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The Way of the Wild Mushroom

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My first encounter with "mushroom pickers" was not by design. I arrived at a normally deserted campground in the Sierra Nevada, one that I have used annually for a spring mushroom workshop, only to find it occupied by a weather-beaten band of migrant mushroom pickers—three adults, four children, and assorted dogs and cats that lived and traveled in a 30-year-old school bus. They had been "sitting on the burn" (a nearby burned area) for more than a month waiting for conditions to produce a profitable flush of morels. Having seen sensationalized newspaper accounts of overly territorial, gun-toting mushroom pickers, I was surprised that they didn't try to chase us off. At the very least I expected them to resent the sudden intrusion and competition that my class of 35 citified adults (and nearly as many SUVs) represented.

But the next day I understood their unconcern. One of them, a teenager, picked more of the elusive morels in two hours than my entire class (under my "expert" guidance) was able to find in two days. I was impressed—and more than a little humbled. In a society where practically all children get their knowledge of nature secondhand, from schools and television, these young mushroom pickers were striking exceptions.

Nancy (where requested, I have honored the first-name-only tradition of mushroom pickers), the matriarch of the clan, explained that she came from a long line of fruit pickers. "Fruit is what I grew up in. Children used to be able to pick fruit, but not any more. Mushroom picking is the only thing left. It's legal for the children, and good for them because they get sunshine, fresh air, and they get to experience what [kind of work] their parents do, which is real important."

Like most migrant mushroom pickers, Nancy has no bank account, no checkbook, no credit card. "In the last ten years I haven't taken a steady job once," she says with obvious pride. "It's pretty

much been mushrooms and huckleberries.” That night they enthralled us with tales of their exploits and adventures on “the mushroom trail”—a string of obscure logging and mining communities, crossroads, and frontier outposts stretching from Alaska to California. Cranberry Junction. Nass. Bella Coola. Boston Bar. Forks. Hungry Horse. Gospel Hump. Crescent Lake. Granite. Prairie City. Happy Camp. The names meant nothing to my class of weekend naturalists, but in the lives of these professional mushroom pickers they clearly loomed larger than San Francisco, Seattle, or New York. As one who has devoted his life to studying the worldwide harvest of wild mushrooms and other nontimber forest products, I resolved that evening in 1993 to join the “mushroom trail,” and have been on and off it ever since.

Wild mushrooms have been praised by Roman and Chinese emperors and have long provided an important everyday food source for rural people around the world. Until recently, however, a deep and exaggerated distrust of wild mushrooms has denied them a cherished place at the North American dinner table. That changed in the 1980s, when rising demand overseas caused mushroom lovers in other countries to look abroad for new sources. At the same time, Americans’ palates grew bolder and more sophisticated. American and Canadian entrepreneurs rushed to fill the rapidly growing market for gourmet foods. And out-of-work rural Americans and recent immigrants (particularly from Southeast Asia) saw picking mushrooms as a chance to make a decent living in a familiar environment—the forest—while maintaining their personal dignity and cultural autonomy.

The “mushroom trail” is actually a migration route that begins in British Columbia with the late summer harvest of matsutake and chanterelles. In September and October the migration snakes (or loops) southward, following warmer weather through Washington and Oregon, reaching the Siskiyou of southern Oregon in November, and northern California in December. Many migrating pickers overwinter in California, where the mild coastal climate yields a “winter pick” of chanterelles, black trumpets, and hedgehogs that tides them over until the spring morel season.

Then, in April, as morels and king boletes begin to show around Mount Shasta and in the mountains of eastern Oregon, pickers climb into their “rigs” and drive northward again. By July and August they have fanned out over more than a dozen states and provinces. Some range into Alaska and the Yukon, where thick carpets of morels grow in burns accessible only by helicopter, floatplane, or river raft. Others opt for tamer pickings such as lobster mushrooms and summer chanterelles on the fogbound coast of Oregon. Still others prospect in the northern Rockies for boletes and huckleberries, and a few head east toward Saskatchewan and Nova Scotia in search of chanterelles, until the lucrative matsutake begins to appear in the Northwest in August and September. This most valuable of wild mushrooms, with the allure of big bucks (seldom realized but constantly dreamed about), acts like a magnet, drawing the widely scattered pickers to a few “famous” hotspots like Cranberry Junction and Crescent Lake for several weeks of frenzied picking, before frost and snow drive them southward again.

I run into Nancy and her family two years later, camped outside the tiny town of Ukiah in eastern Oregon. Each spring the bountiful crop in the surrounding Blue Mountains helps to set the global price for fresh morels. As we fan out into a fir forest looking for “naturals” (morels that do not grow in timber burns), Nancy totes her youngest daughter, two-year-old Caitlin, in a “crow’s nest”

on her back. Caitlin is already able to gurgle "murrri!" when she spies one that her mother has missed. Consumed with the search, they soon disappear over a ridge, and I find myself walking alongside two of her older children and their father, Miles.

"We've bought an' sold mushrooms everywhere from California clear up into the Yukon an' Tok in Alaska," he says. "If there's something that the mushroom industry has done for these kids, it's taught them how to be self-reliant and take care of themselves with confidence. It's taught them how to *work*."

"We haven't actually learned how to work," protests 14-year-old David. "We've just learned how to play and make money at the same time!" "And they learn a little about contributing to a household, which is something that no kids get anymore," adds his dad.

"Dad, you might want to keep an eye out while you're talkin'," interrupts nine-year-old Stacy. "You walked right past a whole bunch, so I had to pick 'em!"

Not all of the permanent residents of Ukiah welcome the annual influx of mushroom pickers and buyers. But Doug Vincent, the owner of a small gas station-cafe-pool hall, points out that everyone welcomes the money that the so-called "trailer trash" have breathed into his tiny community and dozens like it.

"These people are doin' a helluva lot for our society because they're producin' something," says Vincent. "Many tons of these mushrooms go overseas, and that brings an income back into America that we otherwise wouldn't have.... These people work their butts off. And they're the last of the independent Americans that we've got. They're nonconformists. They're not on somebody else's payroll. And every dollar they make they spend in our economy.... Even the really good mushroom pickers seldom get home with any more than just barely enough to squeak through the winter with. The wealth is spread up and down the mushroom trail. It's done nothin' but good for everybody."

But the mushroom harvest has brought more than prosperity to isolated frontier outposts and timber towns like Ukiah. It has also generated a degree of genuine "mushroom consciousness" unimaginable a decade ago. One has only to wander into a rural bar or small café anywhere on the mushroom trail to witness the transformation. Everyday conversation is as likely to be peppered with terms like "flowers" and "flops" (mature and overripe mushrooms, respectively) as with "five-point racks" and "bull trout." "Pines" are not trees, but pine mushrooms (matsutake); terms of endearment such as "matsies" (matsutake) and "naturals" (morels) are beginning to replace "hoot owls" and other expressions of bitterness and derision so prevalent a few years ago. Now, bragging rights are as apt to be fought over "cauliflowers" and "lobsters" of the fungal variety (see sidebar) as over deer and elk.

Mushrooms are the seasonal "fruit" of mostly perennial fungi living in the ground or on decaying wood. The mycelium, or network of threadlike fungal cells that produces the mushrooms, is often long-lived and usually unseen. Imagine an underground apple tree, invisible but for a few "apples" that miraculously appear on the ground after it rains, and you can see why mushrooms dazzled and

mystified the ancients. Most of the commercially valuable wild species derive their nourishment from the rootlets of living trees in a mutually beneficial relationship called mycorrhiza. This fungus-root partnership means that mycorrhizal mushrooms cannot be grown artificially with the ease of mushrooms that live on dead organic matter, such as shiitake and portobellos. They can only be harvested from the forest, where they appear in the same places, or “patches,” year after year (though not necessarily every year because of weather conditions).

Pickers likewise tend to reappear in the same spots year after year (though, again, not necessarily every year). Not only is it easier to harvest known patches than to continually look for new ones, but pickers also develop strong attachments to particular places. A picker once drove me through several miles of clearcuts to yet another clearcut indistinguishable to me from all the others. “Here’s where they logged me,” he says bitterly. “I picked my first chanterelles right here, 15 years ago. I’d go in the woods all day an’ find my way out in the dark. I didn’t need a compass, ‘cause this is where I learned, this is what I spawned off of, right here. This spot. My spot. An’ this is what they left me...”

Thousands of people in the Pacific Northwest now gather and sell wild mushrooms. Most of them pick locally or opportunistically for a little extra cash or as one of several seasonally based strategies for survival. But the notoriously fickle nature of mushrooms—they may be overwhelmingly abundant one year and frustratingly scarce the next—has created the need for skilled pickers and buyers (many do both) willing to go where the rainbows lead them. Ample public lands and an abundance of private vehicles -- a combination rare elsewhere in the world -- makes it possible for whoever so chooses to do just that.

The result is an incredible mix of men and women. Over a period of five days in one tent city, I dined with ex-loggers and trappers, gold miners, Vietnam vets, four stocky Mexicans (one of whom spoke Cambodian) sharing morel-stuffed tacos with three towering young Czechs; a second-generation Norwegian buyer fluent in six languages (including Latin); a family of Laotians preparing *som tum* and sticky rice for a retired Australian sailor learning to pick mushrooms “for the fun of it”; Nancy and her kids; an ex-body builder; a bellydancer; a wandering band of Ulkatcho from Canada; a Cree Indian who ran away from home at age 13 to join a carnival, then left the carnival 16 years later to join the mushroom trail; a Democratic congressional candidate from Michigan; a female couple who fight fires during the summer and then pick morels on the same burns the following spring; a 75-year-old French forager; a visiting Russian rocket scientist out for some weekend cash; a barefoot student from Arcata; a female African-American beargrass picker preparing pancakes for survivors of Cambodia’s Killing Fields; a telecommunications executive who had just given up his career to “pick mushrooms and listen to the coyotes”; a Guatemalan refugee fluent in Korean and English; and three young snowboarders from Florida. I have documented the uses and harvest of wild mushrooms in more than 30 countries, but nowhere else have I witnessed such a remarkable assemblage of people, food, and languages under one roof—or more accurately, one blue tarp (the dominant form of shelter in the mushroom camps.)

These makeshift camps have evoked comparisons to the gold rush, and there are similarities, with everyone scrambling to find the “mother lode” first. But wild mushrooms, unlike gold, recur year after year, and because they are highly perishable, they cannot be hoarded. Matsutakes in

particular must be sold immediately if they are to have value, so the roadside buying stands are beehives of activity and information about what is growing and in what condition and quantity. Everyone gets to see what everyone else has found, and the more successful pickers (or those who boast too much) can expect to have their “rigs” followed by competitors. Add in wild price fluctuations, bidding wars, and the whims of the weather (which may freeze, desiccate, or waterlog a bumper crop on a day’s notice), and the atmosphere of urgency can be electric.

Since most of the picking takes place in rugged ravines and on remote ridgetops far from roads and trails, success requires knowledge, toughness, determination, and a good deal of wilderness savvy. “And don’t forget the big M—memory,” says one proficient picker. “You have to remember all your spots. I can’t remember what day of the week it is. I can’t even remember to pay my bills. But I remember every single place I’ve ever found a mushroom—even if it’s in the middle of a forest miles from nowhere—because no two trees are quite alike, no two pieces of ground look and feel exactly the same. It’s more than the way a place looks; it’s how it smells and feels.”

Not all full-time mushroom pickers are travelers, however. John Getz does most of his picking near his home in Oregon Dunes National Recreation Area on the Oregon coast. The mushroom crops in this area are fairly consistent from year to year. So consistent, in fact, that matsutake have been harvested commercially from the pine-studded sand dunes since the 1930s, long before the land became a National Recreation Area.

Getz’s knowledge of the dunes is so thorough and so intimate that mushroom hunting with him is strictly a spectator sport. When we went out together he let me find a few, but it was rather like going Easter egg hunting with the person who hid the eggs. He moved quickly and silently through the forest, stopping only at known matsutake spots long enough to deftly run his fingertips over the sand, as though massaging it lightly. By this method he is able to locate the prized matsutake buttons while they are still deep under the moss and sand, invisible to everyone else. Time and again, where I saw nothing to indicate a mushroom—not the slightest mound in the moss nor telltale crack in the sand—he would insert his forked fingers like a divining rod, locate a mushroom deep underneath, and then, after grasping and twisting it gently, pull it out of the ground like a white rabbit out of a hat.

“I’ve been gifted with this ability to key into certain things,” he says with understatement. “When I’m predicting the pop, I measure the growth on the trees, an’ then time it to the weather bounces. It’s all with the triggering of the sap [in the trees] goin’ up an’ down. And there’s this *density* to the air. The ground lifts up about a half of an inch, becomes fluffy an’ the sand sticks to yer finger, one grain’s layer, almost like it was sprayed with hairspray. That tells me they’re there. Then when you get in the heat of the season, just before a big flush, it feels like there’s steel wool mixed in the sand, [because] all those little filaments [mushroom hyphae] are really pumped.” In mycological circles, mushrooms simply aren’t talked about this way; I’ve never seen a mycologist uncover 20 pounds of invisible grade-one matsutake, either.

As impressive as Getz is, it is the wandering “circuit pickers,” as typified by Nancy and her kin, that intrigue me the most, for they are quintessential outsiders: figuratively, because they stand

outside the mainstream, and literally, because they spend most of their waking existence outdoors. They are the latest (some say the last) incarnation of a wandering community as ancient as humanity itself—one that is nature-immersed and moves with the seasons, dispersing and coalescing as conditions dictate. Knowledge is acquired through days spent in the woods and is communicated orally. Respect in this traveling community is won through the expertise that flows from that knowledge; trust and camaraderie are cemented and sustained through the exchange of nature—the buying, selling, and bartering of mushrooms—and just as importantly, from the exchange of stories about nature and mushrooms.

“It’s the last of the nomad life,” says Linda, a 42-year-old grandmother and ex-waitress turned mushroom picker. “There’s no more gold minin’ goin’ on. It’s the last thing to be discovered: the freedom of it, the independence, the sense of self-worth you get when you find them.”

But while the migrant pickers may be footloose, they are not carefree. As Doug Vincent observes:

“This mushroom [the morel] has to be picked when it’s right. It’s not a thing that stays out there forever. These people scour the earth up here to find these mushroom beds. They spend days and days and days endurin’ a wet camp and cold food and strugglin’ to hang around til it comes on. And when they pop, they’re there to pick ‘em. Then everybody oohs and aaahs over a guy goin’ out here and makin’ two, three hundred dollars a day pickin’ mushrooms. But if they added up all the days that he didn’t get enough to pay his gas bill, you see, it wouldn’t even be minimum wage.”

Mushroom pickers pay a heavy price for being outsiders. They are politically powerless and are consistently ignored by agencies whose decisions affect them. So why do they persist? Because it is a fundamentally old-fashioned business that rewards know-how, not know-who, and because it offers “freedom of heart,” as Linda puts it.

In southern Oregon, on a freezing December night, I spent an evening with an immigrant family from Laos. They were ethnic Mien—fiercely independent “hill people” recruited by the CIA to fight the Communist insurgency in Laos and Vietnam, with the explicit promise of safe haven in America if they lost. When the Communists triumphed, they fled—not so much for a better life in America, but for the same reason their ancestors had fled China: to preserve their autonomy and cultural identity.

This particular Mien family had been camped out for two months under a blue tarp. Most of the other pickers had left weeks ago. There was frost on the ground and the family had no sleeping bags; every night they huddled together under blankets around the fire. After sharing their simple but delicious meal of rice, dried fish, some unidentified greens from the forest, and *ahun chi* (a dried wild mushroom from Southeast Asia), I asked them how much they were making. Altogether, about \$50 a day, they said—barely enough to cover expenses. Why didn’t they go back to their flat in Sacramento, where they could stay warm and watch TV, I wanted to know.

One replied, “Because nothing to do there, nowhere to go. Here, life hard, yes, but nobody own us. We [can] walk all day, see nobody. No gas, no electricity, sleep on ground, cook on fire, just

like Laos.”

To spend significant time with full-time mushroom pickers is to be continually impressed by their familiarity with the natural world and their ability to read every nook and nuance of the landscape.

One evening around a campfire in a muddy mushroom camp in British Columbia, while the pink and green Northern Lights shimmered ethereally overhead, I listened to nine pickers reminisce about “blackouts” (carpets of black trumpets so thick the ground couldn’t be seen) 1,500 miles to the south and two years in the past. The conversation narrowed from the forests of northern California to a certain watershed east of the coastal town of Fort Bragg, then to one mountain toward the back of the watershed, and to a system of finger ridges emanating from that mountain, and finally, to a particular stand of tanoaks and manzanitas under which the world’s most spectacular “blackouts” occurred. Seven of the nine pickers knew of the watershed and the mountain, and four were sufficiently familiar with the stand of tanoaks that they were able to independently supply details of aspect, slope, vegetation, and timing, even down to details of the humus composition, distribution of woodrat nests, the shapes of the shiros (a term for a mushroom colony they have appropriated from the Japanese), and other kinds of mushrooms present.

In a time when “local control,” “stakeholders,” and “land stewardship” have become buzzwords in conservation circles, migrants tend to be viewed with suspicion and denied standing in all three clubs. Yet one would be hard-pressed to find four residents of Fort Bragg as conversant in the local landscape as these wandering mushroom pickers sharing a campfire in British Columbia. Such specific and intimate knowledge of far-flung localities belies the bioregionalist assertion that kinship to the land is predicated upon being rooted to one spot (a criterion, incidentally, that would eliminate much of the world’s population). Instead it suggests that kinship and stewardship develop out of less exclusive and more elusive criteria such as passion and curiosity, and perhaps some more measurable ones such as actual number of hours immersed in nature. To suggest that these mushroom pickers do not “belong,” that they do not have as much stake in a place as its permanent residents, is like saying that migrating geese do not belong to the lakes to which they flock in the winter, or that steelhead have no stake in the streams in which they spawn.

Though wild mushrooms, like pine nuts or huckleberries, can be harvested without visibly altering the forests in which they grow, some people have questioned whether the mushroom harvest is sustainable at current levels. While this is a complex subject beyond the scope of this article, studies show that intensive picking has little negative effect on future crops, as long as the ground isn’t dug too deeply, and may even have a stimulating effect. This isn’t terribly surprising, because the commercially valuable species tend to be more plentiful in second-growth forests or those impacted to some degree by human beings—which is probably why we came to value them in the first place.

The good news, then, is that ordering wild mushrooms in a gourmet restaurant probably comes at less cost to biodiversity than wine, coffee, strawberries, beef, or almost any other item on the menu. The bad news is that overly restrictive policies and unrealistic permit fees imposed by the U.S. Forest Service and other agencies are turning an already marginal existence into a well nigh impossible one, and making mushroom picking profitable only as an occasional opportunistic

activity that neither conserves a variety of lifestyles nor encourages land stewardship. Such policies portend a future in which packets of dried mushrooms labeled “Buy Wild Mushrooms — Help Conserve Forests” will refer only to forests that are not our own.

The Global Mushroom Trade

Wild mushrooms have long been gathered intensively in many parts of the world. But with the globalization of trade, mushrooms are now being picked in more places than ever before, and they are traveling farther and faster. The global trade in matsutake alone is estimated at three to five billion dollars annually; for chanterelles it is about \$1.5 billion.

In many developing countries wild mushrooms have become an important source of income for people in remote forested regions where there are few other opportunities to make money. Impoverished farmers in Bulgaria, for instance, have bought new tractors with money gained from selling boletes to Italy, and villagers in Zimbabwe pay school tuition fees for their children by selling mushrooms from their native *miombo* woodlands, including chanterelles that they can ship out-of-season to Europe.

One striking success story is in Champa, on the eastern flank of the Himalayas where the Chinese provinces of Yunnan, Sichuan, and Tibet come together. Virtually all of the Tibetan villagers in this rugged region spend the summer months picking, buying, and selling wild mushrooms, or servicing those who do.

Despite a short growing season, the mushrooms provide families with anywhere from 50 to 100 percent of their annual income. In two months, some Tibetan families living in matsutake-rich forests are able to earn more than ten times the annual average wage of a worker in developed China (Shanghai). And in contrast to North America, where the pickers are widely scattered and the material benefits of the mushroom harvest are difficult to distinguish, the wealth generated by mushrooms in Champa is dramatically evident to outsiders, because virtually all of the local money comes from the mushrooms. Villages near matsutake beds are dotted with new two-story wooden houses built in the traditional Champan style but several times larger and more ornate than anything known before; small shops and other businesses have begun to blossom as the new homeowners look for other ways to invest their money.

Even in forests where less valuable mushrooms predominate (e.g., chanterelles or gypsy mushrooms, a locally sold species) the villagers have new houses. They are less grandiose than the matsutake "mansions," but are still a major improvement over the hovels that characterize deforested areas.

Rural boomtowns financed by distant urban elites are nothing new. But what is extraordinary about this area in Champa is that intact forests are seen as the key to rural development rather than as an impediment to it. Several villages have developed their own mushroom management plans, timber harvest has been scaled back, and cultural

integrity is noticeably greater than in nearby areas that cater to tourism.

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Before assuming that any wild mushroom is edible, it should be identified. Accurate determination and proper identification of a species is the only safe way to ensure edibility, and the only safeguard against possible accident. Some mushrooms that are edible for most people can cause allergic reactions in some individuals, and old or improperly stored specimens can cause food poisoning. Great care should therefore be taken when eating any fungus for the first time, and only small quantities should be consumed in case of individual allergies. Deadly poisonous mushrooms that are frequently conf October is the season for wild mushroom hunting. The fruiting bodies of many species flourish in autumn with the return of the cooler, wetter weather. It's fair to say, as a nation, we've historically feared fungi rather than seen them as food. And for good reason - there are many incidents of mushroom poisoning each year. But the popularity of fungal forays continues to rise. And if you know what you're looking for, you'll be richly rewarded. But please remember that fungi are also an important part of the woodland ecosystem so don't overdo it! They can be eaten in the same way as the more familiar penny bun (*Boletus edulis*) and dried too. It's comparable in flavour and apparently has the advantage of being less frequently infested with maggots. Beefsteak fungus (*Fistulina hepatica*). The Pocket Guide to Wild Mushrooms is an excellent reference for learning about mushrooms and for making it easy to identify the good ones while avoiding the bad ones. The Book Giveaway. A copy of The Pocket Guide to Wild Mushrooms has been reserved for one lucky reader. Here is this week's question: What native plants are available for foraging in your area? He told me the best way to check wild mushrooms for poison was to start by filling an aluminum pot with water and bringing it to a boil. Next add the mushrooms to the boiling water but not too long or they become rubbery. Then remove the pot from the heat and toss in one of those old silver quarters.