

Of Mountains and a Moth

Tyra Olstad

The moth struggled to break free from the cold, wet rock to which it was stuck. Rain had left its pale green wings tattered and translucent, plastered to the mountaintop. When it finally managed to wriggle one wing up, it was pelted back flat. Another wing loose! Only to be caught by the wind, flipped over, and stuck again. It looked so pitiful—so broken and bewildered there, writhing and pulsing against the weight of its own soggy body—that I had to dash out to try to help it. To, oh, I don't know, cup my hands over it, shelter it from the huge drops beating down? Gently peel it off the bedrock? Then what? Carry it away from the summit and toss it over the cliff? Commiserate; try by empathy or sheer hope to will it back to life?

There was nothing I could do. Instead of executing a rescue mission, I found myself looming over the poor thing, helpless and hapless, and watching its little life fade. I might have stayed there all afternoon but for a generous gust of wind that scooped it up and sent it tumbling into a soft patch of moss nearby.

Absolved of responsibility, I retreated back to the giant boulder that provided the only semblance of shelter on the otherwise exposed summit. I'd been huddling against the southeast side of that big rock for at least an hour, trying (unsuccessfully) to stay somewhat dry. While there, I had nothing to do but watch mist swirl and wait for the rain to cease or the day to end. Mist, rain, rock; rock, rain, mist—that was my pre-moth world. Although I was officially supposed to stay there—crouching behind a forlorn glacial erratic on the top of a mountain in the pouring rain—until five p.m.-ish, I was considering leaving early. Having not seen anyone since midmorning, I sincerely doubted that any hikers would show up in such miserable weather. Besides, if I did happen to cross paths with anyone on my way down, I could still give them the “Rock Walk Talk” below the summit. (Please be careful to stay on the marked trail and step only on durable surfaces. The Arctic-Alpine vegetation is extremely rare and fragile...) My job was to try to protect the plants, not court hypothermia. Or pneumonia. My job was not to watch moths die.

“It will be okay,” I whispered to myself, hunching even lower and trying to arrange my pack and raincoat into a weather-resistant fort behind the boulder, “that battered insect is tougher than it looks.” It's resilient. It's safe, cradled by moss and sheltered by patches of deer's hair sedge. “It will be okay.” I didn't believe myself, but that lonely luna moth was my only hope, the only trace of beauty in an otherwise cold, wet, cruel, and grey world.

On other days (in better weather), the view from where I sat is absolutely spectacular. From atop Algonquin Peak—the second highest mountain in New York State—I could look out and see dozens of other ranges and ridges, countless shimmering ponds and lakes, thousands of acres of thick, dark forest unfurling across a sea of state-protected wilderness. Although I knew there were, in fact, a few roads and towns tucked away within hiking distance and that the entire region was studded with lean-tos and laced with trails (affording “outstanding opportunities for a primitive and unconfined type of recreation,” as per the Wilderness Act of 1964), the “imprint of man’s work” was, per state and national definition, legislation, and enforcement, “substantially unnoticeable.”¹ The place looked primeval. Natural. Wild.

The Adirondacks.

At six million acres (nearly 1.1 million of which are designated “Wilderness” and another 1.3 million of which are “Wild Forest”), Adirondack State Park is the largest park in the contiguous United States, as well as one of the oldest, and arguably, most loved protected places. Hikers and hunters, canoers and climbers, painters and poets, and the wealthiest of the East Coast elite have come to the region seeking rest, relaxation, inspiration, and/or adventure for more than a century and a half. The landscape is immortalized in paintings by Thomas Cole and poems by Ralph Waldo Emerson. The architecture is perpetuated in “haute rustic” cabins and Adirondack chairs. Historical figures such as Theodore and Franklin Delano Roosevelt cherished and sought to protect the region. Article XIV of the New York State Constitution, which ensures that the Forest Preserve be “forever kept as wild,” was the first and one of the United States’ most stringent mandates for wilderness preservation. As such, the Adirondacks were a source of inspiration for Bob Marshall and Howard Zahniser—wilderness advocates, founders of the Wilderness Society, and, in the case of the latter, primary author of the National Wilderness Preservation Act of 1964.²

Today, Adirondack Park is within a day’s drive from several urban areas, including Syracuse, Albany, Montreal, New York City, and Boston. Millions of people come each year to relax in luxurious resorts or camp in backcountry lean-tos, paddle leisurely around lakes and listen for the call of the loon, ski, snowshoe, soak in the piney scent of the woods and, of course, hike. Although there are more than two thousand miles of established and fairly-well-maintained trails (and far more abundant trailless terrain, ripe for exploring), many hikers aim for the “High

¹ An Act to establish a National Wilderness Preservation System for the permanent good of the whole people, and for other purposes. Public Law 88-577 (16 U.S. C. 1131-1136). 88th Congress, Second Session. September 3, 1964.

² For more information, see: Philip G. Terrie. *Contested Terrain: A New History of Nature and People in the Adirondacks (2nd Edition)*. Syracuse: Syracuse University Press, 2008.

Peaks”—the forty six (or, technically, forty-two or forty-three) mountains that rise up above an elevation of four thousand feet. (The count of forty-six came from Bob Marshall, who, along with his brother Robert and friend/guide Herb Clark, decided to climb the tallest peaks and set the bar at four-thousand-footers. Working off maps from the 1910s-1920s, they located and mostly bushwhacked their way to the top of all forty-six that met their criteria. Soon thereafter, other avid hikers set out to follow in their footsteps and established an “Adirondack Forty-Sixers” club. It wasn’t until later that surveyors realized that four of the summits are, in fact, below four thousand feet in elevation and one taller mountain was left off the list. Today, though, with nearly nine thousand people having conquered the original forty-six and countless more aspiring to do so, the number is well entrenched in tradition.)³

What is it about these mountains that people find so alluring? Is it the legacy, the landscape, the thrill of the climb? The scenery, the superlatives, the sense of adventure? Challenge, triumph, *topophilia*?

For that matter, what is it about *any* mountain that people find so alluring? Why do people spend hundreds or thousands of dollars for gear and travel, willingly court hunger, aches, and blistered feet, sometimes even put themselves in mortal danger just to stand on top of Fuji or Kilimanjaro, Denali, or Everest? The beauty, the peril; why climb them, because they’re there?

Confession: I have never liked mountains. I am a plains person. I like my skies wide and horizons distant. I like the smell of the sage and the swirl of dust, not trees and mud and, good God, definitely not black flies. In my years of wandering around the Intermountain West and Alaska, I’ve always been drawn to big, sweeping, empty spaces. I like to see storms rolling in.

When I took a job in Central New York a few years ago, people kept telling me about this magical place called “the Adirondacks.” I didn’t expect the mountains to rival others I’d visited nor could the forests and streams be as pristine, but I figured I’d better give the place a chance. So many people (so many people!) loved the Adirondacks that there had to be something there. (Destination for millions! Inspiration for “wilderness”! A shining example of public/private conservation!)

I applied for a summer job as a “Summit Steward,” duties: hike to the top of one of the highest of the high peaks each day, talk with every hiker there, perform minor trail work, and/or assist with ecological research projects, all in the name of protecting the rare and fragile Arctic-Alpine vegetation. (If I was going to get to know the place, well then I was going to get as full an

³ Adirondack Forty-Sixers, Inc. *Heaven Up-h’isted-ness! The History of the Adirondack Forty-Sixers and the High Peaks of the Adirondacks*. Cadyville: Adirondack Forty-Sixers, 2011.

“Adirondack experience” as possible.) During the final interview, when my potential employers asked me why I wanted to be a summit steward, I rambled something about wanting to help protect New York’s natural heritage and contribute to the honourable work of wilderness preservation, then clearly asserted that I hoped to learn how to “think like a mountain.”

That was what intrigued me. I didn’t understand mountains—their ecology, their appeal—and hoped that with time and intimacy I might learn to appreciate them. If I sat quietly enough and listened carefully enough, I might hear what the mountains were singing. If I watched attentively enough and worked hard enough, I might learn something of whatever it was they had to teach me. If I spent an entire season living in the High Peaks Wilderness—breathing the mountain air, drinking the (filtered) mountain water—I might absorb some sort of fierce green fire.

Thus I found myself crouched behind a giant boulder atop Algonquin Peak late one July afternoon, exposed to the cold, sideways-blowing rain, surrounded by an infinity of opaque grey mist, empty and alone but for a soaked and tattered pale green moth.

Even though the rain showed no sign of letting up any time soon, the moth might have been okay—or, at least, I might have been able to believe that the moth would be okay, settled on its soft patch of moss—until a dark-eyed junco swooped in to claim an easy meal.

The treachery! The treason! Oh, how I hated that little bird! Normally, juncos were my chipper companions. A few of them would arrive each day at noon to peck at hikers’ picnic crumbs, then they’d spend the rest of the afternoon hopping towards me and fluttering away as they alternately expected me to feed them and realized I wasn’t going to do so. I always greeted their arrival, practically timing my watch by it—juncos promptly at twelve; ravens precisely at two. I laughed at their antics, admired their foraging strategy, and envied their optimism. I even talked to them (As I did with the ravens. And the rocks and the clouds.): “No, I am not going to share my granola with you, but there are some tasty-looking crowberries in that patch over there...” Although I loved the clear song of the white-throated sparrow and kept my eyes peeled for rare Bicknell’s thrush, up to that point, I would have said that juncos were my favourite white-breasted, grey-backed, dark-beady-eyed little birds. A junco! It had to be a junco!

“Get away! Get away from it!” I shouted, and ran out, intending to shoo the predator away from its prey. My muscles were stiff and cramped from crouching, though; I stumbled and fell. Sprawled out on the cold, wet rock, I was even more helpless and hapless than before. I could only watch as the junco, which didn’t deign to acknowledge my presence, stabbed at the moth with swift, triumphant ferocity. Though the insect was nearly as big as the bird, in these sopping

circumstances, there was nothing it could do to flee or fight back. Did it know it was done for? Did it know it would die?

I couldn't watch. But I also couldn't bring myself to stand up, retreat back to my semi-shelter, and pretend nothing was happening—that the moth was fine or, better yet, that it had never blown into my life; that the rain and mist would eventually end and that tomorrow would be blue-skied. I couldn't believe there was any possibility of ever being warm and dry. I couldn't believe that anyone actually liked this place. I couldn't believe there was any point to trying to save anything. I lay there, out on the cold, hard, billion-year-old bedrock, feeling angry at the Adirondacks and saddened by the world. The junco kept killing. The rain kept falling, washing away my pathetic tears.

I hated it there. Not just there, that moment, but there, that whole summer. Sure, there were moments of grace, particularly in the early mornings and late afternoons, when the light was soft and I had the summits all to myself. And of course, I enjoyed looking out over that expanse of wilderness, especially when cloud-shadows skittered across the forest and sunlight snagged on the peaks. I absolutely loved watching storms build or, better yet, break open. (I had a bad habit of lingering above the tree line a bit longer than was safe—until I felt rumbles in my feet and electricity in the air.) Even though I nurtured a mild contempt for those who spoke of “conquering” or “checking off” mountains, I couldn't help relishing the dose of adrenaline and the rush of euphoria I felt when I made it to the top each day.

But oh, the hike to get to the top was awful. Mud, stones, and roots. Mile after mile of misery. Most of the trails were cut in the late nineteenth and early twentieth centuries, before anyone had studied principles of erosion or recognized the value of a gradual incline. Now they're steep, bouldery ruts that shoot straight up the slopes without a switchback in sight. Worse yet, they turn into sloppy, slippery, boot-sucking, ankle-twisting puddles if not streams whenever it rains.

It rained all the time. Rained and rained and rained, May into June (“Don't worry, it eventually ends,” people promised me) and most of July (“This is an unusually wet year,” they apologized). If it wasn't raining, it was buggy. Black flies emanated straight from stone.

Discomforts aside (in fact, they're rather a point of pride for Adirondackers), the work itself often felt disheartening if not downright futile. Each (sunny) day, I talked with hundreds of hikers. Took their photos. Gave directions. Recited the Rock Walk Talk. And each day, I caught at least a few tromping blithely through a meadow of Bigelow's sedge or standing squarely on a patch of sandwort. “Oh, you mean these plants?” they'd ask. Or, “I'm just trying to catch a better view; I'll be quick.”

Arctic-Alpine ecosystems aren't adapted to being stepped on by anything bigger than a snowshoe hare. The plants are exquisitely capable of withstanding high winds, extreme cold, intense solar radiation, and wintry coatings of ice—they tend to hunker down low to the ground, conserving heat and moisture by staying small and relatively compact—but have no defense against the crushing force of a boot. (Some species can only tolerate being stepped on five times before they show signs of reduced growth.) They know how to lace their roots into and extract nutrients from the thin, acidic soil—soil that's taken thousands of years to form, yet is only a few centimeters deep—but don't know what to do when the soil is compacted or, worse yet, broken up and eroded away. In fact, that's the biggest danger—if the soil washes or blows away, it will take another few hundred or thousand years to reform.

Unfortunately, the plants are being stepped on; the soils are in fact eroding. As mountain climbing in general and the Forty-Sixer challenge in particular became more and more popular in the late 1960s to early 1970s, more and more hikers began tromping on up to the summits. Not knowing how unique and delicate the mountaintop ecosystems are (there are only an estimated eighty-five acres of the vegetation in New York State, found on just a dozen or so high peaks), some picnicked in deer's hair sedge and pitched their tents atop alpine goldenrod. Some stumbled out to scenic overlooks, overlooking the diapensia or dwarf willow destroyed underfoot. By the 1980s, social trails wove willy-nilly around the summits, which were increasingly bare.

Salvation came in the form of Dr. Edwin Ketchledge. An avid climber (Forty-Sixer #507) and a biologist at the State University of New York College of Environmental Science and Forestry in Syracuse, he recognized the vulnerability of the Arctic-Alpine zones and embarked on a mission to restore and preserve them by lugging hundreds of pounds of soil and lye up the steep rugged trails and reseeding patches to stop erosion and allow for the regrowth of native plants, and perhaps most significantly, by advocating for greater public outreach and education via a summit steward program.

In 2014, the Adirondack High Peaks Summit Steward program, sponsored by the Adirondack Mountain Club, New York State Department of Environmental Conservation, and the Nature Conservancy, and also supported by the Adirondack High Peaks Foundation and 46R Conservation Trust, celebrated twenty-five years of good, hard conservation work. Repeat photography shows significant regrowth of sedge meadows and sandwort, and botanical surveys suggest that rare and endangered species are hanging on, if not reappearing. Summit stewards have become familiar features on Mt. Marcy, Algonquin Peak, and Wright Peak, as well as Cascade Mountain and Mt. Colden. The first season I stewarded, five paid employees and at least twice as many hearty, dedicated volunteers spoke with nearly thirty thousand hikers about the importance of protecting the vegetation.

Thirty thousand people! What brings them to these mountains? What are they learning here? When camp groups and couples and solo hikers stay on the summits for a few minutes or hours, what do they see? If they come on a bright sunny morning, how will they know what it feels like in the rain? If they come on a dreary, drizzly afternoon, how will they know what the air tastes like when it's fresh and light? Summer versus winter, dawn versus dusk, even if they come back day after day, year after year, does anyone feel the rhythms of the wind and memorize the profile of every peak? Who learns the names of the plants, the locations, the phenology? Does anyone know to watch for the ravens at two and the juncos at noon? Does anyone realize how rare and precious it is to see one pale green luna moth tumble out of the mist, and then how heartbreaking it is to watch it die?

I didn't know it on that miserable afternoon, but luna moths (*Actias luna*, a saturniid with moon-like eyespots) only live for about a week beyond the caterpillar stage of their life cycle. As adults, they only have vestigial mouthparts and thus are unable to feed. They typically emerge in the morning, mate at night, and then spend the rest of their short lives laying eggs and/or flying around, hopelessly luminous.

According to the Cornell Lab of Ornithology, dark-eyed juncos (*Junco hyemalis*, small grey-blue sparrows) are one of the most common birds of North America, native to high coniferous and mixed forests. While many of the six hundred thirty million individuals migrate out of lowland territory in the summer, the population in the Adirondacks stays there year-round, foraging for seeds through the winter and feasting on insects during the breeding season. Depending on how adept they are at finding food and escaping predators, they typically live three to eleven years.

Three to eleven years. How old was the junco I saw that afternoon? How many summers had it spent in the Adirondacks? How often, if ever, had it had a chance to gorge on a moth, then use that energy to breed?

As their name suggests, dwarf willow (*Salix herbacea*) are tiny trees that creep out of crevices and gnarl behind windbreaks, doing their best to stay out of reach of debilitating rime ice. It takes them about a century to grow a trunk the thickness of my thumb.

Diapensia (*Diapensia lapponica* subsp. *lapponica*)—low, compact cushion plants found matted on mountaintops in eastern North America only as far south as the Adirondacks—may, over the course of several hundred years, manage to grow to the size of a salad bowl.

Lichens and mosses, how slow are they to grow? Intrepid pioneers, they were likely the first life forms to settle in at the end of the last ice age, when the continental ice sheet retreated (dropping big boulders erratically on mountaintops and depositing seeds that had been scraped down from the Canadian Arctic), the bedrock was exposed to weathering forces, and soils began to form (slowly, slowly). “Islands of history,” mountain-climbing conservationist Edwin Ketchledge characterized the Arctic-Alpine communities—remnants of a ten-thousand-year-old tundra that once covered most of New York State.

Of course, the mountains themselves are older, having been sculpted by the ice some two hundred fifty thousand years ago, after doming up five to ten million years before that. The rock itself is Precambrian—anorthosite and gneiss that burbled up and metamorphosed when earth’s land masses collided to form the supercontinent Rodinia, 1.1 billion years ago.

One-point-one billion years ago.

I’d been there for a little more than two months. Two, mostly cool, rainy, and buggy months, with a few rare and delicious moments of sunshine. Two months of sore knees and blistered feet, and frustrated attempts to memorize peak names and plant taxonomy. Yes, two months of enjoying the view, sometimes meeting kind people, sometimes sitting and marvelling at the wildness, and the wondrousness and the immutability of the mountains, but sometimes not.

What was I doing there? What could I possibly do to help? What did I possibly think I would learn in a few fleeting months as a summit steward? Or that day, that afternoon, for that matter—cold, miserable, alone: what was the point?

Ed Ketchledge, again, reflecting on one of the rewards of visiting alpine summits: “You feel immersed and intimate with the natural world, a part of nature itself rather than a passive passenger over its surface. Climate and environment become a personal experience, a physical reality.”⁴

⁴ Ketchledge, Edwin H. “Adirondack Insights #24: The Four Rewards of Visiting Alpine Summits,” *Adirondac* (1993): 30-31.

I'd like to say that the mountain gods took pity on me: the rain tapered off and the sun broke through; crepuscular rays pierced through the clouds and illuminated brilliant green patches of forest below. Better yet, a rainbow! Colours arced horizon to horizon, shimmering with joy and promise. Birds started singing, no flies started buzzing, the mud dried immediately, and tiny flowers burst into bloom.

But no, it just kept raining. And raining. And raining. I stayed dutifully until five p.m. A bit later, in fact—I was loath to leave the stolid comfort of my rock to hike down the questionably slippery, splooshy trail. By the time I'd convinced myself to stand up and shake the cramps from my legs, both moth and junco were gone, the latter's flight fuelled by the former. No colour, no comfort there, just the grand order of things.

At some point (Not that day, maybe the next?) the rain did finally pause. Surely, birds did sing. I didn't ever encounter another luna moth, but I saw my first rainbow on my final afternoon on Algonquin Peak, weeks later. Perhaps because of that rare moment of grace, I returned to steward for a second season. And I hope to return again next year. Again, again, I guess I'll have to return to the Adirondacks until I've had my fill of fierce beauty, until I understand. Humility, tenacity; short brilliant life, silent old rock.