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Garden Notes

GN 156

ATTRACTING NATIVE POLLINATORS

Birds, bats, bees, butterflies, beetles, and other small mammals that pollinate plants are responsible for bringing us one out of every three bites of food. They also sustain our ecosystems and produce our natural resources by helping plants reproduce. Unfortunately they are in trouble. Some species have seen a **90% decline** in their populations over the last decade. But you can help. There are a number of ways you can enhance your garden to be more pollinator-friendly.

Take the **Pollinator Walk** through our Water Efficient Garden (WEL) to learn more. Find the nine signs that start on the left of the path and meander up and back to conclude at the Native Plant shaded area. Follow the text below to find out more.

1. **Make changes in the garden**: No matter whether the garden is a backyard, a patio or a community gardening plot, the gardener makes decisions about what plants to grow, how to manage pests, and which chemicals to use. Like other animals, pollinators need food, water, nesting sites and overwintering sites.
2. **Use masses of color**: Bold masses of color (like this bed of black-eyed susans) can help pollinators find the garden. Plant single species together. Pollinators use less energy foraging when many flowers are close together. Research suggests that planting in clumps of at least 3 feet are more attractive to pollinators than randomly dispersed, smaller clumps.
3. **Include a diversity of flower shapes**: Different flower shapes appeal to different types of pollinators. Some tube-shaped flowers have nectar that is only accessible to pollinators with long tongues; other flowers offer their nectar reward to any visitor. Select a variety of flower shapes to increase the appeal of the garden. Varying plant heights and growth habits also adds to the garden diversity.
4. **Develop new nesting and egg-laying habitat**: Many native bees need access to the soil in order to nest in the ground, so limit the use of plastic or fabric mulch, and deep piles of bark mulch. Recognize that existing natural patches of bare ground may be valuable to native bees. Other desirable nest habitat includes shrubs, tall grasses and low-growing plants, patches of fallen branches and bee nesting blocks. Look around the WEL garden to see areas where bees can nest.
5. **Include at least three species in bloom**: Many gardeners design their gardens to span the season with bloom. Why not incorporate plants that provide food for pollinators into this design? Reference the "Type of Pollinator" table at the end of this handout for ideas.
6. **Provide season-long sources of pollen and nectar**: To keep pollinators in the landscape, offer a continual source of food – flowers – throughout the season. Aim for year-long flowers: with some planning, the garden can have flowers in bloom at almost any time of the year. The plants in this area of the WEL garden – winter blooming manzanita, spring blooming toyon and penstemon, and summer blooming crape myrtle – all provide food for insects.
7. **Include a water source and protection**: Butterflies and other insects may be less likely to visit the garden in a windy, exposed site. Use plantings or structures such as fences and windbreaks to

make the garden more appealing. Having a simple water source, such as a bird bath, shallow bowl or dripping fountain provides an important resource for many plant pollinators, not just insects.

8. **Limit pesticides**: Pesticides can impact pollinator populations in a variety of ways. They can kill pollinators directly, or change their behavior or reproductive potential. Some chemicals make bees more susceptible to viruses. These effects can be caused by fungicides or herbicides, not just insecticides. Expect and accept a little bit of pest activity. Sometimes tolerating the pest and doing nothing is the best option. If pests become a serious problem, use a least toxic approach to control them. Start with good horticulture to keep plants healthy. Physical controls include hand picking pests, excluding them with row covers or trapping pests. Biological controls can include the use of natural enemies, beneficial insects or beneficial diseases to fight pests. Chemical controls are the last resort. These can include insecticidal soaps, horticultural oils, organic pesticides or synthetic pesticides, depending on the pest, the product's effectiveness and the gardener's philosophy. It's the gardener's responsibility to weigh the options and select the best management practices for any given pest.
9. **Use locally native plants**: Include locally native plants in the garden to further diversify the planting. Native plants are attractive to native pollinators. Look around you to see the diversity that is possible in a garden planted with California native plants.

	Type of Pollinator							
Trait	**Bat**	**Bee**	**Beetle**	**Bird**	**Butterfly**	**Fly**	**Moth**	***Wind***
Color	White, green or purple	Bright white, yellow, blue, or UV	White or green	Scarlet, orange, red or white	Bright red and purple	Pale,or dark brown, purple	Pale red, purple, pink or white	Pale green, brown, or colorless
Nectar guides	None	Present	None	None	Present	None	None	None
Odor	Strong and musty; emitted at night	Fresh, mild, pleasant	None to strongly fruity or foul	None	Faint but fresh	Putrid	Strong sweet; emitted at night	None
Nectar	Abundant; somewhat hidden	Usually present	Sometimes present	Ample; deeply hidden	Ample; deeply hidden	Usually absent	Ample; deeply hidden	None
Pollen	Ample	Limited; often sticky, scented	Ample	Limited	Limited	Limited	Limited	Abundant; small, smooth
Flower Shape	Bowl shaped; closed during day	Shallow; with landing platform; tubular	Large and bowl-shaped	Large, funnel -like; strong perch support	Narrow tube with spur; wide landing pad	Shallow; funnel-like or complex with trap	Regular; tubular without a lip	Regular and small

Resources used to create this handout and for additional information:
Xerces Society for Invertebrate Conservation- www.xerces.org
Pollinator Partnership- www.pollinator.org
The Great Sunflower Project- www.greatsunflower.org
U.S Fish & Wildlife Service- www.fws.gov/pollinators/

This publication can be found at www.ucanr.edu/sacmg

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