

## **Wolf Packs Suffer When Humans Kill Their Leaders** From [Marc Bekoff, Psychology Today / Animal Emotions](#) January 2023

*A study shows how humans cause wolf packs to become less stable and fall apart.*

Wolves are amazing and magnificent carnivores. They are highly social, pack-living animals whose numbers have been decimated globally because of their predatory ways.

While it's been known that human intrusions into their lives can affect their behavior, a new, landmark study—called "one of the most important papers to come out of Yellowstone in his 28 years with the park" by Doug Smith, one of the world's leading wolf experts who led Yellowstone's wolf reintroduction for many years—shows that when people kill wolves their pack becomes less stable and can disband and cease to exist.<sup>1</sup>

Details of this seminal research can be found in an open-access [essay](#) by Kira Cassidy, a research associate with the Yellowstone Wolf Project, and her colleagues, called "Human-Caused Mortality Triggers Pack Instability in Gray Wolves."<sup>2,3</sup> Not only do groups suffer, but individuals do as well.



*Source: patrice schoefolt/Pexels.*

The database for this new study is massive: the researchers analyzed more than 118 years of cumulative data from five national parks, all within the historical and current gray wolf range in the United States. The parks included Yellowstone, Grand Teton, Voyageurs National Parks, Denali National Park Preserve, and Yukon-Charley Rivers National Preserve.

Data from 193 packs (with 2 to 37 wolves) over 864 pack years were analyzed and included 978 wolf mortalities from 1986 to 2021. Each year, an average of 5.3 percent of each pack died from a human-related cause.

Here is a brief summary of what the researchers learned.

Human-caused mortality accounted for 36 percent of collared wolf mortalities and had a detrimental effect on both pack persistence and reproduction. The human-caused mortality of any wolf decreased the predicted odds of pack persistence to the end of the biological year by 27 percent and reproduction the following year by 22 percent.

Packs with no reported human-caused mortalities persisted to the end of the biological year 91.6 percent of the time, while packs that experienced at least one reported human-caused mortality persisted 76.3 percent of the time."

Packs with no reported human-caused mortalities reproduced the following year 79.0 percent of the time, whereas packs with at least one reported human-caused mortality reproduced the following year only 65.6 percent of the time.

Larger packs were better to recover from human-caused intrusions than smaller packs.

### **Why this study is so important.**

Paul Paquet, Senior Scientist at the Raincoast Conservation Foundation in Canada and a wolf expert, noted,

The foundation of good conservation and [management](#) of wildlife is science buttressed by persuasive moral arguments and [ethics](#). Accordingly, this seminal study has important implications regarding the conservation of gray wolves and the contentious public debate surrounding their future.<sup>1</sup>

All in all, while it's known that wolf packs come and go and wolves leave their groups for a wide variety of reasons, human intrusions increase the frequency of occurrence of pack instability and disbandment and reduce reproductive output so that fewer wolf children are produced. It's not known how removing wolves from packs in one location and moving them to another location, as is done in reintroduction or repatriation studies, influences the packs from which wolves were removed, and it is extremely important to know a lot more about the effects of these types of human intrusions on packs and on the well-being of [individual wolves and other species](#) who are affected by these experiments.<sup>4</sup>

*Sentience, emotions, and conservation.* Wolves, like dogs, are sentient, feeling animals, and it's also important to consider what they're thinking and feeling during translocation efforts, from the time they're pursued and trapped to when they're transferred and then put out in a new, unfamiliar place where they're not always welcomed.<sup>5</sup> Welcomed or not, I'm sure they they'd be feeling incredibly scared and [stressed](#). It's also perfectly okay [to factor in our own feelings](#) and the principles of compassionate conservation into decisions about what we're doing to wolves and other animals—[their and our emotions matter](#).<sup>6</sup> For more discussion of the daunting practical on-the-ground aspects and the serious ethical issues involved in doing these sorts of projects, many of which do not meet the eye, see "[The Hidden Slippery Slopes of Animal Reintroduction Programs](#)."

While common sense tells us that we all "know" that humans can seriously disrupt the natural behavior of many wild animals, it's essential to have data such as those reported in this study. The researchers call for more analyses of the ways in which humans influence the behavior and mortality of wolves, along with more science-based management plans. These include how to minimize the effects of people who understandably want to see these magnificent social beings in their natural homes.

Philosopher Martha Nussbaum has argued that [justice for animals](#) means the freedom to do what comes naturally. I agree, and when animals can do what they've evolved to do in the presence of humans, it's a

win-win for all—the humans get to see these wild animals in action as they would behave when the humans aren't around.

I look forward to future studies on other animals who people want to observe so that their desires can be fulfilled and so that they hopefully will come to respect and appreciate these amazing nonhumans and at the same time, *the well-being of individual animals and their groups* will be closely and vigorously protected so that they can continue to live their natural lives and do what they're supposed to do as members of their respective species.

## References

1) Press release from [Living with Wolves](#); contact <[gductcher@livingwithwolves.org](mailto:gductcher@livingwithwolves.org)>.

2) For details about wolf behavior, emotions, and personality see, for example, four outstanding books by wolf expert Rick McIntyre, the last of which is reviewed in a piece called "[The Power and Legacy of Yellowstone's Alpha Female Wolf 06](#)." See also [The Story of Yellowstone Wolf 8: From Underdog to Alpha Male](#), [The Reign of Wolf 21](#), [Yellowstone's Benevolent Alpha Male](#), and [The Redemption of Yellowstone's Renegade Alpha Wolf 302](#). For more information about the wolves of Yellowstone see [Yellowstone Wolves: Everything You Want to Know and More](#) and for details about how a parasite can affect wolf behavior and make them more daring see [Wolves With a Parasite Become More Daring, Study Shows](#).

3) The abstract reads: Transboundary movement of wildlife results in some of the most complicated and unresolved wildlife management issues across the globe. Depending on the location and managing agency, gray wolf (*Canis lupus*) management in the US ranges from preservation to limited hunting to population reduction. Most wildlife studies focus on population size and growth rate to inform management, but relatively few examine species biological processes at scales aside from that of the population. This is especially important for group-living species such as the gray wolf, for which the breeding unit is the social group. We analyzed data for gray wolf packs living primarily within several US National Park Service units (years of data): Denali National Park and Preserve (33 years), Grand Teton National Park (23 years), Voyageurs National Park (12 years), Yellowstone National Park (27 years), and Yukon-Charley Rivers National Preserve (23 years). We identified two gray wolf biological processes that differed from population size – namely, pack persistence and reproduction – and determined that while human-caused mortality had negative effects on both, pack size had a moderating effect on the impacts of mortality.

4) A reintroduction program is in the plans for my home state of Colorado. An early [draft](#) of the "Colorado Wolf Restoration and Management Plan" is being hotly debated—pro-wolf advocates claim it doesn't adequately protect the wolves who will be brought to Colorado, a perspective with which I strongly agree, while anti-wolf people claim it doesn't adequately protect them. For further discussion of how to make Colorado a more welcoming place for introduced wolves click [here](#), and for more general discussion of this project click [here](#).

5) Given that Colorado is planning to reintroduce wolves to the state, it's important to note that Denver University now has a new [Institute for Animal Sentience and Protection](#). See also [Colorado can become the first state to declare animals to be sentient beings](#).

6) For more information about compassionate conservation click [here](#) and [here](#).

[It's Time To Stop Wondering if Animals Are Sentient—They Are.](#)

Do Individual Wolves Care if Their Species Is on the Brink?

Justice for Animals Means Freedom to Do What Comes Naturally.

Wildlife Conservation: Bringing Compassion to Wild Animals.

Do Emotions "Get in the Way" of Progress in Conservation?

Batavia, Chelsea et al. 2021. Emotion as a source of moral understanding in conservation. *Conservation Biology*.

Ramp, Daniel and Marc Bekoff. Compassion as a Practical and Evolved Ethic for Conservation. *BioScience*, 2015.

Wallach, A. D., Bekoff, M., Batavia, C., Nelson, M. P., & Ramp, D. 2018. Summoning compassion to address the challenges of conservation. *Conservation Biology*.