

## VOLUME 25, NO. 3 Fall 2007

### Members in Action

A Unique Bat Sanctuary Bob Wisecarver built a bat cave in Californiaâ€™s Pardee Dam  
Robert Locke

Bob Wisecarverâ€™s bat houses are a bit like snowflakes: No two are ever exactly alike, with each designed to meet specific needs and to utilize the mostly salvaged materials he converts to abodes for bats throughout northern California. But his most unusual creation is a unique and extremely successful â€œbat caveâ€ that provides a home for some 9,500 bats in the spillway of the Pardee Dam across the Mokelumne River.

The 86-year-old Walnut Creek resident, known as â€œBat House Bob,â€ retired years ago from a career as a problem solver in the construction business. â€œMy job,â€ he says, â€œwas to check out a problem, go back to the office and come up with a solution, â€ then take it out to the job site and install it. That is exactly what happened at Pardee.â€

In 1995, the East Bay Municipal Utility District sealed several openings in a spillway during renovations of the 75-year-old dam, some 30 miles (50 kilometers) northeast of Stockton, California. That displaced a small colony of Mexican free-tailed bats (*Tadarida brasiliensis*) that had been living inside the dam, so EBMUD turned to Wisecarver for help in providing a new home for the bats.

He was a logical choice. Wisecarver has been a remarkably active bat-house builder and advocate since encountering a copy of BATS magazine in 1993. The issue featured an article about an Oregon organic farmer, Tony Koch, who built bat houses to attract bats that helped control corn earworm moths. Wisecarver met with Koch and â€œhe put a fire in my belly. What really got me going is that you can help solve these problems without using poisons.â€


He started out with plans from BCIâ€™s Bat House Builderâ€™s Handbook, then added special touches based on his own observations and insight. His distinctive â€œ and usually successful â€œ bat houses were already scattered around the area when EBMUD came calling.

Wisecarver and an EBMUD engineer visited the dam to figure out a solution. An initial notion to simply install a few bat houses in one of 16 concrete, cubicle-like spaces in the spillway was dismissed as inadequate. Wisecarver decided to turn one of the cubicles, each 10 feet (3 meters) high, wide and long, into a bat roost â€œ an instant bat cave.â€

They assembled five roosting modules similar to those often used now under bridges, basically 5-foot-long (1.5 meter) rectangular boxes divided by parallel panels to form roosting chambers. â€œThey were all 10 inches (25 centimeters) high because thatâ€™s what I had in the way of fence boards, but they were all built differently,â€ Wisecarver said. â€œAll the houses had different spacing, as we didnâ€™t know what kind of bats we would get and what they liked best.â€

This was in the very early days of BCIâ€™s pioneering North American Bat House Research Project, which began in 1992, and reliable information was still sketchy at best.



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Wisecarver was an important part of changing that, as he has contributed observations and data as a project Research Associate since 1995.

Four of the modules used rough lumber for roost-chamber walls, while another tested the idea of using carpet scraps instead. (Wisecarver said the carpet worked well enough, but required frequent replacement because of odor issues.)

The wide-open front of the cubicle was closed off by a plywood wall with a door and three 6-inch (15.2-centimeter) by 18-inch (45.7-centimeter) openings for the bats.

The Pardee bat cave got off to a slow start, with few bats moving in and most of those scrunching behind the wall framing rather than in the roosting chambers. So Wisecarver built an extension that created three-quarter-inch (1.9-centimeter) chambers on one of the modules. "That worked well, so we reworked another one, and they liked it, too."

He has been gradually replacing the original roosting modules with three-quarter-inch chambers and also adding new ones ever since. "We have been adding four panels a year for quite some time to keep up with our growing population," he said.

The bats in residence are overwhelmingly Yuma myotis (*Myotis yumanensis*) and Mexican free-tailed bats.

In 2000, all of the bats, estimated at nearly 3,000, abruptly vanished. The culprit turned out to be a barn owl, an efficient predator of bats that had moved into the roost. After running the owl out, Wisecarver put wooden bars over the three wall openings that were intended only for bats. That reduced the entrances from 6 inches to about 2 inches (5.1 centimeters), which kept the owl out, although the bats didn't return until the following spring. "So one thing we learned," Wisecarver said, "is that no opening can be more than 2 1/2 inches (6.4 centimeters) high."

Three years ago, he realized that during the warmest summer months, the roost chambers got so hot that many of the bats were hanging on the outside of the modules. Deciding that "we needed to cool things off, we cut two vents into the top of the front panels as hot-air vents. The next year, there were fewer bats showing, but there was an increase in guano, indicating more bats in the roost. Voila! It seemed to work. Now we plan to add more vent slots and more panels."

He and several volunteers also annually collect the guano (195 gallons [0.74 cubic meters] in August) that the bats leave behind. The guano fertilizes gardens at a historic site alongside the Pardee Reservoir.

The bat population keeps growing, and Wisecarver keeps tinkering and improving things at the dam and dozens of other California bat-house sites. But now, he says, it's about time to retire from the career that has filled his retirement.

"I have a deep sense of pride in my gut for this whole thing," Wisecarver said. "Bats are only half of what I do. The rest of my free time is spent on habitat enhancement at our four Open Space Parks in Walnut Creek."

"But as the saying goes: All good things must end. This will probably be my last year in this monkey business. On my last trip in August, all I did was stand around and watch." So he says he's looking now for someone to take the baton and continue the program he

began so long ago. But if you ever wonder whether one person can make a difference, look no further than Bat House Bob Wisecarver.

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