

In search of the 'lost ladybug'

April 30 2012, By Tina Susman, Los Angeles Times

Leah Tyrrell wants to make something clear: She does not wear ladybug sweatshirts. She does not carry her belongings in ladybug bags, shelter from the rain beneath a ladybug-shaped umbrella, or take notes with pens decorated with little ladybugs.

True, someone did give her earrings in the shape of ladybugs, and another admirer gave her a rock painted like a [ladybug](#). A woman once saw her in the supermarket and said loudly, "Oh! The ladybug lady!"

For the most part, though, the Buffalo-based student and mother of two says she is no different from thousands of other people across North America and Mexico who have become absorbed in an effort called the Lost Ladybug Project, which Cornell University entomologist John Losey started 12 years ago to document the [insects](#) and determine why some species are declining.

In the beginning, ladybug collectors worked with sticky cards - trapping the bugs onto gluey bits of paper or cardboard and sending them to Cornell. It was good for the science but not for the ladybugs.

"Mostly when you get on a sticky card, you don't get off again," Losey said.

By 2004, the program had gone digital, with participants uploading photographs of ladybugs and volunteers pulling together a database of the discoveries. Now, the Lost Ladybug Project is a wildly popular "citizen scientist" project, with at least 14,939 sightings reported by

spotters so far.

"People just love ladybugs," said Losey, who has funding from the National Science Foundation as well as lab and office space at Cornell to keep the project going at least through 2015. "It's a very sort of charismatic, approachable insect."

With prime ladybug-spotting season approaching - ladybugs tend to hibernate in fall and winter - people like Tyrrell once again are heading outside in search of the little [beetles](#). Many are buoyed by last summer's discovery of some rare nine-spotted ladybugs on Long Island.

"It's ridiculous how much I know about them now," Tyrrell said as she headed into her garden for a quick peek at her plum tree, ticking off trivia about ladybug mating and eating habits. "They eat everything from aphids to mold."

Like most of those who submit ladybug pictures to Cornell, Tyrrell, 33, is not a bug expert and has no special science training. She is a self-described nature lover who dotes on the native plants in her organic garden in central Buffalo. Tyrrell credits her study of art and photography in high school with enabling her to spot the tiny bugs that others might never notice.

"A lot of people are looking for something specific. They're not necessarily looking for something the ladybug project wants them to search for," she said, describing how she peers into masses of leaves, branches and buds to spot a particular shade of color, or a tiny movement.

In July 2009, Tyrrell and her toddler son, Jack, discovered an *Adalia bipunctata* - a two-spotted specimen - in their plum tree. Of all the ladybug sightings reported to Cornell, only 222 have been this species,

and most have turned up in Canada and the western United States.

But no sighting has generated as much excitement as the one last July at the Quail Hill organic farm on Long Island. There, Peter Priolo found a nine-spotted ladybug, the first documented in New York state in 29 years.

The species had become so rare here that lawmakers, fearing it was headed the way of the dodo bird, considered for a time replacing the nine-spotted ladybug - formally known as *Coccinella novemnotata* - as the official state insect. Only 105 of the once-common nine-spotted brand, valued for devouring pests, have been reported to the Lost Ladybug Project from anywhere in North America.

"That's the celebrity beetle of the group. It's like the golden ticket," said Priolo, 27, an organic gardener and agricultural expert who was working with Cornell and with the Peconic Land Trust, which runs Quail Hill, when he found the famous bug.

By comparison, spottings of *Harmonia axyridis* - the Asian ladybug, which was introduced to the United States in the 1980s in a pest-control effort - number in the thousands, leading scientists to speculate that introduced species are pushing out natives.

"It was incredible, like goose bumps," Cornell entomologist Leslie Allee said of Priolo's discovery. "We were jumping around. We were screaming. The two-spot was really cool; the nine-spot was like, 'Wow!'"

"They used to be just everywhere, and now they're not," Allee said of many native ladybug species, which account for about 500 of the world's approximately 5,000 types. "We want to try to understand why, and if we can bring those species back."

Losey said he has noticed that the native bugs found are generally smaller than they once were, a sign that nonnative species are beating them to the aphids and other pests ladybugs feed on. But he's encouraged by the numbers of bugs being reported and their far-flung locations, something that would not be possible without thousands of citizen scientists.

"When we first started, there were several species we thought may be going, or already be, extinct. We already have a lot of sightings to show they are not," he said.

Spotters have submitted pictures of bugs on the pavement at Walt Disney World in Florida, on the grassy plains of Wyoming and on a tattered green dishrag in Santa Monica. There are pictures of ladybugs with their tiny wings spread, about to take flight; ladybugs perched atop coins, beside rulers, and on fingertips to reflect their size; ladybugs in glass containers; ladybugs on arms, leaves and at the centers of daisies; and ladybugs clustered in thousands around tree trunks and across rocks.

There is a ladybug crawling on a paper towel next to a pile of Cheddar Cheese Goldfish in Oregon, ladybugs mating in the weeds in Alaska and a ladybug teetering on the edge of a beer bottle cap in Colorado.

On the Lost Ladybug Project's Facebook page, followers post updates on sightings. "YAHOO! I thought it would be too early to see ladybugs here, but I just submitted my first photos of the season!" one wrote this month.

The ladybug project is one of dozens that invite nonscientists to document everything from bobcats to butterflies, eels to frogs. Unlike most, though, the ladybug project is not confined to a specific region, and participation requires little more than a digital camera and perhaps a sweep net and a glass jar.

During his visit last year to the Quail Hill farm, Priolo corralled a group of hunters, including his grandmother, to fan out in search of ladybugs.

At the end of the day, the bugs were inventoried and photographed, and most set free. But Priolo took his own jar home with one intriguing bug inside. He sent a picture to Losey, who confirmed the good news: The state insect was alive and living on Long Island.

"I was kind of jumping up and down in my living room. It was like a chance of a lifetime - an accomplishment, really," said Priolo, who released the famous bug into his organic garden. Subsequent searches turned up more of the species at Quail Hill.

Some rare ladybugs are caught and sent to Cornell for mating in a ladybug lab. A separate colony of aphids is maintained to feed them.

Tyrrell has sent five ladybugs. She became involved in the project about three years ago, when she and Jack, then 2, attended an event at a nature reserve and happened upon the Lost Ladybug Project booth.

"A woman kept pointing to a two-spotted ladybug and insisting she had one in her front yard," entomologist Allee recalls of her first encounter with Tyrrell. "I kept saying, 'Oh sure, it's possible but probably you're seeing something else.' "

No two-spotted ladybugs had been seen in the state for years. Tyrrell, though, was certain. She had been staying at home with Jack, spending time watching the insects that thrive in their garden. "I was like, 'Oh, I think we have this in our front yard,' " Tyrrell recalled telling Allee. "She was so excited."

When Tyrrell got home that day, a ladybug flew off the plum tree, landed on her mother's arm, and Jack caught it. A close look confirmed

it was a two-spotted ladybug. They photographed it, gave it a name - Jack dubbed it Marty Stouffer, in honor of the "Wild America" television show host - and sent it to Cornell.

All those digital images prompt a question: How do Losey and Allee know that people aren't altering photographs, perhaps adding or removing a spot or two to dress up an otherwise common ladybug?

"I don't think it's possible," Losey said, noting that there are countless characteristics that make each beetle special. "You would really have to be a good forger at a very high level to fool our ID people. You could add the spots, but we'd know something was fishy."

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