

#21 August 2020

Green Thoughts

Conversations and ideas about growing at The Spring Gardens

Gaul, as we know from Julius Caesar, is divided into three parts. The Spring Gardens, not being as extensive, is divided into just two parts – the individual member plots on the one hand and

Composting on a bigger scale

everything else on the other. *Everything else* consists of the periphery and the central common area. During the course of the year both the member plots and *everything else* produce a lot of biomass.

More on the periphery

Some biomass is for consumption – tomatoes, beans, eggplant, cucumbers, squash, herbs. etc – the non-consumable part of the biomass is for composting.

It is current Spring Gardens policy that individual plot holders should deal with their own plot-produced biomass. It is strongly recommended that everything in a plot that is not to be harvested should be composted on the plot holder’s site. Green Thoughts has written about this before (and below).

But what about the biomass of *everything else*? Green Thoughts had the opportunity to talk to Spring Gardener Luke Keele, the maestro of the *everything else* compost system. At its core is a bin to create an Aerated Static Pile located on the graveled area of The Gardens near North Street. The bin is that unlabeled, sturdy-looking wood box 6 feet wide, 4 and a half feet front to back and



Wooden bin (left) housing the aerated static pile with open bins (right) for gathering raw material and storing finished product

about 3 and a half feet high. On the north side of the box near the bottom are two large diameter PVC pipes that extend horizontally into the box (see next page). The parts of the pipes inside the box are perforated so that fresh air (which is about 20% oxygen) pumped into the pipes by a fan on the outside aerates the box. Inside on top of the pipes is a layer of dried leaves to evenly distribute the air. On top of the leaves is the pile of

biomass from the *everything else*: lawn clippings, leaves, weeds, dead plants. On top of the pile is a layer of previously composted material. The top of the box is then loosely covered by a tarp. Perhaps the term “aerated static pile” now makes sense. Once the contents are in place and have sufficient moisture, aerobic bacteria indigenous in all soil, break down the materials of the pile by enzymatic activity. The pile is static – it doesn’t have to be turned over. As the bacteria do their work they generate a lot of heat and the pile starts to rise in temperature. The aim is get the pile

up to about 130° F for a few days, hot enough so that weeds and weed seeds are decomposed. The volume of the pile decreases to a fraction of what it started at. Then the pile is allowed to “cure”. It cools down to ambient temperature. More difficult material to compost like cellulose is broken down by resident fungi. After a month or 2 the remaining material is sifted and the result is very good, sweet-smelling soil. The Gardens don’t have to pay a contractor to take the raw biomass away. We are all the richer for it.



Back side of wooden bin with fan (green) that pumps air into the pile via white PVC pipes at the bottom.

This is the first year for the compost system. Luke said the first batch went well, reaching that weed-killing temperature of about 130°. We are now on the second batch but the pile didn’t get much above 100° F even though the outside temperature reached the 90’s most days. Luke suspected that the pile wasn’t wet enough. He watered it more and it heated up. According to the company that sold us the compost system, “it is always better to have a pile that is too hot than a pile that is too dry.” The maestro is still learning.

As an individual plot holder I have been composting for years in my own plot in a most elementary way. I take my waste biomass, chop it up as much as I can, place it in a hole in a corner of my plot, cover the stuff with soil and wait. When it looks dry on top I water it. Usually the material gets nice and warm and it composts. As a result I have been getting wonderful rich new soil for years. Other gardeners have small commercial composters that also do the trick and look more elegant.

The Bees

Spring Gardeners Karen and Michael have induced a new Queen Bee to hold court inside the hive at the northeast corner of TSG. There is now a resident population of honeybee foragers pollinating our flowers and gathering pollen and nectar from around the Gardens and bringing it back to the hive. The honey bees are not as plentiful as in previous years. We’ll see if that is better or worse for the survival of the hive.

Meanwhile bumble bees, very good foragers themselves, are reliably visiting the TSG in their usual numbers. [It is a mystery where they come from.] A recent scientific report (Pashalidou et al.) in Science 22 May 2020 from a team in Switzerland and France showed that hungry bumble bees will damage the leaves of plants that have not yet flowered. Shown on the right are bumble bees using their proboscis (A) and mandibles (B) to damage plant leaves which they do in only a few seconds. The damage to the leaf is shown in (C). The effect is not



enough to kill the plant or even individual leaves but it induces the plant to speed up flowering by around 16 days. Who would have thought it?

Tomatoes and other veggies

It has been an unusual year for growing tomato plants. I don't usually start them from seed because I don't have good enough sunlight and warm conditions at home. So I buy plants. However, because of the corona virus I didn't travel far to get any plants – the hardware store on Fairmount Ave. I bought 2 plants of sun gold cherry tomatoes. They are sweet and prolific. One was very good, as usual. But one was mislabeled so I'm not sure what it was. I tried Candyland tomatoes. They are very sweet but as big as medium size blue berries. I tried Rutgers, a heritage variety. It survived the cold snap but afterwards withered away. It was the only tomato plant that completely failed. I'm thinking the cold snap lowered its resistance to various tomato pests. Since it is an old variety it probably wasn't bred to fight off various pests. I kept the runt of a tomato that was almost done in by the cold snap. After a plea by Pat Schuyler, a TSG alumna, I did not euthanize it and it did suddenly get a growth spurt. It now has tomatoes on the vine. But we haven't eaten any yet. I bought what I thought was a plant to produce plum cherry tomatoes but I misread the label – instead, it produces plum tomatoes! But they have turned out to be excellent - quite sweet and we have used them for both eating raw and cooking.

Then came the torrential rains. The Schuylkill flooded its banks twice and the tomato plants at TSG got overwatered. Many tomato plants have lots of brown leaves. They are likely to recover but it has been a tough year to be a tomato plant.

We have had the usual bounty of zucchini flowers over many weeks. We stuff them with hot pepper cheese, cover them with garlic-infused batter and then fry them - *fiori di zucca*. Heavenly. We also batter-cover sliced onions and sliced sweet peppers. Yum.

I have had only a few eggplants. What else is new? I noticed that gardening neighbor Jack has had many more eggplant fruit but he has spaced the plants much further apart. Important? Adequate spacing also seems useful for pole beans and gita beans. If you give them more room they produce much bigger crops. And you can easily spot if morning glory vines are sneaking in among these tall bean plants competing for space and sunlight.

Jack's eggplants



Ann Northrup reports

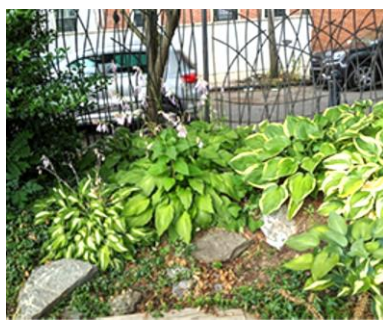
A Gardener's Biggest Challenge: A Tour of the Shade Garden and the Native Plants Garden with Doris Stahl

Doris says her biggest challenge as a gardener is finding the plants that will thrive in the spaces that she has, or where to put a beloved plant where it will be happy. That is why, if you have a plant you would like to donate, she asks that you consult with her first, about where to plant it.

In the last Green Thoughts issue we examined the herb garden in the Northwest corner of The Spring Gardens. We start our foray just where we left off, at the corner of 19th and North Streets. Here the pines of Vista Hill create some deep and very welcome shade on summer afternoons. For this special spot, Doris chose shade-loving plants: Solomon Seal, Hosta (or Plantain Lily), Sweet Woodruff, and Heuchera (also called Coral Bells). She reveals her long-term design plan: to make them look as if they were flowing down from the piney shade in the manner of a waterfall. The varied lavender, chartreuse and bright green plants are clearly delighted with the conditions and look terrific.

As we move to the east we come to another special area to the West of the North entrance gate. It is anchored at the gate by a grand set of tall shrubs that were a generous donation by Parks and Recreation some years ago when the perimeter gardens were just a gleam in our eyes. Doris remembers, “They were such big specimens that we had an established garden within 2 years!” And here, in this decidedly sunny area, well away from the pines, on a single Good Friday, 3 years ago (amazing), she planted a garden of sun-loving native plants that would be able to thrive. As we approach she exclaims with surprise, “We had such a mild winter! As a result the plants are doing so well... it looks like we are in Italy!” Here we see a 3-foot high hedge of purple Perovskia, or Russian Sage together with Rudbeckia, a 12-foot wide stretch of Black-eyed Susan that looks great with the feathery purple Sage. Doris points out however, that it has overwhelmed many other interesting plants even though we constantly cut it back. “People don’t realize how complex it is to keep up with this!” And of course, the pine trees will keep on growing over the years and shading out more of the native plants from the afternoon sun.

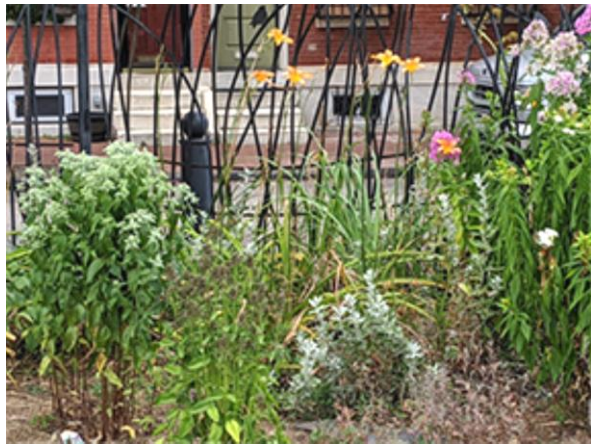
There are many lovely contrasts in the Native Plants section: the brilliant yellow-green Amsonia with the small burnt orange Cosmos flower and orange-berried Spice Bush, the deep pinky lavender Phlox with the yellow Daylily. I can’t wait to see the Asiatic Lilies (a lovely donation, even if they are not native) and anemone in bloom next year, to the left of the magnificent, tall Joe Pye Weed in the photo. To its right is a variety of pink Primrose. Doris comments that this dried out looking plant flowered back in the spring and needs to be cut back. You can see that where it has been, the foliage is green again. More challenges. Choose a cooler day and come take a look!



Left panel: Heuchera & Ajuga (shade); Center panel: Hostas (plantain lily) (shade);
Right panel: Rudbeckia & Russian Sage (sun)



Left panel Anemone, Joe Pye Weed, Rudbeckia, Phlox Paniculata (sun);
 Center panel: Amsonia & Cosmos (sun), Spice Bush (sun/shade);
 Right panel: left foreground Purpletop Vervain, center foreground Yarrow top right Ninebark flowering shrub (sun)



Left to right: Pycnanthemum (Mountain Mint), Betony, Daylily, Artemisia, Silver Queen, dried out Pink Primrose, & Phlox (sun)

Counterclockwise from top left: Daylily, Artemesia, White and Pink Phlox (sun)

Ann Northrup is not only a gardener but an artist/muralist as well. Her murals are at various spots around the city. Close by, is a wonderful Northrup mural entitled Our Garden. It is located on 21st St just south of Mt Vernon St.

Public service announcement from the League of Spring Garden Voters.

If you or someone you know is not registered to vote please do so. It is easy. As you surely know, this coming election is extremely important. You can register online by going to

<https://www.philadelphiavotes.com/en/voters/registering-to-vote>

The last date to register to vote for this 3 November’s election is October 19. But it is a good idea to start the process early. Please.

If you are already registered but want a mail-in ballot, it is easy and secure. Apply online at [votespa.com](https://www.votespa.com) Voters who apply now will receive their ballot in late September.

Signs of the times



Please send your ideas, thoughts, suggestions and observations to:
e.gruberg@temple.edu
that address can also be used for getting on the mailing list for **Green Thoughts**, or getting off.

Prepared by Ed Gruberg

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