

These Ants Found a Loophole for a Fundamental Rule of Life

Researchers discovered that Mediterranean ants are having babies that belong to a different species.

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By [Cara Giaimo](#) Sept. 15, 2025

When an animal parent has a child, both will belong to the same species. Humans beget humans, combfish beget combfish, and green tinkerbirds beget green tinkerbirds. Outside of the occasional hybrid (like a mule or a [wholphin](#)), this just seems like an incontrovertible fact of biology.

It took an ant to find a way out of this seemingly airtight setup.

In [a paper published earlier this month in Nature](#), researchers reported how queens of the Mediterranean harvester ant species *Messor ibericus* could produce male offspring of a different species, *Messor structor*. The *M. ibericus* ants then used the *M. structor* males to create hybrid workers who supported the colony.

This strategy — in which one species needs to produce offspring belonging to another species — has not been seen before in any creature. The researchers call it “xenoparity,” or “foreign birth.”

“It’s crazy,” said Jonathan Romiguier, a biologist at the Institute of Evolutionary Science at the University of Montpellier in France and an author of the paper. “Sci-fi material.”

Ant colonies are highly structured, with individual insects sticking to specific roles. In harvester ant societies, female queens create offspring, and male drones provide sperm. Sterile female workers take care of pretty much everything else, including nest building, child care, and making and distributing “ant bread,” or crushed seeds mixed with saliva.

Studying *M. ibericus*, Dr. Romiguier noticed something “really, really abnormal,” he said. Nearly all the workers in their colonies were first-generation hybrids — crosses between their own species and another harvester ant, *M. structor*.

The hybridization itself is not so unusual. A number of ant queens mate with male drones of other species to produce hybrid workers, a strategy called “sperm parasitism.” Although the offspring are typically sterile, it’s not a problem, because reproduction isn’t their job.

These hybrid workers may be stronger and healthier than purebred workers. Or the queens may have “[selfish genes](#)”: In some cases, queen ants who reproduce with drones of their own species can only create other queens, and must hybridize with a different species in order to create workers at all, Dr. Romiguier said.

But *M. ibericus* shouldn't have the opportunity to parasitize sperm from *M. structor*. While the ranges of the two species once overlapped, they now diverge in many places. Some *M. ibericus* colonies with hybrid workers are hundreds of miles from the closest *M. structor* colony. How are the *M. ibericus* queens even finding *M. structor* drone-dads to father their hybrid workers?

To investigate, Dr. Romiguier and his team began DNA-testing *M. ibericus* colonies in the wild and in the lab. They found a number of *M. structor* drones living among the *M. ibericus* ants and the hybrids.

Furthermore, they found that all the drones within the colonies — whether *M. ibericus* or *M. structor* — had mitochondrial DNA from *M. ibericus*. Because this type of DNA is always maternally inherited, this meant ants from both species had *M. ibericus* queen-mothers.

When they started their research, the idea that *M. ibericus* queens could lay two species of eggs was “like a joke” among the team members, Dr. Romiguier said. As sampling efforts went on, it became a more serious hypothesis.

Then they isolated *M. ibericus* queens and tested the eggs they laid. Nearly 10 percent were fully *M. structor*. They watched males of both species reach adulthood. After that, “we had to face the facts,” he said: *M. ibericus* queens were not finding *M. structor* drones, but making them.

M. ibericus and *M. structor* diverged about five million years ago, a period “equal to the human-chimp divergence,” said Dr. Romiguier. So is this like a human having a chimpanzee baby?

It's actually weirder than that.

“It's like a human having chimp babies,” which they use as “a source of sperm for giving birth to human-chimp hybrids that would do all their tasks,” Dr. Romiguier said.

Strategically, though, it makes sense.

“If you can produce at home the males you need, everything is easier,” he said, comparing it to humans domesticating animals, rather than going out to hunt them.

Gary Umphrey, a professor of statistics at the University of Guelph in Ontario who coined the term “[sperm parasitism](#),” called the research “fabulous.” Papers like this are “setting off a gold rush into ant genetic research” and pushing our understanding of hybridization, he said.

But though he is excited, he is less surprised. “I look at evolution as DNA finding ways to keep reproducing,” he said. “This is just another very cool way.”