Your Urban Garden is
Better with Bees

Special thanks to Dr. Gordon Frankie

Large fuzzy bumble bees and busy honey bees with loud buzzing flights are what many people picture when they think "bee." But researchers have estimated that California and its highly diverse habitats house about 1,500 different species of bees, most of which are natives. While honey bees and bumble bees are social and live in colonies, the vast majority of bees are solitary in nature. Bee research from California could be influential in helping gardens in urban settings everywhere.

Bees visit flowers to collect nectar (carbohydrates to power their flight) and pollen (providing protein, oils and minerals needed by bee larvae). Bees find their favorite flowers by color and scent; a colorful and aromatic native bee garden is pleasing to humans as well. Bees are everywhere; every urban yard has bees whether you know it or not, no matter how beat down or poorly tended.

What can bees do for me?
Here are several reasons for finding bees desirable in your yard:

- Bees are a critical part of natural environments, and they provide a valuable service to humans when they pollinate our fruit and vegetable plants and wildflowers.
- Worldwide evidence suggests pollinator populations are declining due many factors, including habitat destruction. Urban areas can provide important habitat for many bee species.
- Honey bee numbers in North America have been declining over the past 10 years due to parasitic tracheal and Varroa mites; so making space for native bees guards against dependence on a single species. Most native bees are immune from mite attack.
- Bees are fun to observe! Watch a bee forage, collect pollen or sip nectar from flowers. Bumble bees, large and easy to see, can be approached relatively closely to make observations.
- Bees, like birds and butterflies and many other animals in our yards, give us a sense of pleasure knowing that wild organisms can make productive use of artificial urban environments.

Aren't bees dangerous? Don't they sting?
Most bees don't sting, and few species defend their nest (bumblebees are an exception). Bees generally only use their stingers in defense. No need to fear being stung if you move slowly and non-aggressively. Only females are capable of stinging (males of all bee species lack this capacity).

What to Plant – An Exotic Question
Bees, especially native bees, are more attracted to native plants than exotics. "Natives" occur naturally in a specific region; they were not introduced either intentionally or unintentionally to the area by humans or animals. Plants and animals native to elsewhere outside a given region are regarded as "exotics." In a Frankie et al. study (2002), California native plants were at least four times more likely to attract native bees. Why?

- Many hybrid ornamental varieties have reduced rewards (pollen and nectar) for bees due to commercial attempts to make larger or showy flowers. Multi-petalled roses are an example.
- Native bees have no historical relationship with exotic plants.

What can you do?

- Group several "bee" plants together in flowering patches of one meter squared, to increase overall attraction of the site to a greater diversity of bees.
- Don't use pesticides in your garden. If you must, use fast-acting, short-residual options, and apply at dusk when pollinators are least active.
- Create homes for bees! Many of the wild bees you may encounter in your backyard garden make their burrow homes in the soil or in holes in trees. You can also encourage bee-residents by providing nesting blocks. (read about how you can make bee boxes at home, in the Home-Made Sweet Homes section)

Bees Love these Plant Families (especially these species)

Asteraceae – **Daisy, Aster, Sunflower** family (Gaillardia grandiflora, Bidens ferufolia, Coreopsis grandiflora, Cosmos binnatus, Helianthus annuus)
Fabaceae – **Legume** family
Lamiaceae – **Mint, Lavender, Salvia** family (Agastache and Lavandula species, Salvia uliginosa)
Polygonaceae – **Buckwheat** family
Rosaceae – **Rose, Apple, Cherry, Strawberry, Raspberry** family
Scrophulariaceae – **Snapdragon, Penstemon** family (Hebe species, Linaria purpurea)
Other species – Eryngium species (**carrot** family), Geranium incanum (**Geranium** family), Phacelia tanacetifolia (**waterfall** family), Caryopteris species (**verbena** family), Sedum species

Some of the bees they may invite

- **Bumble bees** – social, large, fuzzy, noisy flight, boisterous behavior
- **Honey bees** – social, busy, smaller and less fuzzy than bumble bees
- **Other Apidae species** – social, large stingless bees
- **Halictid bees** – solitary, small black or metallic colored bees, includes sweat bees and nomia bees
- **Megachilid bees** – solitary, often metallic blue or black, includes leaf-cutter bees and orchard mason bees

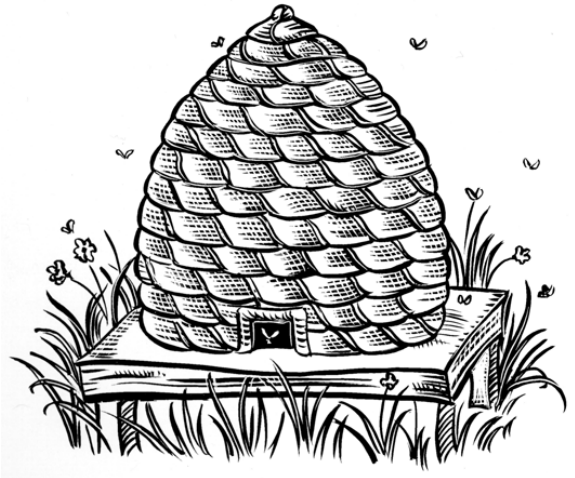
Visit http://nature.Berkeley.edu/urbanbeegardens for more information on urban bee gardening!

Resources:

Frankie, G., Thorp, R., Schindler, M., Ertter, B. and Przybylski, M. 2002. Bees in Berkeley. Fremontia. 30:3-4, p. 50-58.

Cane, J. 2003. Gardening for Native Bees in North America. www.LoganBeeLab.usu.edu, www.loganbeelab.usu.edu/How%20To/CommonName.htm (has a more detailed list of "bee-plants").

Kemp, W. and Bosch, J. 2001. Bees in Your Backyard. American Bee Journal. March 2001, p. 183-185.



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