



FIRING BACK ON LEAD SHOT

HSUS-backed bill would require non-lead ammunition in California
BY JENNIFER WEEKS

As a graduate student, wildlife toxicologist Myra Finkelstein traveled across the Pacific to study lead poisoning in Laysan albatrosses. These majestic seabirds breed in springtime on Midway Atoll, a chain of small islands once the site of an epic World War II naval battle. The U.S. Navy closed its operations there in 1993 but left behind aging buildings covered with flaking lead paint.

Albatrosses nest on the ground, so Finkelstein had no trouble taking blood samples from fuzzy gray chicks. She could see a clear symptom of lead poisoning: chicks dragging paralyzed wings behind them. At the end of their breeding season each summer, adult albatrosses return to the sea, and chicks normally fledge and follow them. But chicks with paralyzed wings couldn't fly.

"I saw one chick lying on the ground unable to move, with its parents trying to feed it and coax it to respond," Finkelstein recalls. "The chick could barely lift its head, but the parents stayed with it for hours. Once chicks' wings were paralyzed, though, they were as good as dead."

In 2009, Finkelstein, then an assistant researcher at the University of California at Santa Cruz, published a study showing that lead poisoning on Midway was a serious threat to the Laysan albatross

population. Her work helped spur the federal government to accelerate lead paint removal from Midway buildings.

In a similar study of critically endangered California condors published last year, Finkelstein and other researchers concluded that lead poisoning is epidemic in the iconic birds: Each year between 1997 and 2010, about 20 percent of free-flying condors in California had blood lead levels high enough to need clinical treatment for poisoning. The researchers used chemical analysis to pinpoint the cause: The birds were ingesting fragments of lead hunting ammunition, lodged in their prey.

Worldwide, more than 130 species of wild animals, up and down the food chain, from grizzlies to songbirds to earthworms, suffer secondary effects of lead ammo. In a recent assessment for the U.S. Fish and Wildlife Service, scientists tested 127 bald eagle carcasses recovered across New England and found that 18 birds had toxic levels of lead in their livers.

In California, the recent case of a poisoned raptor underscored the need to pass legislation introduced by Assemblyman Anthony Rendon and supported by The HSUS, Audubon California, and Defenders of Wildlife. Requiring hunters in California to use non-

lead ammunition, A.B. 711 would prevent the suffering of many more animals like the golden eagle brought into the Bird and Pet Clinic of Roseville in March.

“She couldn’t stand or move her tongue normally, and she also had extensive neurological damage,” says veterinarian Vickie Joseph, who treated the eagle.

The clinic, which works with the California Foundation for Birds of Prey, sees birds with lead poisoning year-round, including bald and golden eagles, falcons, and turkey vultures. “Many animals are running around with lead shot in them, and that’s how birds of prey are exposed,” says Joseph.

The golden eagle was found flopping around on the ground—she could still flap her wings, but her legs were paralyzed. At the clinic, a machine to test for levels of lead typically reads in numbers; this one just said, “High.” The reading was off the scale.

Effects of the poisoning can include paralyzed limbs and digestive systems, organ failure, brain swelling, and permanent cell damage. Treatment typically includes full body x-rays, blood tests, and injections of chelating agents until the birds are able to swallow oral medications. Jennifer Fearing, HSUS California senior state director, remembers the sad scene: a jarring juxtaposition of a bird so large and impressive that Fearing fell back upon seeing her, yet so helpless that clinicians were wrapping her legs in foam to prevent the kennel-induced equivalent of bedsores.

The golden eagle died from respiratory failure—a secondary effect of lead poisoning—after three weeks and \$3,000 of treatment.

Compounding the problem of inherent toxicity, even one lead bullet has a wide range, breaking into



This golden eagle was found floundering in California—her legs paralyzed as a result of severe lead poisoning. She died three weeks later.

small fragments when striking an animal and scattering outward from the wound. “A single bullet can produce hundreds of fragments, and every one of them is poisonous,” says Roberto Aguilar, staff veterinarian at the Cape Wildlife Center in Massachusetts, operated by The Fund for Animals in partnership with The HSUS. In fact, says Finkelstein, “just one dose the size of a grain of sand can kill a condor.”

Other choices of ammunition are available. High-performing lead-free ammo in all common calibers is sold in the U.S. and Europe, sometimes for less than conventional lead ammunition. Switching to alternatives such as copper (which does not fragment) reduces harm to scavenging animals as well as to humans, since lead residues are a health risk for people as well. In a 2009 study, testing of ground venison from deer shot with lead bullets revealed metal fragments in 80 percent of the deer; research by the Centers for Disease Control and Prevention showed people who ate deer and other wild animals shot with lead ammo had 50 percent more lead in their blood than those who didn’t.

In a poll of California voters commissioned by The HSUS, Audubon, and Defenders of Wildlife, a majority of gun owners supported restrictions on lead hunting ammo. That includes almost three dozen avid hunters who wrote to Rendon in support of the bill, warning that “the continued use by hunters of lead ammunition in the face of mounting evidence of lead’s risk to both wildlife and public health is at odds with the proud tradition of responsible hunting stewardship.”

Nonetheless, the National Rifle Association and ammunition manufacturers oppose A.B. 711, contending it’s an anti-hunting initiative. The HSUS’s Lena Spadacene disagrees. “This shift is being made in the name of conservation and public safety,” she says, noting that nearly 30 countries, including the U.S., have already taken steps to reduce the use of lead in hunting. “When the U.S. Fish and Wildlife Service phased out lead shot for waterfowl hunting in 1991, these groups made the same absurd claim that it would be the end of duck hunting and goose hunting. But the only thing that ended was the unnecessary poisoning of millions of animals.”

More than 70 conservation, environmental, public health, and animal protection organizations have endorsed A.B. 711. “There is no good reason to continue allowing lead to be dispersed into the outdoors,” Fearing says. “Californians have a real opportunity to protect wildlife, the environment, and people with this legislation.” ■

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UNINTENDED VICTIMS



Songbirds & Waterfowl

Lead ammo comes in two main forms—bullets and lead shot. The latter is not a single bullet, but a deadly cloud of tiny pellets. Sometimes they hit their target; other times the spent shot falls to the ground or into lakes or creeks. There, birds can ingest the fragments as they pick up food.

Includes: Doves, ducks, swans.



Hunters & Scavengers

It’s a cruel twist: For predators like coyotes and condors, the remains of an animal left behind by a hunter—or even a wounded animal suffering from a shot—can make for a surprise meal. But that meal can be laced with poison. When a lead bullet strikes, fragments of lead disperse into the body—up to 14 inches from the wound channel.

Includes: Coyotes, condors, eagles, vultures, ravens, mountain lions, grizzlies.

Humans

Wild animals aren’t the only ones who can accidentally ingest small fragments of lead as they eat an animal. A CDC study showed that eating deer and other game animals shot with lead ammo can raise the levels of lead in humans by 50 percent. Of particular concern, the CDC notes of children: “No safe level of lead exposure has been identified.”

