

By: Dahlia Edwards



03 WELCOME READER	04 WHO ARE THEY?	06 GARDENS ARE THE ANSWER?
07	08	09
THE DOS	THE DONT'S	QUICK GUIDE
10	11	12
SPREAD THE WORD	CHECKLIST	RESOURCES

Welcome Reader

GARDENING AND POLLINATORS

Hello gardeners!

I am so excited you have decided to pick up this zine! This is a zine associated with the work of the Tufts Pollinator Initiative Organization, which strives to utilize habitat creation and community education to support urban pollinators. If you have heard of the term pollinators or pollination, don't worry, you are in the right place. This zine aims to not only share information about pollinators, but also to act as your guide in supporting pollinators through your own gardening. We know gardens offer a space for nature to thrive, but they also act as a refuge for pollinators. The decisions made in these spaces can lead to greater impacts for pollinators and the overall environment.





What are pollinators?

What is the first thing that comes to mind when you hear the word 'pollinator'? Maybe a bee dancing around a cluster of flowers before making its way to a beehive or a monarch butterfly sunbathing in a field of flowers. Both would be right! Pollinators are anything that help to move pollen from flower to flower, specifically from the male to female parts of flowers, allowing for fruit and seed production. This definition extends from bees and butterflies to bears and birds to even wind and water. Pollen can be moved through intentional collection, food or shelter searches, or even accidental incidents. While there are a wide array of pollinators, this zine will focus on insect pollinators.

.....

Why are they important?

Pollination plays a central role in several processes. Insect pollinators contribute to sustaining a healthy environment, all the while helping to provide a better quality of life. Their ecological importance has no bounds as they help within specific areas to sustain a much more expansive chain.

Outside of pollinating flowers for production, they assist in food security by pollinating around 70 percent of crop species, provide pest control services, sustain the food chain as a food source for vertebrates (bats, birds, etc.), factor into economic health, stabilize biosphere cycles, and foster the relationship between humans and nature. Without pollinators, all of these things would fall apart.

"If all mankind were to disappear, the world would regenerate back to the rich state of equilibrium that existed ten thousand years ago. If insects were to vanish, the environment would collapse into chaos."

E.O. Wilson



Despite pollinators filling many of our gardens and parks, many species are experiencing population declines. A number of pollinators have been categorized as federally 'listed species', which indicates studies have identified evidence of pollinator disappearances. On a global scale, the persistence of habitat loss, pesticides, climate change, invasive species, and disease has disturbed and harmed the wellbeing of pollinators.



With the disappearance of safe spaces for insect pollinators, gardens have become an important place in offering refuge. By creating suitable gardens, we can provide support for pollinators throughout the entirety of their life cycle and continuing populations. Making simple changes to your own garden and moving away from traditional landscaping, will make it possible for a plethora of biodiversity benefits. These safe spaces will allow pollinators to continue their positive impacts.



Do Diversify Plants

Mix up what you're growing! Plant flowers with different shapes, sizes, heights, and colors to attract and protect various pollinators. Pollen and nectar act as food for pollinators, but different species of pollinators means different dietary needs and preferences. Diversifying your garden not only allows for visual aesthetics, but it also allows for a variety of pollinators to visit. To ensure this continues, prioritize perennial flowers that bloom at different times (spring, summer, fall varieties) and plant in clumps for easy pollinator movement. To get started or if you are using a smaller space, choose 3 perennial species that bloom sequentially so your garden can support pollinators all season.

Do Offer A Drink

Just as hydration is important for people, it is equally important for pollinators, especially as temperatures increase. Place a shallow dish of water near your garden, whether that be on your deck or a windowsill, and put many semisubmerged stones in the water dish to act as miniature lands to prevent drowning risks. Don't have stones - that's totally okay. Wine corks work too! They float, so dump wine corks in your drink dish instead of throwing them away.

Do Make Vegetation Structures

Step away from traditional landscaping and become neighbors with pollinators. Leaving pollinator "homes" in your garden can make a big difference in pollinator health. Vegetation structures are important sites for pollinators. This includes trees (dead and alive), shrubs, brush piles, bare ground, leaves, and even bee boxes. Take steps such as not cutting stems until later in the springtime to provide shelter for developing bees or limiting raking in fall so dead leaves and plant material can act as food and shelter in winter. Little things like these can make a big difference in pollinator health.

The DON'Ts

Don't Use Pesticides

Don't Only Use Non-Native Plants

Chemical misuse can excessively damage pollinators. Pollen and nectar that has been coated by pesticides can cause harm to healthy pollinators. Herbicides minimize floral cover and food sources by removing plant diversity, such as weeds. Learn to be okay with some plant damage - pollinators' life stages require eating vegetation at times. That means you have a healthy garden! (Plus skipping the chemicals, means lower garden maintenance expenses.)

Plant what is accustomed to your local climate and soil fertility. Prioritizing native plants means your garden will receive more attention as pollinators cannot find the necessary pollen and nectar in non-native plants. Make sure to avoid ornamentals as they are not a food source and are grown from pesticide coated seeds. Native plants will not only support pollinators, but also reduce your carbon footprint and maintenance. Traditional gardens require fertilizers, pesticides, supplemental water, and machinery. This is costly as well as leads to environmental hazards like poor soil health, erosion, and runoff pollution. By switching to native, plants can be combined into more attractive designs (natural-looking or formal style) and in the long run your gardening will be more hands-off for maintenance.



Quick Guide

Some Pollinator-Friendly Alternatives To Begin Replacing Some "Unfriendly

Ornamentals" In Your Garden

Wildflowers

Colorful clumps:

Anise hyssop, Mountain mint, Shrubby St. John's wort

Short border plants:

Hairy beardtongue, Golden alexander's, Golden ragwort

Walkway containers:

Swamp milkweed, Foxglove beardtongue, Purple coneflower

Short, fast annuals:

Black-eyed Susan, Lance-leaf coreopsis, Spotted horsemint

Tall colorful spikes:

Bee balm, Blazing star, Cardinal flower, Russian Sage

Ground cover:

Aromatic sumac, Wild strawberry, Bearberry

Grasses

<u>Tall border grasses:</u> Switchgrass, Big bluestem

<u>Short, filler grasses:</u> Little bluestem, Purple lovegrass

Shrubs and Trees

Foundation shrubs:
Winterberry holly,
Summersweet,
Chokeberry, Bayberry

Border/hedge shrubs: Buttonbush, Shrubby dogwoods, Arrowwood

Short trees:

Flowering crabapple, Serviceberry, Eastern redbud

Street trees:

American basswood, Tulip tree, Red maple, Red oak



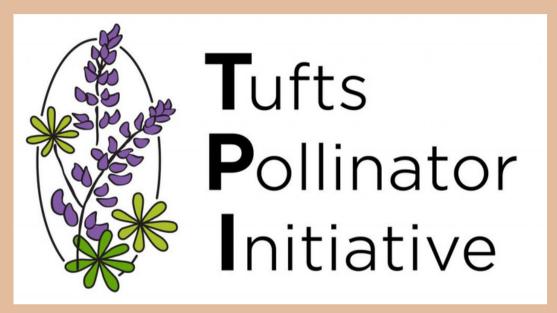
Spread the Word





To Learn More

"Tufts Pollinator Initiative strives to support urban pollinators through habitat creation and community education."



Plant pollinator gardens.

Educate Tufts undergraduates.

Educate community members.

Collaborate with local organizations.

To learn more:



To Contact

Website: https://sites.tufts.edu/pollinators/

Twitter: @PollinateTufts

Email: tuftspollinators@gmail.com