Los Gatos Birdwatcher

Birdwatcher's Insider Info

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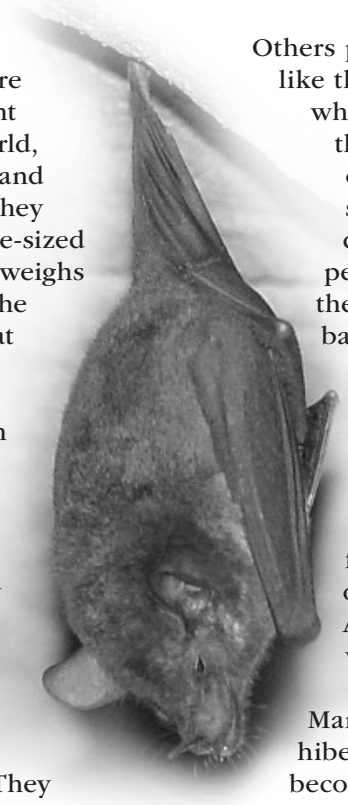
Bats – Nature's Bug Zappers

The Los Gatos Birdwatcher is here to help...



One quarter of all mammals are bats. There are about 1,000 different kinds of bats in the world, 41 in the United States and 16 locally. Worldwide, they range from a bumblebee-sized bat in Thailand, which weighs as much as a dime, to the flying foxes in India that have a wingspan of six feet. Bats belong to the Order *Chiroptera* which translates to "flying hand" or "hand wing". Bats have lived on the earth for over 50 million years and today live on all continents except the Arctic and Antarctica. There are two types of bats. Megas are larger with large eyes, small ears. They are fruit eaters and live in Africa, Asia, Australia, and Indonesia. Micros are smaller with large ears and small eyes and are found worldwide. They are primarily insect eaters, but also eat nectar, fish, reptiles, and amphibians.

Bats are beneficial

Bats are responsible for eating incredible numbers of insects, some of which eat food crops or transmit diseases. Most of the bats in the U.S. eat insects, some 600-1,000 bugs an hour! Where healthy bat colonies exist, fewer pesticides are used creating a healthier overall environment. A colony of big brown bats can protect local farmers from up to 18 million rootworms each summer.

Others perform pollination duties, like the long-nosed bat in Arizona, who is the sole pollinator of the organ pipe cactus. Still other bats pollinate fruits such as bananas, avocados, dates, figs, mangoes and peaches. Over 300 plants in the tropics rely exclusively on bats for pollination. In other parts of the world they eat overripe fruit and are the chief seed dispersal method for many crops, resulting in reforestation. Other local bats eat fish, beetles, and frogs. Vampire bats, found only in Central and South America, eat blood from other vertebrates, but not humans.

Many bats mate in the fall, hibernate in the winter, and become pregnant in early spring (otherwise known as delayed implantation). Most female bats have one, sometimes two babies (pups) each year. Since the mother must eat enough for herself and her pups, she consumes many more insects than non-lactating females. When born, babies can weigh up to 25% of the mother's body weight. Can you imagine a 100-pound woman having a 25-pound baby?

Myth #1: Bats are blind.

Our local insect-eating bats have relatively small eyes, but they still have good vision. In addition, they have a sonar device (echolocation) to detect flying insects at night. This ultrasound scanning produces impulses at a rate of 200-500 beats per second, but the bats have to shut their ears off so that they don't deafen themselves with their own calls. They must then turn their ears back on from 200-500 times a second in order to hear the incoming echo.

Myth #2: Bats attack your hair.

Bats can detect an object as thin as a human hair. Therefore, there is no worry about bats getting stuck in your hair. Bats will fly close to your face while catching insects which are attracted to your breath, but bats are not interested in your hair and will not become entangled while pursuing their prey. Bats are gentle, passive creatures that will only bite in self defense if they are picked up and handled.

Myth #3: All bats have rabies

Like any mammal, bats can contract rabies, but only about 1 in 1,000 bats will become infected with this disease. Bats do not have "outbreaks" of rabies. Bats who develop rabies will separate from the colony and fall to the ground where they are easily found by people who are at risk only if they pick up the bat and attempt to handle it. NEVER pick up or touch a bat with your bare hands. Any bat that allows itself to be touched or picked up is very likely sick. If you find an injured bat, DO NOT pick up or handle the bat. Put a cardboard box over the bat, slide a piece of cardboard underneath and close the box. Or, gently scoop the bat into a small container (like a shoebox) with a cloth or piece of paper and close the box. Place the box where it cannot be

opened by pets or children while you call the nearest wildlife center (see below) or Santa Clara County Animal Control (408)465-2920. If the bat is just hanging from a wall or tree, wait until evening to see if the bat leaves on its own.

Bats are vulnerable

Bats are disappearing at alarming rates. Disturbance of roosting sites due to development and vandalism is the greatest threat to the world's bats. Most of this is due to ignorance and misunderstanding. Most bats prefer to roost in mature and dead trees; however, bats may be forced to take up residence in human dwellings when trees are cut down due to development. Many people evict or sometimes eradicate bats found in their house. A colony of bats evicted from a roost site has a poor chance of survival, unless a bat house is placed near the roost.

During winter hibernation, bats go into a state called "torpor" where they lower their breathing and their heart rate which allows them to survive for long periods on their fat reserves. It is important not to disturb bats during hibernation because if they are awakened during this time, their metabolism increases dramatically. They are unable to replenish their fat reserves because the insects they usually eat are scarce or non-existent during the winter months.

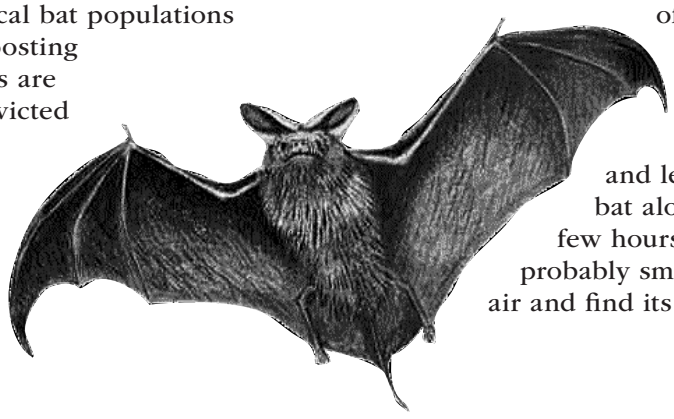
"White nose fungus" is also causing many colonies to die off and much research is being done to find out what is causing this fungus to attack whole colonies.

Benefits of bat houses

Bat houses offer us a way to help some of our local bat populations find suitable roosting sites. Since bats are continuously evicted from trees and human houses, bat houses give these bats a place to live. You are more likely to have bats inhabit your bat house if you know you have bats in your area. By putting up a bat house that is successfully inhabited, you will benefit from fewer yard and garden pests. Insect-eating bats roost during daylight hours in many natural or man-made cavities such as dead trees, old buildings, behind shutters or inside patio umbrellas. Bat houses have narrow crevices at the bottom for bats to enter and rough surfaces inside for them to cling to. A bat house should be mounted at least 15 feet above the ground, sheltered from the wind, and unobstructed by power lines, branches, or foliage. The box should receive approximately four hours of direct sun per day, especially during the morning. Attaching the box to a house will help radiate warmth to the roosting box, especially under an eave. Do not place the box directly above a deck or patio or other location where falling guano (droppings) poses a problem. Bat houses located near a source of water, especially a marsh, lake or stream, are the most likely to attract bats since this habitat provides the insect life needed for their food. A year to a year and a half is not an uncommon period to wait for bats to move into a new house. If you hang your bat house in the fall or winter it may be occupied in the first active season. If it is not occupied within two years, change the location. Also, make your yard and garden "Bat Friendly" by not using pesticides. Bat guano make excellent fertilizer.

Bats in your house

Bats will occasionally get into houses and often cannot find their way back out. After taking off the screens, open all the windows and doors that lead to the outside in the room where the bat is, and close the doors to the rest of the house. Turn out the lights in that room and leave the bat alone for a few hours. It will probably smell the fresh air and find its way out.



Resources

California Bat Conservation Fund is a non-profit organization dedicated to the preservation of bats through education, conservation and rehabilitation.
(www.CaliforniaBats.com)
For injured and orphaned rehabilitation, call Monique Smith Lee (831)722-5011

The Organization for Bat Conservation is a non-profit organization that funds a variety of ecological research and conservation projects as well as purchases and protects natural bat habitat. Volunteer opportunities in bat research, conservation, and public education are available. (248)645-3232 (www.batroost.com)

Bat Conservation International is a non-profit membership organization specializing in educational publications and programs. The organization's purpose is to document and publicize the value and conservation needs of bats, to promote conservation and research projects, and to assist with management initiatives worldwide. (512)327-9721 (www.batcon.org)

Wildlife Center of Silicon Valley is the Santa Clara County rehabilitation and release organization. Located at 3027 Peneticia Creek Rd., San Jose, CA 95132 (408)929-9453 (www.wcsv.org).

Sulphur Creek Nature Center is active in rehabilitation, release, and education and is where our education coordinator, Christine Wolf, is preschool director. They are a distance away but well worth the visit. 1801 D Street, Hayward, CA 94541 (510)881-6749.
(www.haywardrec.org/sulphur_creek.html)

Publications

Understanding Bats, by Kim Williams & Rob Mies, Bird Watcher's Digest. Much of the information in this flyer is from this booklet. The booklet also includes profiles of common bats.

Beginner's Guide to Bats by Donald and Lillian Stokes. The Stokes Guides have beautiful photographs.