

The background is a collage of nature images. The top half shows a pond with green lily pads and a few yellow flowers. The bottom left shows a close-up of a bee on a blue flower. The bottom right shows purple flowers. A green circle is overlaid in the center, containing the text.

**3 Steps to
Attracting
Pollinators
to your garden**

Attracting Pollinators

"One out of every three bites of food eaten worldwide depends on pollinators, especially bees, for a successful harvest."

- Elizabeth Grossman

Welcome to Broken Ground's Attracting Pollinators Guide!

I'm Kareen and I'm here to help you grow the healthiest and freshest food possible, right outside your backdoor, while saving you time, energy and money.

I've been gardening for a decade and teaching workshops on gardening for five years, guiding beginners and more experienced gardeners through the ins and outs of growing their own food and living sustainably. I love teaching people how to become more self-reliant and more connected to our natural world.

Of course, one of the most important elements to our success as gardeners are pollinators. Without pollinators, a vegetable garden and a perennial food forest are not possible. In fact, nearly 75% of the flowering plants on Earth rely on pollinators to set seed or fruit. It's no wonder that attracting them to your garden is such an important task. They are essential to the functioning of healthy and productive ecosystems.

Not only that, but attracting pollinators can be a fun and creative process, bringing beauty, art and productivity to your garden. Follow these three steps to get you started!

STEP 1
Plant in Abundance

STEP 2
Create Nesting Sites & Shelter

STEP 3
Provide Water



Who are our Pollinators?

Honeybees – these are probably the first pollinators we think of in the garden. Ironically, they are not native to North America. Introduced from Europe in the early 17th century, honeybees have now become a vital part of our agriculture.

Native bees – everything from bumblebees to carpenter bees to mason bees and sweat bees, these pollinators are essential to a healthy ecosystem.

Other pollinators include **butterflies, moths, wasps, flies, beetles** and **hummingbirds**.

Integrate, don't segregate!

Before getting into the nuts and bolts of attracting pollinators, one important perspective to keep in mind is the idea of looking at your property/yard as an integrated whole. After all, this is the way pollinators see it. Consider your yard as its own mini ecosystem.

Too often, we have segregated our veggie and flower garden and segmented elements of our yard so they are neat and tidy. Natural systems and pollinators within natural systems don't make these distinctions, it's all an integrated habitat for them. Yet the tidiness of your average suburban lot is not ideal for pollinators (which you'll understand once we get into the three steps).

By understanding this integrated perspective, we can begin to design our gardens so that they mimic natural systems. Why not have flowers in the vegetable garden? Can your children's playspace be integrated with an edible food forest? Integrated does not have to mean untidy yet be prepared to introduce and accept a little more wildness in your backyard if you're trying to attract pollinators.

Trust me, both you and the pollinators will appreciate it!



Step 1

Plant in Abundance

Pollinators need nectar so planting an abundance of flowers is the first step to creating a welcoming habitat.

Plant Natives

Start with native plants as these are best adapted to our native pollinators. However, don't be afraid to add non-natives to the mix, provided they are not invasive. For more info about invasive species, go to <https://www.invasivespeciesinfo.gov/>.

Perennial plants (those that come back year after year) are best because once you've planted them, they are fairly low maintenance. In addition, they will continue to grow bigger and bigger every year. Plant numerous varieties of flowering plants that will bloom over the longest period possible to keep pollinators fed before and after your garden crops bloom. Bees especially like blue and yellow flowers.

Let it go wild!

Resist the urge to tidy your garden, when things like broccoli or lettuce go to flower, leave them in the garden as additional pollinator-attracting plants. Honeybees really like the yellow broccoli flowers!

More is better

The rule of thumb is that more is better for pollinators. Think about quantity but also think about diversity. Pollinators not only need flowers but they also need flowering trees, shrubs, vines and groundcovers. To take it to the next level, you could even consider adding clover to your lawn or adding other flowering lawn substitutes (talk to your local nurseries or garden centers).



Step 1

Plant in Abundance



Start with Herbs

Herbs are a great first place to start. Not only do you get the benefit of using them in your cooking but once they go to flower, you'll attract birds, bees and butterflies.

Basil – *Ocimum basilicum*
Borage – *Borago officinalis*
Dill – *Anethum graveolens*
Lemon balm – *Melissa officinalis*
Mint – *Mentha*
Oregano – *Origanum vulgare*
Sage – *Salvia officinalis*
Thyme – *Thymus vulgaris*
Chamomile – *Chamaemelum*
Chives – *Allium schoenoprasum*

Plant these
for the bees!

Perennials

Anise hyssop – *Agastache foeniculum*
Aster – *Aster*
Blanket flower – *Gaillardia*
Blazing star – *Liatris*
Catmint – *Nepeta racemosa*
Goldenrod – *Solidago*
Globe thistle – *Echinops*
Purple coneflower – *Echinacea*
Wild bergamot – *Monarda fistulosa*
Russian Sage – *Perovskia atriplicifolia*



Annuals

These flowers are easy to start from seed and often self-seed year after year.

Bachelor buttons - *Centaurea cyanus*
Calendula - *Calendula officinalis*
Cosmos - *Cosmos*
Marigold - *Tagetes*
Sunflower - *Helianthus*
Zinnia - *Zinnia elegans*

Step 2

Create Nesting Sites & Shelter

Like humans, pollinators will only stick around an area if there is shelter and places for them to nest.

Of course, honeybees have their designated hives yet all the native bees and other pollinators need nesting sites too. For nesting sites, about 30% of native bees use some form of wood or plant's stem, the other 70% are ground nesters.

Keep it a little messy!

Leave perennial plants in your garden, don't trim them back in the fall. These provide shelter and nesting sites for pollinators. If you need to prune back certain areas, don't dispose of the trimmings. Instead, leave them in an inconspicuous place for nesting sites and hiding spots. You can also tie them neatly and stack them into bundles if you want.

Find ways to incorporate fallen branches, stumps and logs into your garden décor.

As was mentioned at the beginning of this resource, pollinators like things a little wild. If you can, leave parts of your yard undeveloped or unmanicured.

Leave some exposed soil

Although I typically recommend mulching your garden with leaves or straw and not leaving exposed soil, I make one exception for pollinators. They need some bare soil for nesting sites. Plan on leaving certain areas of exposed soil in your garden.

In all circumstances, I would definitely dissuade you from using weed mat or black plastic as mulch. These materials not only limit water and nutrients from percolating down into the soil profile but they cover all soil, leaving no areas for ground-nesting bees. Bare soil that naturally occurs under evergreen trees is a great option, since that space is usually unused anyway.



STEP 2

Create Nesting Sites & Shelter

Layered plantings

As much as possible, mimic multistoried natural systems. Over the course of the seasons, pollinators use different layers of deciduous and evergreen plants for their changing needs. If you have space, a small food forest of fruit trees, berry bushes and an understory of herbaceous plants will offer cover, prospects for food, and protection from wind and cold.

If you don't have the space for trees and shrubs, create beds of perennials flowers of differing heights. Don't be afraid of planting densely so that there are areas of continuous cover in your yard. Getting back to integrating areas, think about building "vegetation highways." Open space in a yard without plants or flowers translates as exposure and lack of food for a pollinator.

Human-made structures

Nesting sites and shelters can also be built. Some of them, like existing hardscapes may serve another purpose already. Patios, garden beds, dry stack walls or stone structures in your yard will provide nooks and crannies for pollinators.

You can also think about building mason bee houses out of paper straws, bundled reeds or wooden blocks. Insect hotels and eco-walls are also becoming popular. For more info, go to <http://inhabitat.com/diy-how-to-build-an-insect-hotel-from-found-materials/>.



Step 3

Provide Water

Pollinators get thirsty just like humans. If you don't give them water, they will find somewhere to get it, and you certainly don't want that to be your neighbor's swimming pool or hot tub! Bees typically search for water close to home. Providing a source in your yard means that they expend less energy flying further to get it. In general, pollinators need more water in the spring before nectar flow is at its peak and then during heat of summer.

Create Water Stations

These can be as simple as a shallow dish with a few marbles in it or a birdbath with a few rocks placed in the bottom. Bees like to keep their feet out of the water and aren't very good swimmers so the more you can provide perches for them as part of your watering stations, the better.

If you have the space, you can get a little more sophisticated and buy a stock tank to fill with water or even make a pond. If you create these larger bodies of water, be sure to include vegetation like floating plants (e.g. water lettuce, water hyacinth, water lilies, azolla) so that they can act as landing pads or perches.

Plants that capture raindrops

Plants themselves can also be used as temporary tiny watering stations. The leaves of the following plants will capture dewdrops and raindrops:

Columbine – *Aquilegia canadensis*

Nasturtium – *Tropaeolum*

Sedum – *Sedum*

Lupine – *Lupinus*

Kale – *Brassica oleracea*



Keep it Safe!

Make sure the water you provide is safe for pollinators to drink, meaning it is free from contaminants and pesticides.

Additional Resources

Our work as gardeners is to understand natural processes and to mimic them in the way that we design, plant and maintain our edible gardens. Pollinators are an essential element of these natural systems. Taking these three steps to attract them to your garden will likely not only increase your productivity but it will beautify and enhance your outdoor living area.

Websites

The Xerces Society - xerces.org

The Xerces Society focuses on habitat conservation and restoration, species conservation, and protecting pollinators. There is a wealth of information and resources on pollinators at this website.

Native Plant Database - wildflower.org/plants

Books

Attracting Beneficial Bugs to your Garden by Jessica Walliser

Edible Forest Gardens by Dave Jacke

Gaia's Garden by Toby Hemenway

Pollinator Friendly Gardening by Rhonda Fleming Hayes

Seeds

johnnyseeds.com

seedsavers.org

rareseeds.com

reneesgarden.com



Native bees and nesting supplies

Raintree Nursery - Raintreenursery.com

Peaceful Valley Farm Supply - Groworganic.com

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