"It sounds like five peaceful Saturday afternoons to me." *This was my friend Ted's response when I lamented that working the big timbers in the meadow was going to be a lot of work. He was right. There were few aspects of this big project more peaceful or pleasing than the days spent here with sharp tools and fresh wood. Dawn on a May morning in 2002 finds me cutting a mortise for one of the common joists on the treehouse platform. By early June, the timbers were labeled and the platform was dismantled and taken in pieces to the tree—awaiting the ingenuity and strength of friends.*

PART TWO

In which we hang a foundation in the sky

"Work consists of whatever a body is *obliged* to do and...Play consists of whatever a body is not obliged to do."

Mark Twain, *The Adventures of Tom Sawyer*

Day 2, February 16, 2002

The day after we cut the AOS, I drove my battered old Nissan from Dad's back to Maine in a sleet storm. The combination of bad wipers, bad visibility, and bad roads isolated me from the rest of the world in a gray cocoon and my mind wandered ahead a couple of hundred miles to a certain pine tree in the woods behind our house. "What have I got myself into?" I asked aloud, shaking my head. As I slithered my way north on white grease, the bones of a great treehouse clanked against each other in the trunk. "Now what?" they barked every time I hit a bump. I had no idea.

It became clear rather quickly that this was no cheap three-weekend deal. It would take thousands of dollars and probably a hundred weekends. When I got back to Maine, we were in the pit of winter and it would be at least eight weeks before any outside work could be done. I had to be content with taming my whirling brain by breaking this giant thing down into manageable bites and creating reasonable goals. Since I'd made the major decisions already—the treehouse would be a hexagonal timber frame structure supported by trusses and hung from cables—I was free to focus on the process and timetable. It seemed that a reasonable goal for 2002 would be to build the trusses and platform, hang them in the tree, connect them, add the joists, and get everything plumb, level, and secure. The next year I would lay down the decking, frame the building, put the siding on, install the windows and trim, build the decks and stairs, and paint everything. Two short years (short because of the truncated building season here in the frigid north, not to mention a full-time job and limited financial resources). In the end, I managed to cram two hectic years into three.

Day 29, March 16, 2002

It's very cold, raw, and blustery. We should be tapping the maple trees by now, but it looks like the pancakes will have to wait. After lunch, I made a cup of tea and sat down in the big chair in the dining room. I was staring up at the joists and wide floorboards when Miah walked in and asked me what I was doing.

"Thinking."

"About the treehouse?"

"Yup."

The conversation deteriorated from there as I tried to explain to him how many pieces of hardware I would need to suspend the AOS collar. He just didn't get it. I told him that I was going to use three of most things: cables, turnbuckles, and quick-links, plus six eyebolts. He started to talk faster than he could think. "Wait, wait, wait, don't you need six of everything?" he said. I sarcastically explained that since there are six attachment points (one on each corner of the hexagon) and they're connected in pairs, I would only need three of most things. "Hey! Hey!" he busted in. "Each piece of cable has two ends, right?"

My son was born an engineer. We could see his bent toward all things mechanical by the time he was seven. At that age, most kids are thrilled to get a big, yellow, toy bulldozer with a little motor that makes "Grrrrr" sounds, but not Miah. One day he came into the house from the construction site out at the sandbox. "Hey!" he said, holding the truck upside down so we could see its injection-molded guts. "The hydraulic system is fake."

Miah is always building something, and it's usually dangerous. I came home from work one day when he was eight to find him walking across a plank suspended fifteen feet in the air between his bedroom window and the roof of the garage. He had secured it with a piece of clothesline tied in an invented knot around a doorknob. His vast resume includes: deep holes in the yard (always in danger of collapse), go-carts (without brakes), an armored tank (although not armored enough; he came in one day with a bloody nose: "I can't believe that kid could throw a rock through that little slot in the rebar"), diving bells (one that was big enough for both of us—yeah, right), zip lines, and towers (especially towers).

Miah has always considered my treehouse rather tame—it's not big enough, tall enough, or complex enough. As if to prove to me the outer limits of the possible, he started his own hare-brained scheme during the first summer that I worked on the treehouse. Miah built a 24 foot, 150 pound tower, reinforced with pipe, and with a tiny platform on top, and hauled it (with my assistance of course) up the treehouse tree. He lashed it in place so that it stuck up five feet higher than the very tip of the tree. Then he climbed up onto it (tied to climbing ropes for safety) and did a handstand on the platform—110 feet above the yawning void. To get down, he rode a 200 foot zip line onto the lawn at about 30 miles per hour.

When he sleeps, Miah dreams of hydraulic pressure, worm gears, cavitation, and neutral buoyancy. He constantly asks me questions I can't answer: "Dad, at Mach 6, which gets hotter from friction with the atmosphere, steel or titanium?" I think of my son as a bit nerdy; he finds me to be hopelessly sentimental. "What the heck are you doing?" he yelled to me one damp spring day when he looked out a window and saw me lying in the meadow with my ear to the ground. I came in all wet and smiling. "I can hear water welling up between the blades of thatch and it sounds like tiny castanets," I said. He looked at me rather disgustedly, the way Spock often looked at Captain Kirk. "I can see how that might be pleasing to you," he said. Miah isn't unemotional or unappreciative of nature—he just prefers stainless steel to wet grass.

Despite our differences, my son and I have many things in common and we are best friends. We argue constantly, but it's just for sport, and he usually wins because he's smarter. Jeremiah is now halfway through his undergraduate degree in marine

engineering and naval architecture. He plans to design submarines. I have no doubt that he will. I want to be just like him when I grow up.

Well, Miah and I went back and forth about this suspended collar business for a long time. He kept correcting my math and I kept insisting that everything was strong enough and he should see the simple beauty of the thing. Sentences would begin boldly and then trickle off leaving us scratching our heads. At some point, one of us used the word "sledgehammer." Finally, Miah stopped the sparring with a bit of wisdom that would become the rallying cry for the entire project: "Look, we're just too stupid to understand the physics so we might as well over-build the thing. Let's just make it as strong as we would if we knew what we were doing."

Day 42, March 29, 2002

In his classic book on fly fishing, *Trout Bum*, John Gierach talks of the coming magic of spring: "Still, it's the long downslope of winter now.... The visions that were memories this morning have turned around to address the future as schemes." I spent this morning double-checking my materials list; this afternoon I called a local sawmill and talked to them about my timber scheme.

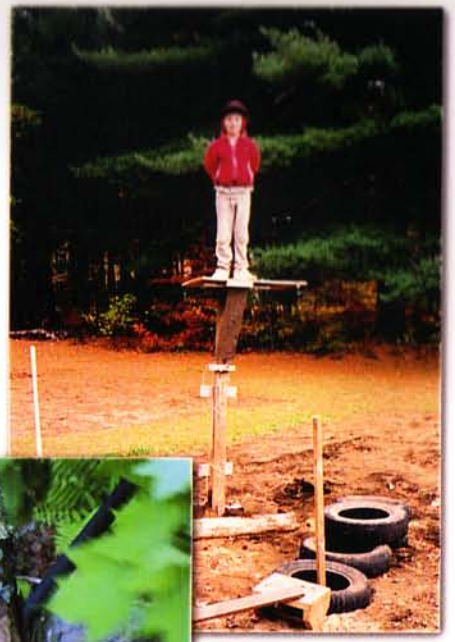
Day 43, March 30, 2002

A hard rain drumming on the roof woke me up this morning and I got up in the dark and went to rouse Amanda—I had a 6:30 appointment at the mill and she wanted to go along for the adventure.

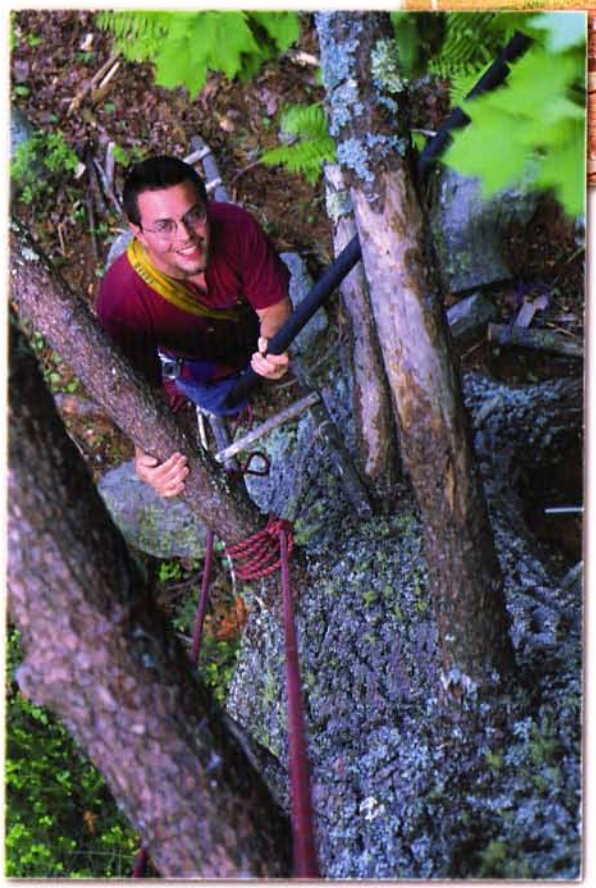
The long driveway into Red Mill was muddy and rutted by the passing of logging trucks. Several metal-roofed buildings sat clustered at the end of the road and piles of logs and lumber were everywhere. When we stepped out of the car, the air was heavy with the scent of peeled bark, sap, and sawdust. The yard was still and quiet; the big machines hadn't started up yet. Mandy and I sloshed over to the office where a light was glowing in a window. A bunch of guys in wool shirts and baseball caps were standing around drinking coffee from paper cups. On the wall above the counter was a photo of the mill taken from the air during the summer when there was no mud.

I asked for Kermit, the guy that my friend Mark Cross had suggested I talk to, and a strikingly handsome man in his 30s walked over and stuck out his hand. I spread my schematics out on the counter and started describing the project. In a moment, every guy in the place was crowded around us, looking, pointing, and generally buzzing with excitement. Amanda grabbed my pant pocket and shuffled in close—standing belt-buckle high to a cluster of grubby strangers made her a little nervous.

Kermit was very enthusiastic about the project and took great interest in the design. He thought all my timber dimensions, while not standard, were fine. "If anything, it's over-built," he said (unknowingly using our rallying cry). He tallied up



Our son Jeremiah, engineer, philosopher, and fellow dreamer, proudly shows off one of his earliest freestanding towers.



Just months before he leaves for college, Miah hauls pipe up the treehouse tree to reinforce his greatest aerial feat—a 24 foot tower that extended far above the top of the tree, and upon which he often did handstands.

Amanda and I amidst a crush of strangers during our trip to the mill.

everything on a tiny calculator and scratched a figure on a piece of scrap paper. "Let's do it," I said, getting out my checkbook. "I guess I should tell my wife about this," I mumbled as I wrote out the check. Kermit stopped filling out the purchase order, dropped his pencil, straightened up, and just stared at me. "You mean to tell me she doesn't know what you're doing?" he said, raising his eyebrows, and then everyone just busted up laughing. I gave him directions and described the house: "It's a white cape with a big barn across the street and chickens running all over the place. Feel free to run over the rooster." A guy over in the corner—probably the delivery driver—giggled wickedly.

Day 50, April 5, 2002

For the last few weeks, I have been working out the final design for the mortise and tenon joints for the trusses and platform timbers. The weather is breaking and there are fine days ahead. Returning from the hardware store this morning I was just in time to see the boom-truck from the mill pull away from in front of the barn. In its dusty wake sat a huge load of timbers. After lunch, I snapped the taut steel bands holding the pile together with the claw of a hammer, and Miah and I started sorting. The timbers were big and wet and very heavy—each of the horizontal truss timbers weighed 135 pounds. Two pages of scribbling in my journal to calculate the wet weight of hemlock per cubic foot revealed that the entire load weighs 3,918 pounds. The number frightened me. Fortunately, the weight would be cut nearly in half when the timbers dried. In the evening, we lugged the timbers to a flat spot out behind the barn and piled them by size near where I will build the trusses and platform.

Before we committed to putting the steel collar back up in the tree, I built a "faux collar" out of thin wood held together with wingnuts. It was very light (five pounds compared to the AOS collar's 50 pounds), easy to maneuver, and could be held in place with strings. Using this, we could make decisions about the final height and orientation of the AOS collar and take measurements for the cables and blocking. I put the faux collar up at dawn one morning. It was a beautiful, warm, glowing morning with a slight breeze and birds everywhere—magical. The earth smelled new and I could sense life stirring in the ground. The collar fit perfectly.

During this prep-time, while we waited for T-shirt weather, Miah and I also hauled up and fixed in place a boom made from a tree trunk 30 feet long and six inches in diameter. Using ropes, we created a 3:1 haul system and after much grunting soon had the big boom positioned in the crotch of the tree 37 feet above the ground. We fastened cable to each end and ran it up to an anchor point higher in the tree to hold it in a horizontal position. Later we would tie climbing ropes to each end and tie them tightly to trees on the ground. This would stabilize the boom and allow us to haul big loads from it—even from out near the ends.

Day 58, April 13, 2002

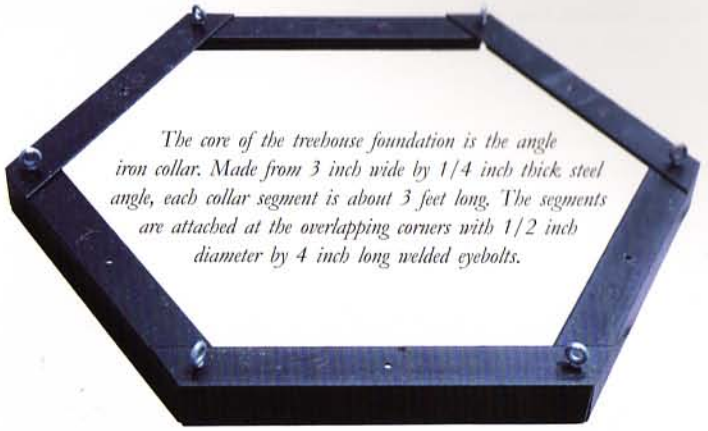
By the middle of April, the weather softened enough for the real grunt work to begin. On the 13th Miah and I lugged the AOS collar and the six main horizontal beams out into the field next to the barn. We placed each horizontal timber on its collar segment and used wooden blocking to make everything approximately level. After aligning the timbers square to the steel, I carefully measured each one, squared the ends, and began drilling the holes for the bolts that would fasten each timber to the collar. It was a classic spring day, "...raining lightly, warm, quiet, and the air smelled sweetly of new grass and freshly cut wood."

I spent the remainder of this day, and much of the next day, baffled by the problem of how to attach the ends of the rim joists to the horizontal truss timbers. It's a three-way joint and I wanted it to be as strong as possible, but the best way to notch and fit the timbers together eluded me. I wrote in my journal, "Here I was, looking at the actual timbers, and I just couldn't see it. I crouched, peered, nudged, stared some more, but just couldn't figure it out. I felt like an idiot." Finally, with just a theory between my ears, I took action. "I've finally had it. I had to go out and cut something—even if it turns out to be wrong." I drew the lines out on the wood, laid the teeth of the big crosscut saw on the hemlock, and started pulling. It worked perfectly.

As I was working, Miah came out to see what I was doing. He saw that I had placed all the exterior rim joists in position, forming the outer ring of the hexagon, but something bothered him. I had left about a foot of the horizontal truss timber sticking out past the exterior rim joists. "Jeez, why don't you make it bigger?" he said. "Look at all that room you have. If I were building something this cool I would make it as big as I could." I mumbled something about balance and diagonal bracing and needing to leave enough wood for sheer strength. "Yeah, but you don't need *that* much room," he said, turning to leave. When I was sure he was out of sight, I kicked each joist out another six inches with my boot.

Day 66, April 20, 2002

Ted came over today to help me build the first of the trusses. Ted is one of my business partners and my mentor for odd building projects. He's a bit of a Renaissance Man who can discuss the street plan for Venice while carving a dragon from a piece of firewood with a knife he made himself. He thinks in every dimension, spins objects in his mind like a man juggling cats, recently restored a 37-foot wooden sloop, can draw or paint anything, and lives in a cottage in the woods with a wolf. Over the coming weeks, Ted and I would finish building the platform and all the trusses in the meadow in the lee of the barn. Later we would cart the pieces over to the tree, then haul them up and put them back together again. Ted and I worked all day in the meadow under the watchful eye of a flicker who drummed intermittently on the metal ridge of the barn roof. We labeled all the timbers with a lumber crayon and



The core of the treehouse foundation is the angle iron collar. Made from 3 inch wide by 1/4 inch thick steel angle, each collar segment is about 3 feet long. The segments are attached at the overlapping corners with 1/2 inch diameter by 4 inch long welded eyebolts.

After months of planning, the anxious moment came when we hung the faux collar and Jeremiah measured the distance between each section of the collar and the trunk of the tree—we were within one-eighth of an inch.

Sharp tools, new wood, and the company of spring birds, made the process of turning tree into treehouse most pleasant. Joints like these make a very nice "Thunk!"

Ted works a slick, a very large, long-handled chisel, along the face of a mortise on the first truss. Relying on its mass, a slick is used alone, not struck with a mallet. I was nearby, cutting out the squiggly parts.

Never throw a chisel.

These entries were found several days apart in my journal. There must be a story in there somewhere.

Never catch a chisel.