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Webworm Warfare

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Last fall in San Antonio, millions of fuzzy, web-spinning caterpillars draped pecans, oaks and other landscape trees with thick, silk cocoons that protected them from wind and rain while they devoured leaves with abandon.

It was one of the worst webworm infestations in memory. But this year, local tree and bug specialist are fighting back, using a natural predator that will eat the webworms before the caterpillars get a chance to eat the trees.

A group of state and local agencies last week released about 2 million tiny parasitic wasps at Roosevelt and Brackenridge golf courses to test the use of these natural predators in an urban setting.

The Trichogramma wasps are among the smallest insects on Earth – about the size of the period at the end of this sentence. But they are among the most efficient when it comes to disrupting the life cycles of webworms.

Adult Trichogramma lay their eggs on top of immature insect larvae. When the wasp eggs hatch, they survive by eating the larvae.

Trichogramma will eat larvae of about 200 species of insects and have been used for years by farmers to control agricultural pest like boll weevils and corn borers. Partners in the San Antonio venture say the wasps will be content to fatten up on urban webworm larvae, thus sparing pecans and other trees from heavy infestations.

Unlike larger wasp species, the Trichogramma don't sting humans.

"It's like biological warfare," said Nathan Riggs, an entomologist for the Bexar County Extension Service. "They couldn't care less about anything except insects eggs."

Webworms actually are the caterpillar or pre-adult stage of the webworm moth. They emerge after adult moths lay eggs on the underside of tree leaves – pecan trees are preferred, but hickory, mulberry, oak, redbud and willow trees also get infested. Groups of caterpillars will spin silky cocoons around branches and then devour the leaves.

The pests are unsightly, but they are not deadly to the trees, said Mark Peterson, an urban forester with

the Texas Forest Service. Still, if the leaf canopies are eaten repeatedly for several years, the health of the tree can be jeopardized, Peterson said. In the case of pecans, webworm infestations early in the growing season will hurt the tree's production of pecans.

Conditions in the San Antonio area typically will sustain three generations of webworm moths between spring and fall, Riggs said. But there can be as many as seven life cycles if weather and other conditions are favorable.

By starting the biological counterattack in the spring, he said, project planners hope to decrease the number that survive until fall, when infestations usually are heaviest.

A second round of Trichogramma will be released in June to disrupt the next generation of webworm caterpillars, he added.

"I would say so far there hasn't been any research done to say that releasing these wasps at the urban level will do any good," Riggs said. "This is what we are trying to find out here."

The Trichogramma eggs used in this project came from an East Coast insectary, but they are available in the region from Biofac Crop Care in Mathis, TX and Kunafin "the Insectary" in Eagle Pass, TX. Trichogramma come on 5-inch-by-12-inch cards that hold about 150,000 wasp eggs.

Buddy Maedgen, president of Biofac, said his company will sell directly to urban customers, but he suggested trying a coordinated approach.

"People can get some results on an individual basis if they want, but it really would be more effective to do it as a citywide project," he said.

Insect Attackers

There are two insectaries in South Texas that breed a variety of beneficial insects and offer direct sales and advice to home gardeners. They are:

✓ **Kunafin "the Insectary of Quemado,**
(800) 832-1113 or
www.kunafin.com

✓ **Biofac Crop Care of Mathis,**
(800) 233-4914 or
www.biofac.com