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## **Listening to Water**

I feel my number acutely. Two of two hundred, the second writer to be summoned to this place. The second voice in a chronicle intended to stretch out for 200 years. Two hundred years is young for the trees whose tops this morning are hung with mist. It's an eye blink of time for the river that I hear through my open window and nothing at all for the rocks. The rocks and the river and these very same trees will likely be here for the 200<sup>th</sup> writer, if we take good care. As for me, and that chipmunk and the cloud of gnats milling in a shaft of sunlight, we will have moved on.

Long term ecological reflection. It's tempting to let your thoughts run out to the future and back into the past, to reach for the stories that live there. Time as objective reality has never made much sense to me. I don't wear a watch and slide between time and timelessness with ease. How can the minutes and years, millennia and nanoseconds, devices of our own creation, mean the same thing to gnats and to cedars? The particular moment and the collective years seem to bear little relation to one another. It's only what happens that matters. If there is meaning in the past and in the imagined future it is captured in the present. To be part of long term ecological reflection is then to be quite literally a mirror on a moment and then let time take care of itself.

When you have all the time in the world, you can spend it, not on going somewhere, but on being where you are. And observing the life of raindrops. In my bright yellow slicker, I walked through the forest and down to the stream. Listening.

This Oregon rain, at the start of winter falls steadily in sheets of gray. Falling unimpeded it makes a gentle hiss. You'd think that rain falls equally over the land, but it doesn't. The rhythm and the tempo change markedly from place to place. Standing in a tangle of salal and Oregon grape, the rain strikes a ratatatat on the hard, shiny leaves, the snare drum of sclerophylls. Rhododendron leaves, broad and flat receive the rain with a smack that makes the leaf bounce and rebound, dancing in the rain. Beneath this massive hemlock, the drops are fewer and the craggy trunk knows rain as dribbles down its furrows. On bare soil the rain splats on the clay while fir needles swallow it up with an audible gulp.

In contrast, the fall of rain on moss is nearly silent. I kneel among them, sinking into their softness to watch and to listen. Rain falls all around me but all I can hear is the splat on my raincoat. The drops are so quick that my eye is always chasing, but not catching their arrival. At last, by narrowing my gaze to just one single frond- and staring- I see it. The impact bows the shoot downward, but the drop itself vanishes. It is soundless. There is no drip or splash, but I can see the front of water move, darkening the stem as it is drunk in and silently dissipated among the tiny shingled leaves.

Most other places I know, water is a discrete entity. It is hemmed in by well defined boundaries, lake shores, stream banks or the great rocky coastline. You can stand at its edge and say "this is water" and "this is land". Those fish and those tadpoles are of the water realm; these trees, these mosses and these 4-leggeds are creatures of the land. But here in these misty forests those edges seem to blur, with rain so fine and constant so as to be indistinguishable from air. Cedars wrapped with cloud so dense that only their outline forms emerge. Water doesn't seem to make a clear distinction between gaseous phase and liquid. The air merely touches a leaf or a tendril of my hair and suddenly a drop appears.

Even the river, Lookout Creek, doesn't respect clear boundaries. It tumbles and slides like an ordinary creek down its main channel, where a dipper rides between pools. But, Fred Swanson, a hydrologist here at the Andrews has told me stories of another stream, an invisible shadow of Lookout Creek, the hyporheic flow. This is the water that moves under the stream, in cobble beds and old sand bars. It edges up the toe slope to the forest, a wide unseen river that flows beneath the eddies and the splash. A deep invisible river, known to roots and rocks, the water and the land, intimate beyond our knowing. It is hyporheic flow that I'm listening for.

I wander the paths along the shore just looking. I lean up against an old cedar with my back nestled in its curves and try to imagine the currents below. But all I sense is water dripping down my neck. Every branch is weighted down with curtains of Isoetecium and droplets hang from the tangled ends, just as they hang from my hair. When I bend my head over, I can see them both. But the droplets on Isoetecium are far bigger than the drops on my bangs. In fact the drops of moss water seem larger than any I know and they hang, swelling and pregnant with gravity far longer than the drops on me, or

on twigs or bark. They dangle and rotate, reflecting the entire forest and a woman in a bright yellow slicker.

Can I trust what I think I'm seeing? I wish I had a set of calipers, so that I could measure the drops of moss water and see if they really are bigger. But surely all drops are created equal? I don't know, so I take refuge in the play of scientists, spinning out hypotheses. Perhaps the high humidity around moss makes the drops last longer? Maybe in their residence among mosses, they absorb some property which increases the surface tension of the drop, making it stronger against the pull of gravity? Perhaps it's just illusion, like how the full moon looks so much bigger at the horizon. The diminutive scale of the moss leaves makes the drops appear larger? Maybe they want to show off their sparkles just a little longer?

After hours in the penetrating rain, I am suddenly cold and damp. Where are the dry places, I wonder? Surely there are niches here and there where the rain does not reach. I poke my head into an undercut bank by the stream, but its back wall runs with rivulets. No shelter there, nor in the hollow of a treefall where I hoped the upturned roots would slow the rain. A spider web hangs between two dangling roots. Even this is filled, a silken hammock cradling a spoonful of water. My hopes rise where the vine maples are bent low to form a moss draped dome. I push aside the *Isoetecium* curtain and stoop to enter the tiny dark room, roofed with layers of moss. It's quiet and windless, just big enough for one. The light comes through the mosswoven roof like pinprick stars, along with the drips.

As I walk back to the trail, a giant log blocks the way. It has fallen from the toe slope out into the river, where its branches drag in the rising current. Its top rests on the opposite shore. Going under looks easier than going over, so I drop to hands and knees. And here I find my dry place. The ground mosses are brown and dry, the soil still soft and powdery. The log makes a roof overhead more than a meter wide in the wedge shaped space where the slope falls away to the stream. I can stretch out my legs, the slope angle perfectly accommodating the length of my back. I let my head rest in a dry nest of *Hylocomium*, and sigh in contentment. My breath forms a cloud above me, up where brown tufts of moss still cling to the furrowed bark, embroidered with spider webs and wisps of lichen that haven't seen the sun since this tree became a log. This log, inches above my face weighs many tons. All that keeps it from seeking its natural angle of repose upon my chest is a hinge of fractured wood at the stump and cracked branches propped on the other side of the stream. It could loose those bonds at

any moment. And one day it will. But given the fast tempo of raindrops and the slow tempo of treefalls, I feel safe in the moment. The pace of my resting and the pace of its falling run on different clocks, so I stretch out, close my eyes and listen to the rain.

The cushiony moss keeps me warm and dry, and I roll over on my elbow to look out upon the wet world. The drops fall heavily on a patch of *Mnium insigne*, right at eye level. This moss stands upright, nearly two inches tall. The leaves are broad and rounded, like a fig tree in miniature. One leaf among the many draws my eye by its long tapered tip, so unlike the rounded edges of the others. As I lean in closer, my head lines up with the drip line of the log, but no matter. The thread-like tip of the leaf is moving, animated in a most un-plantlike fashion. The thread seems firmly anchored to the apex of the moss leaf, an extension of its pellucid green. But the tip is circling, waving in the air as if it is searching for something. Its motion reminds me of the way inchworms will rise up on their hind sucker feet and wave their long bodies about until they encounter the adjacent twig, to which they then attach their forelegs, release the back and arch across the gulf of empty space. But this is no many-legged caterpillar; it is a shiny green filament, a moss thread, lit from within like a fiber-optic element. As I watch, the wandering thread touches upon a leaf just millimeters away. It seems to tap several times at the new leaf and then as if reassured, it stretches itself out across the gap. It holds like a taut green cable, more than doubling its initial length. For just a moment, the two mosses are bridged by the shining green thread and then, green light flows like a river across the bridge and vanishes, lost in the greenness of the moss. Is that not grace, to see an animal made of green light and water, a mere thread of a being who like me has gone walking in the rain?

Down by the river, I stand and listen. The sound of individual raindrops is lost in the foaming white rush and smooth glide over rock. If you didn't know better, you might not recognize raindrops and rivers as kin, so different are the particular and the collective. I lean over a still pool, reach in my hand and let the drops fall from my fingers, just to be sure and indeed there are drops in that river, and both the hanging drop and the surface of the river reflect back to us, the forest.

Between the forest and the stream lies a gravel bar, a jumble of rocks swept down from high mountains in a river-changing flood last decade. Willows and alders, brambles and moss have taken hold there, but this too shall pass, says the river.

A few days later, I walk with my friend Jesse to the gravel bar again. Alder leaves lie fallen on the gravel, their drying edges upturned to form leafy cups. Rainwater has pooled in several leaves and it is stained red brown like tea with tannins leached from the leaf. Strands of lichen lie scattered among them where the wind has torn them free. Suddenly we see the experiment needed to test my hypothesis, the materials are laid before us. We find two strands of lichen, equal in size and length and blot them on my flannel shirt inside my rain coat. One strand Jesse places in the leaf cup of red alder tea, the other I soak in a pool of pure rainwater. Slowly we lift them both up, side by side and watch the droplets form at the ends of the moss strands. Sure enough they are different. The plain water forms small, frequent drops that seem in a hurry to let go. But, the droplets steeped in alder water grow large, heavy and hang for a long moment before gravity pulls them away. I feel the grin spreading over my face. There are different kinds of drops, depending on the relationship between the water and the plant. If tannin rich alder water increases the size of the drops, might not water seeping through a long curtain of moss also pick up tannins, making the big strong drops I thought I was seeing?

Where new gravel meets old shore, a still pond has formed beneath the overhanging trees. Cut off from the main channel it fills from the rise of hyporheic flow, the water rising from below to fill the shallow basin, where summers daisies look surprised to be submerged two feet deep now that the rains have come. In summer, this pool was a flowery swale, now a sunken meadow that tells of the rivers transition from low braided channel to the full banks of winter. It is a different river in August than in October. You'd have to stand here a long time to know them both. And even longer, to know the river that was before the coming of the gravel bar, and the river that will be after it leaves.

Perhaps in just this moment, we cannot know the river. But what about the drops? I stand for a long time, quietly by the still backwater pool and listen. It is a mirror for the falling rain and is textured all over by its fine and steady fall. I strain to hear only that sound among the many, and find that I can. It arrives with a high sprickley sound, a shurring so light that it only blurs the glassy surface, but does not disrupt the reflection. The pool is overhung with branches of vine maple reaching from the shore, a low spray of hemlock and from the gravel bar alder stems incline over the edge. Water falls from each of these into the pool, each to its own rhythm. The hemlock makes a rapid pulse. Water collects on every needle, but travels to the branch

tips before falling, running to the drip line where it releases in a steady pit, pit, pit, pit, drawing a dotted line in the water below.

Maple stems shed their water much differently. The drips from maple are big and heavy. I watch them form and then plummet to the surface of the pool. They hit with such force that the drop makes a deep and hollow sound. Bloink. The rebound causes the water to jump from the surface, so it looks as if it were erupting from below. There are sporadic bloinks beneath the maples. Why is this drop so different than the hemlock drips? I step in close to watch the way that water moves on maple. The drops don't form just anywhere along the stem. They arise mostly where past years bud scars have formed a tiny ridge. The rainwater sheets over the smooth green bark and gets dammed up behind the wall of the bud scar. It swells and gathers until it tops the little dam and spills over, tumbling in a massive drop to the water below. Bloink.

Sshhhhh from rain, pitpitpit from hemlock, bloink from maple and lastly popp of falling alder water. These drops come more rarely, a slow music. It takes time for fine rain to traverse the rough surface of an alder leaf. It's not as big as a maple drop, not enough to splash, but its popp ripples the surface and sends out concentric rings. I close my eyes and listen to all the voices in the rain.

The reflecting surface of the pool is textured with their signatures, each one different in pace and resonance. Every drip it seems is changed by its relationship with life, whether it encounters moss or maple or fir bark or my hair. And we think of it as simply rain, as if it were one thing, as if we understood it. I think that moss knows rain better than we do, and maples. We should be listening. Maybe there is no such thing as rain; there are only raindrops, each with its own story.

Listening to rain, time disappears. If time is measured by the period between events, alder drip time is different than maple drop. Isn't it likely that the surface of this forest is as textured with different kinds of time as is the surface of the pool textured by different kinds of rain? Fir needles fall with the high frequency hiss of rain, branches fall with the bloink of big drops and trees with a thunderous thud, so rarely. Unless you measure time like a river, which catches trees many times in its life. And we think of it as simply time, as if it were one thing, as if we understood it. Maybe there is no such thing as time; there are only moments, each with its own story.

Every drop has a life of its own, a story colored by its meetings and we can no more see the drops in the river than we can see the river which shifts from season to season, year to year so that we scarcely know it. And so, you two hundred years of writers, how blessed we are to have a chance to go beyond ourselves, to listen to the stories of this place, to give voice to rain. Our pages may stretch like a mysterious being, reaching across the gulf, connecting us. We need each other, all the voices, yours and mine, hemlocks, sword ferns, gnats, ravens and green thread animals, to tell the stories, to hand them down so that we might come to know the river and together ride its currents to safety.

**Author's Bio:**

*Robin is a writer (Gathering Moss: a Natural and cultural history) and professor of plant ecology whose research interests include the ecology of mosses and the role of traditional ecological knowledge in ecological restoration. She has an active research program in the ecology and restoration of plants of cultural significance to Native people. Sharing the natural world with students is a joy to her and she teaches courses in aspects of botany, ecology and Ethnobotany. She is an enrolled member of the Citizen Band Potawatomi. Her interests in restoration include not only restoration of ecological communities, but restoration of our relationships to land. She is the mother of two daughters and lives on an old farm in upstate New York, where she tends gardens, wild and cultivated. This essay is the product of a week-long residency in September 2004 at the H.J. Andrews Experimental Forest near Blue River, Oregon, sponsored by the U.S. Forest Service and Oregon State University's Spring Creek Project for Ideas, Nature, and the Written Word.*