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Where the Bats Are - Part II: Other Animals' Shelters

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

Last spring, we featured the first article in a three-part series on the places where bats roost. With the focus on plants and trees, we found bat habitat in leaves, branches, trunks, and even bark. But bats can be found roosting in less expected places, including homes made by other animals. In this issue, we will see how bats borrow shelters made by insects, birds, and other mammals.

Humans have constructed a wide variety of structures that have proven to be favored homes for bats. Many insect-eating bats roost in attics, barns, or behind window shutters. Pictured above, a Mauritian tomb bat (*Taphozous mauritianus*) rests contentedly under the thatched roof of a mud hut in Kenya (**1**). Bats entering a hut are viewed by Kenya□s Nandi and Tugen tribes as a good omen: the more bats that enter a home, the more the owner□s cattle will prosper. As their name implies, tomb bats are also known to roost in sacred crypts where ancient rulers were laid to rest. Some of the most famous tombs of all, the Egyptian pyramids, have had mouse-tailed bat (*Rhinopoma microphyllum*) inhabitants for more than 3,000 years!

An enthusiastic excavator, man has long been known to extend his building activities underground, resulting in everything from mines and bunkers to drainage and irrigation tunnels. Many bat species take advantage of these structures as roosts. In the United States, cave bats *(Myotis velifer*) have been found in road culverts (**2**); and Rafinesque□s big-eared bats *(Corynorhinus rafinesquii*), in abandoned ammunition storage bunkers and old cisterns. In Egypt, trident leaf-nosed bats (*Asellia tridens*) roost in underground channels at oases, while the long-legged bats (*Macrophyllum macrophyllum*) of Central America sometimes take up residence in irrigation tunnels.

From beneath the ground to far above it, human construction spans valleys, roads, and waterways. Our ubiquitous bridges sometimes provide excellent roosts for dozens of bat species. In the United States, more than 25 state transportation departments report bats living in expansion joints under bridges. Little brown, big brown, and Mexican free-tailed bats (*Myotis lucifugus*, *Eptesicus fuscus*, and *Tadarida brasiliensis*) are the most common of the two dozen species known to roost in bridge crevices.

Who really lives here? You may not always find the occupant you□d expect inside an animal□s home. Look into the burrow of Africa□s large-crested porcupine, and you might discover leaf-nosed bats (*Hipposideros fulvum*) in residence. Slit-faced bats (*Nycteris* sp.), like many other small African animals, sometimes seek shelter in the abandoned underground chamber of an aardvark burrow. Birds are also instrumental in providing bats with places to roost. In the Sonoran Desert, big brown bats have been known to adopt old woodpecker holes in columnar cacti such as the saguaro (**3 and 4**). Across the American

Southwest, cave bats (*Myotis velifer*) often reside temporarily in abandoned cliff swallow nests (**5**).

Scientists in equatorial West Africa have found woolly bats (**7**) (*Kerivoula* sp.) in the large webs of the colonial spider *Agelena consociata* (**6**). More than a thousand spiders may make their home in these intricate nests. The bats are well hidden in the cluster of leaves that form the central part of the web. It is suspected that woolly bats sometimes return the favor by inadvertently picking up spider hitchhikers, which colonize in new locations.

Tiny club-footed bats of Asia (*Tylonycteris* sp.) have flattened skulls that allow them to enter bamboo stems through narrow vertical slits made by chrysomelid beetles. With suction pads on their thumbs and feet, these bats are able to climb inside the hollow joints of the stems where they roost.

While club-footed bats view termites as a potential meal, round-eared bats (*Tonatia silvicola*) of South America regard these insects as convenient landlords. These bats excavate the hardened earth at the bottom of suspended termite mounds to create perfect bat-sized cavities from which they can take flight (**8**). Sometimes they must contend with other itinerant lodgers, including a particularly aggressive ant known to vigorously defend the nest. Although these ants do not hesitate to bite most intruders, they are apparently indifferent to the presence of round-eared bats.

From aardvark burrows to spiders webs, we find bats amazingly creative when searching for a quiet place to spend the day. Next time we ll look at the variety of ways bats use caves and rock crevices as roosts.

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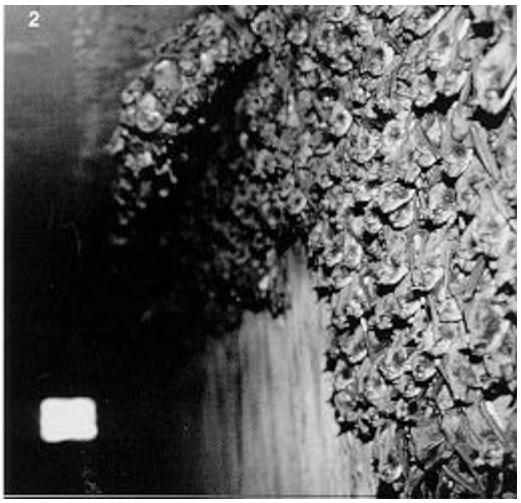
NO PHOTO CAPTIONS, ONLY NUMBERS ON PICS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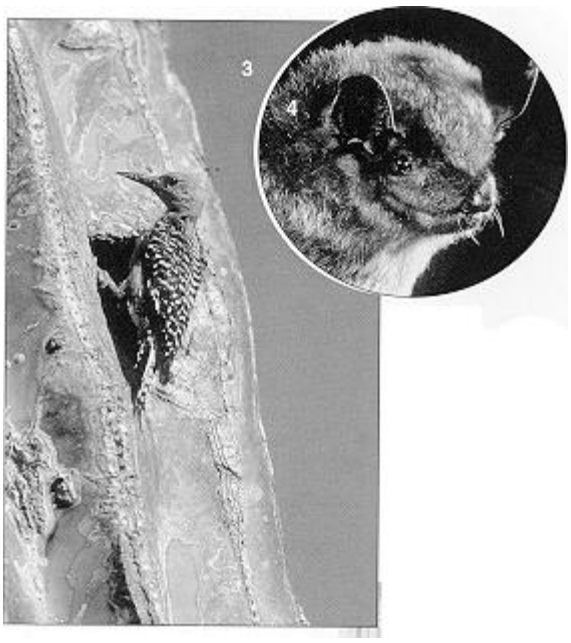
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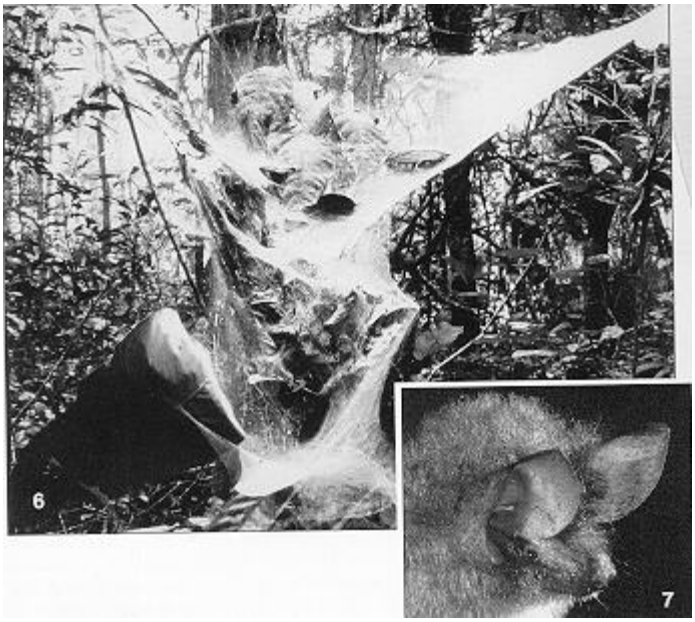

All articles in this issue: