

CHAPTER 21

"PREPARE TO MEET your god," I said as we entered the hotel bar. "Sucking down a cold one."

Scott was on a stool, sipping a Fat Tire Ale. Billy dropped his duffel and stuck out his hand, while Jenn hung behind me. She'd barely let Billy get a word in the whole way across the parking lot, but now, in Scott's presence, she was starstruck. At least I thought she was, till I saw the look in her eye. She wasn't bashful; she was sizing him up. Scott might be hunting the Tarahumara, but he'd better watch who was hunting him.

"Is this all of us?" Scott asked.

I looked around the bar and did a head count. Jenn and Billy were ordering beers. Beside them was Eric Orton, an adventure-sports coach from Wyoming and longtime student of the Tarahumara who'd made me his personal disaster reconstruction project; over the past nine months, we'd been in weekly contact, sometimes daily, as Eric attempted to transform me from a splintery wreck into an unbreakable ultramarathon man. He was the one guy I'd been sure would turn up; even though he'd be leaving his wife behind with their newborn daughter in the middle of a fierce Wyoming winter, there was no way he'd be sitting at home while I was putting his art to the test. I'd flat-out told him he was wrong and there was no way I could run fifty miles; now, we'd both see if he was right.

Sandwiching Scott were Luis Escobar and his father, Joe Ramírez.

Luis was not only an ultrastud who'd won the H.U.R.T. 100 and raced Badwater, but also one of the top race photographers in the sport (his artistry aided, of course, by the fact that his legs could take him places no other shooters could reach). Just by chance, Luis had recently called Scott to make sure they'd be seeing each other at Coyote Fourplay, a semi-secret, invitation-only free-for-all described as "a four-day orgy of idiocy involving severed coyote heads, poisoned snacks, panties in trees, and one hundred twenty miles of trails you'll wish you'd missed."

Fourplay is held at the end of February every year in the backwoods of Oxnard, California, and it exists to give a small band of ultrarunners a chance to whip each other's butts and then glue said butts to toilet seats. Every day, the Fourplayers race anywhere from thirty to fifty miles on trails marked by mummified coyote skulls and women's underwear. Every night, they face off with bowling tournaments and talent shows and endless guerrilla pranks, like replacing ProBars with frozen cat food and gluing the wrappers back shut. Fourplay was a battle royal for amateurs who loved to run hard and play rough; it wasn't really for pros who had to worry about their racing schedules and sponsorship commitments. Naturally, Scott never missed it.

Until 2006, that is. "Sorry, something came up," Scott told Luis. When Luis heard what it was, his heart skipped a beat. No one had ever gotten photos of Tarahumara runners in full flight on their home turf, and for good reason: the Tarahumara run for fun, and having white devils around wasn't any fun. Their races were spontaneous and secretive and absolutely hidden from outside eyes. But if Caballo pulled this thing off, then a few lucky devils would get the chance to cross over to the Tarahumara side. For the first time, they'd all be Running People together.

Luis's dad, Joe, has the chiseled-oak face, gray ponytail, and turquoise rings of a Native American sage, but he's actually a former migrant worker who, in his hard-scraping sixty-plus years, made himself into a California highway patrolman, then a chef, and finally an artist with a flair for the colors and culture of his native Mexico. When Joe heard his kid was heading into the homeland to see their ancestral heroes in action, he set his jaw and insisted he was going, too. The hike alone could, quite literally, kill him, but Joe wasn't

worried. Even more than the ultrastuds around him, this son of the picking fields was a survivor.

"How about that barefoot guy?" I asked. "Is he still coming?"

A few months before, someone who called himself "Barefoot Ted" began blitzing Caballo with a torrent of messages. He seemed to be the Bruce Wayne of barefoot running, the wealthy heir of a California amusement-park fortune who devoted himself to battling the worst crime ever committed against the human foot: the invention of the running shoe. Barefoot Ted believed we could abolish foot injuries by throwing away our Nikes, and he was willing to prove it on himself: he ran the Los Angeles and Santa Clarita marathons in his bare feet and finished fast enough to qualify for the elite Boston Marathon. He was rumored to train by running barefoot in the San Gabriel Mountains, and by pulling his wife and daughter through the streets of Burbank in a rickshaw. Now, he was coming to Mexico to commune with the Tarahumara and explore whether the key to their amazing resilience was their nearly bare feet.

"He left a message that he'd be getting here later," Luis said.

"I guess that's everyone, then. Caballo is going to be psyched."

"So what's the story with this guy?" Scott asked.

I shrugged. "I don't really know much. I only met him once."

Scott's eyes narrowed. Billy and Jenn turned from the bar and cocked their heads, suddenly more interested in me than the beers they were ordering. The atmosphere of the whole group instantly changed. Seconds ago, everyone was drinking and chatting, but now, it was quiet and a little tense.

"What?" I asked.

"I thought you were really good buddies," Scott said.

"Buddies? Not even close," I said. "He's a total mystery. I don't even know where he lives. I don't even know his real name."

"So how do you know he's legit?" Joe Ramírez asked. "Shit, he may not even know any Tarahumara."

"They know him," I said. "All I can tell you is what I wrote. He's kind of strange, he's a hell of a runner, and he's been down there for a long time. That's all I found out about him."

Everyone sat for a sec and drank that in, myself included. So why were we trusting Caballo? I'd gotten so carried away with training for the race, I'd forgotten that the real challenge was surviving the

trip. I had no clue who Caballo really was, or where he was leading us. He could be totally demented or merrily inept, and the result would be the same: out there in the Barrancas, we'd be cooked.

"So!" Jenn blurted. "What are you guys up for tonight? I promised Billy some big-ass margaritas."

If the rest of the crew had hit a crossroad of doubt, they'd put it behind them. Scott and Luis and Eric and Joe all agreed to pile into the hotel courtesy van with Jenn and Billy and head downtown for drinks. Not me, though. We had a lot of hard miles ahead, and I wanted all the rest I could get. Unlike the rest of them, I'd been down there before. I knew what we were heading into.

Sometime in the middle of the night, I was jerked awake by shouting nearby. Very nearby—like, in my room. Then, a *BANG* shook the bathroom.

"Billy, get up!" someone yelled.

"Leemee here. I'm fine."

"You've got to get up!"

I snapped on a light, and saw Eric Orton, the adventure-sports coach, standing in the doorway. "The kids," he said, shaking his head. "I don't know, man."

"Is everyone all right?"

"I don't know, man."

I sat up, still groggy, and went to the door of the bathroom. Billy was sprawled in the tub with his eyes closed. Pink vomit was splattered all over his shirt . . . and the toilet . . . and the floor. Jenn had lost her clothes and found a shiner; she was wearing only shorts and a purple bra, and her left eye was swelling shut. She had Billy by the arm and was trying to haul him to his feet.

"Can you help me lift him?" Jenn asked.

"What happened to your eye?"

"Whaddaya mean?"

"JUST LEAVE ME HERE!" Billy was shouting. He cackled like an archvillain, then passed out cold.

Jesus. I squatted over him in the tub and looked for nonsticky places to get a grip. I got him under the arms, but couldn't find any soft flesh to grab hold of; Billy was so muscular, trying to hoist him was like lifting a side of lean beef. I finally managed to drag him out

of the tub and into the sitting room. Eric and I had planned to share a room, but when Jenn and Billy showed up with no reservation or, it seemed, any money for a room, we said they could crash with us.

And crash they did. As soon as Eric yanked out the fold-out sofa, Jenn dropped like a sack of laundry. I stretched Billy out beside her with his head hanging over the edge. I got a wastebasket under his face just before another pink river gushed out. He was still retching when I hit the lights.

Back in the adjoining bedroom, Eric filled me in. They'd gone to a Tex-Mex place, and while everyone else was eating, Jenn and Billy had had a drinking contest with fishbowl-sized margaritas. At some point, Billy wandered off in search of a bathroom and never returned. Jenn, meanwhile, entertained herself by snatching Scott's cell phone while he was saying good night to his wife and shouting, "Help! I'm surrounded by penises!"

Luckily, that's when Barefoot Ted turned up. When he got to the hotel and heard that his traveling companions were out drinking, he commandeered the courtesy van and convinced the driver to shuttle him around till he found them. At the first stop, the driver spotted Billy asleep in the parking lot. The driver hauled Billy into the van while Barefoot Ted gathered the others. Whatever Billy was lacking in pep, Jenn made up for; during the ride back to the hotel, she did backflips over the seats until the driver slammed on the brakes and threatened to throw her out if she didn't sit the hell down.

The driver's jurisdiction, however, only extended as far as the van door. When he pulled up in front of the hotel, Jenn burst loose. She ran into the hotel, skidded across the lobby, and crashed into a giant fountain full of water plants, smashing her face against the marble and blackening her eye. She emerged soaking wet, waving fists full of foliage overhead like a Kentucky Derby winner.

"Miss! Miss!" the appalled desk clerk pleaded, before remembering that pleading doesn't work on drunks in fountains. "Get her under control," she warned the others, "or you're all out of here."

Gotcha. Luis and Barefoot Ted smothered Jenn in a tackle, then wrestled her into an elevator. Jenn kept wriggling, trying to break free while Scott and Eric were dragging Billy aboard. "Let me *gooooo!*" the hotel staff could hear Jenn wailing as the doors slid shut. "I'll be good! I promiiiiissee...."

"Damn," I said. I checked my watch. "We're going to have to haul their drunk asses out of here in five hours."

"I'll carry Billy," Eric said. "Jenn is all yours."

Sometime after 3 a.m., my phone rang.

"Mr. McDougall?"

"Hmm?"

"This is Terry at the front desk. Your little friend could use some help getting upstairs. Again."

"Huh? No, that's not her this time," I said, reaching for the light. "She's right—" I looked around. No Jenn. "Okay. Be right down."

When I got to the lobby, I found Jenn in her bra and shorts. She gave me a delighted smile, as if to say, "What a coincidence!" Beside her was a big ol' boy with cowboy boots and a rodeo belt buckle. He glanced at Jenn's black eye, then at me, then back to her black eye as he tried to decide whether to kick my ass.

Apparently, she'd woken up to use the toilet, but wandered right past the bathroom and ended up out in the hall. After relieving herself next to the soda machines, she heard music and started to explore. A wedding party was going on down the hall.

"HEY!!!" everyone shouted when Jenn poked her head in.

"HEY YA!" Jenn shouted back, and boogied in to get herself a drink. She butt-grinded with the groom, downed a beer, and fended off the guys who assumed that the wobbling, half-dressed hottie who magically appeared at 3 a.m. was their personal party favor. Jenn eventually meandered on, finally winding up in the lobby.

"Sweetie, you'd better not drink like that where you're going," the desk clerk called as Jenn wobbled toward the elevator. "They'll rape you and leave you for dead." The clerk knew what she was talking about; our first stop on the way to the canyons was Juárez, a border town so lawless that hundreds of young women Jenn's age had been murdered and dumped in the desert over the previous few years; five hundred other people were killed in one year alone. Any doubts about who ran the show in Juárez were cleared up when dozens of police commanders quit or were killed after drug lords nailed a list of their names on telephone poles.

"Kay," Jenn said, waving good-bye. "Sorry about the plants."

I helped her back into the sofa bed, then double-locked the door to prevent any further escapes. I checked the time. Damn, 3:30. We

had to be out the door in ninety minutes, or there was no chance of meeting Caballo. At that moment, he was making his way out of the canyons and up to the town of Creel. From there, he'd guide us down into the Barrancas. Two days later, we all had to be at a certain spot on a trail in the Batopilas mountain range, where the Tarahumara would be watching for us. The big problem was the bus schedule to Creel; if we got a late start tomorrow, there was no telling when we'd arrive. I knew Caballo wouldn't wait; for him, a choice between missing us or standing up the Tarahumara wasn't a choice at all.

"Look, you guys are going to have to go ahead," I told Eric when I got back into the bedroom. "Luis's dad speaks Spanish, so he can get you to Creel. I'll follow with those two as soon as they can walk."

"How are we going to find Caballo?"

"You'll recognize him. He's one of a kind."

Eric thought about it. "You sure you don't want me to drill sergeant those two with a bucket of ice water?"

"Tempting," I said. "But at this point, I like them better asleep."

About an hour later, we heard noises in the bathroom. "Hopeless," I muttered, getting up to see who was puking. Instead, I found Billy sudsing up in the shower and Jenn brushing her teeth.

"Good morning," Jenn said. "What happened to my eye?"

Half an hour later, the six of us were back in the hotel van and hissing through the damp morning streets of El Paso, heading toward the Mexican border. We'd have to cross over to Juárez, then hopscotch from bus to bus across the Chihuahua desert to the edge of the Barrancas. Even with luck on our side, we were facing at least fifteen straight hours on creaking Mexican buses before we got to Creel.

"The man who gets me a Mountain Dew can have my body," Jenn croaked, her eyes closed and face pressed against the cool of the van window. "And Billy's."

"If they race the way they party, the Tarahumara don't have a chance," Eric muttered. "Where'd you find these two?"

CHAPTER 22

JENN AND BILLY met in the summer of 2002, after Billy had finished his freshman year at Virginia Commonwealth University and returned home to lifeguard on Virginia Beach. One morning, he arrived at his stand to discover that the Luck of the Bonehead had struck again. His new partner was a Corona commercial come to life, a beauty who earned top marks in all the Bonehead scoring categories: she was a surfer, a secret bookworm, and a hard-core partyer whose ancient Mitsubishi had a life-size silhouette of gonzo writer Hunter S. Thompson aiming a .44 Magnum stenciled on the hood.

But almost instantly, Jenn began to bug him. She fixated on Billy's University of North Carolina baseball cap and wouldn't let up. "Dude!" Jenn said. "I need that lid!" She'd gone to UNC for a year before dropping out and moving to San Francisco to write poetry, so if there was any karmic justice on this beach, then *she* should be sporting the Tar Heels gear, not some pretty-boy surfer like him who only wore it to keep the pretty-boy bangs out of his eyes....

"Fine!" Billy erupted. "It's yours."

"Sweet!"

"If," Billy continued, "you run down the beach, bare-ass."

Jenn scoffed. "Dude, you are so on. Right after work."

Billy shook his head. "Nope. Right now."

Moments later, hoots and cheers rocked the boardwalk as Jenn

burst out of a porta-potty, her lifeguard suit crumpled on the ground behind her. *Yeah, baby!* She made it to the next stand a block away, turned around, and came charging back toward the throngs of moms and kids she was supposed to be protecting from, among other things, full-frontal nudity by college dropouts goin' wild. Amazingly, Jenn didn't get canned (that came later, for shorting out the engine of her lifeguard captain's truck by sticking a live crab under the hood).

During quieter moments, Jenn and Billy talked big waves and books. Jenn revered the Beat poets so much, she was planning to study creative writing at the Jack Kerouac School of Disembodied Poetics if she ever dropped back into college and got a degree first. Then she picked up Lance Armstrong's *It's Not About the Bike* and fell in love with a new kind of warrior poet.

Lance wasn't just some brute on a bike, she realized; he was a philosopher, a latter-day Beat, a Dharma Bum sailing the asphalt seas in search of inspiration and Pure Experience. She'd known Armstrong had bounced back from cancer, but she had no idea just how close to the grave he'd actually been. By the time Armstrong had gone under the knife, tumors were spreading throughout his brain, lungs, and testicles. After chemotherapy, he was too weak to walk but had to make an urgent decision: should he cash in an insurance policy worth \$1.5 million, or turn it down and try rebuilding himself into an endurance athlete? Take the payout, and he'd be set for life. Turn it down and relapse, and he's dead meat; he'd have no money, no health insurance, no chance of seeing age thirty.

"Fuck surfing," Billy blurted. Living on the edge wasn't about danger, he realized. It was about curiosity; audacious curiosity, like the kind Lance had when he was chalked off for good and still decided to see if he could build a wasted body into a world-beater. The way Kerouac did, when he set off on the road and then wrote about it in a mad, carefree burst he never thought would see the light of print. Looking at it that way, Jenn and Billy could trace a direct line of descent from a Beatnik writer to a champion cyclist to a pair of Pabst Blue Ribbon-chugging Virginia Beach lifeguards. They were expected to accomplish nothing, so they could try anything. Audacity beckoned.

"You ever heard of the Mountain Masochist?" Billy asked Jenn.
"Nope. Who's he?"

"It's a race, you crackhead. Fifty miles in the mountains."

Neither of them had even run a marathon before. They'd been beach kids all their lives, so they'd barely seen mountains, let alone run them. They wouldn't even be able to train properly; the tallest thing around Virginia Beach was a sand dune. Fifty mountain miles was *waaaay* over their heads.

"Dude, that's totally it," Jenn said. "I'm in."

They needed some serious help, so Jenn looked where she always did when she needed guidance. And as usual, her favorite chain-smoking alcoholics came through in the clutch. First, she and Billy dug into *The Dharma Bums* and began memorizing Jack Kerouac's description of hiking the Cascadia mountains.

"Try the meditation of the trail, just walk along looking at the trail at your feet and don't look about and just fall into a trance as the ground zips by," Kerouac wrote. "Trails are like that: you're floating along in a Shakespearean Arden paradise and expect to see nymphs and fluteboys, then suddenly you're struggling in a hot broiling sun of hell in dust and nettles and poison oak . . . just like life."

"Our whole approach to trail-running came from *Dharma Bums*," Billy told me later. As for inspiration, that's where Charles Bukowski stepped up: "If you're going to try, go all the way," the original Barfly wrote. "There is no other feeling like that. / you will be alone with the gods / and the nights will flame with fire. . . . you will ride life straight to / perfect laughter, it's / the only good fight there is."

Soon after, surf fishermen noticed weird goings-on each evening as the sun set on the Atlantic. Chants would echo across the dunes—"Visionnnnns! O-O-O-O-mens! HallucinAAAAAtions!"—followed by the appearance of some kind of loping, howling, four-legged man-beast. As it got closer, they could see it was actually two people, running shoulder-to-shoulder. One was a slim young woman with a "Gay Pride" bandanna on her head and a vampire bat tattooed on her arm, while the other, as best they could make out, seemed to be a welterweight werewolf under a rising moon.

Before setting out for their sunset runs, Jenn and Billy would snap a tape of Allen Ginsberg reading "Howl" into their Walkman. When running stopped being as fun as surfing, they had agreed, they'd quit. So to get that same surging glide, that same feeling of being lifted up and swept along, they ran to the rhythm of Beat poetry.

"Miracles! Ecstasies! Gone down the American river!" they'd shout, padding along the water's edge.

"New loves! Mad generation! Down on the rocks of Time!"

At the Old Dominion 100 a few months later, aid-station volunteers at the halfway mark heard screams echoing through the woods. Moments later, a girl in pigtails burst from the trees. She flipped up in a handstand, jumped back to her feet, and began shadowboxing.

"This all you got, Old Dominion?" she shouted, throwing punches in the air. As the sole member of Jenn's support crew, Billy was waiting with her favorite midrace meal: Mountain Dew and a cheese pizza. Jenn stopped bobbing and weaving and tore into a slice.

The aid-station volunteers stared in disbelief. "Hon," one of them warned her. "You'd better take it easy. Hundreds aren't halfway done till you hit the last twenty miles."

"Okay," Jenn said. Then she wiped her greasy mouth on her sports bra, burped up some Dew, and bounded off.

"You've got to get her to slow down," one of the aid-station volunteers told Billy. "She's going three hours faster than the course record." Tackling one hundred miles in the mountains wasn't like running some city marathon; get in trouble out there in the dark, and you'll be lucky to get back out again.

Billy shrugged. After a year of romance with Jenn, he'd learned she was capable of absolutely anything except moderation. Even when she wanted to rein herself in, whatever was building inside her—passion, inspiration, aggravation, hilarity—inevitably came fire-hosing out. After all, this was a woman who joined the UNC rugby team and set a standard considered previously unachievable throughout the sport's one-hundred-seventy-year history: Too Wild for Rugby Parties. "She'd get so nuts, guys on the men's team would wrestle her down and carry her back to her room," Jessie Polini, her best friend at UNC, said. Jenn always went full speed ahead, only dealing with stone walls after she hit them.

This time, the stone wall arrived with a vengeance at the seventy-five-mile mark. It was now six in the evening. An entire arc of the sun had passed since Jenn had started running at five that morning, and she still had a marathon to go. There was no shadowboxing this time

as Jenn wobbled into the aid station. She stood in front of the food table, stupid with fatigue, too tired to eat and too fuzzy-headed to decide what to do instead. All she knew was if she sat down, she wouldn't get back up.

"Let's go, Mook!" someone shouted.

Billy had just arrived and was pulling off his jacket. Underneath, he had on surf shorts and a rock band T-shirt with the sleeves torn off. Some marathoners are thrilled when a friend paces them through the last two or three miles; Billy was jumping in for the full marathon. Jenn felt her spirits rising. The Bonehead. What a guy.

"You want some more pizza?" Billy asked.

"Ugh. No way."

"All right. Ready?"

"Right on."

The two of them set off down the trail. Jenn ran silently, still feeling awful and debating whether to return to the aid station and quit. Billy coaxed her along just by being there. Jenn struggled through one mile, then another, and something strange began to happen: her despair was replaced by elation, by the feeling that damn, how cool it was to be wandering this amazing wilderness under a burning sunset, feeling free and naked and fast, the forest breeze cooling their sweating skin.

By 10:30 that night, Jenn and Billy had passed every other runner in the woods except one. Jenn didn't just finish; she was the second runner overall and the fastest woman to ever run the course, breaking the old record by three hours (to this day, her 17:34 record still stands). When the national rankings came out a few months later, Jenn discovered she was one of the top three hundred-mile runners in the United States. Soon, she'd set a world best: her 14:57 at the Rocky Raccoon 100 was—and remains—the fastest hundred miles on dirt trails ever recorded by any woman, anywhere.

That fall, a photo appeared in *UltraRunning* magazine. It shows Jenn finishing a 30-mile race somewhere in the backwoods of Virginia. There's nothing amazing about her performance (third place), or her getup (basic black shorts, basic black sports bra), or even the camera work (dimly lit, crudely cropped). Jenn isn't battling a rival to the bitter end, or striding across a mountaintop with the steel-

jawed majesty of a Nike model, or gasping toward glory with a grimace of heartbreaking determination. All she's doing is . . . running. Running, and smiling.

But that smile is strangely stirring. You can tell she's having an absolute blast, as if there's nothing on earth she'd rather be doing and nowhere on earth she'd rather be doing it than here, on this lost trail in the middle of the Appalachian wilderness. Even though she's just run four miles farther than a marathon, she looks light-footed and carefree, her eyes twinkling, her ponytail swinging around her head like a shirt in the fist of a triumphant Brazilian soccer player. Her naked delight is unmistakable; it forces a smile to her lips that's so honest and unguarded, you feel she's lost in the grip of artistic inspiration.

Maybe she is. Whenever an art form loses its fire, when it gets weakened by intellectual inbreeding and first principles fade into stale tradition, a radical fringe eventually appears to blow it up and rebuild from the rubble. Young Gun ultrarunners were like Lost Generation writers in the '20s, Beat poets in the '50s, and rock musicians in the '60s: they were poor and ignored and free from all expectations and inhibitions. They were body artists, playing with the palette of human endurance.

"So why not marathons?" I asked Jenn when I called to interview her about the Young Guns. "Do you think you could qualify for the Olympic Trials?"

"Dude, seriously," she'd said. "The qualifying standard is 2:48. Anyone can make it." Jenn could run a sub-three-hour marathon while wearing a string bikini and chugging a beer at mile 23—and she would, just five days after running a 50-mile trail race in the Blue Ridge Mountains.

"But then what?" Jenn went on. "I hate all this hype about the marathon. Where's the mystery? I know a girl who's training for the Trials, and she's got every single workout planned for the next three years! She's doing speedwork on the track like, every other day. I couldn't take it, man. I was supposed to run with her once at six in the morning, and I called her up at two a.m. to tell her I was shitfaced on margaritas and *pub-robably* not gonna make it."

Jenn didn't have a coach or a training program; she didn't even

own a watch. She just rolled out of bed every morning, downed a veggie burger, and ran as far and as fast as she felt like, which usually turned out to be about twenty miles. Then she hopped on the skateboard she'd bought instead of a parking pass and kicked off to class at Old Dominion, where she'd recently dropped back into school and was making straight As.

"I never really discussed this with anyone because it sounds pretentious, but I started running ultras to become a better person," Jenn told me. "I thought if you could run one hundred miles, you'd be in this Zen state. You'd be the fucking Buddha, bringing peace and a smile to the world. It didn't work in my case—I'm the same old punk-ass as before—but there's always that hope that it will turn you into the person you want to be, a better, more peaceful person."

"When I'm out on a long run," she continued, "the only thing in life that matters is finishing the run. For once, my brain isn't going *blebleblebleh* all the time. Everything quiets down, and the only thing going on is pure flow. It's just me and the movement and the motion. That's what I love—just being a barbarian, running through the woods."

Listening to Jenn was like communing with the Ghost of Caballo Blanco. "It's weird how much you sound like a guy I met in Mexico," I told her. "I'm heading down there in a few weeks for a race he's putting on with the Tarahumara."

"No way!"

"Scott Jurek may be there, too."

"You. Are. *Shitting me!*" the budding Buddha exclaimed. "Really? Can me and my friend go? Oh no. Shit! We've got midterms that week. I'm going to have to pull a fast one on him. Give me till tomorrow, okay?"

The next morning, as promised, I got a message from Jenn:

My mom thinks you're a serial killer who's going to murder us in the desert. Totally worth the risk. So where do we meet you guys?

CHAPTER 23

WE WHEEZED into Creel well after nightfall, the bus shuddering to a stop with a hiss from the brakes like a sigh of relief. Outside the window, I spotted Caballo's ghostly old straw hat bobbing toward us through the dark.

I couldn't believe how smoothly we'd crossed the Chihuahua desert. Ordinarily, the odds of getting across the border and catching four buses in a row without one of them breaking down or chugging in a half-day late were on a par with beating a Tijuana slot machine. On just about any trip through Chihuahua, someone is sure to have to console you with the local motto: "Nothing works out according to plan, but it always works out." But this plan, so far, was turning out to be foolproof, booze-proof, and cartel-proof.

Of course, that was before Caballo met Barefoot Ted.

"CABALLO BLANCO! That's YOU, RIGHT?"

Before I could make my way off the bus in Creel, I could hear a voice outside boozing away like a sieve gun. "YOU'RE Caballo! THAT IS SO COOL! You can call me MONO! THE MONKEY! That's ME, the MONKEY. That's my spirit animal—"

When I stepped through the door, I found Caballo staring in appalled disbelief at Barefoot Ted. As the rest of us had discovered during the long bus ride, Barefoot Ted talked the way Charlie Parker played the sax: he'd pick up on any cue and cut loose with a truly

astonishing torrent of improvisation, seeming to breathe in through his nose while maintaining an endless flow of sound out of his mouth. In our first thirty seconds in Creel, Caballo got blasted with more conversation than he'd heard in a year. I felt a twinge of sympathy, but only a twinge. We'd been listening to *The Mixed-Up Files of Barefoot Ted* for the past fifteen hours. Now it was Caballo's turn.

"...the Tarahumara have been VERY inspirational for me. The first time I read that the Tarahumara could run a one-hundred-mile race in sandals, that realization was so shocking and SUBVERSIVE, so counterintuitive to what I had assumed was NECESSARY for a human being to go that distance, I remember thinking *What in the HELL? How in the HELL is this possible?* That was the first thing, the first CHINK IN THE WALL, that MAYYYBEE modern shoe companies don't have all the answers. . . ."

You didn't even have to hear Barefoot Ted to appreciate his cocktail shaker of a mind; just seeing him was enough. His outfit was a combination of Tibetan Warrior Monk and skateboard chic: denim kickboxing pants with a drawstring waist, a skintight white tank top, Japanese bathhouse slippers, a brass skeleton amulet dangling to the middle of his chest, and a red bandanna knotted around his neck. With his shaved head, cinder-block build, and dark eyes that danced around seeking attention as much as his voice, he looked like Uncle Fester in good fighting trim.

"Yeah. Okay, man," Caballo muttered, easing past Ted to greet the rest of us. We grabbed our backpacks and followed Caballo across Creel's one main street toward lodging he'd arranged on the edge of town. We were all starving and exhausted after the long trip, shivering in the high-mesa cold and longing for nothing except a warm bed and a hot bowl of Mamá's frijoles—all of us except Ted, that is, who believed the first order of business was continuing the life story he'd begun telling Caballo the second they met.

Caballo's teeth were on edge, but he decided not to interrupt. He had some terrible news, and he hadn't figured out yet how to break it without all of us turning around and getting right back on the bus.

"My life is a controlled explosion," Barefoot Ted likes to say. He lives in Burbank, in a small compound that resembles Tom Hanks's kid-gone-wild apartment in *Big*. The grounds are full of gumball-colored

Spyder sports cars, carousel horses, Victorian high-wheel bicycles, vintage Jeeps, circus posters, a saltwater swimming pool, and a hot tub patrolled by an endangered California desert tortoise. Instead of a garage, there are two giant circus tents. Wandering in and out of the single-story bungalow are an assortment of dogs and cats, plus a goose, a tame sparrow, thirty-six homing pigeons, and a handful of odd Asian chickens with claws covered in fur-like feathers.

"I forget that heavy Heidegger word, but it's the one that means I'm an expression of this place," Ted says, although the place isn't his at all. It belongs to his cousin Dan, a self-taught mechanical genius who single-handedly created the world's leading carousel-restoration business. "Dita Von Teese strips on one of our horses," Ted says. "Christina Aguilera brought one on tour with her." While Dan was going through a bad divorce a few years ago, Ted decided that what his cousin needed most was more Ted, so he showed up at Dan's door with his wife, daughter, and menagerie and never left. "Dan spends all day fighting with big, cold, mean, mechanical things and emerges with grease dripping off his fingers like blood off the talons of a bird of prey," Ted says. "That's why we're indispensable. He'd be a sociopath if he didn't have me around to argue with."

Ted made himself useful by setting up a little online store for carousel trinkets, which he ran from a Mac in one of Dan's spare bedrooms. It didn't pay much, but it left Ted a lot of time to train for fifty-mile rides on his six-foot-tall Victorian bike and to cross-train by hauling his wife and daughter around in a rickshaw. Caballo had gotten totally the wrong impression of Ted's wealth, mostly because Ted's e-mails tended to be full of schemes better suited to an early Microsoft investor. While the rest of us were pricing economy flights to El Paso, for instance, Ted was asking about landing strips in the Mexican outback for a private bush plane. Not that Ted has a plane; he barely has a car. He sputters around in a '66 VW Beetle in such coughing decline, he can't take it more than twenty-five miles from home. But that's just fine by Ted; in fact, it's all part of the master plan. "That way, I never have to travel very far," he explains. "I'm a pauper by choice, and I find it extremely liberating."

During his student days at the Art Center College of Design in Pasadena, Ted had a major crush on a classmate, Jenny Shimizu.

While hanging out at her apartment one evening, he met two of Jenny's new friends: Chase Chen, a young artist from China, and Chase's sister, Joan. Neither of the Chen siblings spoke much English, so Ted anointed himself their personal cultural ambassador. The friendship worked out great for everyone: Ted had a captive audience for his symphonic stream-of-consciousness, the Chens were exposed to a flood of new vocabulary, and Jenny got a little breathing room from Ted's wooing. Within a few years, three of the foursome would be international names: Joan Chen became a Hollywood star and one of *People* magazine's "50 Most Beautiful People." Chase became a critically acclaimed portrait painter and the most highly paid Asian artist of his generation. Jenny Shimizu became a model and one of the planet's best-known lesbians ("a household name," as *The Pink Paper* declared) for her affairs with Madonna and Angelina Jolie (a career trajectory that, despite the tattoo on Jenny's right biceps of a hot babe straddling a Snap-on tool, Ted never saw coming).

As for Ted, well . . .

He did manage to crack the Top 30 in the world for breath-holding. "I got up to five minutes and fifteen seconds," Ted says. "Spent the whole summer practicing in the pool." But breath-holding, alas, is a fickle mistress, and it wasn't long before Ted was knocked out of the rankings by other competitors even more dedicated to the art of inhaling less than the rest of us. You have to feel a pang of sympathy for the poor guy, burbling away with dreams of glory at the bottom of his cousin's swimming pool, while just about everyone he knew was painting masterpieces, bedding superstars, and getting close-ups from Bernardo Bertolucci.

And the worst part? Ted holding his breath was actually Ted at his best. In a way, that's even what attracted Lisa, the woman who'd become his wife. They were roommates in the group house, but because Lisa was a bouncer at a heavy-metal bar and only got home at 3 a.m., her exposure to Ted was limited to the dry-land version of the bottom of the pool: after work, she'd come home to find Ted sitting quietly at the kitchen table, eating rice and beans with his nose buried in French philosophy. His stamina and intelligence were already legendary among his roommates; Ted could paint all morning, skate-

board all afternoon, and memorize Japanese verbs all night. He'd fix Lisa a hot plate of beans, and then, with his manic motor finally running down, he'd stop performing and let her talk. Every once in a while, he'd chip in a sensitive insight, then encourage her to go on. Few ever saw this Ted. That was their great loss—and his.

But Chase Chen got it. His artist's eye also spotted the quiet intensity in the aftermaths of Hurricane Ted. Chase's specialty, after all, was "the dramatic dance between sunlight and shadow," and brother, was dramatic dancing ever Ted to a tee. What fascinated Chase wasn't action, but anticipation; not the ballerina's leap, but the instant before takeoff when her strength is coiled and anything is possible. He could see the same thing during Ted's quiet moments, the same simmering power and unlimited possibility, and that's when Chase reached for his sketch pad. For years, Chase would use Ted as a model; some of his finest works, in fact, are portraits of Ted, Lisa, and their incandescently lovely daughter, Ona. Chase was so entranced by the world as reflected by Ted that he released an entire book with nothing but portraits of Ted and his family: Ted and Ona cooped up in the old Beetle . . . Ona buried in a book . . . Lisa glancing over her shoulder at Ona, the living product of her father's sunlight and shadow.

By the time Ted was pushing forty, though, his four decades of dramatic dancing had gotten him no further than cameos in another man's masterpiece and a spare room in his cousin's bungalow. But just when it seemed he'd crossed that bridge between great potential and squandered talent, something wonderful happened:

He got a backache.

In 2003, Ted decided to celebrate his fortieth birthday with his own endurance event, "The Anachronistic Ironman." It would be a full Ironman triathlon—2.4-mile ocean swim, 112-mile bike ride, and 26.2-mile run—except, for reasons only clear to Ted, all the gear had to date from the 1890s. He was already two-thirds of the way there; he was strong enough to handle the swim in full-length woolies, and he'd become an ace on his high-wheel bike. But the run—the run was murdering him.

"Every time I ran for an hour, I had *excruciating* lower-back pain," Ted says. "It was so discouraging. I couldn't even imagine being able

to run a marathon." And the worst was yet to come: if he couldn't handle six miles in bouncy modern running shoes, then he was in for a world of hurt when he went hard-core Victorian. Running shoes have only been around about as long as the space shuttle; before that, your dad wore flat rubber gym shoes and your granddad was in leather ballet slippers. For millions of years, humans ran without arch support, pronation control, or gel-filled pods under their heels. How the hell they managed, Ted had no idea. But first things first; he was less than six months out from his birthday, so Priority No. 1 was finding some way, *any* way, to cover twenty-six miles on foot. Once he figured that out, he could worry later about transitioning into the cowhide widow-makers.

"If I make up my mind, I will find a way," Ted says. "So I started doing research." First, he got checked by a chiropractor and an orthopedic surgeon, and both said there was really nothing wrong with him. Running was just an inherently dangerous sport, they told him, and one of the dangers was the way impact shock shoots up your legs and into your spine. But the docs did have some good news: if Ted insisted on running, he could probably be cured with a credit card. Top-of-the-line running shoes and some spongy heel pads, they said, should cushion his legs enough to get him through a marathon.

Ted spent a fortune he really didn't have on the most expensive shoes he could find, and was crushed to discover that they didn't help. But instead of blaming the docs, he blamed the shoes: he must need even more cushioning than thirty years of Nike air-injection R&D had come up with. So he gulped hard and sent three hundred dollars to Switzerland for a pair of Kangoo Jumps, the springiest shoes in the world. Kangoos are basically Rollerblades as designed by Wile E. Coyote: instead of wheels, each boot sits atop a full-length steel-spring suspension that lets you boing along like you're in a Moon bounce.

When the box arrived, six weeks later, Ted was almost quivering with excitement. He took a few tentative bounces . . . fantastic! It was like walking with Mick Jagger's mouth strapped to the bottom of each foot. *Oh, this was going to be the answer*, Ted thought as he began bouncing down the street. By the time he got to the corner, he was clutching his back and cursing. "The sensation I got after an hour in

running shoes, I got almost instantly from these Kangoo boots," Ted says. "My worldview of what I needed was shattered."

Furious and frustrated, he yanked them off his feet. He couldn't wait to shove the stupid Kangooos back in the box and mail them back to Switzerland with instructions for further shoving. He stalked home barefoot, so pissed off and disappointed that it took him nearly the entire walk to notice what was happening: his back didn't hurt. Didn't hurt a bit.

Heyyy . . . Ted thought. *Maybe I can speed walk the marathon in bare feet.* Bare feet certainly qualified as 1890s sportswear.

So every day, Ted put on his running shoes and walked over to Hansen Dam, an oasis of scrub brush and lakes he calls "L.A.'s last wilderness." Once there, he pulled off his shoes and hiked barefoot along the bridle paths. "I was totally amazed at how enjoyable it was," he recalled. "The shoes would cause so much pain, and as soon as I took them off, it was like my feet were fish jumping back into water after being held captive. Finally, I just left the shoes at home."

But why did his back feel better with *less* cushioning, instead of more? He went online in search of answers, and the result was like parting the foliage in a rain forest and discovering a secret tribe of the Amazon. Ted stumbled across an international community of barefoot runners, complete with their own ancient wisdom and tribal nicknames and led by their great bearded sage, "Barefoot Ken Bob" Saxton. And luckily, this was one tribe that loved to write.

Ted pored over years' worth of Barefoot Ken Bob's archives. He discovered that Leonardo da Vinci considered the human foot, with its fantastic weight-suspension system comprising one quarter of all the bones in the human body, "a masterpiece of engineering and a work of art." He learned about Abebe Bikila—the Ethiopian marathoner who ran barefoot over the cobblestones of Rome to win the 1960 Olympic marathon—and about Charlie Robbins, M.D., a lone voice in the medical wilderness who ran barefoot and argued that marathons won't hurt you, but shoes sure as shooting will.

Most of all, Ted was transfixed by Barefoot Ken Bob's "Naked Toe Manifesto." It gave Ted chills, the way it seemed directed personally at him. "Many of you may be suffering from chronic running related injuries," Barefoot Ken Bob begins:

Shoes block pain, not impact!

Pain teaches us to run comfortably!

From the moment you start going barefoot, you will change the way you run.

"That was my *Eureka!* moment," Ted recalled. Suddenly, it all made sense. So that's why those stinkin' Kangoo Jumps made his back ache! All that cushioning underfoot let him run with big, sloppy strides, which twisted and tweaked his lower back. When he went barefoot, his form instantly tightened; his back straightened and his legs stayed squarely under his hips.

"No wonder your feet are so sensitive," Ted mused. "They're self-correcting devices. Covering your feet with cushioned shoes is like turning off your smoke alarms."

On his first barefoot run, Ted went five miles and felt . . . nothing. Not a twinge. He bumped it up to an hour, then two. Within months, Ted had transformed himself from an aching, fearful non-runner into a barefoot marathoner with such speed that he was able to accomplish something that 99.9 percent of all runners never will: he qualified for the Boston Marathon.

Intoxicated with his startling new talent, Ted kept pushing further. He went on to run the Mother Road 100—one hundred miles of asphalt on the original Route 66—and the Leona Divide fifty-miler, and the Angeles Crest 100-Mile Endurance Run through the rugged San Gabriel Mountains. Whenever he hit gravel and broken glass, he yanked on rubber foot gloves called the Vibram FiveFingers and kept going. Soon, he wasn't just some runner; he was one of the best barefoot runners in America and a sought-after authority on stride technique and ancient footwear. One newspaper even ran an article on foot health headlined **WHAT WOULD BAREFOOT TED DO?**

Ted's evolution was complete. He'd emerged from the watery depths, learned to run, and captured the only quarry he desired—not fortune, just fame.

"Stop!"

Caballo was talking to all of us, not just Ted. He brought us to an abrupt halt in the middle of a wobbly footbridge over a sewage ditch.

"I need you all to swear a blood oath," he said. "So put up your right hands and repeat after me."

Eric looked over at me. "What's this all about?"

"Beats me."

"You've got to make the oath right here, before we cross over to the other side," Caballo insisted. "Back there is the way out. This is the way in. If you're in, you've got to swear it."

We shrugged, dropped our packs, and lifted our hands.

"If I get hurt, lost, or die," Caballo began.

"If I get hurt, lost, or die," we chanted.

"It's my own damn fault."

"It's my own damn fault!"

"Uh . . . amen."

"AMEN!"

Caballo led us over to the tiny house where he and I had eaten the day we met. We all squeezed into Mamá's living room as her daughter jammed two tables together. Luis and his dad ducked across the street and returned with two big bags of beer. Jenn and Billy took a few sips of Tecate and began to perk up. We all raised our beers and clinked cans with Caballo. Then he turned to me and got down to business. Suddenly, the oath on the bridge made sense.

"You remember Manuel Luna's son?"

"Marcelino?" Of course I remembered the Human Torch. I'd been mentally signing Nike contracts on his behalf ever since I'd seen him at the Tarahumara school. "Is he coming?"

"No," Caballo said. "He's dead. Someone beat him to death. They murdered him out on the trail. He was stabbed in the neck and under the arm and his head was bashed in."

"Who . . . what happened?" I stammered.

"There's all kind of drug shit going on these days," Caballo said. "Maybe Marcelino saw something he wasn't supposed to see. Maybe they were trying to get him to carry weed out of the canyon and he said no. No one really knows. Manuel is just heartbroken, man. He stayed over at my house when he came to tell the *federales*. But they're not going to do anything. There's no law down here."

I sat, stunned. I remembered the drug runners in the shiny red Deathmobile we'd seen on the way to the Tarahumara school the year before. I pictured stealthy Tarahumara tipping it over the edge

of a cliff at night, the drug runners clawing frantically at their seat belts, the truck bouncing down the canyon and exploding in a giant fireball. I had no idea if the men in the Deathmobile had been involved. All I knew was I wanted to kill somebody.

Caballo was still talking. He had already absorbed Marcelino's death and was back to obsessing over his race. "I know Manuel Luna won't come, but I'm hoping Arnulfo will show up. And maybe Silvino." Over the winter, Caballo managed to put together a nice pot of prizes; not only was he kicking in his own money, but he'd also been contacted out of the blue by Michael French, a Texas triathlete who'd made a fortune from his IT company. French was intrigued by my *Runner's World* article, and while he couldn't make it to the race himself, he offered to put up cash and corn for the top finishers.

"Excuse me," I said. "Did you say Arnulfo is coming?"

"Yeah," Caballo nodded.

He had to be joking. Arnulfo? He wouldn't even *talk* to me, let alone join me for a run. If he wouldn't go for a jog with a guy who'd come to pay homage right at his doorstep, why would he travel across the mountains to run with a pack of gringos he'd never seen before? And Silvino; I'd met Silvino the last time I was down here. We'd run into him by chance in Creel, right after I'd gone running with Caballo. He was in his pickup and wearing his jeans, the spoils from the marathon he'd won in California. Where did Caballo get the idea that Silvino would bother coming to his race? Silvino couldn't even be induced to run another marathon for the chance of another big payday. I'd learned enough about the Tarahumara, and those two runners in particular, to know there was no way the Quimare clan had any intention of turning up.

"Victorian athletics were *fascinating!*" Oblivious to the fact that it suddenly seemed very unlikely that any Tarahumara runners were going to appear, Ted was prattling on. "That was the first English Channel crossing. Have you ever ridden a high-wheel bike? The engineering is so *ingenious* . . ."

God, what a disaster. Caballo was rubbing his head; it was pushing midnight, and just being around humans was giving him a headache. Jenn and Billy had a platoon of dead Tecate cans in front of them and were falling asleep on the table. I was miserable, and I could tell Eric and Luis were picking up on the tension and getting concerned. But

not Scott; he just sat back, amused. He caught everything and seemed worried by nothing.

"Look, I got to sleep," Caballo said. He led us over to a collection of neat, ancient cabins on the edge of town. The rooms were sparse as cells, but spotlessly clean and toasty from potbellied stoves crackling with pine branches. Caballo mumbled something and disappeared. The rest of us divided up into pairs. Eric and I grabbed one room, Jenn and Billy headed to another.

"All right!" Ted said, clapping his hands. "Who gets me?" Silence.

"Okay," Scott said. "But you've got to let me sleep."

We shut our doors and sank into deep piles of wool blankets. Silence fell over Creel, until the last thing Scott heard was Barefoot Ted's voice in the dark.

"Okay, brain," Ted muttered. "Relax. Time to quiet down."

CHAPTER 24

TAP TAP TAPPITY TAP.

Dawn broke with frost on the window and a rapping at our door.

"Hey," a voice outside whispered. "You guys up?"

I padded over to the door, shivering, wondering what the hell the Party Kids had done this time. Luis and Scott were outside, blowing into their cupped hands. It was so early, the sky was still a milky coffee color. The roosters hadn't even started crowing.

"Want to sneak in a run?" Scott asked. "Caballo said we're on the road by eight, so we've got to hit it now."

"Uh, yeah. Okay," I said. "Caballo took me on a great trail last time. Let me see if I can find him and—"

A window flew open in the cabin beside us. Jenn's head popped out. "You guys going for a run? I'm in! Billy," she called back over her shoulder. "Get your ass up, dude!"

I yanked on some shorts and a polypro top. Eric yawned and reached for running shoes. "Man, these guys are hard-core," he said. "Where's Caballo?"

"No idea. I'm going to look for him."

I walked to the end of the row of adjoining cabins, guessing Caballo would be as far from us as he could get. I rapped on the door of the very last cabin. Nothing. It was a pretty stout door, though, so just to be sure, I gave it a good hammering with the side of my fist.

"WHAT!!!" a voice roared. The curtains ripped open and Caballo's face appeared. His eyes were red and puffy.

"Sorry," I said. "You catch a cold or something?"

"No, man," he said wearily. "I was just getting to sleep." Barely twelve hours into this operation, Caballo was already so stressed that he'd spent the entire night tossing and turning with an anxiety headache. Being in Creel was enough to put him on edge in the first place. It's actually a pleasant little town, but it represents the two things Caballo despises most: bullshit and bullies. It's named for Enrique Creel, a land-raping kingpin of such dastardly magnificence that the Mexican Revolution was essentially thrown in his honor. Enrique not only engineered the land grab that ousted thousands of Chihuahua peasants from their farms, but personally made sure that any feisty farmers ended up in jail by moonlighting as the head of a spy network for the Mexican dictator Porfirio Díaz.

Enrique slithered into exile in El Paso when Pancho Villa's rebels came thundering after him (leaving behind a son who had to be ransomed from the revolutionaries for a million dollars), but once Mexico went through its inevitable correction and reverted back to contented corruption, Enrique returned in all his scheming glory. In a fitting tribute to the region's greatest human virus, Enrique Creel's namesake was now the launching area for every pestilence afflicting the Copper Canyons: strip-mining, clear-cut logging, drug ranching, and big-bus tourism. Spending time there drove Caballo nuts; for him, it was like staying at a bed-and-breakfast on a working slave plantation.

Most of all, though, he wasn't used to being responsible for anyone besides the guy inside his own sandals. Now that he'd had a look at us, his chest was squeezing tight with apprehension. He'd spent ten years building up the trust of the Tarahumara, and it could come crashing down in ten minutes. Caballo envisioned Barefoot Ted and Jenn yapping into the ears of the uncomprehending Tarahumara . . . Luis and his dad flashing cameras in their eyes . . . Eric and me pestering them with questions. What a nightmare.

"No, man, I ain't going for a run," he groaned. He snapped the curtains shut.

Soon, the seven of us—Scott, Luis, Eric, Jenn, Billy, Barefoot Ted, and I—were on the pine-needled trail that Caballo had taken

me on before. We came out of the tree canopy just as the sun was breaking over the giant standing stones, making us squint as the world turned to gold. Mist and glittering droplets swirled around us.

"Gorgeous," Luis said.

"I've never seen a place like this," Billy said. "Caballos got the right idea. I'd love to live here, just living cheap and running trails."

"He's brainwashed you already!" Luis hooted. "The Cult of the White Horse."

"It's not him," Billy protested. "It's this place."

"My Little Pony," Jenn smirked. "You kinda look like Caballo."

In the midst of this banter, Scott was busy watching Barefoot Ted. The trail was snaking through a rock field, but even though we had to hop from boulder to boulder, Ted wasn't slowing down a bit.

"Dude, what are those things on your feet?" Jenn asked.

"Vibram FiveFingers," Ted said. "Aren't they great? I'm their first sponsored athlete!"

Yes, it was true; Ted had become America's first professional barefoot runner of the modern era. FiveFingers were designed as a deck shoe for yacht racers; the idea was to give better grip on slippery surfaces while maintaining the feeling of shoelessness. You had to look closely just to spot them; they conformed so perfectly around his soles and each toe, it looked as if Ted had dipped the bottoms of his feet in greenish ink. Shortly before the Copper Canyon trip, he'd come across a photo of the FiveFingers on the Web and immediately grabbed the phone. Somehow, he connived his way through the thicket of switchboard operators and secretaries and got on the line with the CEO of Vibram USA, who turned out to be none other than . . .

Tony Post! The onetime Rockport exec who'd sponsored the Tarahumara at Leadville!

Tony heard Ted out, but was extremely doubtful. Not that he didn't love the idea of relying on foot strength instead of super cushioning and motion control; once, Tony even ran the Boston Marathon in a pair of Rockport dress shoes to demonstrate that comfort and good construction were all you needed, not all that Shox/anti-pronation/gel-support jazz. But at least Rockport dress shoes had arches and a cushioned sole; the FiveFingers were nothing but a sliver of rubber with a velcro strap. Still, Tony was intrigued

and decided to try it out for himself. "I went for an easy little one-mile jog," he says. "I ended up doing seven. I'd never thought of the FiveFinger as a running shoe, but after that, I never thought of anything else as a running shoe." When he got home, he wrote a check to cover Barefoot Ted's trip to the Boston Marathon.

We'd run six miles along the mesa top and were heading back into Creel when, in the distance, a thin black shadow broke from the trees and started moving toward us.

"Is that Caballo?" Scott asked.

Jenn and Billy peered, then shot toward him like hounds off the leash. Barefoot Ted and Luis went after them. Scott stayed with us, but his racehorse instincts were making him itchy. He glanced apologetically at Eric and me. "You mind if I . . . ?" he asked.

"No problem," I said. "Run 'em down."

"Cool." By the time the "-ool" was out of his mouth, he was a good half-dozen yards away, his hair bouncing like streamers on a kid's handlebars.

"Shit," I muttered. Watching Scott surge off suddenly reminded me of Marcelino. Scott would have gotten such a kick out of that kid. Jenn and Billy, too; they would have loved mixing it up with their teenage Tarahumara triplet. I could even imagine what Manuel Luna was feeling. No, that wasn't true; I was just trying hard not to. Evil had followed the Tarahumara here, to the bottom of the earth where there was no place left to run. Even while mourning his magnificent son, Manuel had to be wondering which of his children would be next.

"You need a break?" Eric asked. "How are you doing?"

"No, I'm good. Something on my mind."

Caballo was approaching; after meeting the others, he'd kept on running toward Eric and me while the others took a breather and posed for Luis's camera. It was a good thing Caballo had changed his mind and decided to come for a run; for the first time since we'd gotten off the bus, he was smiling. The sparkling sunrise and the old familiar pleasure of feeling his body warm from the inside out seemed to have eased his anxiety. And man, was it great to see him in action again! Just watching him, I felt my back straightening and my

feet quickening, as if someone had just switched on the *Chariots of Fire* soundtrack.

Apparently, the admiration was sort of mutual. "Look at you!" Caballo shouted. "You're a whole new bear." A while back, Caballo had decided on a spirit animal for me; while he was a sleek white horse, I was *Oso*—the lumbering bear. But at least he took the sting out of it with his reaction to the way I looked now, a year since I'd gasped and winced pathetically behind him.

"You're nothing like the guy I had up here before," Caballo said.

"Thanks to the man here," I said, jerking my thumb toward Eric. Nine months of Eric's Tarahumara-style training had worked wonders: I was twenty-five pounds lighter and running with ease on a trail that had killed me before. Despite all the miles I'd put in—up to eighty a week—I still felt light and loose and eager for more. Most of all, for the first time in a decade I wasn't nursing some kind of injury. "This guy is a miracle worker."

"Must be," Caballo grinned. "I saw what he had to work with. So what's the secret?"

"It's a pretty wild story—" I began, but by then we'd reached Scott and the others, who were listening to Barefoot Ted hold court. "Tell you later," I promised Caballo.

Barefoot Ted had slipped off his FiveFingers and was demonstrating the perfect shoeless foot strike. "Barefoot running really appealed to my artistic eye," Ted was saying. "This concept of bricolage—that less is more, the best solution is the most elegant. Why add something if you're born with everything you need?"

"You better add something to your feet when we cross the canyons," Caballo said. "You brought some other shoes, right?"

"Sure," Ted said. "I've got my flip-flops."

Caballo smiled, waiting for Barefoot Ted to smile back and show he was joking. Barefoot Ted didn't, and wasn't.

"You don't have shoes?" Caballo said. "You're going into the Barrancas *in flip-flops*?"

"Don't worry about me. I hiked the San Gabriels in bare feet. People kept looking at me like, 'Is this guy out of his mind,' and I'd say—"

"These ain't no San Gay-Bree-All Mountains!" Caballo spat,

mocking the California range with all the gringo butchery he could muster. "The cactus thorns out here are razor blades. You get one in your foot, we're all fucked. Those trails are dangerous enough without carrying you on our backs."

"Whoa, whoa, you guys," Scott said, getting a shoulder in and pushing them both back a step. "Caballo, Ted's probably been hearing 'Ted, go put some shoes on!' for years. But if he knows what he's doing, he knows what he's doing."

"He don't know *shit* about the Barrancas."

"I know this," Ted shot back. "If someone gets in trouble out there, I guarantee you it won't be me!"

"Yeah?" Caballo snarled. "We'll see, amigo." He turned and stalked down the trail.

"Hooo mama!" Jenn said. "Who's the troublemaker now, Ted?"

We followed Caballo toward the cabins, while Barefoot Ted loudly and persistently continued arguing his case to us, Caballo's back, and the awakening town of Creel. I glanced at my watch; I was tempted to tell Barefoot Ted to just shut up and buy a cheap pair of sneakers to keep Caballo happy, but there wasn't time. Only one bus a day made the ten-hour trip down into the canyons, and it would be pulling out before any shops opened.

Back at the cabins, we began jamming clothes into our backpacks. I told the others where they could scare up some breakfast, then I went to check Caballo's cabin. He wasn't there. Neither was his pack.

"Maybe he's cooling off on his own," I told myself. Maybe. But I had a sick feeling that he'd decided to hell with us and was gone for good. After a long night of worrying whether he'd made a colossal mistake, I was pretty sure he'd gotten his answer.

I decided not to tell anyone and hope for the best. One way or the other, we'd know in about thirty minutes if this operation was dead or hanging on life support. I shouldered my pack and walked back across the footbridge over the sewage ditch where we'd taken our oath the night before. I found the rest of the crew in a little restaurant down the block from the bus stop, loading up on bean and chicken burritos. I wolfed down two, then packed a few in my pack for later. When we got to the bus, it had already rumbled to life and was ready to go. The driver was tossing the last bags onto the roof rack, and signaled for ours.

"*Espera,*" I said. Hang on a sec. Caballo wasn't anywhere in sight. I shoved my head inside the bus and scanned the full rows of seats. No Caballo. Damn. I got out to break the news to everyone else, but they'd all disappeared. I walked around the back, and found Scott climbing the rungs to the roof.

"C'mon up, Oso!" Caballo was on top of the bus, catching bags for the driver. Jenn and Billy were already beside him, lounging in a cushy pile of baggage. "You'll never get a ride like this again."

No wonder the Tarahumara thought Caballo was a ghost. There was no telling what this guy would do, or where he'd turn up. "Forget it," I said. "I've seen this road. I'm getting in the crash-ready position inside between the two fattest guys I can find."

Barefoot Ted grabbed the rungs behind Scott.

"Hey," I said. "Why don't you ride inside with me?"

"No, thanks. I'm going roof surfing."

"Look," I said, spelling it out. "Maybe you should give Caballo a little space. Push him too far, and this race is over."

"Nah, we're cool," Ted said. "He just needs to get to know me."

Yeah. That's exactly what he needs. The driver was settling behind the wheel, so Eric and I hustled aboard and squeezed into the back row. The bus misfired, stalled, then grumbled back to life. Soon, we were winding through the forest, heading toward the old mining town of La Bufa and from there, to the end of the road in the canyon-bottom village of Batopilas. After that, we'd strike out on foot.

"I'm waiting to hear a scream and see Barefoot Ted getting heaved off the roof," Eric said.

"You ain't kidding." Caballo's last words before storming off were still ringing in my ears: *We'll see, amigo!*

Caballo, as it turned out, had decided that before Barefoot Ted got us all in trouble, he was going to teach him a lesson. Unfortunately, it was a lesson that would have all of us running for our lives.

CHAPTER 25

BAREFOOT TED

BAREFOOT TED was right, of course. Lost in all the fireworks between Ted and Caballo was an important point: running shoes may be the most destructive force to ever hit the human foot. Barefoot Ted, in his own weird way, was becoming the Neil Armstrong of twenty-first-century distance running, an ace test pilot whose small steps could have tremendous benefit for the rest of mankind. If that seems like excessive stature to load on Barefoot Ted's shoulders, consider these words by Dr. Daniel Lieberman, a professor of biological anthropology at Harvard University:

"A lot of foot and knee injuries that are currently plaguing us are actually caused by people running with shoes that actually make our feet weak, cause us to over-pronate, give us knee problems. Until 1972, when the modern athletic shoe was invented by Nike, people ran in very thin-soled shoes, had strong feet, and had much lower incidence of knee injuries."

And the cost of those injuries? Fatal disease in epidemic proportions. "Humans really are obligatorily required to do aerobic exercise in order to stay healthy, and I think that has deep roots in our evolutionary history," Dr. Lieberman said. "If there's any magic bullet to make human beings healthy, it's to run."

Magic bullet? The last time a scientist with Dr. Lieberman's credentials used that term, he'd just created penicillin. Dr. Lieberman knew it, and meant it. If running shoes never existed, he was saying,

more people would be running. If more people ran, fewer would be dying of degenerative heart disease, sudden cardiac arrest, hypertension, blocked arteries, diabetes, and most other deadly ailments of the Western world.

That's a staggering amount of guilt to lay at Nike's feet. But the most remarkable part? Nike already knew it.

In April 2001, two Nike reps were watching the Stanford University track team practice. Part of a Nike rep's job is getting feedback from its sponsored runners about which shoes they prefer, but that was proving difficult at the moment because the Stanford runners all seemed to prefer . . . nothing.

"Vin, what's up with the barefooting?" they called to Stanford head coach Vin Lananna. "Didn't we send you enough shoes?"

Coach Lananna walked over to explain. "I can't prove this," he explained, "but I believe when my runners train barefoot, they run faster and suffer fewer injuries."

Faster *and* fewer injuries? Coming from anyone else, the Nike guys would have politely uh-huhed and ignored it, but this was one coach whose ideas they took seriously. Like Joe Vigil, Lananna was rarely mentioned without the word "visionary" or "innovator" popping up. In just ten years at Stanford, Lananna's track and cross-country teams had won five NCAA team championships and twenty-two individual titles, and Lananna himself had been named NCAA Cross Country Coach of the Year. Lananna had already sent three runners to the Olympics and was busy grooming more with his Nike-sponsored "Farm Team," a post-college club for the best of the very best. Needless to say, the Nike reps were a little chagrined to hear that Lananna felt the best shoes Nike had to offer were worse than no shoes at all.

"We've shielded our feet from their natural position by providing more and more support," Lananna insisted. That's why he made sure his runners always did part of their workouts in bare feet on the track's infield. "I know as a shoe company, it's not the greatest thing to have a sponsored team not use your product, but people went thousands of years without shoes. I think you try to do all these corrective things with shoes and you overcompensate. You fix things that don't need fixing. If you strengthen the foot by going barefoot, I

think you reduce the risk of Achilles and knee and plantar fascia problems."

"Risk" isn't quite the right term; it's more like "dead certainty." Every year, anywhere from 65 to 80 percent of all runners suffer an injury. That's nearly *every* runner, every single year. No matter who you are, no matter how much you run, your odds of getting hurt are the same. It doesn't matter if you're male or female, fast or slow, pudgy or ripped as a racehorse, your feet are still in the danger zone.

Maybe you'll beat the odds if you stretch like a swami? Nope. In a 1993 study of Dutch athletes published in *The American Journal of Sports Medicine*, one group of runners was taught how to warm up and stretch while a second group received no "injury prevention" coaching. Their injury rates? Identical. Stretching came out even worse in a follow-up study performed the following year at the University of Hawaii; it found that runners who stretched were 33 percent *more* likely to get hurt.

Lucky for us, though, we live in a golden age of technology. Running-shoe companies have had a quarter century to perfect their designs, so logically, the injury rate must be in free fall by now. After all, Adidas has come up with a \$250 shoe with a microprocessor in the sole that instantly adjusts cushioning for every stride. Asics spent three million dollars and eight years—three more than it took the Manhattan Project to create the first atomic bomb—to invent the awe-inspiring Kinsei, a shoe that boasts "multi-angled forefoot gel pods," a "midfoot thrust enhancer," and an "infinitely adaptable heel component that isolates and absorbs impact to reduce pronation and aid in forward propulsion." That's big bucks for sneakers you'll have to toss in the garbage in ninety days, but at least you'll never limp again.

Right?

Sorry.

"Since the first real studies were done in the late '70's, Achilles complaints have actually *increased* by about 10 percent, while plantar fasciitis has remained the same," says Dr. Stephen Pribut, a running-injury specialist and past president of the American Academy of Podiatric Sports Medicine. "The technological advancements over the past thirty years have been amazing," adds Dr. Irene Davis, the director of the Running Injury Clinic at the University of Delaware.

"We've seen tremendous innovations in motion control and cushioning. And yet the remedies don't seem to defeat the ailments."

In fact, there's no evidence that running shoes are any help at all in injury prevention. In a 2008 research paper for the *British Journal of Sports Medicine*, Dr. Craig Richards, a researcher at the University of Newcastle in Australia, revealed that there are *no* evidence-based studies—not one—that demonstrate that running shoes make you less prone to injury.

It was an astonishing revelation that had been hidden in plain sight for thirty-five years. Dr. Richards was so stunned that a twenty-billion-dollar industry seemed to be based on nothing but empty promises and wishful thinking that he even issued a challenge:

Is any running shoe company prepared to claim that wearing their distance running shoes will decrease your risk of suffering musculoskeletal running injuries?

Is any shoe manufacturer prepared to claim that wearing their running shoes will improve your distance running performance?

If you are prepared to make these claims, where is your peer reviewed data to back it up?

Dr. Richards waited, and even tried contacting the major shoe companies for their data. In response, he got silence.

So if running shoes don't make you go faster and don't stop you from getting hurt, then what, exactly, are you paying for? What are the benefits of all those microchips, "thrust enhancers," air cushions, torsion devices, and roll bars? Well, if you have a pair of Kinseis in your closet, brace yourself for some bad news. And like all bad news, it comes in threes:

PAINFUL TRUTH No. 1: The Best Shoes Are the Worst

RUNNERS wearing top-of-the-line shoes are 123 percent *more likely* to get injured than runners in cheap shoes, according to a study led by Bernard Marti, M.D., a preventative-medicine specialist at

Switzerland's University of Bern. Dr. Marti's research team analyzed 4,358 runners in the Bern Grand-Prix, a 9.6-mile road race. All the runners filled out an extensive questionnaire that detailed their training habits and footwear for the previous year; as it turned out, 45 percent had been hurt during that time.

But what surprised Dr. Marti, as he pointed out in *The American Journal of Sports Medicine* in 1989, was the fact that the most common variable among the casualties wasn't training surface, running speed, weekly mileage, or "competitive training motivation." It wasn't even body weight, or a history of previous injury: it was the price of the shoe. Runners in shoes that cost more than \$95 were more than twice as likely to get hurt as runners in shoes that cost less than \$40. Follow-up studies found similar results, like the 1991 report in *Medicine & Science in Sports & Exercise* that found that "Wearers of expensive running shoes that are promoted as having additional features that protect (e.g., more cushioning, 'pronation correction') are injured significantly more frequently than runners wearing inexpensive shoes (costing less than \$40)."

What a cruel joke: for double the price, you get double the pain.

Sharp-eyed as ever, Coach Vin Lananna had already spotted the same phenomenon himself back in the early '80s. "I once ordered high-end shoes for the team, and within two weeks, we had more plantar fasciitis and Achilles problems than I'd ever seen. So I sent them back and told them, 'Send me my cheap shoes,'" Lananna says. "Ever since then, I've always ordered the low-end shoes. It's not because I'm cheap. It's because I'm in the business of making athletes run fast and stay healthy."

PAINFUL TRUTH No. 2: Feet Like a Good Beating

AS FAR back as 1988, Dr. Barry Bates, the head of the University of Oregon's Biomechanics/Sports Medicine Laboratory, gathered data that suggested that beat-up running shoes are safer than newer ones. In the *Journal of Orthopaedic & Sports Physical Therapy*, Dr. Bates and his colleagues reported that as shoes wore down and their cushioning thinned, runners gained more foot control.

So how do foot control and a flapping old sole add up to injury-

free legs? Because of one magic ingredient: fear. Contrary to what pillow-y-sounding names like the Adidas MegaBounce would have you believe, all that cushioning does nothing to reduce impact. Logically, that should be obvious—the impact on your legs from running can be up to twelve times your body weight, so it's preposterous to believe a half inch of rubber is going to make a bit of difference against, in my case, 2,760 pounds of earthbound beef. You can cover an egg with an oven mitt before rapping it with a hammer, but that egg ain't coming out alive.

When E. C. Frederick, then the director of Nike Sports Research Lab, arrived at the 1986 meeting of the American Society of Biomechanics, he was packing a bombshell. "When subjects were tested with soft versus hard shoes," he said, "no difference in impact force was found." No difference! "And curiously," he added, "the second, propulsive peak in the vertical ground reaction force was actually *higher* with soft shoes."

The puzzling conclusion: the more cushioned the shoe, the less protection it provides.

Researchers at the University of Oregon's Biomechanics/Sports Medicine Laboratory were verifying the same finding. As running shoes got worn down and their cushioning hardened, the Oregon researchers revealed in a 1988 study for the *Journal of Orthopaedic & Sports Physical Therapy*, runners' feet stabilized and became less wobbly. It would take about ten years before scientists came up with an explanation for why the old shoes that sports companies were telling you to throw away were better than the new ones they were urging you to buy. At McGill University in Montreal, Steven Robbins, M.D., and Edward Waked, Ph.D., performed a series of tests on gymnasts. They found that the thicker the landing mat, the harder the gymnasts stuck their landings. Instinctively, the gymnasts were searching for stability. When they sensed a soft surface underfoot, they slapped down hard to ensure balance.

Runners do the same thing, Robbins and Waked found: just the way your arms automatically fly up when you slip on ice, your legs and feet instinctively come down hard when they sense something squishy underfoot. When you run in cushioned shoes, your feet are pushing *through* the soles in search of a hard, stable platform.

"We conclude that balance and vertical impact are closely

related," the McGill docs wrote. "According to our findings, currently available sports shoes . . . are too soft and thick, and should be redesigned if they are to protect humans performing sports."

Until reading this study, I'd been mystified by an experience I'd had at the Running Injury Clinic. I'd run back and forth over a force plate while alternating between bare feet, a superthin shoe, and the well-cushioned Nike Pegasus. Whenever I changed shoes, the impact levels changed as well—but not the way I'd expected. My impact forces were lightest in bare feet, and heaviest in the Pegs. My running form also varied: when I changed footwear, I instinctively changed my footfall. "You're much more of a heel striker in the Pegasus," Dr. Irene Davis concluded.

David Smyntek decided to test the impact theory with a unique experiment of his own. As both a runner and a physical therapist specializing in acute rehabilitation, Smyntek was wary when the people telling him he had to buy new shoes were the same people who sold them. He'd been warned forever by *Runner's World* and his local running store that he had to replace his shoes every three hundred to five hundred miles, but how was it that Arthur Newton, one of the greatest ultrarunners of all time, saw no reason to replace his thin rubber sneakers until he'd put at least four thousand miles on them? Newton not only won the 55-mile Comrades race five times in the 1930s, but his legs were still springy enough to break the record for the 100-mile Bath-to-London run at age fifty-one.

So Smyntek decided to see if he could out-Newton Newton. "When my shoes wear down on one side," he wondered, "what if I just wear them on the wrong feet?" Thus began the Crazy Foot Experiment: when his shoes got thin on the outside edge, Dave swapped the right for the left and kept running. "You have to understand the man," says Ken Learman, one of Dave's fellow therapists. "Dave is not the average individual. He's curious, smart, the kind of guy you can't BS real easy. He'll say, 'Hey, if it's supposed to be this way, let's see if it really is.'"

For the next ten years, David ran five miles a day, every day. Once he realized he could run comfortably in wrong-footed shoes, he started questioning why he needed running shoes in the first place. If he wasn't using them the way they were designed, Dave reasoned,

maybe that design wasn't such a big deal after all. From then on, he only bought cheap dime-store sneaks.

"Here he is, running more than most people, with the wrong shoe on the wrong foot and not having any problems," Ken Learman says. "That experiment taught us all something. Taught us that when it comes to running shoes, all that glitters isn't gold."

FINAL PAINFUL TRUTH: Even Alan Webb Says "Human Beings Are Designed to Run Without Shoes"

BEFORE Alan Webb became America's greatest miler, he was a flat-footed frosh with awful form. But his high school coach saw potential, and began rebuilding Alan from—no exaggeration—the ground up.

"I had injury problems early on, and it became apparent that my biomechanics could cause injury," Webb told me. "So we did foot-strengthening drills and special walks in bare feet." Bit by bit, Webb watched his feet transform before his eyes. "I was a size twelve and flat-footed, and now I'm a nine or ten. As the muscles in my feet got stronger, my arch got higher." Because of the barefoot drills, Webb also cut down on his injuries, allowing him to handle the kind of heavy training that would lead to his U.S. record for the mile and the fastest 1,500-meter time in the world for the year 2007.

"Barefoot running has been one of my training philosophies for years," said Gerard Hartmann, Ph.D., the Irish physical therapist who serves as the Great and Powerful Oz for the world's finest distance runners. Paula Radcliffe never runs a marathon without seeing Dr. Hartmann first, and titans like Haile Gebrselassie and Khalid Khannouchi have trusted their feet to his hands. For decades, Dr. Hartmann has been watching the explosion of orthotics and ever-more-structured running shoes with dismay.

"The deconditioned musculature of the foot is the greatest issue leading to injury, and we've allowed our feet to become badly deconditioned over the past twenty-five years," Dr. Hartmann said. "Pronation has become this very bad word, but it's just the natural movement of the foot. The foot is *supposed* to pronate."

To see pronation in action, kick off your shoes and run down the

driveway. On a hard surface, your feet will briefly unlearn the habits they picked up in shoes and automatically shift to self-defense mode: you'll find yourself landing on the outside edge of your foot, then gently rolling from little toe over to big until your foot is flat. That's pronation—just a mild, shock-absorbing twist that allows your arch to compress.

But back in the '70s, the most respected voice in running began expressing some doubts about all that foot twisting. Dr. George Sheehan was a cardiologist whose essays on the beauty of running had made him the philosopher-king of the marathon set, and he came up with the notion that excessive pronation might be the cause of runner's knee. He was both right and very, very wrong. You have to land on your heel to overpronate, and you can only land on your heel if it's cushioned. Nevertheless, the shoe companies were quick to respond to Dr. Sheehan's call to arms and came up with a nuclear response; they created monstrously wedged and superengineered shoes that wiped out virtually all pronation.

"But once you block a natural movement," Dr. Hartmann said, "you adversely affect the others. We've done studies, and only two to three percent of the population has real biomechanical problems. So who is getting all these orthotics? Every time we put someone in a corrective device, we're creating new problems by treating ones that don't exist." In a startling admission in 2008, *Runner's World* confessed that for years it had accidentally misled its readers by recommending corrective shoes for runners with plantar fasciitis: "But recent research has shown stability shoes are unlikely to relieve plantar fasciitis *and may even exacerbate the symptoms*" (italics mine).

"Just look at the architecture," Dr. Hartmann explained. Blueprint your feet, and you'll find a marvel that engineers have been trying to match for centuries. Your foot's centerpiece is the arch, the greatest weight-bearing design ever created. The beauty of any arch is the way it gets stronger under stress; the harder you push down, the tighter its parts mesh. No stonemason worth his trowel would ever stick a support *under* an arch; push up from underneath, and you weaken the whole structure. Buttressing the foot's arch from all sides is a high-tensile web of twenty-six bones, thirty-three joints, twelve rubbery tendons, and eighteen muscles, all stretching and flexing like an earthquake-resistant suspension bridge.

"Putting your feet in shoes is similar to putting them in a plaster cast," Dr. Hartmann said. "If I put your leg in plaster, we'll find forty to sixty percent atrophy of the musculature within six weeks. Something similar happens to your feet when they're encased in shoes." When shoes are doing the work, tendons stiffen and muscles shrivel. Feet live for a fight and thrive under pressure; let them laze around, as Alan Webb discovered, and they'll collapse. Work them out, and they'll arc up like a rainbow.

"I've worked with over a hundred of the best Kenyan runners, and one thing they have in common is marvelous elasticity in their feet," Dr. Hartmann continued. "That comes from never running in shoes until you're seventeen." To this day, Dr. Hartmann believes that the best injury-prevention advice he's ever heard came from a coach who advocated "running barefoot on dewy grass three times a week."

He's not the only medical professional preaching the Barefoot Doctrine. According to Dr. Paul W. Brand, chief of rehab at the U.S. Public Health Service Hospital in Carville, Louisiana, and a professor of surgery at Louisiana State University Medical School, we could wipe out every common foot ailment within a generation by kicking off our shoes. As far back as 1976, Dr. Brand was pointing out that nearly every case in his waiting room—corns, bunions, hammertoes, flat feet, fallen arches—was nearly nonexistent in countries where most people go barefoot.

"The barefoot walker receives a continuous stream of information about the ground and about his own relationship to it," Dr. Brand has said, "while a shod foot sleeps inside an unchanging environment."

Drumbeats for the barefoot uprising were growing. But instead of doctors leading the charge for a muscular foot, it was turning into a class war pitting podiatrists against their own patients. Barefoot advocates like Drs. Brand and Hartmann were still rare, while traditional podiatric thinking still saw human feet as Nature's Mistake, a work in progress that could always be improved by a little scalpel-sculpting and orthotic reshaping.

That born-broken mentality found its perfect expression in *The Runners' Repair Manual*. Written by Dr. Murray Weisenfeld, a leading sports podiatrist, it's one of the top-selling foot-care books of all time, and begins with this dire pronouncement:

"Man's foot was not originally designed for walking, much less running long distances."

So what, according to the *Manual*, was our foot designed for? Well, at first swimming ("The modern foot evolved out of the fin of some primordial fish and these fins pointed backward"). After that, climbing ("The grasping foot permitted the creature to squat on branches without falling out").

And then . . . ?

And then, according to the podiatric account of evolution, we got stuck. While the rest of our bodies adapted beautifully to solid earth, somehow the only part of our body that actually touched the earth got left behind. We developed brains and hands deft enough to perform intravascular surgery, yet our feet never made it past the Paleolithic era. "Man's foot is not yet completely adapted to the ground," the *Manual* laments. "Only a portion of the population has been endowed with well ground-adapted feet."

So who are these lucky few with well-evolved feet? Come to think of it, nobody: "Nature has not yet published her plan for the perfect modern runner's foot," Dr. Weisenfeld writes. "Until the perfect foot comes along, my experience has shown me that we've all got an excellent chance at having some kind of injury." Nature may not have published her blueprint, but that didn't stop some podiatrists from trying to come up with one of their own. And it was exactly that kind of overconfidence—the belief that four years of podiatric training could trump two million years of natural selection—that led to a catastrophic rash of operations in the '70s.

"Not too many years ago, runner's knee was treated by surgery," Dr. Weisenfeld acknowledges. "That didn't work too well, since you need that cushioning when you run." Once the patients came out from under the knife, they discovered that their nagging ache had turned into a life-changing mutilation; without cartilage in their knees, they'd never be able to run without pain again. Despite the podiatric profession's checkered history of attempting to one-up nature, *The Runners' Repair Manual* never recommends strengthening feet; instead, the treatment of choice is always tape, orthotics, or surgery.

It even took Dr. Irene Davis, whose credentials and open-mindedness are hard to beat, until 2007 to take barefooting seriously,

and only then because one of her patients flat-out defied her. He was so frustrated by his chronic plantar fasciitis, he wanted to try blasting it away by running in thin-soled, slipperlike shoes. Dr. Davis told him he was nuts. He did it anyway.

"To her surprise," as *BioMechanics* magazine would later report, "the plantar fasciitis symptoms abated and the patient was able to run short distances in the shoes."

"This is how we often learn things, when patients don't listen to us," Dr. Davis graciously responded. "I think perhaps the widespread plantar fasciitis in this country is partly due to the fact that we really don't allow the muscles in our feet to do what they are designed to do." She was so impressed by her rebellious patient's recovery that she even began adding barefoot walks to her own workouts.

Nike doesn't earn \$17 billion a year by letting the Barefoot Teds of the world set the trends. Soon after the two Nike reps returned from Stanford with news that the barefoot uprising had even spread to elite college track, Nike set to work to see if it could make a buck from the problem it had created.

Blaming the running injury epidemic on big, bad Nike seems too easy—but that's okay, because it's largely their fault. The company was founded by Phil Knight, a University of Oregon runner who could sell anything, and Bill Bowerman, the University of Oregon coach who thought he knew everything. Before these two men got together, the modern running shoe didn't exist. Neither did most modern running injuries.

For a guy who told so many people how to run, Bowerman didn't do much of it himself. He only started to jog a little at age fifty, after spending time in New Zealand with Arthur Lydiard, the father of fitness running and the most influential distance-running coach of all time. Lydiard had begun the Auckland Joggers Club back in the late '50s to help rehab heart-attack victims. It was wildly controversial at the time; physicians were certain that Lydiard was mobilizing a mass suicide. But once the formerly ill men realized how great they felt after a few weeks of running, they began inviting their wives, kids, and parents to come along for the two-hour trail rambles.

By the time Bill Bowerman paid his first visit in 1962, Lydiard's Sunday morning group run was the biggest party in Auckland. Bow-

erman tried to join them, but was in such lousy shape that he had to be helped along by a seventy-three-year-old man who'd survived three coronaries. "God, the only thing that kept me alive was the hope that I would die," Bowerman said afterward.

But he came home a convert, and soon penned a best-selling book whose one-word title introduced a new word and obsession to the American public: *Jogging*. Between writing and coaching, Bowerman was busy ruining his nervous system and his wife's waffle iron by tinkering in the basement with molten rubber to invent a new kind of footwear. His experiments left Bowerman with a debilitating nerve condition, but also the most cushioned running shoe ever created. In a stroke of dark irony, Bowerman named it the Cortez—after the conquistador who plundered the New World for gold and unleashed a horrific smallpox epidemic.

Bowerman's deftest move was advocating a new style of running that was only possible in his new style of shoe. The Cortez allowed people to run in a way no human safely could before: by landing on their bony heels. Before the invention of a cushioned shoe, runners through the ages had identical form: Jesse Owens, Roger Bannister, Frank Shorter, and even Emil Zatopek all ran with backs straight, knees bent, feet scratching back under their hips. They had no choice: the only shock absorption came from the compression of their legs and their thick pad of midfoot fat. Fred Wilt verified as much in 1959 in his classic track text, *How They Train*, which detailed the techniques of more than eighty of the world's top runners. "The forward foot moves toward the track in a downward, backward, 'stroking' motion (not punching or pounding) and the outer edge of the ball of the foot makes first contact with the track," Wilt writes. "Running progression results from these forces pushing behind the center of gravity of the body. . . ."

In fact, when the biomedical designer Van Phillips created a state-of-the-art prosthetic for amputee runners in 1984, he didn't even bother equipping it with a heel. As a runner who lost his left leg below the knee in a water-skiing accident, Phillips understood that the heel was needed only for standing, not motion. Phillips's C-shaped "Cheetah foot" mimics the performance of an organic leg so effectively, it allowed the South African double amputee Oscar Pistorius to compete with the world's greatest sprinters.

But Bowerman had an idea: maybe you could grab a little extra distance if you stepped *ahead* of your center of gravity. Stick a chunk of rubber under the heel, he mused, and you could straighten your leg, land on your heel, and lengthen your stride. In *Jogging*, he compared the styles: with the time-tested "flat foot" strike, he acknowledged, "the wide surface area pillows the footstrike and is easy on the rest of the body." Nevertheless, he still believed a "heel-to-toe" stride would be "the least tiring over long distances." *If you've got the shoe for it.*

Bowerman's marketing was brilliant. "The same man created a market for a product and then created the product itself," as one Oregon financial columnist observed. "It's genius, the kind of stuff they study in business schools." Bowerman's partner, the runner-turned-entrepreneur Phil Knight, set up a manufacturing deal in Japan and was soon selling shoes faster than they could come off the assembly line. "With the Cortez's cushioning, we were in a monopoly position probably into the Olympic year, 1972," Knight would gloat. By the time other companies geared up to copy the new shoe, the Swoosh was a world power.

Delighted with the reaction to his amateur designs, Bowerman let his creativity take off. He contemplated a waterproof shoe made of fish skin, but let that one die on the drawing board. He did come out with the LD-1000 Trainer, a shoe with a sole so wide it was like running on pie plates. Bowerman figured it would kill pronation in its tracks, overlooking the fact that unless the runner's foot was perfectly straight, the flared heel would wrench his leg. "Instead of stabilizing, it accelerated pronation and hurt both feet and ankles," former Oregon runner Kenny Moore reported in his biography of Bowerman. The shoe that was supposed to give you a perfect stride, in other words, only worked if you already had one. When Bowerman realized he was causing injuries instead of preventing them, he had to backtrack and narrow the heel in later versions.

Back in New Zealand, meanwhile, an appalled Arthur Lydiard was watching the flashy exports flooding out of Oregon and wondering what in the world his friend was up to. Compared with Bowerman, Lydiard was by far the superior track mind; he'd coached many more Olympic champions and world-record holders, and he'd created a training program that remains the gold standard. Lydiard

liked Bill Bowerman and respected him as a coach, but good God! What was this junk he was selling?

Lydiard knew all this pronation stuff was just marketing gibberish. "If you told the average person of any age to take off his or her shoes and run down the hallway, you would almost always discover the foot action contains no hint of pronation or supination," Lydiard complained. "Those sideways flexings of the ankles begin only when people lace themselves into these running shoes because the construction of many of the shoes immediately alters the natural movement of the feet."

"We ran in canvas shoes," Lydiard went on. "We didn't get plantar fascia, we didn't pronate or supinate, we might have lost a bit of skin from the rough canvas when we were running marathons, but, generally speaking, we didn't have foot problems. Paying several hundred dollars for the latest in high-tech running shoes is no guarantee you'll avoid any of these injuries and can even guarantee that you will suffer from them in one form or another."

Eventually, even Bowerman was stricken by doubt. As Nike steamrolled along, churning out a bewildering variety of shoes and changing models every year for no reason besides having something else to sell, Bowerman felt his original mission of making an honest shoe had been eroded by a new ideology, which he summed up in two words: "Make money." Nike, he griped in a letter to a colleague, was "distributing a lot of crap." Even to one of Nike's founding partners, it seemed, the words of the social critic Eric Hoffer were ringing true: "Every great cause begins as a movement, becomes a business, and turns into a racket."

Bowerman had died by the time the barefoot uprising was taking hold in 2002, so Nike went back to Bowerman's old mentor to see if this shoeless stuff really had merit. "Of course!" Arthur Lydiard reportedly snorted. "You support an area, it gets weaker. Use it extensively, it gets stronger. . . . Run barefoot and you don't have all those troubles.

"Shoes that let your foot function like you're barefoot—they're the shoes for me," Lydiard concluded.

Nike followed up that blast with its own hard data. Jeff Pisciotta, the senior researcher at Nike Sports Research Lab, assembled twenty runners on a grassy field and filmed them running barefoot. When

he zoomed in, he was startled by what he found: instead of each foot clomping down as it would in a shoe, it behaved like an animal with a mind of its own—stretching, grasping, seeking the ground with splayed toes, gliding in for a landing like a lake-bound swan.

"It's beautiful to watch," a still spellbound Pisciotta later told me. "That made us start thinking that when you put a shoe on, it starts to take over some of the control." He immediately deployed his team to gather film of every existing barefoot culture they could find. "We found pockets of people all over the globe who are still running barefoot, and what you find is that during propulsion and landing, they have far more range of motion in the foot and engage more of the toe. Their feet flex, spread, splay, and grip the surface, meaning you have less pronation and more distribution of pressure."

Faced with the almost inescapable conclusion that it had been selling lemons, Nike shifted into make-lemonade mode. Jeff Pisciotta became head of a top-secret and seemingly impossible project: finding a way to make a buck off a naked foot.

It took two years of work before Pisciotta was ready to unveil his masterpiece. It was presented to the world in TV ads that showed so many barefoot athletes—Kenyan marathoners padding along a dirt trail, swimmers curling their toes around a starting block, gymnasts and Brazilian capoeira dancers and rock climbers and wrestlers and karate masters and beach soccer players—that after a while, it was hard to remember who *does* wear shoes, or why.

Flashing over the images were motivational messages: "Your feet are your foundation. Wake them up! Make them strong! Connect with the ground. . . . Natural technology allows natural motion. . . . Power to your feet." Across the sole of a bare foot is scrawled "Performance Starts Here." Then comes the grand finale: as "Tiptoe Through the Tulips" crescendos in the background, we cut back to those Kenyans, whose bare feet are now sporting some kind of thin little shoe. It's the new Nike Free, a swooshed slipper even thinner than the old Cortez.

And its slogan?
"Run Barefoot."

CHAPTER 26

Baby, this town rips the bones from your back;
It's a death trap, it's a suicide rap . . .

— BRUCE SPRINGSTEEN, "Born to Run"

CABALLO BLANCO'S face was pink with pride, so I tried to think of something nice to say.

We'd just arrived in Batopilas, an ancient mining town tucked eight thousand feet below the lip of the canyon. It was founded four hundred years ago when Spanish explorers discovered silver ore in the stony river, and it hasn't changed much since then. It's still a tiny strip of houses hugging the riverbank, a place where burros are as common as cars and the first telephone was installed when the rest of the world was programming iPods.

Getting down there took a cast-iron stomach and supreme faith in your fellow man, the man in question being the one driving the bus. The only way into Batopilas is a dirt road that corkscrews along the sheer face of a cliff, dropping seven thousand feet in less than ten miles. As the bus strained around hairpin turns, we hung on tight and looked far below at the wrecks of cars whose drivers had miscalculated by a few inches. Two years later, Caballo would make his own contribution to the steel cemetery when the pickup truck he was driving caught the lip of the cliff and tumbled over. Caballo managed to dive out just in time and watched as the truck exploded far below. Later, chunks of the scorched carcass were scavenged as good-luck charms.

After the bus pulled over on the edge of town, we climbed down stiffly, our faces as war-painted with dust and sweat salt as Caballo's had been the first the time I met him. "There she is!" Caballo hollered. "That's my place."

We looked around, but the only thing in sight was the ancient ruin of an old mission across the river. Its roof was gone and its red-stone walls were collapsing into the ruddy canyon they'd been carved from, looking like a sand castle dissolving back into sand. It was perfect; Caballo had found the ideal home for a living ghost. I could only imagine how freaky it must be to pass here at night and see his monstrous shadow dancing around behind his campfire as he wandered the ruins like Quasimodo.

"Wow, that's really something, uh . . . else," I said.

"No, man," he said. "Over here." He pointed behind us, toward a faint goat trail disappearing into the cactus. Caballo began to climb, and we fell in behind him, grabbing at brush for balance as we slipped and scrabbled up the stony path.

"Damn, Caballo," Luis said. "This is the only driveway in the world that needs trail markers and an aid station at mile two."

After a hundred yards or so, we came through a thicket of wild lime trees and found a small, clay-walled hut. Caballo had built it by hauling up rocks from the river, making the round-trip over that treacherous path hundreds of times with river-slick stones in his hands. As a home, it suited Caballo even better than the ruined mission; here in his handmade fortress of solitude, he could see everything in the river valley and remain unseen.

We wandered inside, and saw Caballo had a small camp bed, a pile of trashed sports sandals, and three or four books about Crazy Horse and other Native Americans on a shelf next to a kerosene lamp. That was it; no electricity, no running water, no toilet. Out back, Caballo had cut away the cactus and smoothed a little place to kick back after a run, smoke something relaxing, and gaze off at the prehistoric wilderness. Whatever Barefoot Ted's heavy Heidegger word was, no one was ever more an expression of their place than Caballo was of his hut.

Caballo was anxious to get us fed and off his hands so he could catch up on sleep. The next few days were going to take everything we had, and none of us had gotten much rest since El Paso. He led us

back down his hidden driveway and up the road to a tiny shop operating from the front window of a house; you poked your head in and if shopkeeper Mario had what you wanted, you got it. Upstairs, Mario rented us a few small rooms with a cold-water shower at the end of the hall.

Caballo wanted us to dump our bags and head off immediately for food, but Barefoot Ted insisted on stripping down and padding off to the shower to sluice away the road grime. He came out screaming.

"Jesus! The shower's got loose wires. I just got the shit shocked out of me!"

Eric looked at me. "You think Caballo did it?"

"Justifiable homicide," I said. "No jury would convict." The Barefoot Ted-Caballo Blanco storm front hadn't improved a bit since we'd left Creel. During one rest stop, Caballo climbed down from the roof and squeezed his way into the back of the bus to escape. "That guy doesn't know what silence is," Caballo fumed. "He's from L.A., man; he thinks you've got to fill every space with noise."

After we'd gotten settled at Mario's, Caballo brought us to another of his Mamás. We didn't even have to order; as soon as we arrived, Doña Mila began pulling out whatever she had in the fridge. Soon, platters were being handed around of guacamole, frijoles, sliced cactus and tomatoes doused in tangy vinegar, Spanish rice, and a fragrant beef stew thickened with chicken liver.

"Pack it in," Caballo had said. "You're going to need it tomorrow." He was taking us on a little warm-up hike, Caballo said. Just a jaunt up a nearby mountain to give us a taste of the terrain we'd be tackling on the trek to the racecourse. He kept saying it was no big deal, but then he'd warn us we'd better pound down the food and get right to bed. I became even more apprehensive after a white-haired old American ambled in and joined us.

"How's the giddyup, Hoss?" he greeted Caballo. His name was Bob Francis. He had first wandered down to Batopilas in the '60s, and part of him had never left. Even though he had kids and grandkids back in San Diego, Bob still spent most of the year wandering the canyons around Batopilas, sometimes guiding trekkers, sometimes just visiting Patricio Luna, a Tarahumara friend who was Manuel Luna's uncle. They met thirty years before, when Bob got

lost in the canyons. Patricio found him, fed him, and brought him back to his family's cave for the night.

Because of his long friendship with Patricio, Bob is one of the only Americans to have ever attended a Tarahumara *tesgüinada*—the marathon drinking party that precedes and occasionally prevents the ball races. Even Caballo hasn't reached that level of trust with the Tarahumara, and after listening to Bob's stories, he wasn't sure he wanted to.

"All of a sudden, Tarahumara I've been friends with for years, guys I knew as shy, gentle amigos, are in my face, butting against me with their chests, spitting insults at me, ready to fight," Bob said. "Meanwhile, their wives are in the bushes with other men, and their grown-up daughters are wrestling naked. They keep the kids away from these deals; you can imagine why."

Anything goes at a *tesgüinada*, Bob explained, because everything is blamed on the peyote, moonshine tequila, and *tesgüino*, the potent corn beer. As wild as these parties get, they actually serve a noble and sober purpose: they act as a pressure valve to vent explosive emotions. Just like the rest of us, the Tarahumara have secret desires and grievances, but in a society where everyone relies on one another and there are no police to get between them, there has to be a way to satisfy lusts and grudges. What better than a booze-fest? Everyone gets ripped, goes wild, and then, chastened by bruises and hangovers, they dust themselves off and get on with their lives.

"I could have been married or murdered twenty times before the night was over," Bob said. "But I was smart enough to put down the gourd and get myself out of there before the real shenanigans started." If one outsider knew the Barrancas as well as Caballo, it was Bob, which was why, even though he was liquored up and in a bit of a ranting mood, I paid careful attention when he got into it with Ted.

"Those fucking things are going to be dead tomorrow," Bob said, pointing at the FiveFingers on Ted's feet.

"I'm not going to wear them," Ted said.

"Now you're talking sense," Bob said.

"I'm going barefoot," Ted said.

Bob turned to Caballo. "He messing with us, Hoss?"

Caballo just smiled.

Early the next morning, Caballo came for us as dawn was breaking over the canyon. "That's where we're headed tomorrow," Caballo said, pointing through the window of my room toward a mountain rearing in the distance. Between us and the mountain was a sea of rolling foothills so thickly overgrown that it was hard to see how a trail could punch through. "We'll run one of those little guys this morning."

"How much water do we need?" Scott asked.

"I only carry this," Caballo said, waving a sixteen-ounce plastic bottle. "There's a freshwater spring up top to refill."

"Food?"

"Nah," Caballo shrugged as he and Scott left to check on the others. "We'll be back by lunch."

"I'm bringing the big boy," Eric said to me, gurgling springwater into the bladder on his ninety-six-ounce hydration backpack. "I think you should, too."

"Really? Caballo says we're only going about ten miles."

"Can't hurt to carry the max when you go off-road," Eric said. "Even if you don't need it, it's training for when you do. And you never know—something happens, you could be out there longer than you think."

I put down my handheld bottle and reached for my hydration pack. "Bring iodine pills in case you need to purify water. And shove in some gels, too," Eric added. "On race day, you're going to need two hundred calories an hour. The trick is learning how to take in a little at a time, so you've got a steady drip of fuel without overwhelming your stomach. This'll be good practice."

We walked through Batopilas, past shopkeepers hand-sprinkling water on the stones to keep the dust down. Schoolkids in spotless white shirts, their black hair sleek with water, interrupted their chatter to politely wish us "*Buenos días.*"

"Gonna be a hot one," Caballo said, as we ducked into a storefront with no sign out front. "*¿Hay teléfono?*" he asked the woman who greeted us. Are the phones working?

"*Todavía no,*" she said, shaking her head in resignation. Not yet. Clarita had the only two public phones in all Batopilas, but service

had been knocked out for the past three days, leaving shortwave radio the only form of communication. For the first time, it hit me how cut off we were; we had no way of knowing what was going on in the outside world, or letting the outside world know what was happening to us. We were putting a hell of a lot of trust in Caballo, and once again, I had to wonder why; as knowledgeable as Caballo was, it still seemed crazy to put our lives in the hands of a guy who didn't seem too concerned about his own.

But for the moment, the grumble of my stomach and the aroma of Clarita's breakfast managed to push those thoughts aside. Clarita served up big plates of huevos rancheros, the fried eggs smothered in homemade salsa and freshly chopped cilantro and sitting atop thick, hand-patted tortillas. The food was too delicious to wolf down, so we lingered, refilling our coffee a few times before getting up to go. Eric and I followed Scott's example and tucked an extra tortilla in our pockets for later.

Only after we finished did I realize that the Party Kids hadn't shown up. I checked my watch; it was already pushing 10 a.m.

"We're leaving them," Caballo said.

"I'll run back for them," Luis offered.

"No," Caballo said. "They could still be in bed. We've got to hit it if we're going to dodge the afternoon heat."

Maybe it was for the best; they could use a day to rehydrate and power up for the hike tomorrow. "No matter what, don't let them try to follow us," Caballo told Luis's father, who was staying behind. "They get lost out there, we'll never see them again. That's no joke."

Eric and I cinched tight our hydration packs, and I pulled a bandanna over my head. It was already steamy. Caballo slid through a gap in the retaining wall and began picking his way over the boulders to the edge of the river. Barefoot Ted pushed ahead to join him, showing off how nimbly he could hop from rock to rock in his bare feet. If Caballo was impressed, he wasn't showing it.

"YOU GUYS! HOLD UP!" Jenn and Billy were sprinting down the street behind us. Billy had his shirt in his hand, and Jenn's shoelaces were untied.

"You sure you want to come?" Scott asked when they panted up. "You haven't even eaten anything."

Jenn tore a PowerBar in two and gave half to Billy. They were each carrying a skinny water bottle that couldn't have held more than six swallows. "We're good," Billy said.

We followed the stony riverbank for a mile, then turned into a dry gully. Without a word, we all spontaneously broke into a trot. The gully was wide and sandy, leaving plenty of room for Scott and Barefoot Ted to flank Caballo and run three abreast.

"Check out their feet," said Eric. Even though Scott was in the Brooks trail shoe he'd helped design and Caballo was in sandals, they both skimmed their feet over the ground just the way Ted did in his bare feet, their foot strikes in perfect sync. It was like watching a team of Lipizzaner stallions circle the show ring.

After about a mile, Caballo veered onto a steep, rocky washout that climbed up into the mountain. Eric and I eased back to a walk, obeying the ultrarunner's creed: "If you can't see the top, walk." When you're running fifty miles, there's no dividend in bashing up the hills and then being winded on the way down; you only lose a few seconds if you walk, and then you can make them back up by flying downhill. Eric believes that's one reason ultrarunners don't get hurt and never seem to burn out: "They know how to train, not strain."

As we walked, we caught up with Barefoot Ted. He'd had to slow down to pick his way over the jagged, fist-sized stones. I squinted up at the trail ahead: we had at least another mile of crumbly rock to climb before the trail leveled and, hopefully, smoothed.

"Ted, where are your FiveFingers?" I asked.

"Don't need 'em," he said. "I made a deal with Caballo that if I handled this hike, he wouldn't get mad anymore if I went barefoot."

"He rigged the bet," I said. "This is like running up the side of a gravel pit."

"Humans didn't invent rough surfaces, Oso," Ted said. "We invented the *smooth* ones. Your foot is perfectly happy molding itself around rocks. All you've got to do is relax and let your foot flex. It's like a foot massage. Oh, hey!" he called after us as Eric and I pulled ahead. "Here's a great tip. Next time your feet are sore, walk on slippery stones in a cold creek. Unbelievable!"

Eric and I left Ted singing to himself as he hopped and trotted along. The glare off the stones was blinding and heat kept rising, making it feel as if we were climbing straight into the sun. In a way,

we were; after two miles, I checked the altimeter on my watch and saw we'd climbed over a thousand feet. Soon, though, the trail plateaued and softened from stones to footworn dirt.

The others were a few hundred yards ahead, so Eric and I started to run to close the gap. Before we caught them, Barefoot Ted came whisking by. "Time for a drink," he said, waving his empty water bottle. "I'll wait for you guys at the spring."

The trail veered abruptly upward again, jagging back and forth in lightning-bolt switchbacks. Fifteen hundred feet . . . two thousand . . . We bent into the slope, feeling as though we only gained a few inches every step. After three hours and six miles of hard climbing, we hadn't hit the spring; we hadn't seen shade since we left the riverbank.

"See?" Eric said, waving the nozzle of his hydration pack. "Those guys have got to be parched."

"And starving," I added, ripping open a raw-food granola bar.

At thirty-five hundred feet, we found Caballo and the rest of the crew waiting in a hollow under a juniper tree. "Anyone need iodine pills?" I asked.

"Don't think so," Luis said. "Take a look."

Under the tree was a natural stone basin carved out by centuries of cool, trickling spring water. Except there was no water.

"We're in a drought," Caballo said. "I forgot about that."

But there was a chance another spring might be flowing a few hundred feet higher up the mountain. Caballo volunteered to run up and check. Jenn, Billy, and Luis were too thirsty to wait and went with him. Ted gave his bottle to Luis to fill up for him and sat to wait in the shade with us. I gave him a few sips from my pack, while Scott shared some pita and hummus.

"You don't use goos?" Eric asked.

"I like real food," Scott said. "It's just as portable and you get real calories, not just a fast burn." As a corporate-sponsored elite athlete, Scott had the worldwide buffet of nutrition at his fingertips, but after experimenting with the entire spectrum—everything from deer meat to Happy Meals to organic raw-food bars—he'd ended up with a diet a lot like the Tarahumara.

"Growing up in Minnesota, I used to be a total junk eater," he said. "Lunch used to be two McChickens and large fries." When he was a

Nordic skier and cross-country runner in high school, his coaches were always telling him he needed plenty of lean meat to rebuild his muscles after a tough workout, yet the more Scott researched traditional endurance athletes, the more vegetarians he found.

Like the Marathon Monks in Japan he'd just been reading about; they ran an ultramarathon *every day for seven years*, covering some twenty-five thousand miles on nothing but miso soup, tofu, and vegetables. And what about Percy Cerutty, the mad Australian genius who coached some of the greatest milers of all time? Cerutty believed food shouldn't even be cooked, let alone slaughtered; he put his athletes through triple sessions on a diet of raw oats, fruit, nuts, and cheese. Even Cliff Young, the sixty-three-year-old farmer who stunned Australia in 1983 by beating the best ultrarunners in the country in a 507-mile race from Sydney to Melbourne, did it all on beans, beer, and oatmeal ("I used to feed the calves by hand and they thought I was their mother," Young said. "I couldn't sleep too good those nights when I knew they would get slaughtered.") He switched to grains and potatoes, and slept a whole lot better. Ran pretty good, too).

Scott wasn't sure why meatless diets worked for history's great runners, but he figured he'd trust the results first and figure out the science later. From that point on, no animal products would pass his lips—no eggs, no cheese, not even ice cream—and not much sugar or white flour, either. He stopped carrying Snickers and PowerBars during his long runs; instead, he loaded a fanny pack with rice burritos, pita stuffed with hummus and Kalamata olives, and home-baked bread smeared with adzuki beans and quinoa spread. When he sprained his ankle, he eschewed ibuprofen and relied instead on wolfsbane and whomping portions of garlic and ginger.

"Sure, I had my doubts," Scott said. "Everyone told me I'd get weaker, I wouldn't recover between workouts, I'd get stress fractures and anemia. But I found that I actually feel better, because I'm eating foods with more high-quality nutrients. And after I won Western States, I never looked back."

By basing his diet on fruits, vegetables, and whole grains, Scott is deriving maximum nutrition from the lowest possible number of calories, so his body isn't forced to carry or process any useless bulk.

And because carbohydrates clear the stomach faster than protein, it's easier to jam a lot of workout time into his day, since he doesn't have to sit around waiting for a meatball sub to settle. Vegetables, grains, and legumes contain all the amino acids necessary to build muscle from scratch. Like a Tarahumara runner, he's ready to go any distance, any time.

Unless, of course, he runs out of water.

"Not good, guys," Luis called as he trotted back down. "That one's dry, too." He was getting worried; he'd just tried to piss, and after four hours of sweating in 95-degree heat, it came out looking like convenience-store coffee. "I think we should run for it."

Scott and Caballo agreed. "If we open it up, we'll be down in an hour," Caballo said. "Oso," he asked me. "You okay?"

"Yeah, I'm fine," I said. "And we're still packing water."

"All right, let's do it," Barefoot Ted said.

We began running single file down the trail, Caballo and Scott up front. Barefoot Ted was amazing; he was speeding down the mountain hard on the heels of Luis and Scott, two of the best downhillers in the sport. With all that talent pushing up against each other, the pace was getting ferocious. "YEEEEAAAHHH, BABY!" Jenn and Billy were hollering.

"Let's hang back," Eric said. "We're going to crash if we try to hang with them."

We settled into an easy lopé, falling far behind as the others slashed back and forth down the switchbacks. Running downhill can trash your quads, not to mention snap your ankle, so the trick is to pretend you're running uphill: keep your feet spinning under your body like you're a lumberjack rolling a log, and control your speed by leaning back and shortening your stride.

By midafternoon, the heat had bottled up in the canyon until it was over 100 degrees. We'd lost sight of the others, so Eric and I took our time, running easily and sipping often from our quickly emptying hydration packs, feeling our way carefully down the confusing web of trails, unaware that an hour before, Jenn and Billy had vanished.

"Goat's blood is *good*," Billy kept insisting. "We can drink the blood, then eat the meat. Goat meat is *good*." He'd read a book by a guy

whose trick for cheating death in the Arizona desert was to stone a wild horse to death and suck the blood from its throat. *Geronimo used to do that, too*, Billy thought. *Wait, it might've been Kit Carson.* . . .

Drink the blood? Jenn, her throat so parched it hurt to talk, just stared at him. *He's losing it*, she thought. *We can barely walk, and Bonehead's talking about killing a goat we can't catch with a knife we don't have. He's in worse shape than I am. He's—*

Suddenly, her stomach clenched so badly she could barely breathe. She got it. Billy didn't sound crazy because of the heat. He sounded crazy because the only sane thing left to talk about was the one thing he wouldn't admit: there was no way out of this.

On a good day, no one in the world could have dropped Jenn and Billy on a measly six-mile trail run, but this was turning out to be a pretty bad day. The heat, their hangovers, and their empty stomachs had caught up with them before they'd made it halfway down the mountain. They lost sight of Caballo on one of the switchbacks, then they hit a fork in the trail. Next thing they knew, they were alone.

Disoriented, Jenn and Billy wandered off the mountain and into a stone maze that webbed in every direction. The rock walls were mirroring the heat so hideously, Jenn suspected she and Billy were just going whichever way looked a little shadier. Jenn felt dizzy, as if her mind were floating free of her body. They hadn't eaten since splitting that PowerBar six hours before, and hadn't had a sip of water since noon. Even if heat stroke didn't wipe them out, Jenn knew, they were still doomed: the 100-plus degree heat would drop, but keep on dropping. Come nightfall, they'd be shivering in the freezing dark in their surf shorts and T-shirts, dying of thirst and exposure in one of the most unreachable corners of Mexico.

What weird corpses they'd make, Jenn thought as they trudged along. Whoever found them would have to wonder how a pair of twenty-two-year-old lifeguards in surf baggies ended up at the bottom of a Mexican canyon, looking like they'd been tossed in from Baja by a rogue wave. Jenn had never been so thirsty in her life; she'd lost twelve pounds during a hundred-mile race before and still didn't feel as desperate as she did now.

"Look!"

"The Luck of the Bonehead!" Jenn marveled. Under a stone

ledge, Billy had spotted a pool of fresh water. They ran toward it, fumbling the tops off their water bottles, then stopped.

The water wasn't water. It was black mud and green scum, buzzing with flies and churned by wild goats and burros. Jenn bent down for a closer look. *Ugh!* The smell was nasty. They knew what one sip could do; come nightfall, they could be too weak with fever and diarrhea to walk, or infected with cholera or giardia or guinea worm disease, which has no cure except slowly pulling the three-foot-long worms out of the abscesses that erupt on your skin and eye sockets.

But they knew what would happen without that sip. Jenn had just read about those two best friends who'd gotten lost in a canyon in New Mexico and became so sun-crazed after a single day without water that one stabbed the other to death. She'd seen photos of hikers who'd been found in Death Valley with their mouths choked with dirt, their last moments alive spent trying to suck moisture from scorching sand. She and Billy could stay away from the puddle and die of thirst, or they could swallow a few gulps and risk dying from something else.

"Let's hold off," Billy said. "If we don't find our way out in one hour, we'll come back."

"Okay. This way?" she said, pointing away from Batopilas and straight toward a wilderness that stretched four hundred miles to the Sea of Cortez.

Billy shrugged. They'd been too rushed and groggy that morning to pay attention to where they were going, not that it would have mattered: everything looked exactly the same. As they walked, Jenn flashed back to the way she'd scoffed at her mother the night before she and Billy had left for El Paso. "Jenn," her mother had implored. "You don't know these people. How do you know they'll take care of you if something goes wrong?"

Dang, Jenn thought. *Mom nailed that one.*

"How long's it been?" she asked Billy.

"About ten minutes."

"I can't wait anymore. Let's go back."

"All right."

When they found the puddle again, Jenn was ready to drop to her knees and start slurping, but Billy held her back. He swirled aside the

mold, covered the open mouth of his water bottle with his hand, then filled it from the bottom of the puddle, half hoping the water would be a little less bacteria-ridden beneath the muck. He handed his bottle to Jenn, then filled hers the same way.

"I always knew you'd kill me," Jenn said. They clinked their bottles, said "Cheers," and started to gulp, trying not to gag.

They drank their bottles dry, refilled them, and started walking west again into the wilderness. Before they'd gotten far, they noticed deep shadows were stretching farther across the canyon.

"We've got to get more water," Billy said. He hated the idea of backtracking, but their only chance of surviving through the night was getting to the puddle and hunkering down till dawn. Maybe if they chugged three bottles full of water, they'd be hydrated enough to climb up the mountain for a last look around before dark.

They turned and, once again, trudged back into the maze.

"Billy," Jenn said. "We're really in trouble."

Billy didn't answer. His head was killing him, and he couldn't shake a line from "Howl" that kept beating in time to the throbbing in his skull:

... who disappeared into the volcanoes of Mexico leaving behind
nothing but the shadow of dungarees and the lava and ash of
poetry. . . .

Disappeared in Mexico, Billy thought. *Leaving nothing behind.*

"Billy," Jenn repeated. They'd put each other through some bad times in the past, she and the Bonehead, but they'd found a way to stop breaking each other's hearts and become best friends. She'd gotten Billy into this, and she felt worse for what was about to happen to him than what would happen to her.

"This is for real, Billy," Jenn said. Tears began trickling down her face. "We're going to die out here. We're going to die *today*."

"SHUT UP!" Billy screamed, so rattled by the sight of Jenn's tears that he erupted in a total non-Bonehead frenzy. "JUST SHUT UP!"

The outburst stunned both of them into silence. And in that silence, they heard a sound: rocks clattering somewhere behind them.

"HEY!" Jenn and Billy shouted together. "HEY! HEY! HEY!"

They began running before realizing that they didn't know what they were running toward. Caballo had warned them that if they faced one danger out there greater than being lost, it was being found.

Jenn and Billy froze, trying to peer into the shadows below the canyon's crest. Could it be the Tarahumara? A Tarahumara hunter would be invisible, Caballo had told them; he'd watch from a distance, and if he didn't like what he saw, he'd disappear back into the forest. What if it was drug cartel enforcers? Whoever it was, they had to risk it.

"HEY!" they shouted. "WHO'S THERE?"

They listened until the last echo of their voices died away. Then a shadow split from the canyon wall, and began moving toward them.

"You hear that?" Eric asked me.

It had taken us two hours to pick our way down the mountain. We'd kept losing the trail, and had to stop to backtrack and search our memories for landmarks before continuing. Wild goats had turned the mountain into a web of faint, crisscrossing trails, and with the sun fading below the canyon lip, it was getting hard to keep track of which direction we were going.

Finally, we spotted a dry creek bed down below that I was pretty sure led to the river. Just in time, too; I'd finished my water half an hour before and was already pasty mouthed. I broke into a jog, but Eric called me back. "Let's make sure," he said. He climbed back up the cliff to check our bearings.

"Looks good," he called. He started to climb down—and that's when he heard voices echoing from somewhere inside the gorges. He called me up, and together we began following the echoes. A few moments later, we found Jenn and Billy. Tears were still streaking Jenn's face. Eric gave them his water, while I handed them the last of my goos.

"You really drank out of that?" I asked, looking at the wild burro dung in the puddle and hoping they'd confused it with another one.

"Yeah," Jenn said. "We were just coming back for more."

I dug out my camera in case an infectious-disease specialist wanted to see exactly what had gotten into their bowels. Foul as it was, though, that puddle had saved their lives: if Jenn and Billy hadn't

come back for another drink at precisely that moment, they'd still be walking deeper and deeper into no-man's-land, the canyon walls closing behind them.

"Can you run a little more?" I asked Jenn. "I think we're not that far from the village."

"Okay," Jenn said.

We set off at an easy trot, but as the water and goo revived them, Jenn and Billy set a pace I could barely keep up with. Once again, I was amazed at their ability to bounce back from the dead. Eric led us down the creek bed, then spotted a bend in the gorge he recognized. We doglegged left, and even with the light getting dim, I could see that the dust ahead of us had been tromped by feet. A mile and a half later, we emerged from the gorges to find Scott and Luis waiting anxiously for us on the outskirts of Batopilas.

We got four liters of water from a little grocery store and dumped in a handful of iodine pills. "I don't know if it will work," Eric said, "but maybe you can flush out whatever bacteria you swallowed." Jenn and Billy sat on the curb and began gulping. While they drank, Scott explained that no one had noticed that Jenn and Billy were missing until the rest of the group had gotten off the mountain. By then, everyone was so dangerously dehydrated that turning back to search would have put them all in danger. Caballo grabbed a bottle of water and went back on his own, urging the others to sit tight; the last thing he wanted was for all his gringos to go scattering into the canyons at nightfall.

About half an hour later, Caballo ran back into Batopilas, red-faced and drenched in sweat. He'd missed us in the branching gorges, and when he realized the hopelessness of his one-man search party, he'd returned to town for help. He looked at Eric and me—tired but still on our feet—and then at the two ace young ultrarunners, exhausted and distraught on the curb. I could tell what Caballo was thinking before he said it.

"What's your secret, man?" he asked Eric, nodding toward me. "How'd you fix this guy?"

I'D MET Eric the year before, right after I'd thrown off my running shoes in disgust and sprawled in an icy creek. I was hurt again—and for the last time, as far as I was concerned.

As soon as I'd gotten home from the Barrancas, I'd started putting Caballo's lessons to work. I couldn't wait to lace up my shoes every afternoon and try to recapture the sensation I'd had in the hills of Creel, back when running behind Caballo made the miles feel so easy, light, smooth, and fast that I never wanted to stop. As I ran, I screened my mental film footage of Caballo in action, remembering the way he'd floated up the hills of Creel as if he were being abducted by aliens, somehow keeping everything relaxed except those bony elbows, which pumped for power like a Rock'em-Sock'em Robot. For all his gangliness, Caballo on a trail reminded me of Muhammad Ali in the ring: loose as wave-washed seaweed, with just a hint of ferocity ready to explode.

After two months, I'd built up to six miles a day with a ten-miler on the weekend. My form hadn't graduated to *Smooth* yet, but I was keeping the needle wavering pretty steadily between *Easy* and *Light*. I was getting a little anxious, though; no matter how gingerly I tried to take it, my legs were already starting to rebel; that little flamethrower in my right foot was shooting out sparks and the backs of both calves felt twangy, as if my Achilles tendons had been replaced with piano

wire. I stocked up on stretching books and put in a dutiful half hour of loosening up before every run, but the long shadow of Dr. Torg's cortisone needle loomed over me.

By late spring, the time had come for a test. Thanks to a forest-ranger friend, I lucked into the perfect opportunity: a three-day, fifty-mile running trip through Idaho's River of No Return, two and a half million acres of the most untouched wilderness in the continental U.S. The setup was perfect: our supplies would be hauled by a mule packer, so all that I and the other four runners had to do was kick up fifteen miles of dirt a day from campsite to campsite.

"I really didn't know anything about the woods till I came to Idaho," Jenni Blake began, as she led us down a thin wisp of a dirt trail winding through the junipers. Watching her flow over the trail with such teenage strength, it was hard to believe that nearly twenty years had passed since her arrival; at thirty-eight, Jenni still has the blonde bangs, winsome blue eyes, and lean, tan limbs of a college frosh on summer break. Oddly, though, she's more of a carefree kid now than she was back then.

"I was bulimic in college and had a terrible self-image, until I found myself out here," Jenni said. She came as a summer volunteer, and was immediately loaded with a lumberjack saw and two weeks of food and pointed toward the backcountry to go clear trails. She nearly buckled under the weight of the backpack, but she kept her doubts to herself and set off, alone, into the woods.

At dawn, she'd pull on sneakers and nothing else, then set off for long runs through the woods, the rising sun warming her naked body. "I'd be out here for weeks at a time by myself," Jenni explained. "No one could see me, so I'd just go and go and go. It was the most fantastic feeling you can imagine." She didn't need a watch or a route; she judged her speed by the tickle of wind on her skin, and kept racing along the pine-needled trails until her legs and lungs begged her to head back to camp.

Jenni has been hard-core ever since, running long miles even when Idaho is blanketed by snow. Maybe she's self-medicating against deep-seated problems, but maybe (to paraphrase Bill Clinton) there was never anything wrong with Jenni that couldn't be fixed by what's right with Jenni.

Yet when I winced my way down the final downhill leg three days later, I could barely walk. I hobbled into the creek and sat there, simpering and wondering what was wrong with me. It had taken me three days to run the same distance as Caballo's racecourse, and I'd ended up with one Achilles tear, maybe two, and a pain in my heel that felt suspiciously like the vampire bite of running injuries: plantar fasciitis.

Once PF sinks its fangs into your heels, you're in danger of being infected for life. Check any running-related message board, and you're guaranteed to find a batch of beseeching threads from PF sufferers begging for a cure. Everyone is quick to suggest the same remedies—night splints, elastic socks, ultrasound, electroshock, cortisone, orthotics—but the messages keep coming because none of them really seems to work.

But how come Caballo could hammer descents longer than the Grand Canyon in crappy old sandals, while I couldn't manage a few easy months of miles without a major breakdown? Wilt Chamberlain, all seven feet one inch and 275 pounds of him, had no problem running a 50-mile ultra when he was sixty years old after his knees had survived a lifetime of basketball. Hell, a Norwegian sailor named Mensen Ernst barely even remembered what dry land felt like when he came ashore back in 1832, but he still managed to run all the way from Paris to Moscow to win a bet, averaging one hundred thirty miles a day for fourteen days, wearing God only knows what kind of clodhoppers on God only knows what kind of roads.

And Mensen was just cracking his knuckles before getting down to serious business: he then ran from Constantinople to Calcutta, trotting ninety miles a day for two straight months. Not that he didn't feel it; Mensen had to rest three whole days before beginning the 5,400-mile jog back home. So how come Mensen never got plantar fasciitis? He couldn't have, because his legs were in excellent shape a year later when dysentery killed him as he tried to run all the way to the source of the Nile.

Everywhere I looked, little pockets of superrunning savants seemed to emerge from the shadows. Just a few miles away from me in Maryland, thirteen-year-old Mackenzie Riford was happily run-

ning the JFK 50-miler with her mom ("It was fun!"), while Jack Kirk—a.k.a. "the Dipsea Demon"—was still running the hellacious Dipsea Trail Race at age ninety-six. The race begins with a 671-step cliffside climb, which means a man nearly half as old as America was climbing a fifty-story staircase before running off into the woods. "You don't stop running because you get old," said the Demon. "You get old because you stop running."

So what was I missing? I was in worse shape now than when I'd started; not only couldn't I race with the Tarahumara, I doubted my PF-inflamed feet could even get me to the starting line.

"You're like everyone else," Eric Orton told me. "You don't know what you're doing."

A few weeks after my Idaho debacle, I'd gone to interview Eric for a magazine assignment. As an adventure-sports coach in Jackson Hole, Wyoming, and the former fitness director for the University of Colorado Health Sciences Center, Eric's specialty is tearing endurance sports down to their integral movements and finding transferable skills. He'd study rock climbing to find shoulder techniques for kayakers, and apply Nordic skiing's smooth propulsion to mountain biking. What he's really looking for are basic engineering principles; he's convinced that the next great advance in fitness will come not from training or technology, but technique—the athlete who avoids injury will be the one who leaves the competition behind.

He'd read my article about Caballo and the Tarahumara and was intensely curious to hear more. "What the Tarahumara do is pure body art," he said. "No one else on the planet has made such a virtue out of self-propulsion." Eric had been fascinated with the Tarahumara since an athlete he'd trained for Leadville returned with amazing stories about fantastic Indians flying through the Druidic dusk in sandals and robes. Eric scoured libraries for books on the Tarahumara, but all he found were some anthropological texts from the '50s and an amateur account by a husband-and-wife team who'd traveled through Mexico in their camper. It was a mystifying gap in sports literature; distance running is the world's No. 1 participation sport, but almost nothing had been written about its No. 1 practitioners.

"Everyone thinks they know how to run, but it's really as nuanced as any other activity," Eric told me. "Ask most people and they'll say,

'People just run the way they run.' That's ridiculous. Does everyone just swim the way they swim?" For every other sport, lessons are fundamental; you don't go out and start slashing away with a golf club or sliding down a mountain on skis until someone takes you through the steps and teaches you proper form. If not, inefficiency is guaranteed and injury is inevitable.

"Running is the same way," Eric explained. "Learn it wrong, and you'll never know how good it can feel." He grilled me for details about the race I'd seen at the Tarahumara school. ("The little wooden ball," he mused. "The way they learn to run by kicking it; that can't be an accident.") Then he offered me a deal; he'd get me ready for Caballo's race, and in return, I'd vouch for him with Caballo.

"If this race comes off, we have to be there," Eric urged. "It'll be the greatest ultra of all time."

"I just don't think I'm built for running fifty miles," I said.

"Everyone is built for running," he said.

"Every time I up my miles, I break down."

"You won't this time."

"Should I get the orthotics?"

"Forget the orthotics."

I was dubious, but Eric's absolute confidence was winning me over. "I should probably cut weight first to make it easier on my legs."

"Your diet will change all by itself. Wait and see."

"How about yoga? That'll help, yeah?"

"Forget yoga. Every runner I know who does yoga gets hurt."

This was sounding better all the time. "You really think I can do it?"

"Here's the truth," Eric said. "You've got zero margin of error. But you can do it." I'd have to forget everything I knew about running and start over from the beginning.

"Get ready to go back in time," Eric said. "You're going tribal."

A few weeks later, a man with a right leg twisted below the knee limped toward me carrying a rope. He looped the rope around my waist and pulled it taut. "Go!" he shouted.

I bent against the rope, churning my legs as I dragged him for-

ward. He released the rope, and I shot off. "Good," the man said. "Whenever you run, remember that feeling of straining against the rope. It'll keep your feet under your body, your hips driving straight ahead, and your heels out of the picture."

Eric had recommended I begin my tribal makeover by heading down to Virginia to apprentice myself to Ken Mierke, an exercise physiologist and world champion triathlete whose muscular dystrophy forced him to squeeze every possible bit of economy out of his running style. "I'm living proof of God's sense of humor," Ken likes to say. "I was an obese kid with a drop foot whose dad lived for sports. So as an overweight Jerry's Kid, I was way slower than everyone I ever played against. I learned to examine everything and find a better way."

In basketball Ken couldn't drive the lane, so he practiced three-pointers and a deadly hook shot. He couldn't chase a quarterback or shake a safety, but he studied body angles and lines of attack and became a formidable left tackle. He couldn't outsprint a cross-court volley, so in tennis he developed a ferocious serve and service return. "If I couldn't outrun you, I'd outthink you," he says. "I'd find your weakness and make it my strength."

Because of the withered calf muscles in his right leg, when he began to compete in triathalons Ken could only run with a heavy shoe he'd built from a Rollerblade boot and a leaf spring. That put him at a substantial weight disadvantage to the amputee athletes in the physically challenged division, so ramping up his energy efficiency to compensate for his seven-pound shoes could make a huge difference.

Ken got a stack of videos of Kenyan runners and ran through them frame by frame. After hours of viewing, he was struck by a revelation: the greatest marathoners in the world run like kindergartners. "Watch kids at a playground running around. Their feet land right under them, and they push back," Ken said. "Kenyans do the same thing. The way they ran barefoot growing up is astonishingly similar to how they run now—and astonishingly different from how Americans run." Grabbing a pad and pen, Ken went back through the tapes and jotted down all the components of a Kenyan stride. Then he went looking for guinea pigs.

Fortunately, Ken had already begun doing physiological testing

on triathletes as part of his kinesiology studies at Virginia Polytechnic, so that gave him access to a lot of athletes to experiment on. Runners would have been resistant to having someone tinker with their stride, but Ironmen are up for anything. "Triathletes are very forward thinking," Ken explains. "It's a young sport, so it's not mired in tradition. Back in 1988, triathletes started to use aero bars on their bikes and cyclists mocked them mercilessly—until Greg LeMond used one and won the Tour de France by eight seconds."

Ken's first test subject was Alan Melvin, a world-class Masters triathlete in his sixties. First, Ken set a baseline by having Melvin run four hundred meters full out. Then he clipped a small electric metronome to his T-shirt.

"What's this for?"

"Set it for one hundred eighty beats a minute, then run to the beat."

"Why?"

"Kenyans have superquick foot turnover," Ken said. "Quick, light leg contractions are more economical than big, forceful ones."

"I don't get it," Alan said. "Don't I want a longer stride, not a shorter one?"

"Let me ask you this," Ken replied. "You ever see one of those barefoot guys in a 10K race?"

"Yeah. It's like they're running on hot coals."

"You ever *beat* one of those barefoot guys?"

Alan reflected. "Good point."

After practicing for five months, Alan came back for another round of testing. He ran four one-mile repeats, and every lap of the track was faster than his previous four hundred-meter best. "This was someone who'd been running for forty years and was already Top Ten in his age group," Ken pointed out. "This wasn't the improvement of a beginner. In fact, as a sixty-two-year-old athlete, he should have been declining."

Ken was working on himself, as well. He'd been such a weak runner that in his best triathlon to date, he'd come off the bike with a ten-minute lead and still lost. Within a year of creating his new technique in 1997, Ken became unbeatable, winning the world disabled championship the next two years in a row. Once word got out that Ken had figured out a way to run that was not only fast but gentle on

the legs, other triathletes began hiring him as their coach. Ken went on to train eleven national champions and built up a roster of more than one hundred athletes.

Convinced that he'd rediscovered an ancient art, Ken named his style Evolution Running. Coincidentally, two other barefoot-style running methods were popping up around the same time. "Chi Running," based on the balance and minimalism of tai chi, began taking off in San Francisco, while Dr. Nicholas Romanov, a Russian exercise physiologist based in Florida, was teaching his POSE Method. The surge in minimalism did not arise through copying or cross-pollination; instead, it seemed to be testament to the urgent need for a response to the running-injury epidemic, and the pure mechanical logic of, as Barefoot Ted would call it, "the bricolage of barefooting"—the elegance of a less-is-more cure.

But a simple system isn't necessarily simple to learn, as I found out when Ken Mierke filmed me in action. My mind was registering easy, light, and smooth, but the video showed I was still bobbing up and down while bending forward like I was leaning into a hurricane. My ease with Caballo's style, Ken explained, had been my mistake.

"When I teach this technique and ask someone how it feels, if they say 'Great!', I go 'Damn!' That means they didn't change a thing. The change should be awkward. You should go through a period where you're no longer good at doing it wrong and not yet good at doing it right. You're not only adapting your skills, but your tissues; you're activating muscles that have been dormant most of your life."

Eric had a foolproof system for teaching the same style.

"Imagine your kid is running into the street and you have to sprint after her in bare feet," Eric told me when I picked up my training with him after my time with Ken. "You'll automatically lock into perfect form—you'll be up on your forefeet, with your back erect, head steady, arms high, elbows driving, and feet touching down quickly on the forefoot and kicking back toward your butt."

Then, to embed that light, whispery foot strike into my muscle memory, Eric began programming workouts for me with lots of hill repeats. "You can't run uphill powerfully with poor biomechanics," Eric explained. "Just doesn't work. If you try landing on your heel with a straight leg, you'll tip over backward."

Eric also had me get a heart-rate monitor so I could correct the second-most common mistake of the running class—pace. Most of us are just as clueless about speed as we are about form. "Nearly all runners do their slow runs too fast, and their fast runs too slow," Ken Mierke says. "So they're just training their bodies to burn sugar, which is the last thing a distance runner wants. You've got enough fat stored to run to California, so the more you train your body to burn fat instead of sugar, the longer your limited sugar tank is going to last."

The way to activate your fat-burning furnace is by staying below your aerobic threshold—your hard-breathing point—during your endurance runs. Respecting that speed limit was a lot easier before the birth of cushioned shoes and paved roads; try blasting up a scree-covered trail in open-toed sandals sometime and you'll quickly lose the temptation to open the throttle. When your feet aren't artificially protected, you're forced to vary your pace and watch your speed: the instant you get recklessly fast and sloppy, the pain shooting up your shins will slow you down.

I was tempted to go the Full Caballo and chuck my running shoes for a pair of sandals, but Eric warned me that I was cruising for a stress fracture if I tried to suddenly go naked after keeping my feet immobilized for forty years. Since the No. 1 priority was getting me ready for fifty backcountry miles, I didn't have time to slowly build up foot strength before starting my serious training. I'd need to start off with some protection, so I experimented with a few low-slung models before settling on a classic I found on eBay: a pair of old-stock Nike Pegasus* from 2000, something of a throwback to the flat-footed feel of the old Cortez.

By week two, Eric was sending me off for two hours at a stretch,

*Nike's policy of yanking best-selling shoes from the shelves every ten months has inspired some truly operatic bursts of profanity on running message boards. The Nike Pegasus, for instance, debuted in 1981, achieved its sleek, waffled apotheosis in '83, and then—despite being the most popular running shoe of all time—was suddenly discontinued in '98, only to reappear as a whole new beast in 2000. Why so much surgery? Not to improve the shoe, as a former Nike shoe designer who worked on the original Pegasus told me, but to improve revenue; Nike's aim is to triple sales by enticing runners to buy two, three, five pairs at a time, stockpiling in case they never see their favorites again.

his only advice being to focus on form and keep the pace relaxed enough to occasionally breathe with my mouth shut. (Fifty years earlier, Arthur Lydiard offered an equal but opposite tip for managing heart rate and pace: "Only go as fast as you can while holding a conversation.") By week four, Eric was layering in speedwork: "The faster you can run comfortably," he taught me, "the less energy you'll need. Speed means less time on your feet." Barely eight weeks into his program, I was already running more miles per week—at a much faster pace—than I ever had in my life.

That's when I decided to cheat. Eric had promised that my eating would self-regulate once my mileage began climbing, but I was too doubtful to wait and see. I have a cyclist friend who dumps his water bottles before riding uphill; if twelve ounces slowed him down, it wasn't hard to calculate what thirty pounds of spare tire were doing to me. But if I was going to tinker with my diet a few months before a 50-mile race, I had to be careful to do it Tarahumara-style: I had to get strong while getting lean.

I tracked down Tony Ramirez, a horticulturist in the Mexican border town of Laredo who's been traveling into Tarahumara country for thirty years and now grows Tarahumara heritage corn and grinds his own pinole. "I'm a big fan of pinole. I love it," Tony told me. "It's an incomplete protein, but combined with beans, it's more nutritious than a T-bone steak. They usually mix with it with water and drink it, but I like it dry. It tastes like shredded popcorn."

"Do you know about phenols?" Tony added. "They're natural plant chemicals that combat disease. They basically boost your immune system." When Cornell University researchers did a comparison analysis of wheat, oats, corn, and rice to see which had the highest quantity of phenols, corn was the hands-down winner. And because it's a low-fat, whole-grain food, pinole can slash your risk of diabetes and a host of digestive-system cancers—in fact, of *all* cancers. According to Dr. Robert Weinberg, a professor of cancer research at MIT and discoverer of the first tumor-suppressor gene, one in every seven cancer deaths is caused by excess body fat. The math is stark: cut the fat, and cut your cancer risk.

So the Tarahumara Miracle, when it comes to cancer, isn't such a mystery after all. "Change your lifestyle, and you can reduce your

risk of cancer by sixty to seventy percent," Dr. Weinberg has said. Colon, prostate, and breast cancer were almost unknown in Japan, he points out, until the Japanese began eating like Americans; within a few decades, their mortality rate from those three diseases skyrocketed. When the American Cancer Society compared lean and heavy people in 2003, the results were even grimmer than expected: heavier men and women were far more likely to die from at least ten different kinds of cancer.

The first step toward going cancer-free the Tarahumara way, consequently, is simple enough: Eat less. The second step is just as simple on paper, though tougher in practice: Eat better. Along with getting more exercise, says Dr. Weinberg, we need to build our diets around fruit and vegetables instead of red meat and processed carbs. The most compelling evidence comes from watching cancer cells fight for their own survival: when cancerous tumors are removed by surgery, they are *300 percent* more likely to grow back in patients with a "traditional Western diet" than they are in patients who eat lots of fruit and veggies, according to a 2007 report by *The Journal of the American Medical Association*. Why? Because stray cells left behind after surgery seem to be stimulated by animal proteins. Remove those foods from your diet, and those tumors may never appear in the first place. Eat like a poor person, as Coach Joe Vigil likes to say, and you'll only see your doctor on the golf course.

"Anything the Tarahumara eat, you can get very easily," Tony told me. "It's mostly pinto beans, squash, chili peppers, wild greens, pinole, and lots of chia. And pinole isn't as hard to get as you think." Nativeseeds.org sells it online, along with heritage seeds in case you want to grow your own corn and whiz up some homemade pinole in a coffee grinder. Protein is no problem; according to a 1979 study in *The American Journal of Clinical Nutrition*, the traditional Tarahumara diet exceeds the United Nations' recommended daily intake by more than 50 percent. As for bone-strengthening calcium, that gets worked into tortillas and pinole with the limestone the Tarahumara women use to soften the corn.

"How about beer?" I asked. "Any benefit to drinking like the Tarahumara?"

"Yes and no," Tony said. "Tarahumara *tesgüino* is very lightly fermented, so it's low in alcohol and high in nutrients." That makes

Tarahumara beer a rich food source—like a whole-grain smoothie—while ours is just sugar water. I could try home-brewing my own corn near-beer, but Tony had a better idea. “Grow some wild geranium,” he suggested. “Or buy the extract online.” *Geranium niveum* is the Tarahumara wonder drug; according to the *Journal of Agricultural and Food Chemistry*, it’s as effective as red wine at neutralizing disease-causing free radicals. As one writer put it, wild geranium is “anti-everything—anti-inflammatory, antiviral, antibacterial, antioxidant.”

I stocked up on pinole and *chia*, and even ordered some Tarahumara corn seeds to plant out back: cocopah and mayo yellow chapolote and pinole maiz. But realistically, I knew it was only a matter of time before I got sick of seeds and dried corn and started double-fisting burgers again. Luckily, I spoke to Dr. Ruth Heidrich first.

“Have you ever had salad for breakfast?” she asked me. Dr. Ruth is a six-time Ironman triathlete and, according to *Living Fit* magazine, one of the ten Fittest Women in America. She only became an athlete and a Ph.D. in health education, she told me, after she was diagnosed with breast cancer, twenty-four years ago. Exercise has been shown to cut the risk of breast cancer reoccurrence by up to 50 percent, so even with the sutures still in her chest from her mastectomy, Dr. Ruth began training for her first triathlon. She also started researching the diets of noncancerous cultures and became convinced that she needed to immediately transition from the standard American diet—or SAD, as she calls it—and eat more like the Tarahumara.

“I had a medical gun at my head,” Dr. Ruth told me. “I was so scared, I’d have bargained with the devil. So by comparison, giving up meat wasn’t that big a deal.” She had a simple rule: if it came from plants, she ate it; if it came from animals, she didn’t. Dr. Ruth had much more to lose than I did if she got it wrong, but almost immediately, she felt her strength increasing.

Her endurance increased so dramatically that within one year, she’d progressed from 10ks to marathons to the Ironman. “Even my cholesterol dropped from two hundred thirty to one hundred sixty in twenty-one days,” she adds. Under her Tarahumara-style eating plan, lunch and dinner were built around fruit, beans, yams, whole grains, and vegetables, and breakfast was often salad.

“You get leafy greens in your body first thing in the morning and

you’ll lose a lot of weight,” she urged me. Because a monster salad is loaded with nutrient-rich carbs and low in fat, I could stuff myself and not feel hungry—or queasy—when it came time to work out. Plus, greens are packed with water, so they’re great for rehydrating after a night’s sleep. And what better way to down your five vegetables a day than forking them all down at once?

So the next morning, I gave it a stab. I wandered around the kitchen with a mixing bowl, throwing in my daughter’s half-eaten apple, some kidney beans of questionable vintage, a bunch of raw spinach, and a ton of broccoli, which I chopped into splinters, hoping to make it more like coleslaw. Dr. Ruth fancies up her salads with blackstrap molasses, but I figured I’d earned the extra fat and sugar, so I went upscale, dousing mine with gourmet poppy-seed dressing.

After two bites, I was a convert. A breakfast salad, I was happy to find, is also a sweet-topping delivery system, just like pancakes and syrup. It’s far more refreshing than frozen waffles, and, best of all, I could cram myself till my eyes were green and still shoot out the door for a workout an hour later.

“The Tarahumara aren’t great runners,” Eric messaged me as we began my second month of those workouts. “They’re great athletes, and those two things are very different.” Runners are assembly-line workers; they become good at one thing—moving straight ahead at a steady speed—and repeat that motion until overuse fritzes out the machinery. Athletes are Tarzans. Tarzan swims and wrestles and jumps and swings on vines. He’s strong and explosive. You never know what Tarzan will do next, which is why he never gets hurt.

“Your body needs to be shocked to become resilient,” Eric explained. Follow the same daily routine, and your musculoskeletal system quickly figures out how to adapt and go on autopilot. But surprise it with new challenges—leap over a creek, commando-crawl under a log, sprint till your lungs are bursting—and scores of nerves and ancillary muscles are suddenly electrified into action.

For the Tarahumara, that’s just daily life. The Tarahumara step into the unknown every time they leave the cave, because they never know how fast they’ll have to sprint after a rabbit, how much firewood they’ll have to haul home, how tricky the climbing will be during a winter storm. The first challenge they face as kids is surviving

on the edge of a cliff; their first and lifelong way to play is the ball game, which is nothing if not an exercise in uncertainty. You can't drive a wooden ball over a jumble of rocks unless you're ready to lunge, lope, backpedal, sprint, and leap in and out of ditches.

Before the Tarahumara run long, they get strong. And if I wanted to stay healthy, Eric warned me, I'd better do likewise. So instead of stretching before a run, I got right to work. Lunges, pushups, jump squats, crunches; Eric had me powering through a half hour of raw strength drills every other day, with nearly all of them on a fitness ball to sharpen my balance and fire those supportive ancillary muscles. As soon as I finished, it was off to the hills. "There's no sleep-walking your way up a hill," Eric pointed out. Long climbs were an exercise in shock and awe, forcing me to focus on form and shift gears like a Tour de France cyclist. "Hills are speedwork in disguise," Frank Shorter used to say.

That was the year my hometown in Pennsylvania got a heat flash for Christmas. On New Year's Day, I pulled on shorts and a thermal top for a five-mile trail run, just an easy leg-stretcher on a rest day. I rambled through the woods for half an hour, then cut through a field of winter hay and headed for home. The warm sun and the aroma of sun-baked grass were so luxurious, I kept slowing down, dragging out that last half mile as long as I could.

When I got within one hundred yards of my house, I stopped, shucked my thermal shirt, and turned back for one last lap through the hay. I finished that one and started another, tossing my T-shirt aside as well. By lap four, my socks and running shoes were on the pile, my bare feet cushioned by dry grass and warm dirt. By lap six, I was fingering my waistband, but decided to keep the shorts out of consideration for my eighty-two-year-old neighbor. I'd finally recovered that feeling I'd had during my run with Caballo—the easy, light, smooth, fast sensation that I could outrun the sun and still be going by morning.

Like Caballo, the Tarahumara secret had begun working for me before I even understood it. Because I was eating lighter and hadn't been laid up once by injury, I was able to run more; because I was running more, I was sleeping great, feeling relaxed, and watching my resting heart rate drop. My personality had even changed: The

grouchiness and temper I'd considered part of my Irish-Italian DNA had ebbed so much that my wife remarked, "Hey, if this comes from ultrarunning, I'll tie your shoes for you." I knew aerobic exercise was a powerful antidepressant, but I hadn't realized it could be so profoundly mood stabilizing and—I hate to use the word—meditative. If you don't have answers to your problems after a four-hour run, you ain't getting them.

I kept waiting for all the old ghosts of the past to come roaring out—the screaming Achilles, the ripped hamstring, the plantar fasciitis. I started carrying my cell phone on the longer runs, convinced that any day now, I'd end up a limping mess by the side of the road. Whenever I felt a twinge, I ran through my diagnostics:

Back straight? Check.

Knees bent and driving forward? Check.

Heels flicking back? . . . There's your problem. Once I made the adjustment, the hot spot always eased and disappeared. By the time Eric bumped me up to five-hour runs in the last month before the race, ghosts and cell phone were forgotten.

For the first time in my life, I was looking forward to superlong runs not with dread, but anticipation. How had Barefoot Ted put it? *Like fish slipping back into water.* Exactly. I felt like I was born to run.

And, according to three maverick scientists, I was.

CHAPTER 28

TWENTY YEARS EARLIER, in a tiny basement lab, a young scientist stared into a corpse and saw his destiny staring back.

At that moment, David Carrier was an undergraduate at the University of Utah. He was puzzling over a rabbit carcass, trying to figure out what the deal was with those bony things right over the butt. The bony things bugged him, because they weren't supposed to be there. David was the star student in Professor Dennis Bramble's evolutionary biology class, and he knew exactly what he was supposed to see whenever he cut into a mammal's abdomen. Those big belly muscles on the diaphragm? They need to anchor down on something strong, so they connect to the lumbar vertebra, just the way you'd lash a sail down to a boom. That's how it is for every mammal from a whale to a wombat—but not, apparently, for this rabbit; instead of grabbing hold of something sturdy, its belly muscles were connected to these flimsy chicken-wing-looking things.

David pushed one with his finger. Cool; it compressed like a Slinky, then sprang back out. But why, in all mammaldom, would a jackrabbit need a spring-loaded belly?

"That made me start thinking about what they do when they run, the way they arch their backs with every galloping stride," Carrier later told me. "When they push off with their hind legs, they extend the back, and as soon as they land on the front legs, the back bends

dorsally." Lots of mammals jackknife their bodies the same way, he mused. Even whales and dolphins move their tails up and down, while a shark slashes from side to side. "Think of an inchworming cheetah movement," David says. "Classic example."

Good; this was good. David was getting somewhere. Big cats and little rabbits run the same way, but one has Slinkies stuck to its diaphragm and one doesn't. One is fast, but the other has to be faster, at least for a little while. And why? Simple economics: if mountain lions ran down all the rabbits, you'd have no more rabbits and, eventually, no more mountain lions. But jackrabbits are born with a big problem: unlike other running animals, they don't have reserve artillery. They don't have antlers or horns or hard-kicking hooves, and they don't travel in the protection of herds. For rabbits, it's all or nothing; either they dart their way to safety, or they're cat food.

Okay, David thought, maybe the Slinkies have something to do with speed. So what makes you fast? David began ticking off components. Let's see. You need an aerodynamic body. Awesome reflexes. Power-loaded haunches. High-volume capillaries. Fast-twitch muscle fiber. Small, nimble feet. Rubbery tendons that return elastic energy. Skinny muscles near the paws, beefy muscles near the joints . . .

Damn. It didn't take David long to figure out he was heading toward a dead end. A lot of factors contribute to speed, and jackrabbits share most of them with their hunters. Instead of finding out how they were different, he was finding out how they were alike. So he tried a trick Dr. Bramble had taught him: when you can't answer the question, flip it over. Forget what makes something go fast—what makes it slow down? After all, it didn't just matter how fast a rabbit could go, but how fast it could *keep* going until it found a hole to dive down.

Now that one was easy: other than a lasso around the leg, the quickest way to bring a fast-moving mammal to a halt is by cutting off its wind. No more air equals no more speed; try sprinting while holding your breath sometime and see how far you get. Your muscles needs oxygen to burn calories and convert them into energy, so the better you are at exchanging gases—sucking in oxygen, blowing out carbon dioxide—the longer you can sustain your top speed. That's

why Tour de France cyclists keep getting caught with other people's blood in their veins; those illicit transfusions pack in extra red-blood cells, which carry lots of extra oxygen to their muscles.

Wait a second . . . that meant that for a jackrabbit to stay one hop ahead of those snapping jaws, it would need a little more air than the big mammal on its tail. David had a vision of a Victorian flying machine, one of those wacky but plausible contraptions rigged with pistons and steam valves and endless mazes of wheezing levers. Levers! Those Slinkies were beginning to make sense. They had to be levers that turbocharged the rabbit's lungs, pumping them in and out like a fireplace bellows.

David ran the numbers to see if his theory held up and . . . bingo! There it was, as elegant and niftily balanced as an Aesop's fable: Jackrabbits can hit forty-five miles per hour, but due to the extra energy needed to operate the levers (among other things), they can only sustain it for a half mile. Cougars, coyotes, and foxes, on the other hand, can go a lot farther but top out at forty miles per. The Slinkies balance the game, giving the otherwise defenseless jackrabbits exactly forty-five seconds to either live or die. Seek shelter quickly and live long, young Thumper; or get cocky about your speed and be dead in less than a minute.

"You know," he thought, "if you take away the levers, isn't it the same engineering for every other mammal?" Maybe that's why their diaphragms hooked on to the lumbar vertebra—not because the vertebra was sturdy and wouldn't move, but because it was stretchy and would. Because it *flexed!*

"It seemed obvious that when the animal pushed off and extended its back, it wasn't just for propulsion—it was also for respiration," David says. He imagined an antelope racing for its life across a dusty savannah, and behind it, a streaking blur. He focused on the blur, froze it in place, then clicked it forward a frame at a time:

Click—as the cheetah stretches long for a stride, its rib cage is pulled back, sucking air into the lungs and . . .

Click—now the front legs whip back until front and rear paws are touching. The cheetah's spine bends, squeezing the chest cavity and squishing the lungs empty of air and . . .

And there you had it—another Victorian breathing contraption, albeit with a little less turbo power.

David's heart was racing. Air! Our bodies were all about getting air! Flip the equation, as Dr. Bramble had taught him, and you have this: getting air may have determined the way we got our bodies.

God, it was so simple—and so mind-blowing. Because if David was right, he'd just solved the greatest mystery in human evolution. No one had ever figured out why early humans had separated themselves from all creation by taking their knuckles off the ground and standing up. It was to breathe! To open their throats, swell out their chests, and suck in air better than any other creature on the planet.

But that was just the beginning. Because the better you are at breathing, David quickly realized, the better you are at—

"Running? You're saying humans evolved to go running?"

Dr. Dennis Bramble listened with interest as David Carrier explained his theory. Then he casually took aim and blew it to smithereens. He tried to be gentle; David was a brilliant student with a truly original mind, but this time, Bramble suspected, he'd fallen victim to the most common mistake in science: the Handy Hammer Syndrome, in which the hammer in your hand makes everything look like a nail.

Dr. Bramble knew a little about David's life outside the classroom, and was aware that on sunny spring afternoons, David loved to bolt from the labs and go trail-running in the Wasatch Mountains, which lap right up to the back of the University of Utah campus. Dr. Bramble was a runner himself, so he understood the attraction, but you had to be careful with stuff like that; a biologist's biggest occupational hazard, second only to falling in love with your research assistants, was falling in love with your hobbies. You become your own test subject; you start seeing the world as a reflection of your own life, and your own life as a reference point for just about every phenomenon in the world.

"David," Dr. Bramble began. "Species evolve according to what they're good at, not what they're bad at. And as runners, humans aren't just bad—we're awful." You didn't even need to get into the biology; you could just look at cars and motorcycles. Four wheels are faster than two, because as soon as you go upright, you lose thrust, stability, and aerodynamics. Now transfer that design to animals. A tiger is ten feet long and shaped like a cruise missile. It's the drag

racer of the jungle, while humans have to putter along with their skinny legs, tiny strides, and piss-poor wind resistance.

"Yeah, I get it," David said. Once we came up off our knuckles, everything went to hell. We lost raw speed and upper-body power—*Good kid, Bramble thought. Learns quick.*

But David wasn't done. So why, David continued, would we give up strength *and* speed at the same time? That left us unable to run, unable to fight, unable to climb and hide in the tree canopy. We'd have been wiped out—unless we got something pretty amazing in exchange. Right?

That, Dr. Bramble had to admit, was a damn clever way to put the question. Cheetahs are fast but frail; they have to hunt by day to avoid nocturnal killers like lions and panthers, and they abandon their kills and run for cover when scrappy little thugs like hyenas show up. A gorilla, on the other hand, is strong enough to lift a four-thousand-pound SUV, but with a gorilla's land speed of twenty miles per hour, that same SUV could run it over in first gear. And then we have humans, who are part cheetah, part gorilla—we're slow *and* wimpy.

"So why would we evolve into a *weaker* creature, instead of a stronger one?" David persisted. "This was long before we could make weapons, so what was the genetic advantage?"

Dr. Bramble played the scenario out in his head. He imagined a tribe of primitive hominids, all squat, quick, and powerful, keeping their heads low for safety as they scrambled nimbly through the trees. One day, out pops a slow, skinny, sunken-chested son who's barely bigger than a woman and keeps making a tiger target out of himself by walking around in the open. He's too frail to fight, too slow to run away, too weak to attract a mate who'll bear him children. By all logic, he's marked for extinction—yet somehow, this dweeb becomes the father of all mankind, while his stronger, swifter brothers disappear into oblivion.

That hypothetical account was actually a pretty accurate description of the Neanderthal Riddle. Most people think Neanderthals were our ancestors, but they were actually a parallel species (or subspecies, some say) that competed with *Homo sapiens* for survival. "Competed," actually, is being kind; the Neanderthals had us beat any way you keep score. They were stronger, tougher, and probably

smarter: they had burlier muscles, harder-to-break bones, better natural insulation against the cold, and, the fossil record suggests, a bigger brain. Neanderthals were fantastically gifted hunters and skilled weapon-makers, and may very well have acquired language before we did. They had a huge head start in the race for world domination; by the time the first *Homo sapiens* appeared in Europe, Neanderthals had already been cozily established there for nearly two hundred thousand years. If you had to choose between Neanderthals and Early Us in a Last Man Standing contest, you'd go Neanderthal all the way.

So—where are they?

Within ten thousand years of the arrival of *Homo sapiens* in Europe, the Neanderthals vanished. How it happened, no one knows. The only explanation is that some mysterious X Factor gave us—the weaker, dumber, skinnier creatures—a life-or-death edge over the Ice Age All-Stars. It wasn't strength. It wasn't weapons. It wasn't intelligence.

Could it have been running ability? Dr. Bramble wondered. Is David really onto something?

There was only one way to find out: go to the bones.

"At first I was very skeptical of David, for the same reason most morphologists would be," Dr. Bramble later told me. Morphology is basically the science of reverse engineering; it looks at how a body is assembled and tries to figure out how it's supposed to function. Morphologists know what to look for in a fast-moving machine, and in no way did the human body match the specs. All you had to do was look at our butts to figure that out. "In the whole history of vertebrates on Earth—the whole history—humans are the only running biped that's tailless," Bramble would later say. Running is just a controlled fall, so how do you steer and keep from smacking down on your face without a weighted rudder, like a kangaroo's tail?

"That's what led me, like others, to dismiss the idea that humans evolved as running animals," Bramble said. "And I would have bought into the story and remained a skeptic, if I hadn't also been trained in paleontology."

Dr. Bramble's secondary expertise in fossils allowed him to compare how the human blueprint had been modified over the millennia and check it against other designs. Right off the bat, he began finding things that didn't fit. "Instead of looking at the conventional list, like

most morphologists, and ticking off the things I expected to see, I began focusing on the abnormalities," Bramble said. "In other words, what's there that shouldn't be there?" He began by splitting the animal kingdom into two categories: runners and walkers. Runners include horses and dogs; walkers are pigs and chimps. If humans were designed to walk most of the time and run only in emergencies, our mechanical parts should match up pretty closely to those of other walkers.

Common chimps were the perfect place to start. Not only are they a classic example of the walking animal, but they're also our closest living relative; after more than six million years of separate evolution, we still share 95 percent of our DNA sequence with chimps. But what we don't share, Bramble noted, is an Achilles tendon, which connects the calf to the heel: we've got one, chimps don't. We have very different feet: ours are arched, chimps' are flat. Our toes are short and straight, which helps running, while chimps' are long and splayed, much better for walking. And check out our butts: we've got a hefty gluteus maximus, chimps have virtually none. Dr. Bramble then focused on a little-known tendon behind the head known as the nuchal ligament. Chimps don't have a nuchal ligament. Neither do pigs. Know who does? Dogs. Horses. And humans.

Now this was perplexing. The nuchal ligament is useful only for stabilizing the head when an animal is moving fast; if you're a walker, you don't need one. Big butts are only necessary for running. (See for yourself: clutch your butt and walk around the room sometime. It'll stay soft and fleshy, and only tighten up when you start to run. Your butt's job is to prevent the momentum of your upper body from flipping you onto your face.) Likewise, the Achilles tendon serves no purpose at all in walking, which is why chimps don't have one. Neither did *Australopithecus*, our semi-simian four-million-year-old ancestor; evidence of an Achilles tendon only began to appear two million years later, in *Homo erectus*.

Dr. Bramble then took a closer look at the skulls and got a jolt. *Holy moly!* he thought. *There's something going on here.* The back of the *Australopithecus* skull was smooth, but when he checked *Homo erectus*, he found a shallow groove for a nuchal ligament. A mystifying but unmistakable time line was taking shape: as the human body changed over time, it adopted key features of a running animal.

Weird, Bramble thought. *How come we acquired all this specialized running stuff, and other walkers didn't?* For a walking animal, the Achilles would just be a liability. Moving on two legs is like walking on stilts; you plant your foot, pivot your body weight over the leg, and repeat. The last thing you'd want would be stretchy, wobbly tendons right at your base of support. All an Achilles tendon does is stretch like a rubber band—

A rubber band! Dr. Bramble felt twin surges of pride and embarrassment. Rubber bands . . . There he'd been, thumping his chest about not being like all those other morphologists who "tick off the things they expect to see," when all along, he'd been just as misguided by myopia; he hadn't even thought about the rubber-band factor. When David started talking about running, Dr. Bramble assumed he meant speed. But there are *two* kinds of great runners: sprinters and marathoners. Maybe human running was about going *far*, not fast. That would explain why our feet and legs are so dense with springy tendons—because springy tendons store and return energy, just like the rubber-band propellers on balsa-wood airplanes. The more you twist the rubber band, the farther the plane flies; likewise, the more you can stretch the tendons, the more free energy you get when that leg extends and swings back.

And if I were going to design a long-distance running machine, Dr. Bramble thought, that's exactly what I'd load it with—lots of rubber bands to maximize endurance. Running is really just jumping, springing from one foot to another. Tendons are irrelevant to walking, but great for energy-efficient jumping. So forget speed; maybe we were born to be the world's greatest marathoners.

"And you've got to ask yourself why only one species in the world has the urge to gather by the tens of thousands to run twenty-six miles in the heat for fun," Dr. Bramble mused. "Recreation has its reasons."

Together, Dr. Bramble and David Carrier began putting their World's Greatest Marathoner model to the test. Soon, evidence was turning up all over, even in places they weren't looking. One of their first big discoveries came by accident when David took a horse for a jog. "We wanted to videotape a horse to see how its gait coordinated with its breathing," Dr. Bramble says. "We needed someone to keep the gear from getting tangled, so David ran alongside it." When they

played back the tape, something seemed strange, although Bramble couldn't figure out what it was. He had to rewind a few times before it hit him: even though David and the horse were moving at the same speed, David's legs were moving more slowly.

"It was astonishing," Dr. Bramble explains. "Even though the horse has long legs and four of them, David had a longer stride." David was in great shape for a scientist, but as a medium-height, medium-weight, middle-of-the-pack runner, he was perfectly average. That left only one explanation: as bizarre as it may seem, the average human has a longer stride than a horse. The horse looks like it's taking giant lunges forward, but its hooves swing back before touching the ground. The result: even though biomechanically smooth human runners have short strides, they still cover more distance per step than a horse, making them more efficient. With equal amounts of gas in the tank, in other words, a human can theoretically run farther than a horse.

But why settle for theory when you can put it to the test? Every October, a few dozen runners and riders face off in the 50-mile Man Against Horse Race in Prescott, Arizona. In 1999, a local runner named Paul Bonnet passed the lead horses on the steep climb up Mingus Mountain and never saw them again till after he'd crossed the finish line. The following year, Dennis Poolheco began a remarkable streak: he beat every man, woman, and steed for the next six years, until Paul Bonnet wrested the title back in 2006. It would take eight years before a horse finally caught up with those two and won again.

Discoveries like these, however, were just happy little extras for the two Utah scientists as they tunneled closer to their big breakthrough. As David had suspected on the day he peered into a rabbit's carcass and saw the history of life staring back at him, evolution seemed to be all about air; the more highly evolved the species, the better its carburetor. Take reptiles: David put lizards on a treadmill, and found they can't even run and breathe at the same time. The best they can manage is a quick scramble before stopping to pant.

Dr. Bramble, meanwhile, was working a little higher up the evolutionary ladder with big cats. He discovered that when many quadrupeds run, their internal organs slosh back and forth like water in a bathtub. Every time a cheetah's front feet hit the ground, its guts

slam forward into the lungs, forcing out air. When it reaches out for the next stride, its innards slide rearward, sucking air back in. Adding that extra punch to their lung power, though, comes at a cost: it limits cheetahs to just one breath per stride.

Actually, Dr. Bramble was surprised to find that *all* running mammals are restricted to the same cycle of take-a-step, take-a-breath. In the entire world, he and David could only find one exception:

You.

"When quadrupeds run, they get stuck in a one-breath-per-locomotion cycle," Dr. Bramble said. "But the human runners we tested *never* went one to one. They could pick from a number of different ratios, and generally preferred two to one." The reason we're free to pant to our heart's content is the same reason you need a shower on a summer day: we're the only mammals that shed most of our heat by sweating. All the pelt-covered creatures in the world cool off primarily by breathing, which locks their entire heat-regulating system to their lungs. But humans, with our millions of sweat glands, are the best air-cooled engine that evolution has ever put on the market.

"That's the benefit of being a naked, sweating animal," David Carrier explains. "As long as we keep sweating, we can keep going." A team of Harvard scientists had once verified exactly that point by sticking a rectal thermometer in a cheetah and getting it to run on a treadmill. Once its temperature hit 105 degrees, the cheetah shut down and refused to run. That's the natural response for all running mammals; when they build up more heat in their bodies than they can puff out their mouths, they have to stop or die.

Fantastic! Springy legs, twiggy torsos, sweat glands, hairless skin, vertical bodies that retain less sun heat—no wonder we're the world's greatest marathoners. But so what? Natural selection is all about two things—eating and not getting eaten—and being able to run twenty miles ain't worth a damn if the deer disappears in the first twenty seconds and a tiger can catch you in ten. What good is endurance on a battlefield built on speed?

That's the question Dr. Bramble was mulling in the early '90s when he was on sabbatical and met Dr. Dan Lieberman during a visit to Harvard. At the time, Lieberman was working on the other end of

the animal Olympics; he had a pig on a treadmill and was trying to figure out why it was such a lousy runner.

"Take a look at its head," Bramble pointed out. "It wobbles all over the place. Pigs don't have a nuchal ligament."

Lieberman's ears perked up. As an evolutionary anthropologist, he knew that nothing on our bodies has changed as much as the shape of our skulls, or says more about who we are. Even your breakfast burrito plays a role; Lieberman's investigations had revealed that as our diet shifted over the centuries from chewy stuff like raw roots and wild game and gave way to mushy cooked staples like spaghetti and ground beef, our faces began to shrink. Ben Franklin's face was chunkier than yours; Caesar's was bigger than his.

The Harvard and Utah scientists got along right from the start, mostly because of Lieberman's eyes: they didn't roll when Bramble briefed him on the Running Man theory. "No one in the scientific community was willing to take it seriously," Bramble said. "For every one paper on running, there were four thousand on walking. Whenever I'd bring it up at conferences, everyone would always say, 'Yeah, but we're slow.' They were focused on speed and couldn't understand how endurance could be an advantage."

Well, to be fair, Bramble hadn't really figured that one out yet, either. As biologists, he and David Carrier could decipher how the machine was designed, but they needed an anthropologist to determine what that design could actually do. "I knew a lot about evolution and a little about locomotion," Lieberman says. "Dennis knew a shitload about locomotion, but not so much about evolution."

As they traded stories and ideas, Bramble could tell that Lieberman was his kind of lab partner. Lieberman was a scientist who believed that being hands-on meant being prepared to soak them in blood. For years, Lieberman had organized a Cro-Magnon barbecue on a Harvard Yard lawn as part of his human evolution class. To demonstrate the dexterity necessary to operate primitive tools, he'd get his students to butcher a goat with sharpened stones, then cook it in a pit. As soon as the aroma of roasting goat spread and the post-butchered libations began flowing, homework turned into a house party. "It eventually evolved into a kind of bacchanalian feast," Lieberman told the *Harvard University Gazette*.

But there was an even more important reason that Lieberman was

the perfect guy to tackle the Running Man mystery: the solution seemed to be linked to his specialty, the head. Everyone knew that at some point in history, early humans got access to a big supply of protein, which allowed their brains to expand like a thirsty sponge in a bucket of water. Our brains kept growing until they were seven times larger than the brains of any comparable mammal. They also sucked up an ungodly number of calories; even though our brains account for only 2 percent of our body weight, they demand 20 percent of our energy, compared with just 9 percent for chimps.

Dr. Lieberman threw himself into Running Man research with his usual creative zeal. Soon, students dropping by Lieberman's office on the top floor of Harvard's Peabody Museum were startled to find a sweat-drenched one-armed man with an empty cream-cheese cup strapped to his head running on a treadmill. "We humans are weird," Lieberman said as he punched buttons on the control panel. "No other creature has been found with a neck like ours." He paused to shout a question to the man on the treadmill. "How much faster can you go, Willie?"

"Faster than this thing!" Willie called back, his steel left hand clanging against the treadmill rail. Willie Stewart lost his arm when he was eighteen after a steel cable he was carrying on a construction job got caught in a whirling turbine, but he recovered to become a champion triathlete and rugby player. In addition to the cream-cheese cup, which was being used to secure a gyroscope, Willie also had electrodes taped to his chest and legs. Dr. Lieberman had recruited him to test his theory that the human head, with its unique position directly on top of the neck, acts like the roof weights used to prevent skyscrapers from pitching in the wind. Our heads didn't just expand because we got better at running, Lieberman believed; we got better at running because our heads were expanding, thereby providing more ballast.

"Your head works with your arms to keep you from twisting and swaying in midstride," Dr. Lieberman said. The arms, meanwhile, also work as a counterbalance to keep the head aligned. "That's how bipeds solved the problem of how to stabilize a head with a movable neck. It's yet another feature of human evolution that only makes sense in terms of running."

But the big mystery continued to be food. Judging by the

Godzilla-like growth of our heads, Lieberman could pinpoint the exact moment when the caveman menu changed: it had to be two million years ago, when apelike *Australopithecus*—with his tiny brain, giant jaw, and billy-goat diet of tough, fibrous plants—evolved into *Homo erectus*, our slim, long-legged ancestor with the big head and small, tearing teeth perfectly suited for raw flesh and soft fruits. Only one thing could have sparked such a dramatic makeover: a diet no primate had ever eaten before, featuring a reliable supply of meat, with its high concentrations of calories, fat, and protein.

"So where the fuck did they get it?" Lieberman asks, with all the gusto of a man who's not squeamish about hacking into goats with a rock. "The bow and arrow is twenty thousand years old. The spear-head is two hundred thousand years old. But *Homo erectus* is around two *million* years old. That means that for most of our existence—for nearly two million years!—hominids were getting meat with their bare hands."

Lieberman began playing the possibilities out in his mind. "Maybe we pirated carcasses killed by other predators?" he asked himself. "Scooting in and grabbing them while the lion was sleeping?"

No; that would give us an appetite for meat but not dependable access. You'd have to get to a kill site before the vultures, who can strip an antelope in minutes and "chew bones like crackers," as Lieberman likes to say. Even then, you might only tear off a few mouthfuls before the lion opened a baleful eye or a pack of hyenas drove you away.

"Okay, maybe we didn't have spears. But we could have jumped on a boar and throttled it. Or clubbed it to death."

Are you kidding? With all that thrashing and goring, you'd get your feet crushed, your testicles torn, your ribs broken. You'd win, but you'd pay for it; break an ankle in the prehistoric wilderness while hunting for dinner, and you might become dinner yourself.

There's no telling how long Lieberman would have remained stumped if his dog hadn't finally given him the answer. One summer afternoon, Lieberman took Vashti, his mutty half border collie, for a five-mile jog around Fresh Pond. It was hot, and after a few miles, Vashti plopped down under a tree and refused to move. Lieberman got impatient; yeah, it was a little warm, but not *that* bad....

As he waited for his panting dog to cool off, Lieberman's mind flashed back to his time doing fossil research in Africa. He recalled the shimmering waves across the sun-scorched savannah, the way the dry clay soaked up the heat and beamed it right back up through the soles of his boots. Ethnographers' reports he'd read years ago began flooding his mind; they told of African hunters who used to chase antelope across the savannahs, and Tarahumara Indians who would race after a deer "until its hooves fell off." Lieberman had always shrugged them off as tall tales, fables of a golden age of heroes who'd never really existed. But now, he started to wonder....

So how long would it take to actually run an animal to death? he asked himself. Luckily, the Harvard bio labs have the best locomotive research in the world (as their willingness to insert a thermometer in a cheetah's butt should make clear), so all the data Lieberman needed was right at his fingertips. When he got back to his office, he began punching in numbers. *Let's see,* he began. A jogger in decent shape averages about three to four meters a second. A deer trots at almost the identical pace. But here's the kicker: when a deer wants to accelerate to four meters a second, it has to break into a heavy-breathing gallop, *while a human can go just as fast and still be in his jogging zone.* A deer is way faster at a sprint, but we're faster at a jog; so when Bambi is already edging into oxygen debt, we're barely breathing hard.

Lieberman kept looking, and found an even more telling comparison: the top galloping speed for most horses is 7.7 meters a second. They can hold that pace for about ten minutes, then have to slow to 5.8 meters a second. But an elite marathoner can jog for hours at 6 meters a second. The horse will erupt away from the starting line, as Dennis Poolheco had discovered in the Man Against Horse Race, but with enough patience and distance, you can slowly close the gap.

You don't even have to go fast, Lieberman realized. *All you have to do is keep the animal in sight, and within ten minutes, you're reeling him in.*

Lieberman began calculating temperatures, speed, and body weight. Soon, there it was before him: the solution to the Running Man mystery. To run an antelope to death, Lieberman determined, all you have to do is scare it into a gallop on a hot day. "If you keep just close enough for it to see you, it will keep sprinting away. After about ten or fifteen kilometers' worth of running, it will go into

hyperthermia and collapse." Translation: if you can run six miles on a summer day, then you, my friend, are a lethal weapon in the animal kingdom. We can dump heat on the run, but animals can't pant while they gallop.

"We can run in conditions that no other animal can run in," Lieberman realized. "And it's not even hard. If a middle-aged professor can outrun a dog on a hot day, imagine what a pack of motivated hunter-gatherers could do to an overheated antelope."

It's easy to picture the scorn on the faces of those Masters of the Universe, the Neanderthals, as they watched these new Running Men puffing along behind bouncy little Bambis, or jogging all day under a hot sun to return with nothing but an armload of yams. The Running Men could get a load of meat by running, but they couldn't run with a belly load of meat, so most of the time they carbo-loaded on roots and fruits, saving the antelope chops for special, calorie-boosting occasions. Everyone scavenged together—Running Men, Running Women, Running Kids, and Grampies—but despite all that team activity, they were more likely to dine on grubs than wild game.

Bleb. Neanderthals wouldn't touch bugs and dirt food; they ate meat and only meat, and not gristly little antelopes, either. Neanderthals went Grade A all the way: bears, bison, and elk marbled with juicy fat, rhinos with livers rich in iron, mammoths with luscious, oily brains and bones dripping with lip-smacking marrow. Try chasing monsters like those, though, and they'll be chasing you. Instead, you've got to outsmart and outfight them. The Neanderthals would lure them into ambushes and launch a pincer attack, storming from all sides with eight-foot wooden lances. Hunting like that isn't for the meek; Neanderthals were known to suffer the kind of injuries you find on the rodeo circuit, neck and head trauma from getting thrown by bucking beasts, but they could count on their band of brothers to care for their wounds and bury their bodies. Unlike our true ancestors, those scampering Running Men, the Neanderthals were the mighty hunters we like to imagine we once were; they stood shoulder to shoulder in battle, a united front of brains and bravery, clever warriors armored with muscle but still refined enough to slow-cook their meat to tenderness in earth ovens and keep their women and children away from the danger.

Neanderthals ruled the world—till it started getting nice outside. About forty-five thousand years ago, the Long Winter ended and a hot front moved in. The forests shrank, leaving behind parched grasslands stretching to the horizon. The new climate was great for the Running Men; the antelope herds exploded and feasts of plump roots were pushing up all over the savannah.

The Neanderthals had it tougher; their long spears and canyon ambushes were useless against the fleet prairie creatures, and the big game they preferred was retreating deeper into the dwindling forests. Well, why didn't they just adopt the hunting strategy of the Running Men? They were smart and certainly strong enough, but that was the problem; they were *too* strong. Once temperatures climb above 90 degrees Fahrenheit, a few extra pounds of body weight make a huge difference—so much so that to maintain heat balance, a 160-pound runner would lose nearly three minutes *per mile* in a marathon against a one hundred-pound runner. In a two-hour pursuit of a deer, the Running Men would leave the Neanderthal competition more than ten miles behind.

Smothered in muscle, the Neanderthals followed the mastodons into the dying forest, and oblivion. The new world was made for runners, and running just wasn't their thing.

Privately, David Carrier knew the Running Man theory had a fatal flaw. The secret gnawed until it nearly turned him into a killer.

"Yeah, I was kind of obsessed," he admitted when I met him at his lab in the University of Utah, twenty-five years and three academic degrees since his moment of inspiration at the dissecting table in 1982. He was now David Carrier, Ph.D., professor of biology, with gray in his push-broom mustache and rimless round glasses over his intense brown eyes. "I was dying to just grab something with my own two hands and say, 'Look! Satisfied now?'"

The problem was this: Chasing an animal to death is evolution's version of the perfect crime. Persistence hunting (as it's known to anthropologists) leaves behind no forensics—no arrowheads, no spear-nicked deer spines—so how do you build a case that a killing took place when you can't produce a corpse, a weapon, or witnesses? Despite Dr. Bramble's physiological brilliance and Dr. Lieberman's fossil expertise, there was no way they could prove that our legs were

once lethal weapons if they couldn't show that *someone*, somewhere, had actually run an animal to death. You can spout any theory you want about human performance ("We can suspend our own heartbeats! We can bend spoons with our brains!") but in the end, you can't make the shift from appealing notion to empirical fact if you don't come up with the goods.

"The frustrating thing is, we were finding stories all over the place," David Carrier said. Throw a dart at the map, and chances are you'll bull's-eye the site of a persistence-hunting tale. The Goshutes and Papago tribes of the American West told them; so did the Kalahari Bushmen in Botswana, the Aborigines in Australia, Masai warriors in Kenya, the Seri and Tarahumara Indians in Mexico. The trouble was, those legends were fourth- or fifth-hand at best; there was as much evidence to support them as there was that Davy Crockett kilt him a b'ar when he was only three.

"We couldn't find anyone who'd done a persistence hunt," David said. "We couldn't find someone who'd even *seen* one." No wonder the scientific community remained skeptical. If the Running Man theory was right, then at least one person on this planet of six billion should still be able to catch quarry on foot. We may have lost the tradition and necessity, but we should still have the native ability: our DNA hasn't changed in centuries and is 99.9 percent identical across the globe, meaning we've all got the same stock parts as any ancient hunter-gatherer. So how come none of us could catch a stinking deer?

"That's why I decided to do it myself," David said. "As an undergrad, I got into mountain races and had a lot of fun at those. So when it came to how humans breathe differently when we run, I think it was easier for me to see how it could affect us as a species. The idea didn't seem as strange to me as it would for someone who never left the lab."

Nor did it seem strange to him that if he couldn't find a caveman, he could become one. In the summer of 1984, David persuaded his brother, Scott, a freelance writer and reporter for National Public Radio, to go to Wyoming and help him catch a wild antelope. Scott wasn't much of a runner, but David was in great shape and fiercely motivated by the lure of scientific immortality. Between him and his

brother, David figured, it should take only two hours before eight hundred pounds of proof was flopping at his feet.

"We drive off the interstate and down a dirt road for a few miles and it's a wide and open high desert of sagebrush, dry as a bone, mountains in every direction. There are antelope everywhere." That's how Scott later painted the scene for listeners on NPR's *This American Life*. "We stop the car and start running after three—a buck and two does. They run very quickly, but for short distances, and then stop and stare at us till we catch up. Then they take off again. Sometimes they run a quarter of a mile, sometimes a half mile."

Perfect! It was playing out exactly as David had predicted. The antelope weren't getting enough time to cool off before David and Scott were *yip-yip-yaahooing* on their tails again. A few more miles of this, David figured, and he'd be heading back to Salt Lake with a trunk full of venison and a killer video to slap down on Dr. Bramble's desk. His brother, on the other hand, sensed something very different going on.

"The three antelope look at me like they know exactly what we're proposing, and they're not the least bit worried," Scott continues. It didn't take him long to find out why they were so calm in the face of what should have been impending death. Instead of flopping over in exhaustion, the antelope pulled a shell game; when they got winded, they circled back and hid in the herd, leaving David and Scott no idea which antelopes were tired and which were fresh. "They blend and flow and change positions," Scott says. "There are no individuals, but this mass that moves across the desert like a pool of mercury on a glass table."

For two more days, the two brothers chased mercury balls across the Wyoming plains, never realizing they were in the midst of a magnificent mistake. David's failure was unwitting proof of his own theory: human running is different from any other running on earth. You can't catch other animals by copying them, and especially not by using the crude approximation of animal running we've preserved in sports. David and Scott were relying on instinct, strength, and stamina, without realizing that human distance running, at its evolutionary best, is much more than that; it's a blend of strategy and skill perfected during millions of years of do-or-die decisions. And like

any other fine art, human distance running demands a brain-body connection that no other creature is capable of.

But it's a lost art, as Scott Carrier would spend the next decade discovering. Something strange happened out there on the Wyoming plains: the lure of the lost art got into Scott's blood and wouldn't let go. Despite the hopelessness of that expedition, Scott spent years researching persistence hunting on his brother's behalf. He even created a nonprofit corporation devoted to finding the Last of the Long Distance Hunters, and recruited elite ultrarunner Creighton King—the Double Grand Canyon record holder before the Skaggs bros came along—to join an expedition to the Sea of Cortez, where word had it that a tiny clan of Seri Indians had preserved the link to our distance-running past.

Scott found the clan—but he found them too late. Two elders had learned old-style running from their father, but they were a half century out of practice and too old to even demonstrate.

That was the end of the trail. By 2004, the hunt for that one person in six billion had lasted twenty years and gone nowhere. Scott Carrier gave up. David Carrier had moved on long before, and was now studying physical-combat structures in primates. The Last of the Long Distance Hunters was a cold case.

Naturally, that's when the phone rang.

"So, out of the blue, I find myself talking to this stranger," Dr. Bramble begins. He looks like an old cowpoke, with his shaggy gray hair and crisp rancher's shirt, and it's a style that perfectly matches the dried animal skulls on the walls of his lab and his entralling, gather-round-the-campfire storytelling. By 2004, Dr. Bramble says, the Utah-Harvard team had identified twenty-six distance-running markers on the human body. With little hope of ever finding the Last Hunter, they decided to go ahead and publish their findings anyway. *Nature* magazine put them on the cover, and a copy apparently made its way to a beach town on the South African coast, because that's where this call was coming from.

"It's not hard to run an antelope to death," the stranger said. "I can show you how it's done."

"Sorry—who are you?"

"Louis Liebenberg. From Noordhoek."

Bramble knew all the top names in the running-theory field, which wasn't hard since they could fit around a diner booth. Louis Liebenberg from Noordhoek he'd never heard of.

"Are you a hunter?" Bramble asked.

"Me? No."

"Oh . . . anthropologist?"

"No."

"What's your field?"

"Math. Math and physics."

Math? "Uh . . . how did a mathematician run down an antelope?"

Bramble heard a snort of laughter. "By accident, mostly."

It's eerie how the lives of Louis Liebenberg and David Carrier spiraled each other for decades without either of them knowing it. Back in the early '80s, Louis was also an undergraduate in college and, like David, he was suddenly electrified by an insight into human evolution that few others believed in.

Part of Louis's problem was his expertise: he had none. At the time, he was barely twenty and majoring in applied mathematics and physics at the University of Cape Town. It was while taking an elective course in the philosophy of science that he started wondering about the Big Bang of the human mind. How did we leap from basic survival thinking, like that of other animals, to wildly complicated concepts like logic, humor, deduction, abstract reasoning, and creative imagination? Okay, so primitive man upgraded his hardware with a bigger brain—but where did he get the software? Growing a bigger brain is an organic process, but being able to use that brain to project into the future and mentally connect, say, a kite, a key, and a lightning bolt and come up with electrical transference was like a touch of magic. So where did that spark of inspiration come from?

The answer, Louis believed, was out in the deserts of southern Africa. Even though he was a city kid who knew jack about the outdoors, he had a hunch that the best place to look for the birth of human thought was the place where human life began. "I had a vague gut feeling that the art of animal tracking could represent the origin of science itself," Louis says. Then who better to study than the

Bushmen of the Kalahari Desert, who were both masters of animal tracking and living remnants of our prehistoric past?

So, at age twenty-two, Louis decided to drop out of college and write a new chapter in natural history by testing his theory with the Bushmen. It was an insanely ambitious plan for a college dropout with zero experience in anthropology, wilderness survival, or scientific method. He spoke neither the Bushmen's native tongue, !Kabee, nor their adopted one, Afrikaans. He didn't even know anything about animal tracking, the reason he was going in the first place. But so what? Louis shrugged, and got to work. He found an Afrikaans translator, made contact with hunting guides and anthropologists, and eventually set off down the Trans-Kalahari Highway into Botswana, Namibia . . . and the unknown.

Like Scott Carrier, Louis soon discovered that he was losing a race against time. "I went village to village looking for Bushmen who hunt with bow and arrow, since they'd have the tracking skills," Louis says. But with big-game safaris and ranchers taking over their old game lands, most of the Bushmen had abandoned the nomadic life and were living on government settlements. Their decline was heartbreaking; instead of roaming the wilderness, many of the Bushmen were surviving on slave wages for farm jobs and seeing their sisters and daughters recruited by truck-stop bordellos.

Louis kept searching. Far out in the Kalahari, he finally came across a renegade band of Bushmen who, he says, "stubbornly clung to freedom and independence and wouldn't subject themselves to manual labor or prostitution." As it turned out, the search for One in Six Billion was just about mathematically correct: in all the Kalahari, only six true hunters remained.

The renegades agreed to let Louis hang around, an offer he took to the extreme; once installed, Louis acted like an unemployed in-law, basically squatting with the Bushmen for the next four years. The city kid from Cape Town learned to live on the Bushman diet of roots, berries, porcupine, and ratlike springhares. He learned to keep his campfire burning and tent zipped even on the most sweltering nights, since packs of hyenas were known to drag people from open shelters and tear out their throats. He learned that if you stumble upon an angry lioness and her cubs, you stand tall and make her back down, but in the same situation with a rhino, you run like hell.

When it comes to mentors, you can't beat survival; just trying to fill his belly every day and avoid pissing off, for instance, two black-backed jackals mating beneath a baobob was an excellent way for Louis to begin absorbing the wizardry of a master tracker. He learned to look at piles of zebra dung and distinguish which droppings came from which animal; intestines, he discovered, have ridges and grooves that leave unique patterns on feces. Learn to tell them apart, and you can single out a zebra from an exploding herd and track it for days by its distinctive droppings. Louis learned to hunch over a set of fox tracks and re-create exactly what it was doing: here, it was moving slowly as it scented around for mice and scorpions, and look, that's where it trotted off with something in its mouth. A swirl of swept dirt told him where an ostrich had taken a dust bath, and let him backtrack to find its eggs. Meerkats make their warrens in hardpan, so why were they digging here in soft sand? Must mean there's a den of tasty scorpions. . . .

Even after you learn to read dirt, you ain't learned nothing; the next level is tracking without tracks, a higher state of reasoning known in the lit as "speculative hunting." The only way you can pull it off, Louis discovered, was by projecting yourself out of the present and into the future, transporting yourself into the mind of the animal you're tracking. Once you learn to think like another creature, you can anticipate what it will do and react before it ever acts. If that sounds a little Hollywood, then you've seen your share of movies about impossibly clairvoyant FBI profilers who can "see with the eyes of a killer." But out there on the Kalahari plains, mind-throwing was a very real and potentially deadly talent.

"When tracking an animal, one attempts to think like an animal in order to predict where it is going," Louis says. "Looking at its tracks, one visualizes the motion of the animal and feels that motion in one's own body. You go into a trancelike state, the concentration is so intense. It's actually quite dangerous, because you become numb to your own body and can keep pushing yourself until you collapse."

Visualization . . . empathy . . . abstract thinking and forward projection: aside from the keeling-over part, isn't that exactly the mental engineering we now use for science, medicine, the creative arts? "When you track, you're creating causal connections in your mind, because you didn't actually see what the animal did," Louis realized.

"That's the essence of physics." With speculative hunting, early human hunters had gone beyond connecting the dots; they were now connecting dots that existed only in their minds.

One morning, four of the renegade Bushmen—!Nate, !Nam!kabe, Kayate, and Boro/xao—woke Louis up before dawn to invite him on a special hunt. Don't eat any breakfast, they warned him, and drink all the water you can hold. Louis downed a mug of coffee, grabbed his boots, and fell in behind the hunters as they marched off across the savannah in the dark. The sun rose until it was broiling over their heads, but the hunters pushed on. Finally, after walking nearly twenty miles, they spotted a clutch of kudu, an especially agile form of antelope. That's when the Bushmen started to run.

Louis stood there, confused. He knew the standard Bushman bow-hunting drill: drop to your belly, creep into arrow range, let fly. So what the hell was this all about? He'd heard a little about persistence hunts, but he ranked them somewhere between an accident and a lie: either the animal had actually broken its neck while fleeing, or the story was out-and-out baloney. No way these guys were going to catch one of those kudus on foot. No way. But the more he said "No way," the farther away the Bushmen got, so Louis quit thinking and started running.

"This is how we do it," !Nate said when a panting Louis caught up. The four hunters ran swiftly but easily behind the bounding kudu. Whenever the animals darted into an acacia grove, one of the hunters broke from the group and drove the kudu back into the sun. The herd would scatter, re-form, scatter again, but the four Bushmen ran and swerved behind a single kudu, cutting it out of the herd whenever it tried to blend, flushing it from the trees whenever it tried to rest. If they had a doubt about which one to chase, they dropped to the ground, checked the tracks, and adjusted their pursuit.

As he gasped along behind the band, Louis was surprised to find !Nate, the strongest and most skilled hunter of the renegade Bushmen, hanging back with him. !Nate wasn't even carrying a canteen like the other hunters. Nearly ninety minutes into the pursuit, Louis discovered why: when one of the older hunters tired and dropped out, he handed his canteen to !Nate. !Nate drank it dry, then traded it for a half-full one when a second runner dropped out.

Louis staggered along behind, determined to see the hunt through to the end. He was bitterly regretting his choice of heavy bush boots; the Bushmen traditionally wore light, giraffe-skin moccasins, and now had on thin, flimsy sneakers that let their feet cool on the fly. Louis felt the way the kudu looked; he watched it weave drunkenly . . . its front knees buckled, straightened . . . it recovered and bounded away . . . then crashed to the ground.

So did Louis. By the time he got to the fallen kudu, he was so overheated he'd stopped sweating. He pitched facedown into the sand. "When you're focused on the hunt, you push to the limits. You're not aware you're exhausted," Louis later explained. In a way, he'd triumphed; Louis had managed to cross over and run as hard as if he were the one being pursued. Where he failed was not knowing to check his own footprints; because it's so easy to become numb to your own vital signs, the Bushmen learned long ago to periodically check their own tracks. If their prints looked as bad as the kudu's, they'd stop, wash their faces, hold a mouthful of water and slowly let it trickle down their throats. After the final swallow, they'd walk and check their tracks again.

Louis's head was pounding and his dry eyes were going blurry. He was barely conscious, but still alert enough to be really scared; he was lying in the desert in 107-degree heat, and he knew he had only one chance to save his life. He fumbled for his belt knife and reached toward the dead kudu. If he could slash it open, he could suck the water from its stomach.

"NO!" !Nate stopped Louis. Unlike other antelopes, kudus eat acacia leaves, which are poisonous for humans. !Nate calmed Louis, told him to hold on a little longer, and took off running: even though !Nate had already hiked twenty miles and run fifteen, he was able to run twelve more miles to bring Louis back some water. !Nate wouldn't let him drink it. First, he rinsed Louis's head, then he washed his face, and only after Louis's skin began to cool did !Nate allow him tiny sips.

Later, after !Nate had helped him back to camp, Louis marveled at the ruthless efficiency of the persistence hunt. "It's much more efficient than a bow and arrow," he observed. "It takes a lot of attempts to get a successful hunt by bow. You can hit the animal and still lose it, or scavengers can smell blood and get to it before you do,

or it can take all night for the poison on the arrow tips to work. Only a small percentage of arrow shots are successful, so for the number of days hunting, the meat yield of a persistence hunt is much higher."

Louis found out only in his second, third, and fourth persistence hunts how lucky he'd gotten in the first; that debut kudu dropped after only two hours, but every one after that kept the Bushmen on the run for three to five hours (neatly corresponding, one might note, to how long it takes most people to run our latter-day version of prehistoric hunting, the marathon. *Recreation has its reasons*).

To succeed as a hunter, Louis had to reinvent himself as a runner. He'd been an excellent middle-distance athlete in high school, winning the 1,500-meter championship and finishing a close second in the 800, but to hang with the Bushmen, he had to forget everything he'd been taught by modern coaches and study the ancients. As a track athlete, he'd drop his head and hammer, but as an apprentice Bushman, he had to be eyes high and tingly alert every step of the way. He couldn't zone out and ignore pain; instead, his mind was constantly tap-dancing between the immediate—scratches in the dust, sweat on his own forehead—and the imaginary, as he played mental war games to think one step ahead of his prey.

The pace wasn't too fierce; the Bushmen average about ten minutes a mile, but many of those miles are in soft sand and brush, and they occasionally stop to study tracks. They'd still fire the jets and take off at a sprint, but they knew how to keep trotting afterward and recover on the run. They had to, because a persistence hunt was like showing up at the starting line without knowing if you were running a half marathon, marathon, or ultra. After a while, Louis began to look at running the way other people look at walking; he learned to settle back and let his legs spin in a quick, easy trot, a sort of baseline motion that could last all day and leave him enough reserves to accelerate when necessary.

His eating changed, too. As a hunter-gatherer, you're never off the clock; you can be walking home after an exhausting day of collecting yams, but if fresh game scuttles into view, you drop everything and go. So Louis had to learn to graze, eating lightly throughout the day rather than filling up on big meals, never letting himself get thirsty, treating every day as if he were in a race that had already started.

The Kalahari summer cooled into winter, but the hunts continued. The Utah-Harvard docs would turn out to be wrong about one part of their Running Man theory: persistence hunting doesn't depend on killer heat, because the ingenious Bushmen had devised ways to run down game in every weather. In the rainy season, both the tiny duiker antelope and the giant gemsbok, with its lancelike horns, would overheat because the wet sand splayed their hooves, forcing their legs to churn harder. The four-hundred-pound red hartebeest is comfortable in waist-high grasslands, but exposed and vulnerable when the ground parches during dry winters. Come the full moon, antelopes are active all night and tired by daybreak; come spring, they're weakened by diarrhea from feasting on green leaves.

By the time Louis was ready to head home from the bush and begin writing *The Art of Tracking: The Origin of Science*, he'd gotten so accustomed to epic runs that he almost took them for granted. He barely mentions running in his book, focusing more on the mental demands of the hunt than the physical. It was only after a copy of *Nature* magazine fell into his hands that he fully appreciated what he'd seen out there in the Kalahari, and grabbed the phone to dial Utah.

Know why people run marathons? he told Dr. Bramble. Because running is rooted in our collective imagination, and our imagination is rooted in running. Language, art, science; space shuttles, *Starry Night*, intravascular surgery; they all had their roots in our ability to run. Running was the superpower that made us human—which means it's a superpower all humans possess.

"Then why do so many people hate it?" I asked Dr. Bramble as he came to the end of the story of Louis and the Bushmen. "If we're all born to run, shouldn't all of us enjoy it?"

Dr. Bramble began his answer with a riddle. "This is fascinating stuff," he said. "We monitored the results of the 2004 New York City Marathon and compared finishing times by age. What we found is that starting at age nineteen, runners get faster every year until they hit their peak at twenty-seven. After twenty-seven, they start to decline. So here's the question—how old are you when you're back to running the same speed you did at nineteen?"

All righty. I flipped my notebook to a blank page and started jot-

ting numbers. It takes eight years until you run your best time at age twenty-seven. If you get slower at the same rate you got faster, then you'd be back at your nineteen-year-old time by age thirty-six: eight years up, eight years down. But I knew there was a twist involved, and I was pretty sure it had to be whether we fade away as quickly as we improve. "We probably hang on to our speed a little longer once we get it," I decided. Khalid Khannouchi was twenty-six when he broke the marathon world record, and was still fast enough at thirty-six to finish in the top four at the 2008 U.S. Olympic trials. He'd lost only ten minutes in ten years, despite a ton of injuries. In honor of the Khannouchi Curve, I bumped my answer up to forty.

"Forty—" I started to say, until I saw the smile creasing Bramble's face. "Five," I hastily added. "I'll guess forty-five."

"Wrong."

"Fifty?"

"Nope."

"It can't be fifty-five."

"You're right," Bramble said. "It can't be. It's sixty-four."

"Are you serious? That's a—" I scribbled out the math. "That's a forty-five-year difference. You're saying teenagers can't beat guys three times their age?"

"Isn't that amazing?" Bramble agreed. "Name any other field of athletic endeavor where sixty-four-year-olds are competing with nineteen-year-olds. Swimming? Boxing? Not even close. There's something really weird about us humans; we're not only really good at endurance running, we're really good at it for a remarkably long time. We're a machine built to run—and the machine never wears out."

You don't stop running because you get old, the Dipsea Demon always said. You get old because you stop running. . . .

"And it's true for both genders," Dr. Bramble continued. "Women show the same results as men." That makes sense, since a curious transformation came over us when we came down from the trees: the more we became human, the more we became equal. Men and women are basically the same size, at least compared with other primates: male gorillas and orangutans weigh twice as much as their better halves; male chimps are a good one-third bigger than females; but between the average human him and the average human her, the difference in bulk is only a slim 15 percent. As we evolved, we

shucked our beef and became more sinuous, more cooperative . . . essentially, more female.

"Women have really been underrated," Dr. Bramble said. "They've been evolutionarily shortchanged. We perpetuate this notion that they were sitting around waiting for the men to come back with food, but there's no reason why women couldn't be part of the hunting party." Actually, it would be weird if women *weren't* hunting alongside the men, since they're the ones who really need the meat. The human body benefits most from meat protein during infancy, pregnancy, and lactation, so why wouldn't women get as close to the beef supply as possible? Hunter-gatherer nomads shift their camps by the movements of the herds, so instead of hauling food back to camp, it made more sense for the whole camp to go to the food.

And caring for kids on the fly isn't that hard, as American ultra-runner Kami Semick demonstrates; she likes to run mountain trails around Bend, Oregon, with her four-year-old daughter, Baronie, riding along in a backpack. Newborns? No problem: at the 2007 Hardrock 100, Emily Baer beat ninety other men and women to finish eighth overall while stopping at every aid station to breast-feed her infant son. The Bushmen are no longer nomadic, but the equal-partners-in-hunting tradition still exists among the Mbuti Pygmies of the Congo, where husbands and wives with nets pursue the giant forest hog side by side. "Since they are perfectly capable of giving birth to a child while on the hunt, then rejoining the hunt the same morning," notes anthropologist Colin Turnbull, who's spent years among the Mbuti, "mothers see no reason why they should not continue to participate fully."

Dr. Bramble's picture of the past was taking on clarity and color. I could see a band of hunters—young and old, male and female—running tirelessly across the grasslands. The women are up front, leading the way toward fresh tracks they spotted while foraging, and hard behind are the old men, their eyes on the ground and their minds inside a kudu skull a half mile ahead. Crowding their heels are teens eager to soak up tips. The real muscle hangs back; the guys in their twenties, the strongest runners and hunters, watching the lead trackers and saving their strength for the kill. And bringing up the rear? The Kami Semicks of the savannah, toting their kids and grandkids.

After all, what else did we have going for us? Nothing, except we ran like crazy and stuck together. Humans are among the most communal and cooperative of all primates; our sole defense in a fang-filled world was our solidarity, and there's no reason to think we suddenly disbanded during our most crucial challenge, the hunt for food. I remembered what the Seri Indians told Scott Carrier after the sun had set on their persistence-hunting days. "It was better before," a Seri elder lamented. "We did everything as a family. The whole community was a family. We shared everything and cooperated, but now there is a lot of arguing and bickering, every man for himself."

Running didn't just make the Seris a people. As Coach Joe Vigil would later sense about his own athletes, it also made them *better* people.

"But there's a problem," Dr. Bramble said. He tapped his forehead. "And it's right up here." Our greatest talent, he explained, also created the monster that could destroy us. "Unlike any other organism in history, humans have a mind-body conflict: we have a body built for performance, but a brain that's always looking for efficiency." We live or die by our endurance, but remember: endurance is all about conserving energy, and that's the brain's department. "The reason some people use their genetic gift for running and others don't is because the brain is a bargain shopper."

For millions of years, we lived in a world without cops, cabs, or Domino's Pizza; we relied on our legs for safety, food, and transportation, and it wasn't as if you could count on one job ending before the next one began. Look at !Nate's wild hunt with Louis; !Nate sure wasn't planning on a fast 10k immediately after a half-day hike and a high-speed hunt, but he still found the reserve energy to save Louis's life. Nor could his ancestors ever be sure that they wouldn't become food right after catching some; the antelope they'd chased since dawn could attract fiercer animals, forcing the hunters to drop lunch and run for their lives. The only way to survive was to leave something in the tank—and that's where the brain comes in.

"The brain is always scheming to reduce costs, get more for less, store energy and have it ready for an emergency," Bramble explained. "You've got this fancy machine, and it's controlled by a pilot who's

thinking, 'Okay, how can I run this baby without using any fuel?' You and I know how good running feels because we've made a habit of it." But lose the habit, and the loudest voice in your ear is your ancient survival instinct urging you to relax. And there's the bitter irony: our fantastic endurance gave our brain the food it needed to grow, and now our brain is undermining our endurance.

"We live in a culture that sees extreme exercise as crazy," Dr. Bramble says, "because that's what our brain tells us: why fire up the machine if you don't have to?"

To be fair, our brain knew what it was talking about for 99 percent of our history; sitting around was a luxury, so when you had the chance to rest and recover, you grabbed it. Only recently have we come up with the technology to turn lazing around into a way of life; we've taken our sinewy, durable, hunter-gatherer bodies and plunked them into an artificial world of leisure. And what happens when you drop a life-form into an alien environment? NASA scientists wondered the same thing before the first space flights. The human body had been built to thrive under the pressure of gravity, so maybe taking away that pressure would act as an escape-trajectory Fountain of Youth, leaving the astronauts feeling stronger, smarter, and healthier. After all, every calorie they ate would now go toward feeding their brains and bodies, instead of pushing up against that relentless downward pull—right?

Not by a long shot; by the time the astronauts returned to earth, they'd aged decades in a matter of days. Their bones were weaker and their muscles had atrophied; they had insomnia, depression, acute fatigue, and listlessness. Even their taste buds had decayed. If you've ever spent a long weekend watching TV on the sofa, you know the feeling, because down here on earth, we've created our own zero-gravity bubble; we've taken away the jobs our bodies were meant to do, and we're paying for it. Nearly every top killer in the Western world—heart disease, stroke, diabetes, depression, hypertension, and a dozen forms of cancer—was unknown to our ancestors. They didn't have medicine, but they did have a magic bullet—or maybe two, judging by the number of digits Dr. Bramble was holding up.

"You could literally halt epidemics in their tracks with this one

remedy," he said. He flashed two fingers up in a peace sign, then slowly rotated them downward till they were scissoring through space. The Running Man.

"So simple," he said. "Just move your legs. Because if you don't think you were born to run, you're not only denying history. You're denying who you are."

CHAPTER 29

The past is never dead. It's not even past.

—WILLIAM FAULKNER, *Requiem for a Nun*

I WAS ALREADY awake and staring into the dark when Caballo came scratching at my door.

"Oso?" he whispered.

"C'mon in," I whispered back. I blinked on my watch: 4:30.

In half an hour, we were supposed to start out for our rendezvous with the Tarahumara. Months earlier, Caballo had told them to meet us in a little glen of shade trees on the trail up Batopilas mountain. The plan was to push up and over the peak, then down the back side and across the river to the village of Urique. I didn't know what Caballo would do if the Tarahumara didn't show up—or what I'd do if they did.

Travelers on horseback give themselves three days for the thirty-five-mile journey from Batopilas to Urique; Caballo planned to do it in one. If I fell behind, would I be the one wandering lost in the canyons this time? And what if the Tarahumara didn't show—would Caballo lead us into no-man's-land to search for them? Did he even know where he was going?

Those were the thoughts that kept me from sleeping. But Caballo, it turned out, had worries of his own. He came in and sat on the edge of my bed.

"Do you think the kids are up for it?" he asked.

Remarkably, they seemed fine after their near-death day in the canyons. They'd put away a good meal of tortillas and frijoles that

evening, and I hadn't heard any sounds of distress from the bathroom during the night.

"How long till giardia hits?" I asked. Giardia parasites, I knew, had to incubate for a while in the intestines before erupting into diarrhea, fever, and stomach cramps.

"A week or two."

"So if they don't come down with something else by this morning, they might be okay till after the race."

"Hmm," Caballo muttered. "Yeah." He paused, obviously chewing over something else. "Look," he went on. "I'm going to have to pop Barefoot Ted between the eyes." The problem this time wasn't Ted's feet; it was his mouth. "If he gets in the face of the Rarámuri, they're going to get real uncomfortable," Caballo said. "They're going to think he's another Fisher and split."

"What are you going to do?"

"I'm going to tell him he's got to keep it shut tight. I don't like telling people what to do, but he's got to get the message."

I got up and helped him roust the others. The night before, a friend of Caballo's had loaded our bags on a burro and set off for Urique, so all we had to carry was enough food and water to get us there. Bob Francis, the old backcountry guide, had volunteered to drive Luis's father the long way around the mountain in his 4x4 pickup, sparing him the hike. Everyone else turned out quickly, and by 5 a.m., we were picking our way over the boulders toward the river. The canyon moon glittered on the water and bats were still darting overhead as Caballo led us to a faint footpath skirting the water line. We fitted into single file and shuffled into an easy jog.

"The Party Kids are amazing," Eric said, watching them glide along behind Caballo.

"They're more like the Comeback Kids," I agreed. "But Caballo's big worry is—" I pointed ahead to Barefoot Ted, whose outfit for the hike consisted of red shorts, his green FiveFinger toe shoes, and an anatomically correct skeleton amulet around his neck. Instead of a shirt, he wore a red raincoat with the hood knotted under his chin and the rest flapping loose over his shoulders like a cape. Jingling from his ankle was a string of bells, which he'd gotten because he'd read somewhere that Tarahumara elders wore them.

"Good mojo," Eric grinned. "We've got our own witch doctor."

By sunup, we'd left the river and turned up into the mountains. Caballo was pushing hard, even harder than he had the day before. We ate on the move, chomping down quick bites of tortilla and energy bars, sipping conservatively on our water in case it had to last all day. When it got light enough to see, I turned and looked back to get my bearings. The village had vanished like Brigadoon, swallowed whole by the forest. Even the trail behind us seemed to dissolve into the thick green foliage as soon as we passed. It felt like we were sinking into a bottomless green sea.

"Not too much farther," I could hear Caballo saying. He was pointing to something I couldn't make out yet. "See that cluster of trees? That's where they'll be."

"*The Arnulfo*," Luis said, wonder in his voice. "I'd rather meet him than Michael Jordan."

I got closer and saw the trees. I didn't see any people.

"The flu's been going around," Caballo said, slowing down and tilting back his head to squint at the hills above us for signs of life. "There's a chance some of the runners will come later. If they're sick. Or if they have to take care of their families."

Eric and I glanced at each other. Caballo had never mentioned anything about the flu before. I eased my hydration pack off my shoulders and got ready to sit down and rest. *Better take a break now till we see what's next*, I thought, dropping the pack at my feet. When I looked back up, we were surrounded by half a dozen men in white skirts and pirate blouses. Between blinks, they'd materialized from the forest.

We all stood, silent and stunned, waiting for a cue from Caballo.

"Is he here?" Luis whispered.

I scanned the ring of Tarahumara until I spotted that familiar whimsical smile on that handsome mahogany face. Wow; he really came. Just as unbelievably, his cousin Silvino was right beside him.

"That's him," I whispered back. Arnulfo heard and glanced over. His lips twitched in a slight smile when he recognized me.

Caballo was overcome with emotion. I thought it was just relief, until he reached out with both hands toward a Tarahumara runner with a mournful, Geronimo-like face. "Manuel," Caballo said.

Manuel Luna didn't return the smile, but he sandwiched both Caballo's hands with his own. I walked over. "I knew your son," I said. "He was very good to me, a real *caballero*."

"He told me about you," Manuel said. "He wanted to be here."

That emotional reunion between Caballo and Manuel broke the ice for everyone else. The rest of Caballo's crew circulated among the Tarahumara, trading the special Tarahumara handshake Caballo had taught them, that light rasping of finger pads that is simultaneously less grasping and more intimate than a big ol' powerpump.

Caballo began introducing us. Not by name—in fact, I don't think I ever heard him use our names again. He'd been studying us over the past three days, and just as he'd seen an *oso* in me and Barefoot Ted had spotted a monkey in himself, Caballo felt he'd identified spirit animals for everyone else.

"El Coyote," he said, laying a hand on Luis's back. Billy became El Lobo Joven—the young wolf. Eric, quiet and ever watchful, was El Gavilán, the hawk. When he got to Jenn, I saw a flicker of amused interest briefly light up Manuel Luna's eyes. "La Brujita Bonita," Caballo called her. To the Tarahumara, steeped in tales of their two magnificent years at Leadville and the epic battle between Juan Herrera and Ann "the Bruja" Trason, calling a young runner "The Pretty Little Witch" had exactly the punch of nicknaming an NBA rookie "Heir Jordan."

"*¿Hija?*" Manuel asked. Was Jenn really Ann Trason's daughter?

"*Por sangre, no. Por corazón, sí,*" Caballo replied. Not the same blood, but the same heart.

Finally, Caballo turned to Scott Jurek. "El Venado," he said, which even got a reaction out of too-cool Arnulfo. Now, what was the crazy gringo playing at? Why would Caballo call the tall, lean, and supremely confident-looking guy "the Deer"? Was he giving the Tarahumara a foot tap under the table, a little hint how to play their cards on race day? Manuel remembered very well the way Caballo had urged the Tarahumara in Leadville to sit patiently on Ann Trason's heels and "run her down like a deer." But would Caballo favor the Tarahumara over his own compatriot? Or maybe it was a setup—maybe Caballo was trying to trick the Tarahumara into holding back while this American built an unbeatable lead. . . .

It was all mysterious and complicated and thoroughly entertain-

ing to the Tarahumara, whose love of race strategy rivaled their taste for corn beer. Quietly, they began to banter among themselves, until Barefoot Ted barged in. Whether accidentally or prophylactically, Caballo had bypassed Ted in the introductions, so Ted presented himself.

"*Yo soy El Mono!*" he announced. "The Monkey!" Hang on, Barefoot Ted thought; do they even *have* monkeys in Mexico? Maybe the Tarahumara don't know what a *mono* is. Just in case, he began hooting and scratching like a chimp, his ankle bells jingling and the sleeves of his red raincoat flapping in his face, somehow thinking that impersonating a thing they'd never heard of would let them know what that thing was.

The Tarahumara stared. None of them, incidentally, wore bells.

"Okay," Caballo said, eager to drop the curtain on this show. "*¿Vámonos?*"

We resholedered our packs. We'd been on the climb for nearly five straight hours, but we had to keep racing the sun if we were going to have a chance of fording the river before dark. Caballo took point, while the rest of us shuffled into single file among the Tarahumara. I tried to put myself last so I wouldn't slow down the parade, but Silvino wouldn't hear of it. He wouldn't move till I moved first.

"*¿Por qué?*" I asked. Why?

Habit, Silvino said; as one of the top ball-racers in the canyons, he was used to keeping tabs on his teammates from the rear and letting them pull the pace until it was time for him to slingshot off for the final miles. I was tickled to think of myself as part of an All-Star Mixed Tarahumara-American Ultrarunning Team, until I translated what Silvino had said for Eric.

"Maybe," Eric said. "Or maybe the race already started." He nodded farther ahead. Arnulfo was walking right behind Scott, watching him intently.

CHAPTER 30

Poetry, music, forests, oceans, solitude—they were what developed enormous spiritual strength. I came to realize that spirit, as much or more than physical conditioning, had to be stored up before a race.

—HERB ELLIOTT, Olympic champion and world-record holder in the mile who trained in bare feet, wrote poetry, and retired undefeated

“OYE, OSO,” a shopkeeper called, waving me inside.

Two days after we’d arrived in Urique, we were known everywhere by the spirit-animal nicknames Caballo had given us. “Everywhere,” of course, meant about five hundred yards in every direction; Urique is a tiny, Lost World village sitting alone at the bottom of the canyon like a pebble at the bottom of a well. By the time we’d finished breakfast on our first morning, we’d already been folded into the local social life. An army squad encamped on the outskirts would salute Jenn as they passed through on patrol, calling, “*Hola, Brujita!*” Kids greeted Barefoot Ted with shouts of “*Buenos días, Señor Mono.*” Good morning, Mr. Monkey.

“Hey, Bear,” the shopkeeper continued. “Do you know that Arnulfo has never been beaten? Do you know he’s won the one-hundred-kilometer race three times in a row?”

No Kentucky Derby, presidential election, or celebrity murder trial has ever been handicapped as passionately and personally as Caballo’s race was by the people of Urique. As a mining village whose

best days were over more than a century ago, Urique had two things left to be proud of: its brutally tough landscape and its Tarahumara neighbors. Now, for the first time, a pack of exotic foreign runners had traveled all this way to test themselves against both, and it had exploded into much more than a race: for the people of Urique, it was the one chance in their lifetime to show the outside world just what they were made of.

And even Caballo was surprised to find that his race had surpassed his hopes and was growing into the Ultimate Fighting Competition of underground ultras. Over the past two days, Tarahumara runners had continued trickling in by ones and twos from all directions. When we awoke the morning after our hike from Batopilas, we saw a band of local Tarahumara traipsing down from the hills above the village. Caballo hadn’t even been sure the Urique Tarahumara still ran anymore; he’d been afraid that, as in the tragic case of the Tarahumara of Yerbabuena, government upgrades to the dirt road had converted the Urique Tarahumara from runners into hitchhikers. They certainly looked like a people in transition; the Urique Tarahumara still carried wooden *palia* sticks (their version of the ball race was more like high-speed field hockey), but instead of traditional white skirts and sandals, they wore running shorts and sneakers from the Catholic mission.

That same afternoon, Caballo was overjoyed to see a fifty-one-year-old named Herbolisto come jogging in from Chinivo, accompanied by Nacho, a forty-one-year-old champion from one of Herbolisto’s neighboring settlements. As Caballo had feared, Herbolisto had been laid up with the flu. But he was one of Caballo’s oldest Tarahumara friends and hated the idea of missing the race, so as soon as he felt a little better, he grabbed a *pinole* bag and set off on the sixty-mile trip on his own, stopping off on the way to invite Nacho along for the fun.

By the eve of Race Day, our numbers had tripled from eight to twenty-five. Up and down Urique’s main street, debate over who was now the true top seed was running hot: Was it Caballo Blanco, the wily old veteran who’d poached the secrets of both American and Tarahumara runners? Or the Urique Tarahumara, experts on the local trails who had hometown pride and support on their side? Some money was riding on Billy Bonehead, the Young Wolf, whose

surf-god physique drew admiring stares whenever he went for a swim in the Urique River. But the heaviest street action was divided between the two stars: Arnulfo, king of the Copper Canyons, and El Venado, his mysterious foreign challenger.

"Sí, señor," I replied to the shopkeeper. "Arnulfo won a one-hundred-kilometer race in the canyons three times. But the Deer has won a one-hundred-mile race in the mountains *seven* times."

"But it's very hot down here," the shopkeeper retorted. "The Tarahumara, they eat heat."

"True. But the Deer won a one-hundred-thirty-five-mile race across a desert called Death Valley in the middle of summer. No one has ever run it faster."

"No one beats the Tarahumara," the shopkeeper insisted.

"So I've heard. So who are you betting on?"

He shrugged. "The Deer."

The Urique villagers had grown up in awe of the Tarahumara, but this tall gringo with the flashy orange shoes was unlike anyone they'd ever seen. It was eerie watching Scott run side by side with Arnulfo; even though Scott had never seen the Tarahumara before and Arnulfo had never seen the outside world, somehow these two men separated by two thousand years of culture had developed the same running style. They'd approached their art from opposite ends of history, and met precisely in the middle.

I first saw it up on Batopilas mountain, after we'd finally gotten to the top and the trail flattened as it circled the peak. Arnulfo took advantage of the plateau to open it up. Scott locked in beside him. As the trail curled into the setting sun, the two of them vanished into the glare. For a few moments, I couldn't tell them apart—they were two fiery silhouettes moving with identical rhythm and grace.

"Got it!" Luis said, dropping back to show me the image in his digital camera. He'd sprinted ahead and wheeled around just in time to capture everything I'd come to understand about running over the past two years. It wasn't Arnulfo's and Scott's matching form so much as their matching smiles; they were both grinning with sheer muscular pleasure, like dolphins rocketing through the waves. "This one is going to make me cry when I get back home," Luis said. "It's like getting Babe Ruth and Mickey Mantle in the same shot." If Arnulfo had an advantage, it wouldn't be style or spirit.

But I had another reason to put my money on Scott. During the last, hardest miles of the hike to Urique, he kept hanging back with me and I'd wondered why. He'd come all this way to see the best runners in the world, so why was he wasting his time with one of the worst? Didn't he resent me for holding everyone up? Seven hours of descending that mountain eventually gave me my answer:

What Coach Joe Vigil sensed about character, what Dr. Bramble conjectured with his anthropological models, Scott had been his entire life. The reason we race isn't so much to beat each other, he understood, but to be *with* each other. Scott learned that before he had a choice, back when he was trailing Dusty and the boys through the Minnesota woods. He was no good and had no reason to believe he ever would be, but the joy he got from running was the joy of adding his power to the pack. Other runners try to disassociate from fatigue by blasting iPods or imagining the roar of the crowd in Olympic Stadium, but Scott had a simpler method: it's easy to get outside yourself when you're thinking about someone else.*

That's why the Tarahumara bet like crazy before a ball race; it makes them equal partners in the effort, letting the runners know they're all in it together. Likewise, the Hopis consider running a form of prayer; they offer every step as a sacrifice to a loved one, and in return ask the Great Spirit to match their strength with some of his own. Knowing that, it's no mystery why Arnulfo had no interest in racing outside the canyons, and why Silvino never would again: if they weren't racing for their people, then what was the point? Scott, whose sick mother never left his thoughts, was still a teenager when he absorbed this connection between compassion and competition.

The Tarahumara drew strength from this tradition, I realized, but Scott drew strength from *every* running tradition. He was an archivist and an innovator, an omnivorous student who gave as much serious thought to the running lore of the Navajo, the Kalahari Bushmen,

*Any doubts I had about this theory were laid to rest the following year, when I went to crew for Luis Escobar at Badwater. At three o'clock in the morning, I drove ahead to check on Scott and found him bearing down in the midst of a four-mile-high hill. He'd already run eighty miles in 125-degree heat and was on pace for a new course record, but when he saw me, the first words out of his mouth were, "How's Coyote?"

and the Marathon Monks of Mount Hiei as he did to aerobic levels, lactate thresholds, and the optimal recruitment of all three types of muscle-twitch fiber (not two, as most runners believe).

Arnulfo wasn't going up against a fast American. He was about to race the world's only twenty-first-century Tarahumara.

While the shopkeeper and I were busy setting the over-under, I saw Arnulfo strolling past. I grabbed a couple of Popsicles to pay him back for the sweet limes he'd given me at his house, and together we went looking for a shady spot to relax. I saw Manuel Luna sitting under a tree, but he looked so alone and lost in thought, I didn't think we should disturb him. Barefoot Monkey, however, saw it differently.

"MANUEL!" Barefoot Ted shouted from across the street.

Manuel's head jerked up.

"Amigo, am I glad to see you," Barefoot Ted said. He'd been looking around for some tire rubber so he could make his own pair of Tarahumara sandals, but figured he needed some expert advice. He grabbed mystified Manuel by the arm and led him into a tiny shop. As it turned out, Ted was right; all tire rubber is not the same. What Ted wanted, Manuel demonstrated with his hands, was a strip with a groove right down the middle, so the knot for the toe strap can be countersunk and not get torn off by the ground.

Minutes later, Barefoot Ted and Manuel Luna were outside with their heads together, tracing Ted's feet and slicing away at the tire tread with my big-bladed Victorinox knife. They worked through the afternoon, trimming and measuring, until, just before dinner, Ted was able to do a test run down the street in his new pair of Air Lunas. From then on, he and Manuel Luna were inseparable. They arrived for dinner together and hunted around the packed restaurant for a place to sit.

Urique has only one restaurant, but when it's run by Mamá Tita, one is plenty. From daybreak till midnight for four straight days, this cheerful sixty-something woman kept the four burners on her old propane stove blazing full blast, bustling away in a kitchen hot as a boiler room as she turned out mountains of food for all Caballo's runners: stewed chicken and goat, batter-fried river fish, grilled beef, refried beans and guacamole, and minty, tangy salsas, all garnished with sweet limes and chili oil and fresh cilantro. For breakfast, she

served eggs scrambled with goat cheese and sweet peppers, and on the side, heaping bowls of *pinole* and flapjacks that tasted so much like pound cake, I volunteered to apprentice in her kitchen one morning to learn the secret recipe.*

As the American and Tarahumara runners squeezed around the two long tables in Tita's back garden, Caballo banged on a beer bottle and stood up. I thought he was going to deliver our final race instructions, but he had something else on his mind.

"There's something wrong with you people," he began. "Rarámuri don't like Mexicans. Mexicans don't like Americans. Americans don't like *anybody*. But you're all here. And you keep doing things you're not supposed to. I've seen Rarámuri helping *chabochis* cross the river. I've watched Mexicans treat Rarámuri like great champions. Look at these gringos, treating people with respect. Normal Mexicans and Americans and Rarámuri don't act this way."

Over in the corner, Ted thought he could help Manuel by translating Caballo's clumsy Spanish into clumsier Spanglish. As Ted yammered, a faint smile kept flitting across Manuel's face. Finally, it just stayed there.

"What are you doing here?" Caballo went on. "You have corn to plant. You have families to take care of. You gringos, you know it can be dangerous down here. No one has to tell the Rarámuri about the danger. One of my friends lost someone he loved, someone who could have been the next great Rarámuri champion. He's suffering, but he's a true friend. So he's here."

Everyone got quiet. Barefoot Ted laid a hand on Manuel's back. Of all the Tarahumara he could have asked for help with his huaraches, I realized, he hadn't picked Manuel Luna by accident.

"I thought this race would be a disaster, because I thought you'd be too sensible to come." Caballo scanned the garden, found Ted in the corner, and locked eyes with him. "You Americans are supposed to be greedy and selfish, but then I see you acting with a good heart. Acting out of love, doing good things for no reason. You know who does things for no good reason?"

*Tita's secret (it's okay, she won't mind): she whips boiled rice, overripe bananas, a little cornmeal, and fresh goat milk into her batter. Perfection.

"CABALLO!" the shout went up.

"Yah, right. Crazy people. *Más Locos*. But one thing about crazy people—they see things other people don't. The government is putting in roads, destroying a lot of our trails. Sometimes Mother Nature wins and wipes them out with floods and rock slides. But you never know. You never know if we'll get a chance like this again. Tomorrow will be one of the greatest races of all time, and you know who's going to see it? Only crazy people. Only you *Más Locos*."

"*Más Locos!*" Beers were shoved in the air, bottles were clinking. Caballo Blanco, lone wanderer of the High Sierras, had finally come out of the wild to find himself surrounded by friends. After years of disappointments, he was twelve hours from seeing his dream come true.

"Tomorrow, you'll see what crazy people see. The gun fires at daybreak, because we've got a lot of running to do."

"CABALLO! VIVA CABALLO!"

CHAPTER 31

Often I visualize a quicker, like almost a ghost runner,
ahead of me with a quicker stride.

—GABE JENNINGS, 2000 U.S. Olympic Trial 1,500-meter winner

BY 5 A.M., Mamá Tita had pancakes and papayas and hot *pinole* on the table. For their prerace meal, Arnulfo and Silvino had requested *pozole*—a rich beef broth with tomatoes and fat corn kernels—and Tita, chirpy as a bird despite only getting three hours of sleep, whipped it right up. Silvino had changed into a special race outfit, a gorgeous turquoise blouse and a white *zapete* skirt embroidered with flowers along the hem.

"*Guapo*," Caballo said admiringly; looking good. Silvino ducked his head bashfully. Caballo paced the garden, sipping coffee and fretting. He'd heard that some farmers were planning a cattle drive on one of the trails, so he'd tossed awake all night, planning last-minute detours. When he got up and trudged down for breakfast, he discovered that Luis Escobar's dad had already ridden to the rescue with old Bob, Caballo's fellow wandering gringo from Batopilas. They'd come across the *vaqueros* the evening before while shooting photos in the backcountry and warned them off the course. Now without a stampede to sweat over, Caballo was searching for something else. He didn't have to look far.

"Where are the Kids?" he asked.

Shrugs.

"I better go get them," he said. "I don't want them killing themselves without breakfast again."

When Caballo and I stepped outside, I was stunned to find the entire town there to greet us. While we'd been inside having breakfast, garlands of fresh flowers and paper streamers had been strung across the street, and a mariachi band in dress sombreros and torero suits had begun strumming a few warm-up tunes. Women and children were already dancing in the street, while the mayor was aiming a shotgun at the sky, practicing how he could fire it without shredding the streamers.

I checked my watch, and suddenly found it hard to breathe: thirty minutes till the start. The thirty-five-mile hike to Urique had, as Caballo predicted, "chewed me up and crapped me out," and in half an hour, I had to do it all over again and go fifteen miles farther. Caballo had laid out a diabolical course; we'd be climbing and descending sixty-five hundred feet in fifty miles, exactly the altitude gain of the first half of the Leadville Trail 100. Caballo was no fan of the Leadville race directors, but when it came to choosing terrain, he was just as pitiless.

Caballo and I climbed the hill to the little hotel. Jenn and Billy were still in their room, arguing over whether Billy needed to carry the extra water bottle which, it turned out, he couldn't find anyway. I had a spare I was using to store espresso, so I hustled to my room, dumped the coffee, and tossed it to Billy.

"Now eat something! And hustle up!" Caballo scolded. "The mayor is gonna blast that thing at seven sharp."

Caballo and I grabbed our gear—a hydration backpack loaded with gels and PowerBars for me, a water bottle and tiny bag of *pinole* for Caballo—and we headed back down the hill. Fifteen minutes to go. We rounded the corner toward Tita's restaurant, and found the street party had grown into a mini-Mardi Gras. Luis and Ted were twirling old women and fending off Luis's dad, who kept cutting in. Scott and Bob Francis were clapping and singing along as best they could with the mariachis. The Urique Tarahumara had set up their own percussion brigade, beating time on the sidewalk with their *palias* sticks.

Caballo was delighted. He pushed into the throng and began a

Muhammad Ali shuffle, bobbing and weaving and punching his fists in the air. The crowd roared. Mamá Tita blew him kisses.

"*;Ándale!* We're going to dance all day!" Caballo shouted through his cupped hands. "But only if nobody dies. Take care out there!" He turned to the mariachis and dragged a finger across his throat. Kill the music. Showtime.

Caballo and the mayor began corralling dancers off the street and waving runners to the starting line. We crowded together, forming into a crazy human quilt of mismatched faces, bodies, and costumes. The Urique Tarahumara were in their shorts and running shoes, still carrying their *palias*. Scott stripped off his shirt. Arnulfo and Silvino, dressed in the bright blouses they'd brought especially for the race, squeezed in beside Scott; the Deer hunters weren't letting the Deer out of their sight for a second. By unspoken agreement, we all picked an invisible line in the cracked asphalt and toed it.

My chest felt tight. Eric worked his way over beside me. "Look, I got some bad news," he said. "You're not going to win. No matter what you do, you're going to be out there all day. So you might as well just relax, take your time, and enjoy it. Keep this in mind—if it feels like work, you're working too hard."

"Then I'll catch 'em napping," I croaked, "and make my move."

"No moves!" Eric warned, not even wanting the thought to creep into my skull as a joke. "It could hit one hundred degrees out there. Your job is to make it home on your own two feet."

Mamá Tita walked from runner to runner, her eyes puddling as she pressed our hands. "*Ten cuidado, cariño,*" she urged. Be careful, dearie.

"*;Diez! . . . ;Nueve! . . .*"

The mayor was leading the crowd in the countdown.

"*;Ocho! . . . ;Siete! . . .*"

"Where are the Kids?" Caballo yelled.

I looked around. Jenn and Billy were nowhere in sight.

"Get him to hold off!" I shouted back.

Caballo shook his head. He turned away and got into race-ready position. He'd waited years and risked his life for this moment. He wasn't postponing it for anyone.

"*;BRUJITA!*" The soldiers were pointing behind us.

Jenn and Billy came sprinting down the hill as the crowd hit "*Cuatro*." Billy wore surf baggies and no shirt, while Jenn had on black compression shorts and a black jog bra, her hair knotted in two tight Pippi braids. Distracted by her military fan club, Jenn whipped the drop bag with her food and spare socks to the wrong side of the street, startling spectators, who hopped over it as it flew between their legs and disappeared. I raced over, snagged it, and got it to the aid table just as the mayor jerked the trigger.

BOOM!

Scott leaped and screamed, Jenn howled, Caballo hooted. The Tarahumara just ran. The Urique team shot off in a pack, disappearing down the dirt road into the predawn shadows. Caballo had warned us that the Tarahumara would go out hard, but whoa! This was just ferocious. Scott fell in behind them, with Arnulfo and Silvino tucked in on his heels. I jogged slowly, letting the pack flow past until I was in last place. It would be great to have some companionship, but at this point, I felt safer alone. The worst mistake I could make would be getting lulled into someone else's race.

The first two miles were a flat ramble out of town and along the dirt road to the river. The Urique Tarahumara hit the water first, but instead of charging straight into the shallow fifty-yard crossing, they suddenly stopped and began rooting around the shore, flipping over rocks.

What the hell . . . ? wondered Bob Francis, who'd gone ahead with Luis's dad to take photos from the far side of the river. He watched as the Urique Tarahumara pulled out plastic shopping bags they'd stashed under rocks the night before. Tucking their *palias* under their arms, they slipped their feet into the bags, pulled them tight by the handles, and began sloshing across the river, demonstrating what happens when new technology replaces something that has worked fine for ten thousand years: afraid of getting their precious Salvation Army running shoes wet, the Urique Tarahumara were hobbling along in homemade waders.

"Jesus," Bob murmured. "I've never seen anything like it."

The Urique Tarahumara were still stumbling over slippery rocks when Scott hit the riverbank. He splashed straight into the water, Arnulfo and Silvino hard behind. The Urique Tarahumara reached shore, kicked the bags off their feet, and stuffed them into their

shorts to use again later. They began scrambling up the steep sand dune with Scott closing fast, sand spraying from his churning feet. By the time the Urique Tarahumara hit the dirt trail leading up the mountain, Scott and the two Quimares had made contact.

Jenn, meanwhile, was already having a problem. She, Billy, and Luis had crossed the river side by side with a pack of Tarahumara, but as Jenn tore up the sand dune, her right hand was bugging her. Ultra-runners rely on "handhelds," water bottles with straps that wrap around your hand for easy carrying. Jenn had given Billy one of her two handhelds, then rigged a second for herself with athletic tape and a springwater bottle. As she fought her way up the dune, her homemade handheld felt sticky and awkward. It was a tiny hassle, but it was a hassle she'd have to deal with every minute of the next eight hours. So should she keep it? Or should she once again risk running into the canyons with only a dozen swallows in her hand?

Jenn began gnawing through the tape. Her only hope of competing with the Tarahumara, she knew, was to go for broke. If she gambled and crashed, fine. But if she lost the race of a lifetime because she'd played it safe, she'd always regret it. Jenn tossed the bottle and immediately felt better. Bolder, even—and that led to her next risky decision. They were at the bottom of the first meat grinder, a steep three-mile hill with little shade. Once the sun came up, she had little hope of sticking with the heat-eating Tarahumara.

"Ah, fuck it," Jenn thought. "I'm just gonna go now while it's cool." Within five strides, she was pulling away from the pack. "Later, dudes," she called over her shoulder.

The Tarahumara immediately gave chase. The two canny old vets, Sebastiano and Herbolisto, boxed Jenn in from the front while the three other Tarahumara surrounded her on the sides. Jenn looked for a gap, then burst loose and pulled away. Instantly, the Tarahumara swarmed and bottled her back up. The Tarahumara may be peace-loving people at home, but when it came to racing, it was bare knuckles all the way.

"I hate to say it, but Jenn is going to blow up," Luis told Billy as they watched Jenn dart ahead for the third time. They were only three miles into a 50-mile race, and she was already going toe-to-toe with a five-man Tarahumara chase pack. "You don't run like that if you want to finish."

"Somehow she always pulls it off," Billy said.

"Not on this course," Luis said. "Not against these guys."

Thanks to the genius of Caballo's planning, we'd all get to witness the battle in real time. Caballo had laid out his course in a Y pattern, with the starting line dead in the middle. That way, the villagers would see the race several times as it doubled back and forth, and the racers would always know how far they were trailing the leaders. That Y-formation also provided another unexpected benefit: at that very moment, it was giving Caballo plenty of reason to be very suspicious of the Urique Tarahumara.

Caballo was about a quarter mile back, so he had a perfect view of Scott and the Deer hunters as they closed the gap with the Urique Tarahumara on the hill across the river. When he saw them heading back toward him after the first turnaround, Caballo was astounded: in the space of just four miles, the Urique crew had opened up a *four-minute lead*. They'd not only dropped the two best Tarahumara racers of their generation, but also the greatest climber in the history of Western ultrarunning.

"No. Way. In. HELL!" growled Caballo, who was running in a pack of his own with Barefoot Ted, Eric, and Manuel Luna. When they got to the five-mile turnaround in the tiny Tarahumara settlement of Guadalupe Coronado, Caballo and Manuel started asking the Tarahumara spectators some questions. It didn't take them long to find out what was going on: the Urique Tarahumara were taking side trails and shaving the course. Rather than fury, Caballo felt a pang of pity. The Urique Tarahumara had lost their old way of running, he realized, and their confidence along with it. They weren't Running People anymore; they were just guys trying desperately to keep up with the living shadows of their former selves.

Caballo forgave them as a friend, but not as a race director. He put out the word: the Urique Tarahumara were disqualified.

I got a shock of my own when I hit the river. I'd been concentrating so much on watching my footing in the dark and reviewing my mental checklist (*bend those knees . . . bird steps . . . leave no trace*) that when I started to wade through the knee-deep water, it suddenly hit me: I'd just run two miles and it felt like nothing. Better than nothing—I felt

light and loose, even more springy and energized than I had before the start.

"Way to go, Oso!" Bob Francis was calling from the opposite bank. "Little bitty hill ahead. Nothing to worry about."

I scrambled out of the water and up the sand dune, growing more hopeful with every step. Sure, I still had forty-eight more miles, but the way it was going, I might be able to steal the first dozen or so before I had to make any real effort. I started climbing the dirt trail just as the sun was slanting over the top of the canyon. Instantly, everything lit up: the glittering river, the shimmering green forest, the coral snake coiled at my feet. . . .

I yelled and leaped off the trail, sliding down the steep slope and grabbing at scrub brush to stop my fall. I could see the snake above me, silent and curled, ready to strike. If I climbed back up, I risked a fatal bite; if I climbed down toward the river, I could plunge off the side of the cliff. The only way out was to maneuver sideways, working my way from one scrub-brush handhold to the next.

The first clump held, then the next. When I'd made it ten feet away, I cautiously hauled myself back onto the trail. The snake was still blocking the trail, and for good reason—it was dead. Someone had already snapped its back with a stick. I wiped the dirt out of my eyes and checked the damage: rock rash down both shins, thorns in my hands, heart pounding through my chest. I pulled the thorns with my teeth, then cleaned my gashes, more or less, with a squirt from my water bottle. Time to get going. I didn't want anyone to come across me bleeding and panicky over a rotting snake.

The sun got stronger the higher I climbed, but after the early-morning chill, it was more exhilarating than exhausting. I kept thinking about Eric's advice—"If it feels like work, you're working too hard"—so I decided to get outside my head and stop obsessing about my stride. I began drinking in the view of canyon around me, watching the sun turn the top of the foothill across the river to gold. Pretty soon, I realized, I'd be nearly as high as that peak.

Moments later, Scott burst around a bend in the trail. He flashed me a grin and a thumbs-up, then vanished. Arnulfo and Silvino were right behind him, their blouses rippling like sails as they flew past. I must be close to the five-mile turnaround, I realized. I climbed

around the next curve, and there it was: Guadalupe Coronado. It was little more than a whitewashed schoolhouse, a few small homes, and a tiny shop selling warm sodas and dusty packs of cookies, but even from a mile away, I could already hear cheers and drumbeats.

A pack of runners was just pulling out of Guadalupe and setting off in pursuit of Scott and the Quimares. Leading them, all by herself, was the Brujita.

The second Jenn saw her chance, she pounced. On the hike over from Batopilas, she'd noticed that the Tarahumara run downhill the same way they run up, with a controlled, steady flow. Jenn, on the other hand, loves to pound the descents. "It's the only strength I've got," she says, "so I milk it for all I'm worth." So instead of exhausting herself by dueling with Herbolisto, she decided to let him set the pace for the climb. As soon as they reached the turnaround and started the long downhill, she broke out of the chase pack and began speeding off.

This time, the Tarahumara let her go. She pulled so far ahead that by the time she hit the next uphill—a rocky single track climbing to the second branch of the Y at mile 15—Herbolisto and the pack couldn't get close enough to swarm her. Jenn was feeling so confident that when she reached the turnaround, she stopped to take a breather and refill her bottle. Her luck with water so far had been fabulous; Caballo had asked Urique villagers to fan out through the canyons with jugs of purified water, and it seemed that every time Jenn took her last swallow, she came across another volunteer.

She was still gurgling her full bottle when Herbolisto, Sebastiano, and the rest of the chase pack finally caught her. They spun around without stopping, and Jenn let them go. Once she was rewatered, she began pounding down the hill. Within two miles, she'd once again reeled them in and left them behind. She began mentally scanning the course ahead to calculate how long she could keep pulling away. Let's see . . . upcoming was two miles of descent, then four flat miles back into the village, then—

Wham! Jenn landed facedown on the rocks, bouncing and sliding on her chest before coming to a stunned stop. She lay there, blinded with pain. Her kneecap felt broken and an arm was smeared with blood. Before she could gather herself to try getting to her feet, Her-

bolisto and the chase pack came storming down the trail. One by one, they hurdled Jenn and disappeared, never looking back.

They're thinking, That's what you get for not knowing how to run on the rocks, Jenn thought. *Well, they've got a point.* Gingerly, she pulled herself to her feet to assess the damage. Her shins looked like pizza, but her kneecap was only bruised and the blood she thought was pouring from her hand turned out to be chocolaty goo from an exploded PowerGel packet she'd stashed in her handheld. Jenn walked a few cautious steps, then jogged, and felt better than she expected. She felt so good, in fact, that by the time she reached the bottom of the hill, she'd caught and passed every one of the Tarahumara who'd jumped over her.

"*;BRUJITA!*" The crowd in Urique went crazy when Jenn came racing back through the village, bloody but smiling as she hit the twenty-mile mark. She paused at the aid station to dig a fresh goo out of her drop bag, while a deliriously happy Mamá Tita dabbed at Jenn's gory shins with her apron and kept shouting "*;Cuarto! ;Estás en cuarto lugar!*"

"I'm a what? A room?" Jenn was halfway out of town again before her rickety Spanish let her figure out what Mama Tita was talking about: she was in fourth place. Only Scott, Arnulfo, and Silvino were still ahead of her, and she was nibbling steadily at their lead. Caballo had picked her spirit name perfectly: twelve years after Leadville, the Bruja was back with a vengeance.

But only if she could handle the heat. The temperature was nearing 100 degrees just as Jenn was entering the furnace—the jagged up-and-down climb to the Los Alisos settlement. The trail hugged a sheer rock wall that plunged and soared and plunged again, gaining and losing some three thousand feet. Any of the hills in the Los Alisos stretch would rank among the hardest Jenn had ever seen, and there were at least half a dozen of them, strung one behind the other. The heat shimmering off the rocks felt as if it was blistering her skin, but she had to stick tight to the canyon wall to avoid slipping off the edge and into the gorge below.

Jenn had just reached the top of one of the hills when she suddenly had to leap against the wall: Arnulfo and Silvino were *blazing* toward her, running shoulder to shoulder. The Deer hunters had taken everyone by surprise; we'd expected the Tarahumara to haunt

Scott's heels all day and then try to blast past him at the finish, but instead, the Deer hunters had pulled a fast one and jumped out first.

Jenn pressed her back against the hot rock to let them pass. Before she had time to wonder where Scott was, she was leaping back against the wall again. "Scott is running up this goddamn thing with the most intensity I've ever seen in a human being," Jenn said later. "He's *booking*, going, 'Hub-Hub-Hub-Hub.' I'm wondering if he's even going to acknowledge me, he's so in the zone. Then he looks up and starts screaming, 'Yaaaah, Brujita, *waaaaaa!*'"

Scott stopped to brief Jenn on the trail ahead and let her know where to expect water drops. Then he quizzed her about Arnulfo and Silvino: How far ahead were they? How did they look? Jenn figured they were maybe three minutes out and pushing hard.

"Good," Scott nodded. He swatted her on the back and shot off.

Jenn watched him go, and noticed he was running on the very edge of the trail and sticking tight to the turns. That was an old Marshall Ulrich trick: it made it harder for the guy in the lead to glance back and see you sneak up from behind. Scott hadn't been surprised by Arnulfo's big move after all. The Deer was hunting the hunters.

"Just beat the course," I told myself. "No one else. Just the course."

Before I tackled the climb to Los Alisos, I stopped to get myself under control. I ducked my head in the river and held it there, hoping the water would cool me off and the oxygen debt would snap me back to reality. I'd just hit the halfway point, and it had only taken me about four hours. Four hours, for a hard trail marathon in desert heat! I was so far ahead of schedule, I'd started getting competitive: *How hard can it be to pick off Barefoot Ted? He's got to be burting on those stones. And Porfilio looked like he was struggling.* . . .

Luckily, the head-dunking worked. The reason I was feeling so much stronger today than I had on the long haul over from Batopilas, I realized, was because I was running like the Kalahari Bushmen. I wasn't trying to overtake the antelope; I was just keeping it in sight. What had killed me during the Batopilas hike was keeping pace with Caballo & Co. So far today, I'd only competed against the race-course, not the racers.

Before I got too ambitious, it was time to try another Bushman

tactic and give myself a systems check. When I did, I noticed I was in rougher shape than I'd thought. I was thirsty, hungry, and down to just half a bottle of water. I hadn't taken a leak in over an hour, which wasn't a good sign considering all the water I'd been drinking. If I didn't rehydrate soon and get some calories down my neck, I'd be in serious trouble in the roller coaster of hills ahead. As I started sloshing the fifty yards across the river, I filled the bladder of my empty hydration pack with river water and dropped in a few iodine pills. I'd give that a half hour to purify, while I washed down a ProBar—a chewy raw-food blend of rolled oats, raisins, dates, and brown rice syrup—with the last of my clean water.

Good thing I did. "Brace yourself," Eric called as we passed each other on the far side of the river. "It's a lot rougher up there than you remember." The hills were so tough, Eric admitted, that he'd been on the verge of dropping out himself. A bad-news burst like that could come across as a punch in the gut, but Eric believes the worst thing you can give a runner midrace is false hope. What causes you to tense up is the unexpected; but as long as you know what you're in for, you can relax and chip away at the job.

Eric hadn't exaggerated. For over an hour, I climbed up and down the foothills, convinced I was lost and on the way to disappearing into the wilderness. There was only one trail and I was on it—but where the hell was the little grapefruit orchard at Los Alisos? It was only supposed to be four miles from the river, but I'd felt as if I'd covered ten and I still couldn't see it. Finally, when my thighs were burning and twitching so badly I thought I was going to collapse, I spotted a cluster of grapefruit trees on a hill ahead. I made it to the top, and dropped down next to a group of the Urique Tarahumara. They'd heard they were disqualified and decided to cool off in the shade before walking back to the village.

"*No bay problema,*" one of them said. It's not a problem. "I was too tired to keep going anyway." He handed me an old tin cup. I scooped into the communal *pinole* pot, giardia be damned. It was cool and deliciously grainy, like a popcorn Slushee. I gulped down a cupful, then another, as I looked back at the trail I'd just covered. Far below, the river was faint as fading sidewalk chalk. I couldn't believe I'd run here from there. Or that I was about to do it again.

"It's *unbelievable!*" Caballo gasped.

He was slick with sweat and bug-eyed with excitement. As he struggled to catch his breath, he sluiced sweat off his dripping chest and flung it past me, the shower of droplets sparkling in the blazing Mexican sun. "We've got a world-class event going on!" Caballo panted. "Out here in the middle of nowhere!"

By the forty-two-mile mark, Silvino and Arnulfo were still ahead of Scott, while Jenn was creeping up behind all three. On her second pass through Urique, Jenn had dropped into a chair to drink a Coke, but Mamá Tita grabbed her under the arms and hauled her to her feet.

"Puedes, cariño, puedes!" Tita cried. You can do it, sweetie!

"I'm not dropping out," Jenn tried to protest. "I just need a drink."

But Tita's hands were in Jenn's back, pushing her back into the street. Just in time, too; Herbolisto and Sebastiano had taken advantage of the flat road into town to move back within a quarter mile of Jenn, while Billy Bonehead had broken free of Luis to move within a quarter mile of *them*.

"This is anybody's day!" Caballo said. He was trailing the leaders by about a half hour, and it was driving him batty. Not because he was losing; because he was in danger of missing the finish. The suspense was so unbearable, Caballo finally decided to drop out of his own race and cut back to Urique to see if he could get there in time for the final showdown.

I watched him run off, desperate to follow. I was so tired, I couldn't find my way to the skinny cable bridge over the river and somehow ended up under it, forcing me to splash through the river for the fourth time. My soaked feet felt too heavy to lift as I shuffled through the sand on the far side. I'd been out here all day, and now I was at the bottom of that same endless Alpine climb I'd almost fallen off this morning when I'd gotten spooked by the dead snake. There was no way I'd get down before sunset, so this time, I'd be stumbling back in the dark.

I dropped my head and started trudging. When I looked up again, Tarahumara kids were all around me. I closed my eyes, then opened them again. The kids were still there. I was so glad they weren't a hal-

lucination, I was almost weepy. Where they'd come from and why they'd chosen to tag along with me, I had no idea. Together, we made our way higher and higher up the hill.

After we'd gone about half a mile, they darted up a nearly invisible side trail and waved for me to follow.

"I can't," I told them regretfully.

They shrugged, and ran off into the brush. "*Gracias!*" I rasped, missing them already. I kept pushing up the hill, shambling along at a trot that couldn't have been faster than a walk. When I hit a short plateau, the kids were sitting there, waiting. So that's how the Urique Tarahumara were able to break open such big leads. The kids hopped up and ran alongside me until, once again, they vanished into the brush. A half mile later, they popped out again. This was turning into a nightmare: I kept running and running, but nothing changed. The hill stretched on forever, and everywhere I looked, Children of the Corn appeared.

What would Caballo do? I wondered. He was always getting himself into hopeless predicaments out here in the canyons, and he always found a way to run his way out. *He'd start with easy*, I told myself. *Because if that's all you get, that's not so bad. Then he'd work on light. He'd make it effortless, like he didn't care how high the hill is or how far he had got to go—*

"OSO!" Heading toward me was Barefoot Ted, and he looked frantic.

"Some boys gave me some water and it felt so cold, I figured I'd use it to cool down," Barefoot Ted said. "So I'm squirting myself all over, spraying it around . . ."

I had trouble following Barefoot Ted's story, because his voice was fading in and out like a badly tuned radio. My blood sugars were so low, I realized, I was on the verge of bonking.

". . . and then I'm going, 'Crap, oh crap, I'm out of water—'"

From what I could make out from Barefoot Ted's yammering, it was maybe a mile to the turnaround. I listened impatiently, desperate to push on to the aid station so I could chow down an energy bar and take a break before tackling the final five miles.

". . . So I tell myself if I've got to pee, I'd better pee into one of these bottles in case I'm down to the last, you know, the last of the last. So I pee into this bottle and it's like, *orange*. It's not looking

good. And it's *hot*. I think people were watching me pee in my bottle and thinking, 'Wow, these gringos are really tough.'

"Wait," I said, starting to understand. "You're not drinking piss?"

"It was the *worst!* The worst-tasting urine I've ever tasted in my entire life. You could bottle this stuff and sell it to bring people back from the dead. I know you can drink urine, but not if it's been heated and shaken in your kidneys for forty miles. It was a failed experiment. I wouldn't drink that urine if it was the last liquid on planet Earth."

"Here," I said, offering the last of my water. I had no idea why he hadn't just gone back to the aid station and refilled if he was so worried, but I was too exhausted to ask any more questions. Barefoot Ted dumped his whiz, refilled his bottle, and padded off. Odd as he was, there was no denying his resourcefulness and determination; he was less than five miles from finishing a 50-mile race in his rubber toe slippers, and he'd been willing to drink bodily waste to get there.

Only after I arrived at the Guadalupe turnaround did it finally penetrate my woozy mind why Barefoot was dry in the first place: all the water was gone. All the people, too. Everyone in the village had trooped into Urique for the postrace party, closing up the little shop and leaving no one behind to point out the wells. I slumped down on a rock. My head was reeling, and my mouth was too cottony to let me chew food. Even if I managed to choke down a few bites, I was way too dehydrated to make the hour-long run to the finish. The only way to get back to Urique was on foot, but I was too wasted to walk.

"So much for compassion," I muttered to myself. "I give something away, and what do I get? Screwed."

As I sat, defeated, my heavy breathing from the hard climb slowed enough for me to become aware of another sound—a weird, warbling whistle that seemed to be getting closer. I pulled myself up for a look, and there, heading up this lost hill, was old Bob Francis.

"Hey, amigo," Bob called, fishing two cans of mango juice out of his shoulder bag and shaking them over his head. "Thought you could use a drink."

I was stunned. Old Bob had hiked five miles of hard trails in 95-degree heat to bring me juice? But then I remembered: a few days before, Bob had admired the knife I'd lent Barefoot Ted to make his sandals. It was a memento from expeditions in Africa, but Bob had been so kind to all of us that I had to give it to him. Maybe Bob's mir-

acle delivery was just a lucky coincidence, but as I gulped the juice and got ready to run to the finish, I couldn't help feeling that the last piece of the Tarahumara puzzle had just snapped into place.

Caballo and Tita were jammed into the crowd at the finish line, craning their necks for the first glimpse of the leaders. Caballo pulled an old, broken-strapped Timex out of his pocket and checked the time. Six hours. That was probably way too fast, but there was a chance that—

"*;Vienen!*" someone shouted. They're coming!

Caballo's head jerked up. He squinted down the straight road, peering through the bobbing heads of dancers. False alarm. Just a cloud of dust and—no, there it was. Bouncing dark hair and a crimson blouse. Arnulfo still had the lead.

Silvino was in second, but Scott was closing fast. With a mile to go, Scott ran Silvino down. But instead of blowing past, Scott slapped him on the back. "C'mon!" Scott shouted, waving for Silvino to come with him. Startled, Silvino reached deep and managed to match Scott stride for stride. Together, they bore down on Arnulfo.

Screams and cheers drowned out the mariachi band as the three runners made their last push toward the finish. Silvino faltered, surged again, but couldn't hold Scott's pace. Scott drove on. He'd been in this spot before, and he'd always found something left. Arnulfo glanced back and saw the man who'd beaten the best in the world coming after him with everything he had. Arnulfo blazed through the heart of Urique, the screams building as he got closer and closer to the tape. When he snapped it, Tita was in tears.

The crowd had already swallowed Arnulfo by the time Scott crossed the line in second. Caballo rushed over to congratulate him, but Scott pushed past him without a word. Scott wasn't used to losing, especially not to some no-name guy in a pickup race in the middle of nowhere. This had never happened to him before—but he knew what to do about it.

Scott walked up to Arnulfo and bowed.

The crowd went crazy. Tita rushed over to hug Caballo and found him wiping his eyes. In the midst of this pandemonium, Silvino struggled across the finish line, followed by Herbolisto and Sebastian.

And Jenn? Her decision to win or die trying had finally caught up with her.

By the time she arrived at Guadalupe, Jenn was ready to faint. She slumped down against a tree and dropped her dizzy head between her knees. A group of Tarahumara clustered around, trying to encourage Jenn back to her feet. She lifted head and mimed drinking.

"*Agua?*" she asked. "*Agua purificada?*"

Someone shoved a warm Coke into her hand.

"Even better," she said, and smiled wearily.

She was still sipping the soda when a shout went up. Sebastiano and Herbolisto were running into the village. Jenn lost sight of them when the crowd thronged around to offer congratulations and *pinole*. Then Herbolisto was standing over her, stretching out his hand. With the other, he pointed toward the trail. Was she coming? Jenn shook her head. "Not yet," she said. Herbolisto started to run, then stopped and walked back. He put out his hand again. Jenn smiled and waved him off. "Get going, already!" Herbolisto waved good-bye.

Soon after he disappeared down the trail, the shouting began again. Someone relayed Jenn the information: the Wolf was coming.

Bonehead! Jenn saved him a long sip of her Coke, and pulled herself to her feet while he downed it. For all the times they'd paced each other and all the sunset runs they'd done on Virginia Beach, they'd never actually finished a race side by side.

"Ready?" Billy said.

"You're toast, dude."

Together, they flew down the long hill and thundered across the swaying bridge. They came into Urique whooping and hollering, redeeming themselves magnificently; despite Jenn's bloody legs and Billy's narcoleptic approach to prerace prep, they'd beaten all but four of the Tarahumara as well as Luis and Eric, two highly experienced ultrarunners.

Manuel Luna had dropped out halfway. Though he'd done his best to come through for Caballo, the ache of his son's death left him too leaden to compete. But while he couldn't get his heart into the racing, he was fully committed to one of the racers. Manuel prowled up and down the road, watching for Barefoot Ted. Soon, he was

joined by Arnulfo . . . and Scott . . . and Jenn and Billy. Something odd began to happen: as the runners got slower, the cheers got wilder. Every time a racer struggled across the finish—Luis and Porfilio, Eric and Barefoot Ted—they immediately turned around and began calling home the runners still out there.

From high on the hill, I could see the twinkle of the red and green lights strung above the road to Urique. The sun had set, leaving me running through that silvery-gray dusk of the deep canyons, a moon-like glow that lingers, unchanging, until you feel everything is frozen in time except you. And then, from out of those milky shadows, emerged the lone wanderer of the High Sierras.

"Want some company?" Caballo said.

"Love it."

Together, we clattered across the swaying bridge, the cool air off the river making me feel oddly weightless. When we hit the last stretch into town, trumpets began blasting. Side by side, stride for stride, Caballo and I ran into Urique.

I don't know if I actually crossed a finish line. All I saw was a pigtailed blur as Jenn came flying out of the crowd, knocking me staggering. Eric caught me before I hit the ground and pushed a cold bottle of water against the back of my neck. Arnulfo and Scott, their eyes already bloodshot, pushed a beer into each of my hands.

"You were amazing," Scott said.

"Yeah," I said. "Amazingly slow." It had taken me over twelve hours, meaning that Scott and Arnulfo could have run the course all over again and still beaten me.

"That's what I'm saying," Scott insisted. "I've been there, man. I've been there *a lot*. It takes more guts than going fast."

I limped over toward Caballo, who was sprawled under a tree as the party raged around him. Soon, he'd get to his feet and give a wonderful speech in his wacky Spanish. He'd bring forward Bob Francis, who'd walk back into town just in time to present Scott with a ceremonial Tarahumara belt and Arnulfo with a pocketknife of his own. Caballo would hand out prize money, and get choked up when the Party Kids, who could barely pay for the bus back to El Paso, immediately gave their cash to the Tarahumara runners who'd fin-

ished behind them. Caballo would roar with laughter as Herbolisto and Luis danced the Robot.

But that would all come later. For now, Caballo was content to just sit alone under a tree, smiling and sipping a beer, watching his dream play out before his eyes.

CHAPTER 32

That head of his has been occupied with contemporary society's insoluble problems for so long, and he is still battling on with his good-heartedness and boundless energy. His efforts have not been in vain, but he will probably not live to see them come to fruition.

—THEO VAN GOGH, 1889

"YOU'VE GOT TO HEAR THIS," Barefoot Ted said, grabbing my arm.

Damn. He caught me just as I was trying to slink away from the madness of the street party and limp off to the hotel to collapse. I'd already heard Barefoot Ted's entire postrace commentary, including his observation that human urine is both nutrient-rich and an effective tooth whitener, and I couldn't imagine anything he could possibly say that would be more compelling than a deep sleep in a soft bed. But it wasn't Ted telling stories this time. It was Caballo.

Barefoot Ted pulled me back into Mamá Tita's garden, where Caballo was holding Scott and Billy and a few of the others spell-bound. "You ever wake up in an emergency room," Caballo was saying, "and wondered whether you wanted to wake up at all?" With that, he launched into the story I'd been waiting nearly two years to hear. It didn't take me long to grasp why he'd chosen that moment. At dawn, we'd all be scattering and heading home. Caballo didn't want us to forget what we shared, so for the first time, he was revealing who he was.

He was born Michael Randall Hickman, son of a Marine Corps gunnery sergeant whose postings moved the family up and down the West Coast. As a skinny loner who constantly had to defend himself in new schools, young Mike's first priority every time they moved was to find the nearest Police Athletic League and sign up for boxing lessons.

Brawny kids would smirk and pound their gloves together as they watched the geek with the silky hippie hair gangle his way into the ring, but their grins died as soon as that long left arm began snapping jabs into their eyes. Mike Hickman was a sensitive kid who hated hurting people, but that didn't stop him from getting really good at it. "The guys I liked best were the big, muscular ones, 'cause they'd keep coming after me," he recalled. "But the first time I ever knocked out a guy, I cried. For a long time after that, I didn't knock out anybody."

After high school, Mike went off to Humboldt State to study Eastern religions and Native American history. To pay tuition, he began fighting in backroom smokers, billing himself as the Gypsy Cowboy. Because he was fearless about walking into gyms that rarely saw a white face, much less a vegetarian white face spouting off about universal harmony and wheatgrass juice, the Cowboy soon had all the action he could handle. Small-time Mexican promoters loved to pull him aside and whisper deals in his ear.

"*Oye, compay,*" they'd say. "Listen up, my friend. We're going to start a *chisme*, a little whisper, that you're a top amateur from back east. The gringos are gonna love it, man. Every *gabacho* in the house is going to bet their kids on you."

The Gypsy Cowboy shrugged. "Fine by me."

"Just dance around so you don't get slaughtered till the fourth," they'd warn him—or the third, or the seventh, whichever round the fix had been set for. The Cowboy could hold his own against gigantic black heavyweights by dodging and clinching up until it was time for him to hit the canvas, but against the speedy Latino middleweights, he had to fight for his life. "Man, sometimes they had to haul my bleeding butt out of there," he'd say. But even after leaving school, he stuck with it. "I just wandered the country fighting. Taking dives,

winning some, losing but really winning others, mostly putting on good shows and learning how to fight and not get hurt."

After a few years of scrapping along in the fight game's underworld, the Cowboy took his winnings and flew to Maui. There, he turned his back on the resorts and headed east, toward the damp, dark side of the island and the hidden shrines of Hana. He was looking for a purpose for his life. Instead, he found Smitty, a hermit who lived in a hidden cave. Smitty led Mike to a cave of his own, then began guiding him to Maui's hidden sacred sites.

"Smitty is the guy who first got me into running," Caballo told us. Sometimes, they'd set out in the middle of the night to run the twenty miles up the Kaupo Trail to the House of the Sun at the top of 10,000-foot Mount Haleakala. They'd sit quietly as the first rays of morning sparkled on the Pacific, then run back down again, fueled only by wild papayas they'd knocked from the trees. Gradually, the backroom brawler named Mike Hickman disappeared. In his place arose Micah True, a name inspired by "the courageous and fearless spirit" of the Old Testament prophet Micah and the loyalty of an old mutt called True Dog. "I don't always live up to True Dog's example," Caballo would say. "But it's something to shoot for."

During one of his vision-seeking runs through the rain forest, the newly reborn Micah True met a beautiful young woman from Seattle who was visiting on vacation. They couldn't have been more different—Melinda was a psychology grad student and the daughter of a wealthy investment banker, while Micah was, quite literally, a caveman—but they fell in love. After a year in the wilderness, Micah decided it was time to return to the world.

Wham! The Gypsy Cowboy knocked out his third opponent . . .

. . . and his fourth . . .

. . . and his fifth . . .

With Melinda in his corner and those rain-forest runs powering his legs, Micah was virtually untouchable; he could dance and shuffle until the other fighter's arms felt like cement. Once his fists drooped, Micah would dart in and hammer him to the canvas. "I was inspired by love, man," Micah said. He and Melinda settled in Boulder, Col-

orado, where he could run the mountain trails and get bouts in Denver arenas.

"He sure didn't look like a fighter," Don Tobin, then the Rocky Mountain lightweight kickboxing champion, later told me. "He had real long hair and was carrying this crusty old pair of gloves, like they were handed down from Rocky Graziano." Don Tobin became the Cowboy's friend and occasional sparring partner, and to this day, he marvels at the Cowboy's work ethic. "He was doing unbelievable training on his own. For his thirtieth birthday, he went out and ran thirty miles. *Thirty miles!*" Few American marathoners were putting up those numbers.

By the time his unbeaten streak reached 12-0, the Cowboy's reputation was formidable enough to land him on the cover of Denver's weekly newspaper, *Westword*. Under the headline FIST CITY was a full-page photo of Micah, bare-chested and sweaty, fists cocked and hair swinging, his eyes in the same glower I saw twenty years later when I surprised him in Creel. "I'll fight anybody for the right amount of money," the Cowboy was quoted as saying.

Anybody, eh? That article fell into the hands of an ESPN kickboxing promoter, who quickly tracked down the Cowboy and made an offer. Even though Micah was a boxer, not a kickboxer, she was willing to put him in the ring for a nationally televised bout against Larry Shepherd, America's fourth-ranked light heavyweight. Micah loved the publicity and the big payday, but smelled a rat. Just a few months before, he had been a homeless hippie meditating on a mountaintop; now, they were pitting him against a martial artist who could break cinder blocks with his head. "It was all a big joke to them, man," Micah says. "I was this long-haired hippie they wanted to shove into the ring for laughs."

What happened next summarizes Caballo's entire life story: the easiest choices he ever had to make were the ones between prudence and pride. When the bell clanged on ESPN's *Superfight Night*, the Gypsy Cowboy abandoned his usual canny strategy of dodging and dancing. Instead, he sprinted self-righteously across the ring and battered Shepherd with a furious barrage of lefts and rights. "He didn't know what I was doing, so he covered up in the corner to figure it out," Micah would recall. Micah cocked his right arm for a hay-

maker, but got a better idea. "I kicked him in the face so hard, I broke my toe," Micah says. "And his nose."

Dingdingding.

Micah's arm was jerked into the air, while a doctor began probing Shepherd's eyes to make sure his retinas were still attached. Another KO for the Gypsy Cowboy. He couldn't wait to get back home to celebrate with Melinda. But Melinda, he discovered, had a knockout of her own to deliver. And long before that conversation was over—long before she'd finished telling him about the affair and her plans to leave him for another man and move back to Seattle—Micah's brain was buzzing with questions. Not for her; for him.

He'd just smashed a man's face on national TV, and why? To be great in someone else's eyes? To be a performer whose achievements were only measured by someone else's affection? He wasn't stupid; he could connect the dots between the nervous boy with the Great Santini dad and the lonely, love-hungry drifter he'd become. Was he a great fighter, in other words, or just a needy one?

Soon after, *Karate* magazine called. The year-end rankings were about to come out, the reporter said, and the Gypsy Cowboy's upset had made him the fifth-ranked light-heavyweight kickboxer in America. The Cowboy's career was about to skyrocket; once *Karate* hit the stands and the offers started pouring in, he'd have plenty of big-money opportunities to find out whether he truly loved fighting, or was fighting to be loved.

"Excuse me," Micah told the reporter. "But I just decided to retire."

Making the Gypsy Cowboy disappear was even simpler than dispensing with Mike Hickman. Everything Micah couldn't carry on his back was discarded. The phone was disconnected, the apartment abandoned. Home became a '69 Chevy pickup. By night, he slept in a sleeping bag in the back. By day, he hired himself out to mow lawns and move furniture. Every hour in between, he ran. If he couldn't have Melinda, he'd settle for exhaustion. "I'd get up at four-thirty in the morning, run twenty miles, and it would be a beautiful thing," Micah said. "Then I'd work all day and want to feel that way again. So I'd go home, drink a beer, eat some beans, and run some more."

He had no idea if he was fast or slow, talented or terrible, until one summer weekend in 1986 when he drove up to Laramie, Wyoming, to take a stab at the Rocky Mountain Double Marathon. He surprised even himself by winning in six hours and twelve minutes, knocking off back-to-back trail marathons in a scratch over three hours each. Racing ultras, he discovered, was even tougher than prizefighting. In the ring, the other fighter determines how hard you're hit, but on the trail, your punishment is in your own hands. For a guy looking to beat himself into numbness, extreme running could be an awfully attractive sport.

Maybe I could even go pro, if I could just get over these nagging injuries. . . . That thought was running through Micah's mind as he coasted on his bike down a steep Boulder street. Next thing he knew, he was blinking into bright lights in the emergency room of Boulder Community Hospital, his eyes caked with blood and his forehead full of stitches. Best he could recall, he'd hit a gravel slick and sailed over the handlebars.

"You're lucky you're alive," the doctor told him, which was one way of looking at it. Another was that death was still a problem hanging over his head. Micah had just turned forty-one, and despite his ultrarunning prowess, the view from that ER gurney was none too pretty. He had no health insurance, no home, no close family, and no steady work. He didn't have enough money to stay overnight for observation, and he didn't have a bed to recover on if he checked out.

Poor and free was the way he'd chosen to live, but was it the way he wanted to die? A friend let Micah mend on her sofa, and there, for the next few days, he pondered his future. Only lucky rebels go out in a blaze of glory, as Micah knew very well. Ever since second grade, he'd idolized Geronimo, the Apache brave who used to escape the U.S. cavalry by running through the Arizona badlands on foot. But how did Geronimo end up? As a prisoner, dying drunk in a ditch on a dusty reservation.

Once Micah recovered, he headed to Leadville. And there, during a magical night running through the woods with Martimano Cervantes, he found his answers. Geronimo couldn't run free forever, but maybe a "gringo Indio" could. A gringo Indio who owed noth-

ing, needed no one, and wasn't afraid to disappear from the planet without a trace.

"So what do you live on?" I asked.

"Sweat," Caballo said. Every summer, he leaves his hut and rides buses back to Boulder, where his ancient pickup truck awaits him behind the house of a friendly farmer. For two or three months, he resumes the identity of Micah True and scrounges up freelance furniture-moving jobs. As soon as he has enough cash to last another year, he's gone, vanishing down to the bottom of the canyons and stepping back into the sandals of El Caballo Blanco.

"When I get too old to work, I'll do what Geronimo would've if they'd left him alone," Caballo said. "I'll walk off into the deep canyons and find a quiet place to lie down." There was no melodrama or self-pity in the way Caballo said this, just the understanding that someday, the life he'd chosen would require one last disappearing act.

"So maybe I'll see you all again," Caballo concluded, as Tita was killing the lights and shooing us off to bed. "Or maybe I won't."

By sunup the next morning, the soldiers of Urique were waiting by the old minibus that was idling outside Tita's restaurant. When Jenn arrived, they snapped to attention.

"Hasta luego, Brujita," they called.

Jenn blew them screen-siren kisses with a big sweep of her arm, then climbed aboard. Barefoot Ted got on next, climbing up gingerly. His feet were so thickly swathed in cloth bandages, they barely fit inside his Japanese bathhouse flip-flops. "They're not bad, really," he insisted. "Just a little tender." He squeezed in next to Scott, who willingly slid over to make room.

The rest of us filed in and made our sore bodies as comfortable as possible for the jouncing trip ahead. The village tortilla-maker (who's also the village barber, shoemaker, and bus driver) slid behind the wheel and revved the rattling engine. Outside, Caballo and Bob Francis walked the length of the bus, pressing their hands against each of our windows.

Manuel Luna, Arnulfo, and Silvino stood next to them as the bus

pulled out. The rest of the Tarahumara had set off already on the long hike home, but even though these three had the greatest distance to travel, they'd waited around to see us off. For a long time afterward, I could see them standing in the road, waving, until the entire town of Urique disappeared behind us in a cloud of dust.

ACKNOWLEDGMENTS

BACK IN 2005, Larry Weissman read a pile of my magazine clips and synthesized them into one smart question. “Endurance is at the heart of all your stories,” he said, or something to that effect. “Got one you haven’t told yet?”

“Well, yeah. I heard about this race in Mexico. . . .”

Since then, Larry and his brilliant wife, Sascha, have served as my agents and higher brain functions, teaching me how to turn a clutter of ideas into a legible proposal and yanking hard on the choke chain whenever I miss deadlines. Without them, this book would still be just a tale I told over beers.

Runner’s World magazine, and especially then-editor Jay Heinrichs, first sent me into the Copper Canyons and even briefly (*very* briefly) entertained my notion of publishing an all-Tarahumara issue. I’m indebted to James Rexroad, ace photographer, for his companionship and gorgeous photos on that trip. For a man with such a huge brain and lung capacity, *Runner’s World* editor emeritus Amby Burfoot is extraordinarily generous with his time, expertise, and library. I still owe him twenty-five of his books, which I promise to return if he’ll join me for another run.

But I’m especially grateful to *Men’s Health* magazine. If you don’t read it, you’re missing one of the best and most consistently credible magazines in the country, bar none. It’s staffed by editors like Matt Marion and Peter Moore, who encourage absurd ideas such as sending oft-injured writers into the wilderness for footraces with invisible Indians. *Men’s Health* allowed me to train for the race on their dime, then helped me shape the resulting story. Like everything I’ve written for Matt, it came into his hands like an unmade bed and came out with crisp hospital corners.

For a clan so consistently misrepresented by the media, the ultra community was extraordinarily supportive of my research and personal experimentation. Ken, Pat, and Cole Chlouber always made me feel at home in Leadville and taught me more than I ever wanted to learn about burro racing. Likewise, Leadville race director Me-

rilee O’Neal filled every request I could think of and gave me a race-finisher’s hug even though I hadn’t earned it. David “Wild Man” Horton, Matt “Skyrunner” Carpenter, Lisa Smith-Batchen and her husband Jay, Marshall and Heather Ulrich, Tony Krupicka—they all shared their remarkable stories and secrets of the trail. Sunny Blende, the ace ultra nutritionist, staved off disaster in the desert when Jenn, Billy, Barefoot Ted, and I fumblingly crewed for Luis Escobar at the 2006 Badwater, and provided the best definition of the sport I’ve ever heard: “Ultras are just eating and drinking contests, with a little exercise and scenery thrown in.”

If you didn’t feel overwhelmed by weird digressions while reading this book, you and I both owe thanks to Edward Kastenmeier, my editor at Knopf, and his assistant, Tim O’Connell. Also to Lexy Bloom, a senior editor at Vintage Books, who offered her valuable insight and comments down the stretch. Somehow, they figured out how to cut the fat out of my writing without sacrificing any flavor. Likewise, my friend Jason Fagone, author of the excellent *Horsemen of the Esophagus*, helped me understand the difference between storytelling and self-indulgence. Max Potter first let me write about Leadville for 5280 magazine and is the rare writer noble enough to cheerlead another writer on. Patrick Doyle, 5280’s amazing researcher, confirmed many facts about Caballo’s mysterious life, and even unearthed that lost newspaper photo from “The Gypsy Cowboy’s” prizefighting days. Years ago, Susan Linnee gave me a job at the Associated Press that I didn’t deserve, then taught me how to do it. If more people knew Susan, fewer would bash journalism.

To be a great athlete, you need to pick your parents wisely. To survive as a writer, you should do likewise with your family. My brothers, sisters, nieces, and nephews have all been tremendously supportive and forgiving of missed birthdays and obligations. Most of all, I’m indebted to my wife, Mika, and my glorious daughters, Sophie and Maya, for the joy that I hope is evident in these pages.

I now know why the Tarahumara and the Más Locos got along so beautifully. They are rare and wonderful people, and spending time with them is one of the greatest privileges of my life. I wish I had time for one more mango juice with that great gringo Indio, Bob Francis. Shortly after the race, he died. How, I don’t know. Like most deaths in the Copper Canyons, his death remains a mystery.

While still absorbing the loss of his loyal old friend, Caballo got the offer of a lifetime. The North Face, the popular outdoor sports company, offered to become his race sponsor. Caballo’s future, and his race’s, would finally be secure.

Caballo thought it over. For about a minute.

“No, thanks,” he decided. “I don’t want anyone to do anything except come run, party, dance, eat, and hang with us. Running isn’t about making people buy stuff. Running should be free, man.”