ECOLOGY

Deer Friends

Bats and white-tailed deer have each other's backs

Forget bug repellent—some deer in Minnesota rely on a team of bats to eat up the swarms of biting flies that typically plague them. Researchers observed this previously unknown symbiotic relationship between white-tailed deer and an unidentified bat species, in camera-trap footage and in person, at the Cedar Creek Ecosystem Science Reserve.

"These bats appear to be attracted by all the flies around the deer," says study leader Meredith Palmer, then a postdoctoral researcher at the University of Minnesota. Symbiotic relationships between grazing mammals and birds are better known, she says, but "it's very, very rare for mammals to engage with each other like this."

Horseflies and deerflies deliver painful bites that can fester and transmit disease, and the bats bring the deer much needed relief in the summer months. Meanwhile the deer act as lures, providing the bats with an all-you-can-eat fly buffet. "It decreases the search time" for bats to find food, Palmer says. "They aren't flying through an entire forest looking for flies." The study was published in March in *Ethology*.

Craig Willis, a biology professor at the University of Winnipeg in Manitoba, who was not involved in Palmer's research, says the findings hint at the pest-deterrent services bats may offer humans. "If the bats are reducing biting insects for deer, maybe they can also do the same for us," he says.

Ecological research often focuses on predator-prey interactions rather than on the positive ways in which animals help one another, Palmer notes. When it comes to mutually beneficial symbiotic relationships, she says, "there's just a big gap out there."

—*Joshua Rapp Learn*

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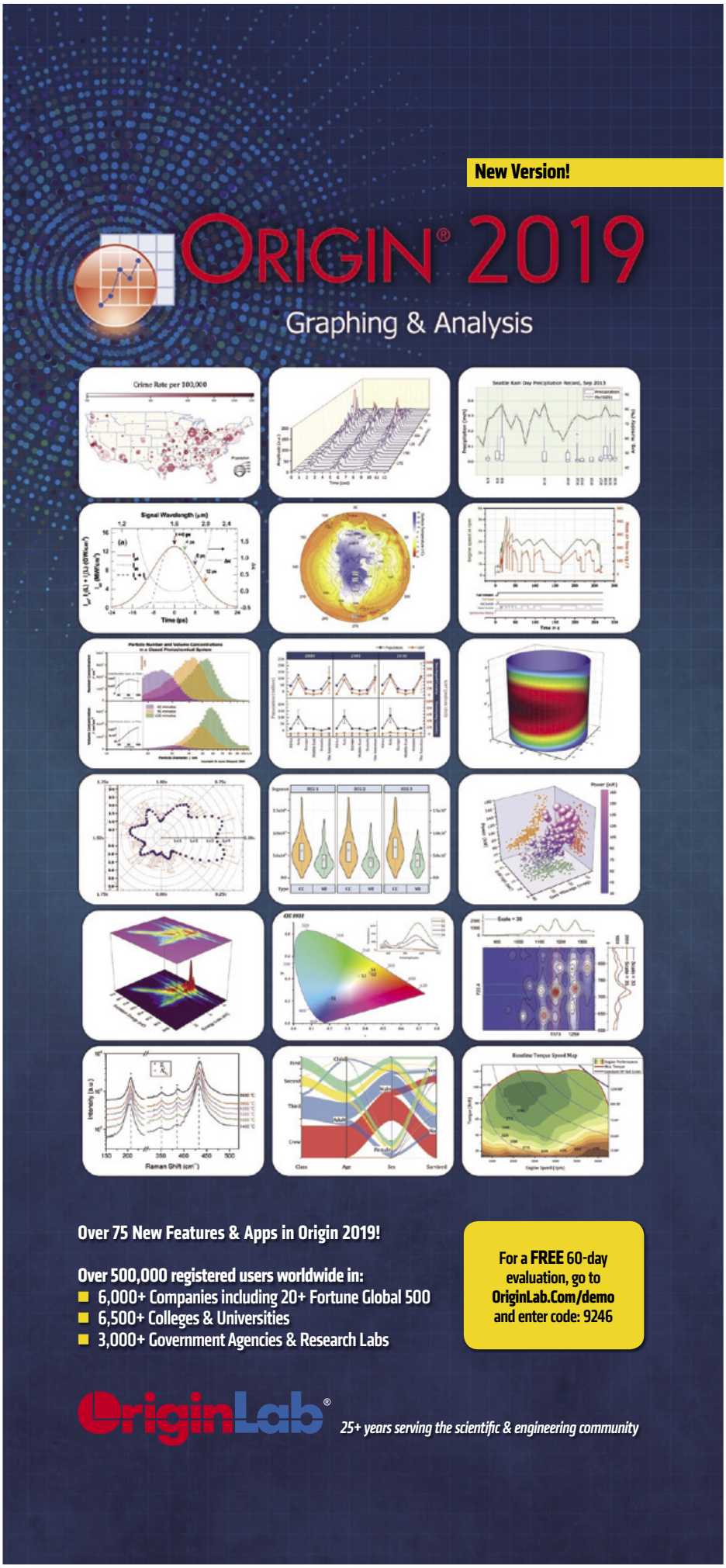

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