Bats: Safe Insect Control

In an age when landscape designers are looking for environmentally safe insect control, help comes from a rather unlikely source — bats.

In North America the majority of bats are insect eaters and, in fact, major predators of night-flying insects. Almost half of these species may use artificial roosts.

The use of bat roosts for insect control is not a new idea. AT the turn of the century, Dr. Charles A. Campbell built artificial roosts in Texas to try to control mosquitoes in order to eradicate malaria. He based his idea on birdhouses, artificial cavaties provided for birds and was nominated for a Nobel Prize. One of his towers, a "hygieostatic bat roost," is a Texas State Historical Landmark. And it still has bats living in it.

Around the time of Campbell's experiments, bat houses were being used in Europe. In the past decade, they have been given consideration in North America largely through the efforts of Bat Conservation International of Austin, Texas. Nature, of course, has used natural bat controls for a long, long time.

Backyard habitats include bat houses that hold from 20 to 100 bats. These can be mounted under the eaves of buildings or in trees. The roosts look like bird houses, the largest being about two-feet-high, one-foot-wide, and one-foot-deep. The bottom is open. Inside are vertical partitions spaced from ¾ inch to 1½ inches apart.

The common little brown bat, *Myotis lucifugus*, is one species likely to move in. They can eat up to 600 mosquitoes per hours. Another possibility is the big brown bat, *Eptesicus fuscus*, "big" only in relation to "little". They will eat Japanese beetles.

Some bats eat half their body weight in insects each night. Along with mosquitoes, gnats, midges, Japanese beetles and black flies, bats eat farm and garden pests such as cutworm and cornborer moth.

Because bats are nocturnal, they will not interfere with the homeowner who has a purple martin colony, a bluebird house, or is encouraging other insect eating birds on their property.

For a municipal design project, a Missouri style bat roost can be used. Seven-feet by four-feet by three-feet, it can hold 1,000 bats. These roosts have been successful on golf courses and in park and recreation settings in a number of states. As a community conservation effort, it has both educational and public relations value.

Bat roosts are not for every project but with certain conditions, a supply of insects, and a source of water, it may be a possibility. There is a scarcity of tree cavaties used for roost sites, a loss of habitat for these beneficial animals.

For more information contact the APLD's Committee on the Environment and read *America's Neighborhood Bats,* by Merlin Tuttle.

Credit: The Landsculpture, May 1992

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