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Editorial The adventure of a lifetime: kids, entertainment, and an endangered root

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In early September of 2017, Miami-Dade was evacuated as Hurricane Irma threatened Florida. My four kids, Sam, Beatriz, Cody, Georgia, and I decamped to our family farm on the Cumberland Plateau in eastern Tennessee. We spend a good amount of time in Tennessee. In the wet winter season, we paddle the various local creeks. In spring time, we count migrating birds and document warm season grass growth. In the summer, we hike and spend time in our spring-fed pond. By Labor Day, it starts to get hot, dry, and dusty on the Plateau. If we visit that time of year, it is usually for a day or two to check on the farm animals. So, when we evacuated Miami and headed to Tennessee, we all figured we would hang out at the farm for a couple of days and check on the chickens and ducks and cows. Hurricanes often threaten but rarely hit, so this would probably be a short trip.

As it turned out, Hurricane Irma made a mess of Miami-Dade, so we were alone at the farm during what we thought was the off season. It was my job as a single dad to make sure the kids exercised and stayed intellectually active. I think I am pretty good at finding fun things to do. My kids find me a bit wacky, but we played bingo (one of our favorite games,) ping-pong, and Scrabble. Scrabble can be a tough one because the 8-year old twins (Cody and Georgia) do not know as many words as Sam and Beatriz.

We cleaned the chicken coop. We picked flowers. We went on a bunch of plant photo safaris, with prizes going to the best pictures. Sometimes I blow up the good ones and cover them with plastic. We use them to identify various trees and plants. Even so, after one too many "safaris," the kids got restless. What is an evacuated family to do on day five of no school and no homework and no end in sight?

Ideas for entertaining the kids were waning when inspiration struck. For 10 years I had seen signs on roads all over Cumberland County, "WE BUY GINSENG." What is that all about I wondered?

I turned to the farm manager, Harold. He explained that it is a plant that grows in the Cumberland Mountains and that people collect it to sell to the Chinese for lots of money.

"How much," I asked?

"About a thousand dollars a pound," he said, with his deep Appalachian drawl.

"Is there any ginseng on my farm?"

"I reckon we might find us some ... "

SCORE!

"Guess what kids? After lunch we are going to hunt for ginseng." All four of them sighed in unison. "Sounds boring Dad, what else can we do?"

I explained to the kids that they would get the "going rate" for their work. The kids were ecstatic at the thought of making money and embarking on a new adventure—in that order. Harold agreed to be our guide. He is a remarkable person who enjoys sharing his knowledge of life, history, and flora and fauna on the Cumberland Plateau.

Harold is about 65 years old and has lived on the Plateau his entire life, as has his familyfor generations. When the kids and I have explored the natural resources on my farm and around it, Harold has been an enthusiastic and knowledgeable teacher. He has seen how resource management has changed over the years. Sometimes, the old ways are best, sometimes the new. The key, he tells me is to choose the right technique for the right job.

It was no surprise that Harold knew how to look for ginseng. He loaded us into a "mule ATV" and his 1999 red four-wheel drive truck—and off we went. We drove about a mile up the mountain to a northeast facing slope. Harold stopped a few times, got out of the truck, and scoped out the terrain. On the third stop, he told us all to follow him. About 100 yards from the vehicles, he bent down and in that deep drawl I love, he called the kids over and showed them our first plant.

It was a four-pronged plant with a bunch of red berries.

Sam elbowed his three siblings out of the way as only a teenaged boy can do and watched carefully as Harold demonstrated how to correctly dig the root. Each of us located a root and we all began. We stopped at two other locations. When we had a half bucket of roots, we decided to call it quits. We headed home, thanked Harold, and unloaded our booty. The kids were excited to make some money.

But first, we needed a scale. How else could I determine exactly how much ginseng was in the bucket? We headed to the local "superstore". When I explained to a nice lady that the scale was for ginseng, she told us her husband was a "sang" guy, too. That is what they call ginseng on the Cumberland Plateau, sang. She provided all sorts of good advice, lots and lots of advice. I did not realize it then, but there is a "sang" community throughout rural Appalachia. If you are a "sang" person, you share a commonality with others. I could have talked for hours, but the kids were ready to get paid. Learning about the ways to look for, clean, sell, or protect ginseng was just not as compelling to them. So, we paid and headed home to weigh the kids' treasure. I was relieved that I had managed to entertain everyone for one more day.

That night we weighed the ginseng and paid the kids.

Satisfied with their work and funds, the kids chatted about what they planned to do with their money.

In the meantime, here I was the proud owner of a half bucket of American wild ginseng. Scientists call it *Panax quinquefolius*. I was not quite sure what to do with the stuff, so I did a little online surfing to see what in the world I could do with my treasure.

Ginseng is a root. We learned that before lunch. But, I did not know how humans have loved ginseng to the point of near extinction. I knew ginseng had medicinal values, but I did not realize that many believe it to be a *Panax*, a cure-all. I knew that the Chinese appreciated the plant, but I did not know they believed it to have mystical powers. I knew that it grew in forests, but I did not know that it was an indicator species for the health of the forest. Finally, I knew that ginseng was rare, but I did not know that it was protected by the United Nations and was approaching extinction. Based on what I learned, I knew that early September on the Plateau would never be the "off" season again and that for the next few days, our little family would be busy exploring ginseng on the farm.

Best practices for preservation are rather simple. You need to find the ginseng. Then, you pick the berries off and plant them near the parent plant. After that, you cut the prongs off, leaving just a small, largely invisible stem. This process hides the root from poachers. Burying the berries near the parent hides the seeds from predators. I was certain that I no longer wanted to dig up my roots, at least not until I understood more. My new mission was to hide the plants from poachers and predators. I decided to offer to pay each kid per clipped berry/planted root. I simultaneously created a motivated and enthusiastic labor force and another generation of conservation-minded citizens. With kids, marketing is crucial.

At 6:30 the next morning, Harold dropped by to check on us. He was on his way to sell some livestock—a very big deal in that part of the country. The kids and I were on a different mission, a ginseng mission.

"I know you are busy this morning, but we all have a special request. Could you please help us find some more ginseng?"

Harold bent over laughing and asked if we were serious. Of course, we were serious. Harold agreed to help us, provided that we promised not to tell any of his rancher friends that he was late to the sale because he was looking for "sang." Real cattlemen do not leave other real cattlemen waiting while they look for ginseng. It is considered bad form.

We all put on our snake boots, (where there is ginseng, there are often snakes) grabbed some water and snacks, and set out on our ATVs. Once again, we headed up the mountain on a generally northeast facing trail. In about 15 minutes, Harold, in the lead, stopped and pulled over. We all got out of our vehicles and followed. Harold put his hand to his forehead and scanned the woods like an owl looking for a mouse. He was focused. He was calm, but I could tell that the adrenaline was flowing. We stopped three different times until finally Harold motioned with his hand that we should follow him. We trekked through the woods, heads down looking for berries, and of course snakes.

About 500 yards later, there it was, a ginseng patch. We were elated. Harold most of all. He seemed to have forgotten about the important cow sale. The kids clipped and planted. This continued for a few hours at three different locations.

As lunch time approached, Harold excused himself to go sell some cows. I did some accounting work and paid each kid for the roots they had helped preserve.

Later that afternoon, Sam and I donned our snake boots one more time, thinking we would go save some more roots. We went to the same general areas but, without Harold's help, could not spot a single plant. The following morning, Harold "volunteered" to teach us how to hunt ginseng. Over the next several days of our Irma evacuation, we all went on several more clipping and planting trips. I called them ginseng safaris. Sam's ginsengspotting skills got better each day. Mine did not. Over time, he developed an eye for spotting ginseng. I could be standing on top of a plant and for the life of me, not see it. I have read that some people have an eye for the plant, some do not.

But my research in the evening got a whole lot better. The root had taken hold of me—its history, its application, and its scarcity—and I was determined to learn as much as I could and do as much as I could to help protect the roots on my property, as well as in the surrounding Appalachian region.

Harold and I discussed buying some roots from sellers and transplanting them onto my farm. Harold had performed this decades before and was confident he could locate some good "aged" roots. But, I began to wonder about ethics. Was I supporting a questionable trade? Was it better not to? Was transplanting even a good idea? After discussing the ethics with the kids and Harold, I bought 300 ten-year-old roots. Harold was quite proud of the quality of our purchase, and we worked together to plant 300 roots in the gorge-facing northeast of course. We will not know how the roots will fair until summer 2019, unless of course they decide to go dormant. Occasionally, without rhyme or reason, ginseng can just go to sleep for a few years? It can, and it often does. Dormant or not, we are all excited to head back when the season opens in Tennessee—September 1. We cannot wait to see how the new roots are doing. Sam is designing a spread sheet to pair with a GPS that locates our plants. Secrecy is paramount to our new ginseng project. Poachers are a problem. And, they are not always careful about protecting the plant for the future. I am focused on continuing my research and finding fellow enthusiasts.

Over several conversations with Harold, I learned so much more about his grandparents and great grandparents. What he calls his "people." After 10 years of working closely with Harold, I thought that I knew him quite well, but I had no idea that his people had been "sang" folks for generations. They supplemented their income by foraging in the fall.

Harold's face lit up as he told us about fall forages with his grandfather. They used to go for long hikes looking for "sang" together. They would sell some and keep some at home for tea. "Granddaddy" taught him to replant berries and to leave different aged roots in the ground and dig up others; he taught him to rotate digging areas so as not to overdig. His granddaddy taught him how to dig properly without damaging the tops; he taught Harold how to store and clean the roots. Finally, he taught him a "ginsenger's" most important rule: silence. Harold never discussed ginseng with me because it is ingrained in the culture of "sang" families—the need to keep quiet.

It is not something that I do well.

My research continued. I called and spoke to anyone who was knowledgeable and who would share their time. I met new conservation-minded people. Most of my friends with advanced degrees, even conservationist/biologists, laughed me off the phone. Ginseng is tinged with quackery, and self-respecting academics generally stay away, they explained. But, I have found scientists and academics and state conservationists who take the study and preservation of ginseng very seriously. According to James McGraw, a plant biologist and ginseng expert at West Virginia University, "It may be the most interesting plant in the world."

I am not going to stay away. I am going to write and talk and call as much as I can to do what I can to preserve this endangered root. Ginseng's Latin name, *Panax quinquefolius*, can be translated to mean panacea: cure-all. We need to save this cure-all.

Ginseng is important to local economies. It is important to those who believe in its medicinal value. It is important to those who believe in its spiritual value. It is important to the forest where its health can be gauged by the health of the ginseng population.

It is important to me.

Conflicts of interest

All authors have no conflicts of interest to declare.

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