remove hoses. Hang garden hoses to drain before storage.
- ☐ See our [October newsletter](#) for any garden jobs that you may have missed!

“Leave the leaves, stems, and seed heads of plants standing in your garden.”



“Insect galls on plants are an important source of winter food for native birds.”



Chickadee feeding on an insect inside a goldenrod gall. Image by David Whelan (Creative Commons CC0 1.0)

- ☐ **Houseplants** – Decrease watering as the days become shorter. Increase humidity by misting plants. Check for pests weekly & treat with commercial insecticidal soap if needed. Increase lighting with [grow lights](#) or reflective surfaces.

LETTING THE CAT OUT OF THE BAG

By Allyn Walsh, Halton Master Gardener



Photo: Allyn Walsh

What are grow bags and why use them?

For those of you who aren't familiar with them, grow bags are fabric bags with handles that can be filled with growing medium. They are easily stored once emptied, and the smaller ones can be moved from spot to spot. The biggest advantage over ceramic, fibreglass, and plastic pots is that they are breathable, drain readily, and don't get as hot. I will admit they are probably not going to be as good-looking – but we are being practical here! They come in a variety of sizes and have a relatively large diameter since they are not designed for their visual appeal. From my perspective this makes them ideal for growing crops. They are readily available at garden centres and online, in a wide variety of sizes, and a limited number of colours (black, grey, and brown predominate).

As the growing season comes to an end, it's worth evaluating your garden experiments, both your successes and your failures.

My biggest innovation this year was to grow food in grow bags, using my asphalted parking pad at the front of the house. With a few modifications, I'm going to do it next year too. I've long grown herbs and tomatoes in containers, because with a small, shady urban lot, finding the right conditions for each plant can be challenging. And since it is not advisable to grow the same vegetables in the same soil year after year, it is a lot easier to change the soil in the pots than it is to find a new suitable position every year. This year a new opportunity opened up because I got rid of my car (one big advantage of living in an urban area – walkability!) The parking pad at the front of the house was now half empty – and pretty sunny too. Rather than starting by digging up the asphalt right away, I decided to see how vegetables would do in grow bags placed on the empty portion.



Photo: Allyn Walsh

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LETTING THE CAT OUT OF THE BAG (CONT'D)

What do you use for the growing medium?

A rule of thumb is to allow five gallons per big plant (e.g. tomatoes.) The grow bags I selected are the 15-gallon (60 litre) size. I wanted depth to support tomato stakes while avoiding bags that would swallow enormous amounts of soil. Because I had only six grow bags, I needed to grow shallow-rooted herbs around the larger tomato and eggplant varieties. I wanted a growing medium that would not require artificial fertilizer, and which was readily available in small enough packages for me to be able to lug them around. I ended up using a mix of good quality potting soil, home-made and purchased compost, and black earth. With the potential for purchased soil to contain extremely harmful jumping worms, I was reassured that what I purchased would be contained and easily inspected. Because grow bags drain very well, I placed mine in large saucers to help contain the water. That water wicked up into the grow bags very readily and I met my goal of not allowing any water to run off to the street. Because the parking pad is on quite a slope, my husband used leftover subflooring to build a platform to more or less level the bags. This also helped prevent run off. One caution about using grow bags: they can dry out quickly. At the height of summer, I needed to water daily.

What can you plant in grow bags?

Just about anything that thrives in containers will do very well in grow bags. In fact, because they are breathable, root systems are healthy. I was concerned about vegetables that require staking since my grow bags were going on an impermeable surface. Previously, I have run a stake through one of the drainage holes in a fibreglass container about 6 inches into the ground, but that wasn't going to be possible. I discovered that an "L" shaped trellis placed down into the bottom of the bag and augmented by a couple of wooden stakes supported my heavy tomato vines just fine. Of course, the tomatoes were also planted at the bottom of the bag to ensure many leaf nodes were under the surface to grow a strong network of roots. This year I grew large heirloom tomatoes, a small hybrid Roma variety, and several cherry tomatoes, all of them indeterminate. Growing them from seed made it easy to select ones with a strong tall stem for planting. I had great success with baby eggplants and lettuce, a bit less so with carrots (which I probably didn't harvest early enough). Herbs flourished – basil, dill, parsley, and cilantro. I planted nasturtium and borage for their edible flowers and for their good looks.

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Photo: Allyn Walsh

LETTING THE CAT OUT OF THE BAG (CONT'D)**But what will the neighbours say?**

I've had lots of comments and questions about my pollinator front garden, but that pales in comparison to the amount of interest in the grow bags on my parking pad. At first people wondered what I was doing because my home-grown seedlings looked mighty tiny in those big bags. Then people noticed how the bags were on saucers sitting on platforms (which we painted black because, well, it matched the bags). Pretty soon the plants were lush and luxuriant, and I had many admiring comments and questions about the varieties I had grown. One of my granddaughters commented that she liked going into our house because "it's like going through the woods." I admit the pruning got away from me for awhile there.

What's next?

Every gardener begins planning for the next year while in the midst of the present one. I'm going to do a little more experimenting before thinking about digging up the asphalt. Crop and soil rotation are particularly important with container gardening. I'll switch the grow bags around so those that held tomatoes will be used for herbs and lettuce, and I'll give carrots another try. The tomatoes will go in the herb and lettuce containers. After another inspection for jumping worms, I'll recycle the top few inches of soil into my regular garden beds and augment the grow bags from my compost bin. As for the edible flowers, I didn't get around to eating them and I won't bother again. That will leave room for me to daydream as I pour over seed catalogs this winter.

So if you have been thinking about container gardening because you have limited space or no garden space, perhaps an unused balcony or patio, or you just want to experiment a bit. Grow bags are worth thinking about. ✿

Read More:

An excellent overview by Joe Lamp'L.

[Gardening in Grow Bags](#)

Container Gardening basics, including grow bags from Ohio State University

[No Garden, No Problem, Container Gardening Basics](#)

All about growing carrots in containers - but also good general guidance from Niki Jabbour and Savvy Gardening.

"I may try carrots again after reading this!"

[Growing Carrots in Containers](#)



Photo: Allyn Walsh

HOW TO MAKE LEAF MOLD

by Kirsten McCarthy, Halton Master Gardener

What is leaf mold?

Leaf mold results from letting leaves sit and decompose over time. It is dark brown to black and has a pleasant earthy aroma and a crumbly texture, much like compost. In fact, leaf mold is just that: composted leaves. Instead of adding a bunch of organic matter to a pile, you only use leaves. It is an excellent soil amendment that also happens to be entirely free. It's easy to make, simple to use, and has a huge impact on soil health. This is a great way to deal with large amounts of leaves falling from mature trees in a smaller city garden. If you have the room in your garden, consider leaving some leaf litter in place in the garden for over-wintering insects such as fireflies, butterflies and other invertebrates.

How to make leaf mold

First, rake the leaves up. Most leaves will break down while still whole. But sometimes when working with larger, tougher leaves, like Norway Maple, you can speed up the process by mowing or otherwise shredding them before bagging.



Second, put the leaves in large plastic bags.



Third, add water to the leaves in the bag, filling the bag about half full of water. Make sure you soak the leaves around the side of the bag as well as in the middle. This gives the leaves a good base for the necessary fungal growth.



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HOW TO MAKE LEAF MOLD (CONT'D)

Next, tie off the bag. Puncture about 12 to 15 holes around the sides and the bottom of the bag to let the excess water out. This will keep the mixture decomposing aerobically and prevent odours from anaerobic decomposition.



Store bags in a back corner of the garden for six to twelve months. Check the bags every month or two for moisture and add water if the leaves are dry. Toss and turn the bags over to allow air to enter and circulate which can speed up the decomposition rate.



Benefits and Use

Leaf mold is a great soil amendment. It is essentially a soil conditioner that increases the water retention of soils. Leaf mold also improves soil structure and provides a fantastic habitat for soil life. However, it doesn't provide much in the way of nutrition, so you may want to add organic fertilizer depending on what you are growing.

So, this season, swap the paper yard waste bags for leaf mold bags. Next year you will be rewarded with black leaf gold for your garden beds. ✿

Further reading

Spelling note: Some sources also use the British spelling "mould."

[What is leaf mold? \(And How to Make It\) - Growing With Nature](#)

[Anaerobic vs. aerobic bag composting - Iowa State Extension](#)

[The Best Leaves to Use in Leaf Mould -RHS](#)

FUNGUS GNAT SEASON IS HERE!

By Claudette Sims, Halton Master Gardener

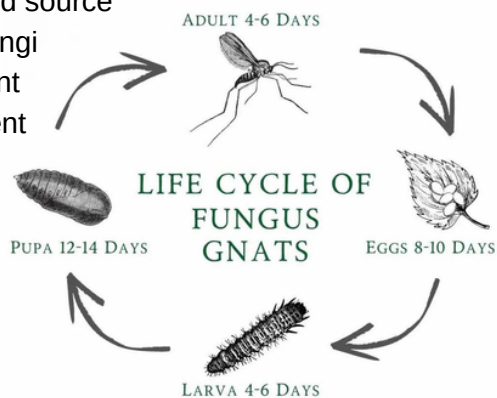
Fungus gnats, small flies in the Sciaridae family, are relatively benign, but they can drive me crazy when my houseplants are infested. When dealing with fungus gnats, you need to tackle both the adults and the larvae. The adults are the little black flies that you see flying around the plant or around your face if you're trying to read a book at night! The larvae are hiding in the soil and will not be affected by treatment aimed at adults.



Fungus gnat infestation gone awry

Cultural Practices

The first thing to do is to change your watering practices. Water deeply, enough to moisten the entire root ball, then allow the soil to dry out before watering again. This help kill off the larvae by reducing their food source which is algae, fungi and decaying plant material. Be patient as it can take about a month to reduce populations.



The flies are only part of the problem. The tricky thing to control are the larvae hiding in the soil.

Image: The Contented Plant

Controlling Adults

- Yellow sticky tapes can be used to collect the adults so they don't continue to breed and spread. There are various shapes and sizes.
- Covering the soil surface with a one cm layer of coarse pebbles or sand may dissuade adult gnats from laying eggs. I've also used perlite with some success.
- Remove the top 2.5 cm of soil and replace with new soil.
- Commercial insecticidal soap sprayed on the plant and soil are effective. Spray must hit the flies in order to work.
- Schultz fungus gnat spray (containing Resmethrin) may be effective.
- Bounce® fabric softener dryer sheets (Outdoor Fresh Scent) repel fungus gnat adults. Greenhouse producers insert dryer sheets into growing medium.
- Lavender (*Lavandula angustifolia* Mill.), marjoram (*Origanum vulgare* L.), and basil (*Ocimum basilicum* L.) which contain linalool (3,7-dimethyl-1,6-octadien-3-ol).
- Sprinkling some oregano on the soil surface may help.



Sticky traps only catch adults. You still have to deal with the larvae.

Image: Amazon.ca

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FUNGUS GNATS (CON'T)

Controlling larvae

- Let the top five to ten centimetres of soil dry out completely between waterings.
- Re-pot and change the soil.
- Mosquito Dunks will kill the gnats in the soil. The active ingredient in Mosquito Dunks® is *Bacillus thuringiensis ssp. israelensis* (Bti), a bacterium that is deadly to mosquito larvae and gnat larvae. Water your plants with a "tea" made from Mosquito Dunk to kill fungus gnat larvae in the soil. Repeat as needed to keep the fungus gnats away.



Mosquito Dunks is readily available online and will kill the larvae lurking in the soil.



Yellow sticky traps are available in various shapes and sizes.

So there's a fly...

...and a gnat lands on its back.

The fly says, "Is there a gnat on my back?"

The gnat says, "Gnat at all."

The fly says, "That's the worst pun I've ever heard."

The gnat goes, "What do you expect, I just made it up on the fly!"

Find out More!

- [Fungus Gnats – Which Home Remedies Actually Work?](#)
- [Fungus Gnats Factsheet](#)



Uh oh...
I'm seeing
a lot of BUGS
in your garden
and I saw
CATERPILLARS
over there
eating your leaves!

THAT'S GREAT
NEWS!
We need more insects.
I'm gardening with
indigenous
plants to feed
those caterpillars.
I WANT
them to eat
my leaves!



Q & A

By Hariette Henry, Halton Master Gardener

There are some who believe that slow growing deciduous vines like clematis can be okay to grow on trees. However all too often the vines that we see growing on our large, mature trees are fast growing, native or invasive vines that have the potential to do a lot of harm.

The tree in the adjacent photo is covered in English ivy (*Hedera helix*), an invasive species first introduced to North America from Europe by the early settlers in the 1700s. English ivy is still widely available from nurseries in southern Ontario. It is an evergreen, climbing vine that attaches to the tree by sticky rootlets that develop along the stem. Vine stems can be up to 30 cm in diameter and can climb up to 30 metres into the canopy of the tree.

Ivy is very leafy and its dense leaves can shade out the sun around the base of the tree and in the canopy, slowing down photosynthesis and depriving the tree of essential nutrients. Vines that colonize trees are large and heavy, particularly when they are wet and snowy. The unnaturally heavy weight of the vines can pull down limbs and break branches.

Many vines that begin covering the ground end up forming a thick “blanket” covering the root flare of a tree. When you add falling leaves and rain to this, you get a piled-up layer against the root collar and trunk. Trapped moisture combined with decaying leaves unfortunately raises the potential for fungal and bacterial diseases.

“I have recently moved to an older neighbourhood in my community and I’ve noticed that many of the beautiful, large trees in the area are covered in vines. This looks quite nice however I’m wondering if this is good for the trees?”



Top: Mature tree covered in heavy English ivy vine,
Bottom: Dark green, waxy, white-veined leaves of English ivy.

Q & A (CON'T)

The plant (English ivy) reproduces by seeds contained in black, berry-like fruits. Birds eat the berries and are responsible for the long-distance spread of English ivy since the seeds within the fruit pass through the bird without damage. The plant can also reproduce vegetatively from broken or cut vines that root easily. English ivy can grow in dense patches in open woodlands, forest openings and forest edges. It can form a thick, evergreen, ground cover that suppresses native tree seedlings.

Other native and non-native vines that tree experts agree should not be left to colonize trees are native Virginia creeper (*Parthenocissus quinquefolia*), winter creeper (*Euonymus fortunei*), common grape (*Vitis vinifera*), and wisteria (*Wisteria spp.*).

To remove English ivy and any other invasive vines, use garden clippers to cut the ivy at the bottom around the entire trunk of the infested tree. Follow cutting by pulling out the vine's roots, eliminating as many as you can see.

Gently try to pull the upper portion of the stem out of the tree, but if it doesn't come easily don't force it. Leave the vine to die and dry out. When it's brittle, it will most likely fall down by itself. Several years of control may be needed as the seeds of ivy are unaffected by the above methods and seedlings can quickly recolonize the area.

There are other ways that humans abuse trees. We often prune them and even plant them incorrectly. We damage their roots and trunks with our lawn equipment. We stake them with guy wire well past the point of their needing it, and we pile up excessive mulch around their base which encourages rodent damage and bark rot. For a thorough list of the human misdeeds that can be visited upon trees have a look at [24 Ways to Kill a Tree](#) authored by Bonnie Appleton, Virginia Cooperative Extension, Virginia State University. *



Take a Closer Look!

www.TreeStewards.org

[The Tree Care Guide](#)

[Trees Canada, Tree Killers Resource](#)

[24 Ways to Kill a Tree](#)

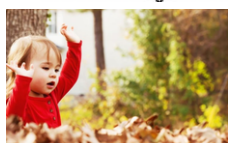
Top: This conifer is almost totally covered in ivy with few unbroken branches.

Bottom: The stump and mound are the remains of a tree that blew down onto the home of this property.

What's Growing On?



**Royal
Botanical
Gardens**



Early Years Play
Click [here](#)



Winter Wonders
Nov 23 - Jan 8 Wed to Sun



Family Fun Day
Nov 20

We're here to answer
your garden questions!

Answering your
Gardening
Questions!

Send us an [email](#). It's what we do best!

- Do you have a passion for gardening and sharing your knowledge? Learn more about [joining us](#).
- Interested in attending a meeting? Contact us at: [Halton Master Gardeners](#)
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**Conservation
Halton**



Education Programs
for students of all ages
to learn in the parks, at school,
virtually or at home.

Click [here](#)



Mon	Tue	Wed	Thu	Fri	Sat	Sun
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Check our [calendar](#) for events

There is so much to explore outdoors!

Hiking & Recreational Trails

[Home](#) » Hiking & Recreational Trails

Click [here](#) for activities at the Hamilton Conservation Authority

What's Growing On?



Ready for Rain:

DIY Rain Garden Workshop Series

It's hard not to be thinking about water management given the incredibly dry summer we have just had. Rain gardens are an excellent and relatively inexpensive garden addition, which can help you capture more rainwater on your property, whilst reducing stormwater runoff, increasing biodiversity, and improving the health of our lake and stream ecosystems.

Cost: FREE!

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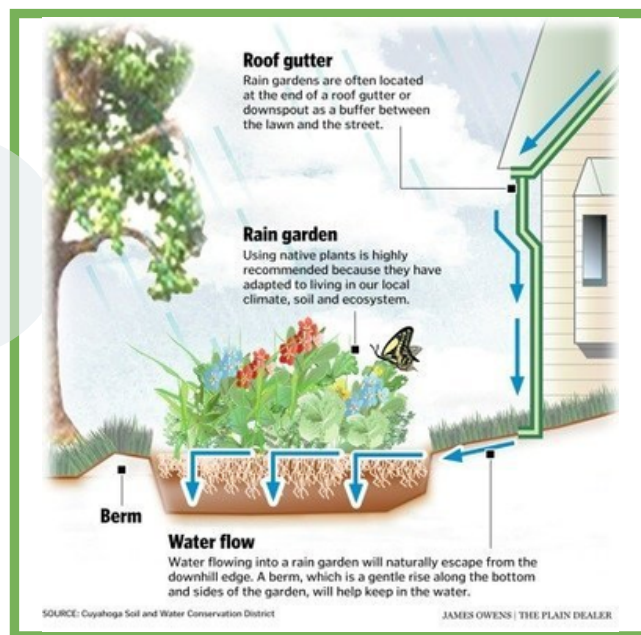
- **Virtual:** workshops in your home
- **In person hands on demonstrations** at the beautiful Joshua Creek Heritage Art Centre

You will be helping to build a demo rain garden to teach others about the benefits of rain gardens. Come spring you will be fully trained-up and ready to install your own rain garden. We will continue to support you, with helping hands, guidance and lots of encouragement.

When: Saturday, November 5th, 10am-12 pm

Where: Joshua Creek Heritage Art Centre - 1086 Burnhamthorpe Rd E, Oakville, ON L6H 7B2

Register at this [link](#).



How Do Insects Survive The Rain?



About Our Newsletter

Cross Pollination is published monthly from February to December and is written and prepared by our dedicated volunteers. Halton Master Gardeners are experienced gardeners who have studied horticulture extensively and continue to upgrade their skills through technical training. We strive to provide science-based, sustainable gardening information to the general public. The information in our newsletter has been verified by our volunteers to the best of our abilities, but given the scope of horticulture and science some concepts may not reflect current knowledge.

Your [donations](#) support our work!

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