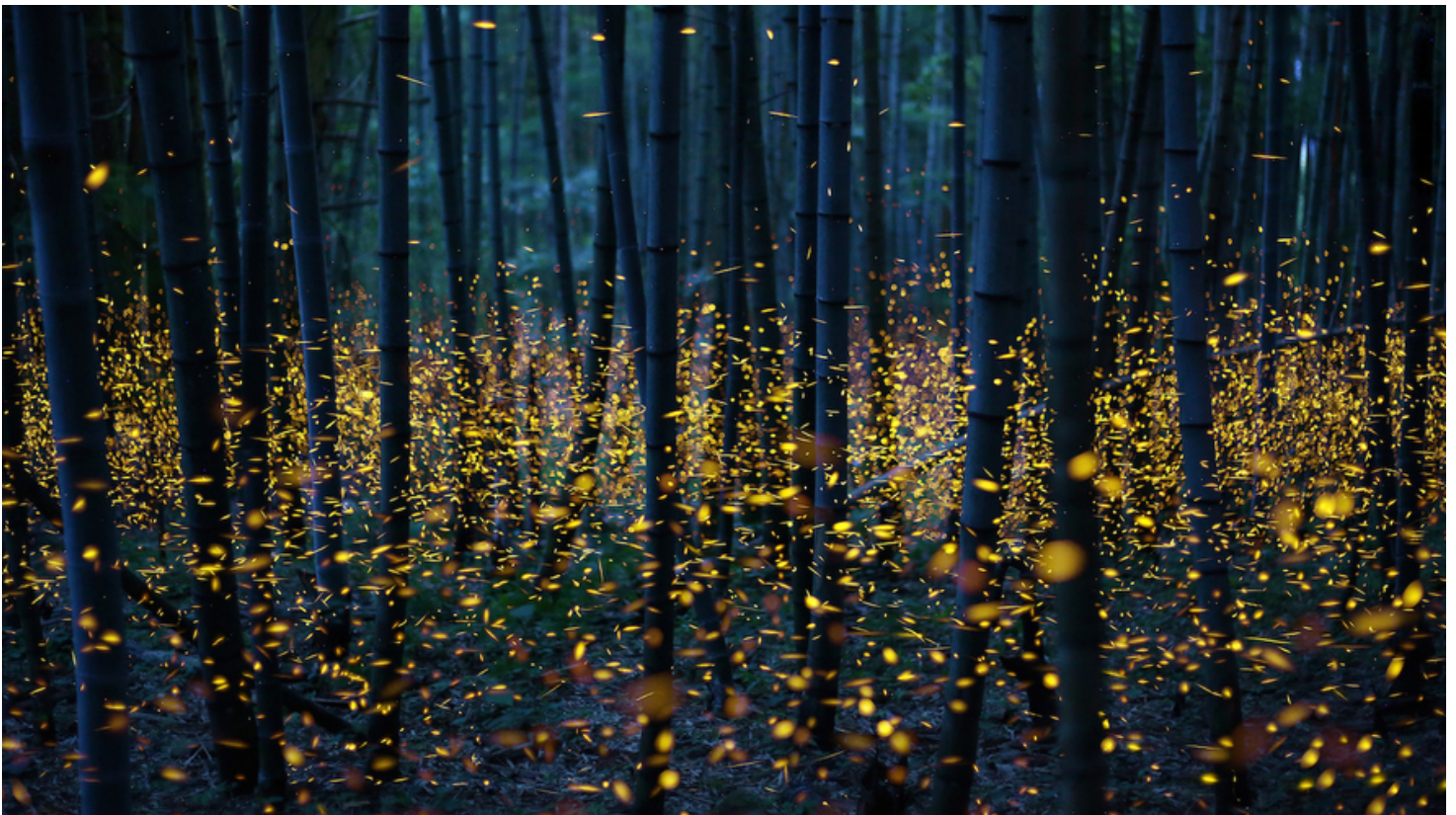


# Bats aren't so blind: Fireflies glow so bats will avoid eating them

By Associated Press, adapted by Newsela staff on 08.28.18

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Fireflies light up the night in a forest. Call their glow an anti-bat signal. Photo by Kei Nomiya/Barcroft Images/Barcroft Media via Getty Images

Fireflies are known for their flashing light in the night sky. They flash to attract a partner. However, a new study just came out suggesting that the light from the fireflies means more than attracting a mate.

In the study, scientists wanted to find out if there's more to the lightning bug's signature blinking glow than finding a mate. Some experts had speculated it was a glaring signal to predators, like bats, that fireflies taste bad.

## **A Sign That Reads "Do Not Eat"**

Scientists at Boise State University in Idaho wanted to test out this idea. They sought to determine if the glow acted like a bad restaurant review saying "do not eat." They put bats and fireflies in front of high-speed cameras. They published their results on August 22 in the journal *Science Advances*.

The painstaking experiment required researchers to introduce western bats—which had never seen lightning bugs before—to the fireflies. The bats got a first look at the unfamiliar lit-up fireflies. At first, they swooped in and munched on them, only to get a bad taste in their mouths. Later, they hand-painted firefly bellies black, essentially turning off their night lights.

Jesse Barber is a Boise State biology professor and author of the study. "They shake their heads, salivate and spit and generally despise their caretakers for giving such a rude meal," he said.

After a few tries, the bats avoided the glowing fireflies. Despite the popular misunderstanding, bats aren't blind, a study author noted.

Once the fireflies essentially taught bats that they taste bad, Barber and coworkers introduced the darkened fireflies. About 40 percent of the painted ones were eaten, but none of the normal fireflies were eaten.

### **Flight Patterns Of Lightning Bugs**

Scientists also think the way lightning bugs fly signals what they are. To test that they put fireflies on fishing lines to change how they flew. The bats went after them despite already knowing that fireflies don't taste good.

Nick Dowdy, a scientist at Purdue University in Indiana, did not work on the study. The results make sense and are valuable, he said.

Scientists already knew that fireflies have distinctive flash patterns that tell others who they are and where they are. Some females prefer males that flash at higher rates, according to study co-author Marc Branham of the University of Florida.

### **Protective Trait**

Barber noted that even in their larval stage, the bugs glow and don't get eaten by predators. So he came up with a theory: when it comes to evolution, fireflies' glowing trait may have first developed as protection from predators and only later became a signal to potential mates.

So, Barber said, "bats may have invented fireflies."