

## Stalking the Wild Groundnut

*In case of a famine...a plant that grows everywhere*

BY TAMARA DEAN

PHOTO BY JASON HOUSTON

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Once I paid attention to it, the plant appeared everywhere. Its foliage clouded our view of the river. Its vines tangled with my pumpkins, twisted around goldenrod, jewelweed, cow parsnip—in fact, anything with a stalk—and grew so long and intertwined that it was impossible to tease one out to find where it sprouted. In August, I was drawn to its maroon-and-cream-colored flowers, shaped like pea blossoms and smelling of lilies. I picked a cluster and looked it up in a wildflower guide.

The plant was *Apios americana*, also known as wild bean, Indian potato, potato bean, and, most commonly, groundnut (though other plants, including peanuts, are also called groundnuts). *Apios americana* is a legume, like peas and beans, and prefers moist soil. Where established, it grows aggressively, its vines spreading up to ten feet each summer. Cranberry farmers hours north of my place in Wisconsin consider “wild bean” a weed and spray it with herbicides. But a University of Maine agriculture bulletin suggests an alternative: “One way to remove the tubers would be to eat them, just as Native Americans and the Pilgrims were accustomed to doing.”

Indeed, for centuries *Apios americana* was a staple in the diets of many Native Americans, which explains why it grows profusely where they once encamped. Almost every part of the plant is edible—shoots, flowers, the seeds that grow in pods like peas, but, most importantly, the tubers. These tubers (the groundnuts) are swellings that form along a thin rhizome, like beads on a necklace. They can be small as a fingernail or, rarely, large as a melon. And as with other root vegetables, they sweeten after a frost and overwinter well in a cool, damp place, offering sustenance in a time when the land provides little other food. Pilgrims were taught to dig and cook groundnuts by the Wampanoags, and these “Indian potatoes” probably spared the newcomers

from starvation. Henry David Thoreau knew and ate the tubers. He wrote in his journal, “In case of a famine, I should soon resort to these roots.”

However, neither Thoreau nor the Native Americans nor the Pilgrims could have known how healthy groundnuts are. Like potatoes, they are high in starch. But they’re also relatively high in protein, containing up to 17 percent—about three times as much as potatoes. In addition, studies from at least two U.S. universities reveal that groundnuts contain a significant quantity of isoflavones, chemicals linked to a decreased incidence of prostate and breast cancers. Plants for a Future, a British organization that educates the public on “edible, medicinal, and useful plants for a healthier world,” ranks *Apios americana* as the fourth-most-important plant in its database of seven thousand.

Much of this I discovered by searching the Internet long past midnight on the day I picked the groundnut blossoms. And then I lay awake thinking. How could I not have heard of this wild food? After following my parents through the woods looking for morels and fiddleheads every spring? After childhood summers at nature camp by the oxbow? Of course, I was curious to taste it. My partner, David, and I resolved to dig some of the tubers. But we’d wait until after a frost, when they’d be sweeter.

THE NEXT DAY WE VISITED OUR FRIENDS Erin and Dave Varney, who operate One Sun Farm a few miles from our property. The Varneys practice permaculture, which involves the planting of diverse, perennial, interdependent species appropriate for one’s locale. For example, Dave plants strawberries between his hazelnut bushes. Both will coexist happily for years. And he planted the hybridized hazelnuts where he had seen wild hazelnuts grow previously. “I kept cutting these things down, and they kept coming back. Then I thought, ‘Wait! Something’s telling me to grow hazelnuts here!’” A lanky, energetic young man, Dave speaks with the arm-waving zeal of a southern preacher.

We picked up our dozen eggs and stood talking near the chicken coop in the late afternoon sun. I told Dave about the groundnuts, how we found the plant, researched it, and planned to taste the tubers. He rubbed his chin and looked skyward.

“But no one’s cultivated it?” he asked.

“They’ve tried, but it takes two or three years to produce sizeable tubers, so—“

“It sounds like a permaculture crop! Commercial growers want one season and out. They don’t want to wait, to make an investment.”

Even after our conversation wandered to other topics, Dave would say, “Oh, now you’ve got me excited about this groundnut.” He’d never seen a plant matching its description on his property, so we promised to bring him some tubers, enough to eat and to plant.

The sun was setting when we arrived home. A deer grazed on the hill across the road, and in front of the deer and nearly as tall, a pair of sandhill cranes pecked and stepped their way through the grass.

I went to the shed and found a spade. “We won’t make any judgments,” I told David. “We know they’ll taste better in a few months, right?”

“Okay, we’ll just try them.”

High on the riverbank I grabbed some tendrils and followed them to what I thought was an *Apios americana* stem. David dug a football-sized clod of dirt from beneath it, then held up the shovelful for my inspection. Yes! Poking out were two strings of dark-brown groundnuts, looking just like the illustrations I’d seen online. We tugged to separate them from the thatch of grass roots and shook off the dirt. Minutes later we had collected about a dozen, ranging from a half inch to two inches in diameter. A few were soft and woody—the

older ones, we guessed. Most were firm as knuckles.

We hadn't brought a bag, so I made a pouch out of the front of my t-shirt to carry them home, where we washed and then examined our harvest in the colander. What to do with them? Depending on the tribe, Native Americans had boiled the tubers, dried them to make a flour, fried them in animal fat, or roasted them with maple syrup. Thoreau also offered hints on their preparation:

*October 12, 1852. I dug some ground nuts with my hands in the railroad sand bank, just at the bottom of the high embankment on the edge of the meadow. These were nearly as large as hen's eggs. I had them roasted and boiled at supper time. The skins came off readily, like a potato's. Roasted they had an agreeable taste, very much like a common potato, though they were somewhat fibrous in texture. With my eyes shut I should not have known but I was eating a somewhat soggy potato. Boiled they were unexpectedly quite dry, and though in this instance a little strong, had a more nutty flavor. With a little salt a hungry man could make a very palatable meal on them.*

But since we'd dug our groundnuts months before their peak, we decided to cook them in a manner that couldn't fail: fried in butter and salt.

With paring knives and great patience we peeled every one of the groundnuts, even the smallest. The ivory flesh, dense as ginger root and striated with tiny capillaries, left a starchy residue on our knives. We sliced the naked tubers on a mandoline, then fried the slices in a cast-iron skillet until we had a pan full of little brown coins—penny- and nickel-sized chips. After letting them drain on a paper towel, we agreed to take our first bites simultaneously, in case they weren't good after all. But they were good. Delicious, in fact. A flavor something like a potato, but sweeter, and, as Thoreau had written, a little nutty.

IN THE FOLLOWING MONTH I ASKED EVERYONE I encountered—friends, relatives, neighbors, foresters, checkout clerks at the food co-op—if they'd heard of groundnuts, by this or any other name. I described the plant's habitat, vines, and foliage, its relation to peas, and its tubers, but no one, not even an acquaintance who boasts of enduring lengthy survival training and uses clamshells as utensils, was familiar with it. How had a once-vital food source become invisible, just another weed?

I contacted Sam Thayer, a wild-edibles expert who lives in northern Wisconsin. He conducts foraging workshops across the nation and recently published a book on the subject. Groundnuts, it turned out, were not only among his favorite wild foods but also his favorite topic of conversation, though Sam chooses to call the plant by its Lenape name, hopniss. I phoned him at lunchtime, and he was munching as he talked. I imagined him before a large bowl of various shoots, roots, berries, and leaves that I would be hard-pressed to identify.

"I don't have all the answers, but this is something I can explain," Sam said when I asked why so few people knew about the plant.

His theory was that the first Europeans who arrived in this country found the thought of living like Native Americans abhorrent. Some foods, like corn, they recognized as "super important" for survival and adaptable to European cuisine and methods of cultivation. Those deemed unsuited to the European lifestyle were not only rejected but stigmatized. Sam gave as examples from the Great Lakes region acorns, wild rice, hickory nuts, wapato, also known as arrowhead, and groundnuts. In the southeastern United States, he said, the forgotten food is lotus, whose roots he claimed were delicious. "No European would eat it. Now hardly anyone remembers that it's edible."

Sam estimated that he eats a hundred pounds of groundnuts a year, in at least two meals per week. He harvests them in early November before the ground freezes and stores them in a root cellar. One of his

favorite ways to prepare groundnuts is to boil, peel, and cube the tubers, let them dry, then grind the dried cubes into a meal, which he later reconstitutes into something that, with some taco seasoning and lime juice, resembles refried beans. He added, "I also like to make a hot dish of hopeniss, grated wild parsnip, onions, and wild rice. To be perfect, you should make this with squirrel broth, but if you don't have that you can use something else."

I mentioned having read that groundnuts were exported to Ireland during the potato famine, and that many centuries earlier, explorers had tried to transplant *Apios americana* to Germany and France, but these attempts at domestication failed.

"I wouldn't say they failed," Sam said. "They just didn't produce within the traditional monoculture model. Hopeniss are easy to transplant, but they don't like to be alone. They want to grow under the roots of other things, like elderberry. Or next to Jerusalem artichokes. They're a twin to Jerusalem artichokes. I imagine them fitting into a three-tier system. In Wisconsin, you could have hickory, hackberry, or sugar maple as the overstory, elderberry in the middle, then hopeniss below."

It was just as our friend Dave Varney had said: *Apios americana* is a permaculture plant. But Sam wanted to talk about something else.

"I have to tell you, since I've been feeding people hopeniss all these years, I've found out some of them will get violently ill after eating it." It had never happened the first time someone tried it, he said, but it could happen the second time or even after many years of eating it. "Maybe you need to build up a certain dose of the protein. Maybe there's more of this allergen in larger tubers. Or it might have to do with the growing conditions." He estimated that as many as 5 percent of *Apios americana* eaters would be made sick at some point and, once they reacted, would become ill with every subsequent bite. "That's the only thorn on this rose. Otherwise, it would be a perfect food."

That weekend David and I had planned a party to celebrate the completion of our straw-bale wood-shop and thank our friends and neighbors who had helped. After raving about groundnuts for a month, I had promised that I'd prepare some. Two grocery sacks full of tubers waited in our cold garage. But on the morning of the party, as I ran about town gathering provisions, I began to have second thoughts. Was it okay to serve the tubers as long as I warned people about the possible effects? What about the children?

Finally, an hour before the party, I dumped the groundnuts into a sink full of water. I would assume that Sam was right about no one getting sick the first time and that this would be our guests' first taste. As for David and me, we would take our chances.

According to Sam's recommendation, I boiled the tubers a long while to loosen the skins, filling the kitchen with a musty steam. After peeling them, I put the groundnuts in a Crock-Pot with a half stick of butter and about three-quarters of a cup of maple syrup, loaded it in the car, and drove to our straw-bale building. By the time I arrived, I was late for my own party, and in the haste of setting up I simply plugged in the Crock-Pot and forgot about it. Later, a friend reminded me of my promise to serve groundnuts. I scooped out a few and put them on his plate.

"Oh, wow. This is delicious!" he said and quickly held out his plate for another helping.

Others circled around, and soon I had a full-time serving position as people lined up for seconds and thirds. Their groundnut questions became more and more specific, until finally I said, "Want to go get some?"

Friends grabbed shovels and followed me to the riverbank. Some wanted to see the vines, but our first light frost had killed them weeks before, and what remained were nearly invisible, brittle tendrils clinging to the weeds. Yet in our area you needn't follow a vine to the ground to find tubers. The plants grow so densely that

sinking a spade anywhere brings up at least a handful.

We and our friends and neighbors and their children huddled in a circle, the evening sun glowing pink on our cheeks and hair, and took turns with the shovels. A mound of freshly upturned dirt prompted outbursts from those who spied the tubers first. “There’s some! Here!”

Just as Sam had predicted, the tubers were nestled between the roots of other plants—in this case, Jerusalem artichokes and the finger-shaped rhizomes of cow parsnip. The kids clawed through the dirt to get at the tubers, which we then passed around, inspected, and cooed over. Once the larger groundnuts were snapped off and stowed in a pocket, we watched expectantly as the next shovelful was overturned.

For a moment it seemed crazy to me that everyone had gone straight to collecting food from the riverbank at my suggestion. But of course this is how people learn about foraging. Although there have been a handful of books, and now websites, describing which plants are edible and how to prepare them, foraging remains anchored in oral tradition—staked on a communal shovel, a trailside tutorial. But oral tradition lasts only as long as teachers and listeners keep communicating. Sam had told me about the time he prepared wapato, historically a staple of the Ojibwe diet, and brought it to Ojibwe friends in northern Wisconsin. They loved the starchy tuber, but confessed they’d never heard of it, much less tried it. Eventually one of the older men said, “You know, I think I remember my grandmother making a dish like that when I was a kid.” But sometime in the twentieth century his clan forgot about wapato, forgot how it was cooked and how it tasted.

Today most of us have forgotten what our forebears surely knew: that we can find our food in the wild if we need to, that we don’t have to rely on those giant tracts of soybean and corn that dominate the rural Midwest. Few of us carry Euell Gibbons’ *Stalking the Wild Asparagus* on nature hikes. We seldom look at a prairie or forest and think “lunch.” I wondered if, the next time they walked in the woods, members of our digging party would taste-test anything besides the obviously edible wild raspberries—if they’d snap off fresh basswood leaves for a salad or gather wild parsnips for soup.

From five clumps of dirt, our party collected more sizeable groundnuts than we could carry. Luckily, one of the children was wearing cargo pants with side pockets as big as saddlebags. These were soon filled, and the wearer waddled his way back to our shop, where he dumped the groundnuts into a sack.

In the end, no one fell ill, either from the groundnuts served at the party or those they took home.

GIVEN HOW TASTY, NUTRITIOUS, AND PROLIFIC groundnuts are, I wasn’t surprised to learn that someone had tried to adapt *Apios americana* to modern agricultural practices. Sam told me about Bill Blackmon, a professor who led such an effort at Louisiana State University from 1984 to 1996. Bill, however, chooses to call the plant simply “apios.” “It’s like a friend once told me,” he said when I called him. “You’d better be careful using some of these Indian names. You don’t really know what you’re saying.”

Bill’s voice is soft and shaped by a southern accent. He spoke with reverent specificity about germplasms, plant strains, propagation techniques, and about his program. “We had a lot of success,” he said. “It took years to domesticate our potato.”

His *Apios americana* rivals any Idaho potato plant; the tubers in photos he mailed me are burly and thick on the rhizome, making my foraged versions look puny. When I remarked on the contrast he said, “But that’s what we started with.”

Bill and his colleagues bred *Apios americana* for larger tubers and more tubers per rhizome. Their most productive strains yielded as many as fifty sizeable tubers and up to eight pounds of edible mass per plant. His group also aimed for greater disease resistance and later attempted to develop a non-twining variety, so that plants needn’t be staked or trellised (which requires more labor) and could be cultivated in rows like

ordinary potatoes.

Bill's writings in the 1980s, in publications like the *American Journal of Botany* and *HortScience*, reflect almost giddy enthusiasm for the plant's potential: "We are in search of the golden nugget buried among Mother Nature's tuber cache" and "domestication would be a benefit to mankind." An issue of the "Apios Tribune," a dittoed newsletter published in 1986 out of Bill's LSU department, lists several recipes for groundnuts, including Joan Blackmon's Apios Cornbread, which calls for "1 cup cooked Apios, well mashed." But in the mid-1990s, despite leading phrases such as "the prognosis for developing *A. americana* as a food crop looks outstanding," Bill's apios paper trail came to an end. I asked what happened.

"I left the program in 1996 to take a position closer to my family, in Virginia," he said. However, he left the program vigorous, under the capable oversight of a research partner and a team of committed graduate students. They had been close to landing big grants, they were on the verge of releasing strains to growers, and then, somehow—it seemed unclear even to Bill—support faltered and funding was withdrawn.

"I thought it was going to go on. If I hadn't I wouldn't have left the university."

His last hope had been a grad student who planned to continue to research *Apios americana* at another university, but she decided to study horticulture therapy instead.

"A lot of potential doesn't always equate to realizing something," he said, adding, "I haven't been able to let it go."

When Bill left the program he took approximately forty strains of *Apios americana* with him. He maintains them in his home garden, where they go on producing tubers like the ones he grew at LSU. There, groundnuts were everyday fare for him and his colleagues. Now he eats them only occasionally.

In his twenty years of working with the tubers, he hasn't known them to make anyone ill, but he doesn't deny Sam's claims. "If I were still working with apios, I'd try to figure out why that happens," he said, and then added, "Maybe you could put together some assays . . . it takes someone who'll grit their teeth and stick with it."

Never had I wished so earnestly to be a horticulture postdoc.

Bill offered to send me five or six strains of his domesticated tubers, but warned that they might not yield as abundantly or even survive as far north as Wisconsin, and because of the shorter growing season, they probably wouldn't produce seedpods. He also cautioned me to keep them in a cold place until I could plant them in spring. Naturally, he would appreciate it if I shared my observations.

THE FOLLOWING MAY I CLEARED A CORNER of my garden, a fifth of an acre on a bench of fertile land near the river, for domesticated apios. I unpacked Bill's samples, gritty with Virginia sand, from their plastic bags. I sowed them according to his handwritten instructions and watered them well. Then I carefully penned his lab's monikers, like "LA-784" and "LA-7190," on the corresponding stakes. Would these apios take to our clayey soil? Would they produce prolifically enough for meals as well as for sharing with friends and relatives, as the wild groundnuts had? Bill told me he'd envisioned the market for apios beginning with home gardeners who would tell their neighbors, who would tell their neighbors, and so on, eventually creating a demand for apios that would prompt larger market growers to adopt them. Now I was part of the chain.

Bill, however, was not the only one hoping to introduce groundnuts to a wider public. In 1994, Frieda's, a distributor of specialty produce that boasts of bringing us kiwifruits and sunchokes (aka Jerusalem artichokes), offered groundnuts as part of its Lost Crops of the Americas collection along with appaloosa beans, quinoa, and other historically indigenous staples. "Apios" were sold, washed and unpeeled, in eight-

ounce bags. “We had a release party for Lost Crops in San Antonio,” Frieda’s president Karen Caplan told me, “and we were met with a great big unblinking disinterest.” All the Lost Crops products were discontinued after a single season. They simply didn’t sell. “Apios came and went,” she said. Even a brief mention of apios in a 1994 episode of Food Network’s *Iron Chef* didn’t boost its popularity.

But that was before the resurgence of farmers’ markets, whose number in the United States more than doubled from 1994 to 2004. It’s here that America has rediscovered many of its lost foods, including heirloom tomatoes, ramps, and garlic scapes—and, in fact, where Frieda’s founder discovered Jerusalem artichokes. Farmers’ markets might be the next best thing to foraging. They have in common free taste-tests, a near guarantee of freshness and local origin, and, most important, a relationship with others who know about preparing, growing, or finding food. One slow morning at our local market a neighboring farmer—and a man who’d been part of our riverbank groundnut expedition—taught us how to inoculate oak logs with shiitake mushroom spores and grow them in our backyard. As we lingered beside his pickup bed, he went on to share advice about milling our own lumber and making our own large-scale maple syrup evaporator, and before we left he was urging us to stop by his place and visit. One day, perhaps, we’ll have similar conversations over tubs of groundnuts, those gathered from near the river’s edge or the larger variety dug from a garden.

**BILL’S APIOS DID TAKE TO OUR SOIL.** Now, in late summer, beyond the stalwart rows of edamame and the abandoned pea vine trellises, one corner of my garden is an unholy mess. I haven’t pulled any of the weeds there, because they are indistinguishable from the cultivated plants. Wild *Apios americana* has crept in and overrun or intermingled with Bill’s apios. The wooden stakes I labeled are buried in pyramids of dark-green foliage so thick that not only the distinctions between plants but also their names are obscured. This mess is surely a kind of permaculture crop, one ideally suited to its locale, persistent, vigorous, and indifferent to human designs. Domesticated apios vines sprawl yards north through the fence and into the meadow, where wild groundnuts sprout and climb southward. In and out of the garden food grows, abundant and available. It’s our choice whether to notice, and dig in.

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### Books

*Identifying and Harvesting Edible and Medicinal Plants in Wild (and Not So Wild) Places*, by Steve Brill, William Morrow/Harper Collins, 1994.

*Stalking the Wild Asparagus*, by Euell Gibbons, Alan C. Hood & Company, originally published in 1962.

*A Field Guide to Edible Wild Plants: Eastern and Central North America*, by Lee Allen Peterson and Roger Tory

Peterson, Houghton Mifflin, 1999.

*The Forager's Harvest: A Guide to Identifying, Harvesting, and Preparing Edible Wild Plants*, by Samuel Thayer, Forager's Harvest Press, 2006.

*Wild Fruits: Thoreau's Rediscovered Last Manuscript*, by Henry David Thoreau, edited by Bradley P. Dean, W. W. Norton and Company, 2001.

## **Web Sites**

[Plants for a Future](#)

[The USDA PLANTS Database](#)

[Forager's Harvest](#) (Sam Thayer's site)

"Wildman" [Steve Brill's site](#)

[Wild Food Adventures](#)

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