What avail is it to win prescribed amounts of information about geography and history, to win ability to read and write, if in the process the individual loses his own soul; loses his appreciation of things worthwhile, of the values to which these things are relative; if he loses desire to apply what he has learned and, above all loses the ability to extract meaning from his future experiences as they occur?

—John Dewey

We set up camp at a bend in the creek where a few old cottonwoods stand like sentries against the emptiness. In this bleak country we seek harbor near the trees; we need something larger than ourselves to provide a sense of scale.

We break into groups of three to cook dinner. Each group’s meal looks remarkably like the next—a steaming pot of starch. Our stoves have two settings—high and off. Further limiting creativity is the need to fill three people to bursting with one pot of food. Most dishes consist of three steps: 1. boil water, 2. add food, and 3. eat. In three weeks on the trail one can weary of dried beans and rice, mashed potatoes, and macaroni and cheese. The monotonous consistency of “camp slop” can be offset by the addition of a food repair kit consisting of lightweight luxuries such as curry power, dried green chiles and jalapenos, dried vegetables (carrots, tomatoes, green and red peppers), Parmesan cheese, garlic salt, pepper, Italian seasoning, and cinnamon. So with unabashed self-interest at stake (the students will be feeding me as well), I prepare lavish meals at the beginning of a course in the hopes they will follow suit. “One-pot wonders,” I call them.

Tonight I am preparing a simple but elegant meal with discrete fanfare. I begin by sauteeing fresh chopped garlic, onion, carrots, sun-dried tomatoes, Formed by swamps and vast river deltas that were heavily populated by dinosaurs, the Morrison contained copious decaying organic matter. Volcanic ash of unknown origin covered these fluvial deposits and created a high pH environment which led to an abundance of dinosaur fossils, as silica replaced bone. The Morrison, along with the Dakota above it, is one of the most widespread formations, found from central New Mexico throughout Colorado and Utah, all of Wyoming, most of Montana and east into the Dakotas.
and pine nuts in olive oil. The aroma pervades the camp and the other cook groups enviously glance my way. With a flourish, I add basil and oregano. When lightly browned, I scrape this into a plastic bowl and set it aside in full view of the rest of camp. Then I boil a pot of water and add multi-colored pasta spirals. While the pasta is cooking, I add some of the hot water to the bowl mixing in dried milk and pesto. After draining the pasta carefully into a sump hole dug for our waste water, I pour the pesto mixture over the pasta. I sprinkle Parmesan cheese and salt just before ladling out portions. I glance over at the faces of the mashed potato eaters as my cook group exudes ecstatic proclamations over the meal.

After dinner we kick the dried cow pies out of the way so that we may sit in a circle on the sand between the creek and the tangled greasewood. Emily chooses a trail name for herself. On our first day out she slipped on the slick mud at one of the creek crossings and slid into the water, soaking her pack. Laughing uncontrollably, she managed to slip out of her pack and rolled around on the bank coating herself with grey mud. "I decided that my trail name is Mud," she announces.

Several years ago, my students suggested the use of trail names, and I've done it ever since. I've found that choosing a new name allows people to reinvent themselves. Most folks come into this program not knowing anyone and with limited experience in the back country. Wilderness quickly strips distractions away, and for some, it is the first time in their lives that they are forced to see who they really are. Many of the things that define us—parents, friends, social roles—are removed, and we are left with ourselves and a small group of other humans in a strange land. We get the opportunity to do some psychic exploration. Who am I? Who am I in relation to others? In relation to the environment? These are fundamental questions that we don’t have the chance to ask when we are surrounded by a culture that views nature as increasingly irrelevant.

Six weeks in the wilderness engenders a redefinition and exploration of one’s role in a group. If we are indeed products of our actions, experiences, and environment, here we are suddenly presented with a clean slate. We have no past actions upon which others can judge us, our experiences have yet to be defined, and the environment is new and unknown. Snakes shed their skin every year, birds molt, and occasionally we need to shed our old selves and create new ways of being. This redefining is particularly apt at the college age, which is one of profound transformation.

In many ways this program serves as a metamorphosis from adolescence to adulthood. If nothing else, students learn to take responsibility for their actions as well as take responsibility for their role in the group. The naming process also creates group identity and cohesion. Everyone calls each other by
their new names, and this is the context in which we experience each other. Most choose names of natural elements they feel some affinity toward, others pick names that they feel are suiting or names that embody a quality. Some names are surprisingly appropriate, and some students never go back to their given name after the course is over. Other names don't quite fit and eventually fall away.

Stacy becomes Sage because of her interest in and affiliation toward plants. Yucca decides his blond dreadlocks resemble the desert plant. Seeker is keenly aware of his search, a search for something although he isn't sure what. Patience wants to be reminded to be patient. David, who wears a plastic figurine of Yoda around his neck, renames himself Bobofet after the Star Wars character. Allison becomes Seaweed because she wants to learn to go with the flow, bob in the tide and not stress about being on time. Michelle names herself Metta after the Buddhist concept of loving kindness. And Jonathan transforms into Huckleberry.

"Why Huckleberry?" asks Patience.

"Well," he answers in his characteristic drawl, "Huckleberry had a little problem with the law." He pauses to make sure everyone is listening.

"It seems there was this timber sale over in Idaho called Cove-Mallard. The largest timber sale in history. Right in the heart of one of the largest roadless areas in the lower forty-eight. So, to protest, Huckleberry and some of his friends built a tripod . . ."

"What's a tripod?" asks Patience.

Jonathan (a.k.a. Huckleberry) sketches in the sand. "A tripod is three long poles lashed together and you sit at the top. If someone tries to cut down one of the poles, you come crashing to the ground. You put this in the middle of a logging road to block the road until they can figure out a way to get you down."

"How do they get you down?" asks Patience, rocking forward on her knees intently interested.

"They make all sorts of threats, like jail. Then when that doesn't work, they say they won't arrest you if you come down. When that doesn't work, they fire up the bulldozers and drive right at you trying to scare you off. When that doesn't work, they start cutting away at the tripod."

"Don't you fall off?"

"Naw, you're locked in pretty good. They finally figured out that if they just cut off a couple feet off each leg they lower it bit by bit until the cops can arrest you and haul you off."

"Were you arrested?"

"Well, this Huckleberry character was. 'Course they didn't much like it when they asked him his name and he told them 'Huckleberry.' He went into
hiding for a couple years. So in the spirit of fighting for the remaining wild places, I think it’s about time for Huckleberry to reappear.”

After breakfast the next morning, we venture out for a day hike and exploration. Away from the creek, the familiarity of cottonwoods yields to an alien landscape like some *Star Trek* movie set. Rainbow hills of reds, purples, and greens indicate we’ve entered the Morrison Formation, a welcome relief from the oppressive grey of the Mancos Shale we hiked through yesterday. However, like the Mancos Shale, these rainbow hills are quite barren and composed of bentonite clay, which swells when it gets wet and forms a slick and impervious barrier. It then dries, leaving a few inches of crumbly clay like spilled granola. Both formations are also laden with selenium, a toxic material that further inhibits plant growth.

The Morrison is the only formation on the Colorado Plateau that contains significant dinosaur fossils, especially in Dinosaur National Park and the Cleveland-Lloyd quarry in the northwest part of the San Rafael Swell, where *Allosaurus*, *Apatosaurus*, and *Stegosaurus* skeletons have been uncovered. The swamps also begat large deposits of uranium and other minerals. The road scars and old mines attest to the boom of the 1950s.

The weak layers of clay erode easily, undermining the harder capstone that collapses, leaving sandstone blocks frozen seemingly beyond the angle of repose until they, too, turn to dust. These sandstones and conglomerates are evidence of Jurassic stream channels that once meandered across the lowlands. Conglomerate boulders composed of rounded river rocks cemented together litter the gully. They erode into weird shapes, rocks with saucer depressions and thumb-like protrusions, and look like they might get up and move around when we aren’t looking.

“Dude, this is like walking around on a planet or something,” proclaims Bobofet.

Bobofet and Yucca scamper up the loose granular rock and slide back down. As a group we look up at the skid marks their boots have left and compare it to the motorcycle tracks nearby.

Part of our purpose here is to document the motorbike and ATV (all terrain vehicle) abuse of the land for the Southern Utah Wilderness Alliance (SUWA). We take photos of the tracks we encounter and plot them on a map in the hope that this information will persuade Congress to protect the area. Besides the noise, the ORVs (off-road vehicles) have a significant ecological impact, displacing wildlife, running over what little vegetation there is, and, perhaps worst of all, destroying the fragile desert crust that so much of the ecosystem depends upon.

But looking up at the boot skids, we have to assess our own impact. It is easy to be unconscious of what we do. The area has already been trampled
by cattle, crisscrossed by ORV tracks, littered with old mines, laced with road scars. What difference does it make if a few campers leave their mark?

The students debate the question and come up with their own minimum impact standards. When I first began leading trips, I laid down the law of minimum impact, detailing the rules. Of course, then I was responsible for enforcing them. Along with enforcement came the sticky question of what to do when the rules were violated. Over the years I discovered that if I allowed the students to set the standard (and they invariably came up with pretty strict rules), then they were the ones responsible for maintaining them. We decided that sliding down the loose rock creates a visible impact, if nothing else, and therefore we shouldn’t do it.

“But why does it matter?” Yucca asks, pointing out how impacted the area already is.

“I regard minimum impact as a practice, like meditation or yoga,” I reply. “You just keep doing it. It’s the act itself that’s important. It becomes a part of a daily ritual. Even if no one else knows it, even if it doesn’t make any real difference if you drop some oatmeal on the ground or trample a cactus. It’s how you live your life from day to day. It’s easy to be a minimum-impact purist in a pristine place, the real challenge is doing it in a place that’s so damaged that you wouldn’t notice the difference. It’s about the self, knowing that you are being true to your principles. And of course it isn’t always easy; we all lapse. That’s why I see it as a practice.”

What harm? Nothing but our own realization of our clumsy attempt to inhabit a place.

Someone finds a flower, a rare forb in this overgrazed place, and so we investigate. Examining the clusters of drooping white flowers indicates that this is one of one hundred and forty-seven species of Fabaceae found on the Colorado Plateau.

“An unusual shape for a flower. Check it out. Anyone recognize it?” I inquire.

Most shake their heads.


“Yep. A member of the pea family just like clover, alfalfa, lupine. All Fabaceae have a few things in common. First is the flower. It has a banner, wings, and keel.” I pull back on the yellow keel revealing the pistil and stamen. “Why might a flower evolve such a structure?”

“For pollination,” says Sage.

“Okay, what about pollination?”

“So it can get pollinated?” says Seeker.

“Does this look like it would be easy to pollinate?”

They shake their heads.
“To keep it from getting pollinated by the wrong insect?” asks Patience.

“Why should a flower care which insect pollinates it?”

Blank looks.

“It’s a selective strategy. Pollen is a precious commodity. You can’t just have any old Tom, Dick, or Harry insect come poking his nose into your parts. You want a specialized pollinator, one that will visit only your species and not go dropping your pollen on a sunflower somewhere. What might be a problem with being selective about your pollinator?”

“That insect might be scarce like the yucca moth in *Desert Solitaire*,” says Seeker.

“So your fate is tied to the fate of that insect, and if that insect hits hard times, gets diminished by pesticides, you suffer. Conversely, if the plant population drops below a threshold, that insect can no longer sustain itself and its population drops and on and on into a downward spiral, known as an extinction vortex.”

“How else might you want to make it difficult to get your pollen?” prompts Metta.

“So the wind won’t blow it away,” says Sage.

“Yeah, or . . . ?”

“So when an insect lands it’s gotta really get in there and drops pollen from other plants,” offers Mud.

“Exactly. Fabaceae also share leaf shape, the leaves are compound, composed of leaflets, either palmate compound like a clover and lupine, or pinnately compound like this, where the leaflets branch off in a series.”

By the time we finish, a couple of students have already looked up the flower and decided it is a stinking milkvetch, *Astragalus prolongs*.

“Well, there’s lots of milkvetch around here. In fact there’s quite a few endemic *Astragalus,*” I counter.

“It says it has a foul odor from growing in saline and selenium soils,” insists Seeker.

“Well this is the right place for that. We can test it.”

We all bend down and smell the flower.

“That’s not so bad,” says Sage

“I don’t think it smells bad at all,” says Mud.

“Yeeccch!” A few moments later the sweet smell turns rancid.

“I guess that would be a stinking milkvetch,” says Metta.

Continuing up the draw, we end our hike at the top of a butte overlooking the entire San Rafael Swell, a blister on the earth’s surface, a hundred miles long and forty miles wide. The geologic formations lie exposed in concentric circles like ripples in a pond, with the oldest rocks in the center exposed by uplift and erosion. To the east the surface rises upward
to meet the upended layers of the San Rafael Reef, forming a seemingly impenetrable wall of sandstone battlements. Beyond the reef it appears that the world simply drops away. But if you kept going east you would find the rocks becoming younger until you reached the Mancos Shale once again. We visually follow the course of Muddy Creek south but lose sight of it near Lone Tree Wedge, a long mesa that looks like it is slowly melting into the formation below. Across the creek, shark fins of black basalt testify to relatively recent volcanic activity.

Following Muddy Creek downstream, the rock will get successively older. Then as we approach the reef we will go forward in time emerging onto the Mancos Shale. A one-hundred-and-ninety-million-year journey back in time and then forward again, encompassing the entire Mesozoic Era. From the vantage point on this butte we stand witness to the last two hundred and twenty-five million years of Earth’s history: from the Permian sandstone at the top of the San Rafael Swell formed in the age of fishes through the Triassic, Jurassic, and Cretaceous (the age of dinosaurs), to the age of mastodons and giant sloths in the Tertiary (marked by the Henry Mountains), and the erosional conditions of the Quaternary.

To the south the sharp, snow-covered Henry Mountains rise above a vast desert laced with broken canyons. To the north, we can pick out the only sign of civilization, I-70 slicing through the charcoal grey mesas of Mancos Shale. The deeply furrowed lower slopes are the remnants of an inland sea that in fits of indecision repeatedly retreated and advanced, creating lagoons and swamps along its western margin. Beaches and sand bars formed the hard sandstone of the Mesa Verde group, which caps the Mancos Shale. As the sea finally retreated for good and deposited the top layer of sandstone, the Cretaceous came to a screeching halt when the earth was struck by a giant asteroid, ending the age of dinosaurs.

The decomposing plant material eventually became coal, oil, and gas. Numerous coal mines infest the formation, from the large operation outside Price to defunct mines near Durango, Colorado. A flurry of seismic exploration for oil and gas deposits worries conservationists as the U.S. government has already approved nearly a thousand gas wells and over four hundred miles of new roads north of Green River.

To the west rises a long scarp of high plateaus dotted with patches of snow. An unbelievably vast country and so much sky that the world seems infinite.

The students prepare for their first class by pulling notebooks out of their packs. They look at me expectantly.

“So, what do you want to learn about?” I ask, borrowing a page from philosopher/educator John Dewey.
They stare at me for a moment. I wait. The story goes that Dewey would walk into a classroom, prop his feet up on a desk, and wait. The entire hour would tick by. The next class he would do the same and keep it up until someone asked him, “Well, are you going to teach us anything?”

“What do you want to learn?” Dewey would reply.

By this point his students were on the edge of exasperation and pelted him with their pent-up frustration. Dewey’s point was that, “The inert, stupid quality of current customs perverts learning into a willingness to follow where others point the way, into conformity, constriction, surrender of skepticism and experiment. . . . We think of the insolent coercions, the insinuating briberies, the pedagogic solemnities by which the freshness of youth can be faded and its vivid curiosities dulled. Education becomes the art of taking advantage of the helplessness of the young.” The first modern proponent of experiential learning, Dewey turned the education establishment on its head in the early twentieth century with his radical approaches to learner-based education. He insisted, “It is not the subject *per se* that is educative or that is conducive to growth,” but rather the experience one has.

However, Dewey campaigned against permissiveness and empty activities in experiential education. “The belief that all genuine education comes about through experience does not mean that all experiences are genuinely or equally educative,” he wrote. Those experiences that have “the effect of arresting or distorting the growth of further experience,” and lead to lack of sensitivity, boredom, or conditioning (i.e., traditional education) or that may be enjoyable yet are disconnected, (playtime or unstructured activities) Dewey labeled as “miseducative.” Dewey advocated education as a form of personal growth rather than the production of an efficient and well-trained work force, which seems to be the unstated purpose of the modern educational system.

Despite politicians’ emphasis on standardized testing, most educators have come to appreciate the value of Dewey’s approach—people learn best by doing and having control over what they are learning. He wrote, “The pupil must learn what has meaning, what enlarges his horizon, instead of mere trivialities.” Perhaps due to the infusion of his ideas into the educational system, college students now are more forthcoming than they were in Dewey’s time.

“I’d like to do a lot of writing,” states Patience.

“Can we learn about the geology?” asks Mud.

“And ethnobotany,” adds Sage.

“I’d like to know more about the environmental issues. Where’d all these cows come from?” says Seeker.

“Can we do, like, some spiritual stuff?” asks Seaweed.

Yucca cringes.
“Birds,” says Huckleberry.
“Can we do solos?” inquires Patience.
“Oooh, yeah.”
“...I find that I learn best through discussions, you know, about literature and philosophy,” says Patience.
“This philosophy!” counters Yucca.
Patience looks crushed.
“Well, we don’t all have to talk philosophy. Maybe in the evenings or something. I know I’d be interested,” adds Metta, attempting a conciliation.
Most of what they brainstorm is already part of the curriculum, but this discussion gives me an idea of how much interest there is and how much time to spend in each subject area. More important, this process provides the students with a sense of ownership over the program. I set up the framework, allowing for flexibility, and the students appreciate having a structure. Providing a say in what and how they are learning increases their interest and motivation far beyond anything I could do. Indeed, sometimes my biggest challenge is to keep my mouth shut and stay out of the way. I see the teacher’s role as one of facilitator to help guide the students’ own learning and place it within a meaningful context.

With this in mind, I present them with their first assignment, writing up their personal and academic goals for the next six weeks, which we will revisit on occasion along with the course content and direction. We may find more interest in geology than philosophy as the course progresses.

Leaving the students to their own explorations, assignments, or lounging, I follow the butte south and wander back down a dry wash, eventually ending up back at Muddy Creek. The water is the color of weak coffee with lots of milk, sort of an opaque, thin sludge. Take bentonite clay, add water, and you get a surface slick as oil; put a creek through it and you get a viscous clay. You get a peculiar quicksand that, lacking sand, is amazingly quick and tenaciously sticky. Both Banjo and I found ourselves mired and surprised on our first stream crossing the previous day. Standing beside the creek in mild confusion trying to figure out where I am, I notice a large black rock beside the water, one of the basalt boulders washed down from Fishlake Plateau.

“Is that an animal?” I question myself. “No, it’s just an algae-covered boulder.”

But as I pass, the smell demands a second look. The algae turns out to be thousands of flies coating the decaying flesh of a cow, pulled by thirst to her death in a deep zone of quicksand.

I decide not to inform the students of my discovery, knowing what a dead cow in their drinking water will lead to among people who are already
apprehensive about this water. There is no other water source for several days’
warm in any direction, and I can only hope that our hike tomorrow will take
us far enough downstream that the effects of a rotting carcass will be diluted.
Water filters are useless here, clogging quickly on the silt. We treat the water
liberally with iodine, which kills the microorganisms but leaves a rather
unpleasant taste. When I see upturned noses and expressions of disgust at the
quality of the water, I feel like a frustrated parent cajoling his offspring into
eating her vegetables. I want to say, “This is a desert, for crying out loud. Do
you have any idea how lucky you are just to have any water to drink?” Instead
I suggest heavy doses of lemonade or Tang, which turns our water from
brown to yellow or orange.

Around the bend from the cow I stumble upon a ramshackle cabin,
hastily built of juniper and cottonwood logs. The plank roof is mostly caved
in. The builder chinked the logs with river mud to keep out the winter cold
and incessant wind. A few scattered pieces of iron implements lie about, too
far rusted to be identifiable. Besides rodents, a woodstove and a hand-built
table are the only occupants of the cabin.

Who lived here? As early as 1870, ranchers west of the San Rafael began
looking for winter pasture in the Swell when snow could provide water.
Could this have been a line camp for a vast ranch? Maybe it was Chris
Peterson’s cabin, who sometime before 1900 brought 300 head of cattle down
Muddy Creek hoping to start his own spread out where no one would notice.
Could it have belonged to sheep rancher Henry Jenson, who was found dead
in 1890 just north of here? Blood in the snow showed he had crawled half a
mile after being shot, presumably in a dispute over grazing rights. Perhaps it
was built by some poor homesteader who arrived too late and found all the
best land to the north and west already taken. Homesteading continued into
World War II in the Swell. Perhaps this was an outlaw cabin? Butch Cassidy
and the Wild Bunch were known to frequent the area. Was it someone seek-
ing a fresh start or an escape from the world?

Nevertheless, it must have been hard, living out here, trying to eke out an
existence off a few cows, drinking this water every day. The sound of the wind
enough to drive anyone crazy. Perhaps it was a crazy fellow who found immeas-
urable solace in the intricate solitude of this place, where Kit Carson said, “not
even a wolf could make a living.” Someone who grew to love the heat and cold
and wind but finally abandoned the place in frustration and despair after his
dreams wandered off in search of greener pastures.