

# Hostas

by Marcel Beauchamp

I love hostas. Some might even say I'm addicted to hostas, if that's possible. Anyone who has ever visited my gardens may very well attest to that. I have well over 350 plants consisting of 114 different varieties, at last count. Every year, my collection gets bigger.

Hostas take a good four to five years to attain their mature size. My first plantings under a Scots Pine near the house in 2004 now contain some very large and attractive specimens. I thought I had left enough room for them to grow and achieve their mature size, or so it seemed at the time, but looking at them now I realize that I will have to move some this spring, or risk having a few swallowed up by the larger varieties like Blue Angel, *sieboldiana* 'Elegans', Frances Williams and *montana* 'Aureomarginata'.



The Scots Pine bed in 2005



The Scots Pine bed in 2008 – filled in quite nicely with the plants not yet too crowded.



In 2009 the plants are starting to crowd each other.

The main part of my shade garden, on the other side of the house behind the old shed, is the site of many hostas planted over the last four years. I must say I have a preference for large hostas. It's a good thing I have the room for them, because giants like Komodo Dragon, T-Rex, Mr. Big and Lady Isobel Barnett can spread to their heart's content. Of course I also have the old standbys there too, like Sum and Substance, Blue Angel, Frances Williams, and of course sieboldiana Elegans.



A collection of large hostas in my main shade garden

Over the last two years, I created two new hosta beds which I planned more judiciously, taking into consideration their eventual mature size including width and height. Here's hoping I did a better job. Only time will tell.

Hostas continue to be the most popular perennial in North America. They've retained this distinction for many years. Varieties and hybrids number in the thousands, with new ones introduced each year. There's a hosta for every taste. With careful selection and attention to planting sites, soil conditions and moisture levels, hostas can grow in deep shade to dappled shade and even full sun.

I have two favourites, *sieboldiana* 'Elegans' and *montana* 'Aureomarginata', and I can't seem to decide which I like best.



The large blue hosta on the left is *sieboldiana* 'Elegans'; the bright variegated hosta in the centre is *montana* 'Aureomarginata'



A group of hostas in a semi-naturalized garden setting; the brightly variegated hosta in the centre is *montana* 'Aureomarginata'

## Growing Conditions

### Light

Most hostas require some degree of shade to be at their best. At the least, they should be shaded from the strong afternoon sun. Morning or evening sun can benefit most varieties. As previously mentioned, some hostas will grow in full sun, provided they have adequate moisture at their roots. Otherwise, dry soil conditions and hot sun can be detrimental to them, causing their leaves to burn and dry up, and may lead to the loss of a plant.

Most sun-loving hostas have been bred from a Chinese species which grows primarily in open fields, *Hosta plantaginea*. This species, with shiny green leaves and large, scented white flowers, is available at nurseries in the form of several cultivars, the most popular being *plantaginea* 'Grandiflora'. This hosta sports large, white and highly-scented flowers carried on tall spikes called scapes. These characteristics have been passed on to many hybrids, including Guacamole, Stained Glass, Avocado, Fragrant Bouquet, Summer Fragrance, Fragrant Dream, and Invincible, among others.



The flowers of Guacamole are large and carry a heavenly scent

Gold Standard, a very popular and beautiful hybrid, will tell you when it gets too much sun by changing the colour of its leaves. Its leaves have a green margin with a chartreuse to gold centre when grown in partial shade. Too much sun will turn the leaves white as the summer progresses and result in holes being burned through the thin cells of the leaf centre.

## Soil

Hostas perform best in a light, open soil with lots of organic matter. The organic matter provides much needed moisture retention and good drainage. As it decomposes, organic matter also provides nutrients for growth. Needless to say, it should be replenished on a yearly basis if you're to have large, beautiful, healthy hostas. You can use your own compost or buy bags of prepared compost or manure. Aged manure can be had for next to nothing if you know where to get it and is great for preparing beds and making your own planting mix. Fresh manure is too strong (I'm not talking about the smell) and can burn roots. At any one time, I might use compost (my own), aged manure which I obtain from local farmers, and leaf mould which I make every year.

## A Word About Leaf Mould

Leaf mould sounds like a disease, doesn't it? Something that could destroy plants. But it's just the opposite. Leaves are, unfortunately, a highly underused and overlooked source of excellent organic matter. Many people bag their leaves and dispose of them every fall through their township disposal service. Last fall I collected 217 bags of leaves which I am turning into rich, black, organic 'gold'. Pound for pound, composted leaves will provide more nutrients than manure, more water retention than peat moss and greatly improve overall soil quality. I simply construct a long pile approximately five to six feet wide, four to five feet high and as long (length-wise) as I have leaves. As I build the pile, I throw in the occasional

shovelful of soil, compost or manure to provide the necessary beneficial bacteria to start the decomposing process, as well as sprinkling in some grass clippings to provide the nitrogen necessary for the bacteria to multiply. Care must be taken not to pile grass clippings in thick layers or they will mat and compact and create an oxygen-free zone in an otherwise aerobic environment. They simply will not decompose or take much longer to do so. Shredding the leaves with a lawn mower will hasten decomposition. This is also an excellent opportunity to mix your grass clippings with the shredded leaves. By spring, this mixture will be decomposed enough (you will still see some leaf parts in it) to use as a top-dressing on beds or use in a planting mix for your hostas throughout the growing season. As summer progresses, the decomposition process continues and by the fall you should have leaf mould ready to use as a top-dressing again. I generally don't bother turning the pile as I usually don't have time and it's a lot of work. I like making compost the easy way.

## Bed Preparation

When I prepare a new hosta bed, after getting rid of the existing grass or other vegetation (it's up to you how you want to do this – there are many ways, from using Round-up, to digging up the grass or covering it with layers of newspapers and organic matter), I like to spread a generous layer of compost or aged manure. I won't till it in, for many reasons. First and foremost, it's too much work and tree roots get in the way. I like to disturb tree roots as little as possible. You can put 6 to 8 inches of organic matter over tree roots without any detrimental effects. Besides, earthworms will gladly do that work for you. They will come up and work that organic matter into the soil free of charge (it's food for them, so you're actually feeding them and they in turn will provide rich castings to feed your plants). The bed is now ready to be planted with new hostas.

## Planting Mix with 'Secret' Ingredient

Before I begin planting, I like to create a rich planting mix which I incorporate with the soil from the planting hole. This mix should consist of any organic matter you have on hand, whether compost, peat moss, aged manure, bagged compost or manure, or even soil-less mixes. I then add some alfalfa pellets which I purchase from feed stores or nurseries. Alfalfa is not only rich in nitrogen, which is essential for strong leaf growth, but contains a powerful plant growth hormone, triacontanol, which stimulates growth in one season by two or three times. The pellets can be mixed with the planting mix or simply broadcast (one handful per hole is sufficient) into the hole at planting time. Alfalfa pellets can (and should) be spread onto existing beds around hostas in spring just as growth starts to provide a boost in growth. You can also broadcast some alfalfa pellets in your compost or leaf mould pile.

## Mycorrhiza

I like to use another secret ingredient – mycorrhiza – which I sprinkle into the planting hole. Mycorrhiza is a naturally occurring fungus which attaches itself to plant roots to establish a symbiotic relationship. Mycorrhizae greatly facilitate the absorption of nutrients and water by plants; in return, it obtains carbohydrates from the host plant for their own growth. Spread enough mycorrhizae granules to cover all surfaces of the planting hole (one or two tablespoons should do it) to ensure contact with the hosta roots. The only mycorrhizal product that I've been able to locate in the Ottawa area is Myke's, which contains an endo or arbuscular mycorrhiza, *Glomus intraradices*, which is ideal for most perennials and trees and shrubs. If you want to know more about mycorrhizae, refer to my article on this website "Soils, Fungi and Plant Partnerships"

When planting a new hosta, I like to remove the soil from the roots and gently spread the roots into the planting hole. This will ensure contact with the mycorrhiza granules. Once you backfill with the alfalfa-enriched mix, make sure you water thoroughly. When I've finished planting all my plants in the new bed, I mulch it with shredded bark mulch. I don't use landscape fabric and I highly discourage anyone from using it as it creates an impenetrable barrier between the soil and the mulch. This runs counter to the principles of living soils. The idea behind using mulch is not only to suppress weeds and retain moisture, but to also provide a source of decaying organic matter over the long term to continually replenish organic matter as it is consumed by soil bacteria.

## Slugs and Snails

Anyone who's ever grown hostas knows that slugs and snails, left uncontrolled, can make hosta leaves look like Swiss cheese by the end of summer. Gardeners can get extremely frustrated when it comes to controlling slugs and snails. Controls abound, from natural and home-made, to commercially available preparations. Egg shells and coffee grounds are promoted as natural barriers which keep slugs away from plants. Copper wire barriers around plants are used to provide a mild shock to slugs when they try to cross them. The problem with these kinds of controls is that they don't take into consideration slugs or their eggs which are hiding around and in the hosta crown.

Beer is touted as an effective control for slugs. I've tried it and it works. However, it gets messy after a while, having to clean up the saucers full of old beer and dead slugs – ugghh!

Salt works quite well. I've spent many nights bent over in the garden sprinkling slugs with salt. It is somewhat satisfying as you get immediate results. But you also get a sore back from being bent over for long periods of time. And I'm not too sure about the effect of all that salt on hosta leaves. Handpicking slugs and putting them in a dish of soapy water or salt also works very well – but again, the same result – sore back.

Commercial baits can be quite effective. However, make sure you pick the right one. The traditional (chemical) bait consists of metaldehyde. Metaldehyde seems to work well but is extremely toxic to pets, small mammals which may actually be slug predators in your garden, birds and even children. So it is highly recommended to hide it in containers which pets and children can't access. But are you willing to chance it? Are you willing to also kill off natural predators like chipmunks, toads, birds and snakes?

A few years ago, a new bait product was introduced which contains iron phosphate. Iron phosphate poisons slugs and snails but is non-toxic to other non-target organisms. It also remains effective when wet for a couple of weeks. It eventually breaks down in the soil into iron and phosphate which can be absorbed by plants as nutrients. So check the ingredients carefully when you buy slug bait. Remember, metaldehyde – NO; iron phosphate – YES!

One technique which I found very effective is diluted ammonia solution. I discovered this a couple of years ago and since using it religiously, one area of my shade garden was completely slug free last year. You need to go out almost every night (slugs will also be out on cloudy, rainy days and so can you) but the nice thing is you can use it without bending down – so no sore back. Simply mix 1 part household ammonia with 9 parts water (this seems to be an effective dilution rate; stronger dilutions have been recommended but what's the point?) and apply it with a spray bottle with the nozzle adjusted to provide a jet (like a water pistol). It's extremely effective and satisfying as the slugs start dying immediately on contact. The good news is that it doesn't harm plants. As a matter of fact, the ammonia

breaks down and provides nitrogen as a foliar spray. I've found no evidence that it is harmful to garden predators like toads. I've been told that this solution can be applied around the base and crown of plants in the spring as growth begins to kill eggs and slugs as they awake from their winter slumber. Can't wait to try it this spring!

## Hosta Virus X (HVX)

Just when you thought your worst problem with hostas was slugs, a new threat comes along, this one more devastating than slugs because there is no cure for it. Hosta Virus X (HVX) started appearing a few years ago and is now quite widespread. The plants don't die from it but become terribly disfigured and stunted. Once a plant has HVX, the only thing to do is to discard it in the garbage, not your compost pile. And don't even think about using Round-Up. I pulled out a badly infected Paul's Glory late one summer, sprayed it with Round-Up and let it sit on top of the soil with roots exposed over winter. Come spring, it started growing again. Hostas are tough plants.

HVX can be dormant in a plant for several years before surfacing. That Paul's Glory I pulled out had been growing symptom free in my garden for three years and then suddenly, symptoms appeared in full force.

Early symptoms can go unnoticed as they are quite subtle. They usually appear as irregular mottling between veins or as "inkbleeds" along the veins. More severe and advanced symptoms disfigure the leaves by causing extensive areas of collapsing tissue, giving a leaf a corrugated and discoloured appearance.



'June' with inkbleed symptoms





'Sun Power' with inkbleed symptoms



'Blue Cadet' with inkbleed symptoms



'So Sweet' with mottling symptoms



'Sum and Substance' with inkbleed and extensive collapsed tissue



'Striptease' with inkbleed and extensive collapsed tissue

The virus is contained in the plant's sap and is transmitted from plant to plant through tools like knives or secateurs or even your fingers when you remove flower scapes or leaves. Ideally, all sap should be washed off your tools before you go to another plant. Thoroughly clean your spades and shovels as they can be carriers of infected sap from hosta roots which can be spread to other plants. Do not replant in the same hole until the following year if you've removed an infected plant. If you think your plants aren't infected, then carry on as usual.

The best prevention is to avoid buying infected plants or those you suspect might be infected. I've seen infected plants at box and chain stores often. They are bought by unsuspecting clients and sold by people who know nothing about this disease. Reputable nurseries that specialize in hostas go to great care to avoid HVX-infected plants. They buy only from reputable producers whose stock is known to be virus free. Box stores and chain stores often buy large-scale from large producers in Holland, where it is believed the spread of the virus originated. Many producers in Holland are now trying to avoid propagating and selling HVX-infected plants but many still have a 5% tolerance.

If you'd like to learn more about HVX, go to the Hosta Library website at <http://www.hostalibrary.org/firstlook/HVX.htm>

## Conclusion

I hope I haven't turned you off growing hostas, with talk about HVX and slugs, because growing hostas can be quite rewarding in spite of these small pitfalls. There's nothing like the joy of realizing one day that the small hosta you planted five years ago has now grown into a large majestic plant with a spread of five or six feet.