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Where the Bats Are

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All photos by Merlin D. Tuttle, unless otherwise noted
Drawings by Cullen Geiselman

Where do bats live? Ask anyone, and the immediate response is likely to be □in caves.□ More knowledgeable people might also mention trees, buildings, and abandoned mines. In fact, the range of places bats choose to roost is too broad to make into a simple list. From woodpecker holes to tall jungle grasses to old World War II bunkers, bats□ housing selections are far more creative and opportunistic than one might imagine. Bats take advantage of all manner of natural resources, as well as shelters already built by insects, birds, and other mammals, including humans. As the first installment in a series illustrating the vast diversity of bat roosts, this photo essay focuses on some of the interesting ways in which bats use plants and trees.

To protect bat habitat, it is important to know not only which plants and trees bats use, but which parts they use--leaves, branches, bark, hollow trunks--and how they use them. For example, many tropical bats make their homes in large Heliconia or banana leaves, but different species use the leaves in different ways. Spix□s disk-winged bats (1) roost deep in the tubes of developing leaves in a unique heads-up position that allows them to escape quickly from approaching predators. With suction cups on their wrists and ankles, they can quickly make their way up or down the slick inner surface of a leaf. These bats were photographed in the few seconds it took them to deftly scramble out of their roost and take flight. Banana bats (2) also make a cozy home from rolled banana leaves. Bats such as these, which use furled leaves for shelter, must move quite often as the leaves unfurl. Tent-making bats, such as Honduran white bats (3 and 4), labor to create a leaf roost that may last a bit longer. By chewing along the midrib of a Heliconia leaf, they force the leaf to fold down into a tent that keeps them protected from the elements as well as predators. As sunlight filters through the leaf, these tiny fruit-eating bats take on a pale green tinge that serves to camouflage them.

Yellow bats in the southern United States sometimes climb into the dead fronds of palm trees (5) or nestle within clumps of Spanish moss (6) that drape dramatically from tree branches (7). Because the yellow bat□s fur matches the color of the dry, faded moss or yellowing fronds, the bat is hidden from view. They cannot protect themselves, however, from the common practice of pruning dead fronds from ornamental palms, which threatens yellow bat habitat in Texas and other southern states [BATS, Summer 1997].

Although the red bat (8) of North America prefers to roost in more exposed positions--usually from a tree branch or the petiole (stem) of a leaf--this species□ mottled red coat protects it by giving the bat the appearance of a dead leaf. In fact, there are accounts of these bats being found hibernating in piles of leaf litter on the ground. Red bats may also resemble rotting fruit as they hang from the branches of peach trees. With the exception of mothers and their offspring, red bats and other bats of the genus Lasiurus

generally roost solitarily. The mother in this picture is nursing quadruplets while clinging to a grapevine. Unlike most other bats, red bats can have more than one pup.

The magnificent flying foxes of the Old World tropics also roost in the open, but form large groups called □camps,□ such as this camp of grey-headed flying foxes in Australia (9). Hanging from the bare branches of trees with their wings wrapped around themselves, they sometimes look like giant fruit pods. These bats return to the same tree, or group of trees, year after year to raise their young. Because of flying foxes□ affinity for particular roosts, protection of these trees is vital to their conservation.

Some bats simply hang in the open on tree trunks, relying on camouflage to protect them. These proboscis bats (10) blend well into the multicolored bark on the side of a tree in Belize. This species typically roosts only on trees that extend over water, probably as a means of limiting predators. To photograph these bats, BCI executive director Merlin Tuttle had to wade chest-deep into the river (11).

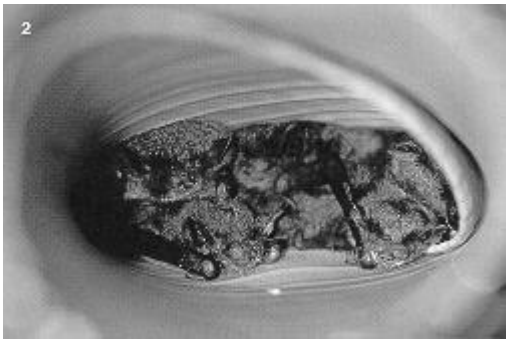
Woodpecker holes and loose bark on tree trunks make convenient hideaways for many bats in North America. Here an endangered Indiana bat (12) peeks out from its resting place beneath the bark of a dead but standing trunk, called a snag. Unfortunately, a perfectly loosened piece of bark doesn□t last for the entire life of the snag, and bats are forced to move often to find new bark crevices. Well-designed forest management plans protect snags from being cleared away because of their importance as habitat for bats and other animals.

Decaying trees with hollow trunks should also be conserved, because they provide a dry and secure shelter for bats that enter and exit through holes in the trunk. Some of these bats roost toward the tops of trees so they are able to make the slight drop needed to take flight when leaving their roost. These are generally species with long, narrow wings built for high speed. Others, such as this tropical frog-eating bat and Seba□s short-tailed bat (13), have broader wings that permit greater maneuverability and do not require a drop-off for the bat to take flight. These bats can enter a hollow at the base of a tree where many other species cannot.

From tree trunks to branches, dead fronds to lush tropical leaves, there is potential bat habitat in much of the vegetation that surrounds us every day. In future issues of this magazine, we□ll look at the many different ways in which bats use caves, rock crevices, and shelters built by other animals.

Barbara French is BCI□s Conservation Information Specialist and co-author of the new book Captive Care and Medical Reference for the Rehabilitation of Insectivorous Bats.

1. Spix□s disk-winged bats (Thyroptera tricolor)



2. Banana bats (Pipistrellus nanus)

3. and 4. Above and right: Honduran white bats (Ectophylla alba)

5. Northern yellow bat (Lasiurus intermedius)

6. Southern yellow bat (Lasiurus ega)

7. Spanish moss hanging from trees

8. Red bat (Lasiurus borealis)

9. Grey-headed flying foxes (Pteropus poliocephalus)

10. and 11. Proboscis bats (Rhynchonycteris naso)

12. Indiana bat (Myotis sodalis)

13. Frog-eating bat (Trachops cirrhosus) and Seba□s short-tailed bat (Carollia perspicillata)

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