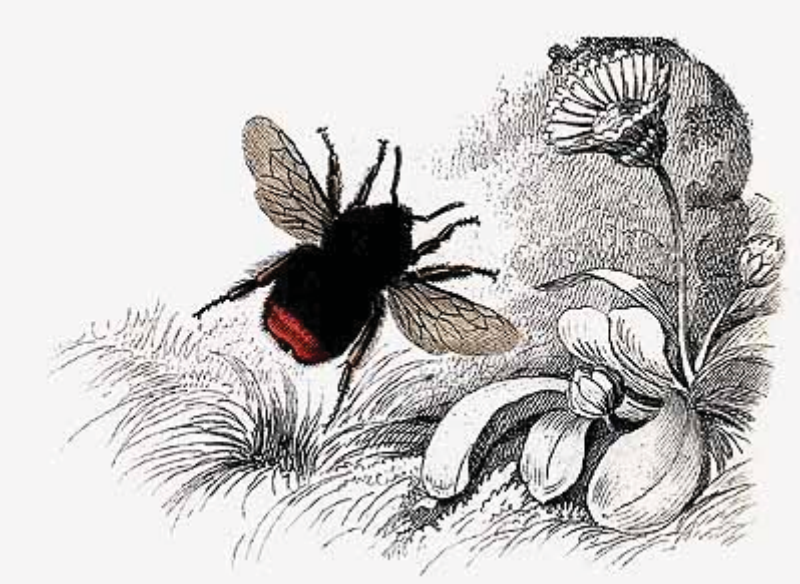
What's the Buzz on....

Planting a Bee Garden

By Stephen Buchmann



So you want to plant a bee garden or modify your existing garden to attract many of the native ("wild") bees that occur in the United States. The first thing you should know is that by planting bee-attracting plants, you can attract a diverse array of other wildlife as well. Butterflies, wasps, flies, hummingbirds and other pollinators will give you a bountiful harvest of fruits, vegetables, seeds and provide you with many hours of outdoor entertainment. You will be providing pesticide-free safe havens for pollinators. Once such havens are duplicated across your county or state, they can provide significant wildlife habitat for native animals involved in the often threatened process of pollination.

Bees as "watchable" wildlife you ask? Don't worry, nearly all species of bees are gentle and will not sting you. They are simply searching for food-- pollen and nectar-- to feed themselves and their young. All bees need the same few basic requirements in order to make a living. It may surprise you to learn that of the nearly 5,000 species of bees in the U.S. Most lead solitary lives and construct their homes (nests) underground or in pithy twigs or abandoned beetle burrows in dead tree branches.

You have already taken the first important step in providing what the bees ordered for dinner-- flowers. The bees won't chew up your prize specimens. Instead, they will take away pollen and nectar, leaving a "pollination path" of luscious fruits, vegetables and seeds in their wake. Remember, they aren't intentionally trying to be helpful to flowering plants by moving the pollen from flower to flower. In search of a quick sip of nectar, some tasty pollen and maybe some building materials to transport back to their nests the bees pollinate blossoms leading to fertilization and fruits to form. By selecting the best bee-rewarding plants, you can attract beneficial pollinating bees and other creatures to your flower and

vegetable gardens or backyard fruit orchard.

The most important consideration is how to use a maximum of native annual and perennial wildflowers which naturally grow in your region. These plants evolved there and are adapted to the growing season and local climate and soils. They often require less water, fertilizer and pesticides than showy exotics, fanciful hybrids splashed across colorful ads in the most recent seed or bulb catalogs. The native wilflowers will also provide your bee visitors with more nutritious pollen and nectar since plant breeders do not think about providing floral rewards for pollinators and their magnificient creations are often all show and no bee chow. You can also make selections from old "heirloom" varieties such as Cosmos, black-eyed Susans, lupines, mints and others which are now enjoying a Renaissance of popularity.

Once you have provided your garden landscape with attractive and rewarding bee plants, there are a few other things to keep your bees healthy and around to pollinate another day. Apart from bountiful flowers, all bees require places to hide from predators, to locate and court a mate or establish their nests. Thus, they need you to help provide safe havens from predators, parasites and chemical insecticides.

Organic farming and gardening practices are growing at an exponential (use another word?) rate as demonstrated by the growth of this industry and everyone's concern for buying safe produce at the supermarket. At home, you can do the same thing by purchasing beneficial insects such as ladybird beetles, green lacewings or praying mantids. You can also encourage insect control by allowing spiders to build webs in your yard or ants to build nests in your garden. They are worth their weight in gold for controlling insects such as caterpillars which may be pests.

If you can't avoid not using some insecticides, try to use less persistent ones which have been proven safer for bees and other pollinators. Also, remember to follow the application instructions on the label and apply these materials after dark or when pollinators like bees are safe within their nests. If you poison your bees, you will have fewer prize-winning fruits on your table to brag about with your gardening neighbors. The biggest and tastiest fruits are the direct result of flowers pollinated by bees. Over a third of all the fruits and vegetables we eat are the result of bee visits to blossoms in our farms and gardens.

Bees also need sources of water which can be provided from a dripping faucet or pond or bird bath. Some, require mud as a building material for their nests. If you are lucky enough to have "Blue Orchard Bees" in your neighborhood, or other so-called Mason bees, encourage them by providing some mud. Create a one foot tall conical mound of soil near your garden. Allow some water to seep up from a pan at the base. The eager Mason bees will collect balls of mud from the wet soil at the proper height and reward you by sticking around and increasing in numbers.

Bees in the large family of leafcutter bees (Megachilidae) nest in the ground or more typically in abandoned beetle burrows in dead wood. Most of them require small leaf pieces which they cut then fashion into the natal cells for their young. They may also collect downy plant fibers or small pebbles and plant resins to complete the job. Please allow these fascinating leafcutters to cut a few elliptical holes from leaves of some of your garden plants. They will pollinate your fruits and vegetables as they go about their housebuilding and grocery shopping to provision their hidden pantries and bee nurseries.

In creating a bee garden, it is important to remember that you should leave a small patch of bare ground somewhere in or around your garden in which bees can establish their underground nests. Very few bees can nest in manicured grass lawns. Similarly, if you, or your neighbors, can tolerate a dead tree, or at least some dead branches, these will prove invaluable as nesting sites for many leafcutter and mason bees. Tie some dead branches up against your garden shed or other building to create some enticing holey bee real estate. The more beetle burrows the better for the bees.

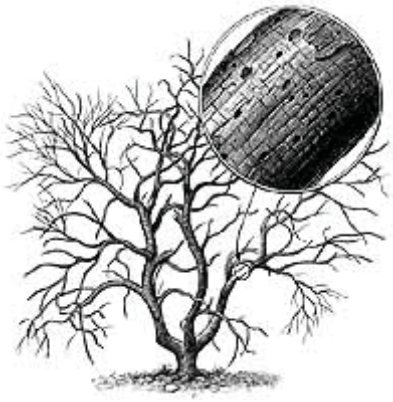
Often, it is not floral abundance but rather nesting sites that is limiting for our native bees. If you have access to elderberry stems, cut and dry some into 1-2 foot lengths. With a drill, different sized starter holes can be drilled into one end and into the sides of the woody stems. Sharpen one end like a tent stake and push them into the ground around your yard. If your dog doesn't use them as toys, the bees will soon find them and reward you for your bee stewardship efforts.

"Bee houses" are easy and fun to make or can be purchased commercially from several vendors. Making your own can provide you and your children with hours of fun and even more entertainment once they are hung up in your yard to entice new bee pollinating tenants. With a drill bit of various sizes (5/16th of an inch works best for Mason bees including the Blue Orchard Bee) simply take some scrap lumber and drill holes 3 to 5 inches deep but not all the way through the wood block. Nail these up securely in

protected places under building eaves in the early spring. Using paper or plastic soda straws, you can bundle these materials and glue them into the bottom of paper milk cartons or coffee cans. Place them in protected shady and dry places in the early spring and the bees will come.

Nectar, pollen, water, nesting materials and open ground-- combine these ingredients and your collaboration with nature should result in some larger and tastier fruits and vegetables in just a season or two from now. By creating small patches of pesticide-free safe havens for all pollinators, you can play a small but vital role in reversing the dramatic pollinator declines which have occured during the past few years. it may not seem like much, but magnified across your state and across the country, these gardens (a patchwork quilt of "floral islands") can serve a vital role by feeding and protecting many threatened animals that pollinate wildflowers and our crop plants. This is especially true for migratory pollinators (animals like nectar-feeding bats or Monarch butterflies) which travel long distances across state and international boundaries. Along these "nectar corridors" the migratory pollinators can take a much needed nectar break within your newly-constructed pollinator garden.

Leave dead wood as branches and entire trees standing on your property if possible. That's because most bees in the leafcutter bee family (Megachilidae), especially the genera Megachile and Osmia do not make their own nests but use tunnels made by the larvae of wood-boring beetles (long-horned beetles and metallic wood-boring beetles among others). These holes and tunnels occur in solid but dead wood. The illustration that follows is from a palo verde tree (Cercidium microphyllum) in the Sonoran desert around Tucson. Note the englareed section showing the numerous beetle exit holes in the small branch. In the spring, female leafcutter and mason bees actively search over dead branches to find new homes. Let them become your new tenants. If you don't have beetle holes in that dead branch, you can help these bees by drilling holes for them.



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Blue Orchard Mason Bees and nesting blocks available from:

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