

Invasive crazy ants are displacing fire ants in areas throughout southeastern US

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In 2012 the species was formally identified as *Nylanderia fulva*, which is native to northern Argentina and southern Brazil. Frequently referred to as Raspberry crazy ants, these ants recently have been given the official common name "Tawny crazy ants." Credit: Image courtesy of Joe MacGown, Mississippi Entomological Museum

Invasive "crazy ants" are displacing fire ants in areas across the southeastern United States, according to researchers at The University of

Texas at Austin. It's the latest in a history of ant invasions from the southern hemisphere and may prove to have dramatic effects on the ecosystem of the region.

The "ecologically dominant" crazy ants are reducing diversity and abundance across a range of ant and arthropod species—but their spread can be limited if people are careful not to transport them inadvertently, according to Ed LeBrun, a research associate with the Texas invasive species research program at the Brackenridge Field Laboratory in the College of Natural Sciences

The study by LeBrun and his colleagues was published in *Biological Invasions*.

"When you talk to folks who live in the invaded areas, they tell you they want their fire ants back," said LeBrun. "Fire ants are in many ways very polite. They live in your yard. They form mounds and stay there, and they only interact with you if you step on their mound."

LeBrun said that crazy ants, by contrast, "go everywhere." They invade people's homes, nest in crawl spaces and walls, become incredibly abundant and damage electrical equipment.

The crazy ants were first discovered in the U.S. in 2002 by a pest control operator in a suburb of Houston, and have since established populations in 21 counties in Texas, 20 counties in Florida, and a few sites in southern Mississippi and southern Louisiana.

In 2012 the species was formally identified as *Nylanderia fulva*, which is native to northern Argentina and southern Brazil. Frequently referred to as Raspberry crazy ants, these ants recently have been given the official common name "Tawny crazy ants."

The Tawny crazy ant invasion is the most recent in a series of ant invasions from South America brought on by human movement. The [Argentine ant](#) invaded through the port of New Orleans in about 1891. In 1918 the black imported fire ant showed up in Mobile, Ala. Then in the 1930s, the red imported fire ant arrived in the U.S. and began displacing the black fire ant and the Argentine ants.

The UT researchers studied two crazy ant invasion sites on the Texas Gulf Coast and found that in those areas where the Tawny crazy ant population is densest, fire ants were eliminated. Even in regions where the crazy ant population is less dense, fire ant populations were drastically reduced. Other ant species, particularly native species, were also eliminated or diminished.

LeBrun said crazy ants are much harder to control than fire ants. They don't consume most of the poison baits that kill fire ant mounds, and they don't have the same kinds of colony boundaries that fire ants do. That means that even if they're killed in a certain area, the supercolony survives and can swarm back over the area.

"They don't sting like fire ants do, but aside from that they are much bigger pests," he said. "There are videos on YouTube of people sweeping out dustpans full of these ants from their bathroom. You have to call pest control operators every three or four months just to keep the infestation under control. It's very expensive."

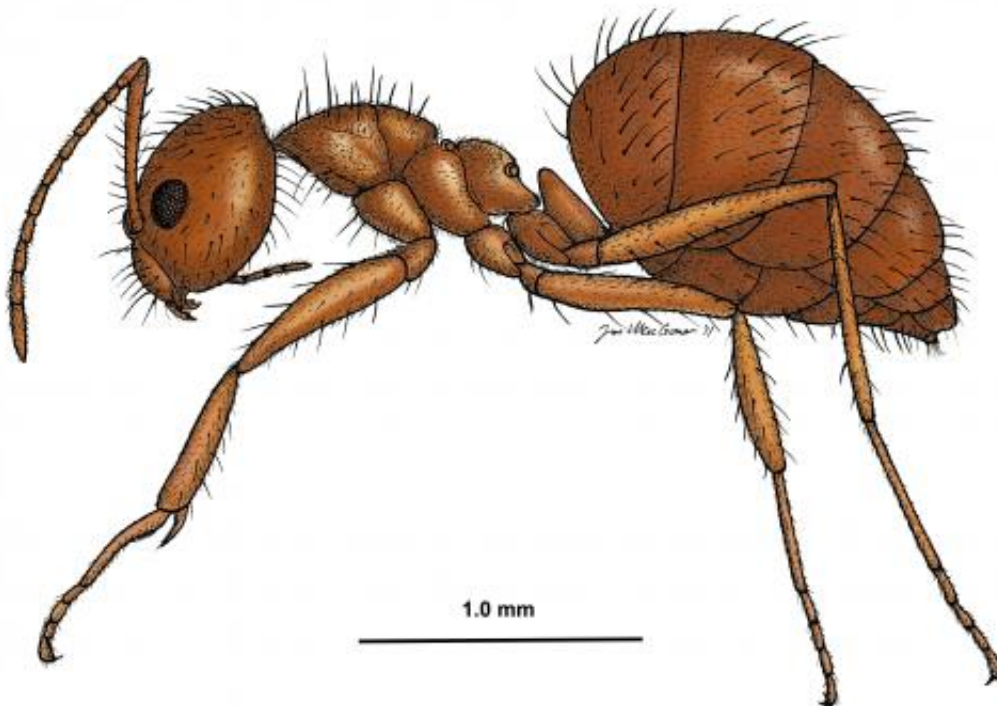
LeBrun said that in northern Argentina and southern Brazil, where the ants are native, populations are likely held in check by other ant species and a variety of natural enemies. In the U.S. there is no such natural control.

Here the crazy ants can attain densities up to 100 times as great as all other ants in the area combined. In the process, they monopolize food

sources and starve out other species. LeBrun said the crazy ants, which are omnivorous, may also directly attack and kill other ant and [arthropod species](#).

The overall result is a significant reduction in abundance and biodiversity at the base of the food chain, which is likely to have implications for the ecosystem as a whole.

"Perhaps the biggest deal is the displacement of the fire ant, which is the 300 pound gorilla in Texas ecosystems these days," said LeBrun. "The whole system has changed around fire ants. Things that can't tolerate fire ants are gone. Many that can have flourished. New things have come in. Now we are going to go through and whack the fire ants and put something in its place that has a very different biology. There are going to be a lot of changes that come from that."



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LeBrun said a great deal about the Tawny crazy ants remains unknown, including their potential range. So far, most of the colonies are in fairly wet environments with mild winters, near the coast, so it may be the case that they can't thrive in drier or colder climates, and that [fire ants](#) will remain dominant in those areas.

The spread of the Tawny crazy ants may also be limited, even within the more hospitable climates, by caution from humans. The reproductive members of the species don't fly. So when left to their own devices, crazy ant colonies can only advance about 200 meters a year. That means they're dependent on humans to colonize new areas.

"They are opportunistic nesters," said LeBrun. "They can take up residence in everything from a house plant, to an empty container left outside, to an RV. So they're easily transported by us. But the flip side of that is that if people living in or visiting invaded areas are careful and check for the crazy ants when moving or going on longer trips, they could have a huge impact on the spread." Nursery products also appear to be a key way these ants spread, so both buyers and sellers should be watchful for these ants.

LeBrun said that cutting down on the number of transplantation events could slow the spread by years or decades. And that extra time could give the ecosystem time to adapt and researchers time to develop better control methods.

"We can really make a difference," he said, "but we need to be careful, and we need to know more."

Provided by University of Texas at Austin

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