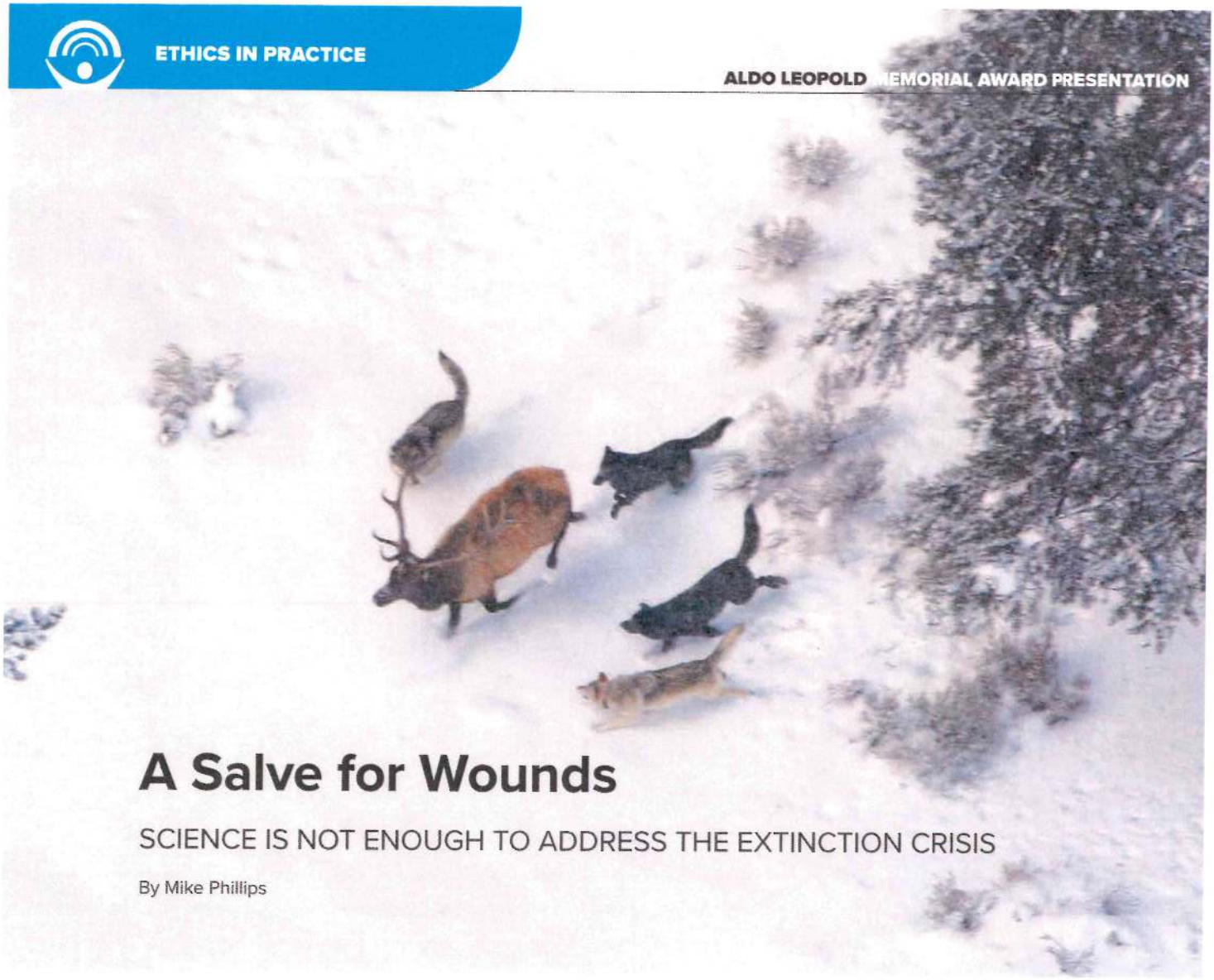


A Salve for Wounds

SCIENCE IS NOT ENOUGH TO ADDRESS THE EXTINCTION CRISIS

By Mike Phillips

Credit: Doug Smith/National Park Service

▲ Stories told over the centuries have given rise to a mythical wolf with almost supernatural abilities to take down prey. The real wolf is far from the myth we have created.

No less than conservation pioneer Aldo Leopold surmised that a consequence of our training as wildlife biologists is an awareness of a damaged world that is invisible to the layperson. "One lives alone in a world of wounds," he wrote.

That has never been more relevant than now. Here, there, and—increasingly—everywhere, we see evidence of ecological wounds inflicted by humanity. Of all the wounds, though, perhaps none is as egregious as the biodiversity crisis. Every year, thousands of species, fine-tuned by time and place, disappear by our hand. Losses are so severe that the certainty of nature is being stripped away, exhausting the lives of millions of creatures great and small, to say nothing of people.

While some wounds can be healed, such is not the case for extinction. Once a species vanishes, a confluence of heaven and earth, an unimaginable amount of time and even more luck must come together for it to rise again. There is no workaround for this chain of events.

The current extinction crisis is one of humanity's most pressing and least attended problems, on par with the previous five great waves of extinction that have swept across the planet over the hundreds of millions of years that it has supported multicellular life. The forces that drive an extinction crisis are so powerful and pervasive that the Darwinian rules of survival of the fittest are rendered irrelevant. Species that survive an extinction crisis are not so adapted as they are simply lucky.

The onset of the Anthropocene—the age of humanity—beginning at least by the late 18th century, if not much earlier, marked the starting point of the sixth great extinction crisis. For myriad reasons,

including wildlife biologists' inability to rise adequately in defense of imperiled species, this crisis is worsening. As a collective, we need to do at least two things better to help redress the extinction crisis—to serve as salve for wounds that for Leopold were plainly obvious: We must be better at telling stories and better at politics.

Science is not enough

I have worked on the extinction crisis through conservation projects for over four decades, starting as a field biologist in 1980 with Dave Mech, the 1993 Aldo Leopold Memorial Award recipient, on his seminal study of wolves and their prey in northeastern Minnesota. Since then, I have learned that a more secure future for most rare and vanishing species is simply a matter of human choice.

Our past disregard for and destruction of nature does not have to be our future. We could choose a future of regard and restoration and end the extinction crisis. For wildlife biologists to be useful to that end, we must be better at telling stories to attract attention. We must also be better at politics to have a direct bearing on decisions.

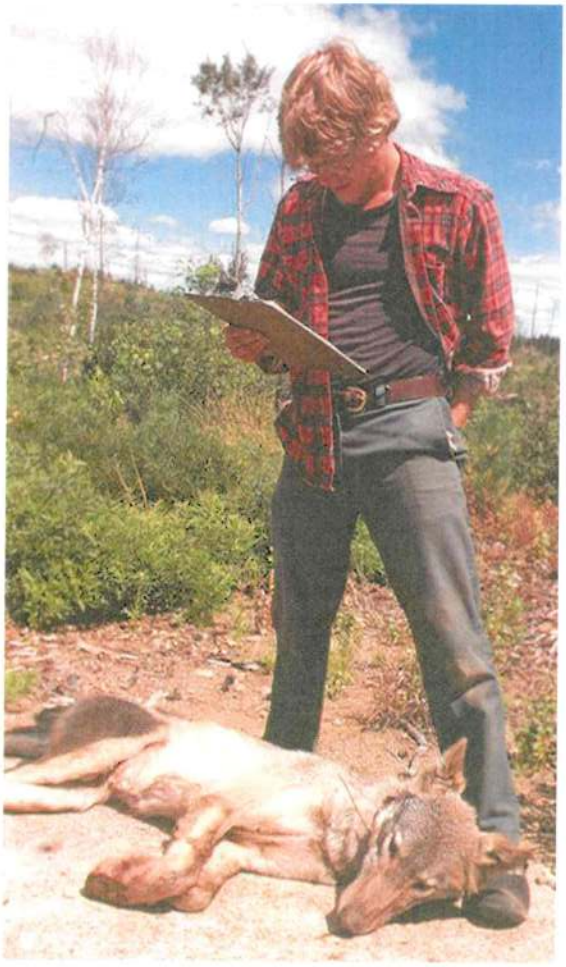
To be better at telling stories, we must accept that science is not enough to correct most problems. Science is good at telling us what might happen based on what we *might* do. It's not necessarily good at telling us what *to* do. Furthermore, science is not sufficiently familiar to most people, who are uncomfortable with its incrementalism, its uncertainty and its limitations. Plus, the scientific aspects of an issue connect more to one's head, but the normative aspects of an issue connect to one's heart. This matters, because durable solutions seem to be keenly related to the heart.

Take wolves, for example. I've had the good fortune to be actively involved in wolf research, conservation and restoration across the country for nearly 40 years—with the U.S. Fish and Wildlife Service, the National Park Service and the private sector. If science was all it took to establish a secure future for wolves, that task would have been accomplished long ago. Science tells us that co-existing with wolves is a straightforward affair that requires only a modicum of accommodation. It tells us that wolves do not represent a threat to livestock, big game hunting or human safety. Yet coexisting with wolves remains a struggle.

The power of story

This is due to countless stories told over centuries that gave rise to the mythical wolf—a wolf with an almost supernatural ability to exercise its predatory will on a whim. While nothing could be further from the truth, the real wolf is nearly impossible to see through the thick haze created by the myth. The species remains intensively persecuted and extinct across nearly 85% of its historical range despite an abundance of suitable, widespread habitat and effective tools for preventing and resolving conflicts.

Stories built these myths, but they can also tear them down. In 2019, I was interviewed by popular podcaster Tim Ferris about the campaign to pass Colorado's Proposition 114—the first-ever exercise of direct democracy to secure a lawful mandate to use reintroductions to restore wolves. When the



Courtesy Mike Phillips

◀ Mike Phillips began his work with wolves as a field biologist on Dave Mech's study of wolves and prey in northeastern Minnesota.

podcast aired to millions of listeners in August 2019—more than a year before the vote—the campaign was running on fumes.

The most important part of our discussion was not the science of wolf biology or management. I didn't talk about peer-review publications. I told stories. Stories about grizzlies in the Arctic that could have killed me. About a canebrake rattlesnake that spit venom in my eyes. About an arch stone that could be restored to connect gray wolves across a continent. These stories so captured Ferris and his listeners that within one week of airing, $250,000 had been raised for the campaign, which proved essential for its eventual success.

Courtesy Mike Phillips

▲ Mike Phillips, left, served for 14 years in the Montana state legislature.

Lest you doubt the power of stories, recall that Leopold's masterpiece, *A Sand County Almanac*, is mostly a collection of stories. Stories inspire action because they prompt people to listen—to pay attention—so that when we share our science, it matters. This is especially the case when we tell our stories in the right setting. Often that is a political one, where durable decisions are made.

Taking action

In addition to being better at telling stories, we need to be better at politics. We can do this in any number of ways: working on behalf of candidates, testifying before committees, writing letters to the editor, calling in to talk radio shows, hosting talk radio shows, engaging more fully with TWS' policy work through the Conservation Affairs Network.

But being better at politics also means that more of us must run for office and gain a seat at a decision-making table. Then, we need to sit in that seat with a dogged determination to ensure that science and a conservation ethic are part of the decision-making process. This is essential, because far too many elected and appointed officials persistently disregard both.

It was this disregard that prompted my decision 20 years ago to serve in elected office. Acting on that decision was uncomfortable. It required me to untether myself from the secure and predictable moorings of fieldwork and wildlife conservation and jump head first into the unfamiliar and seemingly irrational mosh pit of politics. I planted yard signs, knocked on doors and presented my values, hoping they aligned with at least 50% plus one of the voters.

I acted with a belief that politics could be an honorable endeavor. I also acted with a commitment to respect my profession as a wildlife biologist by working as a candidate and elected official from a foundation of science presented honestly. My 14 years in the legislature were rewarding and provided rich opportunities to insert conservation science more firmly in Montana's political process.

On the shoulders of giants

As you consider the notion of serving in elected office, note that at its core our political system favors people like us who believe that facts, knowledge and scholarship matter. During the United States' formative years, the founders recognized that that there was no way on the heels of the hard-fought Revolutionary War to form a viable republic that resolved problems related to the rights of the federal government versus state governments, the rights of women, the rights of Native Americans and the rights of slaves. At the time of the nation's founding, these problems were insolvable.

Instead, the founders created a political system and political parties as institutionalized channels for ongoing debate, permitting dissent to be regarded not as a treasonable act but as a legitimate voice. Part of the enduring genius of the Constitution—beyond the opportunity and responsibility of self-rule—is that it provides a framework for debating salient questions, nearly endlessly if need be.

You might say, "The world of electoral politics is not for me. It's way outside my comfort zone. It would be too hard to succeed." If you believe that, I offer Leopold's observation that in our attempt to make conservation easy, we have made it trivial. And I ask that you consider James Madison—the fourth president of the United States. Political historians refer to Madison—at less than 5 feet 4 inches tall and just 130 pounds—as a giant among giants. Shy, retiring and often softly spoken, he did not cast a notable physical presence or always exude a notable personality. He did, however, possess a commanding intellect and a resolute belief in the power of preparation, facts and logic. If God were in the details, so the saying went, Madison would be present to greet Him upon arrival.

In June 1788, in what some historians consider the most consequential debate in American history, Madison debated the wisdom of ratifying the Constitution with Patrick Henry, widely regarded as America's most formidable orator at the time. While Henry had the greater power to persuade, Madison had the greater power to convince, and that power swayed his colleagues to ratify the Constitution.

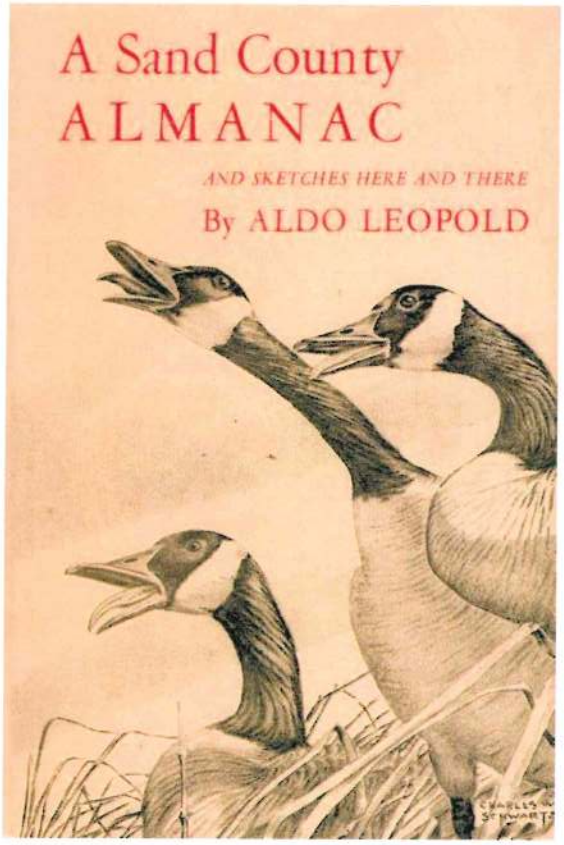
In a different time, I'm sure Madison could have been a top-shelf wildlife biologist. He celebrated what we celebrate. The power of preparedness. The power of data, collected fairly and interpreted honestly. The power of logic, reliable knowledge and debate.

The gift of sight

As Madison was needed at decision-making tables in his time, we are needed in this time to arrest and reverse the extinction crisis. But beyond that, we have much to offer to solve other profoundly important social problems.

When I was at the University of Alaska Fairbanks, Dave Klein, the 1999 Aldo Leopold Memorial Award recipient, hosted graduate students at his cabin for potluck discussions. One such discussion centered on the question, "Is biological training useful even if one never works as a biologist?" We unanimously agreed that the answer was yes, because knowledge of biology is foundational to understanding the world around us and contributing to solutions to all sorts of problems.

Our knowledge makes us aware that life on earth is undergirded by a finite biosphere. We know that



Credit: Oxford University Press

◀ Aldo Leopold was a pioneering wildlife biologist, but for many, he is best known for his storytelling in his famous collection, *A Sand County Almanac*.

ever since our distant ancestors discarded hunting and gathering in favor of agriculture, humankind has not lived sustainably. Leopold acknowledged this decades ago when he wrote, "Our tools are better than we are, and grow better faster that we do. They suffice to crack the atom, to command the tides, but they do not suffice for the oldest task in human history, to live on a piece of ground without spoiling it." What we know can help humankind stop the spoiling.

Given the importance of that, we should be haunted by the adage, "Those who have the privilege to know have the duty to act." I think our duty is clear. We must be better at telling stories to capture others' attention, and we must be better at politics—including winning elections—to have a direct bearing on decisions to arrest and reverse the extinction crisis.

If not us, who?

In 1990, following 27 years of imprisonment, Nelson Mandela spoke 11 words that signaled an end to apartheid in South Africa. "We can't win a war," he

Credit: Jacob W. Frank/National Park Service

▲ Peale Island provides a sanctuary of solitude in Yellowstone Lake.

said, "but we can win an election." Four years later, Mandela became South Africa's first Black president and ended the policy of apartheid. We also can win elections, and by winning enough of them, we can heal the ugly wounds we have caused.

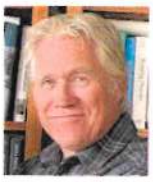
A few summers ago, with family and friends, I camped on Peale Island, a magical dot of solitude in the southern arm of Yellowstone Lake. The first day out, as the sun gave way to the moon, we heard the hopeful howl of a lone wolf, probably searching for a companion. Wolves don't like being alone. Life is difficult for any wolf, and especially so for a lone wolf.

The wolf howled all night. It was nothing if not persistent. Since there was never a response, I thought about howling back, but I didn't. I have howled to a lot of wolves, but that night I stayed in my sleeping bag and listened. As I did, I came to wonder if Mother Earth has been howling to us, hoping for us to respond by affirming her importance. Hoping for us to respond by embracing regard and restoration. Hoping for us to heal the wound that is the extinction crisis.

As I wondered, I recalled two questions from Congressman John Lewis as he rallied the nation to embrace the rights of people of color. These two questions now apply with great force to any effort to rally for an end to the extinction crisis: If not us, then who? If not now, then when?

Most human endeavors are understandably anthropocentric. Very few people dedicate energies to the nonhuman world. Yet, it is that part of creation that allows for and enriches the human experience. As wildlife biologists, we are important because we *do* dedicate energies to the nonhuman world.

I am inspired by that importance. I am inspired by the work of wildlife biologists. And I would be inspired by any effort to do better through stories and do better through politics. Leopold would be inspired, too. He would know that such effort is a salve for wounds. ■



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