

Nemesis - Bugs/Invasives/Disease

April:

Garlic Mustard (*Alliaria petiolata*). April is the perfect time to eradicate this nasty pest as it stands well above most of the woodland vegetation, about 18 – 36”, and is flowering, making it easy to spot. It is a cool season biennial with stalked, triangular or heart-shaped, coarsely toothed leaves that smell of garlic when crushed. The white flowers are in clusters with four petals in the shape of a cross. Its habitat is moist, shaded woodland associated with calcareous soils, making Boxerwood a perfect host. This plant seeds prolifically. I have read that over 5000 plants can grow in one square meter. Garlic mustard out competes our native plants by monopolizing light, moisture, nutrients and space. Recent studies have also shown that it has allelopathic tendencies, inhibiting the growth of surrounding plants by releasing phytotoxic chemicals in the soil. As with many invasives, it is an exotic, and was brought to this country in the 1860s from Europe as a food source. It is edible. Garlic mustard pesto, anyone? How to get rid of it? Right now, I am pulling it as it does come up easily. Hannah’s After-School kids have been a big help and have been competing to see who can pull the most. The plant spends its first year as a rosette of leaves and rapidly develops into a mature plant the following spring that flowers, produces seeds and dies by late June. The seeds of garlic mustard can remain viable for up to five years, so eradicating it is a long-term project. Be vigilant.

May:

Powdery Mildew: With all the rain we have been having in May, you may start seeing what looks like baby powder on your plants, especially things like beebalm or phlox. This is powdery mildew, a fungus that can cause foliage or buds to drop. The April issue of *Fine Gardening* (my favorite gardening magazine) has this home remedy: spray the infected plant with a solution of 1 part whole milk to 2 parts water every week or two (but not on edibles as milk spoils). Scientists think that the antimicrobial proteins in milk are what make this remedy effective.

Multiflora rose. This is one nasty invasive. There are canes at Boxerwood that are 15’ long. This rose is a thorny, perennial shrub with arching stems. Beginning in May in June, clusters of snowy white to pink, fragrant flowers appear, each about 1” across. During the summer, small bright red hips form and turn leathery, hanging on throughout the winter. This might be the only advantage to multiflora rose as the branches look nice in holiday arrangements. This rose will grow just about anywhere. You’ll see it in fields, alongside streams, and in dense woods. Why is it a threat? It is extremely prolific and can form impenetrable thickets that choke out native plant species. Where did it come from? It was introduced in the late 1860’s from Japan as a rootstock for ornamental roses. In the 1930’s the US Soil Conservation Service promoted it for use in erosion control and as a “living fence” and the plant was even distributed to landowners free of charge for use as wildlife cover and food for birds. Here at Boxerwood, we are digging it out when possible. Glyphosate (Roundup) can be used to paint fresh stumps or regrowth. Multiflora rose is also host to a native viral pathogen, rose-rosette disease, spread by a tiny mite and a seed-infesting wasp. It does eventually kill the plant, but is a danger to other rose species and cultivars. **Be sure to sterilize all tools after working with multiflora rose.**

June:

New biological pesticide - Spinosad: This is the time of year when it seems as if bugs are everywhere, especially for those of us with vegetable gardens. Ordinarily, I am not too fussy about bugs, but when it comes to vegetables, I’d rather be the one eating them. There is a new biological pesticide on the market that I have been hearing raves about: spinosad. It is very similar to Bt (although it lasts twice as long), in that it is derived from a species of bacteria discovered in soil samples. It is especially effective on caterpillars, but will work on other leaf-eating insects such as Colorado potato beetle (my enemy), diamond-back moth, cabbage looper (another of my enemies),

cabbageworms, corn borer, fall army-worm, corn earworm, hornworms, thrips and leafminers. It does spare a number of beneficial insects and is toxic to bees when wet, but relatively safe once it dries. How does it work? It is a nerve poison and a stomach poison and will kill the pest that it contacts and those that consume it on foliage they eat. Spinosad over stimulates nerve cells that result in paralysis from which the insect cannot recover. Its effectiveness lasts about a week. Spinosad is the ingredient in a number of EPA-approved products, so read the labels. You can bet I will be trying it this summer. I had almost given up on growing potatoes. My hat is off to commercial organic farmers!

Japanese Stiltgrass (*Microstegium vimineum*) This nasty invasive is an annual grass that germinates in the spring and grows slowly through the summer reaching a height of about 2—3'. Tiny flowers are produced in late summer and dry fruits are produced soon after. It loves shady moist areas and will quickly choke out native species. It is, however, easy to pull out as it is very shallowly rooted. Pull in mid to late summer when the plant is tall and also pulling then will prevent newly exposed seed from germinating. You can also mow it in late summer. It is an annual and will die anyway, but mowing it will prevent it from going to seed.

July:

Squash bugs attack plants in the cucurbit family—squash (obviously, and both winter and summer squash), melons, and pumpkins. Pictured is the adult squash bug surrounded by baby squash bugs, called nymphs. The adult insect, as you can see, looks a lot like a stink bug and causes damage by sucking the plant's juices. If one day your squash plant looks lush and healthy and the next day is yellow and wilted, the culprit is probably squash bugs. The little buggers (pun intended) lay thousands of eggs which in turn create thousands of squash bugs. Row covers early in the season will help, but mostly I just check the plants daily for the eggs. I read of a neat trick for removing the eggs from leaves. I usually just scrape the eggs off (and be sure to look under the leaves as well), but the suggestion was made that using duct tape to pull off eggs was a much easier solution—and you'll bet I am going to try it. Other organic solutions include spraying the plants with water, waiting a couple of minutes for the bugs to come out and dry themselves and then catch them and drop them in a pail of soapy water. Another solution is to place a piece of board or a shingle next to the plant. The squash bugs will huddle under the board at night and then you can scoop them up first thing in the morning before they get active. I have tried this one with little success. There just seem to be too many of them! Pesticides (which I avoid) don't even necessarily do the job either because the bugs hide everywhere—under the leaves, on top of the leaves and in in the crown of the plant. It is hard to saturate a large squash or pumpkin plant. I have had luck with starting a late crops of squash, usually right after the bugs have gotten my first crop of squash, sometime in July. In the fall/winter, make sure your squash beds are perfectly clean, as the insects will overwinter. They are a menace!

August:

Blossom end rot on my tomatoes. If you have grown tomatoes or peppers, you have probably experienced this problem. Symptoms appear at the blossom end of the fruit (the end opposite the stem). A small water-soaked spot appears, which enlarges and darkens as the fruit ripens. Then the spot dries out and becomes flattened, black and leathery in appearance. Usually, environmental factors cause this disease. It doesn't spread from plant to plant. This year I think it has been the combination of wet and dry—dry weather interspersed with deluges. Blossom end rot has been associated with a calcium deficiency. With too much water or too little water, the roots are unable to take up enough calcium and moisture for the developing fruit. Tomatoes have large root systems, so don't cultivate too closely. Use a fertilizer that is low in nitrogen, but high in superphosphate (4-12-4 or 5-20-5). Some tomato cultivars are more resistant than others. My 'Celebrity' tomatoes look fine. By the way, if you remember my rant about **squash bugs** last month? This summer, I have had very little trouble with them. Go figure! In fact, I planted extra squash in anticipation of losing plants to the pest and I have been inundated with squash. Now the squash borers are attacking my plants and I am actually glad. There is only so much squash we can eat or give away.