

URSULA K. LE GUIN

Up in a Cottonwood

i

Who could have for some reason
put a large grey stone
way up in a cottonwood?
Not even on a branch: a twig
holds up that feather boulder
softer than the evening air.

Another deeper in the leaves
turns its silent horns this way,
gazes, shifts the grip
of the mousedearth talons
and softly tells us who.

ii

Indignant indolence.
Wrath gone all downy.
An awful gold round glare
shut halfway to pure contempt.
Birdwatchers.
Someone should remove them.
If they were smaller
If it were evening
I would see to it.
And presently
issue a pellet containing their bones.

iii

Moon cursive
shell curve
of wings in leaves and shadows
soundless, halfseen.

An owl is mostly air.

Who owns the history of the Great Basin? We all do. We all make it, in one way or another. What we know of the ancient history of this region comes in part from the work of archaeologists who examined what can be found of previous occupation of the basin. Greg Bryant recalls his own experiences sifting the sands of the Catlow and Alvord Basins with renowned anthropologist Mel Aikens.

GREG BRYANT

Digging for Universals

The moment you discover a handful of writing, the time of its writing becomes “historic.” If we accept this definition, then “prehistory” has a kind of density, with more of it or less of it, in every time and place, depending on available records.

My personal prehistory includes a mostly unrecorded summer, an archaeological expedition in the spectacular deserts and gorges of eastern Oregon in 1979. We extracted the residue of the distant and possibly idyllic lives of prehistoric peoples occupying Steens Mountain as far back as twelve thousand years ago. In that era, water was more abundant in this diverse landscape but, as far as we know, archivists were not.

The scribes of history finally arrived, but rather late: first in the 1930s with Professor Luther Cressman and his small band of young male student laborers. (Luther Cressman can't be recalled without mentioning that he was Margaret Mead's first husband. He was, like Mead, a student of the great cultural leveler and anti-racism campaigner Franz Boas, who launched anthropology in the United States and fought academic sup-

port for colonialism. Cressman was trained as a sociologist and a priest but didn't resist the draft into archaeology, because it was obviously just another approach to understanding people.) And later still for our story: dominated by an army of nearly fifty young women and men from three universities in Oregon and Washington, a crazy exercise in infatuation with the past, broader and larger than could possibly be launched today. Both times, these adventures were called a “field school.”

The idea of a field school is so helpful that I must stress its importance. It is a healthy solution to an intractable health problem in higher education: any careful and introspective researcher finds it difficult to use the word “teach” without choking a little. How can we fully explain the richness and poorly understood complexities of real research? It's unenlightened to pressure ourselves to reflect upon our experience, cast unearthed and probably incorrect aphorisms and characterizations into textbooks, and then force students to consume them. Instead, let's simply invite them to join the discovery and become colleagues for a season. Let them learn.

For example, when I joined this field school, none of the professors imagined spending the first weeks coping with sneaky treasure hunters who repeatedly breached fences and destroyed excavations untouched since the 1930s. These so-called pot-hunters were after arrowheads and . . . pots. Our attention had attracted the attention of these looters: it would be hard to ignore the helicopters that delivered the cyclone fences. In a classroom, no professor could convey all possible approaches to decontaminating a site under such an active assault. And there was no need. Though the cooperative effort of site repair, students discovered the desired high standards.

The effect of a field school is profound. But teaching and working at the same time is still difficult. Field school directors need to be community organizers, and they tend toward a self-sacrificing commitment to training the next generation of researchers. Mel Aikens led comprehensive digs in deserts for decades and built bridges between archaeologists in the United States and Japan. He served as the head of the University of Oregon anthropology department that Cressman had founded. University of Washington professor Don Grayson is a paleobiologist and evolutionary theorist with a prodigious memory, and his students could reliably

identify hundreds of animals from mere scraps of bone. Pete Mehringer Jr. (whose father was an Olympic gold medalist in wrestling) is a paleobotanist and palynologist who led us to extract pollen strata in cores from the bottom of ice-cold mountain lakes, to initiate the difficult process of uncovering entire plant ecologies. He was extremely patient with students fumbling around on his small, field-built water platforms piled high with custom scaffolding.

The original plan of our summertime adventure—even before the pot-hunters intervened—was ambitious and multidisciplinary, and it required a robust team. We needed to overcome a century-old backlog of untested assumptions about northern Great Basin prehistoric peoples.

The expeditions in the 1930s were guided by empathy and intuition. That's a good place to start: perhaps the only one. But intuition provides no more than a prologue in the natural sciences, because nature, even our own nature, rarely agrees with our instinct, and many of our assumptions become comical, upon examination. Take our earlier example of "pre-history," an academic-sounding but ultimately silly idea. The proposed distinction dissolves when we simply admit that we are animals—so all of our past is natural history.

Cressman provided interesting theories, radiocarbon-datable specimens, and artifacts with context: small clues to the region's natural history. He discovered the world's oldest shoes and pushed back the known beginnings of Northwest human occupation. His work was a little rough, but he conclusively demonstrated that Northwest natural history was worth serious study.

Our new seriousness in 1979 demanded extensive random sampling of a vast area to help identify biases in these intuitive theories of human habitation. It was very ambitious, and Cressman, who came to visit, was pleased with the direction. It resonated with Boas' famous counsel to scientific investigators, to work to eliminate their cultural presumptions.

This sampling couldn't be completely random, of course. All data is retrieved by the questions, assumptions, limitations, and equipment that you carry with you. We do our best to identify our human predilections and shortcomings. The goal of natural science is not omniscience. Just better theories.

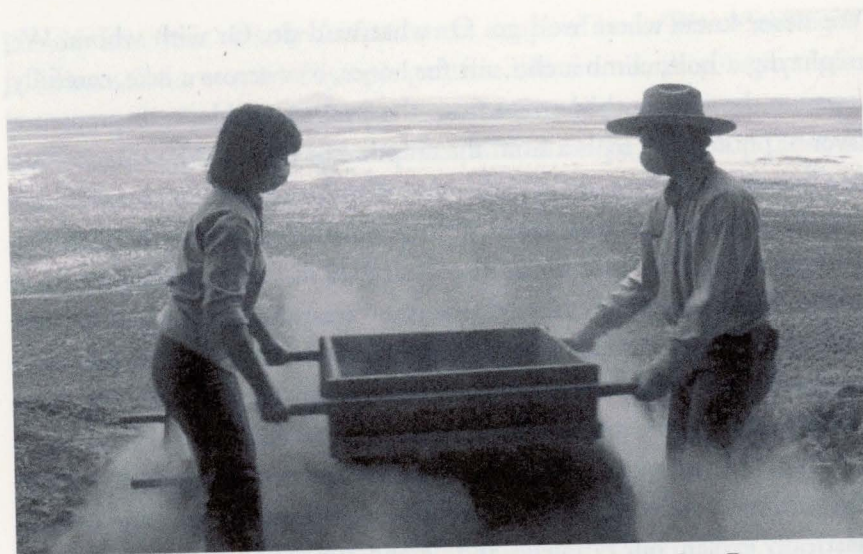
Luckily, random sampling creates an exciting life for student workers.

We never knew where we'd go. Or what we'd do. Or with whom. We might dig a hole, climb a cliff, sift for bones, row across a lake, carefully separate the undisturbed strata from the packrat middens, or prepare a layer of photogenic tephra from the eruption of Mount Mazama . . . this heady variety compensated for the lack of archaeological treasure. For an expedition of this nature, where so little remains of ancient habitat, the goal cannot include 'spectacular discoveries'—a distracting co-conspirator of intuitive archaeology. Instead, we want a carefully constructed, deep panorama of the natural history in question. And we want to improve our methods. The students were aware of these epistemological difficulties and were happy to play the role of human scattershot.

But all of this seemed whimsical to the modern denizens of eastern Oregon, our 'wild west' neighbors, to whom we'd occasionally and enthusiastically explain our rationale, and defend our sanity, over an afternoon milkshake at the general store in the tiny town of Fields. They certainly sympathized with our desire to know the past. Generally, people who live far from 'civilization' are keen local historians. They also deeply appreciate the prodigious feats of memorization and reconstruction common to field archaeologists, whose attention to detail uncovers the puzzles that lead to serious scientific investigation. So we helped the locals understand the importance of the Pleistocene. This understanding became a regional consensus, partly achieved through peer pressure, since we easily tripled the population of the immediate area with our creek-side village of dozens of tents.

Although we conquered the region, it was painful to acclimatize to the desert. The daily heat could reach 40 Celsius (104 Fahrenheit). We'd get up early to avoid the late afternoon boil. But not every challenge was susceptible to planning, since fortune dropped us into environments that no cautious local person would visit—unless they were chasing stray sheep.

Flocks of students stretched across the summer inhospitalities of desert lakebeds in the Alvord and Catlow Valleys, walking for miles in huge transect formations. We'd call out "flake" whenever we saw obsidian or chert flakes, which were evidence of human occupation. We'd all stop, collect, record, and then resume transecting. If there were innumerable flakes, we'd mark the spot as a potential site for a later mapping survey—a harder, hotter, more-focused effort. Plentiful birds from the Malheur



Mel Aikens and a student sifting the earth of Harney County. Photo by Greg Bryant.

National Wildlife Refuge, just up the road, circled and mocked us by mimicking “flake!” as they zoomed by. Vultures also came, hoping that we might be lost and dying.

Personally, in this extreme environment, I felt free to dress quite eccentrically. I wore a Japanese karate *dogi*—a thick white canvas outfit, loose to the skin and hypothetically reflective—and a terry cloth hat that I could pour water over. I’m not sure my preparations for the unanticipated were successful: white clothing is difficult to keep white, over months of camping. I was still too hot. And I looked odd and scruffy.

Destiny’s statistical sampling machine sent a handful of dusty young students for a week to a distant, abandoned high plateau ranch, sitting on steep cliffs overlooking Catlow Valley—an area called Lauserica. We surveyed the flanks of a randomly chosen hillside. The scene was uncommonly beautiful, surrounded by natural fields of short, sharp-to-the-touch mosses, which could easily be mistaken for lush, landscaped lawns. Long-abandoned stone buildings sat on the plateau, which were scenic, but not inviting, so we erected a small one-pole army tent and piled in for some surprisingly cold nights.

One of those nights, an endless, apocalyptic storm blew through, with an abundant supply of monsoon rain, wind, and lightning. We braced against this for hours and hours. We should have been killed. We were at

the highest point, by thousands of feet, and our tent had a conspicuous, thick, lightning-friendly metal rod running down its center. We couldn’t go outside, since the tent would get washed or blown off the mountain without our weight. We pressed back against the soaking wet walls, as far as possible from our cast iron tentpole, which became electromagnetically possessed, vibrating violently like an off-kilter washing machine. The level of static electricity made even our damp hair stand on end. Nature had saturated our evening with terrific educational opportunities.

The summer provided countless smaller learning moments for everyone. We had an excellent camp chef who required a team of students to wash pots and dishes several times a day. One evening this crew was a bit rushed, and didn’t completely rinse off the soap. Almost everyone became ill, including, in my stretched memory, some distinguished elderly visitors. Perhaps Cressman. This kind of poisoning was a revelation to the teenagers involved.

Back at the main camp, which straddled a cool creek, there was a large field office tent dedicated to the labelling of samples, specimens, and artifacts. If you were bordering on heatstroke, you could request a week of this administrative work, which provided a wonderful chance to take leisurely lunches, welcome visiting scholars, and engage the backlog of community chores: patching tents, fixing latrines and showers, clearing brush, or building exciting amenities.

In the labeling tent, everyone threw their music cassettes into a pile to play during the long hours of work, since no radio signal reached the area. Surprisingly, we developed a shared musical taste. A touch of classical, some newgrass, some jazz, and lots of folk rock. When there were enough musicians at main camp, they jammed bluegrass, appropriately enough.

The lab tent housed a kind of field library. Mostly maps and technical books, but also a corner of magazines, journals, field guides, conference proceedings, fiction, and science essays. This kind of “lab library” holds a special resonance for me: a humane and civilized hangout in a sagebrush and alkaline landscape, available at any time. Since culture is within the individual, and emerges through shared experience, we began to develop our particular culture, being so close and sharing so much, with no break.

We discussed great ideas of the day. What else was there to do? We now had time to reflect upon, digest, and consider those ideas and ques-

tions that accumulate during the school year, but become forgotten over a summer. This was perfect—we were still in school, in the sense that we had colleagues, but we were on a break from being crammed with facts. We could breathe. We had time to think and explore. We had older folks around who were happy to entertain ideas. It felt more like real science, and real rationality, than our pressured time at school.

I remember lively nighttime discussions about evolutionary biology, attended also by a variety of lizards, crickets, sparrows, and mice. Our distance from civilization gave us the freedom to highlight misguided trends in scientific thought that might seem appealing but were overly simple: blank slates, behaviorism, positivism, extremist selectionism, the dogmas of molecular biology, and the already unraveling modern synthesis of evolutionary biology. We loved poking fun at shaky technical definitions that we'd learned in school. Somehow these discussions became like confessionals—people poured out their doubts about human endeavors amidst the reality of camping in nature, and supported each other in the hope that we could do better.

I was under the impression that these curious discussions left an impression with the directors, who remembered me whenever I contacted them, even decades later. After all, I was a computer scientist, and only an anthropological dilettante. I never planned to become an archaeologist. I've interacted with anthropologists my whole life—including Margaret Mead, who pulled me into some kind of multicultural experiment with children in the 1960s in a strange room with carpets on the walls behind the insect zoo at the American Museum of Natural History, where I took classes as a child.

But apparently my keen mind was not my most memorable quality for others at the camp. I had a beer with one of the directors nearly forty years later, who said, "Do you know why I remember you? You shared a tent with three female students for a month. There was a lot of gossip. Everyone wondered what was going on."

I wasn't alone: if you wake college students at 6 a.m., that doesn't necessarily keep them from partying at night. Nor does it make them obedient. The field school directors regularly used tongue-in-cheek exclamations like 'mutiny!' when we didn't behave, grabbing hold of our own time when work was done. This behavior was partly a consequence of

the improved gender-balance in field archaeology, which apparently had begun to emerge at the time. Margaret Mead, after all, was the most famous anthropologist in history. Clearly gender-balance is good for the sciences. And it made the collective ideas and experiences of the field-school workers at least twice as rich.

So what did we discover in our unbiased wanderings? A great deal of data was collected, and the analysis showed that human intuition hadn't done too badly. People tend to go where you think they will, if you've dedicated a few decades to a multidisciplinary reconstruction of their long-gone climates and ecologies, so that you can get a sense of what it's like to step into their shoes.

We are the same human species. So it should be no surprise that, to a great extent, with many caveats, the best tool you possess for studying ancient people is *yourself*, since you empathize with the same feelings and motivations, and understand the same ideas.

The problem is that, from the point of view of the natural sciences, we can use our internal "human meters" to do useful investigations into the lives of people—but we really don't know what humans are. We recognize human activity, but we couldn't explain it to an alien or a machine. In that sense, we don't know ourselves. This is normal in natural science—take something that everyone thinks they know, and then you realize that it's actually a complete mystery. Once you begin to investigate this mystery, you don't get answers, you only get occasional insights. And every moment of enlightenment is like getting to the top of a mountain, where you discover new mountain ranges that you need to climb. It is this perpetual mystery that drives science—otherwise we would simply say that we know everything, or that we can explain anything—which is an anti-scientific attitude sometimes known as scientism.

Strangely, if you want answers to universal mysteries, you might be attracted to natural science, but unless you slow down, become deeply humble, and begin to see the limits of the human mind, you won't make any progress. And real progress will take a great deal of work, which you cannot do alone. Luckily, the joy of discovery during collaboration provides its own rewards. Anyone who is exposed to it will never get enough.