When Marijuana Kills: Rat Bait at Illegal Pot Farms Is Needlessly Poisoning Larger Animals

New studies reveal the pesticides are especially harming already-endangered Pacific fishers

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ScientificAmerican.com | February 1, 2016

The Pacific fisher, a house-cat-size member of the weasel family, lives in some of California's remotest forests. Trapping and logging going back to the 1800s had reduced the fisher's U.S. population to a few thousand at most. Those threats waned, but a new one has emerged: pesticides used at illegal marijuana farms. Thousands of these sites have popped up statewide, particularly in national forests, despite the potential to grow legally under California's 1996 medical marijuana law.

Mourad W. Gabriel, executive director of the nonprofit Integral Ecology Research Center, first suspected a link in 2011 between a rash of fisher deaths and California cannabis. Necropsies already had shown that rat poisons were killing fishers, but the source of the chemicals was unknown. At a conference for wildlife professionals that year, a law-enforcement officer mentioned to him that agents often came across these poisons at so-called trespass grow sites on public and tribal land. The compounds had been applied in ways that violated vermin-control regulations with which conventional farmers are expected to comply. Although fishers are not the intended target, they—along with black bears, gray foxes and a wide array of other animals—bleed out internally if they consume the bait or poisoned rodents.

So Gabriel and his friend Mark Higley, a wildlife biologist at the Hoopa Tribal Forestry Department, began tagging along on raids, sometimes entering an illegal grow site while dangling, commando-style, from a rope attached to a police helicopter. Almost without fail, the pair encountered the chemicals—some still in their packages, others strewn about haphazardly—known to be killing fishers, including some banned for use in the U.S. An exhaustive search revealed no one else was dumping pesticides that deep in the woods. The team had found its culprit.

The researchers detailed the problem last November in *PLOS ONE*. Of 129 radio-collared Pacific fishers for which the cause of mortality could be determined over an eight-year span, poison at illegal pot farms was found to have killed 13. Such a loss is devastating for a population that has been proposed for listing under the Endangered Species Act. To make matters worse, fully 85 percent of 101 fishers tested from 2012 to 2014 showed exposure to rodenticides, meaning even those that did not die outright were potentially sickened, which could impair their ability to hunt, reproduce or elude predators.

Meanwhile trespass growers also divert billions of gallons of freshwater and leave behind mountains of garbage, ranging from propane tanks and fertilizer to candy wrappers and car batteries, on land where no mechanism for cleanup exists. "The places are just disasters," says Craig Thompson, a wildlife ecologist at the U.S. Forest Service and lead author of a 2014 paper showing that proximity to illegal cultivation sites affects fisher mortality rates. "It's stunning the amount of destruction that can be packed into a two-acre plot."

California is by far the country's leading producer of marijuana; the U.S. Drug Enforcement Administration reports that of the 3.9 million illegal outdoor plants eradicated nationwide in 2014, 62 percent grew in the Golden State. "It's everywhere," says Capt. Nathaniel Arnold of the California Department of Fish and Wildlife. He points out that armed suspects occasionally engage in shoot-outs with law enforcement or threaten civilians who stumble on them accidentally. Such incidents can discourage wildlife researchers from getting involved in issues that impinge on the contemporary culture wars around marijuana. Yet, as Higley points out, conservationists do not condemn marijuana per se. "You're not supposed to be doing agriculture out in the woods," he says. "It would not matter what they were growing out there."