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Silent spring for Bay Area's raptors?

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Rodenticide-related wildlife mortality may seem an abstract issue until your child finds two dead hawks in the backyard wading pool. That happened to Berkeley resident Dan Rubino on the Fourth of July in 2007. Rubino sought out his neighbor Lisa Owens Viani, who has a background in wildlife rehabilitation. She identified the birds as juvenile Cooper's hawks, the offspring of one of 13 local pairs.

Owens Viani suspected rodenticide poisoning: "When Dan told me they were going to the pool, I knew right away what it was. I knew they would be bleeding internally and looking for water."

Biologists report a rising toll of secondary-poisoning cases involving predatory birds and mammals, many from second-generation anticoagulant rodenticides (SGARs). Anticoagulants kill by causing internal bleeding. While the U.S. Environmental Protection Agency attempts to restrict unsafe use of these poisons, manufacturers like the multinational corporation Reckitt Benckiser are resisting. Bay Area activists and cities are encouraging stores to take the products off their shelves.

Owens Viani took the dead hawks to WildCare, a rehab facility in San Rafael, which sent their livers to a UC Davis lab for analysis. Both hawks tested positive for brodifacoum, the lethal ingredient in D-Con and other rodent baits. Such poisonings prompted Owens Viani to create Raptors Are the Solution to educate consumers and local governments about the risk of secondary poisoning and the rodent-control services of at-risk raptors. A brood of barn owls can consume 600 mice in 10 weeks.

"Let's not poison the solution to the problem," she said.

Brodifacoum, bromadiolone and other SGARs were introduced in the 1970s as alternatives to products like warfarin, to which rodents were developing resistance. Small doses of brodifacoum can be lethal, but not immediately.

"Unlike first-generation rodenticides, brodifacoum is not metabolized by the liver and stays in high concentrations in the body," explained Michael Fry, former coordinator of the American Bird Conservancy's pesticide program. "The rat goes back, eats a second lethal dose, and the stuff builds up in its tissues. It can accumulate an eight-to-tenfold lethal dose. Any larger animal that eats that rat dies. It doesn't take a huge amount of dead rat to kill an animal 10 times its size."

The conservancy is one of the few organizations that track such deaths. The EPA, which used to log all poisoning events, now accepts only reports of five or more birds of prey or large mammals dying at the same time and place. Because most carnivores are solitary, mass poisonings are rare; Fry says reports have fallen to near zero. Some states, including California and New York, maintain records; most do not.

Poisoning cases
California's Department of Fish and Game has compiled 284 cases of SGAR poisoning since 1993, including 37 raptors (eagles, hawks, falcons, owls and vultures) and 50 endangered San Joaquin kit foxes. Last year, WildCare began testing all its predatory bird and mammal patients for rodenticide exposure. Wildlife Solutions Manager Kelle Kacmarcik said 58 percent tested positive: "Brodifacoum is the most frequent. We're seeing it in every type of animal we're testing."

Scientists with Environment Canada found wide exposure to SGARs among red-tailed hawks and great horned owls, with higher liver concentrations in the owls. Philippe Thomas and his co-authors estimated that Canadian great horned owls had an 11 percent risk of fatal SGAR poisoning. These compounds are implicated in the near-extinction of barn owls in Canada and raptor declines in the British Isles.

Owens Viani fears more: "My guess is we're not seeing all the bodies. This could be a 'silent spring' for raptors." Sick, disoriented raptors may collide with buildings or vehicles. Golden Gate Raptor Observatory Director Allen Fish has seen "a lot of unexplained deaths" among banded hawks: "Up to half the birds found dead were not obvious window kills, road kills or electrocutions." They couldn't all be tested for rodenticides; analysis currently costs $100.45 per case, according to Kacmarcik.

New rules

The EPA responded to public concern and litigation over SGARs in 2003, proposing new rules and finalizing them in 2008, to take effect in June 2011. EPA banned direct consumer sales of SGARs but exempted farm stores and rodent-control professionals. Other rodenticides could be sold in tamper-proof "bait stations" - an incomplete solution, since poisoned rodents can leave the boxes and be caught by pets and predators, but at least safer for households with children.

By the 2011 deadline, most manufacturers had complied. Three - Reckitt Benckiser (D-Con, Fleeject and Mimas), Liphatech (Hot Shot) and Spectrum (Generation, Maki and Rozol) - had not.

"The EPA gave them almost three years to come up with adequate packaging," said Fry. "Reckitt Benckiser waited until mid-2011 to say they were refusing."

Chris Geiger of SF Environment said, "My feeling from talking to people at EPA is that they were absolutely blindsided. They were shocked that the companies were thumbing their noses at them. The EPA has said these products pose an unreasonable risk, but they're still on the shelf."

Facing corporate resistance, the EPA is moving to cancel the registration of the disputed products. "I think they're very firm in their resolve to get SGARs off the consumer market," Fry added. Last year, the agency convened a science advisory panel, whose recommendations have not yet been made public.

Next week: Citizens' groups and local governments pick up the ball. Plus safer rodent-control alternatives.

Learn more

The American Bird Conservancy Pesticides and Birds page: bit.ly/GBvqnw

Raptors Are the Solution: www.facebook.com/raptorsarethesolution

WildCare rodenticides page: bit.ly/jPJx09

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