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Searching for Arnica

A yellow-flowered plant goes missing

Bob Zaino



MANY MOUNTAIN PLANTS ARE RARE, BUT ARNICA IS MISSING. Arnica—its formal scientific name is *Arnica lanceolata*, or lance-leaved arnica—is a yellow flower in the aster family. It grows in the wet alpine ravines and subalpine gullies of the New England mountains.

It's not actually missing everywhere. I've seen arnica in Huntington Ravine, below Mount Washington's summit in New Hampshire, while waiting for my turn to start up a busy rock climb. A careless observer might mistakenly think the plant little different than the pretty but ubiquitous black-eyed Susans that litter New England's roadsides. Arnica stands only 1 to 2 feet tall. Narrow, tapered leaves are arranged opposite each other on its stem. Arnica has no black eye; its flower head is pure yellow.

In my state, Vermont, arnica is missing. In 1911, a pair of botanists exploring Mount Mansfield found two populations. Along with a pressed museum specimen in the Harvard University Herbaria—proof that the plant was indeed seen—are intriguing notes about the location of one observation: “brook-bed, N.E. shoulder of Mt. Mansfield above Smugglers' Notch.”

No one has found those plants again.

A century later I, too, explore Smugglers' Notch, searching cliffs and gullies for plants. More than 50 different rare species have been found growing in this steep and narrow mountain pass. This biological diversity is largely of geological origin. Unlike most other mountain areas in the Northeast, the bedrock of Smugglers' Notch is rich in calcium, an important plant nutrient. Species that could never survive in calcium-poor places thrive here in abundance. Combined with the relatively high elevation and cold weather, the result is a flora found in few other places in New England. Ecologically, it is as unique and important as the vegetation of a mountaintop alpine zone.

Smugglers' Notch appears to be ideal for arnica. Groundwater seeps out of the forests and cliffs. Wet, craggy, subalpine habitat abounds. Surely, the plant must be there. So I look. Even on these rugged mountainsides, finding a 2-foot-tall, bright yellow flower doesn't seem it should be that difficult. I've scrambled up gullies and thrashed through spruce past streambeds at the top of the ridge. Each time, I fully expect to be greeted by arnica. It's never there. Others, much better botanists than I, have experienced the same disappointment.

Narrow, tapered, yellow leaves cluster on the small arnica plant. MATTHEW PETERS

I ALSO EXPLORE SMUGGLERS' NOTCH AS A CLIMBER. THE ROCK AND ICE have attracted the talent of Fritz Wiessner and John Bouchard. Compared with them, I'm a nobody. Just another guy with a rack and a rope eager to try out Vermont's approximation of alpine climbing. It does not disappoint. Quartz Crack, a rock route up the main wall directly above the tourist parking lot, is four pitches that are increasingly challenging until finally you traverse out under a mighty overhanging roof hundreds of airy feet above the gawkers below. Belaying this pitch once, I looked down to see a crowd gather, and I started to make out individual voices.

"Oh, my goodness, he's on the rock!"

"Look, there's another person up there!"

It's nice to know that even a nobody can impress someone. The tourists are part of life in the notch. Thousands of people drive into the notch to sightsee, to hike, and to wander around enormous talus boulders. Even in winter, the unplowed road is busy with casual walkers and cross-country skiers at what seems like all hours of the day. Their cacophony can carry into surprising places. As with the dull roar of the interstate I hear climbing Cannon Cliff on New Hampshire's Cannon Mountain in Franconia Notch, I find that, oddly, the sounds reinforce my isolation from the ground. The proximity of the normal and familiar makes the challenge and commitment of climbing these short, wild routes that much more unnerving.

I notice rare plants when I am climbing. Rappelling one day after ascending a popular route, I looked under an overhang and found a previously unknown clump of a rare species, fragrant fern. Certainly other climbers have rappelled past it. I just happened to recognize the fern and record the observation. It's pretty much dumb luck that any human ever noticed it there at all. Were it not for the combination of decent holds, protectable cracks, and solid rappel anchors, no one would be on that part of the face, let alone someone excited about the finer points of fern identification. A few feet away, on unclimbed rock, another clump of ferns might easily remain forever undiscovered.

Since it hasn't been seen in over a hundred years, the scientific consensus is that arnica no longer grows in Vermont. It is "presumed extirpated." Perhaps, though, we are too quick to give up on arnica. If a rare fern could be right in front of climbers' rappel devices, yet remain unseen by science, then surely other species must also be overlooked. Maybe we underestimate just how many rivulets, each one a potential site for this missing flower, pour down the cliffs and gullies of Smugglers' Notch.

Climbing among so many rare plants inevitably leads to conflict. I think back to a cold winter day—a gray, monotone day with the notch covered in rime and the spindrift blowing uphill. A friend and I trudge up a snowy fan of talus to the base of one of the prominent gullies, intent on climbing it. The route begins at a large chockstone, forcing climbers temporarily out of the main gully to pass it. There is no tourist cacophony on this day, just fog and wind. Shivering, we drink warm tea and rope up.

I take the lead, starting delicately up slabby, snow-covered rock. With deeper snow or good ice, the moves would be trivial. But there is no ice and just a thin layer of unconsolidated snow. My footing is precarious.

I wrap a nylon sling around the base of a small clump of shrubby green alder—uncommon in Vermont—and attach the sling to my rope. This may protect me against a long fall back to the talus. But alders' stems are skinny and probably would rip out if I slip. Finally, I find good feet, sinking my



Climbers' boots can disturb delicate plants, such as this white saxifrage, seen here in Smugglers' Notch. BOB ZAINO

crampons into a patch of frozen turf. I'm steady again—but at the expense of tiny plants. Broken bits of purple saxifrage, very rare in Vermont, go flying in the wind.

Under deep snow or ice, plants are protected until spring. The desire for challenge, though, doesn't always lead us to fat ice or easy snow. I've read that, in Scotland, the winter climbing community has arrived at guidelines for what's "in nick," or fair game to climb, so that plants and the rock are protected. Here in Vermont we have no rules. The only ethic to guide me is my own.

My ethic alone won't be enough, though. We're on a well-documented route many have climbed before and many will climb in the future. How many of those climbers have knifed their crampons into the turf? Purple saxifrage is abundant in the notch, so I hope my misstep will have a negligible impact. But how many kicks can these plants take? Could climbers, someday, be responsible for the loss of purple saxifrage?

Could we already be responsible for the loss of arnica?

Spindrift swirls around me. A tenuous stance on unprotected snowy rock in the cold wind is a poor place for calm ethical deliberation. I look uphill. I'm at a short wall, scarcely taller than a high step. If I commit to the move over the wall, there appears to be nothing but more slab and loose talus beyond. I try anyway, scratching for solid tool placements that aren't there. It's over. I down-climb, and we bail.

IN SUMMER, THE GULLIES ARE A COOL REFUGE ON THE HOTTEST DAYS. Water drips off the cliffs and cascades down the talus. On a pleasant sunny afternoon, the harshness of December and January is forgotten. Peregrine falcons tear across the thin ribbon of sky, their *kee-kee-kee* resonating across the notch. The gullies teem with butterwort; fleabane; purple, yellow, and white saxifrages; and many other rare plants. It's overwhelming to keep track of them all. But there's still no arnica.

I find myself staring at photographs and maps, looking for the next secret alcove in the mountain, the trickle of water that no botanist ever bothered to investigate. I end climbing days early, after a few pitches, to visit these places. Some are easy to explore; others remain tantalizingly out of reach. Smugglers' Notch is a small place, but it becomes infinitely large when contemplating a roped visit to every nook and cranny that might support a 2-foot-tall flower.

No matter the rumble of motorcycles or the yelling of tourists below. The more intimately I know the notch, the more wild it is.

Is arnica still out there, growing in Smugglers' Notch? As a scientist, I have to concede that it may not be. Sadly, plants can be extirpated. A single landslide could have wiped out the plants, or those earlier explorers could have picked every last flower for their scientific collection. It is not encouraging that so many experienced botanists have searched for the plant and failed to find it. But nature is tenacious. So much life clings to the sides of this mountain pass and improbably persists.

I may never see arnica in Smugglers' Notch, but I like to think it is still there. I imagine it in some alpine rill guarded by steep ramparts of crumbling schist, free from the curious eyes of scientists and adventurers.

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