

Plumbing in the Empty Quarter*

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I often sat on a bed in an upstairs room of our house and looked west across the fields to the edge of a great forest. The end of potato-land was about a mile beyond Route 11, the highway that parallels the Fish River. Beyond the last field, dark green hills and valleys rose to the skyline. At dusk they turned almost black, and at night I could distinguish them from the sky only because the sky had stars.

Sportsmen came into these woods: the occasional fisherman, clots of hunters, innocent canoeists on the Allagash. The fishermen were mostly locals, the hunters were dressed in Day-Glo, and the canoeists stepped from an L.L. Bean catalog. It made no difference to the Empty Quarter. It swallowed them all.

Western Aroostook and the northern parts of adjoining Piscataquis and Somerset counties: those are the limits of a forest in which there is no permanent settlement of any kind, no one to step out on a front porch and say "this is mine." There are no local governments in these townships, colloquially and misleadingly called "towns." There are no public highways, no schools, no power lines. Legally, it's unorganized territory: a grid of towns known only by number.

The Maine state government keeps its distance. I think of the community of Allagash, where the Allagash River joins the St. John some 30 miles upstream from Fort Kent. The local state trooper in Fort Kent--everyone called him Ross, without affection--had been told by the people of Allagash to stay out. He did, too. I never saw his powder-blue car inside the Allagash line, and I had frequent business up there. It was not a case of mean people or outlaws: it was a case of an isolated Scotch-Irish community that was willing to tolerate passersby at this edge of the forest but would not put up with an outsider who claimed to tell them what they could and couldn't do.

In winter, especially when the wind had been coming at us for days, I would look out my window and think of the carpet-edged Canadian boundary, eight townships away and straight as a ruler. It was forested on the American side, cleared on the Canadian. Sometimes I forgot about the incredibly rocky dairy farms that lay beyond that line. I imagined the woods extending to the St. Lawrence, jumping the water, and continuing to Hudson's Bay and the tundra. No matter how clear the sky was, on days like these you could almost see the wind coming at you.

Such fantasies melted when each spring I drove out into the woods and climbed one of the occasional hills of granite that rise above the shale--the "ledge," as the Acadians call it. I would peer south in a futile search for Katahdin. From the craggy top of Deboullie Mountain--its name comes from the blocks of granite that glaciers have strewn on its south side--I looked south over a mildly rolling plateau, punctuated by other occasional hills but mostly corrugated, with boulder-floored brooks that ran like trellised vines into the Allagash. The wet rocks in the brooks were slippery with algae, but the water was pleasantly warm by June. Like the Fish River, it was the puzzling color of tea, an infusion of forest leaves.

Deboullie was too dry for anything but northern hardwoods like maples and beech, but at the base of the hill the soil grew wetter. Here the Empty Quarter was dark with conifers, Scandinavian-somber. Still, the conifers rarely managed to exclude their hardwood competitors completely, and so it was that looking toward the horizon I saw the dark woods first, then the scattered and brighter bits of hardwood, as though I was turning instinctively to light.

A century ago there were white pines scattered on the sandier parts of the Empty Quarter; they were the wallflowers of the pine forest farther south and, like the trees there, they were eventually cut. Their departure left spruce as the giant of the Empty Quarter and balsam fir as the junior partner. Heavy logging after World War II then removed much of the spruce. Balsam fir, a much faster-growing tree, became increasingly dominant. Foresters like nothing better than forest inventories, and so we know that in 1900 the ratio of spruce to fir in Maine was six to one. Nowadays the ratio is one to one. Goodbye, spruce. Among the people I knew in Maine it was a bitter commonplace that the Maine woods of the future would be a small-log forest, for balsam fir tops out at 70 feet, with a base diameter of less than 16 inches.

Not only was it a small-log forest: it was a small-log forest with butchered openings. I remember an Air Force captain seeing his first clearcut. The land, he said, looked like ground-zero. Strictly, I suppose, he was wrong, since the ground was not incinerated to ash. Yet a clearcut does resemble incarnate chaos. It's a reduction of a forest to stumps, lops, tops, and piles of upturned earth.

I remember the first time I tried walking through such a clearing. The ground was littered with branches, and it was crisscrossed with equipment paths. I tried to walk along these paths, but they were deeply rutted and, when wet, more slippery than a potter's hands. I stood at the roadside on an afternoon with thundershowers building. The trees in the surrounding forest waved in the wind. There was an empty can of motor oil, a signature of equipment operators.

In some parts of the world (adjacent New Brunswick is a good example), it's standard practice to replant such land and thin it a few years later: the harvest itself can be staged so that the land is never clear of trees. Not so in the Empty Quarter. It did not pay, the forest owners said: the Canadians replanted because they received planting and thinning subsidies from a government that realized forests needed help to survive in the international marketplace. Subsidies were anathema on the America side of the border, however, and so almost nothing was planted or thinned in Maine. About the most the forest owners could bring themselves to do was kill young hardwoods by spraying with a herbicide.

Like most big corporations, the owners of the Empty Quarter dealt smoothly with critics. A quarter-million acres were annually clearcut in the state, yet the companies insisted that they were doing nothing of the sort. "Selective logging" was their game, they said. It was a clever play on language, for "selection logging" is a good thing, a way of spreading a timber harvest over numerous "entries" into the forest. "Selective logging" was all too easily confused by the public with this "selection logging," but it was a very different thing, company shorthand for taking everything of value, all at once. An odd "wolf tree" might be left standing in the clearing--some old snag or a twisted and unusable tree--but that was all.

People who saw through this linguistic trick were told by the companies and even by the Maine Forest Service that there were extenuating circumstances. The spruce budworm, they would be told, was devastating the woods. It was true. I remember stopping my car to look at a badly infected patch of fir. (Despite its name, the spruce budworm prefers fir to spruce.) In the preceding year the insects, as moths, had literally blown in and settled in the tree tops. Now, as worms, they were eating the needles around them, then spinning a bit of white filament and dropping down to the next branch. Bare of needles but wrapped in coils of filament, the firs were like dried-up Christmas trees tossed out in January with angel hair still on them.

Budworm eruptions occur about every 40 years, and the budworm epidemic I saw ended suddenly in 1985. But in the 70s, when I was in Maine, the landowners were busy clearing diseased woodlands before the standing timber rotted. To buy time, the companies in cooperation with the state and federal government sprayed the most-infected patches with Sevin or Zectran. The peak year was 1976, when two-and-one-half million acres were misted. Every evening, radio and television stations announced the areas to be sprayed the following day. People were asked to stay away. Early in the morning, before the wind came up, you might see the planes in formation, tanker planes following a guide plane. I knew one of the guide plane pilots, and I remember him shaking his head as he recalled how the tanker pilots often got confused and sprayed the wrong places.

A mortally damaged forest was a useful excuse to justify clearcutting, but since the end of the last budworm outbreak in the 1930s the U.S. Forest Service has been trying to persuade forest owners that clearcutting is actually the worst thing they can do in these circumstances, because there is nothing the budworm likes more than "suppressed" fir, trees crowded together too closely to be healthy. And that is exactly what is produced by clearcutting.

As long ago as 1946 one federal forester wrote that "what we are striving for is to halt outbreaks instead of being forced to fight a rearguard action with salvage cuttings." He went on to call "clearcutting basically unsuited to Northeastern spruce-fir stands." Forty years later one of this man's successors grew hot as he told me that the Forest Service had never been able to sell this advice to the Empty Quarter landowners. Instead, he said, they cut in panic -- that was his word -- wherever budworm damage was most severe. What should they do? I asked. They should let at least some infected stands die and rot, he said. Regeneration would occur some years in the future. The maturity of the new forest in such places would be postponed, in other words, so that the forest was broken up into patches of different ages.

Such advice, if implemented, would cost the companies the money they were now earning with salvage cuts. It would also cost them—or the government—the cost of spraying during the next outbreak. It could also cost somebody the expense of thinning to maintain either a healthy fir forest or a mix of spruce among the firs. (Juvenile fir grows so fast that fir sprouts will overtake and shade out planted spruce seedlings unless the fir is thinned.) And so the Forest Service was ignored. Trees did return to the clearcuts; the usual succession begin with berries and chokecherries. But instead of a spruce-fir forest with a substantial blending of hardwoods, the forest very nearly became a thicket of even-aged balsam fir, suppressed by its own density. A naturally small tree became even smaller, and the ground was set for another budworm outbreak.

Majestic from my upstairs windows and appalling where freshly logged, the Empty Quarter was boring to anyone driving through it. I hesitate to say this, knowing how people feel about great forests, yet on the occasions when I drove all the way through on the private logging roads that lead to Quebec, I had a hard time staying awake. I remember especially the first time I drove through from Allagash to St. Pamphile, Quebec. I looked at a Pepsi sign there as if I were Robinson Crusoe, stopped in my tracks by Friday's footprint. It was a welcome sight after miles of dusty trees -- all the same and all crowding the road like men in uniform blocking up a totalitarian parade ground.

This is a long way from Thoreau's forest, but even before Thoreau set foot in Maine, in 1846, the state government was busy auctioning these lands by the township whole or the township quarter. Some of the descendants of the successful bidders of those years in my time still owned whole townships: the heirs of David Pingree were a prominent example, with holdings exceeding five

thousand acres in each of about thirty townships. Other such inherited ownerships had survived, too, though they had become less important over the years as corporations bought them out.

The pioneer corporation was International Paper, or "I.P." as it was familiarly called. The company had been established in 1898 as a consortium of existing mills in New England and eastern Canada, and from the outset it owned 2,000,000 acres and controlled more than nine-tenths of the newsprint supply of the East Coast. It has grown since then and nowadays reports ownership of over 7,000,000 acres in the United States, including a million in Maine. Annual revenues exceed nine billion dollars.

Important as I.P. is in Maine, the dominating landowner in the Empty Quarter is Great Northern Nekoosa, a smaller company but one with more compact landholdings, concentrated in the Empty Quarter. Established in 1899 by an I. P. director working with Joseph Pulitzer, "the Northern" put up a huge mill at Millinocket, the company town that it created on the Bangor and Aroostook railroad within sight of Katahdin. The company started out with only 250,000 acres, but by 1930 it owned well over a million, and the figure has doubled since then to the ownership of at least 5,000 acres in each of about 90 townships. In comparison to the holdings of I.P and the Northern, Baxter State Park, which includes Mount Katahdin, appears on ownership maps like a postage-stamp park amid the towers of Manhattan.

Until World War II, the two corporate giants worked much like the pioneer loggers of the nineteenth century. They had camps staffed with men on the company payroll. The men cut with handsaws. During the winter, and using animals or steam tractors, the men pulled sleds loaded with logs over winter tracks to yards along the forest's rivers and lakes. Each spring they spent a month driving the logs south on the Kennebec and Penobscot or north on the St. John and the Allagash.

My neighbor Orenie at age seventeen had joined one of these crews. An older brother had told him that if the two of them did not become the number-one crew in camp they would have to leave. How to become number one? Orenie had brought a horse from the family farm. Using a bit of leftover lunch he trained the horse to go back and forth between his brother, who was felling trees in the woods, and the yard where he himself was bucking the logs into the four-foot lengths needed in the days of river-driving. (Balsam fir sinks when wet, and short lengths allowed the wood to dry before its river journey.) In the evening the two of them went back to camp and calls of "crazy Frenchmen." Still, they became the number-one crew, cutting, bucking, and stacking more than 40 cords a week.

The log drives poisoned the rivers with acidic bark, and fishermen were delighted when roads replaced river drives in the 1960s. In 1974 the Northern

completed its Golden Road, an unpaved but high-speed haul road running from St. Zacharie, Quebec, straight through to Millinocket. I.P. built its own arterial, too: this was the American Realty Road, its name coming from an old company subsidiary. The Realty road ran parallel to the Golden Road but about 50 miles north of it; it tied Daaquam, Quebec, to Ashland, Maine. (I drove the road once, three hours end to end as I recall, and nearly died of boredom by the time I got back to where I started.) A third major road was built still farther north, between Allagash and St. Pamphile. It was the work of J. C. Irving, a New Brunswick magnate who had bought I.P.'s holdings in a couple of dozen townships west of the St. John and hard against the Quebec border.

A web of interconnecting branch roads was eventually built. Some of these roads were temporary, but many others were more or less permanent. The roads suddenly made the woods business a year-round affair. They also radically changed the pattern of log marketing. The customary practice of bucking logs into 4-foot lengths had limited the use of Empty Quarter logs to pulp and paper production. Even now, years after roads have replaced river drives, some logs continue to be cut into short wood, stacked along forest roads in a wall four feet high. I remember seeing these pungently aromatic walls running for hundreds of yards, sometimes along both sides of a road. Eventually, a truck would come by. It was fitted with a boom and grapple and would load itself precariously high. Then it would head down to the nearest Bangor and Aroostook siding, where it would reload the wood onto flatcars for shipment to the Northern mill at Millinocket or the I.P. mill farther south, at a town called Jay.

It was a crime, foresters recall, the way the companies continued to buck magnificent spruce logs this way. With trucking, however, the logic of short wood disappeared. Suddenly, it began to make sense to handle tree-length logs. And once that step was taken, there was no reason for the companies not to skim off the logs of sawtimber quality and send them to lumber mills.

The companies themselves were reluctant to invest in building sawmills. By the same token they were unwilling to guarantee in writing a supply of sawlogs to anyone else. The most they would do was offer oral assurances of a wood supply.

Only two Americans were willing to build mills under these conditions. In my time one of these mills, the Pinkham property near Ashland, had done so well that the Northern had taken it over. The other company, Levesque Lumber, was getting by on logs from I. P. It closed after I left Maine. And here is the explanation for why the haul roads all go to Canada, for these two American mills could not absorb all the sawlogs coming from the woods. No other Americans were willing to build mills, but Canadian investors were financially protected by their government from the risk of mill-feed shortages. Some 30 Canadian mills were soon sprinkled around the western ends of the three roads.

Maibec was the Canadian company I knew best, because it was at St. Pamphile, at the end of the Irving road west of Allagash. The road apparently is no longer open to through traffic, but in my time it was: you waved at an immigration officer who rarely saw anything but log trucks, and you came out of the forest like a mole out of a winter den--out of the dusty green canyon of the haul road to the rock piles of Quebec dairy farms. And there in the middle of town, dwarfing the town's church, was a great mill surrounded by piles of logs, not one stick of which had been cut in Canada. It was common knowledge that these mills were going to have their timber supplies cut off when the Empty Quarter finally ran out of sawlogs. The millowners would be made whole by their government, but what about the millworkers? I once asked an important Maine politician about this. He shrugged, partly to say "who knows, who cares?" and partly in reaction to my naiveté.

Besides, these millworkers were no worse off than the men working in the woods. I think of the truckers who brought the logs out of the forest. On weekdays you had to watch for them closely, because even though the roads were generally wide enough for two trucks to pass, the drivers ran down the crown of the roads and only pulled over when they knew from radio communications that another truck was approaching. It is amazing how quickly you can find a road shoulder under such circumstances, even where one does not exist. The truck would pass, with brakes screeching and the driver visibly struggling to maintain control. The truck would ease down to a stream crossing, fill up the bridge, and rain dust on the water below.

The truckers were paid by the ton delivered, and so trucks rated to carry 30 cords took fifty. Drivers ran 12 hours a day, often 600 miles a day over unpaved roads. Amphetamine use was heavy. The only thing that stopped the truckers was "hot ice," a late-winter thaw that left pools of water atop the layer of ice plating the road. The rest of the winter, ice was almost a friend. It was dust free after all; it allowed shortcuts across lakes; it even reduced frictional drag. Wheels sometimes popped off overloaded trucks, and in winter the trailer would just skid along for miles.

And then there were the woodsmen.

The trucks came onto the haul roads from branches that could be very rough, often impassable to an automobile. But it was here, at the ends of the branches, that the loggers themselves were at work. They always worked in two-man teams made up of a skidder operator -- the man in charge -- and his partner, the "chopper." (The word "lumberjack" does not exist in Maine, even though Paul Bunyan is supposed to have gotten his start here.) At the logging site there would be a wide spot on the road. There would be a pickup parked at it, and probably a neat stack of tree-length logs. You could hear machinery off in the woods, and if you made your way into the woods you came upon the two.

Invariably, the chopper would be lean and fast-moving. He would be wearing a brightly colored wool-flannel shirt, a hardhat, gloves and boots, and some kind of work pants. It was almost a uniform: it made no difference that the day was warm: wool "kept the heat away," the men said. The same clothing was worn in winter: a flannel shirt, no coat.

In the chopper's hand there was a sputtering chain saw, periodically wound up to hornet-madness as it cut into the "stems," as Maine woodsmen call tree trunks. (Paul Bunyan lives in such understatement.) The chopper would cut so that the trees lay on the ground with their tops pointing back into the woods. (There is a good reason for this, but let it wait.) He began by making a backcut on the side of the stem facing into the woods. Then he came around and with his back toward the haul road began to make another cut, a little higher than the backcut. He would stop every 15 seconds or so and cast an eye upwards. He would study the tree, cut again, stop. Then there came a moment of eerie silence on top of the idling saw's growl. Like an elephant about to come down, the tree quivered. You could have pushed it. Perhaps the chopper did, out of kindness. But gravity reached up and began pulling with irresistible force. The chopper had already stepped back two or three deft paces, and he watched carefully as the tree crashed through a thicket of underbrush and saplings. The ground jumped.

The idling chain saw seemed for a moment to purr. Then, like a hunter returning to his prey, the chopper hopped onto the stem and with the care of a tightrope walker began walking along it, with the chain saw at his feet, the way people carry metal detectors at a beach. With the saw he removed the many dead branches characteristic of balsam firs, especially when they grow as closely together as they do in the Empty Quarter.

Walking the stem is illegal, because the tree is dynamically balanced on compressed brush and saplings, so it can roll and throw the chopper onto his racing chain. That's why workmen's-compensation premiums for choppers in Maine are a hundred times more than those for clerical workers. In winter, walking the stem was even more tempting, because the frozen branches pop off at the first touch of the saw, but then the practice was even more dangerous, because the stems were plastered with slippery snow. I remember nurses at the Fort Kent hospital saying that they were routinely warned to expect a terrible chain-saw accident. Still, the trees had so many branches and they fell into such thick undergrowth that there was no practical alternative to walking the stem.

The choppers aimed to bring down and delimb a half dozen stems every twenty minutes, and they were kept on schedule by the periodic arrival of their partners, the skidder operators, who were usually deeply in debt trying to pay for the machines they rode.

The skidder operator's job was to go back and forth, picking up stems and dragging them out to the stack of logs in the yard. The operator would back the machine toward the downed trees, get off, and from a spool fixed to the back of the skidder unwind a cable that he pulled out to the farthest stem. In his other hand he carried a half-dozen "chokers," short lengths of cable with clippable eyes at one end and nooses at the other. The eye allowed the choker to slide along the cable, while the noose wrapped itself tightly around the swelling log butt, choking it almost literally. That's why the stems lay with their fat ends toward the log-yard: to give the choker something to grab onto.

When the chokers had been set and clipped onto the cable, the operator climbed back onto his machine and began to reel in the cable. It drew taut as the large bolt at its end came up against the first choker, and one by one the stems were bunched up into a "twitch," with the butt ends of the stems lifted off the ground at the rear of the machine. The skidder now started forward. Logs, saplings, tea-colored brooks: none of them made any difference to the skidder, not with its four-wheel drive, its oversized tires, and its articulated chassis that allowed the machine to twist like a cat. The skidder simply crushed or climbed over or waded through whatever was in its way. A foot-thick log might be lying in its path like a low hurdle propped up by debris of some kind. The operator just revved up the machine and climbed over the log, bark flying as the chains dug for traction.

Out at the haul road, the operator unchoked the stems and with the blade at the front of his machine nosed them to the stack of logs. A loader eventually put them on a truck for transport to a mill.

The skidder operators told me that they tried to lay out a geometric pattern of skid roads, but I could see what they were talking about only from the air. Then it was clear: the skid roads were arranged like the bones of a fish skeleton, with diagonal ribs leading into a spine that pointed to a head at the yard. Flying from Bangor to Presque Isle in winter, you could see the ribs and spines of old cuts bright with snow, while the rest of the ground was green. It was a disturbing pattern, reminiscent after a while not of fish skeletons but of the patterns created in dead wood by burrowing insects.

The choppers were proud men, but they all believed that their health would be ruined by the time they were 40. It was almost a joke among them--looking forward to the day when the skidder operator would have to carry an oxygen tank to keep his partner going.

It had not always been this way. In Orenie's time, men didn't work year-round in the woods; more important, perhaps, the tools they used were more forgiving than machines--more demanding of strength yet slower and less punishing.

There were new kinds of anxiety, too, because the landowners had mostly abandoned the use of salaried workers. Instead, they contracted with jobbers who went out and hired their own cutting crews.

I knew one of these jobbers fairly well. His name was Carlton, but everyone called him "Coun," an odd nickname that I hardly know how to spell. (The sound isn't "coon;" it's like "couldn't" missing a few letters.) To all appearances, Coun was a storekeeper, but the store didn't make any money: it was an innocent front for Carlton's conferences, his informal assemblies of endlessly reshuffled visitors. I dropped in occasionally myself but didn't stay; it's uncomfortable when you know that a group of people have shifted from their language to yours out of courtesy.

Coun must have done deals of a hundred kinds, but one of them was working as a jobber for I.P. Once I asked him how much he was paid for a cord. I'm sure I tried to be more subtle than that, but it didn't work. "They pay me so much for a cord, and I won't tell you how much," he said. And that was that. I had equally little success with some Northern managers at Millinocket: they told me that the figures depend on so many things--location, topography, timber volume, species--that there was no single figure.

Every jobber was happy, on the other hand, to talk about how much he had to pay his choppers and skidder operators: seven dollars a cord, plus six dollars for the skidder and a dollar and a half for the chain saw. There were bonuses for cutting small trees, for cutting in deep snow, and for traveling to areas far from the jobber's camp. I estimated that crews cutting 90 cords a month probably shared about \$3,000, but the average was less than that--about eleven thousand dollars a year, per man, in the early 1980s. This explains the wife I knew who worked as a secretary in Fort Kent to help her husband pay off his used skidder, which had cost him \$50,000.

There was plenty of opportunity for jobbers to cheat their crews by underscaling or by skipping bonuses, but the commonest disagreement was over the assignment of aptly named "chances." These were the 15-acre lots that a jobber would carve out of his contract area and divide among his crews. The men would be paid for the amount of wood they cut and yarded, but their paychecks would depend not only on their own skill and energy but on the quantity and accessibility of the timber in the chance. Over and over I heard jobbers accused of giving better chances to favored crews, especially Canadians. Why Canadians? Because the Canadians worked as "bonds," liable to be thrown out if Americans came forward for their jobs. They had a special incentive, in other words, to please the jobber who hired them.

The Canadians were victimized in another way, too. The United Paper Workers International began organizing the woodsmen in 1975 and made so much progress in improving camp conditions that Americans were attracted to the

work. And so the Canadians, who had supported unionization, found themselves squeezed out of work except at the most northwesterly camps -- the ones so far from American towns that American workers would have had a three- or four-hour drive home each weekend. By the early 1980s the number of "bonds" had been cut from 1,500 a decade earlier to about 300.

And again that powerful politician would smile at my naiveté. Why should the Canadian woodsman be treated any better than the American? Or than the pill-popping trucker? Or than the millworker facing a closure? Or than the forest itself, reduced to thickets of unhealthy, periodically decimated fir?

A colleague once helped me get these things in focus. The landowners of the Empty Quarter, he said, were like plumbers -- bending and cutting the pipes that were the people and trees of northern Maine. Those words stick by me.

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