

Keeping it Cool with Pollinator Gardens

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Pollinators are vital to our food systems and ecosystems because they spread pollen from one plant to another, allowing them to reproduce. In return, bees, moths, butterflies, beetles, some flies and wasps, and hummingbirds (and mammals like bats in other places!) feed on plants to eat the nectar, pollen, and/or the plant itself (think caterpillar). We've all heard that pollinators are declining due to monoculture crops, pesticides, development, non-native landscaping, and... you guessed it... climate change.

Pollinators of all stripes are needed by 90% of native plants and 75% of food crops to reproduce - how do we make sure they keep doing their job?

When I started working on the issue of declining pollinators about a decade ago, the answer seemed pretty simple: **Plant more native plants!** And when we do this, we will see more bees, butterflies, moths, etc. I thought that with education, engagement, and demonstration, the problem was solvable, and the solutions would bring in people from all walks of life to do that one simple thing - plant a native plant. By planting native gardens, we connect urban yards to the wonderful and amazing diverse ecosystems that surround us, so that we become part of the larger ecosystem.

Like many, I have been caught off guard by the changes that are occurring quicker than expected. I'm old enough to have experienced the changes in weather patterns over the decades. Just in these last few years, extreme temperatures have increased substantially.

Urban areas, with their asphalt and lack of shade, are often 10°F or even as much as 50°F warmer than surrounding natural areas. These temperatures don't just stress pollinators (and people), they cause plants to flower too early and completely miss the insects that normally pollinate them. In turn, the insect misses that particular plant species that their reproduction depends upon. Or the larvae of bees and butterflies become too heat stressed to pupate and develop into adults. We are not only threatening all pollinator species, we are also threatening all the creatures who depend on them. Oh, yeah - that includes us.

What if you had no air-conditioning what if your body literally could not move to escape temperatures that can kill you?

A recent study explains the impact temperature extremes are having on native bee populations. "For humans, a three or four-day heat wave may just be an uncomfortable blip, but for a solitary bee, it can represent a quarter of the total time they are active outside their nests — and can severely affect their fitness for mating, pollinating and producing offspring."

So, with all of that doom and gloom, what do we do? Do we accept it all as done and done? Maybe. But on the other hand, maybe we go back to that original idea: **Plant a plant!** Especially

a tree, and preferably native. Create shade to cool our surroundings. Grow plants and reduce runoff. Leave the leaves. Accept a bit of mess, because this is where the pollinators often live and reproduce. Skip the pesticides and herbicides.

Do you work for a city or are you building a house? Consider alternatives to asphalt parking lots. Use grass or gravel or light-colored surfaces, with plenty of shade. These are better for runoff and water quality too!

Consider that many native plants are fire-adapted and can help protect your home during a fire event as well.

Ready to get started? Check out the Resources page on our website for plant selections, tips on creating a native plant garden, videos, and more. Our staff and volunteers have been busy planting native gardens in the Alameda Fire scar, teaching classes on pollinators, educating the public about native plants, and so much more. We're reconnecting our larger ecosystem one yard and one person at a time, so that we all become more resilient in the face of a more extreme climate.

Thanks for getting engaged to save the pollinators by making our world a cooler place. You can find us at <https://www.pollinatorprojectroquevalley.org>