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Writings as a writer in residence at the H. J. Andrews Experimental Forest

- Essay: *The Long Haul*, Orion, Sept/Oct 2004, pp.70-71.
- Extracts from

Reflections:

Field Notes, Journal Entries, Essay, Poems, and Comments

from a writing residency at the H. J. Andrews Experimental Forest

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I. Field Notes (Raw Writing)

(Note: these rough bits are not intended as finished writing. They are transcribed directly from my field notebook almost unedited, with small changes made only for clarification. After-the-fact commentary appears in brackets, but parentheticals are original.)

April 21, 2004. Wednesday afternoon. Forest Road 1506 near 330, going toward the Old-growth Trail, lower section.

Underlie: water tumble through roadside rivulet, maple flowerfall.

Overhead: distant jet rumble, rain.

North side: winter wren blows bubbles on a pennywhistle.

South side: pileated takes time off from hammering to yammer shrill runs.

In the ditch: red steel post, bent by snow, or?

On the moss-swaddled maple trunk: a geometrid moth that would be cryptic a few inches down, against the bark.

Up high: Steller's jay calling.

Down low: Douglas squirrel calling.

All around: western red cedar, vine maple, bigleaf maple, western hemlock, Douglas-fir, hazel, alder, willow.

Old-growth forest opening to columnar-tilted basalt with cupric facets, *Amelanchier*, and one tall incense cedar alone on top.

Water falls generously from above, is caught by a basalt outcrop, drips luxuriantly through mosses, succulents (a long-leaved, softish *Sedum* I don't know?), and tiny brassy monkeyflowers. It's like a rock wrapped in a knobbly washcloth.

Tall cottonwoods down in the canyon shower balsam; when I find a small one by the road and smell it, I am almost overwhelmed. A buck leaps. High Doug-firs triangulate, rhodies hung with *Usnea* bunting.

Up past lower trailhead, in the rain, into snow. In a borrow pit (and log dump) on the left, snow spackles brown earth and rust rot-logs, and amongst it all, a single red currant stands out in full bloom [= blood currant, *Ribes sanguineum*].

Into the snow, on foot, and sun comes out, catching a moss-buffered boulder back: dark flowing ravine, only briefly.

Two sets of glyphs: the paired boundings of Douglas squirrels across the snowy road and back, and sapsucker Braille on overbrook alders. [In the sapsucker holes] you can make out numbers and letters, like pix in stars [constellations], till you wonder if the sapsuckers aren't on the hydrology team [taking readings].

Evergreen violet blooming in the snow-rags. *Pachystima* & pipsissewa beside. Slight bird peeps, and a pileated woodpecker. They all spend the night out here!

6 p.m. **Personal Plot # 2**, where FR 1506 comes up against the bare angle of repose: Looking across Lookout Creek Old-growth to the horn of the west summit, hump of the east summit of Lookout Mountain. Blue and silver skies mottle the gray above the mountain, wisps of mist float up the steep valley.

What is the essential difference I perceive looking over the old-growth/Andrews Forest/Mack Creek etc. watersheds, and the forests I wake to every day?
Obvious: age, complexity, diversity, depth, variegation, individuality, stability, wildness, grandeur, and all that.

Perhaps less obvious: Capacity to hold surprise, e.g., why does that snowy avalanche field [on the high side of LO Mtn.] have one large fir standing in the middle of it? Also soil, water, mystery, the possibility of wolverines, Bigfoot, and DB Cooper.

3-D: the vertical here is not understated! Depth, too. Unruliness! These forests defy easy answers.

7 p.m. Heavy sun hitting summits now--avalanche slopes could be ski runs--upper forest saddle is flocked.

Down into **Long-term Site #1** on the Old-growth Trail, lower end. Immediate immersion. Out of snow, trillium, vanilla leaf, bunchberry; *Linnaea* tendrils form a bower under a nurse log arch [beneath a nurse log lintel]. Classic moss wonderland.

Down to the bridge as light wanes--and *such* a bridge! Two [horizontal] fir giants at right angles, both scored by sawyers to give purchase to soles, approach and cross Lookout Creek. Exquisite islands, streambed *rich* in coarse woody debris! Several huge cedar snags & candelabras dead, rise from water, flares accentuated by water and moss; [with the] soil around their roots washed away, [they look] like cypress knees almost. Maple and fir snags also drowned, other giants still alive just bankward from flood. Rain and dark come together, with me at the bottom of the trail.

Coltsfoot, *Montia*, *Tellima*, moss on islets. This crossing, one of the most beautiful places I have ever been. At south end of bridge, a great triad of snags: one Doug-fir, one cedar, one hemlock.

Last sun, up in the canopy. Can a forest as big as a mountain be said to have alpenglow? Forest floor, heading out, full of the glow of trilliums.

April 22, 2004. Thursday morning. 10, to **Personal Plot # 1.** Sun! Now the dogwood is in shade. Has almost retracted into the forest, while backlit shoreside alderlings and river chips assume all the borrowed brightness of the sun. I take hydro samples from rhodie boats [sip drops from curled leaves].

Every moment of every reflection is responsive, allusive, and subject to mood and how wet my butt is--just the opposite from long-term ecological observations with numbers. How the cold current persuades that root, already talked out of its bark, to let go; how old trees and rootwads form islands that redirect the pummel for each downstream riffle-making rock. How organisms adapt to all this, and what they look like, doing so. How those things touch on our own sense of fitting, bending, releasing, resisting, hanging on.

A big pollinator visits a garnet vine maple flower; I see it is a red-bummed bumblebee. How many more days of rain would have doomed it? How long will this sustain it? Above it, dogwood flowers and fresh, tender *Cornus* leaves sunstroke against blue sky: benignity, or my sense of it? A winter wren sings me out the path of the green-black old-growth puzzle, where softest chartreuse vine maple and red huckleberry leaflets carve sharp relief against dark and still ancient boles. A piece has just revealed itself with a tiny movement in the sun: rufous hummingbird building a nest on a mossy branch of a large Pacific yew extending into the sun over the stream. What has she been doing, these cold, rainy days, and does she forage upstream all the way to the blood currants? Do the vine maples have nectaries, or is the bumblebee coming solely for pollen? Her spot is between an immense Douglas-fir and a massive western hemlock.

Among the puzzle pieces below, the jigsaw of *Trientalis*, queen's cup beadlily, and oxalis, in the matrix of salal. Sword fern, Oregon grape, and roses. Do roses ever bloom in here [in the deep shadows]?

11 a.m.--tumbling rill on the way up FR 1506--What is hard to accept for a writer, but unassailable, is that this *needs no words*.

April 23, 2003. Morning. Going for gas, I pass a man in a day-glo chartreuse windbreaker coming up the Blue River road on a bike. I feel equally clothed in bright lime, just being here at this season.

Back up to the upper Old-growth Trail. Cloud, dry, ~60 degrees F. No moth on the mossy maple [so it was alive and alit before, rather than prey]. Douglas squirrel crosses woodpiles, scamps up a diagonal down hemlock, and watches. That smooth hump of back, alert curve of tail (like a "?"), hands held up in importuning posture. I make a move, and both tail and hands come down, ready to scarper [Brit. for "getaway"]. Looks like it's looking straight ahead (90 degrees to me) but it is of course looking right at me with that one black, glistening ball. Does it take in what the other eye sees too? How does it integrate the images? Can it double track, like me? Loses interest, creeps up log, scratches, noses vine maple leaflets, and moves off into endless tangle.

Snow-level is much higher today after yesterday's sun-melt; can drive to trailhead (Old-growth Upper) and a little beyond. Walk some way in the snow in my new Sorels (running shoes last time, feet got cold!). Snow: Steller's jay investigates, gray jay and a ?

peeper too, but they don't show. More squirrel crossings, and deer, and grouse with two poops (eating buds). Black cottonwood and small soft pussywillows, subalpine fir and mountain hemlock appear.

Snowshoe hare crossing. Ruby-crowned kinglet, chestnut-backed chickadee [in forest edge]. Turn around (4 p.m. +) where snow gauge off road says ten feet of depth and pussywillows are exploding with yellow stamens and honey scent. Small fly lands on notebook [but little spring nival insect fauna, nor "snow worms" or "snow fleas"]. Cool here, ~45 F. Possible bobcat sign, single sit-leap crossing. [Continually peeping, following] birds won't show. Varied thrush in distance, down-canyon, and a jet above: antitheses. *Nice* snow walk! Sorels work A-1! One fall, knees wet, but not feet.

Into the upper Old-growth Trail. The start is under snow, then just patchy in the forest. Golden-crowned kinglets pipe in high western hemlocks. Can't go far--a recent Douglas-fir fall seriously blocks successive switchbacks. Sorels not as appropriate for up-down in slash and forest. The floor here is a carpet of bunchberry, pipsissewa, and rattlesnake plantain--right up the bases of the giants' duff aprons--with much sky-canopy debris. A cedar frond heavy with cones smells conifer-sweet but more terpy than cedary. Boles of these great trees straight, but off-shapes are as appealing: a mossy Douglas-fir burl that's a perfect bison head; an annealed-over stump with excrescences that could have been designed for Middle Earth.

I'm sorry not to see the river up here--it sounds near--but I don't think it makes sense to try; I'd have Terry and LeRoy out after me again. My reflection here is that access to wild places is nothing to do with our convenience or ease. And, again, how utterly useless most of us would be out here, unassisted. To be called old-growth, a forest ought to be able to offer up serious impediments against intrusion of writers and scientists and anyone else lacking the evolutionary PIN number.

Personal Plot # 2, second visit: 1506 overlook, < one mile down from upper trailhead. There's obviously been melting on the avalanche tracks, as there are hollows around the trees and snowball tracks down the slopes, like stretch marks. The [Old-growth] trail goes through over there somewhere--I'd guess it's blocked in many places. Thought I saw a bird flying in the distance, but it was a little hatch of midges in the foreground.

You can start with your eyes at the top of the treetops on the ridge, below the summits (4800' or so) and drop your view 1600' to the river, and never quite be sure when one tree leaves off and another begins--1000' tall trees! [This, through binoculars.]

You could almost map the winter wren territories on the old-growth north slope of Lookout Mountain from here, listening to their songs arise from various coordinates.

Back to **Long-term Site # 1** at the lower end of the Old-growth Trail. Double schoolmarm yew; great sealed stump with hollow, stripped cone cores [falling out, showing that squirrels have used the hollow as I'd imagined]; put nose in recently split Doug-fir--wow! [the sharp terpy smell of recently shattered wood]

Ah! Here is where I would sit and reflect forever! On the stony-mossy peninsula below the great log bridge. Another gargantuan log extending across the stream diagonally below; a cedar, and out from under it, a solid moss seahorse [or rather, mer-horse] with Douglas-fir seedling ears and hoof upraised, midstride, mouth open to gulp

air, mossy forelocks, great muscular moss-log torso stretching back. Such a dipper place! Not yet seen. Bird lime on the cobble behind me beneath high broad moss bough--marbled murrelet this far inland?

I have only minutes by the clock till I must leave, but how can "dark" be near when I see sun on high firs upstream, blue sky-dapple above? I lean back into the mossy pebbles; my blue-dapple view is surrounded by the spikes, spires, and sprays of old-growth tops. I would spend a whole day here, and see what happens. I would be one of these moss-daubed presences. I could do that--it suits my somewhat saturnine demeanor. A whiff of wintergreen on the downstream draught of air.

And how does the creek sound? *That* would take a long poem in steno, like Kerouac at Big Sur with the sea.

Devil's club twining out of the vitals of the Big 3 [trees at the south end of the bridge]. Unfurling buds briefly tender; trilliums line the path up and into the trail not taken. Mossy bosses above [on the big bridge-end Doug-fir]. A rivulet issuing from cedar knees [in midstream], and a winter wren sings me out. *Finally*, down the road in the last dim light, see the dipper, crossing from Lookout Creek to a side-brook.

II. Journal Entry

(Note: This is journaling written with more time and deliberation than the field notes above, but still immediate drafts with little editing.)

April 21, 2004. H. J. Andrews Forest, writing of 20 April. My plan for the day changed when I met Kari O'Connell, the Forest Director, who told me that an old Astoria friend, Howard Bruner, was coming up; that she and he would be making a traverse of Watershed Two (one of the old-growth control areas) and that I was invited to come along if I wanted. I guessed that this trip would be more rigorous than anything I'd do on my own, and that I'd be missing a grand opportunity if I turned it down. So a little after two, we headed up, for what Kari expected would be a couple hours' outing.

Two cars went up, one left at the bottom of our projected route, the other dropping us off as far as we could go on road 465 off 1507, with John cutting some deadfalls for us, then returning the second car to HQ. Then we set out, walking 465 across Watershed Three to the edge of WS Two, by which time the way had become a small trail. At first it was easy, though it was clear that there'd been a lot of windthrow.

Howard used to host a nature-oriented program on KMUN radio, and he had interviewed me and had me read from *Wintergreen*, one long-ago Earth Day. We'd first met on a butterfly walk I'd led on the Clatsop Plains. Howard's a good birder and botanist, and knew most of what we saw, including some plants I did not. He'd gone on to do graduate work in Corvallis, and now works for Kari monitoring permanent vegetation plots and transects on this forest and in related areas. Kari is compact and energetic. She took her PhD at Wisconsin working on boreal forests. Her dad, for whom she had me sign a *Wintergreen*, brought her up a naturalist and largely out-of-doors.

Our rough trail followed the 288' contour for a way, then began descending the old-growth basin in a long series of obscure switchbacks. The point was to check on the state of the trail for Jerry Franklin (there's a photograph of him in this apartment from 1958!), who wants to bring a class down here from the UW to walk and study it (I

understand he feels WS Two is somehow more typical than the Old-growth Trail unit). I don't think they'll be doing that until a hell of a lot of wood is removed!

What we found were massive amounts of downwood blocking, covering, hiding, or obliterating the trail at frequent intervals. Howard had been over it not that long ago, and Kari on parts of it, and they'd had no idea. So for some hours and miles, we slogged, clambered, crept, and bushwhacked up and over and down and under great logs and through forests of limbs and tangles of rhododendrons, vine maples, and hemlock boughs. Howard is strong and fit from doing such things daily, and Kari is young and limber, but I fancy even they found it something of a challenge. For me it was tough--less than an ordeal, but more than a workout. My size makes it difficult to get through or beneath, and my short, inflexible legs render large logs into major barriers for getting over. I judged my routes carefully, and no doubt held them up, but not too badly. They were concerned for me, and Kari half-joked that it wouldn't be good if she got the visiting writer lost or damaged! And we did get temporarily lost a few times, but Howard was awfully good at picking up the trail.

Of course, it rained most of the time, and we grew awfully wet and muddy, but stayed warm enough with exertion; and though we were slipping and sliding, balancing and hopping like a bunch of red tree voles, (or two, plus a small walrus), no one got hurt. My hardest hike in years, but truth to tell, I much enjoyed it. Given the setting, it'd have to be a deal worse (uphill, for example; mercifully, we were heading mostly down) to detract much from the overall riches. I'm just glad my hernias were fixed *last* year!

The birds were chickadees, juncoes, Steller's jays, golden-crowned kinglets, a brown creeper, a nuthatch, lots of winter wrens, and not many more. Most old-growth birds don't show off. But the plants can't help it, and glowed their April extravagance. Everything you'd expect, plus some surprises. I enjoyed watching Kari and Howard working on the ranuncs and saxes, two groups with which I'm a bit short on real intimacy at the species level. They showed me *Anenome lyalii*, whose charming small purple-pink wind-flower was reflected in the two or three patches of calypso orchids we came across. Here and there, a luminous Pacific dogwood searchlit the dark wood. On a few drier slopes (almost an oxymoron here, with 90-140" precipitation), blood currant spurted forth and some golden chinquapin (with feeding damage that might have been from golden hairstreak larvae, but now we were getting worried about time and light, so I didn't tarry.) Shockingly, Scots broom has become well established on these open slopes, too.

Another instance of "feeding" damage seemed to suggest itself on some (already!) big-leaved umbel coming up in several crossings of the stream, open to the light above. But the only insects we could find on the holey leaves were tiny stoneflies from a fresh hatch, and I concluded that the hail Kari had encountered near here a week ago may have shredded and shot the leaves rather than insects. Howard bought my hypothesis. The trailside tapestry wove trillia, vanilla leaf, and upside-down *Vancouveria* into deer fern, *Linnaea borealis* twinflower, and multitudinous mosses.

My hands were raw with wet, cold, bark, pitch, wood, lichen, and moss, and prickled by needles; but they *smelled so good*--as did all the air, all the down timber and veg. Frequently, we passed trees tagged long ago so their life trajectories and ultimate mortality could be measured; transect plots; and other signs of curious hands on this uncut basin. The responses of this forest, both to management and stochastic events (or, vicissitudes) will have been monitored over a long period, along with numerous other

places involved in the LTER project. Much of the linkage and continuity, I gather, is Jerry Franklin's doing. He is dogged. Maybe he *will* get a class through there!

I am supposed to be initiating parallel reflections, response to forest time and change. But I am here for days only, and, whereas the experimental design depends upon repeatability, nothing is ever quite repeatable to the poet. Even so, I am having a go, and if I didn't write a word, just being an organism in this forest for a week would be worth it to me (if not my employers). Anyway, we made it through this much-more-than-expected crossing. Howard reckoned four miles+; that strikes me as a little long from the map, though it felt like ten or twenty.

When we got down, Fred had come looking for us, as we were later than expected. When these forest research pros are late getting out, temporarily lost, and surprised by what they find, the conditions are extraordinary. I was right to take the chance to go along.

But the best of it was the immersion among the trees themselves! This was *true* old-growth. More *huge*--five, six, seven feet DBH Douglas-firs than remain in the entire Willapa Hills, in that one small watershed! And western hemlocks, and western red cedars (much smaller than on Long Island, but grand), and numerous Pacific yews--which, as Kari pointed out, are particularly hospitable to epiphytic mosses and lichens, and to whom I paid due thanks and obeisance (for Thea's healing last year). On every hand stood, leaned, or lay trees as deep-furrowed as a Kansas cornfield, as tall as a row, as big around as a silo. I felt stunned, all over again, like rediscovering infatuation.

Afterward, we were wet to the bone. We had hot showers and got into dry clothes and reconvened here in Rainbow Right for hot tea and a post vivum. Howard had to return to town, but Kari and I continued the conviviality of the campaign in her cabin, over home fries & eggs and Thea's good pea soup and the Bridgeport IPA she had kindly brought up for me. It was exciting to me to see how scientists to whom the forest is home almost daily still get so wrapped up in it. And I felt, as I often do when barging into coterie of naturalists, scientists, and writers, a kind of unearned, short-cut inclusion, incorporation without initiation. Or maybe that deadfall scramble *was* initiation.

I slept hard that night, if waking often to turn over my aching bones. And today I went up to the better known old-growth trail (see notes), was again enchanted entirely, and again put up the alarm, as I could not come in until dark compelled me to. I met LeRoy and Terry, the fine and friendly maintenance men, coming up to look for me. The custom, when this happens, is for the searchee to provide the searcher with a six-pack of the beverage of his choice. They shall have their tall-can Buds, but Kari will have to take care of Fred. Twice in two days! Getting people out to look for me is not what I was brought here to do. At least, perhaps, it shows real engagement with the landscape.

III. Essay

(A column in the author's "Tangled Bank" series for *Orion* magazine, having to do with taking a long view of ecological processes and perception. Published Sept/Oct 2004.)

The Long Haul

In the dim deepwood of massive and moss-bound trees, the three tenors of the Northwest forest give voice: varied thrush's raspy note, like whistling through spit; golden-crowned kinglets' high tinkle, the sound older ears lose first; and winter wrens, pucks with pennywhistles on an endless tape loop. A fourth, pileated woodpecker, is silent for now, having already totomed all the big old snags.

I've come to a place known as the Log Decomposition Plot. The mossy turnoff is paved in evergreen violets. Then comes a trench and berm to keep vehicles out, but the bulldozed tank-trap has grown to resemble a native outcrop, covered in sword fern, salal, and moss. Fresh windthrow renders the trail almost impassable in places: a suitable gateway to a place where, when a tree falls in the forest, a lot of people hear it--and then take a close look at what happens next.

When I get to the laid-out logs and the sawed-off tree-rounds that fallers call cookies, I know I've arrived in the place where druids of forest research make offerings to Rot. This is the H. J. Andrews Experimental Forest, 16,000 acres situated deep in the Cascade Mountains, managed by Oregon State University and the U. S. Forest Service. The Andrews, dedicated to forest research since 1948, became a charter member of the National Science Foundation's Long-Term Ecological Research Program in 1980. Fundamental study of the northern spotted owl took place here, along with much basic research on forest function. Recently, recognizing that science is not the only tool for probing what forests mean, the Forest Service and the Spring Creek Project of OSU's Philosophy Department initiated a program of Long-Term Ecological Reflection. This inspired whim is the source of my good luck in spending a week here, reflecting and writing.

Whole watersheds of old growth western hemlock and Douglas-fir, simply shocking compared to the second- and third-growth evergreens of my home hills, grace the HJA. The Decomposition Plot, devoted to studies of nutrient cycling and forest refreshment, lies in one such ancient stand. It's easy to tell when I'm inside the research zone by the yellow, red, and blue tags on wire stems sprouting from the moss. One pink cluster pokes like old trilliums from a mossy mound that once was a tree. A red bunch limns the ground where a one-time log has finally given up the ghost. Metal tags label the cut butt-ends of many logs that lie about higgledy piggledy, as gravity and the wind might have arranged them had researchers not dropped them first. Bright flags beribbon trees, shrubs, small boles, and limbs, and duct tape shores up the ends of some logs: is someone investigating the degradation rate of duct tape as well as wood fiber? White plastic pipes, buckets, jugs, and other bits lie here and there, each significant to some experiment or other. In early spring, no one is here for me to ask.

Some would see all these artifacts as litter, marring their wilderness experience. You can also see them as inflorescences, like that mysterious white plastic funnel sprouting next to a nodding trillium. Take away the pink ribbon around that hemlock over there, pick up all the aluminum and plastic, and this old growth forest would still work just like any other. Researchers cut fresh cookies for a starting point, then measure their decay forever after--or, at least, as long as they can. But let all the straight-cuts rot away, and you've got an untidy place going about its important business of trading in the old for the new; an ecosystem definitely in it for the long haul.

Most of us take the short-term view, most of the time. What gratifies right now, or soon at the latest, is always more compelling than what might satisfy years from now,

let alone nourish the generations. When business opts for short-term profits instead of long-term husbandry, both forest and human communities suffer. The short view is what turned most of the Northwest's giant forests into doghair conifer plantations cut on short rotation for pulp. To peer much further down the line requires not only empathy for those who follow, but also faith in the future--even if you won't be there to see it for yourself. Such an ethic underlies all of the long-term studies here on the Andrews, whether concerned with old-growth ecology, hydrology, riparian restoration, forest development and mortality, carbon dynamics, invertebrate diversity, or climate change and its effects.

Meanwhile, here in the decomp plot, nuthatches toot in monolithic columns of Douglas-fir; a robin chitters in a clearing. Dappled light falls on forests of the moss called *Hylocomium splendens*, hammocks of shiny twinflower leaves, and fleshy *Lobaria* lichens lying about like tossed-up ocean foam. The path is a maze of Irish byways for voles. Douglas squirrels leave their middens of Douglas-fir cone bracts all about like a prodigal's spent treasures, and round leaves of evergreen violets and wild ginger spatter the path like green coins. If they were gold, I doubt they'd distract the unseen leprechauns who come here to gather the data of decline. Gold doesn't decompose, and this place is all about the documentation of rot. It goes on all around me: something fairly large just fell from a nearby old-growth giant.

Maybe that's the problem with the long view: it speaks of our own inevitable demise. We're not much into self-recycling. Even in death, we take heroic steps to forestall rot by boxing our leavings in expensive, hermetic containers. After all, to anticipate the future--a future without *us*--is asking quite a lot. But life and regeneration are the name of the game on this mortal plane, every bit as much as corruption. The winter wren's song, after all, is no morbid message. Old vine maples hoop and droop under their epiphytic shawls, but the unfurling leaves of the young ones are the brightest items in the forest (even brighter than the red plastic tags). Every downed and decaying cylinder of cellulose makes yards of nitrogen-rich surface area for hopeful baby hemlocks, lichens, liverworts, and entire empires of moss to GRASP and begin making forest anew.

If we care about what comes next, it makes sense to send delegates to the present to find out how things truly are, report back, and check in again year after year. The conundrum of the diminishing baseline says that if we have no clear idea of what went before, we are more likely to accept things as we find them, no matter how degraded they may be. Memory is short, the collective memory even shorter. But with baseline in hand, when change comes, we can appreciate it for what it is. Recognizing loss, we may even act to prevent future loss.

Just as the scientists gather data, any open-eyed observer could go on documenting details without end in such a place: the declination of that row of saplings bent over one deadfall by another; the way that one sword fern catches the sun to suggest a helmet; how the polypore conks launch out from cut ends as soon as they can after their vertical hosts go horizontal, their mycelia re-orienting ninety degrees to the zenith. There is no end to particulars as long as the forest goes on and there is someone to record them. Or not. The moss grows, the raven barks, the trees go to soil--first hemlocks, then firs, finally cedar. All the while, the decomp team is there, watching how the cookies crumble. Maybe looking to the future is a way of hoping there will still be something to

see when we get there. Maybe it's the only way to make sure of it.

IV. Poem

At the H. J. Andrews Experimental Forest

19 April 2004

And here is what the scientists see
but cannot say:

How the dogwood blossoms glow
against the black wet trunks of Douglas-fir;
how the skin of yew runs red in the rain, the bark
of young vine maple green as the skin of anoles
in a hot southern wood.

The way yellow evergreen violets erupt
from the green magma of moss, and trilliums, pinking
out, paste their petals against the waxy leather of salal.
The manner in which Douglas squirrels inscribe
the snow, and where they leave their middens.

Cascara's small tongues lapping
the drip as chorus frogs and winter wrens sound
the walls and depths of Lookout Creek. Pipsisewa
and bunchberry catching all the windthrow

that winter can bring. All these things

may have adaptive value, for all we know. Could generate
data, yield understanding, render the answers
that poets may dream but cannot write.

As last year's bracken rots beneath the new sword ferns
and varied thrushes whistle through spit

I have faith

that somebody, somewhere, surely knows
what to make of all this.

Notes for a Prose Poem:
Scientific Questions One Could Ask

1. Sunbeams slanting through the forest strike evergreen violets and tight buds of cherries: What is the ignition point of each?
2. What is the relative albedo of snowmelt trilliums, rain-wet Oregon grape glisters, and the pale underside of *Lobaria* lichen against cedar frond?
3. What is the precise incidence of sunshine that makes one centimeter of one web shine emerald, a nearby centimeter of another strand sapphire? Or waterdrops on Douglas-fir needle tips on sunny mornings after rain or snowmelt: one ruby, one tourmaline?
4. Is it innate or learned behavior that causes some birds to respond responsibly to pishing, outing themselves for a look, while others obstinately hang back, seeping and teasing invisibly from the brush, for as long as the investigator keeps pishing?
5. What is the capacity of the winter wren's heart for ebullience? How much blood must it pump for one endless obligato? How many times must a winter wren sing, to establish his territory for good? To get a mate? To achieve transcendence in the human heart?