

Feeder Tree: An Album

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But nature is unlike art in terms of its product—
what we in general know it by. The difference is
that it is not only created, an external object with a
history, and so belonging to a past; but also
creating in the present, as we experience it.

--John Fowles (*The Tree*)

i. The Drilling

That my portable electric drill was shaped like a pistol did not reassure me as I stood there pointing it at the sugar maple tree. I had always imagined that for this step in the maple sugaring process, I would be using the old, manually-operated breast drill I had found in the basement. That ponderous drill had a crank on one side of its long cast-iron body and at the opposite end from the drill bit, an elongated disk curved to fit against the chest of the person turning the crank. That tool seemed appropriate to the gravity of the event—one end pointing toward the sap flowing through the tree, the other against the beating heart of the tapper. But it turned out that breast drills are designed for drilling iron and steel, not the delicate flesh of living trees.

So when it was time, I took the portable electric drill, tightened the 7/16 inch drill bit into it, placed myself directly in front of the south side of the tree, spread my feet for stability, and, about four feet from the ground, placed the tip of the bit against the bark of the sugar maple tree with the bird feeder on it—the Feeder Tree. I squeezed the trigger, and gently pushed against the tree. I had put a piece of tape on the drill bit two inches from the point so that I would stop at the proper depth. It went in quickly, and when I had reached the tape and pulled the bit back out, the spiraling grooves of the drill bit were packed with wet sawdust. With a jolt I felt what I had known: I was not drilling into the usual piece of lumber, but into a living thing. I took the metal spile--a narrow cone with an elongated lip on the top that made it look like a lily--slipped the hooked ring over rounded tip, stuck the spile into the tree with the lip at the bottom, placed the end of a short piece of 1 x 1 against the edge of the spile, and tapped it a few times with my hammer. It needed to be firmly seated because the hook on the spile holds up the bucket. I stepped back to admire my work and noticed the force of the spile entering the tree had formed a bead of sap around the spout. I did not bring a bucket with me and had to return to the basement for it.

When I do something for the first time, I often focus my worry on one step of a process, and that concern keeps me from seeing the process as a whole. Drilling the hole in the tree was going to change my relationship with it. I did not think of the next step, a step which then became so obvious that it is hard to recreate the state of mind that required me to say, “Oh, Yeah. I need a bucket.”

ii. Buckets and Filters and Spiles

The buckets, scrubbed and stacked in the basement, were old-fashioned, four-gallon, galvanized metal buckets with tented lids that slipped over the top. Most people doing small-scale maple sugaring today depend on plastic, which is clean and cheap. Cutting holes in plastic milk jugs and hanging them on the trees using a plastic or metal spile is popular. But that seemed to me like celebrating mass with a jelly glass rather than a gold chalice: it could be done, but the transformation about to take place seemed to cry out for consecrated accoutrements. The traditional buckets that looked like Scott and Helen Nearing used, pictured in their famous maple sugaring book from 1950, had the proper emotional patina.

In one respect, my preparation for maple sugaring had been long. Eight or nine years ago, when some friends sold their farm to move to Washington State, they gave us some furniture, a magnificent pile of partially rotted sheep manure, and some of their maple sugaring equipment because some day I was going to tap our trees. We got ten buckets, tops, spiles, and hooks; a boiling pan; and a stained-white felt filter. For all those years the metal equipment gathered dust and droppings in our barn, and the filter sat in a plastic bag on the shelf in the woodshed attached to the back of the house. From time to time I would imagine actually tapping the trees, but it always seemed like an activity that lay on the other side of some impassable gorge, as if the tasks involved needed to be performed in a different place entirely from where I normally lived.

But I was living in unique times because, for the first time in my working life, I had been given a sabbatical from my work responsibilities, and during the time for maple sugaring—February and March—I would be free to schedule my life around the trees. So in mid-February I began to gather and prepare equipment.

The buckets had been stacked in two piles so the concentrically ridged bottoms of the two top buckets were encrusted with insect corpses, cobwebs, bird droppings, and dirt. The literature warns against using soap on sugaring equipment because it does not all rinse off. Use bleach, they advise. Cleaning the buckets was a simple step, a beginning: “One foot up. One foot down. This is the way to London town.” I scrubbed buckets and lids with a scrub brush and rags and let them dry upside down on the grey countertop next to the basement sink. The lines of the buckets have a simple elegance—smooth sides angled slightly more from top to bottom than the usual galvanized steel bucket, no handle across the top, just a dime-shaped hole for the hook near the top edge. The lids are sheet-metal diamonds creased between two points with the other two points crinkled to catch the edge of the buckets. It felt good to clean them, though I could sense the din of London across the bridge in the distance. The boiling pan, a small one—22” x 18” x 5”—was the grimmest piece of all: the bottom was burned black and sooty and the inside was afflicted with patches of burned-on crud. The pan seemed to me to be the one essential piece of equipment because it could be balanced more easily over a fire than a rounded pan and it exposed more surface to the fire than any other pan we owned. Besides, if its condition indicated the level of suffering required of the boiling pan, we probably did not want to use any of our usual kitchenware, if we ever wanted to use it for anything else. I used steel wool and worked away until the combination of how bad it had looked to start with and how long I worked on it combined to convince me that it was clean enough.

When I had washed the boiling pan, I took the hooks, which included rings that slipped over the spiles, the spiles, and the drill bit I intended to use and boiled them in a small saucepan on the stove, the first of many acts of boiling. Since I was going to pound these things into the trees, this act of purification insured they would not infect the wounds.

We had kept the filter, a felt sack about a foot long and 10 inches wide along the mouth, in the house instead of in the barn to protect it. It had been in an old plastic bag in the storage shed attached to the kitchen, and whenever I was searching for something, it seemed to get in the way, a nagging reminder of an adventure not taken, but when I looked for it to do the sugaring, its job of reminding me completed, it had disappeared, undoubtedly as part of the home remodeling that involved clearing out the storage area. Thanks to the Internet, however, a new filter appeared on our front porch.

When I had imagined maple sugaring, often lying in bed at night, one of my biggest concerns was storing the sap before boiling. I felt that my holding tank would need to be at least a 55 gallon drum and where was I going to find a food-safe container that big? But as the time grew closer and I did more research, I discovered that the sap, like milk, goes bad as it gets old, and it should be boiled within 24 hours of taking it out of the tree. I planned to put out no more than ten buckets and if each had 2 gallons in it, I would only need to store 20 gallons at a time at most. I was able to get five-gallon lidded buckets from a local donut shop and what had seemed to be a major problem just evaporated.

I needed two more things: a thermometer and an electric hot plate for finishing up the syrup; I found both at a local hardware store. As my cache of supplies reached completion, I began to feel I could actually do this.

iii. The Stove

During the same time I was washing equipment, I was building a stove. My vision was a cross between an altar for burnt offerings and a barbecue pit. Cooking the sap over a wood fire

requires suspending the pan over the fire. The most basic approach suggested by the instructional pamphlets and flyers published by cooperative extensions in the northeast involve two rows of cinder blocks arranged to create a channel with the pan as its top. Air would pass through and feed the fire. One potential problem with this arrangement is that the smoke might roll up from the fire, slide across the surface of the sap and insinuate itself into the taste of the syrup. One potential solution is to close one end of the channel and send the smoke straight up a chimney. I had some stovepipe and planned to attach a chimney to my cinderblock structure.

On the 19th of February when I decided to begin building the stove, over a foot of snow lay on the ground so I had to dig a space for the stove, down to the grass. I had a good supply of blocks to use to make the stove, but they were downhill from the site. Just east of the barn is the foundation of what was once a milk house, where the cans of milk were stored awaiting pickup by the milk truck. I speculated that the dug well just above it may have been involved in keeping the milk cool. The dark brown, clay colored blocks—the shape and size of cinder blocks—from the long-gone building were stacked behind the barn when we first took possession of the farm and since then had been reincarnated as supports for a goose house, dividing walls for compost piles, and now they were to become a stove for boiling sugar maple sap into syrup. From keeping milk cold, to keeping sap hot. Ah, to what uses does fate put us.

For hauling heavy things, I had a small, black heavy-duty plastic sled. I had been surprised to learn that when horses and oxen were the motive power on farms, winter time was the preferred time for hauling extremely heavy loads: the frozen, snowy surface meant loads could be hauled on sledges and did not need to be held up by wheels and axels. Rather than plow the roads, they also would shovel snow into covered bridges so the horse-drawn sleds used for transportation could pass over them. I am putting off talking about the hauling just as I put off

the hauling itself. The snow piled up next to the driveway which stood between the blocks and the stove site was almost up to my waist. Three blocks at a time, I struggled up the hill. Tom falls for the third time. My original plan called for twelve blocks, the four-foot length of stove pipe, a heating register boot that put a square end on the round pipe, and some wire and stakes to hold the chimney up. As it turned out after four loads, when I had stacked all the blocks, I discovered that setting blocks on the lip of the register boot stabilized the chimney enough to eliminate the guy wires. I hunted up some flat rocks to line the fire area since snow was still mixed in the grass and the frozen ground below would melt, and all that moisture would make an inhospitable bed for the fire to lie in.

The project now had a monument, an outward sign of my inner resolve. The few folks driving by would see the makeshift stove in the backyard, and once the buckets hung from the trees along the road, there would be no mistake about what was happening. They would look in on my vision, and, if just for a moment, we would be looking at the trees and seeing the same thing.

iv. Waiting

The frozen drop of sap hanging from the spout lit up when I poked the flashlight beam into the dark cavity of the sap bucket hanging on the sugar maple. It was the evening of the day I had hung the test bucket on the Feeder Tree, February 22, and since we had been out all day, not returning until well after dark, I was anxious to check the bucket. Below the suspended drop, an inch to an inch and a half of liquid was skimming over with ice. Not much. Maple sugaring is all about temperature--of the world, of the sap, of the syrup. But it is the seasonal temperatures that make the first move. They must begin below freezing, rise above freezing, and then fall to below

freezing again, and that same pattern of cold death and bright resurrection and dark death must repeat itself to make the sap climb the tree. Eventually, temperatures stop falling below freezing, death loses its sting, and the sugaring season ends as the sugar maple buds burst and devote themselves to rebirth. The Feeder Tree would tell me when the sugaring season began, and though February 22, with a high of 36 degrees Fahrenheit (F) and a low of 13 degrees F, did cross the temperature threshold, the Feeder Tree was saying not yet.

The next morning, the liquid at the bottom of the bucket seemed frozen solid, but when I tipped the bucket, a tablespoon or so of liquid gathered at the angle between the side and the bottom. After taking the bucket inside to dump the liquid into a glass, I went back outside and began to slam the bucket down on the old bench next to the back door until the ice in the bottom of the bucket first began to craze and then burst in the middle and sprayed my face and glasses with droplets of sticky sap. I dumped the remaining liquid into the glass—about a third of a cup.

I drank of it and was surprised at its sweetness. I did not want to drink too much because maple sap contains trace amounts of niter. “Niter,” potassium nitrate, also called “saltpeter” is used in making gun powder, but more importantly is said to reduce sexual desire, especially in men. Some argue that its effect on sexual potency is an old wives’ tale, but of course, old wives would speak with special authority in that matter. Niter becomes concentrated in the boiling and is filtered out at the end so even lumberjacks can smother their pancakes in syrup. I poured the remaining sap into a margarine tub and put it in the freezer.

For the next three days, the temperature continued to go up into the mid thirties during the day and into the low teens at night so that each morning I found little sap in the bucket. One day, I simply pried the thin slab of ice off the bottom of the bucket and poured the few remaining drops in the ground. The other days, I’d pour the liquid into a glass and then add it to my

margarine tub after removing the ice. On the morning of February 27, the weather forecast for the next few days looked promising: 38F today, down to 10F tonight, up 45F tomorrow, then down to 18F, up to 50F the next day and then down to 25F. I would need to see what the tree had to say.

On February 28 the temperature broke 40 degrees and at 11:30 AM the Feeder tree was dripping at a rate of one drop every 5 seconds. The sap was on the move. As I set up to drill the next tree to the west, I did not have the same apprehensions as when I drilled the first one: I had my buckets and lids ready at hand. I had performed these rites before and was pleased that the vigil was over and that I could take action. When I had the spile in place and the bucket hung, that tree dripped at a drop a second. As I went along the row of sugar maples in front of the house, placing six more buckets, each tree responded in its own way. The three trees below the driveway were particularly productive, perhaps because the unobstructed sun warmed the bark more efficiently, the sap beginning to roll out the holes even before I could pound in the spiles. One tree produced light colored sawdust and gave nothing to begin with. That afternoon, after taking a walk, I checked the buckets and a few of them were a third full. My imagination raced ahead as I saw myself collecting perhaps five gallons of sap the next day; that would be 20 quarts, and since the ratio of sap to syrup was about 40 to 1, I might end up with a pint of syrup.

I began February 29 as I usually do, looking at *The New York Times*, but news of the violence in Haiti, the search for Osama bin Laden, and Martha Stewart's legal problems all seemed of little moment because none of them demanded my immediate action; for me the news I really needed to know was in buckets hanging on sugar maple trees. After breakfast I would collect the sap and begin. That day, if my father had been alive it would have been his eighty-fourth birthday. Actually it would have been only his 21st birthday, but that is not a measurement

of real time, only a trick of the calendar. On non-leap years we had to decide whether to celebrate his birthday on the twenty-eighth or the first, but since this was a leap year, there was no doubt: exactly on my father’s birthday I would start boiling my first batch of maple syrup, the first sign that winter’s grip was slipping.

v. Wood

Included in almost any picture of a sugaring operation is the huge pile of neatly stacked firewood, often covered with a roof to keep it dry and accessible. I did not have one of those. I have always been sloppy about firewood for the cast iron wood stove in our north parlor, and everything had worked out fine. I would keep a few logs in the small wood bin outside the back door and use them to start the fire. When it came time to add more, I would go out and knock the snow off of a few pieces in our uncovered wood heap, let them sit on the back porch until the snow melted, and then, one at a time, I would open the door and slide a piece of wood into the stove, which was normally so hot that the dampness would vaporize out of the log quickly and it would settle down to burn nicely.

I had intended to gather dead wood lying on the ground in the pine woods above our house in the fall so I would have plenty of fast burning wood for maple sugaring in the winter. But it is so easy to displace the future with large chunks of the present, and by the time I did get around to gathering wood, the ground was covered with a foot and a half of snow. I did slog up there hoping that perhaps the snow was not as deep in the woods. I was wrong. I would stumble across a large piece of wood, and when I cleared the snow away, the wood was either frozen to the ground or caked in ice.

During the previous year, a massive branch on one of the tall white pines in the back yard had been broken off by the wind and crashed to the ground. In the summer, I had cut it into long sections and dragged them over to the old, metal-wheeled farm wagon rusting and rotting at the west end of the barn. When I needed them they were covered with snow, but I cleaned the snow off of them, cut them into smaller pieces with the chainsaw, and split them into firewood. I discovered, however, as the wood thawed during the warming days, that it was wet. Perhaps it had not aged enough. Whatever the cause, when I added the pine wood to a small fire I had made out of kindling from the wood box, the fire would eventually smolder and die. New rules seemed to apply to fire building in the improvised backyard stove: without the tight firebox and controlled draft of the cast iron stove, wood had to be able to burn more on its own.

The boiling process was thus dominated by the search for wood. I would gather wood enough to get the fire going, set the pan on the fire, pour the sap in and begin to hunt for more wood. After I had used almost all the wood from the box, I began to pick through the dregs of the firewood piled on the bank above the stove. We had bought it five years before then for the north parlor wood stove, did not use it much, and most of it had become too rotted and punky to burn. I did find a few pieces that worked, and I kept picking through the pile on and off.

Some friends came over for supper one evening, and when they noticed I had to rush out between dinner and desert to find more firewood, they offered some old wood that had been sitting in the back of their garage. The next day I drove down and loaded as much into the back of the car as I felt I could without looking too greedy and desperate. The wood was very dry and burned quickly so that soon I was back scrounging.

We had just had our kitchen renovated and that involved oak floors and kiln dried hardwood scraps. I located the scrap pile in the barn and picked out all the pieces that were too

small to be used for any projects. This wood turned out to be spectacular: it burned long and hot, and gradually the definition of “pieces that were too small to be used for any projects” got longer so that I would be hard pressed today to find a piece of oak flooring in the barn. I tried mixing other wood with the oak to stretch it out, thinking it might inspire less inclined wood to burn, lowering my standards as I picked through the old wood pile yet again.

Buried under the snow, which by this time had melted some, was wood pruned from the third sugar maple tree. It had been piled next to the tree for three years and some of it was protected by the upper layers and was dry. I had not used it for maple sugaring because it was intended for warming the house during emergencies, when the power was out, but it too was rotting so I began to burn what of it would burn. As I watched sugar maple burn to boil maple sap, I thought of the Shel Silverstein book *The Giving Tree* we read to our children; it told the story of a boy who needed and a tree who gave until the boy’s needs destroyed the tree, and the tree was happy to do it because she loved the boy. I didn’t love the boy; I thought he was a jerk. Burning sugar maple wood to make maple syrup ought to seem wonderfully efficient, but it seemed more like cannibalism.

Finally, toward the end, some of the pine logs that I had split, stacked, and covered at the beginning of the boiling dried out and began to burn. Some of the split logs were crusted with dried white pine pitch. When I threw one of these into the fire, it flamed out and burned hot and beautiful. After that I saved the pitch logs for the times when I needed a thermal and psychological boost.

In the fall, I could have gathered wood, built one of those woodpiles that speak so well of the foresight of their makers, and been able to boil sap in the winter with serene dignity. Instead I was always just getting by and periodically feeling sorry for myself. Early one afternoon, I was

cooking sap, having gathered enough wood so I could sit down for a few minutes, when I heard a pecking noise above me in one of the maples. It did not take long for me to spot the white breasted nuthatch working the bark of the tree, moving effortlessly down the branches and trunk. Nuthatches are wonderfully compact little birds, mostly white and gray with a black cap and a long sharp beak. When they turn upside down on the side of the tree and look out at the world the head and body blend and the whole bird seems to flow into the tip of that beak. From time to time he gave off his “yenk” call as he hacked at the tree. As I watched him, another nut hatch, a smaller, red-breasted nuthatch, appeared working over the same tree, pecking the crevices and giving his “ink” call. They “yenked” and “inked,” whether at each other or me I don’t know, but they never stopped picking and pecking while they did it. Nuthatches do store seeds and bugs in the winter, though most often they store one at a time in the crevices of tree bark so that for those of us watching, hunting for food and recovering stored food look the same. I decided these two were hunting for food, trying to find enough nourishment to get by. We were kindred spirits, and I enjoyed their company as I heaved myself up out of my chair to search for more wood.

vi. Boiling

When I collected the sap during the day and before boiling, it sat overnight in the white, five-gallon buckets, if the temperature had dropped into the teens, water in the sap would freeze so that liquid sap would become encased inside an ice cylinder. What remained liquid inside the cylinder had a slightly higher sugar content than the original solution so that by carefully punching a hole in the top and pouring off the liquid early in the morning before the air warmed up, I shortened the boiling time just a bit. After the sap was dumped into the boiling pan and cooking on the fire, I would enjoy upending the bucket and shaking it until the ice lining slid out and stood like a small monument. On a good day, I could have three or four of them distributed

about the yard to melt during the day. Back and forth, cold and heat, freeze and melt, ice and fire both concentrating the sap, the sap stretched between ice and fire.

One moment of one night of boiling sap stands out most clearly. I am sitting in the back yard on my blue and yellow folding chair; it’s small and handy, but designed for a child so that it is like an assisted squat to sit in it. The temperature of the atmosphere has been dropping as the short March day cycles down toward night. Later as it approaches midnight the temperature will drop to 15 degrees Fahrenheit.

I am bent forward, my arms folded on my stomach and pressed against my side. In my old winter coat, whose lining has become compressed with age so that some of the cold leaks through the back, I am facing the opening in the improvised cinderblock stove as the fire glows and flickers beneath the square boiling pan. The sap is not boiling, but the steam is rolling off the surface of the sap and feathering into the air. The cooking sap has a distinct smell, as if the steamy air around the pan is still connected to the pan and the air is simply thinned sap reaching out like the crown of the maple itself. The tree is turning inside out and the cooking down of the sap intensifies the secret smell below the maple’s skin until it is syrup.

But now is the transition time. The smell of the cooking sap is not the same as the smell of the syrup and those who later pour the syrup on their pancakes will not be privy to the experience I am having sitting by the fire. Cold and tired, knowing there are hours to go before this batch is done, warmed in front by the fire and chilled in the back, reeking of wood smoke, smelling the sweet steam, I am intensely present in that moment. I am no place else. The trees and I are collaborating; we are approaching the moment of transubstantiation.

As the night cold settled in with graceful ease, casually raising ice crystals in the damp firewood and drawing heat out of everything, including me, the distance between the top edge of the pan and the steaming surface of the sap lengthened as the sap cooked and shortened as I added more sap. Once I had poured all the sap into the square pan and it had cooked enough to fit comfortably in the 8 quart soup pan, I could move the boiling inside onto the stove. But moving into the kitchen signaled a radical change in the process. From open outside to closed inside, from subtle darkness to sharp light, from self-conscious cold to unconscious warmth, from ashes, smoke, and dirt to clean surfaces and polished oak floors, from approximately to exactly, from art to science. There were also practical issues: the longer the boiling took place outside, the more moisture went off into the air instead of into the house to fog the windows and coat the walls, and the less of a problem spills and boil-overs would be. But eventually, with the siren song of the warm kitchen ringing in my ears--the kitchen where I could just turn the handle on the gas stove and fire flames up like shining from shook foil--I would give in, decide the sap would fit, get the two-handed soup pot at the door where it stands ready, and pour the sap out one tipped corner of the pan into the pot, and brace myself for the next step.

Don't get me wrong; I like science. One of my favorite programs as a kid was “Watch Mr. Wizard,” the science program from the 50's during which avuncular Mr. Wizard, in his white shirt and black tie, and a young assistant would do all these amazing experiments in his half laboratory half kitchen. That was just the kind of science I was setting out to do. Once the soup pot full of boiled-down sap--what had started out earlier in the day as eight or ten gallons--was on the stove, the goal was to get the contents of the pot to boil at seven degrees above the boiling point of water. That would mean the percentage of sugar in the solution would have reached the right concentration for it to be syrup. Less than that and the syrup would be watery

and would not keep well; more than that and the syrup would eventually crystallize on the inside of the container like miniature blocks of concrete.

But the boiling point of water in a kitchen depends on where the kitchen is. At sea level, water boils at 220 degrees Fahrenheit. I put the candy thermometer I had bought at the hardware store in a pan of boiling tap water and watched the thin red line of oil rise to 220. Even though we lived on a hill in what is called "The Endless Mountain Region" of Pennsylvania, I concluded that apparently this landscape did not raise us up enough to change the calculation so sap would be syrup at 220 plus 7 degrees. I put the thermometer in the sap and cranked up the fire and began what would become a regular activity, part science and part ritual, for the next few weeks: watching the temperature at which the sap boiled.

And I had to be attentive. Because the sap is not pure water, it could boil over in a fit of caloric enthusiasm. Even when the sap was cooking outside in the big pan, I would entertain myself by using our brown plastic slotted spoon to skim the persistent and gummy foam that gathered on the surface of the cooking sap, impurities that were collecting at the surface. I continued to do that inside, but with the steady heat of the stove I needed to be careful that the liquid would not get superheated and create the eruption of foam that happens when potatoes and pasta boil over. The foam in this case would almost instantly harden to a sugary encrustation not on blocks and frozen ground, but on our kitchen stove. I fiddled with the heat frequently: while the boiling point was rising, the bulk of the syrup was shrinking. That the stove was new added to the excitement.

I had happened on another thermometer—a candy/deep-fry one-- in the silverware drawer one morning, a spring kind with a red needle and a circular dial. It looked easier to read than the other one so I put them both in the sap when I boiled the next time. I am a fan of the old

proverb, “A man with one watch knows what time it is; a man with two watches is never sure.”

The Internet, of course, has rendered that saw obsolete since no matter how many watches a man has, he can always check with National Institutes of Standards and Technology and get the Official United States Time. I put both thermometers in the sap and, sure enough, my tube thermometer showed the sap boiling at 215 degrees and the dial thermometer was just shy of 210 degrees. Now, I could have accepted this discrepancy and based decisions on the relative value of either one, but if a thermometer was absolutely wrong, it could also be relatively wrong. So I went to the Internet and found a site that calculated the boiling point of water. In order to do the calculation, I needed to know the barometric pressure. I referenced the National Weather Service web site and found the current barometric pressure for Wellsboro—30.9 inches of mercury. Then I needed to know the exact elevation of our house. Using a topographical map from the U. S. Department of the Interior, the 7.5 minute series, which shows our house and barn as tiny squares, I traced along the brown lines on the map, lines which are 20 feet apart in the real world, and determined we were at 1560 feet above sea level. I plugged the numbers into the equation and found that water boiled at my house at 209.1275 degrees Fahrenheit. Since this result meant the dial thermometer was quite close to being exactly correct, it was retained and the other retired.

Despite all my efforts at exactness, however, throughout the month of cooking sap, I never did become sure of when the syrup was finished. One way to test it is to dip a spoon in the solution and see if, when you slowly pour the liquid out of the spoon, it forms a sheet that resolves itself into two streams of syrup. That never actually happened, though I got close once and then the thermometer read well above the seven degrees above the boiling point of water,

suggesting my sugar content was too high. That time after the syrup cooled, we ended up with some maple candy. It was safest to depend on the thermometer rather than the spoon.

So when the thermometer would read 216 degrees, after making sure, once again, that my angle of vision was correct, that the thermometer was not touching the side or bottom of the pot, and that, even if it did not sheet, the mixture has some viscosity, I would decide it was time for the next step. That even this most precise part of the process deteriorated ultimately into guesswork has limited how much I can swagger when I recount my deeds.

Filtering—getting rid of the niter and other impurities—was more than a perfunctory act. By the end of the cooking the liquid in the pot seemed to have become syrup, but when I poured it into the fuzzy, white cloth bag and the small stream grew out of the saturated, rounded bottom of the filter, it was clear that the syrup in the pot was full of impurities. The golden filtered liquid had a clarity that made me say, “Oh!” out loud alone in the kitchen in the middle of the night, and some of that sense of wonder persisted each time. It had become syrup. Inside the filter bag, as the boiled sap line sank like a draining bathtub, it left behind a foamy dirt ring.

When the sap was poured from bucket to boiling pan it looked and acted like water. When it was poured from the boiling pan to the pot it looked and sounded like apple cider. But when I picked up the filter and looked at the liquid flowing into the pan, it was like silk, a whole that changed shape softly in the pouring, folding back and forth on itself as it spread to the edges of the pot. If I spilled syrup on the dark granite work surface, it beaded up like jewels, and the smell was like the archetypal smell of a holiday, but its power was not in any holiday associations but in the smell itself.

By the time the season finished I had made a gallon and a half of maple syrup, and accidentally, some maple sugar.

viii. Food

The syrup I made was excellent. I’m not bragging: it is simply the case. After the sugaring season ended, I discovered that when syrup is cooked slowly, as my poor wood forced me to, it is usually quite good because the sap is never scalded. For years we have bought and used real maple syrup, some darker some lighter. Even the darkest batch I made was still lighter than any of the syrup we have bought. Almost two years after I made the syrup we were still using it, habituated to its glowing amber color and delicate taste.

But for me the taste of that syrup is secondary. Primary is the feeling—and still it comes like the faint smell of the sap in the early steam—that I am eating the landscape. We grow and eat our own vegetables, but it is not the same thing. We plant them to eat them, and at the end of the growing season they are gone. The fruit trees, the apples and peaches and cherries, want us to eat the fruits, making them showy and obvious; that’s what they are for, so we will spread their genetic material around. But the sap of the maple is secret, hidden in trees much older than we are and accessible through ceremonies older than our civilization. Sugar maples are a New World Tree, and the Indian Peoples taught the Europeans how to make maple sugar. The story is that Indians learned maple sugaring from the red squirrels who wound the tree, let a drop of sap form, and come back to eat it when evaporation has sweetened it.

The slow time of the tree's xylem and phloem, intensified in the syrup, moves through my arteries and veins, in hectic people time, in days not seasons. I feed myself with the intense syrup, in which I have stored the energy of the fire. And this place has become part of me and I am made of it. The trees and I, we are sap brothers. When there was only one jar of syrup left in

the freezer, one from the first batch I boiled, I was tempted to save it, like a souvenir of a trip to the beach. But there was no point in saving it: the eating was the commemoration, and when it was gone, its absence was a more powerful reminder than a small amount hidden away in the artificial winter of our freezer.