TREE RINGS

Agriculture in the Yuba Watershed

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IN THIS ISSUE

Tree Rings is published from time to time by the Yuba Watershed Institute, a 501(c)3 organization based on the San Juan Ridge in Nevada County, California. We welcome unsolicited articles, art, letters and notes.

EDITORS' NOTE

by Daniel Nicholson and Corinne Munger

Agriculture in the Yuba Watershed demonstrates one of the ways we are supported and nourished by our watershed; it is also one of the ways we impact our watershed. Our agricultural systems give shape to our relationships with our watershed, our community, and our food. They form a nexus of culture and nature. For some of us, our connection to our food is also a way to connect with nature.

With poor soils, a limited growing season, uneven terrain, limited water, and hungry wild animals, our region is not the easiest place to grow food. Yet some farmers have applied contemporary, bio-intensive methods to Sierra foothills fields to lessen our food imports. These are the foodshed activists. The local farmers' work provides us access to delicious, fresh, seasonal, and sustainable produce. The local farmers' stories may provide insight into some of the potential solutions and paradigm shifts that will have to happen to for us to develop truly sustainable—environmentally, economically, and spiritually—agricultural systems for our future.

This edition of Tree Rings explores various expressions of personal and political connections to nature, community, and food found through agriculture in Yuba Watershed. We sincerely hope you find inspiration in these pages and that you continue in large and small ways to nourish and cultivate your connection with yourself, families, community, and watershed by remembering "…that we and our country create one another, depend on one another, are literally part of one another; that our land passes in and out of our bodies just as our bodies pass in and out of our land; that as we and our land are part of one another, so all who are living as neighbors here, human and plant and animal, are part of one another, and so cannot possibly flourish alone; that, therefore, our culture must be our response to our place, our culture and our place are images of each other and inseparable from each other, and so neither can be better than the other" (Wendell Berry, *The Unsettling of America: Culture and Agriculture*).

DISTILLATIONS FROM THE FIELDS

by Rowen White

Rowen White is the co-founder and operator of Sierra Seeds, a small regional seed company in the Yuba Watershed. Sierra Seed's mission is to offer a diverse selection of local, organic seeds that thrive in our unique Northern California mountain foothills. Locally adapted seeds are at the foundation of any durable and resilient food system. Sierra Seeds also strives to empower and grow confident seed stewards through an outreach and educational program designed to support seed production in our region and a make a lasting contribution to seed and food sovereignty.

Golden light and cooler breezes, sand hill crane migration south and acorns falling sharply on the roof—these are all the harbingers of Autumn. As the days draw shorter and the season begins to wane, we are called into fervent action to bring in all the abundant seed crops from the fields.

We have a long dry season here in Northern California, which makes it an ideal seed growing climate. For us it is always this delicate dance of gratitude; the promise of the fall rains is such a welcomed balm upon our dusty lands, hands, and hearts. The long hot and dry season leaves us ragged and parched, with dreams of cozy rainy days with pots of soup bubbling and our hearth warmed by woodstove fires and fresh fragrant loaves of newly baked bread.

Photo: Sierra Seeds

Yet as seed stewards, we also recognize the lingering warm and dry weather as our ally; early Autumn is key ripening time for many dry seeded crops. If the rains come too soon, a season's worth of care, work, and prayer can easily wash away to the soil in a sudden and unexpected early fall downpour. Again, each fall we bear witness to the tenuous balance of a life lived close to the Earth. Balancing rocks and eagle feathers, burdens and blessings are often one in the same.

So we deeply listen to the subtle patterns and signs that the Earth and all our Relations continue to share with us, and cultivate a strong sense of intuitive action to miraculously bring in the harvest once again. From the time of seed ripening to the coming of the consistent fall rains, we are in full activation mode, willing to put in the long hours from dawn until dusk to take care of our responsibilities to the seeds and to the sustained nourishment of our family and extended community. To put away our own feelings of overwhelm and discomfort for a short few weeks, with an intuitive knowing that the coming of the rains will signal rest for our well worked bodies. Just as our ancestors did, we rally the community to help us bring in the baskets of beans and corn, till under the fields, and plant the cover crop seeds that will be the transformative keeper of the soil during the wet winter months.

Baskets and buckets of tiny seeds begin their parade into our barn and living space. Shiny smooth squash seeds dry next to flats of tomatoes and peppers. One but can't help plunging their hands into the soft and supple bucket of cleaned amaranth, beans, or millet seeds that sit breathing off their last bits of moisture before going into cold storage.

Photo: Sierra Seeds

Our one-room main house is the showcase of all the diverse seeds that came out of our green fields this season. I always marvel at the expansion and contraction of the growing season. We start off with a tiny handful of seeds to begin the seasonal journey, which quickly germinates and rapidly expands to fill whole fields of greenery and abundance.

Yet, once the seed harvest begins, we see another round of contraction, as we gather whole plants and thresh them into bins, which then get winnowed down to smaller containers of seed again.

We celebrate in the unbelievable exponential abundance of the seed's gift—50 tiny amaranth seeds multiply into a 5 gallon bucket of billions of little bundles of potential. The ratios of expansion are mind-boggling and heart expanding. When we witness the generous and ever-nourishing patterns of the cycles of seed life, we are reminded again that the foundations of life are rooted in abundance. The seed harvest asks us: How did we ever buy into the story of scarcity?

With every seed crop that is brought in and cleaned for safe-keeping, my heart is filled once again with hope for our sustained future.

We witness a sacred distillation of life in the harvest and handling of the seed crops. Each day there is a new crop to thresh and winnow while the air is still dry and conducive to the act of dehiscing seeds from stalks. We see whole fields of corn, millet, cowpeas, and peppers distilled into small but potent bags of pure potential for seasons to come.

This chaff represents parts of the plant that were fully supportive to the seed development and growth while living; but once dried down, this plant material is no longer in service to the seed. This is the transformation of one mother plant who gives of her own self for the extended life of her thousands of children.

This is true from my own inner landscape; when I take the presence to make my work my sadhana, or spiritual practice, it allows me the tools to identify aspects of my life that were once in place to support my own personal growth, but now need to be "winnowed" away to leave room for more expanded potential. Fall is a potent time for this "inner winnowing," to give ourselves the quiet, spacious reflection time to see what is worth carrying with us through the dark winter months, and what is ready to be released.

What an honor when simple daily tasks in our work become our spiritual discipline, helping us to see clearly how simple and profound the little actions in life really are—that they are indeed living metaphors for the deeper lessons in life.

We then bring these cleaned seeds into our Earthen Seed Kiva for safe keeping during the dark season of late fall into Winter. The seeds have a cool and safe sleeping place, a dormancy inspired by fruitful dreams of harvests to come. This Seed Kiva is a temple of origins, an honoring space to hold the rainbows of diverse living treasures. Truly this is our wealth that we will bestow upon our children and grandchildren. As my Mentor Martîn Prechtel so eloquently states: *"In some forgotten part of us all there yet towers the roofless ruins of a neatly made, tiny earth- and- timber palace of unconscious memory in whose thick walls these amazing ancestors have left for us to find a pot of precious seeds, indigenous seeds of still-viable knowledge and living vitality, seeds that could re-sprout into view the organic articles of the original treaty we humans promised long ago to uphold between ourselves and the wild natural world at the time we first began to cultivate the earth, her plants, and animals through agriculture and working with the seeds. Mudded into these forgotten ramparts of our Indigenous Souls, these seeds of how humans are meant to live have been passed unnoticed like recessive spiritual genes in our souls from grandparent to grandchild for millennia, waiting for each generation to consciously rediscover them, replant them into welcoming ground, and once again cultivate into view a real, livable viable array of ritual seed cultures worth descending from."*

All of this helps me cultivate gratitude in my life. When my hands work with the foods and seeds of the fall harvest, I clearly see that there is a roadmap in this work, that this ancient rhythm of harvest illuminates an inner medicine wheel of work that is to be done before winter settles in.

Thank you seeds for all your teachings, wisdom, and blessings.

Thank you to all our Relations—sun, moon, sky, Earth, wind, water, animals, fish, insects and pollinators, stones, ancestors, and all others in the sacred hoop of life.

And I will leave you with some wise words of Peter Blue Cloud—reflections of transformation during this beautiful Autumn season.

"And season merged into season, and we learned the life cycles of all around us. Like the moon, the face of each thing is in constant change and yet life goes into death a seed awaiting rebirth."

Until the rains arrive, I will be the patient and steadfast winnower of seeds.

Photo: Sierra Seeds

FRONT COVER ARTIST BIOGRAPHY

Chula Gemignani 2015

Gentle

36" x 60"

Acrylic on Canvas

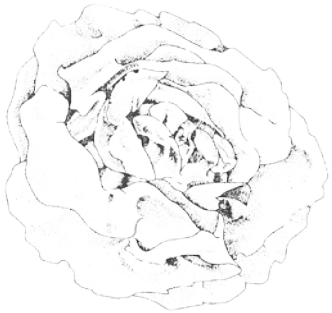
Chula Gemignani is a narrative painter using paint as a medium for inner peace while sharing some stories along the way. Through images that are sometimes real and sometimes dream-like fantasy, Chula takes in inspiration from the layers of consciousness which come alive while we sleep at night and the parts of us that rest just beneath the surface during our waking hours.

For prints of Chula's images contact the artist at chulagem@gmail.com.

WHAT THE POSSUM AND THE OWL ALREADY KNOW

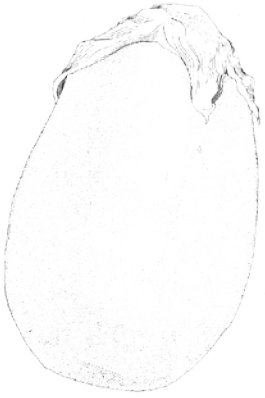
by Maisie Ganz

we farmers try so hard, we want to be
a thing of virtue, proud and free
we grow our food and make compost
of self-sufficiency we boast
but when the season comes to close
a panic starts, and worry grows
“it’s fall,” we exclaim, “i need to know
just what and why and where to go”
“the winter’s coming, the days grow short,
i feel the urge to sail from port
my friends go south to catch the sun
they climb and surf and just have fun
carefree and young they jet around
i watch with envy from the ground.
no kids, no mortgage is this my chance
to go to baja, thailand, france?”



but then i take a deep breath, and re-remember
vacation is more than bali’s beaches in december
it can be the stoking of the woodstove’s fire
making sculptures out of wire
hunkering under blankets warm,
listening to thunderstorms.
mornings of yoga, drinking tea
scaling mountains, climbing trees
rainy walks along the ditch
mending clothing stitch by stitch
fixing fences, building shelves
tiling the bathroom all by ourselves

the day to day is beautiful, i need to worry not
of adventures not yet taken, or the perfect snorkeling spot
inside myself is where i need to be
to find the truest sense of free
where mind is still as fallen snow
constriction eases, i can let go
be more like the bear that settles down
a fox whose den is close to town
the little frog that croaks and sings
who’s happy with the simple things
the truth of living they seem to know
while my discovery was slow
just find a hole, a stump, a pond –
location’s insignificant
cause all the world – inside and out –
is perfectly magnificent.



KNOWING OR GROWING

THE IMAGINARY GAP BETWEEN HUNTING & GATHERING AND AGRICULTURE

by Hank Meals

"*California is more of a wilderness now than it ever was. It's like a feral garden, one that has gone to weeds through neglect*" (Martin: 1996).

When Euro-Americans encountered the indigenous people of the Yuba, Bear, and American River watersheds they saw opportunistic foragers who managed a marginal existence based on what foods they could find. Colonists were so embedded in their version of agriculture they couldn't see that the Nisenan were actually thriving and simultaneously nurturing a beneficial environment for future generations. The Nisenan were not living in a state of desperation, continually teetering on the edge of starvation. They seldom suffered from deprivation but instead lived sustainably within ecosystems that satisfied their desires.

Nisenan horticultural practices included burning, pruning, weeding, tillage, sowing, and selective harvesting. To produce a bountiful acorn crop and to maintain productive meadow environments, the native population used fire, an integral part of the foothill ecosystem. Burning was the most widely employed, efficient, and significant vegetation management tool used in the Sierra Nevada. Fire was also used to enhance the production of basketry and cordage materials, to modify understory species, and to reduce fuels.

Prior to the contact-era, deer did not migrate to higher elevations in the summer but remained in the foothills year-round. By burning in the late fall the Nisenan kept the coniferous forests to higher elevations and thereby increased the oak, grassland, and chaparral area (Matson 1972:43). Some types of chaparral sprout almost immediately after being burned over. For example deer brush (*Ceonothus integerrimus*), typical browse for mule deer (*Odocoileus hemionus*), contains 14% protein and abundant calcium necessary for bones and antlers (Schoenherr 1992:134). Burning also kept the understory vegetation down and prevented crown fires in the conifers. Therefore the conifer canopy was more contiguous, with fewer mountain meadows for the deer to graze in (Matson 1972:43).

In essence, the Nisenan integrated with ecological processes, not as farmers, but as domesticators of habitat with the goal of creating greater benefits. William Preston, Professor of Geography at Cal Poly calls the California Indian relationship with the natural world "… a spiritual path grounded in ecological equity" (1998:267).

Acorns have been the primary food of Sierra Nevada foothill people for at least the past 1,000 years (Hunt 2000:144). Not only can an oak produce hundreds of pounds of acorns, its acorns can be stored for up to two years. Black oak acorns were considered the most desirable because they had the best flavor with a desirable gelatin-like consistency, they were easy to store, they were large and relatively easy to shell, and they required less leaching

COMPARISON OF NUTRITIONAL ELEMENTS (Farris: 1993)

High elevation

Quercus kelloggii (black oak): Protein 3.8 %, Fat 19.8%, Carbohydrate 64.8%
Pinus lambertiana (sugar pine): Protein 21.4 %, Fat 53.6%, Carbohydrate 17.5%

Low elevation

Quercus lobata (valley oak): Protein 4.8 %, Fat 18.6%, Carbohydrate 65.9%
Pinus sabiniana (gray pine): Protein 25 %, Fat 49.4%, Carbohydrate 17.5%

Compared to

Wheat flour: Protein 13.3%, Fat 2%, Carbohydrate 71%

than other acorns (Anderson 1993:159-164).

Burning thins the oaks stands, creating a density pattern that allows trees to grow large and healthy. If left unchecked, filbert worms and weevils can destroy up to 95 percent of the acorn crop dropped by individual trees. Fire breaks the life cycle of both pests, ensuring much better crops (Anderson 2005:288). Fire also encourages grasses to re-sprout with vigor and creates additional ecotones in forest openings.

Nisenan groups followed the rhythm of ripening plants. Plant species were the main source of food, supplemented by fish, mammals, birds, and insects. Rugged and sometimes steep terrain created a diversity of environments such as mixed conifer forests, meadows, freshwater marshes, grasslands, oak woodlands, and riparian corridors. Factors such as elevation, soil, and aspect often create environmental niches. The ecosystem at elevations between 1,000 feet and 3,000 feet supported the greatest frequency of plant species used by the Nisenan. "Increase in the diversity of topography alters the altitude of the life zones locally. This effect produces a great variety of plants in a relatively small area" (Erskian & Ritter 1972:28, 29).

Clover was a favorite food that was eaten raw, steamed as a vegetable, or dried. Other plants, like yampa (*Perideria* spp.), had a potato-like consistency and some grasses produced small seeds that could be ground. Berries included blackberries, thimbleberries, strawberries, elderberries, chokecherries, manzanita berries, madrone berries, and wild plums.

Nutritious and tasty nuts were gathered from gray pine at lower elevations and from sugar pine above 4,000 feet. Archaeologist David Hunt applied GPS data and statistical analysis to the location of Nisenan and Washo campsites in the watersheds of the Middle and South Forks of the American Rivers and determined that sugar pine nuts were collected at many locations and processed at numerous small bedrock mortar stations (2000:147). In his opinion sugar pines probably extended farther westward than they do now.

Some plants were used exclusively as medicines. Other plants were groomed and harvested at particular times, especially those intended for basket weaving. All of the plants have their timings, particular habitats, and associations with other plants and animals. It took comprehensive knowledge to synchronize movements for maximum nutritional and epicurean benefit.

Lizzie Enos was a Nisenan woman who, when interviewed in 1957, still maintained many traditional practices. She lived near Clipper Gap and Sugar Pine Hill in the Bear River watershed. According to Enos, a family would usually gather ten to twelve 50-pound sacks of acorns to last the winter. She observed "the best acorns were high in the mountains and on the shady side of canyons" (Simpson: 1977; Wilson 1972:36). Note her attention to altitude and aspect.

DIGGERS

Probably the oldest and most widely used tool in Yuba River country was the fire-hardened digging stick—Nisenan women were seldom seen without one. It was used to get at roots and tubers, to locate basketry materials and for cultivating soil around desirable plants. It was also used to reach things on the ground, to reach above, as a lever, as a fire tender, for self-protection, as a walking staff, and other functions.

Use of the digging stick was so ubiquitous that gold miners indiscriminately and disparagingly called the foothill Indians "Diggers." What irony—miners are by definition diggers.

Harvesting acorns was a communal activity. After moving in small groups between strategically placed campsites during the spring and summer, the Nisenan congregated to assure a bountiful harvest. Once the acorns had been gathered there was reason to celebrate with a "Big Time" or "Lumai." This was an annual event in which other groups were invited to share food and stories, to trade and gamble, and to make new alliances.

The only plant cultivated by the Nisenan was native tobacco (*Nicotiana* sp.). Seeds were sown on a burned-over plot, usually no more than 50 feet in diameter then they were ignored until maturity. As they grew larger their leaves were sometime pinched at their tips to encourage the growth of bigger leaves. Seeds were saved and scattered the following spring (Anderson 2005:173; Beals 1933:356). At the appropriate time the leaves were gathered, dried, and smoked in stone pipes by men over 30 years of age (Beals 1933:356). It was smoked alone or mixed with dry manzanita leaves, having "a pungent, peppery taste in the pipe which is not disagreeable" (Powers 1976:426). Tobacco was also an important trade commodity for the Nisenan, especially for the villages near Nevada City and Auburn who traded seeds with tribes to the west in exchange for strings of shell beads from the coast (Duncan 1963:75; Littlejohn 1928:85).

What was the Nisenan's relationship with the luxuriant stands of ancient oaks and stately sugar pines that were hundreds of years old, trees that witnessed historical events, trees that made shade and fed the people for many generations? We will never again see the magnificent trees the Nisenan lived with—trees comparable to monuments, cathedrals, and big bank architecture in our own culture. Ethnographers report that certain trees were owned by Nisenan families. Perhaps they misunderstood. Maybe this interpretation shows cultural bias or an inability to see that trees were family.

COLONIZATION

Before the indigenous people of Feather River and Yuba River country ever saw Spanish soldiers, priests, fur trappers, or gold miners, the process of colonization was already underway. Horses and cattle that had run away or were stolen from the missions were breeding while moving northward in the Sacramento Valley. With them came seeds, insects, parasites, and microorganisms from the Mediterranean region of Europe. The native people, at first, hunted the new animals for food and found uses for some of the exotic plants, but they could not have foreseen the domination of California's grasslands by European plants and weeds that occurred in less than a century. Each wave of settlers—intentionally or not—brought increasing numbers of foreign biological and cultural menageries in the form of flora, fauna and disease, as well as religion, colonialism, capitalism, and industrialization.

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OPENING THE SOIL

by Marney Jane Blair

I hold yellow and maroon seeds. I planted their parent plants six months earlier. Now that the green bean plants have created the pods for their young, the plants will wither and die. By Halloween, all the annuals will die and leave their offspring to survive the cold winter.

I love to hold the fruits of our labors. Running my hands through the barrels of corn and sorghum seed stored in our barn, I travel back in time to the early spring. Lisa and I planted all this season's plants by hand, each seed cupped gently in our palms.

We planted three acres this year. For the corn and beans, we used a wooden stamp to make a diamond pattern in the bed. We placed each seed in a divot in the moist soil, crawling next to each other on our hands and knees as we moved down the row pushing the seeds into the warm bed. Our meandering conversation warmed the seeds as they moved from our palms to the soil. After placing each seed in the divot, we gently covered it with a mound of dirt.

Hands are the real tools of a farmer. These tools are sensitive and can serve as a conduit between the farmer's will and the object she is touching. Sorghum and sesame twirl in the fingers as they cascade into their furrows. Squash seeds need a thumb to press them into a mound. The flax, an oily seed, requires a certain

fling of the finger to set it free. If she cares to, a farmer can move love for that object through her hands.

My wife's hands are strong from years of hard labor, but they're also sensitive like the artist she is. In the same day she can build a chicken coop and gently rub salve on my tired back. Her hands, like her solid hips and shoulders, thick salt and pepper hair, and fearless eyes, project strength and confidence.

Lisa arrived on this land before I did. When she was a young adult, her father had taught her to target shoot on the site that our house now occupies. She knew the oak groves that fed the deer and wild turkeys. She knew the thick brush that lined the creekside. In her late thirties, she decided to make it her home. Lisa's mother, passing on her inheritance to her daughters, provided the financing for what became a two-year project to build a house. Her brother-in-law provided the design, but Lisa provided the labor.

When I first stepped into her home several years later, I could see the loving craftswomanship. Even though we had met just a few months earlier, I knew that we would build our dreams together. I could sense that we would be each other's muse, and that our hands would weave a magical tapestry of life.

Together we could see the beginnings of a farm.

"Look Marn, this would be a fantastic spot for the first growing area!" Lisa said, as we walked through the tall summer grasses and around a large outcropping of boulders. She had walked this field many times while she was building her house, and she had had her eye on it. She knew the types of plants that grew here and how the water moved during winter rain storms.

"Let's stand here and see," I replied. I listened to the wind move through the grass. We both knew that an open flat field with full sunlight and good drainage would be a good start for our row crops. I imagined the acre reflecting the primary green of corn and beans, the blue green of chickpeas, and the vibrant green of millet. I took the shovel and plunged it into the moist soil at my feet. The shovel with my weight traveled at a slow, steady, satisfying rate. I flipped the clod of precious earth over. We let our knees touch the ground as we bent over the aromatic clod of loamy clay soil.

"That smells good," Lisa sighed.

We looked at each other and smiled. We felt confident about the future but also humbled by the enormous responsibility we were taking on. The spader on my tractor would forever alter this land we were standing on. We had a strong obligation to do right by nature. Mistakes were inevitable but integrity would be essential.

And this was how we built our farm. Each chicken coop, fence line, orchard, and milking barn built by our hands and celebrated as part of a living entity. A living, integrated farm. Some of the buildings are whimsical. Some of the fences meander, and the stanchions in the milking parlor curve to the shape of the cow's head.

We built our first fence out of manzanita. The woody part of the plant is dense and gnarled. The bark is smooth and apple red. Because not a single branch is straight, the fence undulates with the earth beneath it. What joy, what freedom to build such a fence! The construction took us weeks. It was very unconventional, and the lack of convention set our imaginations bubbling with other ideas. What type of gate, we wondered, was worthy of such a fence?

The inspired answer was a fulcrum gate, a gate that doesn't swing on hinges but rather moves effortlessly from one balanced point, the fulcrum. We constructed it from larger, thicker, and older manzanita. At the end of the gate is the counterweight. Angle iron that has been blacksmithed into a hook eye moves through a drilled hole on the large beam of the gate. Attached to the iron are whimsical, round clay figures. Together they supply the correct amount of equalizing weight for the gate. When one opens the gate, it feels light as a feather. But it also requires the gate opener to be present, for the gate can quickly get away from you.

TURNING

by Dale Pendell

Knowing I'd be laid up
for several months
added some urgency
to October: winterizing—
running the mower empty and the weed-whackers dry,
cleaning chainsaws, draining water lines, coiling hoses,
the air cool, not cold,
sun bright, not hot.
Filling the wood shed, stacking kindling,
bringing in all the scattered tools
of a summer of drought,
finches singing, bush tits
filling a tree.
A day like this—
clean, crisp, first leaves turning,
"all safely gathered in"
worth being alive for.

REBORN A FOX

by Dale Pendell

Ulysses mind
climbed the tree
to the bird feeder—ate
the suet—and
what's with
that tail—I'll tell:
a dried vertebra
left mid-road,
next day, found a glove
moved twenty feet,
then a sock, set
on a stump.
Hungry stork, mad hen house, a thousand,
a hundred thousand
playful lives.

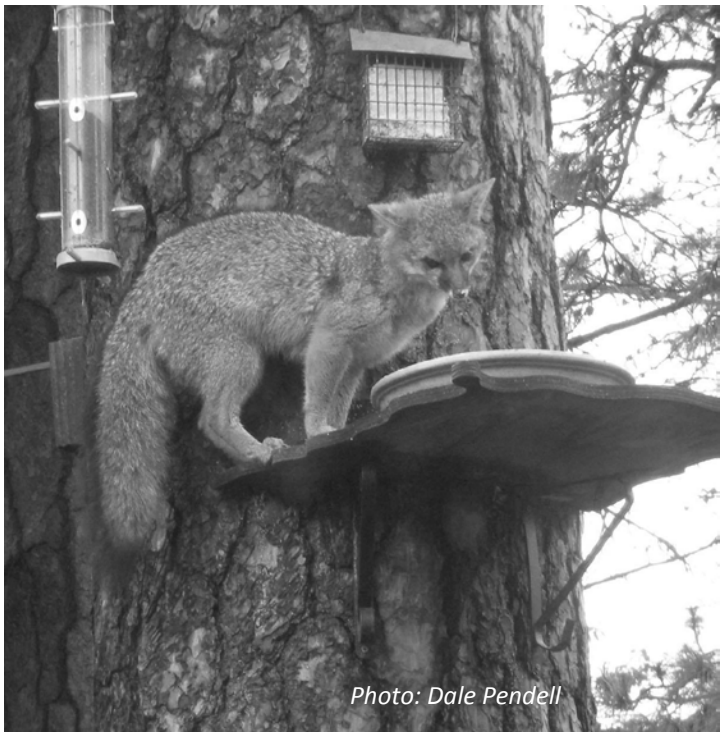

Photo: Dale Pendell

A CARPENTER'S CONFIDENCE

by Maisie Ganz

I am a farmer, which means that besides an implicit expectation that I know how to make things grow, I am also expected to be able to build shit. Fences, sheds, shelves, greenhouses, work-tables, irrigation systems, and of course, the perfectly shaped garden bed. I have never been a confident carpenter. I was not a child who was given a hammer at age three, my own toolbox at age five. I did not work alongside a parent building our home. I did not even put shelves up in my dorm room once I got to college, or in my first apartments later on. I have a memory of my 10-year-old self, attempting to make a treehouse. I hammered three random two by fours up the trunk of tree and climbed up to the third rail. I was maybe 5 feet off the ground. I was high enough to look into the kitchen window. So naturally I emerged into adulthood believing that I was basically building-impaired.

But that's because no one ever told me the secret truth: building is not that hard. Building is not a man's work. Men are not better equipped to build a shelf in the garage (unless they are using their penis in there when we are not looking). Men are not born with a knack for calculating measurements or using a saw. And yet, this is kind of what I thought. This story was even further validated as I began to farm. Time and time again my male farming counterparts, mostly my superiors, were making and fixing shit. Complicated shit. Broken rototiller motors. Underground root cellars. Outdoor kitchens. Whole frickin' houses. Meanwhile, I drew pretty market signs that I laminated at Staples. When a particular project was at hand, I was enlisted, when enlisted at all, to pull nails. The power tools littered around me seemed large, unwieldy, and dangerous. I was told not to touch them. I pictured a circular saw coming to life in my hands, slicing through a leg or arm. So yeah, I didn't touch them.

But then I worked under the tutelage of a manager who wanted to empower his employees—all three of which that particular season happened to be women. There was finally no chance for me to be overlooked and equally no chance for me to hide. So I began to learn. I participated in welding the spade arms on our tractor. I helped build a large greenhouse, standing on the lifted bucket of a tractor to screw in each panel. I helped to dry-wall an old shed that became our farm office. With fear in my heart I cut posts for a compost station with a circular saw. And it began to get easier. I built an outdoor bed and learned the hard way that although it sounds romantic to build bed-posts out of trees, it's just not. I did all sorts of small repairs around the farm. I built picture frames. I carved spoons. And when I left that job, my going away present from that same manager was a set of tools I still use to this day.

From there I slowly built up steam. Outdoor toilets for all of our farm sites, a counter for my kitchen, bamboo flooring for my trailer. I fell in love with the ease of screws, and the brilliance of pre-drilling. I borrowed an impact driver and suddenly realized that screwing a screw is not about skill as much as the right tool. I invested in my own drill set. I bought a circular saw that was slightly smaller, easier to manage for smaller hands and a lighter build. I learned to measure lumber, account for extra inches, be specific. I realized that hours would pass and I would be so engrossed in the process I'd stop only because it was time to have dinner.

My confidence has strengthened over the years. Now I relish a good building project. I feel happy when I am planning, cutting, building, creating something useful. But it is my latest construction that has been to date my proudest. Finished last weekend, the last boards cut, the last screws screwed. I built a bed! And not a janky outdoor bed made out of fallen trees I found in the dry creek-bed. No, a janky INDOOR bed made from pallets I collected from behind our local hardware store! Except for this bed, I have to say, is arguably not as janky, because a) it actually holds our mattress and us up and b) it looks like something that sells at

crate and barrel for a whole lot o' money. And total cost for mine? About $60.

So yeah, I feel proud. And not just because I built a bed. But because I *believed* I could build a bed. I imagined something beautiful then I made what I imagined. There were moments I felt lame, ill-equipped, over my head. But I just gently reminded myself that I could do this. I just read that less than 2% of carpenters in our country are women. This isn't because we don't like the sound of power-tools (though sometimes I don't), or lumber is too heavy for our tiny little lady arms. Nope, from my own experience I can say that there's just a lot of intimidation to overcome. Combine that with a lack of female role-models and an educational system that doesn't exactly steer girls into vocational specialties (farming and building alike) and you get very few women checking the carpenter box on the census.

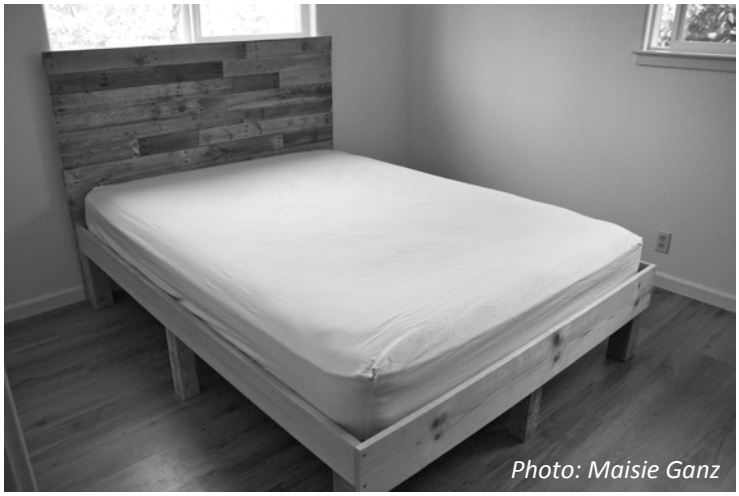
Photo: Maisie Ganz

So I am grateful for all the men and women who have taught me the skills I use in my vocation. The teachers who have taught me to tend to seeds and the teachers who have taught me to quiet the mind. The teachers who have taught me to use power-tools safely and those who have taught me basic grammar and syntax. And today I would like to especially thank the teachers who have encouraged me to build the things of the physical world as well as the things I think up in my dreams.

SURROUNDED:
A RIDGE DWELLER'S PERSPECTIVE ON LIVING IN THE MIDST OF MARIJUANA GROWS

By Debra Weistar

"I don't mean to scare you, Ma'am," the DEA agent told me, "but you live at Ground Zero. You are surrounded on all sides."

It was October 1, 2012. Four days earlier, federal agents and the Nevada County Sheriff's department had raided our home and land, certain they had hit on a big cannabis "grow." Heavily armed and pumped with adrenaline, they searched our house, shop, storeroom—and our son-in-law. They did have a warrant, but with someone else's address on it, and they weren't about to let us see it. They were sure they would find something, but there was nothing to find. They had stumbled (some might say blundered) onto the only place for miles (according to the DEA agent) that had no marijuana on it at all. I was outraged by the violation of my home, family, and constitutional rights, but what really got me was the assumption that I was a grower because of where I live.

Besides calling the DEA (Drug Enforcement Administration) to find out why they made such a glaring mistake, I wrote to Sheriff Keith Royal:

The San Juan Ridge/North San Juan area is known for marijuana plantations and drug related issues, this we know. There are reasons why stereotypes are formed. The danger is when prejudice is borne of stereotype, and actions become influenced by prejudice. Those of us who live here are acutely aware of that prejudice. I would like for people to remember that "The Ridge" is home to professionals, teachers, business owners, trades-people, botanists, artists, authors—people who

actively contribute to the community and take care of it. Our cultural events attract people from all over, bringing economic gain to the whole region. There are several farms here that grow food that helps to feed the wider community from Truckee to Auburn.

When you inhabit a place over time, you bear witness to change: political, social, economic, and cultural. I noticed changes in our neighborhood that coincided with the escalation of cannabis grows in California. Friends and colleagues looking for our place who missed our driveway were greeted with a shotgun. This happened more than once. Up until a few years ago, when walking on our road I recognized nearly every neighbor who drove by. Not so now. Those who drive past me don't wave and they don't smile. When you possess something that may get stolen and that can only be protected by violence, threat of violence, or secret hiding places, it not only forms your behavior, it conditions the way you think and relate. When a whole community is infused with a thought pattern that includes suspicion, secrecy, and fear, everyone feels it, whether we realize it or not. We all breathe the same air.

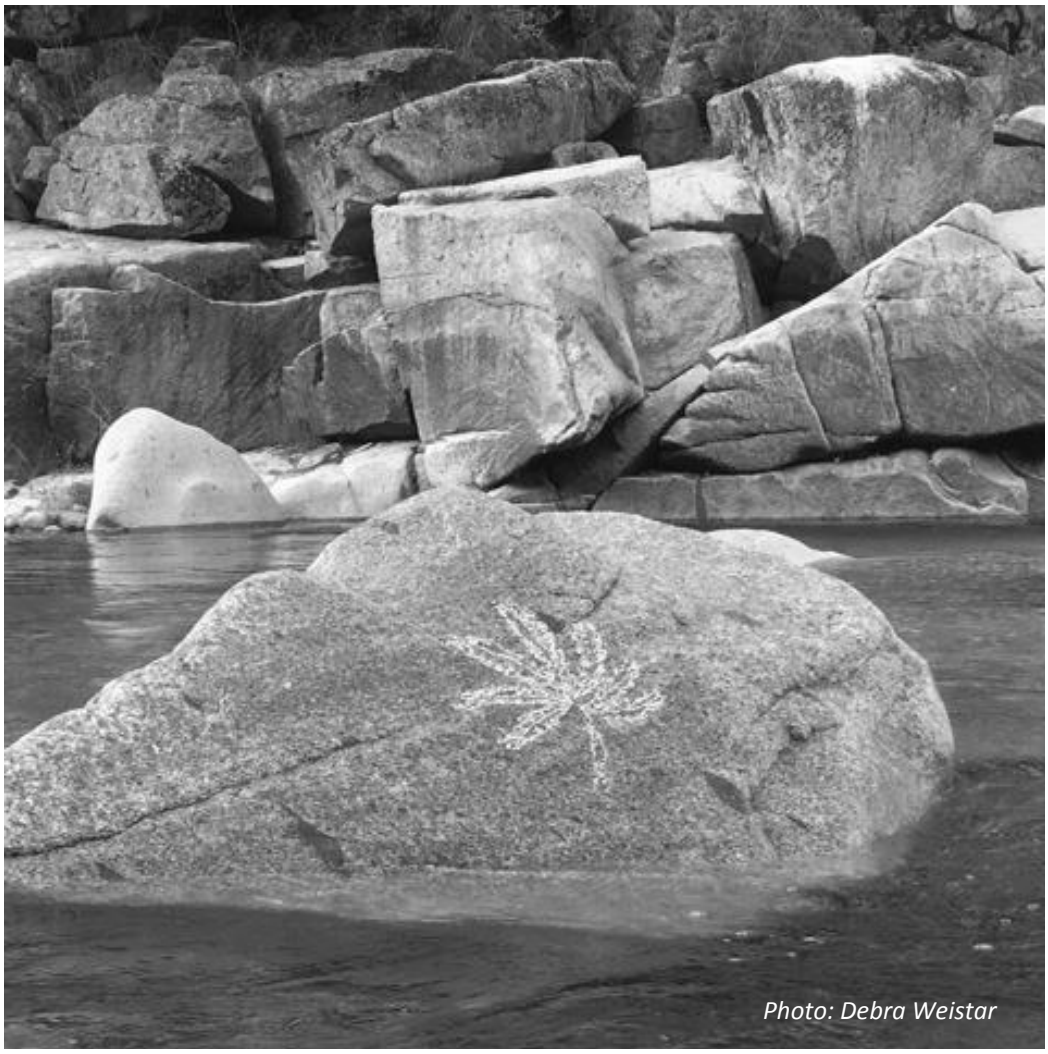

Photo: Debra Weistar

After the search, I swore we would move. Leave the Ridge that had been our home for 27 years. Leave the place that I belong to, and the land that I love. Leave the manzanita, the sugar pine and cedar, the kitkitdizzy, my garden. Leave the outdoor education center that my husband, Tom, and I built. I felt the ripping of something sacred, and my initial reaction was to run away.

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The Sierra Nevada has endured a level of devastation like that found in countries impacted by war. Since gold was first discovered in 1848, thousands have flocked here for the chance to "strike it rich." The old growth forests were clear-cut, streams and rivers poisoned and diverted, wildlife exterminated. The human and cultural genocide was almost complete. In the book *Crow's Range: an Environmental History of the Sierra Nevada*, author David Beesley sums it up in one sentence: "A rapid transformation of Sierra Nevada landscapes accompanied the tragic destruction of its native people." One trip to Malakoff Diggins or

the Yuba gold fields, and one can start to comprehend the otherwise inconceivable fact that more material was moved by hydraulic mining in the Yuba watershed than in the construction of the Panama Canal.

Although it is commonly accepted that marijuana growers are considered farmers, and marijuana a crop, to me they bear little resemblance to the farmers who grow our food, participate in Community Supported Agriculture, or greet me at the Farmer's Market on Saturday mornings. The recent influx of growers has more in common with the miners. Resources—water, soil, forest, and land—are exploited to produce a product with an artificially inflated price tag and that old, seductive promise to "get rich quick."

Disheartened though I was, I didn't leave the Ridge. Instead, I joined a small group of citizen activists who were researching and documenting the environmental impacts of marijuana cultivation in the Yuba watershed. I realized that part of the distress I felt was due to feelings of powerlessness—it seemed that no one dared talk about the negative side of marijuana cultivation for fear of derision, or intimidation. Still, I *had* to do something. The group I joined was an ad hoc committee of SYRCL, the South Yuba River Citizens League. We met once a month, behind closed doors at first. Despite the DEA agent's claim that he didn't want to scare me, I was nervous. Nervous, but no longer alone or silent. At the meetings I learned about the use of rodenticide poisons that threaten the fisher, a forest dwelling mammal in the family that includes weasels, mink, martens and otters. I learned about the impacts that unregulated use of fertilizers and pesticides has on our already overtaxed rivers. I learned more about "trespass grows" (illegal grows on public lands) and about broadly used, legally purchased agricultural products that pollute the watershed.

We researched the environmental impacts, which are significant. We brainstormed solutions. The challenges were obvious—how could we reach a population that by its very nature doesn't want to be reached? We sought guidance and solidarity from other cannabis growing communities struggling with the same issues. We focused on two areas: helping to clean up trespass grows on public lands, and educating growers and the general public about best practices. Our intention was—and is—to educate, not alienate.

In January 2015, we hosted a panel discussion at the Wild and Scenic Film Festival in Nevada City, titled *Marijuana Grows as a Watershed Issue*. Perspectives included growers, scientists, activists, and law enforcement. The room was packed. The discussion was thoughtful, the audience engaged. For the first time ever, I felt hopeful that dialog on this charged and sensitive issue was not only possible, but productive. Going forward, the conversation is essential for the long-term wellbeing of our community. In March of the same year, SYRCL launched *Growing Green for the Yuba*—a daylong series of talks and workshops aimed at educating cannabis growers to adopt environmentally safe growing practices. We didn't know if anyone would come, but they did—about 70 participants. The expanded 2016 event is in the planning stages now. These are considerable accomplishments.

I still feel fear at times, especially in the fall harvest months when the growers are most vulnerable to theft or raids, and tensions run high. As I sat at my desk writing this article, a huge law enforcement helicopter flew so close to the house that the windows shook. It circled the neighboring property twice and flew back over our house again before flying off. Such incidents, though infrequent, are unsettling, and they shatter the peace that is otherwise an integral part of life here. They also keep me alert and on-pointe. The work has really only just begun.

My hope now? That *all* my neighbors can find meaningful, life-affirming work that supports them while bringing ecosystems back into balance; that we atone for the past, and stand up for the voiceless; and that our activism drives cultural evolution. For me, our highest calling is to learn to sustain ourselves, and one another physically, economically, and spiritually in this place we call home.

CULTIVATING A COMMON GROUND

by Matthew O'Malley

for G. — with gratitude, and in friendship. (…But really, this is for all my friends on the SJR: thank you.)

"The ear of wheat (in Latin *spica*, obsoletely *speca*, from *spe*, hope,) should not be the only hope of the husbandman; its kernel or grain (*granum*, from *gerendo*, bearing,) is not all that it bears. How, then, can our harvest fail?"
- Henry Thoreau, "The Bean Field"

Our focus, here, on watershed agricultural practices and agrobiodiversity provides us with an opportunity to remember the importance of "the common" in relation to the sustenance and well-being of *any* community, not just the diverse community constellated around the values, and organization, of the Yuba Watershed Institute. In fact, I will strengthen this suggestion: Any analysis of watershed agriculture and celebration of the work and produce of local farms and gardens must remember the profound social and ecological value of common resources and must make the necessary connections between the health of a community's agriculture (at every scale *and* for every type of cultivation), the vitality of its community culture, and the care for its common wealth. When originally interviewing friends for this essay, one friend on the San Juan Ridge put it rather bluntly: "No water, no commons, right?" Now, this insight can easily be reworked: No access to common resources—e.g., no water—no local agriculture, right? But I'm getting ahead of myself. Let's start with some definitions, and proceed from there.

Firstly, what do I mean when I refer to "the common"? The common is typically understood as the common wealth of our material world: the air, the water, the sunshine, the fruits of the soil and the soil itself—nature's resources. The common is often claimed as "the inheritance of humanity as a whole, to be shared together"; which might even include certain knowledges, languages, codes. (The relation of the common to agriculture should already be emerging.) More, by emphasizing the common, rather than the private, or the guardianship of the state, we start to tune-in, as Michael Hardt has suggested, to "practices of interaction, care, cohabitation in a common world." If today the common is becoming increasingly difficult to see, this is due in part to the continued effort to privatize and exploit it—making water, air, ideas, even animal and vegetative species into private property. So when I emphasize the common in relation to local agriculture it is in part to bring into focus all that we rely on that is no one's property, that is indeed a gift from nowhere, meaning the common, if not sacred, ground of all life.

Traditionally, "the commons" refers to environmental resources open and available for use by an entire community (pastures, fields, forests, rivers and streams—and the wild game and plants to be found there). Common land systems, such as those of indigenous America, medieval Europe, and Asia (well into the "modern" period), operated, and in some places continue to operate, on principles by which certain lands are held in common and governed by traditional rules of careful use. In earlier periods, such as 13th century England, the necessity of a thriving commons in relation to individual agriculture was very clear, for the private rations and small household gardens of feudal laborers were inadequate to meet their total subsistence. Historically, people thus relied on the commons for hunting, foraging, firewood, and other resources to supplement rather limited household inputs. Now obviously contemporary homesteaders in the Yuba Watershed do not rely on common resources for survival in the same way. While mushrooms, herbs, venison, turkey, and firewood are surely all harvested from common sites, such as the 'Inimim Forest, it is likely that most 21st century foothill homesteaders do not depend on the commons as *the* essential material supplement to their livelihood. (Nonetheless, I imagine certain situations of shared water access

still demonstrate this precarious dependence on common resources for necessary, indeed vital, supplementation. Moreover, it is worth recalling how the founding of the Yuba Watershed Institute itself, and the creation and maintenance of the 'Inimim Forest, all demonstrate exemplary responses to various, historical "crises of the commons." By applying ideas of the commons to contemporary, North American practice, these entities defined themselves, in part, by principles of open, shared access and localized, collective decision-making.)


Photo: Claire Potin

In other words, by observing how our relation to the commons has shifted, I do not intend to imply that the place of the commons is now irrelevant to our lives, or that our local agrarian landscapes no longer relate to the commons. Far from it! What it does imply is the need to expand our sense of the common and to introduce a third rubric: commoning. Common must also be a verb, "not only a resource or idea." As Robert Kocik has suggested, "Commoning is the creating of our material conditions and organizing our labors with the greater emphasis on the prosperity of all." Commoning, I suggest, fosters active, engaged community relations, nurtures our local traditions, and values the shared histories, and uses, of a place. Our individually productive homesteads should not be conceived of as isolated nodes in a forested network of solitude, but nexuses in the social and ecological commonwealth of the watershed. The gifts of farm and garden produce we already share with one another are just one testament to what is common, reciprocal, and communal in our various agricultures. More, any agriculture that participates in a process by which the common is "continually reconstituted"—reimagined, revalued, and respected—resists the tendency to become a merely privatized affair (i.e., an enclosure driven solely by the logic of profit); on the contrary, it regularly gives back to its community, both natural and human. In this way, agricultural practices that are sensitive to the ethos of commoning come to reflect, structurally, the nature of gift economy imbricated in any functioning commons: whereby our practices are guided by various senses of ongoing obligation, reciprocity, responsibility, sociality, care, and time (i.e., the past, present, and future of collective exchange). The Yuba Watershed Institute; the North Columbia

Schoolhouse; the D.I.Y. *Mud & Pearls* project; Sierra Seeds; Honey Circle Farm; the San Juan Ridge Taxpayers Association; the Mountain Bounty Farm CSA model; Sierra Harvest; alongside the social commitments of local agrarians such as Tim Van Wagner, Maisie Ganz, and Leo Chapman—all are vital instances of diverse commoning practices. It is no coincidence that all of these entities—in their commitment to the common, to the place, and to an ethos of community support—are somehow tied to various expressions of a sustainable, informed watershed agriculture. If I am right in linking gift exchange to commoning, and linking commoning to a responsible agricultural practice, then these interrelated practices share at least three qualities: 1) the exchange of intimate, local knowledges; 2) the recognition of mutual need within the watershed, and its corollary in; 3) a politics of community organizing around realities of mutual aid and reciprocity. Conviviality, connection, responsibility, and the exigencies of ongoing exchange—commoning requires meeting on, and maintaining, common ground. Any farmer's market, grange meeting, garden-style potluck, annual mushroom foray, weekly CSA share, or harvest fair reminds us of this social fact.

I will close with some additional history, albeit a history that may seem deceivingly distant from our California foothills. It is well-known that most land outside of the plantation proper, in the slaveholding South, was *de facto* common property. Frankly, this was in the interest of slaveholders, for black slaves would have to provision for themselves what was needed to supplement plantation rations. According to historian James Scott, the existence of these commons allowed former slaves to live "freely" after Emancipation. Meaning former slaves often had some kind of humble homestead, perhaps a mule, some chickens, and a small garden plot of their own. Extant common lands permitted these individuals and families to substantially supplement their own small-scale agricultural subsistence through hunting and foraging. In this kind of existence, one could live more-or-less autonomously, only occasionally having to perform menial wage labor for former masters, e.g. when one needed cash for kerosene or some other specialty item. Former slaves lived on like this for nearly two decades. It was only when white Southern elites began to implement "fencing laws"—thus enclosing what was formerly commonwealth and prohibiting access by commoners—that former slaves encountered a crisis of subsistence. Historically, it is at this juncture—once the common was enclosed—that African-Americans were forced into that abominable mode of economic dependence known as shared tenancy, or sharecropping.

Why close with this instance of historical enclosure? It is a stark reminder of how agricultural subsistence and small-scale production rely on the common. And I hold fast to this relation between localized agriculture and local commons—even if, as I have suggested, we must continually rethink and reform what we understand and value as commons and commoning. Enclosure is not only the fencing of common land. It is the enclosure of knowledge, (bio)diversity, mutuality, and care. It is, ultimately, the enclosure of the imagination, for it closes down our senses of the possible ways open to us to be human, together. Commoning—in relation to both our understanding of agricultural lifeways *and* the broader lifeways of a community—opens us to myriad other ways of being here, alongside one another, working in a common place. Of course, it was our friend Wendell Berry who years ago, in *The Unsettling of America*, brought our attention to the interrelations of agriculture, ecology, culture, and community. My remarks on commonality—in this context—have simply been another way of returning to Berry's central point, one he has never ceased making, and one worth regularly recollecting. In this spirit then, I'd like to leave us with the words of another poet, Taka'ski Yoshimoto—offered here as both aspiration and charm: "In order to protect our remaining land, / We gather together our minds, / Somewhere on Earth, a place that is not enclosed / Will help us to live more fully."

OMISHITO OF TWO MINDS

by Adam DeFranco

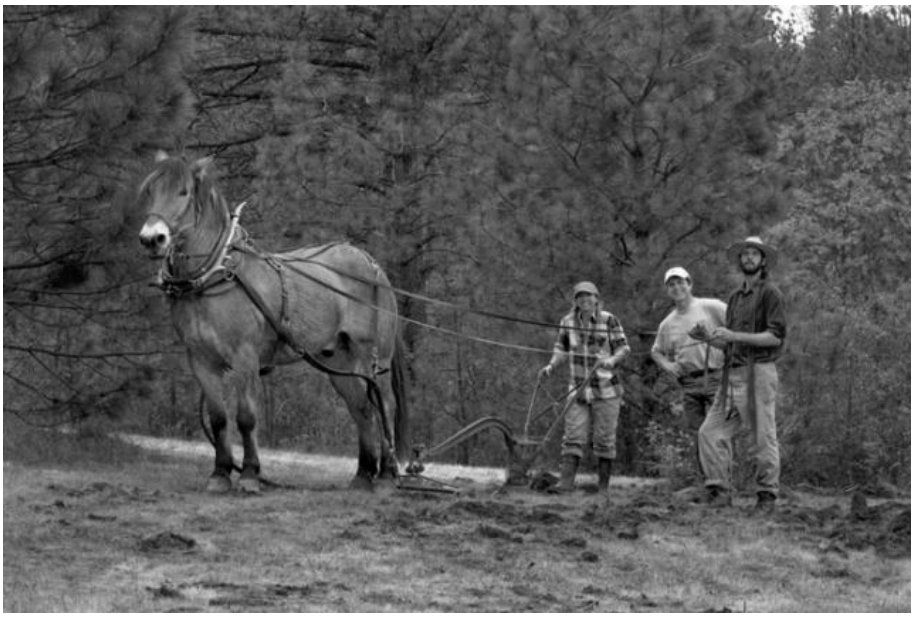
The earth is bleeding across her ancient brow and I love her
I have clawed the dirt open with my bare hands
and from the undercarriage of her breast
I have found a bone without flesh of a mastodon
it is hard to see what I have discovered
I am Omishito of two minds
one of earth the other of heaven
and I live in the far mountains of the north
in a stand of old growth forest
Here there are remnants of ancient seabeds
and above the blue cliffs of marble and stone
a garden of bristlecones
and there entering from an unknown territory are the flocks
who with their wonderful chaotic expansiveness
hastily hurry into the lusty cavern of the clouds
Now I wait in the northwest stands of hemlock and fir
and I am hungry with the free fall of delight
I can feel the grain of bark on my hands
the fragrant incense of cedar
and the ripple of the fold
Something takes place inside of me
beyond the close distance of my mind
and I am cradled into a crevasse of ever changing light
sunflowers and succulent pollen
This wounded earth is my healer
and I will nurse from the light frosted meadow of her breast
and I will lie on her bed of roots and dew
I am Omishito of Two Minds
I live in the far mountains of the north
surrounded by the fragrant incense of cedar
in a stand of old growth forest

BREAKING GROUND

by Amanda Thibodeau

Amanda has been involved doing hands on education with Sierra Harvest's Farm to School Program since 2011. Sierra Harvest is a non-profit organization dedicated to educating, inspiring, and connecting western Nevada County's families to fresh, local, seasonal foods. A graduate of the 2010 Living Lands Agrarian Network's internship program, Amanda used her passion, connections, and experience to start a demonstration farm site devoted to education called the Food Love Project.

Five years ago today, we broke ground with a horse. In eight short months, I had gone from living in the city, working in an office and idealizing an agrarian lifestyle- to being in a cold, wet, field wearing dirty, oversized work clothes, and wondering what the hell I had gotten myself into. The draft horse was huge. The men knew what they were doing. I decidedly did not.



As the plough drove through the ground, revealing waves of dark earth, there was no turning back. Grayson Coney of the Tsk Akim Maidu tribe paced the field, smoking and looking for tribal artifacts that could be unearthed in this process—shards of pottery, glass, square nails. An old home site, now a new farm site.

As I watched the soil appear from under the meadow, I silently prayed that my foolishness was really bravery in disguise, and that this whole idea of starting an educational farm would have some merit.

They asked me if I wanted to take a turn behind the plough. Excitedly, I said yes. The horse was so big, and the plough so heavy, I was running to keep up, and pushing the implement with all my might to bury it into the soil. They made it look easy, but I was exhausted after just one pass. My inexperience coupled with the fact that these implements were definitely not made with a 5'2" woman in mind, made for some wavy plough lines and sly smirks from the men. Luckily for me, they knew what they were doing and finished the job.

All the other farmers told me it was too late to get cover crop in (and it was). We planted a mixture of cereal rye and hairy vetch, none of which got very tall that first year. It didn't matter though—the only thing that matters in your first year of farming is just doing it. Just getting out there and seeing what happens. Asking questions and failing. A lot.

That year, with the help of many people who knew what they were doing, the farm gradually took on its own shape. First with a fence, then water. I vividly remember our first field trip. It was spring of 2011 and there was literally nothing on the farm but some sparse cover crop. Now we have a greenhouse, tipi, chickens, worms, and perennials; but back then, it was just a field of dirt. As the bus pulled up, I paced around wondering how I was going to sell this place as a farm. How could I call myself "Farmer Amanda" in good conscience? I felt like neither farmer nor educator, but that didn't matter. I had started an educational farm, so I'd better start acting like it.

So I asked myself—what would a farmer educator do? The answer was a mix of wild enthusiasm and

the concept of "fake it till you make it," which I will still stand by as an excellent combination. Add to this a willingness to look silly in front of groups of people, and you're winning.

Over 100 field trips later, I am definitely a farmer educator. Somewhere along the line, faking it gave way to being it. Thousands of students, hundreds of volunteer hours, 5 soup nights, 6 interns, a TEDx talk, and a non-profit merger later, here we are closing out another season at the Food Love Project. Shorter days bring the once new but now familiar rhythm of cover cropping, mulching, and turning off water. Of harvesting the sweetest collards of the year, and having hands that can't seem to get warm. The fall turning to winter is a nostalgic time. There's finally enough darkness to rest. How easily we forget about how we were ready to quit in parched, dusty heat of August.

Growing food in the foothills is not easy. Our soils are acidic and low in organic matter, our seasons brief, and the summer weather intense. And at the end of the day, farming isn't well paid work. When the bills are due, often the satisfaction of dirt under the nails and a pantry full of food just isn't enough. To teach students about this is a contrary thing—who would want to be a farmer under these conditions?

Instead, we teach the intentional and faithful magic of planting seeds, the deliciousness of an in season tomato, and the incredible life hidden in the soil beneath our feet. We build compost, look for insects, and taste new foods.

It would be amazing if these experiences inspired even just one child to become a farmer; but the premise is that by experiencing these cycles in a hands-on way at the farm, that each student understands the greater impact that our choices have on the environment we live in and the wider world. I don't care if you want to be a farmer, but I want to you care about farmers and understand the real work that goes into feeding all of us.

If you do a cost benefit analysis, it may not make sense to farm at all, but then again most farmers I know aren't farming because it makes a whole lot of sense. As these students we are teaching grow older, perhaps we can change that. If we instill this value and love of food into the next generation (despite what the headlines say) then maybe it won't be an idealistic vision to want to be a farmer. It's in our blood and DNA to work the soil, and we are starting to re-understand this.

In my house, there is a print by the kitchen sink that says, "There are things you do because the feel right. They may make no sense and they may make no money—but it may be the real reason we are here: to love each other and to eat each other's cooking and say it was good." For now, this is enough. Tomorrow is another story.

FELIX GILLET: THE FATHER OF PERENNIAL AGRICULTURE IN CALIFORNIA

by Amigo Bob Cantisano

For more information about the Felix Gillet Institute, visit http://felixgillet.org/ or email theFGI@gmail.com

Felix Gillet holds a unique place in the history of fruit and nut growing, having imported and bred thousands of varieties of plants that are commonly grown to this day. Gillet introduced varieties that helped create the almond, walnut, filbert, chestnut, cherry, apple, pear, fig, table raisin, wine grape, plum, prune, apricot, peach, rose, nectarine, and strawberry industries in California and the Pacific Northwest. Many of his original introductions are still thriving in foothill towns, mining camps, and homesteads throughout California. Many are also still the leaders of their industry, while others provided the genetics for further breeding that led to today's popular varieties.

Gillet was born in France in 1835 and came to the United States in 1852. He arrived in California in 1858 and settled in Nevada City in 1859. Initially working as a barber, he became a nurseryman and established his "Barren Hill" Nursery in Nevada City in 1866, one of the first fruit nurseries on the west

coast of the United States. He ran it until his death in 1908, at which point it was sold and renamed the Felix Gillet Nursery. It was operated until 1968, at which point it was thought to be the oldest continuously operating nursery in California.

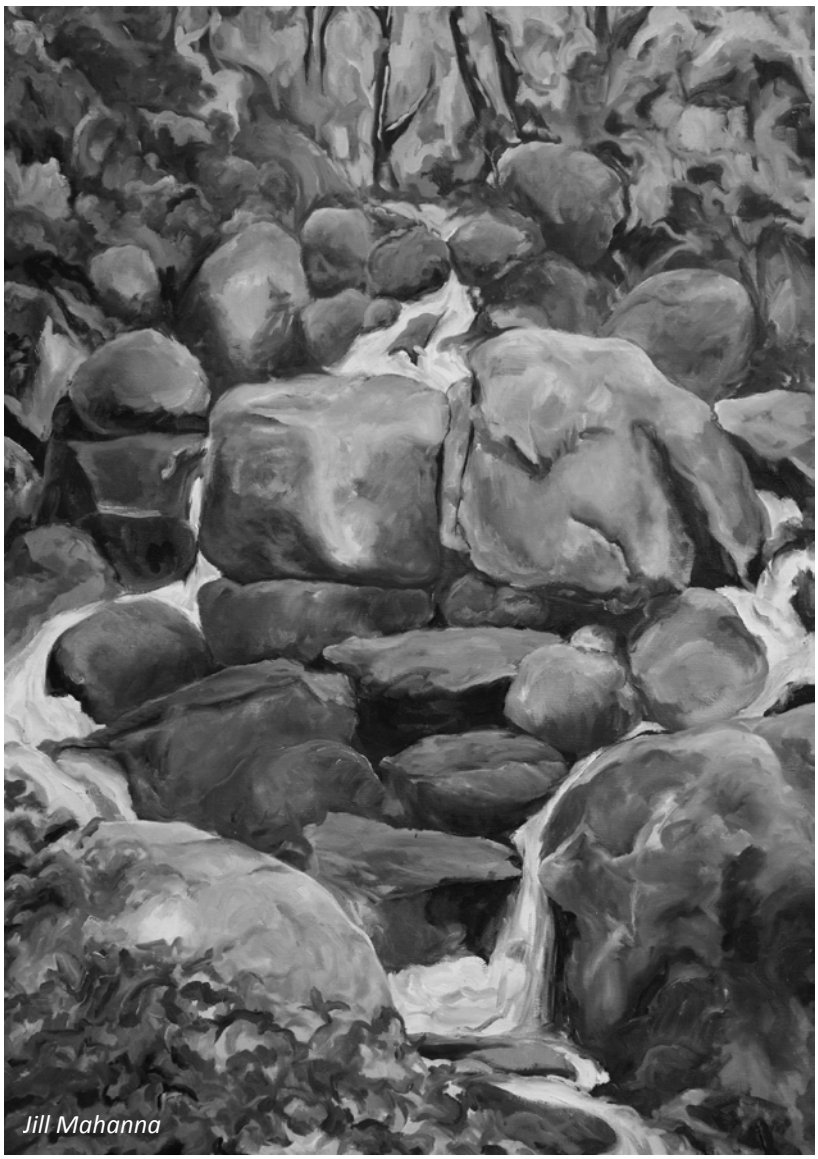
Although not well known today, during his lifetime of work he provided plant materials and knowledge to growers all over the world, wrote extensively for numerous agricultural publications, and was considered an authority on many crops. Gillet personally brought many perennials never before seen to California and was pivotal in the founding of the State's agricultural industry. His stock was primarily introduced from French sources, which he imported by the ton. He also imported and bred plants from Italy, England, Germany, Spain, Afghanistan, Persia, Korea, China, Japan, Portugal, and other countries.

Gillet is credited with providing the nursery stock that established the hazelnut, walnut, prune, and wine grape industries in the Pacific Northwest. He introduced hard-shelled walnuts from his native France to Northern California, where the softer shelled varieties proved too delicate for the colder winters, thus establishing the California and Oregon walnut industry. He grew Bonne Bouche strawberries that were 4 to 6 inches in diameter, which were later bred with the native California beach strawberry, thus creating the basis for the entire West Coast strawberry industry. Other important plant introductions to California and the Pacific Northwest from Gillet's work include the "French" prune, the "Bing" Cherry, the "Thompson" seedless grape, and Cabernet Sauvignon, Chardonnay, Syrah, Petite Syrah, Merlot, and many other wine grape varieties.

Sunny Kahl

The Felix Gillet Institute is a non-profit organization in the Yuba Watershed that was founded in 2003 by Amigo Bob Cantisano to identify, preserve, and propagate the best of the heirloom varieties still thriving in the mining camps, farms, homesteads, and towns of the Sierra Nevada and elsewhere. True permaculture plants, these 125+ year survivors show great resistance to harsh weather, drought, insect and disease attack, and often produce remarkable, extremely flavorful crops with little or no human assistance. The Felix Gillet Institute has collected propagation materials from hundreds of heirloom mother plants from more than 75 sites in four Sierra Nevada counties. These collections have been used to create a database that identifies flavor, productivity, source locations, and other varietal characteristics, such as resistance and susceptibility to fire blight, powdery mildew, codling moth, blister mites, scab, and drought. At the Felix Gillet Institute's organic fruit and nut tree nursery, many of these heirloom varieties are propagated for future generations of gardeners, farmers, nurseries researchers, and for use in breeding improved varieties.

Over 60 varieties are available for sale through the Felix Gillet Institute's website, which has an online catalog, technical writings, variety information, and historical notes. The Felix Gillet Institute also provides educational outreach to the community, offers grafting and plant propagation workshops for farmers, students, and the public, and holds public tastings of these amazing fruits and nuts.



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$35 Individuals
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