

Plant Lovers Almanac

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Farmers and gardeners always feel that the current season is unusual, but this year certainly qualifies as a doozy. We are wet this growing season, with a record June for the Akron-Canton Airport in June of 9.14 inches. An additional story is the cool, with temperatures flirting with the upper 40s this week. While on a conference call this Tuesday at around 10:15am, I checked the weather in Doylestown: 57F. This is pleasant for nighttime sleeping but not so much for swimming-pool owners. Lawns are still green through almost all of the state except for a few areas such as selected Toledo-area sites where bluegrass is now dry and dormant. Tomatoes are mostly still green or worse yet setting poorly as the pollen tube from the pollen germinating on the stigma running out of gas in the cool and often not quite making it to the ovules to deliver sperm nuclei to the unfertilized eggs. No fertilized eggs, no seeds, no ripening ovary around the seeds, no fruits, no tomatoes! Or at least, yes we will have less tomatoes.

Circumpolar and polar vortexes arrive from time to time and certainly explain some of our weather this year. Weather, like politics is of course local, and while we had a cold winter and cool summer, globally warming continues and much of the U.S. and the globe has experienced a hot summer. Weather like politics also is a conversation starter, sometimes boring, but never from the tongue of Mark Twain with his reminder that: "*Climate is what we expect, weather is what we get*". Better yet is Dr. Seuss who puts it ever so well, nearly clearly as a bell:

*"The storm starts, when the drops start dropping
When the drops stop dropping then the storm starts stopping."*

And now for some garden questions from recent programs, mailings, and phone calls:

Q. - What is a good red-leaved tree to replace a purple leaf plum?

A. – Purple-leaved plums did fare poorly this winter and many are dead or declining in landscapes, even more so than usual for this plant that often fails in northeast Ohio, especially in soils with less than excellent drainage. There are many options from purple-leaved redbuds such as 'Forest Pansy' to tricolor beeches with pink and purple patches on the foliage. Of course there is a wide range of Japanese maples, 'Crimson King' Norway maple, purple-leaved smokebush, and several crabapples, from 'Purple Prince' to 'Royal Raindrops'. All have their own set of plusses and minuses.

My favorite, though, is a relatively new cultivar of black gum (also known as sour gum or tupelo), *Nyssa sylvatica* 'Wildfire'. This upright tree does not have completely red leaves until fall, but it has new growth with shiny red color which accents the glossy green foliage of the rest of the plant. At OSU's Sequest Arboretum in Wooster, this splash of fiery new growth is very attractive on 'Wildfire' trees planted amidst the loge area of the amphitheater hillock in the arboretum. Black gum is a native tree, loves wet sites though is tolerant of drier habitats, has few pests, and in the fall, all of the foliage turns a bright scarlet almost until the end of the football season before gray winter weather arrives.

Q. – What are the bizarre ferny growths on a few plants in the Rose Garden of Legend and Romance at Sequester Arboretum?

A. The ferny or “mossy” growths, are the mossy rose gall, also known as a pincushion gall. These abnormal growths (galls) are caused by a wasp, *Diplolepis rosae*, that was given its Latin name way back in 1758 by the founder of the Latin binomial system for plants and animals alike, Linnaeus himself. The wasp lays eggs in Spring on un-open buds of certain roses, then turning on and off genes of the plant tissue, causing the plant to produce the weird, hairy, ball of moss-like growth you see. The galls start out green and then turn to pink then crimson then reddish-brown as the season progresses.

Inside chambers of the gall (remember this is plant tissue that was engineered by its interaction with the wasp), eggs hatch to larvae, eventually pupate and emerge into adults by the next spring to restart the cycle. Also inside the gall are an entire community of organisms, from parasites and parasitoids that feed on the parasites, and bacterial and fungal fellow travelers. Here is Nature in all its oft-hidden glories. As for the rose, the galls cause little to no health problems.

Q. – There is a foamy growth on the mulch in my rose garden. Will it hurt the roses?

A. - Speakest thou of the dog vomit fungus, for it looketh most vile! Actually it is a plasmodial slime mold (*Fuligo septica*) instead of a fungus, but let us not quibble. And lest we cast any more aspersions, let us break fast together and call it by another name (especially during periods when it turns yellow): scrambled egg slime. It lives on wood and other organic matter and thrives in wet mulches. Its plasmodial lifestyle of multinucleate blobs living on the undecomposed nutrients in mulch sometimes worries gardeners but it is living saprophytically on dead organic matter rather on living plant cells.

Sometimes doubters claim this amoeboid-like organism is parasitizing plant stems, but it is simply living on organic matter splashed up onto the stems. One of its lesser known talents is as a zincophile: *Fuligo septica* is able to tolerate levels of zinc and other metals that would, well, sink almost everything else living. This is due to fuligorubin A which chelates zinc, converting it into forms unavailable for uptake. The scrambled egg slime causes no damage to your garden unless you are a rosarian inviting the club to your garden.

If so, simply smear it around with your shoe; you will note that the millions of spores beneath the covering will simply fly away, hopefully to your neighbors! Seriously, it is everywhere and only occasionally develops colonies if there is plenty of organic matter available. It is an allergen for some though, and not so fun for those with asthma.

Enough of dog vomit as well as mossy rose galls! Roses are beautiful even though the June and July rains were quite a breeding ground for rose black spot fungal disease. As Shakespeare reminds us in Sonnet 35:

*“Roses have thorns, and silver fountains mud;
Clouds and eclipses stain both moon and sun,
And loathsome canker lives in sweetest bud,
All men make faults.”*

So go forth and see and smell and enjoy more roses. There are still many in bloom and others with quite attractive rose hips (rose fruits) throughout northeast Ohio landscapes and parks and for sale in garden centers.

