



Scrambling up to the Saddle Mountain summit on a recent clear and crisp day, scaling with all customary huffing and puffing, ravens hovering and diving overhead, I paused here and there, surveying the scenery below. Over here, the mouth of the Columbia. Over there, the mouth of the Nehalem. The rugged basalt mountains crumpled up in-between, concealing Cannon Beach and a corner of the stark blue ocean horizon. In the far distance, the jagged white of Cascade peaks: Jefferson, Hood, Adams, St. Helens, Rainier. And the whole of Clatsop County, sprawled out below. Every last bit of it, a patchwork of greens and browns, the terrain criss-crossed with clearings, scrub, and young stands of timber, geometric vegetation entirely at odds with the soft and chaotic curvature of the lands it once concealed. Visual buffer zones, left to conceal the clear-cut wastelands from the motorists' eye, snake across the valley floors, marking the road's progress. Yet, up here, from the bird's eye view, it is all too clear: this is a dramatically altered landscape.

Almost the entire County, and indeed, almost the entire Coast Range of Oregon has been clearcut, once, twice, three times. The old-growth coastal rainforests have been liquidated, most during the last 80 years, making way for the humanized landscape we see today, biologically simplified plantations, sprawling cellulose factories. No doubt, logging has improved much over the years. We have come a long way since the days, not long ago, in which downed trees were dragged through streams, sheer mountain slopes were logged bare, or lands were not replanted. A long way since logs tumbled to downstream mills on torrents of water created by splash-dams, temporary log structures that retained lakes in mountain stream valleys until blown up with dynamite, carrying logs (and streamside trees, and soil, and fish, and spawning beds and salmon eggs, and any number of other creatures) down to the lowland bays below. The alder trees will show you where these things have happened.

Today, timber companies must replant; buffer zones are left along streams. Here and there, a few solitary trees are left standing. Still, in any fresh clearcut, there are some things that simply cannot be avoided, no matter how careful you are.

Clearcuts magnify climatological extremes. If anyone doubts this, they should go stand in the middle of a clearcut on a particularly hot or cold day, then go stand under the a mature, old forest to compare. One of the most important foundations of a coastal forest's ecology in the microclimate which the forest canopy produces. Year round, a mature forest's floor is shaded, dark and moist, much cooler than exposed clearings in summer, slightly warmer in winter. Once the forest cover is removed, the change is dramatic: the local levels of light, heat, and wind go from zero to sixty in moments.

This comes as quite a shock to the diverse array of forest organisms adapted to, and inextricably dependent upon cool, stable temperatures, constant moisture, low light, and big trees. Spotted owls and marbled murrelets, fine-looking birds with stage presence, get all the press coverage. However, this transition is equally (and often far more) troublesome to many other living things: certain deep-forest lichens, fungi, insects, frogs and salamanders, limb- and cavity-nesting birds, vascular understory plants. (Meanwhile, downstream, salmon and their aquatic peers do not fare well in warm waters, moderated somewhat by the remnant trees now left on the water's edge.)

Then, only a few years after the coastal clearcut has exposed the forest floor to the elements, a reverse pattern emerges. Dense, young trees, all of the same age, crowd in, creating a solid forest canopy through which light scarcely penetrates. The forest floor grows darker and seasonally colder than ever. Little understory vegetation remains, only returning years later as the trees crowd one-another out, creating small holes in the forest canopy, admitting small amounts of light to the forest floor.

It is a rare forest organism that can survive years of complete exposure, followed by years of complete concealment. Most forest organisms that can leave do; many that can't die. And many of them are important players within coastal old growth ecology. Once removed, they are very slow to return. It's not clear whether healthy coastal forests can persist long without them. And while it is possible for these things to retreat to the darker woods, their retreat becomes particularly difficult as the number of remaining mature forests in the neighborhood has dwindled. The ecological effects from a single clearcut may be small, not all that different from those once created by natural fires or windstorms, which sometimes opened small, short-lived forest clearings. But the cumulative effects can be dramatic, as vast, contiguous stretches of forest are leveled, repeatedly, continuously. At this scale, we are no longer altering a forest microclimate; we are altering the climate of a forested region.

Clearcutting, no matter how carefully executed, also contributes to the depletion of soil. Dig your fingers into the forest soil - it is soft, it comes apart in the hands, it is deep but delicate. When the vegetation is removed, this soil is exposed to the full force of winds, rain, frost and runoff. Soil is washed away by rains. Perennially damp forest soil, once exposed, often dries out and goes airborne. And soil fertility is diminished. When it comes to nutrients, coastal forests are conservative; there are few nutrients available in the soil, and what is available is rapidly absorbed and stored in the tissues of trees. As timber is removed, the slash is burned, and even small amounts of soil are washed away, nutrients - nitrogen phosphorous, potassium, calcium - are permanently lost to returning local forests. Tree roots die after the cut, loosening their hold on the soil, contributing to landslides and erosion which can convert corners of the forest into barrens and foul nearby streams.

This is a recently-colonized corner of the planet, and our ubiquitous logging of its forests is an experiment without local precedent. We have not yet witnessed the long term effects of logging on this coast, but it is something we must consider. In temperate forests subject to logging over many generations, in parts of Europe or Asia, forests have been biologically simplified, species diversity reduced down to a small subset of the forest's original inhabitants. These forests, in their entirety, only house those organisms that could stand repeated, abrupt changes in their environments. In these places, lands repeatedly clearcut grow less and less productive over time. Continuously depleting soil and soil nutrients, harming beneficial soil microorganisms, long-term logging

has resulted in stunted and slow-growing trees. Shrubby wastelands or rocky barrens have replaced many of the once vast forests of Europe and Asia. It is very difficult to predict what might happen in the Northwest, but we have no good reason to assume that what once happened in the forests of the Old World will not repeat itself in the unprecedented industrial intensity of the New World.

Selective logging, or the strip cutting as we have seen Willamette Industries behind Cannon Beach can improve things a bit. By leaving some portion of the forest canopy standing, we can keep temperatures relatively constant, limit erosion, enhance water retention, and retain some habitat for a much wider range of forest organisms. These are viable cutting strategies, though not as profitable to timber companies, who are responsible to their shareholders and are compelled to make big profits on the short term. (And most, like our neighbors at Willamette Industries, have grown accustomed to making very good profits in the recent past - Willamette stock has increased in value at an impressive average of around 17.3% during the last 30 years. And not many trees increase in value at a 17.3% annual rate. Therefore it is hard to earn this much unless a company clearcuts early and often. Proceeds from the sale of very young trees, even the skinny ones only a two-by-four wide, can be invested elsewhere, *anywhere* really, and still beat the annual growth rate of a mature stand of timber.) Selective cutting is labor-intensive and cuts into these impressive profits, requiring several return trips to cut and maintain the land, cautious cutting, and high levels of road maintenance. In light of their hard-edged corporate obligations, it is remarkable that companies like Willamette have employed these methods at all. Still, some might argue that the longer-term benefits may outweigh these costs, whether in terms of ecosystem health, the preservation of salmon, the maintenance of our million-dollar scenery, increased lumber quality and size, or the preservation of the long-term productivity of the land.

Most of our local timber lands are private property, yet the public has a stake in their management. The way they are managed, for better or for worse, spills over, affecting the quality of life for all neighbors, possibly for a very long time. The outcomes are not only aesthetic. As Asian economies stall and our timber sales momentarily dip, we - landowners, neighbors, and others - might take pause and engage in a dialogue, exploring how the forests might be best managed, for the long term. Measure 64 has generated much ill will between us. Idealistic, young environmentalists have proposed heavy-handed legislation and been outspent, 10-to-1, by a heavy-handed coalition of timber companies and out-of-state chemical companies (Dow, Du Pont, and others), with an entourage of lawyers, lobbyists, California-based public relations firms, and all of the machinery required to spin the issue this way or that, to remake public opinion. Let us see to it that this statewide head-butting does not stall progress, cooperative progress, toward long-term solutions. Approached thoughtfully, it might still be possible to find innovative ways to sustain our communities and our ecology for the long-term.

Many people have written about the long-term economic and ecological ramifications of clearcutting. You might check out Ray Raphael's *More Tree Talk: The People, Politics, and Economics of Timber*. Island Press: Washington, D.C., 1994. Thus has been a topic of growing interest to planners; see, for example, Kirk Johnson, *Building Forest Wealth: Incentives for Biodiversity, Landowner Profitability, and Value Added Manufacturing*. Seattle: Washington Forestry Working Group, Northwest Policy Center, University of Washington, 1995. A very thorough list of threatened and endangered plants, animals, and habitats in Oregon can be found in the State of Oregon report, *Oregon Natural Heritage Plan*. (Natural Heritage Advisory Council to the State Land Board). Salem: Oregon State Land Board, 1993. The State Land Board may be contacted at 775 Summer Street, N.E., Salem OR 97310.

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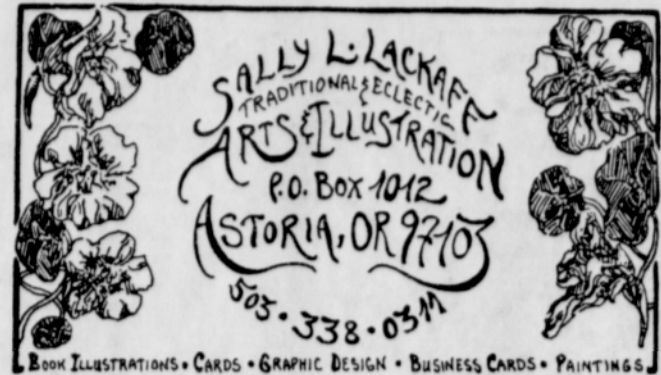
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It's relaxing to go out with my ex-wife because she already knows I'm an idiot. Warren Thomas

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My message from the Birds

by Blue Sky..

I had just left a survey research class at TWU, an elegant, sedate environment, know for it's scholastic climate. The building stands tall within the inner core of the TWU campus, surrounded by concrete promenades bordered by trees and iron benches. It is quite a lovely place and especially so with the recently rain-washed leaves shining in the sunshine. As I walked through the pathway going toward my car, I was aware of a cacophony of trills, twitters, chirps and caws. Virtually, the impromptu avetrium had wrought pandemonium of the peaceful surroundings. The sounds were almost deafening, so much in fact that a passing student had to repeat her disdainful remark about the plumed chorus in order for me to understand her. I walked on briskly only to be called back. The birds were yelling at me! Not unlike unruly monkeys clamoring for the attention of children bearing treats at the zoo, they called for me to hear them. What communication did the feathered creatures have for me? I knew I would receive a message if only I would listen for it. I went back, directly under the boughs of the post oak tree, to sit on the bench. It took a while for my mind to settle down enough to hear the individual birds. What, my mind whispered? I don't understand? What is it you wish me to know? As surely as the cloud covered the sun I felt void of comprehension and even dread of what I would perceive. At times a brief silence would overtake us only to be broken with more energetic warbling. I sat silently on the bench with my head bowed slightly concentrating on a squirrel that in turn was concentrating on a pecan nut. Spell-like I was able to come as one to the sounds, smells, and visions. I became aware of the shadow from the trees playing on the sidewalk. Like a phantom in flight, a shadow of a bird would flit across my vision. Shadows. Are shadows all I am seeing? Is my life only shadows, not true images of life but dark shadows of death and misconceptions, keeping truth out of my reach? Is that what you are saying to me? As these thoughts reeled through my mind I was almost blinded by sudden reflections of pure sunlight upon the whiteness of the sidewalk. Sunlight. Sunlight was filtering through the trees stronger and stronger until I knew that was my message. Light. I saw the light coming out of the darkness. Quickly I opened my notebook to write down my thoughts and record the message sent to me from the blue skies. Suddenly there was a splat, bulls-eye on my paper. I could only burst into laughter as I realized the message was pure BS in the form of bird-shit. Without doubt a mockingbird had delivered THAT message. My laughter subsided as I wiped my paper to go. Still chuckling to myself I recalled the role that bird-dropping, like guano, play in the circle of life. Concentrated energy derived from nature, it returns life in the form of seeds and nourishment to replenish the earth. I could experience only BS or I could see beyond it to the essence of life. My message from the birds was confirmation that I can see beyond the shadows and experience light

May you walk in light.

(Ed.: Blue Sky is a grown-up native American woman we met on-line, currently going for her Master's in the Social Sciences in Texas.)