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The pronghorn is arguably the world's fastest land animal: though a cheetah could beat it in a hundred-yard dash, the pronghorn would likely prevail at 400-meters and in a one-mile race, which it would finish in about a minute.

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THIS PAGE: Each fall, pronghorns in Grand Teton National Park embark on the longest terrestrial migration in the contiguous United States, to their winter range some 120 miles to the south. Photograph by Joe McDonald.

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End of the Road?



Small but cherished, the Grand Teton herd faces a growing number of man-made obstacles—including more than 100 fences (this one near Pinedale, WY) thrown up along the migration route that it has followed for millennia.

Development threatens to block the ancient migration of a herd of pronghorn antelopes in western Wyoming. Without new protections, conservationists say, the speedy animals are running out of time

BY DANIEL GLICK



The chase began just after dawn. In a curious predator-prey role reversal, the pronghorn antelope pursued a coyote across a knoll. The doe could have run down her quarry in seconds, but she was not trying to catch the coyote, only shoo it away. After a half mile, she stopped and headed back to resume her vigil over two light brown fawns in this southeastern corner of Wyoming's Grand Teton National Park. When last seen, the coyote was high-tailing it up a treeless draw.

Joel Berger, a biologist with the Wildlife Conservation Society, had brought me to this perch on Blacktail Butte to observe the pronghorns. The doe, Berger said, had just performed a classic feint, steering the coyote away from the short grass daybed where her fawns had been playing a deadly game of hide-and-seek with predators in the days since their mid-June birth.

Pronghorns evolved in the harsh, high-plains habitat of North America tens of millions of years ago alongside swift predators like saber-toothed cats and dire wolves. They are not related to true antelopes of the Old World, but like those species pronghorns are specialized for speed. They are arguably the world's fastest living land animals. Although a cheetah could beat it in a hundred-yard dash, the pronghorn has greater stamina and would probably prevail in the 400-meter and one-mile races, the latter of which it would run in about a minute. Pronghorns can spot movement three miles away, and a startled pronghorn herd confuses predators by darting in unison at 50 miles an hour like a skittish school of fish. Pronghorns survive harsh winters on the barest intake of sage leaves they paw from the snow. But for this sentinel herd of pronghorns, the greatest threat to its survival is a rapidly changing West.

If this doe's fawns survive the summer, they will follow their mother and a few hundred other pronghorns on the longest terrestrial migration in the lower 48 states. By early fall, the herd will leave Grand Teton National Park, fording rivers and climbing steep ridges to reach its winter range at least 120 miles away, south of Pinedale. If the fawns endure the windblown, minus-20-degree Wyoming winter, they will make their way back to the national park in the spring.

DANIEL GLICK is the author of the book *Monkey Dancing: A Father, Two Kids, and a Journey to the Ends of the Earth*.

This extraordinary migration is getting more difficult with each passing year, due to land development that is placing obstacles in the animals' way and a natural gas boom that is carving up their critical winter range.

Berger and his wife, Kim, who is also a wildlife biologist, have been working to preserve what's left of this herd's long, narrow migratory route. In 2003, the biologists proposed the nation's first National Migration Corridor—a trail that would be protected from further harm by federal restrictions on development and industry. The trail would also benefit the mule deer, moose and other mammals that have traveled the same high-mountain highway for millennia. More than 90 percent of the proposed corridor is federal property, the Bergers point out, and the plan requires mainly that the trail suffer no further deterioration. "We're not asking for a corridor 20 miles wide," says Joel. "We're asking for something long and narrow." It's 90 miles by one mile, to be exact.

Pronghorns are not in trouble everywhere in Wyoming. In fact, there are probably as many of the animals in the state—about a half million—as there are people. Most pronghorns live in eastern Wyoming, where they roam shorter distances across landscapes not yet so prized. But the herd of 200 or so animals that migrates in and out of Grand Teton National Park treads across what has become some of the most valuable real estate in the West. Berger argues that without a protected corridor, the herd will die off, an outcome that he says should be unacceptable.

From our ridge-top perch, Berger and I spy bison, elk, a great blue heron and another doe with two fawns (pronghorns almost always give birth to twins). As the coyote-chasing doe returns, her fawns pop their heads out of the grass to greet her. Berger estimates they are about 3 days old. The twins take turns nursing, then the threesome ranges over a

Grazing in the park all summer, pronghorns follow a 120-mile or more route in fall through booming Pinedale. To aid the herd's survival, advocates propose turning the timeworn trail into a federally protected wildlife corridor.





quarter mile of terrain, alternately feeding, gamboling and lying down to rest. Several times a minute, the mom pricks her ears and scans for coyotes and other threats.

In this part of the park, the Bergers have documented that 90 percent of fawns die, mostly from coyote attacks. The fawns must also weather late spring snowstorms, sub-freezing nights, bears, cougars, bobcats, golden eagles, wolves, badgers, disease, river crossings, roaring SUVs and other perils. If they dodge these bullets, not to mention the actual ones fired at them outside the park during the autumn hunting season, they will migrate before the snows blanket their birthplace.

Then comes the hard part.

KIM BERGER AND I climb a ridge on horseback to get a view of a key pass that the pronghorns must cross. Here, south of Grand Teton National Park, the corridor rises into mixed conifer forest. The view is stunning: we see the upper reaches of the Gros Ventre River, which flows northward into the park, and high meadows where pronghorns meander. Kim points out the “Red Hills bottleneck” in the distance, one of many natural constrictions that migrating animals face. On a steep slope above rapids and below an impassable cliff band, antelope hoofs have carved a single-track trail. “These animals literally come over the same hoofprints year after year,” Kim says, adding that they cover the 120-mile passage between their summer and winter ranges in about three days at a brisk, nose-to-tail walk.

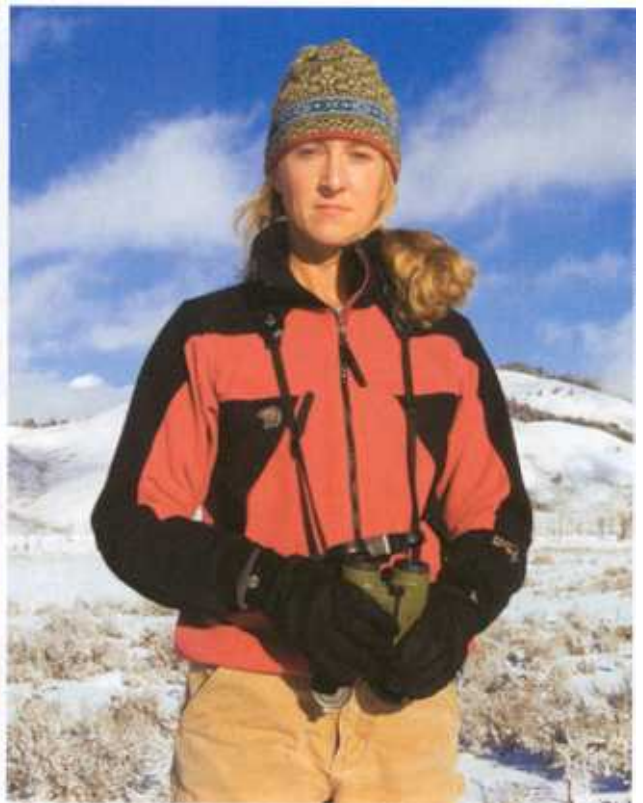
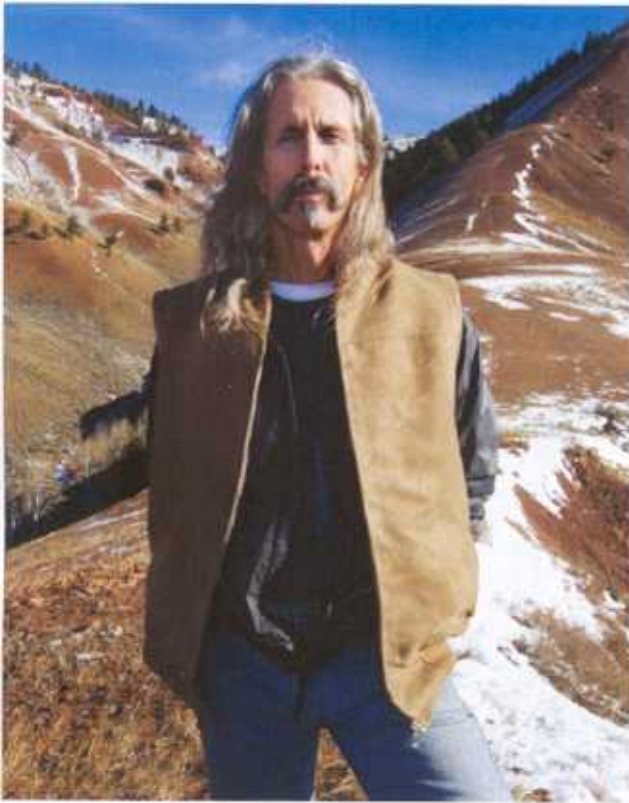
We skirt the edge of the woods, peering down the treeless flood plain where pronghorns graze in scattered small gath-

The fight to save the Grand Teton National Park pronghorn herd isn't the first local battle pitting development rights against environmental concerns. Creation of the 310,000-acre park itself was, says historian Robert Righter, “perhaps the most notable conservation victory of the 20th century.”

erings. They don't migrate in huge herds, Kim tells me, but in groups of three up to a dozen. But migrate they must: deep snows in the higher elevations would kill them if they stayed the winter. In 1993, wildlife managers documented a group of stragglers that got trapped by an early snowfall and died.

On the other side of the ridge, the pronghorns have to negotiate a difficult stretch west of the Green River. The route between the river and some aspen groves has grown narrower and full of obstacles with the recent proliferation of ranchette subdivisions, with their attendant fences and guard dogs. Pronghorns, Kim explains, don't like to go places where they can't “see far and run fast.” If the animals reach Highway 191, which runs through Pinedale, they must pass through one last natural bottleneck, Trapper's Point, a quarter-mile-wide passage that has been a gantlet of sorts for millennia. During construction to improve Highway 191 in the early 1990s, archaeologists discovered the bones of butchered pronghorns dating back 6,000 years, including fetal bones. Native Americans had hunted the animals at this bottleneck during the spring migration, when females were pregnant. Today in this spot, it's cars that are lethal.

Sublette County, where these pronghorns live from about November through April, is the fastest-growing county in Wyoming. An increasing number of wealthy second homeowners are quickly subdividing—and fencing—



previously wide open spaces. Some landowners have worked with wildlife officials to make pronghorn-friendly fences that provide access points for the antelope. But others have put up virtually impenetrable barriers. The cumulative effect of all this construction, Kim Berger says, could be devastating to the pronghorn herd: "It takes only a small difference to switch the balance from a stable population to one that's declining."

AT BEST, THE ARID PINEDALE MESA is a land of "just enough": just enough protein in sparse sage leaves to sustain pronghorn; just enough water that deer can paw from frozen seeps and suckle from snow; just enough shelter from icy winds amid the hillocks. About 100,000 deer, moose, elk, and pronghorns (from Grand Teton and elsewhere) winter here.

The animals' resources have been shrinking ever since people figured out how to eke out a living here. Revenue from oil and gas production provides the base for Wyoming's economy, keeping taxes low and allowing the state to run a budget surplus. Beginning in the late 1990s, breakthroughs in hydraulic fracturing (known as "fracing," pronounced "fracking"), which pumps liquids at high pressure deep into the earth to break up sandstone blocking access to valuable methane gas pockets, have altered the landscape. There is at least 20 trillion cubic feet of methane gas near Pinedale, most of it on federal land—about one year's supply of natural gas for the country. The more drilling became profitable, the more Pinedale boomed: bulldozers carved miles of dirt roads through the sage flats, and

At the heart of the wildlife migration corridor proposed by Joel Berger (at a natural pronghorn-migration bottleneck in the Red Hills) and spouse Kim Berger (in Grand Teton National Park) lies a moral as well as scientific question: Is it OK to let a signal species disappear from a national park?

drilling pads multiplied almost as fast as the gas companies could hire construction workers to build them.

The Pinedale area quickly became the focal point of a debate. To people like Charles Stanley, executive vice president of the Questar Corporation, the area provides a rare, concentrated accumulation of an important energy resource—a place where Questar and other energy companies could demonstrate new techniques that they say minimize drilling's impact on land and wildlife. For instance, they drill in multiple directions from one "fixed pad" to reduce land disturbance. "I believe we can and have as an industry achieved an acceptable balance that protects the environment while still accomplishing development of the nation's third-largest natural gas accumulation," says Stanley.

But for many local residents, the influx of energy developers has not been so salutary. Bouncing along dirt roads south of Pinedale, Linda Baker guides her Saab around vast sage steppes punctuated by drilling rigs and evaporation ponds. "Seven years ago this was a place where there was very little development," says Baker. Now the area has been carved into a pocked, checkered industrial zone that looks more like Texas' oil fields than Wyoming's vast vistas. "It's heartbreaking," she says.

Baker, who has lived in Pinedale for 25 years, is herself a former "juggie," a geophysical explorer for oil and gas com-

panies. After a stint in the fields, she used her earnings to return to school, and she eventually became a librarian—until the recent gas boom propelled her into full-time advocacy. Baker helped form the Upper Green River Valley Coalition in 2002. The coalition won a temporary halt to oil and gas leasing in a nearby national forest and a withdrawal of leases near the Trapper's Point bottleneck. "We have been able to help define a vision for our future as oil and gas development rushes around us," Baker says.

Baker's soft voice belies her passion for her hometown. She points out that the fluids used in fracking can contain solvents such as benzene, toluene and xylene. These compounds are highly carcinogenic, and Baker fears they will contaminate the drinking water supply.

Stanley counters that fracking takes place thousands of feet below groundwater aquifers, and "numerous precautions" isolate the water from fracking fluids and natural gas.

The Bureau of Land Management (BLM) oversees most of the land targeted for energy development. The agency's task, according to its mission statement, is to balance energy needs, wildlife resources and recreation. An assistant secretary of the Interior, C. Stephen Allred, whose department includes the BLM, says, "We are always looking to reduce the human footprint." For instance, he says, proposed pipelines

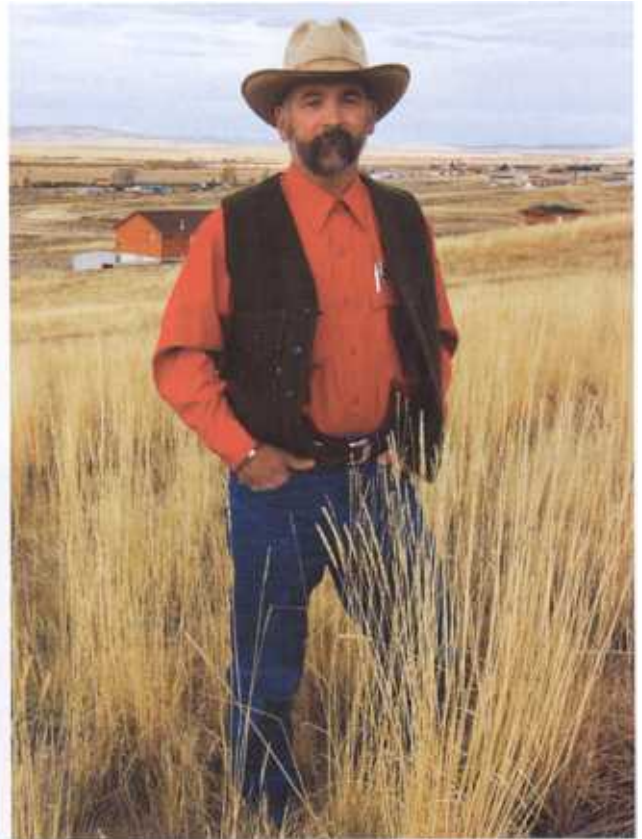
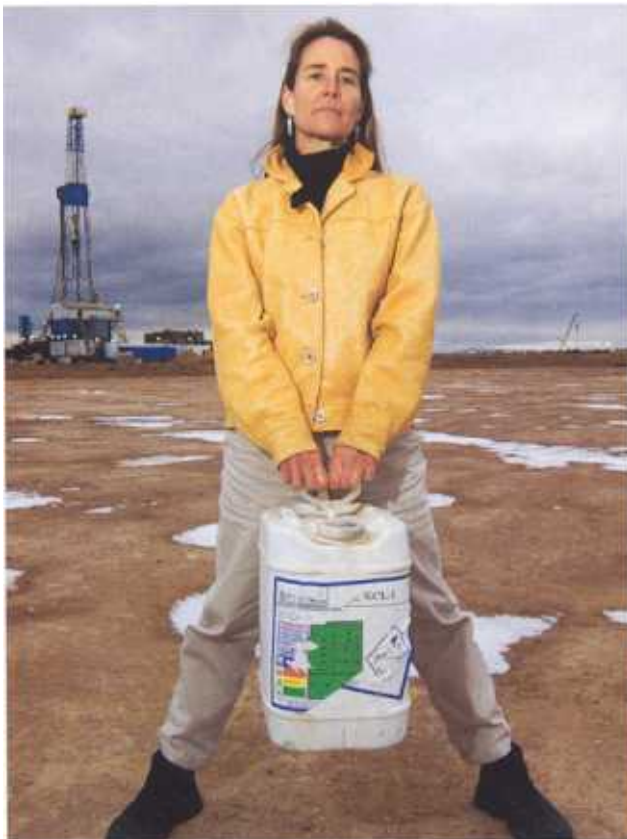
With 5,000 natural gas wells in the Upper Green River Basin, energy companies say they balance the need for fuel against the toll on the environment. But former oil and gas explorer Linda Baker (near Pinedale) and Wyoming wildlife official Bernie Holz (at Trapper's Point) say development has been reckless.

would reduce truck travel by 125,000 trips per year.

In a report released in June 2005, the Government Accountability Office, which evaluates federal programs, said the BLM's enforcement capability had been undermined by the current administration's accelerated granting of permits for new drilling. If something isn't done, the report concluded, "the environmental impacts of oil and gas development could compromise BLM's responsibility for protecting the environment."

Some environmental safeguards have been eased or relaxed. In the late 1990s, companies were required to limit the density of wells per acre and to shut down winter operations for the benefit of wildlife. In 2002, Questar, Ultra, Shell and other energy companies were granted exemptions, including higher well densities, year-round operations and relaxed pollutant limits. Provisions in the Energy Policy Act of 2005 specifically exempt fracking liquids from the Safe Drinking Water Act. Emissions from diesel trucks and drilling rig engines have led to a perceptible decline in the air quality, with plumes of haze that cloud the once-limitless horizon. "Nobody in this valley would refute that we're losing our 100-mile views," says Baker.

Baker and I bump back onto Highway 191 and observe a skyline spiked with drilling rigs. Baker says she doesn't oppose energy development and objects only to the manner and speed with which it is being done, as if gas deposits that sat for millions of years would suddenly disappear if they weren't exploited immediately. "Could somebody tell me what the rush is all about?" she asks.



ON A SNOWY DAY IN MID-MAY, regional wildlife supervisor Bernie Holz and I are in his truck outside Pinedale, looking for signs of pronghorn returning to Grand Teton National Park. Earlier in the spring, he tells me, a migrating lead doe, skittish after crossing fence lines and skirting around new Pinedale subdivisions, balked at crossing Highway 191. The herd backed up behind her, tried to detour up a bluff, then returned and gathered in collective confusion at the highway's edge: 6,000 years of collective memory confronting a ribbon of asphalt. Game and Fish employees fanned out along the road and stopped traffic, as if directing children at a school crossing.

Holz has worked with pronghorns since he started with the Wyoming Game and Fish Department in 1983, and he has hunted them even longer. In his quiet but commanding Western drawl, he says that too many people just won't face the fact that there's a limit to what the animals can take. "People always want to know," he says, "how much more of this we can do before we have to stop." Holz says he's convinced that the most important use of the land "is as a migration corridor. It's not as oil and gas or anything else. In our heart of hearts, we know we're going to clobber this place."

We drive to Trapper's Point, which commands one of the region's most impressive views, taking in the New Fork and Green rivers, as well as the Wyoming, Gros Ventre and Wind River ranges. In the distance, we spot several small groups of pronghorns. Some of the does are pregnant. I ask Holz what it will take to convince Americans that the point of no return is upon us. "I think it takes an urgency and a

belief that this resource is going to be lost," he answers slowly, adding that the pronghorn we see are waiting for the snows to melt so they can return to Grand Teton National Park and give birth to this year's fawns. As much to himself as to me, he adds: "This is worth trying to do."

FROM OUR PERCH on Blacktail Butte, Joel Berger and I spot other pronghorn does with their fawns, grazing against the jaw-dropping backdrop of the jagged Grand Tetons. I ask him why saving such a relatively small herd is so important. "This is the longest migration of a land species outside the Arctic in the New World," he says. "If we can't save this pronghorn migration—an event that has been occurring for 6,000 years through a narrow thread of a corridor—then what hope do we have for conserving other migrations?" That this corridor links to one of the world's premier national parks just adds to the urgency, he says.

The Bergers' proposal for a National Migration Corridor enjoys strong support here in Teton County, where the pronghorns are born, but not among commissioners in Sublette County, where pronghorns winter. Federal designation requires Congressional action. So far, Wyoming's Congressional delegation has been lukewarm to the idea.

As the sun begins to warm the high-altitude autumn morning, the doe that chased the coyote is nowhere to be seen. Neither are her two fawns. They have likely moved up the river valley toward the spot from which the herd will soon begin its ancient migration. They will soon face obstacles their ancestors never knew. ○

North America's fastest land animals, pronghorns (near Pinedale) can run 60 miles per hour—an evolutionary adaptation to swift, now-extinct predators such as saber-toothed cats. Biologists say the Grand Teton herd needs help outrunning modern threats.

