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Help for Migratory Bats

BCI and Mexican biologists join in a mutual concern: protection of the bats that cross our borders...

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Mexico's largest bat populations are in serious trouble. In addition to being victims of habitat loss, pesticides, and roost disturbance, they also are targets of intense eradication efforts. Throughout much of Latin America, people do not discriminate between the single vampire bat species that harms livestock and the hundreds of other species that are essential to the health of tropical ecosystems. War is declared on all bats, and beneficial species, especially those that form large colonies in caves, are the most often killed.

Many of Mexico's more than 130 bat species may be in trouble, though almost nothing is known about the status or needs of most. Last fall BCI staff, Patricia Morton, Paul Robertson, and Merlin Tuttle, along with scientific advisory board member Don Wilson from the Smithsonian Institution, met with Mexican scientists to take the first steps in developing a comprehensive conservation plan for Mexico's exceptionally rich, but threatened, bat fauna. The meeting, chaired by Rodrigo Medellin, a bat ecologist, was held at the Ecology Center at the University of Mexico in Mexico City and was attended by fellow ecologists Hector Arita, Joaquin Arroyo, Gerardo Ceballos, and Oscar Sanchez. Participating scientists agreed upon several stages of conservation initiatives, ranging from surveys to identify the most important bat caves and their protective needs, to developing vampire control training and public education materials.

Mexico's largest remaining overwintering colonies of Mexican free-tailed bats (*Tadarida brasiliensis*) are believed to be in the most immediate jeopardy. Although free-tailed bats still form colonies numbering in the millions (the world's largest aggregations of warm-blooded animals), there is cause for serious concern. A large proportion of the species population is migratory, traveling north each spring to rear young in only about a dozen suitable caves in the southwestern U.S. Alarming declines have been documented at several of these sites. Eagle Creek Cave in Arizona once housed the world's largest bat population, estimated in 1963 to be 25 to 50 million individuals. In just six years, the population plummeted to only 30,000, a 99.9% reduction! Even the famous Carlsbad Caverns, New Mexico, population has dropped from a reported 8.7 million bats in the 1930s to only about 250,000 today.

Following the Mexico conference, Paul Robertson conducted an exhaustive search for information on important bat caves of Mexico and interviewed leading authorities on Mexican caves and bats. Of the over 200 caves identified as important for bats, he selected the 20 believed to harbor the largest overwintering populations of free-tailed bats. He targeted those for immediate status surveys and organized a BCI field team that included Jesse Villalobos, an assistant from Trinity University, and Mexican bat biologists Arnulfo Moreno and Jorge Medellin. During February, they visited eight of the largest overwintering caves historically known to be used by Mexican free-tailed bats.

What the team found highlights the urgency of current efforts. Half of the eight caves visited had lost their entire colonies--an alarming discovery, considering they had historically ranked among Mexico's most important. The owner of the fifth cave estimated a 90% loss of bats over the past five years. The colony in the sixth had dropped from many millions to just 100,000, and the final two caves still housed 30,000 and 100,000 respectively, having apparently undergone substantial decline as well. The primary cause appeared to be human disturbance and vandalism, including ill-timed phosphate mining and guano extraction.

Tires that had been burned in one cave entrance had so covered the interior with thick soot that it was totally unusable by bats, and fire also seriously damaged a second cave. Another that had housed a large free-tailed colony only five years ago had been entirely blocked off with plastic and cardboard, preventing further use. Burning tires in caves is disastrous, the noxious smoke killing entire ecosystems of unique life. Such fires not only destroy millions of bats at a time, but without extensive clean-up by conservationists, bats cannot even use the caves in the future. These disastrous incidents likely are examples of misdirected efforts to kill vampire bats.

This summer the eight caves visited in February will be rechecked, and owners contacted regarding possible protective measures. The remaining 12 of the top 20 Mexican bat caves also will be visited this summer and again during the winter of 1991-92. Ongoing monitoring is greatly needed on both sides of the Mexican border. Following completion of initial surveys, plans will be developed to educate people and gain conservation measures in the locations where help is most feasible and needed.

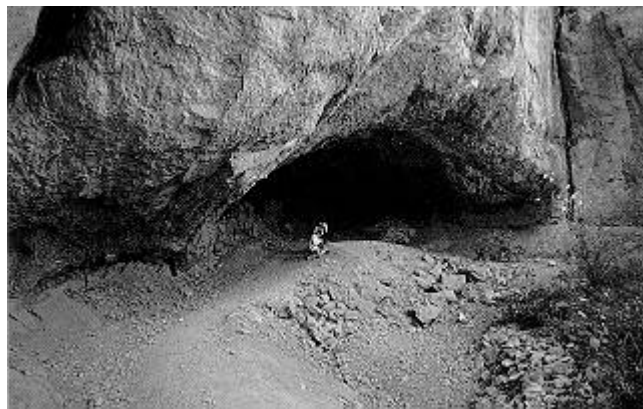
One of BCI's current priorities is to develop educational programs in Spanish for use throughout Latin America. These will focus both on broad public education and on training for vampire control personnel. The many values of bats, as well as specific vampire control techniques, will be emphasized, especially in areas where the most important or endangered bat populations are located.

Mexico's bats are an essential heritage shared by many North Americans. The bats that cross our borders create some of our most spectacular bat flights, from those at Carlsbad Caverns in New Mexico to the Congress Avenue bridge in Austin, Texas. We must work together with the people of Mexico to ensure a future for our bats and the many other plants and animals that rely on them.

by James H. Fullard



Colonies of Mexican free-tailed bats often number in the millions, but there is still cause for serious concern. The few roosting caves suitable for the species are increasingly disturbed, and dramatic declines have been documented.



Half of the caves surveyed have completely lost their bat populations. Although Tio Bartolo is one of the least disturbed, evidence suggests a much larger past population.

All articles in this issue:

- ▶ [ON THE COVER](#)
- ▶ [Help for Migratory Bats](#)
- ▶ [PREDATOR AND PREY: Life and Death Struggles](#)
- ▶ [SEEING IN THE DARK](#)
- ▶ [Tuning in with a Bat Detector](#)
- ▶ [Bats in the Wrong Place?](#)
- ▶ [James River Bat Cave Now Open for Visitors](#)
- ▶ [BCI to Host Bat Research Meetings](#)
- ▶ [Traveling Photo Exhibit](#)
- ▶ [Bats Driven from the University of Arizona](#)
- ▶ [One-Day Bat Study Workshop](#)
- ▶ [New Activity Book for Children](#)
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- ▶ [WISH LIST](#)
- ▶ [Here's a way you can increase your gift to BCI at no extra cost](#)

- ▶ [REVIEWS](#)
- ▶ [LETTERS](#)
- ▶ [Lock and Key](#)