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## Bye, Bye Mosquitoes

By Sophie Braccini



From left: Matt Patera, Cameron Patera, and Tristan Westernoff construct a bat house. Photo Jennifer Patera

"My friend Kevin Gustafson, who built owl boxes for the Town of Moraga, gave me Brian Murphy's number," remembers Patera, "I've always had an interest in nature, birds in particular, and have read many books about them." The 16-year-old student immediately liked the idea of bat houses. "They are very useful little mammals and I've never been afraid of them. The variety we get around here does not bite; they are very small and are only interested in insects. It was a great opportunity to contribute to Moraga."

Each of Patera's two houses can accommodate up to 2000 bats; the bat houses took just a few days to build, with the help of few friends from Boy Scout Troop 212 and his younger brother.

"The young man is an outstanding kid," adds Bernie, "he took the project from start to finish, set the plan, raised the money for his project and completed it by inventing a new way to install bat houses under bridges, which is both ingenious and simple."

Murphy was also impressed by the mounting brackets that Patera invented and that were manufactured by his uncle, the owner of V&O Machine. "Thanks to Matt, U.C. Davis Agricultural Advisor Rachel Long, who works with bats in the Central Valley, is planning on installing bat houses like Matt did on a pedestrian bridge over the American River," said Murphy.

"This is a first small step," says Bernie, who would like to see more bat houses in places such as the Hacienda de las Flores, "if other people catch on to the idea and do the same thing near their homes, or under the overhang of their roofs, they will come."

### A Bit about Bats

Bats have a certain reputation due to their sharp fangs, pointy ears and dark wings; and then there's the vampire thing. But actually, bats are very helpful creatures.

Dave Johnston, a Senior Wildlife Ecologist with H. T. Harvey & Associates and an adjunct professor at San Jose State University, specializes in bat ecology. "Lactating females eat their weight in insects every night," he explains. "The concept of using bats to control pests is a good one; I've been working with farmers in the northern Sacramento Valley to install bat houses."

An additional benefit of having a bat house in your garden is bat guano, which is an effective fertilizer with high levels of phosphorus and nitrogen, and is almost odorless.

"Mexican free-tailed bats are the most common in our area," says Johnston. "They are highly social mammals that like to cluster up." The average Mexican free-tailed bat is about 3.5 inches in length and weighs less than half an ounce.

The unnerving buzz of mosquitoes at dusk in the park could become nothing but a fading memory in Moraga. Not due to massive spraying in creeks and puddles - Moraga still abides by its Integrated Pest Management (I.P.M.) rules - instead, bats have been invited to dinner...and they love to dine on mosquitoes.

Dan Bernie, Moraga's Superintendent of Parks & Public Works, has been seeking opportunities to have bat houses installed close to locations where mosquitoes pullulate. Matt Patera, a junior at Campolindo High School, was up to the challenge. The Eagle Scout candidate built and installed two bat houses in the fly-paths of bats near Moraga's parks.

"We have plenty of mosquitoes and larvae at the parks," says Bernie "we've spotted bats roosting naturally at the southern end of Rancho Laguna Park; they fly their way up the creeks and help us to stay away from pesticides."

Every year, to get his projects completed, Bernie sends his to-do list to Scout Masters and to Brian Murphy of the Mt. Diablo Audubon Society, who is always a resource for scouts looking for interesting projects to complete.

If you find a live bat you should not try to touch it, recommends Johnston. "Bats carry rabies in the same proportion as any other wild mammal," he adds, "it's very rare, about half of one percent."

Johnston believes that bats are the last frontier in mammal studies. "They are so complex and exploit all kinds of habitats," he says, "one of the reasons that we do not know them very well is because their nocturnal habits make it difficult to observe them."

Reach the reporter at: [sophie@lamorindaweekly.com](mailto:sophie@lamorindaweekly.com)

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