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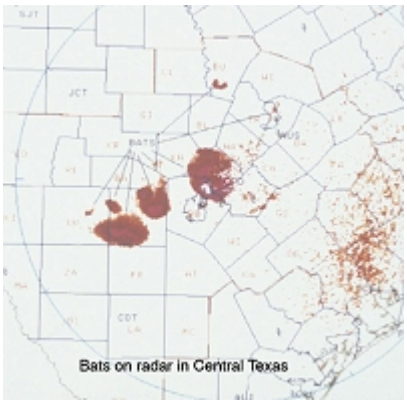
Bats in the News - ï»¿Aiming Radar at Bats



Radar operators have known for years that when big bat colonies take to the sky, they show up as clouds on radar that's designed to track weather conditions or commercial aircraft. Now scientists are turning that radar complication into a treasure trove of information about the in-fight behavior of bats, birds and insects, the Associated Press reports.

"Radar provides us an unprecedented tool for observing bats and birds," said biologist Winifred Frick of the University of California, Santa Cruz. Bats and birds are difficult to observe and track in the air because of their typically small size, the AP said. Radiotracking, for example, is limited to the tiny, relatively short-range transmitters that can be attached to such small bodies.

She said radar is helping researchers study foraging behavior, migratory patterns, seasonal changes in behavior and the effects of climate change. "It was absolutely inspiring to be able to see the scale at which the bats are operating. We've never been able to see that before."

Frick, biologist Tom Kunz of Boston University and meteorologist Phillip Chilson of the University Oklahoma described the results and promise of their work at a conference of the American Association for the Advancement of Science.

Chilson says the tools are in place: roughly 500 government radar stations are operating around the country and networks of the radars are well established.

The National Climatic Data Center has a 20-year archive of weather-radar data, Frick said, and analyzing those records should reveal patterns of bird, bat and insect population changes over time, the AP reports.

She said radar studies already have helped determine that bats come out of their roosts earlier on hot days in dry years but later on hot days in wet years.

The radar research is part of the new field of "aeroecology," developed in large part by Kunz, who coined the term. He said the activity of animals in the air has not been well explored, AP says, and radar analysis should improve scientists' knowledge of that region.

"It's very interdisciplinary â€“ or transdisciplinary â€“ in the sense that it involves bird biologists and bat ecologists, entomologists, radar scientists and meteorologists," Frick said.

She recalled a breakfast with weather researchers who were talking about "QPE" â€“ quantitative precipitation estimates using radar, AP said. The meteorologists said they could estimate the number of raindrops in a cloud.

"So I asked, Can you estimate the number of bats in a bat cloud?" The answer was, "Yes."

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