

Beneficial Bats

by Kathi Joye

Bats have been vilified for centuries as omens of evil. But bats are incredibly beneficial for agriculture, forestry and home gardens as well. Bats are insatiable insect eaters that can consume their weight in mosquitoes, midges, stink bugs, flies, moths, beetles, spiders and other insects each night. This adds up to approximately 600 small flying insects per hour!



Myotis Sp. Bat

Bats are nocturnal hunters that spend the day roosting in dark, protected locations. They are not blind, but most insect-eating bats use a type of echolocation to detect their prey. These bats send out high frequency sounds inaudible to humans, except for spotted and mastiff bats which make lower frequency calls that we can hear. Bats listen for the echoes of their cries as they bounce off of flying insects.

Producing only 1-2 pups per year, bats can live anywhere from 5 to 30 years. When temperatures drop, bats either migrate to warmer places or hibernate while surviving on fat stores. When hibernating, their metabolism drops by nearly 90 percent. Disturbances during this period can result in death, as the return to an active state consumes too much of their energy stores before they can forage for food.

Twenty-five bat species are native to California. Almost all are insect eaters. Seventeen species are found in the Sierra Nevada. These include seven different myotis species which are hard to tell apart: the western pipistrelle (the smallest bat in the U.S.), the rarely seen pallid, little brown, Townsend's big-eared, western red, Mexican free-tailed, big brown and the silver-haired. Western mastiff and spotted bats (the biggest North American bat) are candidates for the federal endangered species listing.

Some of these bats are solitary, whereas others live in large colonies. Big brown, pallid, Mexican free-tailed and little brown bats are often the ones found living within man-made structures.

Bats in the garden are helpful, but bats living in your house are a nuisance. Although they do not gnaw structures, they create other problems: bat urine and guano (bat droppings) lead to unsanitary conditions; roosting colonies make disruptive noises and, though rarely, bats can be infected with rabies, or are hosts for diseases such as encephalitis and histoplasmosis.

To protect yourself, do not touch bats or breathe the dust from their droppings; vaccinate pets against rabies. Bats like vents, cracks around trim and small niches

beneath overhangs and shingles. Use hardware cloth, caulking, self-expanding polyurethane, flashing or weather stripping to exclude them from these areas.

If bats are already residing in your house, wait until they fly out at night before blocking openings. Do not attempt exclusionary tactics from mid-August to mid-May so as not to keep females from reaching helpless pups still inside. For more information, visit <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74150.html>.

An eight-year UC Cooperative Extension study found that the location of bat houses is key to whether or not bats will colonize. Boxes should be placed at least 10 feet off the ground in a place that receives morning sun, but with afternoon shade. They should be within 1/4 mile of water. Boxes placed on poles are rarely used; those placed in trees are never used. Instead, they should be placed on outbuildings near your garden. Boxes should be caulked to protect bats from the elements and should be installed before March. For more information, visit www.batcon.org.

Bats are vital for diversity in our foothill ecosystems. Unfortunately their numbers have been in decline due to habitat loss, pesticide and other chemical use, migration dangers, wind turbines and disease.

Currently larger-scaled strategies encourage the colonization and breeding of bats. On a smaller scale, we can celebrate the arrival of bats each spring as they get to work and, perhaps, encourage local colonization in strategically-placed bat houses while excluding them from our own homes.

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