

## AG PESTICIDES FOUND IN FROGS IN THE SIERRA

By ***The Record***

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SAN ANDREAS - A U.S. Geological Survey study released recently found that frogs in the Stanislaus National Forest, Yosemite National Park and other Sierra Nevada sites have detectable levels of agricultural pesticides in their bodies.

"Our results show that current-use pesticides, particularly fungicides, are accumulating in the bodies of Pacific chorus frogs in the Sierra Nevada," said Kelly Smalling, a research hydrologist and lead author of the study.

"This is the first time we've detected many of these compounds, including fungicides, in the Sierra Nevada. The data generated by this study support past research on the potential of pesticides to be transported by wind or rain from the Central Valley to the Sierras."

Frog tissues were sampled at seven sites from Lassen Volcanic National Park in the north to Giant Sequoia National Monument in the south.

Locally, tests conducted on frogs at the Spicer Sno-Park near Highway 4 west of Bear Valley detected pyraclostrobin and tebuconazole, both of which are fungicides commonly used in farming, as well as DDE, a byproduct of the compound DDT.

At Ebbetts Pass on Highway 108, also in the Stanislaus National Forest, the frogs had all three of those compounds as well as simazine, an herbicide.

The scientists reported that this is the first time the fungicides and the herbicide have been detected in wild frog tissue.

Pesticides continue to be a suspected factor in the decline of amphibian species across the U.S. and the world, although the study's authors cautioned that more research is needed to explain how this might be happening.

"Unfortunately, these animals are often exposed to a cocktail of multiple contaminants, making it difficult to parse out the effects of individual contaminants," said Patrick Kleeman, a USGS amphibian ecologist who collected the frog samples.

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