

Super swats gnats with bats 'n birds

By PETER BLAIS

Black flies and bats. Now there's a combination that'll bring the toughest Mainer to his knees.

But at Sugarloaf Golf Course, head superintendent Ed Michaud is on his knees praying one will help control the other.

The Carrabassett Valley resort had 100 bat houses built two years ago to encourage the winged creatures to nest among the trees that line this mountain valley course.

If bats found the neighborhood appealing, the hope was they would help control the swarming insects that can turn a pleasant round of golf into a mad dash to the clubhouse.

Has it worked?

Michaud said tests have shown two-thirds fewer black flies near the bat houses than nearby areas without the houses.

"The trouble is 10 black flies can seem as much of a problem as 30," said Michaud.

But Michaud isn't discouraged, especially considering there are still many vacancies in the bat houses.

"I have seen a few more bats in the evening," he said. "But not a big increase. If we get a few more to move in, the population could skyrocket."

That could prove a boon in an environmentally conscious state like Maine, where any type of artificial insect control is likely to be frowned upon.

Last spring, the state banned Sugarloaf's three-year testing of B.t.i. in the nearby Carrabassett River, where black flies breed. The naturally occurring bacteria changes the pH in the stomach of black fly larvae, causing them to literally explode, according to Michaud.

"B.t.i. doesn't affect fish or humans. But people don't realize that. The public just didn't like the idea of putting something into the river," said Michaud.

With the B.t.i. ban, the bat experiment has become even more important.

"There are about 15 days a year when it's overcast with no breeze and the black flies are a real problem. We're hoping the bats will help," said Michaud.

Despite their rather unsavory reputation, bats are very beneficial to humans.

Fruit-eating bats pollinate more than 130 types of trees and shrubs. Bat guano is still an important source of fertilizer in some undeveloped countries. Bats are also valuable in scientific research.

But more importantly, at least to Sugarloaf, bats eat insects. Large numbers of insects.

For example, a single gray bat may eat 3,000 insects in one night. A free-tailed bat colony in Texas consumed 500,000 pounds of insects in a single evening. Little wonder Sugarloaf is optimistic about establishing a permanent bat community.

Retired University of Maine at Farmington Professor Dr. Robert Martin, who has studied bats on six continents, helped Sugarloaf set up the residences.

Martin said there are two types of bats likely inhabiting the houses at Sugarloaf—little brown myotis and big brown bats.

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Bat houses welcome inhabitants in the trees around Sugarloaf Golf Club.

About 60 of the little browns, or about 30 of the big browns, can occupy a single house.

It takes about two years for the bats to fill a residence—the first year for the bats to find the house and the second for their offspring to reach adult size.

A single big brown will eat the equivalent of between 1 million and 3 million mosquitoes (even more of the smaller black flies) in a single Maine summer.

"That means one house of big browns will eat between 30 million and 90 million mosquitoes in one summer. That's a lot for a very small investment," said Martin.

The resort installed 50 male and 50 female bat houses in the spring of 1988. The 10-by-10-by-6-inch houses are made out of rough-sawn cedar and cost around \$4 to make, according to Sugarloaf director of golf Fred Downes.

"The houses basically maintain themselves," said Michaud. "The feces drop through the slits the male bats enter. We have to loosen a screw and let the bottom swing out (once a year) to clean the female houses."

"The bats don't like bright colors, so we never have to paint the houses. The only thing we ever have to do is cut down a tree if one with a bat house dies."

"Hopefully this will eliminate the need to

ever use B.t.i. (which may have also been partly responsible for the two-thirds drop in the black fly population). Now we'll be able to tell if it was bats that kept the black flies down."

One hundred swallow houses were installed at the same time as the bat residences. Swallows also are voracious insect eaters. The small birds quickly took to the man-made nests and are a much more common sight than they were two years ago. In fact, they are more visible than the bats, but that's probably because swallows feed by day and bats by night.

"We looked at the possibility of importing bats," explained Downes. "But they like to go back to where they were born once they are old enough, so there didn't seem much point."

"We've had nesting in just about every house we built. So over the next four to five years, we should have a lot more."

An increasing bat population should not be a problem for golfers since the winged mammals hunt at night.

"Most people are off the course by the time it's dark," said Michaud. "If people play late it might be a bother. But you're likely to see bats anywhere up here in the summer."

Martin said Sugarloaf is the only golf course he is aware of that has built bat

houses to control insects. But he is certain it could prove beneficial in other areas where a natural means of insect control is preferable to an artificial one.

Pre-manufactured bat houses are on the market for \$34.95 apiece, said Martin.

Free construction plans for houses, which can be built for about \$5, are available by sending a stamped, self-addressed envelope to BATS in Maine, 820 Lakeview Ave., Winthrop, Maine 04364.

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