

How urban research center in Los Angeles will track bugs

April 14 2016, by By John Rogers

Scientists at the Natural History Museum of Los Angeles County [unveiled an ambitious plan Thursday](#) to find and catalog every species of bug, reptile and squirrel that flies, crawls, slithers or hops across Southern California.

The project—the largest of its kind ever undertaken, according to the museum—is enlisting thousands of volunteer "citizen scientists" to scour backyards and parks, look under rocks, and poke into cracks in concrete-lined waterways.

Their goal is to uncover unnoticed [species](#) and determine where they came from and how they got to Southern California.

HOW THE RESEARCH WILL WORK

Last spring the museum's Urban Nature Research Center gave 400 volunteers a crash course in entomology and even sent some home with backyard bug traps. More than a thousand other [citizen scientists](#) are taking cellphone photos of interesting looking bugs, reptiles and other fauna and sending them to the center for study. The museum eventually hopes to enlist tens of thousands of cellphone-toting volunteers in a region where 22 million people live.

WHAT THEY FOUND SO FAR:

Forty-three species of flies that scientists didn't know existed in

Southern California have been cataloged, nearly doubling the known number. At that rate, says entomologist and center co-director Brian Brown, there could be as many as 20,000 species of insects in the region, not just the 2,000 to 3,000 that scientists currently estimate. Also discovered was a species of gecko from Australia and huge numbers of a species of fruit fly that flew in (most likely on a plane) from El Salvador.

WHY FOCUS ON SOUTHERN CALIFORNIA:

It's more than just a crowded, smoggy region of freeways with a concrete-bottomed waterway called the Los Angeles River. The mild subtropical climate is attractive to people as well as almost every kind of insect, reptile, plant and animal imaginable. "We're in a biodiversity hot spot, one of 35 in the world. We're on par, in California—here in LA right now—with the island of Madagascar and the tropical Andes," says Lila Higgins who directs the center's citizen science program.

WHY IS THE WORK IMPORTANT:

The program is expected to create a massive database for scientists, providing information on how species get introduced to an area, how they migrate across a region and how they become endangered. Citizen scientists have already authored or co-authored five research papers. But beyond that, understanding and protecting a region's biodiversity is key to protecting its human population. A better world for bugs, plants, reptiles and other creatures, Brown says, makes a better place for people as the food chain is maintained, the soil is improved and thriving plants clean the air.

HOW DID THE PROJECT COME ABOUT:

The announcement came 14 years after the Natural History Museum asked for the public's help in finding specimens for its study of Southern

California spiders. When it got more than 5,000 responses it began reaching out to volunteers for help with other studies. In 2013 it opened the Urban Nature Research Center in a first-floor wing of the museum. "In some ways we had a head start," Brown says.

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