



by Charles Bethea

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## NATURAL INTELLIGENCE

### Fair Chase

On the plains of New Mexico, a band of elite marathoners tests a controversial theory of evolution: that humans can outrun the fastest animals on earth

**THROUGH THE BINOCULARS** I see them: nine tiny men in bright jerseys running in formation across the vast short-grass prairie of eastern New Mexico. They're chasing a tawny pronghorn antelope through the crackling stalks of late summer's fading wild sunflowers. The buck weighs about 130 pounds, like the men racing after it, but that's about the only thing they have in common.

The pronghorn is the second-fastest animal on earth, while the men are merely elite marathon runners who are trying to verify a theory about human evolution. Some scientists believe that our ancestors evolved into endurance athletes in order to hunt quadrupeds by running them to exhaustion. If the theory holds up, the antelope I'm watching will eventually tire and the men will catch it. Then they'll have to decide whether to kill it for food or let it go.

"I've harvested a ton of pronghorn," bellows Peter Romero, a camo-clad, 260-pound New Mexican big-game guide who's standing next to me, squinting into a spotting scope. "But never this way." Romero, who speaks in the calibrated tongue of the modern sportsman, has "harvested" nearly every species in the New Mexico big-game handbook and isn't shy about showing off cell-phone pics of his trophies. He's also *Outside's* former building manager, and when he heard we wanted to see if a group of marathoners who live and train near 7,000-foot-high Santa Fe could catch an antelope, he offered to help.

Among other services, the tireless Romero showed the runners where to find antelope-hunting permits—they paid \$985 for a tag on Craigslist—and explained a few laws the men

would have to obey. They'd be required to stay within the roughly five square miles of ranchland we'd received permission to use, and they could pursue only a male antelope with horns taller than its ears. Assuming they actually succeeded in chasing a buck to the point of exhaustion and still felt the resolve to kill it, a licensed hunter would dispatch the animal with a pistol shot. The use of a gun or bow is required, since New Mexico doesn't allow human-hurled projectiles, sticks, or bare hands to be used as hunting weapons.

Andrew Musuva would have preferred a fist-size rock. That's what the 40-year-old Kenyan—who starred in a Subway commercial that aired ahead of last year's New York City Marathon—used to coldcock a kudu after a long chase 20 years ago in his home country. Because he's the only runner with experience in this enterprise, which is known as persistence hunting, he's become the group's unofficial leader. With him is his friend and co-conspirator Marc Esposito, a 33-year-old physical-therapy technician who's carrying his hunting license and Romero's handgun in his backpack.

"Not looking good," says Romero, eyeing the men. Perhaps sensing something suspicious, if not entirely threatening, the wary buck guns it, accelerates to 30 miles per hour—about half speed—and disappears

into a wrinkle in the landscape. A few minutes later, around 1 P.M., three hunters from Hereford, Texas, drive up. Romero and I explain what's going on.

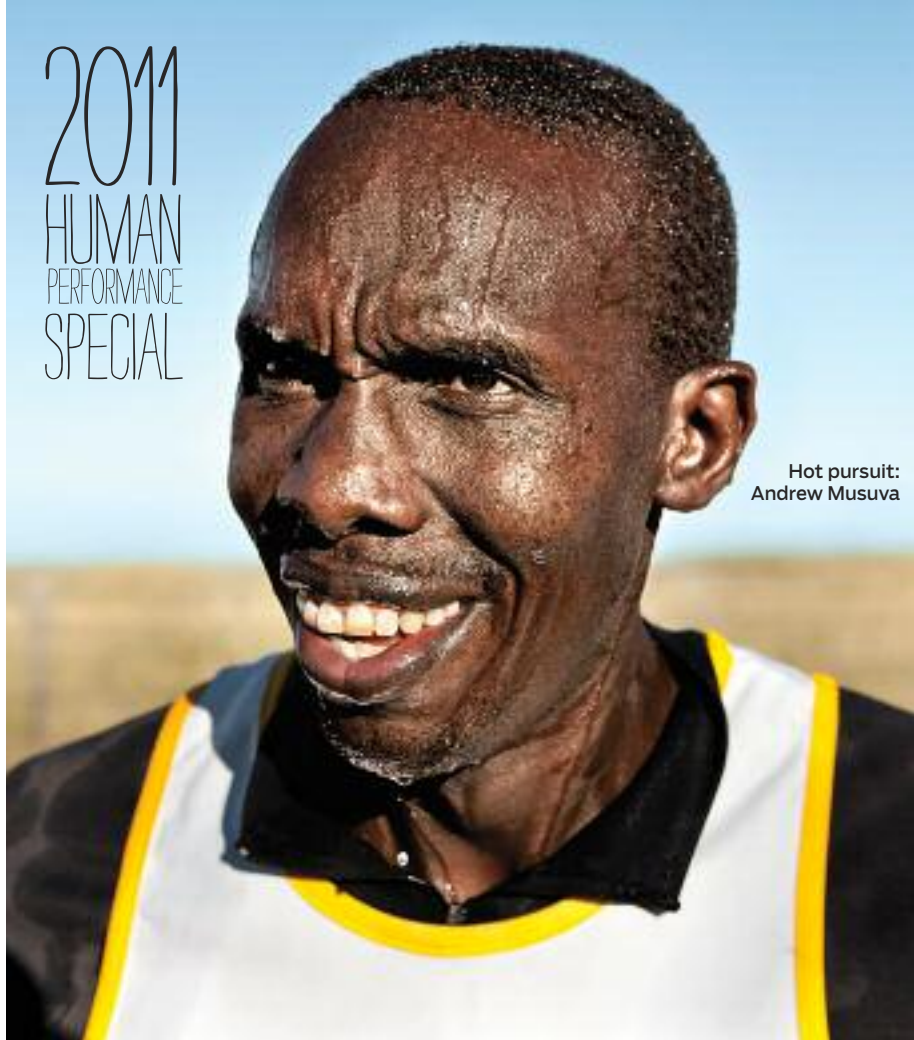
"I'm taking the four-legged son of a bitch with the white ass," one of them wagers.

"Give me ten to one and I'll take the Kenyans," says another, chuckling.

The third just stands there, slack-jawed. "Look at those crazy bastards!" he says. "Ain't that some shit?"

AS RIDICULOUS AS THIS spectacle might appear, the men are testing a much-debated scientific notion about when and how humans became hunters. Between two and three million years ago, when our australopithecine ancestors ventured out of the forests and onto the protein-rich African savanna, they were prey more often than hunter. They gathered plant-based foods, just as their primate brethren did. Then something changed. They began running after game with long, steady strides. Evolutionary biologists like Harvard's Dan Lieberman think the uniquely human capacity for endurance running is a distant remnant of prehistoric persistence hunting.

We can run all day, the theory goes, because there was once a caloric advantage to it. Our two human legs, packed as they are with long



Hot pursuit:  
Andrew Musuva

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slow-twitch muscle fibers, make us better runners over long distances than most quadrupeds. And our three million sweat glands give us the ability to cool our bodies with perspiration. An antelope, by contrast, sprints—for up to 15 minutes—while wearing a fur coat and relies on respiration (panting) to release the heat that builds up with exertion. Add to the mix our ability to organize and strategize and, well, you can see how persistence hunting might actually work.

In Christopher McDougall's 2009 book *Born to Run*, a bestseller that examined the history and science of endurance running, Lieberman explained that a successful persistence hunt probably began with scaring the quarry into a long gallop on a hot day. "If you keep just close enough for it to see you, it

species of the *Antilocapra* genus, which evolved to flee the now extinct North American cheetah. The pronghorn's top speed of 60 mph is faster than any African ungulate.

In addition to its swiftness, the pronghorn has lungs the size of water-cooler jugs and wide-set eyes as large as an elephant's. It's capable of 340-degree vision, with acuity comparable to a pair of ten-power binoculars.

Evolutionary biologist David Carrier and his brother, Scott, who wrote the 2001 memoir *Running After Antelope*, made the single recorded attempt to chase down a pronghorn. Scott, a recreational runner, characterized the elusiveness of the animal, which they pursued in Wyoming, like so: "They blend and flow and change positions. There are no individuals but this mass that moves across the

**Most of the men looked confused, but Romero nodded vigorously over his third helping of brisket.**

**"Oh, he's good. He's very good," he said seriously. "That's how wolves hunt."**

will keep sprinting away," he said. "After about 10 or 15 kilometers' worth of running, it will go into hyperthermia and collapse."

Of course, "hot" means approaching 100 degrees Fahrenheit, and 10 to 15 kilometers is a low-end estimate. Biologist and ultramarathoner Bernd Heinrich described it more succinctly in his 2001 book *Why We Run*: "The sprints cost them dearly in the end."

There's no hard archaeological evidence of persistence hunting, but half a dozen tribes are known to have pursued game this way in the past century: the Aborigines in Australia, the Navajo in the American Southwest, the Seri and Tarahumara Indians in Mexico. Of the tribes thought to practice persistence hunting, though, only the Bushmen of the Kalahari Desert have been seen chasing antelope in recent decades. In the 1980s, South African mathematician Louis Liebenberg joined a successful Bushman persistence hunt for kudu in 107-degree heat. It nearly killed him, too.

The Santa Fe team figured that persistence hunting would work just as well on an American antelope, which may have been something of a blunder. Neither Lieberman nor McDougall nor Heinrich knows of anybody who's caught a pronghorn this way. The speed goat, as it's sometimes called, isn't technically an antelope at all but the lone

desert like a pool of mercury on a glass table." The brothers failed. The antelope, Scott wrote, "used the terrain to ditch us."

Musuva and his gang are much quicker than the Carrier brothers: the fastest of them has run a 2:10 marathon (six minutes off the world record) and the slowest, Esposito, a respectable 2:45. Vegas probably wouldn't like their odds, but who knows? If you believe Lieberman, our mere existence is already a testament to our ancestors' success at this tiring pursuit.

THE NIGHT BEFORE THE HUNT, all the runners, along with Romero, met at Esposito's house for a brisket dinner. Esposito had just placed 20th in the Imogene Pass Run, a 17-mile mountain race in Colorado. On the day of the hunt, there would be two Kenyans, one Ethiopian, a Korean, and five Americans, each with varying degrees of interest and skepticism in the project that Esposito and Musuva had roped them into.

"It's not possible," Abebe Yimer said gravely. Yimer, one of Musuva's housemates, came to the U.S. by defecting from the Ethiopian national team at the 2001 Boston Marathon. He won the Las Vegas Marathon the following year and became a citizen in 2009, with the hope of qualifying for the U.S. Olympic team in 2012. He made it clear

that this exercise was just about logging his miles. "Training gets boring," he grumbled. "Sure, I will chase the antelope."

Musuva, who has won the Twin Cities Marathon three times and routinely races "until it feels like I will die," turned very serious when I asked what their chances were. "One hundred percent," he said, enunciating each syllable. Musuva's brothers taught him to hunt this way, and the men viewed the skill as a matter of pride. Jonathan Ndambuki, another Kenyan—the one with the 2:10 marathon time—giggled at his friend's confidence. "Andrew is very funny," he said to me. "Very serious." Musuva ignored him.

"We will do it like this," said Musuva. He drew a bunch of Xs on a piece of paper—the runners—and a pair of horns to represent the antelope. A few minutes later, the page was covered with arcs and arrows and an antelope that had been caught, if only on paper. Most of the men looked confused, but Romero nodded vigorously over his third helping of brisket. "Oh, he's good. He's very good," he

said seriously. "That's how wolves hunt."

Musuva's strategy boiled down to this: once an antelope has been separated from its herd, the nine men will contain it in a large circle, a half-mile in diameter, with runners spaced out along the perimeter.

"A big sweeping motion," Romero summarized.

Esposito smiled and scraped plates into the sink. "Hope you guys are hungry tomorrow," he said. "Also, I hope it's super hot. Never said that before a big run."

WE DON'T SEE ANY antelope until we're past the tiny town of Mosquero—a cluster of farm buildings, boarded-up storefronts, and stone foundations huddled on a windy sweep at the edge of the Great Plains. A herd of pronghorns eye us without concern. Then, suddenly, two take off. "Time to stretch," Esposito says. "They're already warm."

Kristopher Houghton, an immigration attorney from Albuquerque, jogs along the dirt road in a bright orange jersey. Benjamin

Fletcher, a training coordinator for the New Mexico Indian Affairs Department and a former track star at the University of Pennsylvania, rubs his quads. Jae-Young Hyung, a 40-year-old South Korean Olympic hopeful, doesn't speak much English but smiles at almost everything. Twenty-six-year-old Minnesotan middle-distance runner John Heitzman and 38-year-old David Garcia, an ultramarathoner from Denver, round out the crew. Romero, the only man in camouflage, shows Esposito how to use his pistol.

"What do you mean, 'The safety is on the trigger'?" Esposito asks. He's fired a handgun just once in his life.

Musuva gathers his men and goes over the plan one last time. He paces back and forth among their ranks, gesturing like Russell Crowe in *Gladiator*. "Run!" says Musuva. "Run it down. We will be many. It will be in the open, visible. When it gets tired, it fights back more, but we will get it. We are strong!"

The men trot off after their quarry, which stares at them quizzically for a few moments

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and then skedaddles like the Road Runner. After the first buck disappears, most of the runners are ready to quit. "Hours!" Musuva repeats. "I told you this would not be quick!"

Gathered atop a small ridge two hours later, they reconnoiter. "Let's give it one more run," says Esposito. He, Houghton, and Yimer go one way and Garcia and Heitzman form the other half of the giant perimeter.

**"Then we all scream," says Houghton, "like carnal, primal screaming. Beating our chests. I lunge and it takes off between us."**

They soon spot a buck among eight does and begin the chase. The herd sprints, the buck briefly lagging. Then they lose it, along with two of their own: Yimer goes after another antelope (or to train without interference, some suspect), and Heitzman collides with a cactus.

Esposito, Garcia, and Houghton begin again with a fresh buck. Running along a fence, it stops after a half-hour or so, looking back with moon-pie eyes at the men pursuing it.

"I'm flying," Houghton tells me later, "and for the first time, I get excited. I'm actually chasing him. He isn't gapping us anymore!"

They do three laps around the gentle valley trailing the antelope, running behind it for two hours. On the last pass, they push the buck up a small ridge and abruptly find it with a bunch of does, 50 feet away.

Now they're within 25 feet of a panting pronghorn buck. It's starting to seem feasible. "For a second, we don't know what to do," Esposito later recalls.

"Then we all scream," says Houghton, "like carnal, primal screaming. Beating our chests. I lunge and it takes off between us."

Houghton, with Garcia behind him, is in a dead sprint with the antelope.

"I'm trying to scare him," Houghton continues, "make him use up adrenaline. We're getting closer. The theory is working. I can see his shoulder muscles rippling." After running for two-and-a-half hours, they log a 4:36 mile, according to their GPS. It's 94 degrees. It seems within reach.

The pronghorn continues around the valley for another five miles. They follow, scaring cows, crushing sunflowers, until it rejoins a herd below a small rise. They chase it over the hill and discover that the weary animal has gone the other way.

Kristopher Houghton at day's end



"WE DID IT," Esposito says as he jogs back into our base camp. Romero nearly chokes on his summer sausage. The men agree that Esposito could have easily shot the antelope had the pistol been accessible, but that would have voided the experiment. Their goal was to prove a point about their evolutionary advantage, not their novice gunslinging skills.

They didn't quite succeed, but in Esposito's mind they were close enough. He now believes it's possible. Houghton and Garcia have a crazy look in their eyes, like they've tapped into something primal. They surrounded an animal they'd chased for some 20 miles—and they came very, very close.

In *Why We Run*, Heinrich writes, "The human experience is populated with dreams and aspirations. For me, the animal totem for these dreams is the antelope, swift, strong and elusive." For most of these men, the antelope is all of these things and also, now, something obtainable. Yimer and the Texans may not have been surprised by their failure, but I'm inclined to see in it the shadow of success.

As the sun nears the horizon, the men pack into Romero's truck and drive down the road, at his urging, to see if Esposito can kill a buck the easy way. The tag cost \$985, so why waste it? A bird passes over them, and Musuva, quiet after spending most of the day running alone along the prairie, says that he could hit it with a rock. "I used to kill hawks like that in Kenya," he says. No one laughs.

They see plenty of does in the sun's last rays but no bucks. Esposito, who's in the front seat cradling Romero's scoped Winchester .270, is relieved that he won't have to shoot one. "After all that," he says, "there was a lot of pressure. My hands were shaking." It's silent for a while. Then Houghton says, "We'll get it next summer." ○