

MARY PUTMAN

Calling them In, 2000
Acrylic on panel, 48 x 86 in



COURTESY THE ARTIST, PRIVATE COLLECTION

SHANNON ROSE RILEY

Loving a Hornworm in End-Times

Connecting to
the small in nature

Prologue: Early August 2019

Every morning, the dog and I descend the redwood stairs that Jherald built a few months back and step into a side yard that's partly shaded by an awning and hidden from view by a cedar gate. I call it my secret garden. It has a long concrete patio with potted plants lining the always-green strip of artificial grass that runs between the fence and the awning's edge. The pots contain flame-colored marigolds, violet-hued violas, fragrant thyme and rosemary, velvety black petunias, and a scraggly Cherokee Purple tomato plant. There are more tomatoes growing in back, Black Krim and Sungold, along with a giant pot of multicolored wildflowers and a red cigar bush that attracts the same iridescent green hummingbird daily. On the other side of the house, a raised bed brims with wild arugula and black bean bushes, purplish pods drying on the vine. In front, two enormous sages and a lavender bush exude intoxicating perfumes day and night. Colorful rose lantana nestles up against tufts of black mondo grass in two low, wide pots on either side of a young Pinkerton avocado tree that's just settling in. The fifty-year-old pink-flowering mystery tree out back has, for the first time, bloomed all summer long; we call her Mama.

While we rent the tiny lot in a mobile home park in Fremont, California, the 1972 mobile home is ours, and I am the steward of this small slice of earth. We planted most of this gloriousness, save for Mama. We feed the outdoor cats, an occasional skunk, and several crows on a daily basis—things thrive all around. I should probably add that I'm a city girl from Chicago who had a concrete alley as a backyard growing up. I have limited gardening experience and it's been years since I've had even a wee bit of land to tend. I'm utterly in love.

August 17, 2019, Saturday, 77/62°F

While watering my plants around six this morning, I discover some strange green bits on the patio. I'm in my turquoise robe squatting next to the little cluster and peering over the top of my glasses. Pellet shaped, somewhat larger than mouse scat, but green and geometrically segmented—they look like minuscule mulberries or

doll-sized hand grenades. Eight to ten of them congregate to one side of my potted Cherokee Purple. *What in the hell?* I examine the plant and don't see anything unusual. Seven green tomatoes in various stages of development hang from otherwise mostly bare branches. I quickly scan them and the few leaves but don't see anything, I look around the rest of the patio but don't find the pellets anywhere else.

I retreat inside to do a Google image search (that's right, I took a photo) and it doesn't take long to identify it as caterpillar poop—or frass, a new word I proudly post on Facebook along with the photograph. While online, I see an article about an internet-famous baby dugong who died from eating plastic. Sadness comes over me—a kind of hollow sensation that pushes against my diaphragm. I try to fill it with thoughts of Greta Thunberg, three days into her cross-Atlantic voyage to attend the UN Climate Action Summit in New York. Godspeed, I think, and I go back outside to search for the frass-producing, leaf-eating little fucker. Again, nothing.

August 18, 2019, Sunday, 79/58°F

It's the second day I see a lot of frass on the ground—wherever this caterpillar is, it's a frickin' frass machine. It's definitely fresh frass because I swept it all up last night. Still, I can't find the culprit. I've been caught standing in my robe by the tomato plant several times this morning and Jherald, a sometimes-stoic former marine, thinks I've lost my mind. I try to explain that I'm looking for a caterpillar, but he's not very interested.

This afternoon, I'm sitting at my kitchen table drinking tea and gazing out the large window to my right. I can see directly into the secret garden—the Cherokee Purple is less than eight feet away. All of a sudden, I see something smaller than a pea drop from the plant and bounce below. I run outside and look from whence the frass fell and there, I see it, almost directly at eye level on one of the top branches. I'm so startled I let out a little *oh!* and then lean in for a closer look. More than three inches long and the same color as the plant, he's got some impressive markings down each side—several dark spots in a row. I leave him there and go inside to do some research.

August 19, 2019, Monday, 78/59°F

First thing this morning, Cairo and I head down the steps into the side yard. He runs off to pee and bark at birds and I'm at the Cherokee Purple, searching for that caterpillar. It's my first day of vacation and I smell sage blossoms wafting over the gate.

There is fresh frass by the pot and I quickly find the intruder by following the path of decapitated stems and scanning for its body, which is fatter than most of the upper branches—wider than a cigarette but not as thick as my thumb. It is surely the biggest caterpillar I've ever seen, but again, city girl . . .

From what I discovered yesterday, it might be a tomato hornworm, some kind of moth larva. They say it won't kill a healthy plant but it can devastate an unhealthy one—the general attitude is that the hornworm is a pest and should be eradicated, especially where money and crops are concerned. Some recommend pesticides, others describe the pleasures of plucking them off and feeding them to chickens. It turns out you can order them online as a kind of high-protein delicacy for pet turtles and such. Who knew?

I take another peek at the little guy but am still mostly reviled by his squishy green softness and those markings. His bulbous head and the striped claws near his hungry mouth give me the creeps. I'm careful not to touch the minute hairs on his back as they might cause a rash, but I am compelled to feel the top of his bald head with my index finger, and I do. It's a chilly morning but I'm surprised that he's so cold and clammy. I realize my finger must feel incredibly warm to him and, almost in response, he squirms and starts to eat. I watch in surprise as the teeny claws shovel young leaves into his mouth.

Maybe it's because the fires in the Amazon rainforest are visible from space today—maybe it's because I learned that moths, however maligned, are also pollinators. Either way, I decide to let him stay.

August 20, 2019, Tuesday, 73/59°F

There's no poop this morning!—*What?* I don't know much about caterpillars, but I know everything poops and I'm concerned. I find him quickly and see he's not moving. I try to reposition one of the defoliated stems to get a closer

look and accidentally poke him in the side of the head with the stem's pointy end. A very small drop of clear liquid oozes out of him but he doesn't move. Now I feel even worse—and guilty. It seems that in trying to interact with this creature, I've harmed it instead. When I tell my husband about my concerns, he mocks me a little. "It's just a caterpillar." I walk away, upset.

August 21, 2019, Wednesday, 82/57°F

This is the second morning with no frass and no movement. He's not eating. I fear I might've killed him when I stabbed him in the head. I hope he's not in pain.

I busy myself throughout the day but the truth is, I'm worried. I continue to monitor his situation every hour or so. Nothing changes. I cautiously caress his head and he remains still. Ever so gently, I hold my finger there and focus on sending him positive energy. "I hope you feel better soon, little guy," I whisper. He's so big and exposed on that top branch, I realize he might be eaten by one of the crows—but I leave him alone and wait.

August 22, 2019, Thursday, 85/64°F

In a 6:00 A.M. text to my husband: *Fresh caterpillar poo outside! Yay! He's alive!*

Jherald: *Yay!*

Much relieved, I take a longer look at this little critter. He's a bit leaner—well, after two days of not eating, I would be too. His markings are darker than they were and resemble eight tiny black eyes running down each side. Each appears outlined with brown liner and each is paired next to a black-and-white diagonal stripe in a pattern that repeats along every segment of his body. At the top of his derriere is a reddish-pink horn about half an inch long. He looks rather magical, so I do more research.

Hornworms are the larval form of sphinx moths (*Sphinxidae*), also known as hummingbird moths or hawkmoths, primarily because of the way they hover while drinking nectar and their extremely long proboscises. The adults are ecologically important as pollinators and the larvae are vital to the migration of Swainson's hawks, fueling the birds' journey from Argentina to North America for breeding season.

While doing research, I also see a news article titled "Fires in the Amazon Could Be Part of a Doomsday Scenario That Sees the Rainforest Spewing Carbon into the Atmosphere and Speeding Up Climate Change Even More," and I realize it's likely I have a bit of ecoanxiety, described in a 2017 report by the American Psychological Association as the stress and worry associated with the ecological changes that mark our time. Symptoms include emotions of fear, anger, powerlessness, and the exhaustion that come with both gradual and sudden changes in climate, the "unrelenting day-by-day despair" of living through events like drought, extreme weather, wildfires, or hurricanes, or simply watching slow impacts unfold—the melting of ice caps, the suffering of species. The peril of future generations, the guilt of consumers, the failure of recycling, all pile on.

I've got a lot riding on this little hornworm.

August 23, 2019, Friday, 82/59°F

I'm happy to find a big ol' pile of frass this morning and am also in awe of the epic journey he undertook overnight—he's on a completely different part of the plant, which would've required inching over four feet down to another branch and then all the way back up again. He's feeling extra feisty today because when I touch his head, as I regularly do, he rears up like a cobra, arching at the thorax. I run inside to get my phone and take several pictures. I realize they are the first I've taken of him.

Midmorning, I drive up to Berkeley, where I do Authentic Movement twice a month with a colleague. We have a longer session today because it's my birthday weekend. I tell her about what can only be called my growing love for a hornworm, *of all things*, as well as my ongoing sense of despair for the planet. We hold space for those contradictory feelings for a moment, standing with several feet between us, gazing softly at each other, our arms held wide to the side as if preparing for an embrace.

August 24, 2019, Saturday, 79/59°F

This morning, he's upside down, using all ten of his prolegs to hold the branch while his head and thorax hang freely. The arch of his back is quite lovely, and I take a picture.

which I immediately send to my husband with a text, “Good morning!”

I decide spontaneously to name him Hermann. Hermann Hornworm. I take more photos—one a close-up of the markings on his side. When I look at it, I’m amazed to see something black and fuzzy at the bottom of each proleg, I learn they’re called crochets and that they’re like little Velcro mitts that give him supergrip powers. He is truly adorable.

He’s also a little pig. He spends most of the day at the top of the plant, where he eats three sets of new leaves, an entire green tomato over an inch in diameter, and two fresh yellow flowers. His abdomen is distended by the time Jherald comes home.

Late afternoon, I’m standing near Hermann’s plant while Jherald sits at the patio table. We’re chatting back and forth when my mouth falls open because I see a piece of frass extrude from Hermann’s ass and hit the ground. “Hermann has just pooped,” I announce, and Jherald guffaws playfully. His green eyes flicker in the sunlight like that iridescent hummingbird and I smile widely at him, my cheeks warm with love.

So, Hermann thrives and the Amazon is ablaze. An artist friend of Ojibwe descent sends me the Algonquin Water Song to pray for healing rains in Brazil, and I sing it earnestly. My copy of Joanna Macy’s book on countering environmental despair, *Active Hope*, arrives via Amazon Prime two-day delivery. I realize there is a lot of tension if not outright hypocrisy in this brief paragraph.

This evening, Hermann is still at it—he starts a second tomato but doesn’t finish it. Before I go to bed, I reflect on what seems the impending destruction of a plant that I also love, but I renew my commitment to Hermann, nonetheless.

August 25, 2019, Sunday, 83/59°F

Today is my birthday. I wake up early and go outside with Cairo. While he pees, I find Hermann and take some photos. He is almost four inches long and as big around as my thumb, which I hold next to him for comparison. I also document the partially finished green tomato that hangs from an almost fully defoliated branch. He sure was busy last night.

Jherald and I drive two and a half hours north to Middletown to spend the day at a clothing-optional hot springs called Harbin. As we get closer, we see traces of the 2015 Valley Fire, which burned the area badly; 95% of the structures and hundreds of thousands of trees on the springs’ property were destroyed. The allure of the mineral water pools and surrounding hills is strikingly offset by the startling beauty of charred and scorched trees, which, like contorted *butoh* dancers, intermingle with the new growth, lush and green—a landscape of emotional chiaroscuro.

These springs were once shared among local indigenous tribes—their shamans recognized the spirits in the waters. Despite conflicts between the tribes, the mineral springs were an open, sacred space for all—until 1856, when a white man named James Madison Harbin claimed the land. In 1866, he opened a resort that catered primarily to other white folks from San Francisco who came to “take the waters.” The mountain and springs still bear his name today.

In this stolen, scarred, still-magical space, we white folk soak, we swim, we get massages. I have something called water shiatsu while in my birthday suit in a body-temperature pool and it’s one of the most intimate, blissful experiences of my life. For a full hour, I release all of my body weight and float while being gently stretched and moved. I’m in turn a baby, a mermaid, water itself, a snake.

On the way home, we stop to eat in Napa. Jherald orders steak and I have fish. It’s odd that we made reservations at a restaurant with few vegetarian options even though I’ve recently returned to that diet. While grateful for the delicious food and animal protein, I say, “You know, eating meat isn’t sustainable much longer. Let’s enjoy this tonight.”

I’m surprised he agrees immediately because he loves beef, pork, and chicken.

At 10:57 P.M., I complete my sixtieth spin around the sun.

August 26, 2019, Monday, 89/57°F

I get up early and spend some time in the secret garden before heading to work—it’s already warm and might get up to the nineties today. Hermann has started a third tomato even though he didn’t finish the one he started Friday evening. He hangs upside down, bent backward from one branch while leaning out to eat a tomato that hangs from another. This is a level of risk-taking I’ve not seen before—usually

he stays safely on the limb he’s eating, I’m also shocked at how voracious and apparently wasteful he is, but I’m not sure why I’d expect nature to be either safe or efficient.

August 27, 2019, Tuesday, 86/58°F

Hermann moved off the third tomato without finishing it either—this can’t possibly be sustainable. Not only is he getting big enough to be seen by a bird (he has more protein than a cricket), but he may run out of host plant before he completes his larval stage. At the micro level, Hermann’s situation seems possibly precarious, and at the macro level, huge fires in Africa and the Amazon blaze out of control.

August 28, 2019, Wednesday, 84/58°F

I stay home today—feeling slightly under the weather or overextended from birthday celebrations. I write “home sick” in my datebook but immediately misread it as “homesick.” For what am I homesick? Certainly not the alleys of my youth. Perhaps it’s closer to solastalgia . . . a kind of mourning or nostalgia for a place that no longer exists or, in this case, may no longer exist soon.

I’m thankful for some more time at home and happy to see that Hermann returned to his second tomato and finished it today. He also started a fourth, so the current tomato tally is two finished, two in progress. One result of all of this eating is his size—he must be five inches long. How has he grown an inch since Sunday?

I learn that Hermann Hornworm is actually a late instar larva of the tobacco hornworm, *Manduca sexta*. The white diagonal lines and reddish tail spine or horn distinguish him from his cousin, the tomato hornworm. Amazingly, the eight sets of “eyes” down each side are called spiracles and function as his breathing apparatus—not as some evil eye warning to would-be predators. I realize that Hermann had probably been on the plant for weeks by the time we encountered each other.

August 29, 2019, Thursday, 77/63°F

Hermann’s in another spot this morning, far from where I saw him last night, and he’s using only four of ten prolegs

to grip the branch. Most of him reaches across the precipice to another stem, where his tiny feeding claws maneuver small leaves deftly. It’s the most daring position I’ve seen him in. I take a photo.

When I get home it’s already dark out, but I turn on the patio string lights and make sure he’s all right before I go to bed.

August 30, 2019, Friday, 78/57°F

How could he seem smaller today? He’s not moving much, either. Could it be the weather? It’s been cooler the last couple of days after the warm spell earlier in the week.

August 31, 2019, Saturday, 87/56°F

In a morning text to my husband: *Hermann is gone. I’m so sad.*

Jherald: *Sorry, Pookie, did he transition?*

Me: *I don’t know. They go through a period of wandering before they bury themselves to pupate. But he’s in a pot so I don’t know how much roaming he can do. I don’t know if he’s in the fake grass or another pot, if a bird ate him, or if he’s already burrowed into the leaves and dirt in his own pot. I clearly hope for the latter.*

I just realized the hard thing about loving a tobacco hornworm: I love him and I’ll never know what happened to him. I just have to believe I did everything to give him the best odds. I hope I see a sphinx moth this spring. I’m actually crying.

Jherald: *(heart emoji)*

Me: *I’m so proud of him! Imagine going through such a big transition alone without any encouragement!*

Jherald: *You encouraged him.*

I look for Hermann throughout the day. I look everywhere—all over his plant, his pot, the neighboring plants and pots, the concrete, the fake grass (in case he fell) . . . everywhere . . . and I’m freaking out. My throat pulses like I’ve swallowed a bird and I can’t sit for long without searching.

I photograph his two unfinished tomatoes, the straggly abandoned plant, and me, red-faced, crying.

September 1, 2019, Sunday, 85/57°F

What did I expect? To watch him transform? Wiggle safely into the ground? I don't know that I expected anything. I certainly didn't expect to feel sadness at his departure. I truly miss him. The frass on the patio reminds me of him. I can't clean it up. Or won't.

The book *Active Hope* describes two kinds of hope. One is the kind that's based on outcomes—when things don't look good, people become hopeless. Active hope, on the other hand, is a practice—something to do, not to have. It's not based on outcomes, but on intentions. Instead of acting only when there's the chance of a good outcome, identify what you hope for and follow your intentions with action.

I decide to be hopeful. I burn some handmade paper with bay leaves on which I've written my magical intention: "Hermann Hornworm finds a beautiful and safe place to enter the prepupal stage. The pupa overwinters safely and the lovely moth emerges this coming spring to thrive and pollinate and lay eggs. I see Hermann transformed. I am grateful."

Truth is, I *am* grateful for having watched him—for having a chance to love a creature I once found revolting. I also have hope—hope for Hermann's successful transformation and trust in his own knowledge. He knows what he's doing even if I don't understand (even if I'm terrified for him—how could this burrowing thing possibly work?).

I refuse to be sad. Instead, I hold on to the odd intimacy of our brief time together and my faith that he's in his pot, pupating. I also focus on preparing a habitat for the moth he will become.

And the Cherokee Purple is still alive—Hermann left me three tomatoes.

Epilogue: September 15, 2019,
Sunday, 75/57°F

This morning, there's a white butterfly on the watercress, which I'm letting go to seed. Hermann's plant has started a new tomato, leaving a total of four. Jherald and I ate one of them last night, sweet and fragrant. I couldn't help but feel close to Hermann—eating the same fruit he ate and wondering if somehow his genetic imprint is on the tomato. Well, I've never claimed to be a scientist—more of a magical thinker.

I had a dream last night that I'm squatting in the dirt, holding some leaves aside and watching an egg hatch into a first instar larva. I am filled with tremendous joy and can feel my chest expand even in my sleep.

Today, I clip some of the defoliated branches but don't disturb the roots or soil in Hermann's pot, or the pots nearby, because I don't know how far he meandered. I don't want to harm him. An heirloom flowering tobacco plant, *Nicotiana glauca*, one of Hermann's favorites, arrives on Tuesday from Richmond, and moonflower plants, another sphinx moth delicacy, will be available soon. I'll have more tomatoes, too. I squat down, put my palm against his pot, which is warm from the sun, and whisper, "I know you're in there, Hermann. You got this."

Shannon Riley, an interdisciplinary artist and scholar, is the author of *Performing Race and Erasure: Cuba, Haiti, and US Culture, 1898-1940* (Palgrave Macmillan UK, 2016), and coeditor of *Mapping Landscapes for Performance as Research: Scholarly Acts and Creative Cartographies* (Palgrave Macmillan UK, 2009). She performs and records with the Chicago-based group ONO. Their next album, *Red Summer*, is forthcoming (May 2020) on American Dreams Records. Riley is professor of creative arts and chair of humanities at San José State University.

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A View of Woodland Beach, 2004
Acrylic on panel, 51 x 92 in



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