National Pollinator Week (6/16 – 6/22)

All About Plants and Pollinators

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There is so much information out there on pollinators, so I thought I would approach pollinator week a bit different this year. Of course, everyone knows about the bees and butterflies, but let's not forget about one of the original pollinators; the beetle. Well before bees and butterflies, the beetle was tasked in finding and spreading pollen from flower to flower. However, many of these flowers were adapted especially for beetles since bees had not evolved at the time. Magnolias and the family Magnoliaceae, are a prime example of this still in use today. The large opened flowers, full of protein rich pollen and a sweet or spicy scent, make for a smorgasbord for tons of beetles (Figure 1 & 2).

Figure 1. Ohio Native Cucumber Magnolia Tree

Without the hard work of these flightless beetles, many species of plants would not be found today. Sometimes it really is the little things in life that can make a difference. Another Ohio native, the spicebush, is primarily beetle pollinated shrub as well.

Figure 2. Tulip Tree, Ohio Native Magnolia

Another topic I would like to touch on may step on some toes in the gardening community. We always say more flowers are better, but research has come to find many of our genetic variants of even our native plants have changed too much to be easily accessed by our pollinators. For example, a great pollinator plant the black-eyed Susan, is generally a popular favorite among many pollinators. Gardeners have begun creating new varieties that are far from the natives we have in our backyards. Because of this, many pollinators have a tough time either because of the color/smell change or even the pollen is hidden behind a double layered flower. Many hybrids are actually sterile and will not provide any benefit to

pollinators. There are hybrids called Echibeckia (Coneflower and Black-Eyed Susan hybrid Figure 5). One would think that the 2 pollinator powerhouses would create an amazing new plant to be visited. Unfortunately, it has caused some confusion among the ranks. See Figure 3 & 4 below to gain an idea of how the same plant can be so different!

Figure 3. Double Flowered Black-eyed Susan

Figure 4. Ohio Native Black-eyed Susan

Figure 5. Echibeckia Hybrid Flower

Some cultivars, bred for foliage color, may even be toxic to insects. One study compared cultivars of ninebark (*Physocarpus* spp.), which has been bred into dozens of cultivars featuring various shades of red or gold foliage. In the study, ninebark beetles (*Calligrapha spiraeae*) were fed leaves of the cultivars 'Monlo' (deep red foliage) and 'Dart's Gold' (chartreuse colored leaves) vs. the straight species. The beetles showed a strong preference for the regular green foliage and the foliage of the yellow cultivar, and avoided 'Monlo'. Observers speculate that, because dark red foliage is typically high in anthocyanins, a compound which may be poisonous to herbivores, the beetles avoided the plant. It can be reasonably inferred that the caterpillars and moths that host on ninebark are also avoiding these cultivars, which are widely sold as native and beneficial to pollinators. (Xerces society, 2017). The article goes on to say that not all cultivars are bad. Some have provided resistance to bacteria and fungi issues, or may even produce more flowers in general. Another pro about native varieties is that they are typically cheaper too! Or for those of us that really dabble in native plants, you can obtain the seed pods from your favorite natives and grow them yourself with a just a little knowhow.

Besides using a majority of native plants in your landscape, another positive change you could make to your garden is to make sure you have something flowering at all times during the growing season. To begin flowering in March/April the redbud tree (*Cercis canadensis)* spits out an unbelievable number of purple flowers to get the bees going after winter. Many of our wildflowers are blooming at this time too. Not long after comes our largest native fruit tree in North America; the paw paw with it's dark red blooms attracting flies and beetles (Figure 6). In May, the ninebarks will be flowering continuing the window for pollinators. Summer can be a tough one to plan for, luckily coreopsis and black-eyed Susans have got most of summer covered. Bee balm or wild bergamot is one of my personal favorites for mid-summer to early fall blooming plants (Figure 7). The color of the flowers paired with an almost oregano like scent is pleasing not just to humans but nearly every pollinator too. The last plant I will introduce is extremely different from the others introduced on the list.

Figure 6. Pawpaw tree flower

Figure 7. Monarda fistulosa (Wild Bergamot)

American witch hazel is blooming when there is likely no other plants in flowering in October to November (Figure 8). The flowers remain receptive to pollen for long periods of time. These plants have evolved a brilliant adaptation to ensure their genetics are passed on to the next generation because they flower at a time when there is little to no competition from other plants for pollinators. Witch hazel is very important for any pollinators still lingering before winter.

Figure 8. American Witch Hazel blooming

Figure 7 alludes to my next topic, the odd pollinators. Seen above drinking nectar from wild bergamot is a hummingbird clearwing moth. I have only seen 1 before. I would describe them somewhere between a bee, butterfly, and a

Figure 8. American Witch Hazel flowers

moth while hovering like a hummingbird. Hummingbird moths almost have that 'buzz' that bees often make. If you stay around a large patch of wildflowers you may just see one yourself! This pollinator was featured on the 2025 wildlife legacy stamp here in Ohio (Figure 9).

Figure 9. Hummingbird Clearwing Moth ODNR 2025

Seeing this otherworldly insect is a delight for most, they are the most striking in my opinion. Another odd insect that seems like a Frankenstein of a creature are the Bee-like Robber Flies (Figure 10). These flies look very similar to the bees buzzing around but unfortunately, the bees are food for them. The robber fly contains a powerful neurotoxin that they inject into the prey to paralyze it before sucking the nutrients from the exoskeleton like a vampire. The last oddity is the Eastern Velvet Ant (Figure 11). As the other 2 insects have confused you as to what they are, this one will surely stump you. Actually, a wasp the female velvet ant is wingless, constantly searching the ground for the nests of other wasps or bees to lay her eggs. The larva will eat the pupa of the host nest, providing food and shelter for the parasitic invader. Heed the nickname 'cow killer' because it has one of the worst stings known to humans. The males on the other hand lack a stinger.

Figure 10. Bee-Like Robberflies

Figure 11. Eastern Velvet Ant Female

This exploration into the world of pollinators reminds us that the intricacies of nature extend far beyond the familiar buzz of bees and flutter of butterflies. From the ancient beetle diligently pollinating magnolias and spicebush, to the agile hummingbird clearwing moth, and even the formidable, robber fly and velvet ant, each plays a unique and vital role in our ecosystems.

We've also seen the critical importance of selecting the right plants for our gardens. While the allure of new cultivars is strong, it's essential to choose native varieties and open-pollinated flowers that truly offer the nectar and pollen our pollinators need. Be mindful of bloom times to ensure a continuous supply of food throughout the growing

season, and choosing straight species over heavily hybridized plants can make a significant difference.

Ultimately, appreciating the "little things" and making informed choices in our landscapes allows us to foster a thriving environment for all creatures, ensuring the continued health and beauty of our natural world for generations to come.