

THE IMPACTS OF REMOVING LEAD FROM NATURAL RESOURCE ACTIVITIES IN THE NATIONAL PARK SYSTEM

Elaine Leslie, guest editor

Introduction

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A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it does otherwise.

— *Aldo Leopold, A Sand County Almanac*

I GREW UP IN SOUTHERN CALIFORNIA, not far from the Los Padres National Forest. Weekend outings included hikes and day trips into some of the most remote areas of the Los Padres. When you are 10–12 years old, hiking in rough chaparral is not exactly an activity you look forward to, but my father was an avid birder. As a student at UCLA in the 1940s, he would venture into this remote wilderness in search of the California condor—elusive even then. We heard his stories and participated in his personal quest, but our efforts were never rewarded with a sighting.

When the last seven condors were brought into captivity in the early 1980s, it was considered a highly controversial wildlife management decision. It was the ultimate in human interference, and was debated in scientific institutions, the media, and at our dinner table.

Years passed. On December 12, 1996, California condor restoration began in Arizona. Condors were released at Vermillion Cliffs National Monument—the first time in 100 years that condors once again soared over Arizona skies. In November 2002, the first wild-reared condor emerged from a remote redwall cave and took flight over Grand Canyon National Park. In 2003, I had the pleasure and honor of watching my aging father stand on the South Rim of the canyon, finally being rewarded with viewing free-flying condors, thus fulfilling his 60-year-long quest.

The George Wright Forum, vol. 28, no. 1, pp. 21–23 (2011).

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Natural resource managers recognize the important roles hunting and fishing play in the complex management of wildlife populations. Given the increasing awareness of environmental lead poisoning, the National Park Service, as a leader in environmental stewardship, has a compelling obligation to mitigate lead's negative effects on ecosystem and wildlife health in national park units.

Scientific literature is replete with evidence that ingestion of spent ammunition and fishing tackle can be lethal to wildlife and have harmful effects on humans. The magnitude of poisonings in species (e.g., waterfowl, doves, quail, swans, and loons) and scavengers (e.g., vultures, eagles) continues to be reported annually. And in some instances, populations (e.g., California condors) are affected (Rattner et al. 2008). From a public health perspective, the presence of lead fragments in wild game meat, presumably from the bullets or shot used for hunting, has raised concerns about health risks from meat consumption where relatively low doses of lead may be the cause for a variety of human health problems, particularly in children. Even if a lead pellet or bullet fragment completely passes through an animal, a small amount of lead may be left behind and can be absorbed by a person consuming the meat (Iqbal et al. 2009).

In response to the overwhelming scientific data, there have been several actions taken to ban the use of lead in hunting and fishing activities:

- In 1991, the US government implemented a successful national ban on the use of lead shot for waterfowl hunting.
- In October 2007, California Governor Arnold Schwarzenegger signed into law Assembly Bill 821, which banned the use of lead ammunition from areas of the state inhabited by the California condor. All hunting of big game, small-game mammals, and game birds in the affected area require the use of non-lead ammunition.
- In 2009 and 2011, the National Park Service issued memos instructing managers to “remove lead as a source of contamination in natural resource related activities in national parks” in order to “benefit humans, wildlife, and ecosystems within and outside of parks.” Yellowstone and Glacier national parks have successfully implemented fishing programs using non-toxic tackle. In the last two years, parks working on ungulate culling efforts, such as Valley Forge National Historical Park, Catoctin Mountain Park, and Rocky Mountain and Theodore Roosevelt national parks have all successfully implemented their contract and volunteer efforts using non-lead ammunition; ensuring thousands of pounds of safe meat donations to food banks as well as leaving lead-free deer and elk remains in the field for safe scavenging, where appropriate.
- In December 2010, the US Fish and Wildlife Service changed regulations governing control of depredating blackbirds, cowbirds, grackles, crows, and magpies to require the use of nontoxic shot or bullets when a firearm is used to “prevent toxicity hazards to other wildlife.”

Minimizing and eliminating toxic substances in the environment that can evoke adverse impacts is at the core of our stewardship mission. Lead could be phased out with a goal of complete elimination from national park units, yet there are many who feel that banning lead

will affect their hunting and fishing experiences. This is the dilemma that we—not just the National Park Service, but every state and federal resource manager and, ultimately, the American public—face.

Is there any reason every park in the national park system should not have the same protective measures as Yellowstone or Glacier? Is there any reason anyone who ventures into our national parks to observe our national natural heritage—large or small, swimming, flying or ambling across our national landscape—should not have the opportunity that my father had, that my children have, or that I hope my grandchildren will have?

The time to act is now. And for anyone who may believe that we as stewards of terrestrial and aquatic ecosystems cannot collectively act to protect natural resources, I challenge you to stand on the rim of the world's grandest canyon and watch as condors take a leap of faith over the canyon, soar on the currents high above your head, and disappear into the far reaches of a remote side canyon.

Our nation's initiatives are clear: "Let's Move," "America's Great Outdoors," "Healthy Parks, Healthy People." It's time.

References and additional resources

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