

Did you know that sixteen species of bat occur in Orange County? One is a nectar-eating bat and the rest eat insects. The three most common bats are Mexican Free-tailed Bat, Yuma Myotis, and Big Brown Bat.

Yuma Myotis (*Myotis yumaensis*) has a swift and erratic flight. It forages primarily over calm water and eats small emergent insects (midges, small moths, flies, caddisflies, and small beetles). Look for Yuma Myotis during the first two hours after sunset in spring and summer. They roost in natural (cliffs, caves, trees) and artificial structures (buildings, bridges, mines).

Mexican Free-tailed Bat (*Tadarida brasiliensis*) has long and narrow wings so its flight is fast and straight. It forages at high elevations for moths. Reaching speeds of 60 MPH, it may fly more than 30 miles from roost to foraging area. Look for Mexican Free-tailed Bats when they emerge shortly after dusk and before sunrise when they return to their day roost. They roost in natural (caves, rock crevices) and artificial structures (buildings, bridges, mines, and bat houses)

Big Brown Bat (*Eptesicus fuscus*) has a slow, straight and steady flight. It forages within a few kilometers of its day roost, feeding mostly on beetles but also mosquitoes, moths, and wasps. Big Brown Browns emerge before darkness and are active (with periodic breaks) until dawn. They roost in natural (sycamore tree cavities and caves) and artificial structures (buildings, bridges, mines).

Come on a Summer Bat Walk at the San Joaquin Wildlife Sanctuary!

Discover the fascinating world of bats on a Summer Bat Walk with Sea and Sage Audubon at the beautiful San Joaquin Wildlife Sanctuary in Irvine! During these popular events, you will take a short evening walk as we search for two species of bats that come in small numbers to feed at the freshwater wetland. You will learn about common bats in Orange County, how they use echolocation to catch their prey, and why bats are so important in the ecosystem.

Enrollment begins each year on April 1st and fills quickly for the entire season. Choose from a variety of dates on Friday and Saturday nights between July and September. For this year's schedule and registration information, see our website at www.seaandsageaudubon.org. We look forward to discovering bats with you at the beautiful San Joaquin Wildlife Sanctuary!



Big Brown Bat by Donna Robb



Discover Bats in Orange County!



Mexican Free-tailed Bat by Donna Robb

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Yuma Myotis Bat by Donna Robb

Bats of the World. About 1,200 bat species fly through the night on Earth. Bats are mammals which have fur and provide milk for their babies. The smallest is the size of a bumblebee and weighs less than a penny; the largest is the size of a small cat and weighs about 3½ pounds. The hog-nosed bat has a 6 inch wingspan while the flying fox bat has a 6 foot wingspan!

Myths. First, let's get rid of the myths: bats are not blind, do not get tangled in our hair, and do not attack people to suck their blood.

Importance. Bats play an important role in the world's environments by controlling insects, dispersing seeds, and pollinating plants. Insect-eating bats consume huge quantities of insects each night, therefore keeping agricultural pests in check. Fruit-eating bats dine on the juice of fruit while the seeds are either spit out or pooped out to grow into new plants. Nectar-eating bats have long tongues to drink nectar from flowers. While doing this, they transfer pollen from plant to plant, thus making them important plant pollinators of bananas, mangos, figs, dates, cashews and carob.

How do bats find their food? Most bats in Orange County use echolocation to find insects. They make high-pitched sounds (sonar) from their mouths that bounce off objects back to their ears and noses. This is why bat ears and noses are large and such fancy shapes! From

the sonar received, bats learn the prey's size, quantity, and direction of travel, but they cannot discern color.

Where can I see bats? Look for bats on warm, still summer nights. They are found in a variety of habitats, especially near ponds, lakes, streams and canals. They are also found in leafy parks and gardens. Bats are drawn to insects attracted to lights at ballparks and outdoor arenas.

Where do bats rest and sleep? Bats have four types of roosts: day roost (where they sleep); night roost (where they rests between foraging); maternity roost (where mothers raise babies); and a hibernacula (where they hibernate in winter).

What predators eat bats? Some owls, falcons, snakes, opossums and cats catch and eat bats.

Are there vampires in Orange County? No! Only 3 species of the world's bats eat blood, and they are found in Mexico and Central America. Two vampire species prey on bird blood and one on mammal blood (e.g., domestic cattle). The vampire's incisor teeth are razor-sharp to make a cut in their victim. An anti-coagulant in their saliva causes their victim's blood to keep flowing. Vampires lap up blood with their tongue like a cat drinking milk. They are blood lappers, not blood suckers!

What about rabies? Any mammal can contract the rabies virus that affects the nervous system and can spread through saliva. Rabies is rare in wild populations of bats.

What can we do to help bats? Spread the word about the positive role of bats, dispel myths, reduce our use of pesticides, and help conserve natural open space in Orange County.

What is White-nose Syndrome? White-nose Syndrome is a non-native, cold-loving fungus found in eastern North American caves that kills bats during hibernation. Discovered in 2006, this disease has very high mortality (90-100%) and is spreading rapidly. It has moved across the Mississippi River but has not yet devastated Western bats like eastern bat populations. The disease name refers to the white fungal growth found on the noses of infected bats, although it is also found on their wings and tail membranes.

What threatens bat survival? Threats to bats include human persecution, habitat loss (including tree snags), wind turbines, disturbances at roost sites, careless use of pesticides and white-nose syndrome. More than half of the 47 bat species in the United States are endangered or rapidly declining.

What should I do if I find a bat in my house or on the ground? Help a bat get out of your house by opening doors and windows and letting it find a way out. Bats on the ground or unable to fly should be assumed to be sick and left alone. Call your local Animal Services officer to take care of it.

For more information about bats in general, contact the bat experts at Bat Conservation International at www.batcon.org.

For information about Orange County bats,



contact bat biologist
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Western Red Bat by Donna Robb