

CASE HISTORY

Embassy under siege

Ultrasonic device solves pest control problem at government complex

Pest problems can be a nightmare for facilities professionals. Birds and insects are bad enough to deal with, but imagine hundreds of fruit bats, each with a wingspan of three feet, plaguing your facility. Imagine those creatures incessantly chattering and dropping parasite-infested excrement all over the grounds. Add to that a constant struggle with a legion of sewer rats.

Not a pleasant thought, is it? Yet this was exactly the problem faced by the U.S. Embassy in Bamako, Mali, as well as the official residences of the U.S. Ambassador, the Deputy Chief of Mission, and the Public Affairs Officer. Karl C. Voiles, facilities manager for the U.S. Embassy, saw what the three executive officers and their families had to live with, and he knew something had to be done to put an end to the problem. But he didn't know what.

The burden of bats

The country of Mali is located in the sub-Saharan region of Africa, near Algeria and the Ivory Coast, and has a tropical climate. The city of Bamako, where the U.S. Embassy is headquartered, is on the Niger River. The Embassy is on one side of town; the three official residences are across town, where the giant bats like to congregate in the tall trees that grow by the river.

"Bats are a problem that is common all over West Africa," Voiles says. "They go with the territory, wherever banana palms and mango trees grow." The huge bats, which live on insects and fruit, like to roost in tall trees, where there's lots of hanging room. Furthermore, the bats are a year-round problem.

One prior facilities manager cut down the fruit trees to discourage the roosting bats. But in Mali's hot, humid climate, where daily temperatures routinely hit 115°, the trees grew back rapidly and the pests returned in full force.

"Everything was tried, from loud music to bright lights," Voiles says. Nothing worked. The bats remained, creating an incredible noise and mess.

Guests at the Ambassador's events were bombarded with excrement and frightened by swooping bats, and bat droppings completely polluted the Ambassador's pool.

Fruit bats consume tons of insects, which can be a good thing, Voiles says. "We didn't want to hurt the bats. We just didn't want them invading Embassy events," he explains.

Finding a solution

Voiles studied much literature in a desperate search for ideas on getting rid of the pests. One day he read about an ultrasonic device created by Bird-X, Inc., a Chicago, IL manufacturer of bird repelling products.

The Transonic IX-L is designed to repel birds, rodents, skunks, raccoons, and other pests without harming them, and Voiles had a hunch that this might work on the offending bats. The device in question uses intense ultrasonic and sonic sounds to create a hostile environment for up to 2,000 sq. ft., driving out pests safely, effectively, and rapidly. Pests cannot adapt to the intolerable high-level sound output — it bothers their nervous systems, and it works on a variety of nuisances.

When Voiles learned how inexpensive the Bird-X Transonic IX-L Pest Repeller was, he ordered 15 of them — enough to encircle the three Embassy residences. Voiles, who heads a staff of 50 facilities maintenance workers, asked two of his electricians to install the wiring, outlets, and units at 100-ft. intervals around the perimeter wall of the residences.

He cautioned his staff that it might take several days or weeks before the ultrasonic units reduced the bat population around the homes. But the results were instantaneous. "Like magic, the bats vanished," says Voiles. "The trees were empty, the racket ceased, and no more mess." The sound emitted by the Transonic IX-L Pest Repeller was above the human threshold. It only bothered the bats.

The Transonic IX-L Pest Repeller uses ultrasonic sounds to drive out pests up to 2,000-sq.-ft. away.

This artist's rendition demonstrates the Transonic IX-L in use at the U.S. Embassy in Mali, West Africa.

Another triumph

Voiles took another Transonic IX-L unit across town to the Embassy Compound and installed it near the site of the second major pest problem: rats. In the city of Bamako, as in much of West Africa, there are open sewers, drainage ditches, and visible garbage. The rats, he says, are "large and bold," and they were particularly offensive when they stuck their heads up from the drainage ditch while Embassy employees sat on nearby benches eating their lunches. "We didn't want to do indiscriminate poisoning, with the risk of poisoning other creatures as well," Voiles says.

Like the bats, the rats left the scene instantaneously when the Transonic unit was turned on. "No more intruders now," Voiles confirms. Although the unit repels rats at a decibel level that humans can hear, Voiles placed the unit far enough away from Embassy buildings so it bothers no one. "The theory behind the ultrasonics works," states Voiles, "and the price made it an easy decision."

Voiles is very open about the savings and benefits for the U.S. Government. For example, the three Embassy officers residences had to be repainted every year due to the bat droppings, at a cost of \$8,000 to \$10,000 each year in paint and labor. "Now, one paint job should last three years," Voiles notes. He also stresses the importance of reduced health hazards from the absence of bat and rodent droppings, which contain parasites that can spread rabies, plagues, and other diseases.

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USE IMPO NO. 279

