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A CONVERSATION WITH JOEL BERGER

When Grizzlies Ruin Eden, Moose Take to the Road



M. Scott Moon/The Pennsylvania Clarion, via Associated Press

ROAD HAVEN Studying prey-predator relationships, Joel Berger has noticed that each year, moose in Grand Teton National Park move closer to the road to calve.

By CLAUDIA DREIFUS
Published: February 12, 2008

Joel Berger, 56, is a specialist in ungulates, hooved mammals that, in general, walk on the tips of their toes to sustain their body weight. His investigations into the behavior and habits of rhinoceros, bison, pronghorn sheep and moose have been used to find ways to preserve them and their environments.

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Tom Bauer for The New York Times

"We think that the Grand Teton moose have figured out a way to use humans as shields for their babies." - Joel Berger.

On a recent visit to New York City, Dr. Berger, a professor at the University of Montana and senior scientist with the [Wildlife Conservation Society](#), drew a photograph from his wallet of a saiga, a smiling Mongolian antelope that looks as if it is equal parts camel and deer.

"This is my latest campaign," he said. "Most of them were wiped out by hunters when the cold war ended. Now, the Mongolian government is trying to help them make a comeback, and we're helping figure out their migratory routes. Isn't she worth saving?"

An edited version of a two-hour interview and a subsequent telephone conversation follows:

Q. *O.K., why did the moose go down to the road?*

A. If she's a native of the greater Yellowstone ecosystem and she's pregnant, she may have done it because she wanted to give birth in a place where one of her main predators, the

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grizzly bear, rarely goes.

Grizzlies tend to avoid humans. In the part of Yellowstone that I've been studying this past decade, the Grand Teton National Park, grizzlies don't go near the roads because they know that's where the humans and cars are.

I collar and track moose as part of my wider research on prey-predator relationships. For the past 10 years, we've noticed that Grand Teton moose are, each year, moving about 375 feet closer to the roads when they are about to calve. We think they are doing it because they've figured out that the paved road is a bear-free zone where their newborns stand a better chance of survival. Up in Alaska, grizzly bears have been observed killing between 50 and 90 percent of the newborn moose population. We think that the Grand Teton moose have figured out a way to use humans as shields for their babies.

Q. *Is this a new behavior for them?*

A. It's recent. Until the mid-1990s, the moose of the Yellowstone basin lived in a kind of moose paradise, without predators. The wolves had all been shot out about 70 years earlier. Grizzly bears were heavily hunted, and there were few of them. Without their traditional predators, Grand Teton moose were docile, naïve.

That all changed in the mid-1990s when the grizzlies rebounded because of a ban on their hunt and when wolves were reintroduced to the Yellowstone region. The first Grand Teton moose to encounter a wolf probably thought it was nothing more than a big coyote, which she didn't fear. We reconstructed the interaction from tracks we found in the snow. From what we could see, the wolves just walked up to the moose and grabbed her 300 pound calf and ate it.

Grand Teton moose have learned a lot since then. Most of us think of moose as these dim lumbering Bullwinkles, but they figure things out. Today, if I were to play wolf calls over a loudspeaker to a herd in the park, they'd become vigilant — and they'd move away.

Q. *Isn't this just moose instinct at work?*

A. No. They didn't do it 15 years ago.

Q. *Why did you once dress up as a moose?*

A. Legitimate scientific inquiry. We wanted to see how the Grand Teton moose reacted to the smell of bear scat. In Alaska, where the moose are very bear-savvy, if they smell it, they'll manifest fear. But what about "naïve" moose? Well, you can't just go up to moose and put odiferous bear poop patties before them. The outfit — and a tactic of acting like a moose — was a way of getting in close. We only did this perhaps four times, but I'll never live it down. The media made a big deal of it. Letterman wanted me on his show. We didn't go.


Q. *How did your guys react to the bear patties?*

A. At that time, bears hadn't been that much of a danger to them. And so they mostly ignored it. But within one moose generation, really only a few years, they started to wise up.

Q. *We found a book by you, "Bison: Mating and Conservation in Small Populations." Are you the Alfred Kinsey of the bison world?*

A. This was serious work, again. Our team spent over 9,000 hours over a five-year period watching bison copulations that lasted for less than 10 seconds each.

Bison in the Badlands park in South Dakota, where we were working at that time, are genetically as if on an island. They are surrounded by a sea of human domination, and no new ones are going to migrate in. Thus, the potential for inbreeding is high. We wanted to observe mating patterns to see if it would work to bring in outside males to diversify the gene pool. The question was, Would these introduced males be allowed to mate with the



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females.

And what we found was that within the herd, a handful of the male bisons did most of the mating. They were these big [Arnold Schwarzenegger](#)-type bulls. They were the fathers of about 50 percent of the babies. The other males were, um, mostly superfluous. We concluded that, no, we shouldn't bring in outside males because they probably wouldn't get to breed, but rather outside females — because they'd breed with those Arnolds.

Q. *How has the greater Yellowstone ecosystem changed in the 13 years you've been working there?*

A. In terms of the wildlife, the big difference is predators. Before the wolves and bears came back, moose populations had climbed inexorably high. The moose battered down the cottonwoods, willows, aspens — and we lost a lot of migratory songbirds because we had these extraordinarily large moose populations. It's been a real positive thing to see how predators checked some of that.

The other change is more people. People are putting up vacation houses in these areas nearby, but they are sometimes antagonistic to the animals whose habitats they are moving in to. We used to live near Jackson Hole, and some of our neighbors would get really upset because the moose were eating their horticultural plants. Others would be terrified that wolves or coyotes might attack their pets.

Q. *Can you blame them?*

A. Listen, if you're going to live in the wilderness, you'll have wolves and bears and cougars. We have to find a way to tolerate them and live alongside them.

If we're going to ask Africans to tolerate elephants and ask Panamanians to bear the burden of jaguars, then we Americans ought to be able to tolerate our own wildlife. It's not like we're growing any new wild places.

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