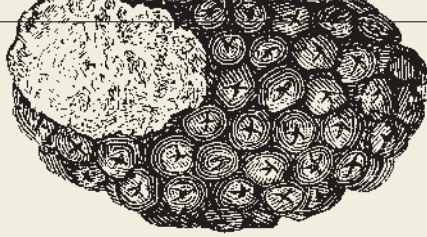


photographs by
CAROLINE
TOMPKINS

All over America's ancient eastern mountains, there's an organism that lives underground, tethered to tree roots, waiting to be hunted. It's among the world's rarest and most expensive foods, and it grows in a wide range of conditions. But there's only one guy in the country who really knows how to find it. ROWAN JACOBSEN joins him in the search for the Appalachian truffle.

Appalachian
truffles





Too early on a Saturday, high in the hills of Appalachia, Ben Kable and I creep along a mountain road in his SUV, eyeing the passing evergreens like burglars casing a neighborhood. Kable eases to a stop beside a stand of stubby conifers, their roots gripping the roadside gravel like mossy fingers. "This looks like a good spot," he says. "Let's take a quick peek."

We stop the car, and Kable opens the back to free his Rottweiler, Daisy. He makes a clicking sound with his mouth. "Go get 'em, Daisy." She charges into the trees, giving the base of each trunk a cursory sniff.

Kable keeps one eye on his dog while he pulls a pH meter from a pouch, sinks the long metal stick into the ground, and consults the display. "It's 7.5. Pretty good."

A 7.5 pH means the soil is "sweet," full of calcium and phosphorus from the limestone used to build the road. That's what we're looking for, because our quarry lives underground and eats these chemical elements for breakfast.

The Appalachian truffle, *Tuber canaliculatum*, is a one-ounce ball of delight that could be the next culinary star, yet it's virtually unknown. I'm here to figure out why. For years I've been chasing truffle hunters across half a dozen European countries as I research a book. The prize—extraordinarily pungent orbs of fungus that grow tethered to tree roots, with which they share nutrients—are a billion-dollar business there, where diners pay upward of \$6,000 per pound. Every year, tens of thousands of hunters scour the forests, using trained dogs to sniff truffles out underground. The continent's famous white variety grows almost exclusively in the wild forests of Italy and Eastern Europe, and the great black strain flourishes on farms in Spain and France. North America has always been left out of the smelly fun. I had assumed this was because there are no comparable truffles to be found here.

Then, three years ago, I learned about *T.*

can, as its handful of aficionados call it. The truffle has been found in Michigan and Massachusetts, but the Appalachians seemed to be a hot spot. There were rumors that it was delicious, but all the reports seemed to be thirdhand. I was intrigued but skeptical.

After much searching, I finally managed to get my hands on a *T. can* sample during a visit to Québec two years ago, and I was skeptical no more. It smelled like a hazelnut torte that had taken a tumble in the moss with a wood nymph. It was the prettiest piece of fungus I'd ever seen, wrapped in a jewel-like burgundy coat. As I shaved it over linguine, waves of cocoa, clove cigarettes, and sweaty spice billowed up, as seductive as anything I'd encountered in Europe. I thought: Has one of the world's greatest wild ingredients been sitting in our backyard all along, waiting for someone to notice?

Insane, but not improbable. You don't just stumble across a truffle. You can walk right over one without knowing it's there. You need a dog. And not just any dog—preferably a Lagotto Romagnolo, a poodlesque hunting machine of Italian heritage, bred for centuries for no other purpose.

Daisy isn't that, but she is one of a very few specially trained dogs in the country, and one of only a small number of them to ever find an Appalachian truffle, which is why I'm tingling with anticipation as Kable packs up the pH meter and we follow her into the Christmas-scented woods.

I'd driven 13 hours to meet Kable in a remote patch of the Appalachian Mountains I can't disclose. But I'm worried about our

odds. To find this particular delicacy, you have to be looking in the right habitat, and with *T. can*, no one is certain exactly what that habitat is. The mycologists I've spoken with tell me it's a generalist, found in association with many different kinds of trees: hemlock, hornbeam, oak, pine, pecan, chestnut, spruce. The few sightings tend to be accidental. Somebody blunders into one while digging in the dirt and sends it to an expert for identification.

Still, Kable, who I met over email through what can only be called the truffle underground, thinks he has pieced it together. A fit and focused third-generation veterinarian in his early thirties, with an animal hospital in Maryland to run, two small children, and a very understanding wife, he really shouldn't be obsessing over truffles in his nonexistent free time, but he can't help himself. Late at night, he combs Google Earth, searching for sites with the precise combination of factors he believes are key: limestone gravel roads, high pH, a certain elevation.

He's been aided in this quest by Jeff Long, an elusive forager and the only person in the country to run *T. can* to ground with regularity. Long has never shared his secrets before, but Kable has been working on him for over a year; miraculously, he's finally agreed to be the ace up our sleeves. He's headed our way, but we have a half-day head start so Kable and Daisy can prove themselves.

Which is not going well. After only a few minutes on task, Daisy appears to have completely forgotten the objective of our mission. She looks back questioningly.

"Truffles, Daisy," Kable says with a click. "Go get 'em."

She snaps out of her daze and nuzzles a few tree trunks, but I can't help but notice that she doesn't have the drive I've seen in European dogs, the best of which hunt with a fanatical obsession. In contrast, Daisy has the slightly comical look of a very nice Rottweiler lacking self-confidence. A cartoonist would draw her with scrunched eyebrows. Kable warned me that they'd only actually found truffles twice before, but in my enthusiasm I hadn't considered an outcome of little to no prospects. Now, as we watch her investigate a pile of deer poop, we're left to guess if our detector is fried, or if there simply are no truffles in this area.

Clockwise from top left: Ben Kable; a seedling inoculated with truffle spores on Kable's family farm in Maryland; *Tuberaceae* truffles; Kable and his daughter; Kable's foraged truffles; Daisy



"She's middlin' as a truffle dog," Kable admits. "She was three years old when she came from the Humane Society. I've worked with her, but her existence does not center around the search. She'll do it, but she doesn't care that much."

We try to get Daisy to care, but after an hour of loping in circles through the chilly, dripping woods, Kable sighs in frustration.



TRUFFLES MAKE mammals do foolish things. A flying squirrel will pivot in mid-air at the slightest whiff, slaloming through the trees in search of the source. A pig will forgo sex and other pleasures until its lust is slaked. And a human will trade a day's work for the tiniest taste, or plow a life's savings into an orchard that might produce a specimen around five years later.

It's all part of the truffle master plan. Balls of spores, they depend on animals to dig them up, eat them, and spread them across the forest. To accomplish this, truffles must smell so irresistible that passing critters lose their minds. And it works. The scent is the beautifully honed end product of millions of years of market testing.

That scent was enough to entice Kable to drop a small fortune in an attempt to farm them. Over a decade ago, he got hooked on the pungent morsels for all the usual reasons—the magic, the mystery, the way the aura burrowed itself into his brain, not to mention the prospect of growing a ton of them and getting rich.

Two species of European truffles, known as the Périgord and the Burgundy, have been farmed around the world for decades, but neither of them have taken off in American soils and climates. Kable originally planned to grow the Burgundy variety on some land his parents owned in Maryland, but in 2017, a mycologist friend mentioned *T. can*: great aromatics, long shelf life, cute as heck, seems to thrive in the eastern U.S. "It totally blew my mind," he says. "I couldn't believe that I could have been hunting out my back door all along."

Information on the truffle was almost nonexistent. "There were maybe two pictures of it online. Nobody had it, could find it, or knew anything about it." The great chef James Beard got his hands on one in 1977 and pronounced it "exquisite." But, as is its nature, the truffle stayed underground.

Eventually, Kable discovered Jérôme Quirion, an arborist in rural Québec who had scored a few samples in the 2000s and quietly taught himself to cultivate *T. can* by

inoculating tree seedlings with its spores, which germinate and then grow on the roots. When I met with Quirion, he had just started a business selling inoculated seedlings, which begin producing truffles about six years or so after being planted.

Kable asked Quirion if he could buy a few truffles to serve as inoculum for his own orchard. No deal. "He explained to me that inoculum is gold, and no, he would never, ever give me any. But he'd sell me trees." (My dime-size Appalachian truffle came from Quirion. He doesn't usually hand them out, since you can extract spores from a mature specimen. Being a food writer and not a future farmer, I was able to beg one off him on the condition that I eat it that night, which I happily did.) In 2019, Kable bought 1,500 of Quirion's tree seedlings at around \$25 each and sank them into 4.5 acres of sweet Maryland earth. Now he waits for them to fruit, somewhere around 2025, if all goes well.

"I can't tell you the anxiety," he says. "Years go by and you're just thinking, What the hell is going on under there?"

To hedge his bets, Kable decided on a plan: boost the soil with as many *T. can* spores as he could find in the wild, mimicking what happens in nature, where the cells germinate in the soil and find their way to tree roots and each other. The end product is the result of two individual fungi "mating." Kable wanted to max out the genetic diversity of his orchard in the hope of spurring a truffle orgy.

But where to find those wild specimens? For years, Kable had ransacked the internet, pestered mycologists, and haunted grower's forums, all for nothing. No one had deciphered *T. can*'s habits. That is, except for Jeff Long. A retired Washington, D.C., attorney, Long was rumored to disappear into the mountains with his dog and come back with tubfuls of the maroon morsels, which he'd sell to a couple restaurants.

Long kept a very low profile, but after a year and a half of outreach, Kable made contact. He expected a cold shoulder. Instead, Long welcomed him to the club. "I was surprised by how friendly he was," Kable says. For

the 69-year-old expert, the novelty of being the only person in the world hunting *T. can* had worn thin. Now he was ready to share his wisdom. Seek out flat or low-lying areas, Long told him. Gravel roads. High pH.

Kable threw himself at Google Earth with renewed vigor. And he began trying to retrofit Daisy into a truffle dog by introducing a training regimen in his yard, using small pieces of the black variety. But Kable wasn't sure if drilling on other strains would carry over to *T. can*, so in 2019 he persuaded Long to sell him the gooey bits of rotten Appalachian truffles that were too far gone for chefs.

A few months after training Daisy with the real thing, he deployed her for the first time, convincing his wife that they really needed to take their infant daughter camping, in a spot he knew checked all three boxes Long had described. He stepped out of the tent on a dewy morning, snapped his fingers, and said, "Go get 'em, Daisy." Immediately, the dog ran down the road and scratched up a nice hunk of deliciousness under the moss.

Kable couldn't believe it. So easy! They had one more success that fall, at another campsite with similar conditions, enough to convince him that he had a method dialed in.

But since then—very little luck. Today, as Daisy gives the forest floor zero attention, he tries directing her to specific trunks with his hand. "What about this one, Daisy?

Maybe this one?" The dog stares at Kable as if he is playing charades. Then she lights out after a squirrel, and Kable darkly watches her go. "She's just aloof and scatterbrained, like me," he says. "I need a dog that's going to be a laser beam."

In theory, that laser beam is in the works. "We've got a puppy who will be formally trained. His toys have truffles in them. His food is truffle scented. He's been rewarded for finding them from the day he was ten weeks old. His life and drive will be centered on the hunt." But that puppy won't be up to speed for about a year.

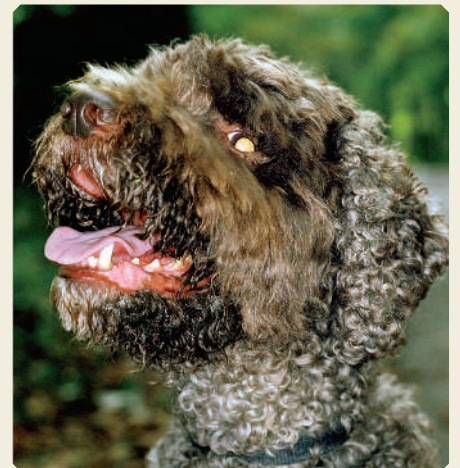
Kable throws up his arms and gestures toward the forest. "How do we know we're not walking over truffles right now?" he says. I gaze out at the rippling folds of Appalachia, a blue-green standing wave extending as far as I can see. I think about needles and haystacks. It's time to play the ace.

It's all part of the truffle master plan. Balls of spores, they depend on animals to dig them up, eat them, and spread them across the forest. To accomplish this, truffles must smell so irresistible that passing critters lose their minds.





Clockwise: Long and Este; digging up a *T. canis*; Este; a mushroom guidebook; Long on the hunt; Este on the move; cleaning a truffle



T T T

LATER THAT MORNING, on the side of a gravel road at the site of our third and final failure, Long steps out of his SUV and greets me and Kable. He's wearing comfy jeans and leather boots, tufts of white hair poking out from under his ball cap. He looks like somebody's grandfather out for a walk. He pulls on a khaki fishing vest and opens the hatchback. A gray Lagotto Romagnolo with fetching bangs hops out and stretches.

Long gets down on one knee and gazes soulfully into his dog's eyes. "Où est la?" he coos softly. "Cherches la truffe."

And we're off.

The dog is from France—Burgundy, in fact, a region steeped in truffles. In addition to being a serious mushroomer and a former president of the Mycological Association of Washington, D.C., Long is a wine aficionado. In the 1990s, he was visiting Domaine Armelle et Bernard Rion, a Burgundy wine estate, when he discovered that the owner raised the world's most prized hunters. The dogs spent their days digging for truffles in the estate's garden.

Long fell for the breed and brought a pup named Este back to America in 2009. He didn't think truffling was an option where he lived. He just wanted a buddy.

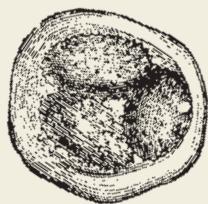
But Este had other plans. In 2010, Long was hunting porcini along a forest road when the puppy tunneled into the dirt and chomped on something. "I turned him over, reached in his mouth, and there was a truffle," Long says, still amazed.

It was the size of a kumquat, with a beautiful orange coat, and it smelled insane. Long was familiar with the European varieties; this sure as hell was not one of those. He sent samples from that day's finds off to Matt Smith, a truffle expert at the University of Florida.

Smith got right back to him. *Tuber canaliculatum!* Nice find!

Soon Este found a few more, and Long brought them to his mushroom clients, including Frank Ruta, the former White House chef whose restaurant Palena was at the pinnacle of the D.C. dining scene at the time. Ruta told me that he was deeply skeptical of these strange fellows at first, but as soon as he popped open the

But where to find those wild specimens? For years, Kable had ransacked the internet, pestered mycologists, and haunted grower's forums, all for nothing. No one had deciphered T. can's habits. That is, except for Jeff Long.



tub, everything changed. "I loved them! The purity of the aroma! They reminded me of white truffles."

He put them on the menu that evening, along with the backstory. Diners went bonkers. Ruta texted Long later that night: "When can I get some more???"

"Jeff's Lagotto truffles" have been a mainstay on Ruta's restaurant menus ever since. "When Jeff comes in, we all huddle around him in the kitchen to smell them," he says. "We take as many as we can get."

Which wasn't many initially. Over time, Long identified a few productive sites, but he couldn't figure out what they had in common. It wasn't as simple as one type of tree or a set of conditions. His break happened when Matt Smith came to the area to see Long's sites for himself. Smith confirmed Long's suspicions: it was the pH.

After that, Long's successes multiplied, and he settled into

his new retirement project as the only consistently successful truffle hunter east of the Mississippi. "If I could do nothing but truffle all the time, that's what I'd do," he says as we descend a shady forest road. "When Este's on the search, he's happy, I'm happy, we're out in nature, it's good."

At this particular moment, Este is in full Lagotto mode, darting methodically from tree to tree, giving each the once-over, nose twitching, but he hasn't stopped once to dig.

"I don't like this slope," Long says. "I'd like it better if it was flatter on either side of the road." He casts a dismal eye over the trees and mutters something about exposure and glacial till. "I'd like to see more rock." He calls Este over and squats down. "Anything over here?" he asks, touching a particularly fluffy hump of moss. "Around this rock? Anything? *Cherches la truffe.*"

The dog dutifully noses the spot but doesn't slow down. So it goes for an hour. Kable tries to look stoic. All those hours on Google Earth.

The road drops lower down the mountainside, the ground wet with puddles from a recent rain. "Not ideal," Long says. "Rain suppresses the aromatics. If I see that, I usually turn around."

Still, we plod onward. "Find me a truffle, Este," Long coos. "Please."

Instead, Este stops in his tracks and



Kable holding a batch of foraged truffles

glowers back at us, head low. Long stops as well. "I call that *the look*. It means 'Why are we here?' Sorry, Ben. We're done."

The good news: Daisy is exonerated. The bad: Once again, we've been skunked.

As we trudge back up the soggy forest roads, Kable and Long brainstorm on what might be wrong. Altitude? Wetness? Lack of critters? Lack of limestone? The reality is we just don't know for certain. *T. can* is an elusive prize.

Kable tries to put a positive spin on things, pointing out the miles of unexplored roads. "This place holds a lot of promise. It'll take more than one visit. We just gotta keep searching."

But I can't suppress my doubts. Maybe these guys don't know nearly as much as they think they do. Or maybe Este's exploits have been greatly exaggerated. Or worst of all, maybe *T. can* is a lot rarer than I'd hoped.

Kable seems to be mulling something, and when we reach the cars, he decides to spill. He's planning on hitting another spot—one of the two he's been successful at in the past—two weeks from now. Foragers hate to show other foragers their spots, but Kable needs Este's expert appraisal.

Long hems and haws and says maybe, but I can sense the drool of his inner forager.

And me? I think about it for all of ten seconds: "I'll be there."



KABLE'S SECRET camping spot is down another barely navigable dirt road in the middle of Nowheresville. Rolling hills, bony fields, and slanting cabins just screaming out for a banjo player on the porch. At a spot where the towering trees crowd the roadsides in eternal gloom, we unleash Daisy. As before, we're taking a shot on our own before we bring in the cavalry.

Also as before, we're getting nothing. "This all looks a little too crusty to me," Kable says, scanning the dry, needle-strewn ground. "Let's find more moss."

A hundred yards farther along, things look a little better. The ground is wetter, bumpier, emerald green. "What about here, Daisy?"



In short order, we unearth a dozen of the little gems, each about the size of a cherry tomato. We dance a jig like forty-niners who have just hit a seam. Kable checks the pH of the patch of ground: 8.4, the highest he's ever seen.

in the dirt and comes up with a second one. Then a third. "I don't need no truffle dog!"

I shake off the shock and throw myself to the ground, pulling at moss. In short order, we unearth a dozen of the little gems, each about the size of a cherry tomato. We dance a jig like forty-niners who have just hit a seam. Kable checks the pH of the patch of ground: 8.4, the highest he has ever seen.

I gather the goods in my palms and hold them to my nose for that scent I've been cradling in my memory, and smell... nothing.

"Ben, where's the aroma?"

Kable takes a whiff. His smile fades. "They're not mature."

Like fruit, truffles take months to ripen. They only crank out their beguiling smell once their spores have developed, and if plucked early, they stop growing. Hunting by scent, dogs only hit on ripe truffles, but we have a dozen unripe, useless mounds of fungus on our hands.

We can't do this without Long and Este.

And we get them that afternoon. After his pregame routine, Este samples the air, nose twitching. His gaze falls on a tree across the road. He casually trots to it, stops at the base, and scratches the dirt once with his paw.

Long reaches into the spot and pulls out a truffle the size of a Ping-Pong ball. "Excellent!" he exclaims, sliding the dog a biscuit. "Good work!"

Kable calls, standing in the center of the mossy zone. "Get the truffles."

But Daisy has been chasing birds up and down the road, and she just pants at him, tongue lolling. "Once she starts panting like that, you know she's not sniffing much," he laments. He looks like he's at the end of his rope, and when he drops to his knees, I wonder if he's giving up. But he mutters, "Let's just see," gouges his fingers into the carpet of moss, and pulls it back like a blanket. I gaze at the uninspiring patch of bare dirt—one of a million such spots in this valley—as the hopelessness of our quest settles on me. Then I notice a little knob of dirt that seems to be curved up in a lump.

Kable has already spotted it. He slides his fingers underneath and pulls up a perfect, dusty-orange hunk.

I stare in disbelief. Kable lets out a whoop. "Look at that bad boy!" He feels around

We don't even have time to take a good sniff of the bounty before Este is scratching at another spot a few yards away. Another one, even larger than the first. This one I do sniff, and instantly my head is thrumming with dopamine as a thousand years of the spice trade seems to pour out of the little lump at once.

Este zigzags up the line of trunks, indicating every few yards, and it's all we can do to keep up. He circles trees and doubles back, swiping the ground with his paw before moving on, his eyes glazed with an eerie calm, like a mystic listening to spirits.

"This is like a dream sequence," Kable murmurs as he fills his pack.

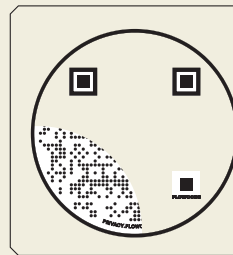
The next few hours are a blur of scratching, digging, and treats. We could go for miles and not run out of truffles. We could follow this road forever. The only things that stop us are the failing light and a god-level patch of porcini that sidetracks Long.

That evening, the booty is divided up. Long gets the best for his chefs. Kable buys the rest for his farm.

And me? I don't really have dibs on anything, but somehow a little four-gram nubbin finds its way into my pocket, and that night it finds its way onto the poached egg I cook at my campsite.

Basking in that golden haze of happiness, I find my mind wandering into the future. So many spots to explore. So much buried treasure, just waiting for a canine corps to give it its day in the sun. ❶

OUTSIDE CONTRIBUTOR ROWAN JACOBSEN (@ROWANJACOBSEN) IS THE AUTHOR OF EIGHT BOOKS, INCLUDING TRUFFLE HOUND, WHICH WAS PUBLISHED IN OCTOBER 2021.



Scan here to read Rowan Jacobsen's 2014 *Outside* Classic on the Colorado River.

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Long and Este
truffling in an
Appalachian forest

