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Over the Garden Gate

President's Corner

Shantha McDonald

Thoughts from a Mosquito Magnet

Have you ever heard of a “mosquito magnet?” Let me assure you that I am one and it is no fun! Anytime I am outside—gardening, watering plants, doing yard work, bird watching, hiking, playing tennis or golf—these little creatures seek me out. They bite me while leaving those around me alone. Ugh! No fun!

When I hear the distinctive buzzing sound I know what's coming. Within minutes much of my exposed skin will be covered in mosquito bites followed by itching and welts then by an overwhelming need to scratch. Home remedies only provide temporary relief. These little creatures make me miserable. They are more than just a nuisance, though, mosquitos can be deadly. In fact, mosquitos cause more human deaths than any other animal, over 700,000 deaths worldwide per year.

Mosquito is Spanish for “little fly.” They belong to a family of flies called *Diptera*, from the Greek meaning two wings. They are one of 3,500 species of flies in the world. Mosquitos have a long proboscis that is strong enough to pierce their host's skin.

The mosquito life-cycle consists of egg, larva, pupa and adult. Eggs are laid on the surface of water where they hatch into larvae. The larvae feed on algae and organic matter in the water. Adult male mosquitos feed on nectar. However, females need protein to produce eggs. Their protein of choice is blood—all too often mine!

While the female mosquito ingests her blood meal she also takes in the blood borne pathogens from the host. Then when she inserts her proboscis into another victim those pathogens are transmitted to the new host. Mosquitos transmit malaria, yellow fever, West Nile virus, Zika virus, and more.

Since the mosquito is at best a nuisance and at worst deadly, mosquito control is a high priority. Pest control companies offer indiscriminate spraying of insecticides in back yards, playgrounds, parks, etc., to eliminate these pesky “little flies.” This may seem like a good idea if you

don't think it through. There is no such thing as a mosquito specific insecticide. The broad spectrum insecticides they use not only kill mosquitos, they also kill other insects like butterflies, honey bees, and native bees among others. When the insects are gone, the birds that feed on those insects either suffer from eating poisoned insects or leave for lack of a food source. In addition, insecticides run off the land into streams and rivers effecting insects remote from where the insecticides were sprayed.

We need to be smarter about controlling mosquitos and still maintain the ecosystems in our backyard. Since the female lays her eggs in stagnant water, eliminating water in your yard from bird baths, gutters, old tires, and even leaves helps reduce the mosquito population. Next, wear long sleeves and pants when you are working in your garden. Topical mosquito repellents are effective in preventing bites. Mosquito netting or window screens are also effective in keeping mosquitoes out of your house. There are also patio plants such as the scented geranium as well as mosquito repellent candles and torches that rid your yard of the little critters.

As good stewards of our environment it is our responsibility to use insecticides carefully. Ecosystems are complex and fragile. Indiscriminate spraying has a lot of unintended consequences. We are all interconnected with nature and it is our responsibility to have as little impact as possible while protecting ourselves from diseases.

Write for Us!

Like to write? Have something to say? Your fellow master gardeners want to hear from you!

Email Rick at
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Contributors:

Shantha McDonald; Hugo Kollmer; Vince Evens; Rick Freeland

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You may be familiar with invasive species such as cogongrass, the hemlock wooly adelgid, and kudzu (“the plant that ate the south”). Unfortunately, they’re not the only ones we must contend with. Here are a few lesser known invasives to add to your knowledge base.

Varroa Bee Mite



Varroa bee mite (Varroa jacobsoni) preying on a honey bee

First discovered in 1904, the Varroa bee mite, is a parasite of the Asian honey bee, *Apis cerana*. Varroa mites were first detected in the U.S. in 1987. Only one continent, Australia, remains free of it.

Varroa continues to be considered the most devastating parasite of honey bee colonies in existence. The mite is absolutely dependent on the honey bee and cannot complete its life cycle without being in contact with the honey bees.

Methods of control include, breeding of resistant strains, naturally derived chemicals and traps. A promising innovation is the Varroa Gate, a structure at the entrance to the hive. Every bee must climb through chemically infused apertures in this gate when leaving or returning to its own hive.

Gypsy Moth



Adult Gypsy moth larva (Lymantria dispar)

The gypsy moth is a European native, accidentally introduced into New England in the late 1800's during an attempt to rear an alternative silk producing insect. Young gypsy moth larvae chew small holes in leaves, while older larvae consume entire leaves except for the larger veins and midribs. An entire tree may be defoliated, resulting in reduced growth and loss of vigor, as well as reduced aesthetic, recreational, and wildlife values. If total defoliation occurs over several years, mortality may result. Favored hosts include oak, apple, alder, basswood, birch, poplar, sweet gum, willow, and hawthorn. There are also numerous other plants which the larvae may feed upon.

Tanglefoot, sticky tape, or bands of burlap, placed around the trunk of the tree may be used to trap larvae and can afford some protection to individual ornamental trees. Several inorganic and organic pesticides such as Sevin and *Bacillus thuringiensis* (Bt) offer effective control. In addition, natural controls, including introduced insect parasites, virus diseases and preda-

tors, can serve to mitigate gypsy moth infestations.

Autumn Olive

Autumn olive (Elaeagnus umbellata)



Native to China and Japan, Autumn olive was introduced into America in 1830. It is a deciduous shrub growing from 3 to 20 feet in height. Its bark is gray-brown and smooth with small white dots (lenticels). Leaves are alternate, elliptical and 2 to 3 inches in length, easily recognized by the silvery, dotted underside of the leaves. In the fall, abundant edible red juicy berries occur on clusters near the stems. Since its introduction, Autumn olive has been widely planted for wildlife habitat, and large-scale erosion control.

Found in the northern part of our state, it is also established throughout the eastern United States. Because the fruits are eagerly eaten by birds and small mammals, this plant can rapidly compete with native species.

Herbicides, including Arsenal AC, Vanquish or Garlon, used as a spray or basal treatment, can provide good control of Autumn olive when used as directed.

(Continued on page 3)

Giant Reed



Giant Reed (Arundo donax)

Easily recognized by its tall erect feathery spike, Giant reed (*Arundo donax* L.) is a clumping perennial grass, reaching heights of 16 feet and more, native to Asia and widespread throughout the Mediterranean region. It has been cultivated for use as building material, and for erosion control and windbreaks throughout the Middle East and Mediterranean region for thousands of years. It is currently widespread in southern Europe, Northern Africa, the Middle East, Australia, South America, and North America. The majority of commercially produced giant reed is

grown in the Mediterranean to make reeds for musical instruments.

Introduced in California in the 1820s for erosion control, Giant reed escaped and has since become a major invasive weed problem. It can be found throughout the southern United States and as far north as Maryland, but the date and location of its initial introduction in the eastern United States is unknown.

Giant reed is persistent and very difficult to control. Best results are obtained with a systemic herbicide to ensure translocation to the roots and rhizomes. Glyphosate (2 to 5% solution) applied to leaves, after the crop has flowered, has proven effective. Additionally, Arsenal (imazapyr) may provide control to some extent. Regardless of which herbicide is used, repeat applications will likely be necessary.

Apple Lore

Vince Evens

Next time you go to the grocery store, count the different kinds of apples you see on display. Six or seven kinds would be considered a good variety. Some farm orchards may have an even better selection. Hard to believe there used to be 1000s of different varieties of apples, and most of the old apples are non-existent today.

On the grocery store shelves today, in my opinion you can not go wrong with a Fuji. Fuji was first propagated in the 1930s but was not brought to market until the early 1960s. Though it came from Japan it is the product of two old and well-known apples, the Red Delicious and the Ralls Genet. Incidentally the Ralls Genet was grown at Monticello by none other than Thomas Jefferson.

Gala is a similar apple to Fuji but to me Fuji is superior in every category to Gala. Maybe only slightly but enough to matter.

You will also usually find Granny Smiths. While it is a great cooking apple, to me it is not the best to eat out of hand. Red Delicious are somewhat disappointing to me, often with a slight bitter after taste.

Honey Crisps is a fairly new apple on the market if you prefer a sweeter apple. Usually the final choice is the Golden Delicious. We are all familiar with the softness of the Golden but I tell you if you can catch a Golden Delicious on the one day a year it is perfect, that day there may not be a better apple.

I also like the very hard to find Arkansas Black which when first picked is as firm as a baseball. If you will put these apples in a cooler place for a month they mellow out nicely.

Apples remind me of a story. Shortly after the Civil War there was a widely planted tree known as Ben Davis. It was a good producing tree but the fruit was dry and almost tasteless. About this time in Southern Illinois there was a man who claimed to be able to identify any apple by taste, even if he were blindfolded. Of course he was challenged, and given apple after apple to taste, which he identified correctly. Finally one challenger, in an effort to fool him, found a large piece of cork and quickly whittled it into the shape of an apple. He gave it to the blindfolded apple expert. He took a bite and with a confused look on his face, he took another bite. He proclaimed "I am not real sure about this apple. I think it may be a Ben Davis. But if it is, it's the best one I ever had!"

How Vines Climb

Planning to plan a vine in your landscape? One thing you need to know is how vines climb.

Vines climb using several techniques, which are explored below.

Self Clinging Vines use aerial roots (known also as adventitious rootlets) to cling to walls, buildings or tree trunks. Roots are made up of countless fine hairs. Think English Ivy, or Poison Ivy.

Aerial rootlet self-clingers are great ground covers, but use care when planting around other plants and structures. They may be overwhelmed by the climber. And if grown against a masonry wall, rootlets may dislodge the mortar over time.

Other self-clingers use adhesive tendrils to grasp and cling. One is Virginia Creeper.

Self-clingers need no additional support once established. Strings or temporary stakes may help young vines secure a hold.

Twining Vines climb via coiling stems that spiral around supports in a clockwise or counter-clockwise direction, depending on the species. Examples: Honeysuckles coil clockwise. *Wisteria chinensis* will spiral counter-clockwise.

Twining vines need a permanent support like a trellis, a woven wire attached to an overhead structure, or a sturdy host plant.

Tendrils Climbers climb using modified leaf stalks or tendrils.

Clematis is a good example of a vine using a modified leaf stalk. Bignonias or Sweet Peas may employ a contact-sensitive tendril that reacts on contact with a wire or structure. Grapes use terminal shoots to grasp; Passiflora uses an auxiliary shoot.

Scrambling, Rambling or Trail-ing Type Climbers are plants with long, arching stems. Think Winter Jasmine and Bougainvillea.

Rick Freeland

Stems might not actually attach themselves to their support and may need to be tied.

Ramblers can also be trained to grow through shrubs or other support plants. They're good for sprawling over walls, groundcovers, or for erosion protection on banks.

Some trailing plants, like Climbing Roses, have a hooked thorn to help secure a hold as they ramble through host plants. They can also be tied onto a support structure.

When selecting vines, gardeners should consider fundamental design principles like line, color, texture and form, as well as attributes like flower type and bloom season, interesting bark or fall color. But whether a gardener needs a vine for screening an unsightly view, for softening a rock wall, for establishing shade for a patio, or just for a colorful vertical accent, there's always a climbing plant perfect for the situation.

What the Heck?

Circumnutation

The action of the growing tips of some plants - mostly vines - as they rotate or move, searching out sun. Or in the case of vines, an attachment opportunity.

Containers filled with vibrant, blooming plants can be versatile complements to your house and garden. They're easy to create, portable, and can add just the right touch of color, texture or contrast exactly where needed. But if you're new to container gardening, their design and installation can be intimidating. The following tips will help you become a container gardening expert in no time.

Use Design Principles

Having an understanding of design principles like unity, simplicity, balance, scale, line and transition can help you create your container garden masterpiece.

You can unify your design by repeating the same type elements. Plants, pots and groupings of the same are all good candidates for repetition.



Keep things simple. Use two or three complimentary or contrasting colors, similar texture combinations, or the same type pot for all your plantings.

Balance can be symmetrical or asymmetrical. *Symmetrical* balance lends itself to formality. Two matching ceramic containers with the same type plants placed one on either side of your front door is a good example of symmetrical balance. *Asymmetrical* balance is more abstract and informal. It may use different shapes and forms on opposite sides, but the overall balance of each side equals out. Or shapes, colors and plant types may be similar, but sizes and composition of the elements may differ.

How Will You Use Your Container Garden?

How you plan to use your container garden will play a large part in the type and number of plants and pots you choose for your creation.

Do you want a distinctive entry accent? How about outdoor rooms? Do you need to screen or frame views? Create a focal point? Grow herbs or other edibles? A beautiful container garden arrangement can welcome visitors to your home, divide space, make a living screen, or allow you to grow herbs and vegetables right outside your kitchen door.

Location

The high visibility of an entryway demands you use top quality pots, like ceramic terracotta, in colors that complement your home's exterior siding or trim.

You can also get quality pots in materials like fiberglass and foam that look almost as good as terracotta, but are lighter and may be less expensive.

Take the total weight of your creation into account, too. If you plan to place containers on balconies or decks, or think you'll be moving them from place to place, forget about stone and concrete containers or containers with trees. Use lighter and smaller foam and plastic composition pots, with light potting mixes and drainage materials, and smaller plant arrangements that won't be blown over by the wind.

If you do need to move large, unwieldy pots, place them on pot caddies, wheeled bases that make transporting big containers a breeze.

Think Maintenance

How do you plan to provide water and fertilizer to your containers? A single large potted perennial used as an accent on a distant garden path may be harder to maintain than a cluster of seven containers located on your patio. Using dedicated drip irrigation systems and slow release fertilizers will save you time and effort.

Remember too that permanent plantings will eventually need to be moved to larger pots. Seasonal plantings may need to be overwintered or protected during the colder months. These tasks add to your work load, so plan accordingly.



Plants

When choosing plants, think about the following:

- Is this plant suitable to my zone?
- Is it easy to grow?

- Does it thrive in sun, shade or a combination?
- Is it long-blooming and self cleaning?
- What are its water, food and soil needs?
- What's its mature size, in both height and spread?
- Does it work well in the composition?

Composition

Now comes the fun part - putting it all together!

You can have as few or as many plant and pot combinations in your container garden arrangement as you want. Try one distinctive plant in a plain pot, or a combination of three or more in multiple containers.



A good rule of thumb for combo plantings is to use a *thriller* (a tall plant placed in the center), a *filler* (several medium sized plants to fill in the middle), and a *spiller* (plants that trail over the edge of the pot).

For immediate impact, consider purchasing larger plants, and planting them close together in the pot.

You may be able to save money by buying larger plants or plants in a hanging basket and dividing them into several new plants.

So don't be afraid to jump right in and play. With a little planning and forethought, you can have a container garden that meets all your needs and perfectly complements your home's unique style and beauty.