

PLUGGED IN

FUN FOR KIDS

A COOPERATIVE PROJECT OF THE SANTA BARBARA NEWS-PRESS AND THE MUSEUM EDUCATORS' ROUNDTABLE TO PROMOTE LEARNING AMONG YOUNG READERS IN NATURAL SCIENCE, HISTORY, TECHNOLOGY AND ART

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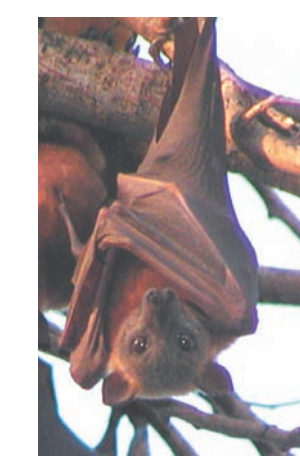
This Month's Theme: BASIC BAT BIOLOGY

Improve Your Batting Average

The Nature of Bats
By Lori Krubsack and Kirsten Friar, Santa Barbara Zoo

How high is your batting average? We're not in the dugout anymore, kids! We've hit a grand slam and we're going batty! We're talking about bats!

Bats are cool and helpful animals. Did you know that there are almost 1,000 different kinds of bats? Most bats found in the U.S.A. feed on insects. Bats are nature's insect repellent. One bat can eat between 600 and 1,000 mosquitoes in just one hour! Believe it or not, bats can see pretty well, but they need to find their way around and catch their dinner in almost total darkness. They do this with the help of a special feature called echolocation. Bats send out pulses of high-pitched sound from their mouths or noses (the frequency is so high that humans can't even hear it.) Then, they carefully listen to the echoes. From the echoes, bats can tell the size and shape of things in their path. As bats close in on their prey, they send out more pulses to make a direct hit. Using echolocation, bats



Little red flying-fox from tropical Australia
Hundreds of roosting fruit-bats or flying-foxes, Australia

can find food as small as a flea without any light.

Many bats eat insects, but a lot of bats eat nectar and pollen and some even eat fruit. Nectar feeding bats are really important because they help pollinate the plants of tropical rainforests. Like bees, bats fly from one night flower to the next getting nectar and spreading pollen as they go. Nectar feeding bats find their way and their food mostly by sight and a really good sense of smell. The flowers that these nocturnal bats like are night blooming and most have giant white petals that help make them easier to see in the dark. Both the flowers and the bats depend on each other to survive.



Nectar-feeding bat

Like the nectar feeding bats, fruit eating bats use their senses of sight and smell to find their food. Fruit eating bats are important to the survival of tropical rain forests because they disperse seeds. The seeds are in the bat droppings that fall down onto cleared land and help forests re-grow. Bat droppings are called guano. This is a highly prized fertilizer.

Several Mexican fruit bats live at the Santa Barbara Zoo. In the wild they are found in Mexico and the Caribbean. Mexican fruit bats use their eyes and nose to find their food, which includes figs, mangoes, avocados, bananas, and palm fruits. Yum! Come to the Zoo and check out our bats.

How's your batting average now? Bats do a lot for us, and they are very important animals - whether they use cool echolocation to get rid of pesky bugs buzzing around or use their sense of sight and smell to pollinate flowers and disperse seeds. Get on base and go batty learning more about bats!
<http://www.factmonster.com/spot/kidsbats.html>

Interview with Our Local Bat Man

By Sally Isaacson, Santa Barbara Botanic Garden

Paul Collins is a zoologist who works at the Museum of Natural History. He is very interested in bats and is working on a big study about the bats of Vandenberg Air Force Base near Lompoc. Paul told me that there are 26 species of bats in California and of these, 20 species live in the Tri-County area of Santa Barbara, Ventura and San Luis Obispo Counties. Most of our local bats feed on insects, but one nectar-feeding species that is more common in Mexico has been found in our area. This is the Mexican long-tongued bat.



The Giant Saguaro Cactus Depends on Bats

By Sally Isaacson, Santa Barbara Botanic Garden

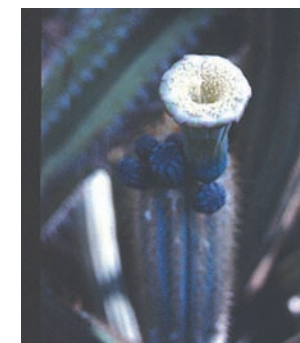


Saguaro cactus in the Desert at the Botanic Garden

The saguaro cactus grows in the Sonoran Desert of Arizona and southeastern California. This huge, branched cactus grows from 10 to 50 feet tall. It has large creamy-white flowers that open at night. The white flowers are easy for bats to see in the dark. The saguaro depends on Mexican long-tongued bats and rare lesser long-nosed bats to pollinate its flowers. Nectar feeding bats have long muzzles and long tongues that allow them to reach the nectar deep within the saguaro flowers. As they look for nectar, the bats get a lot of pollen on their faces. They pollinate the cactus flowers as they fly from blossom to blossom. Successful pollination results in producing seeds and then in more saguaro plants. The saguaro cactus is just one of the many interesting plants that grow in the desert section near the entrance of the Botanic Garden.

BAT PLANTS AT LOTUSLAND

By Connie Buxton, Ganna Waska Lotusland



Pseudo pilocereus

Most bats in Southern California are insect eaters. They do not eat nectar or pollen, so are not plant pollinators. At Lotusland you can see "bat plants" from Peru, which in their native habitat are mostly pollinated by long-nosed bats. These bats are very important pollinators and seed dispersers. At Lotusland these cacti bloom during spring and summer, and their beautiful flowers can be seen at night and last into the early morning.



Pilocereus palmeri

Bat Biology

E K O E L V A R M L L L Z B N
F C L A S R E P S I D A A H E
X I H W I C S L Q T X N A M S
Q O J O A N A E P F F R B P T
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Night Friends: Bat Stamps for Halloween

By Connie Buxton, Ganna Waska Lotusland

Bats are often misunderstood, but are highly beneficial to humans. You can help people appreciate bats by using the new bat stamps offered by the U.S. Postal Service. You can go to their website and order online at www.usps.com, click on "Buy Stamps," and go to "Night Friends." You can also go to your local post office and buy these beautiful stamps.



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