

and the terrible mistake I had made.” But her journey, like a shaman’s, was no mistake. On a goshawk’s wings, she flew through time, through madness, past species boundaries, and back, returning whole. And we, the lucky readers of this glorious, passionate, and heartbreaking book, are far the richer for it.

—Sy Montgomery

---

## The Triumph of Seeds

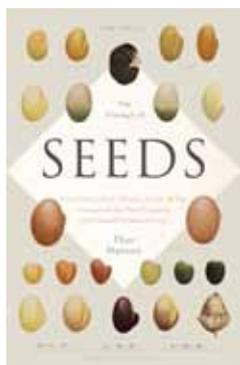
THOR HANSON

\$26.99, 304 pages. Basic Books, 2015.

---

**GIVEN** humanity’s perpetual search for order in the world, it is not surprising that we all want to know where things begin. While generally a futile quest, humans can at least be satisfied in the investigation of botany. Conservation biologist Thor Hanson does just that in his inclusive look at the epic lives of tiny kernels, pits, spores, and stones. He catalogues the heroic efforts of seeds, ranging from how they sustain themselves and endure to how they defend themselves and are dispersed.

Hanson delivers botanical information with wit and imagination. How seeds nurture themselves with starch, proteins, and oils may be a prosaic affair, but Hanson enlivens the explanation of their diverse nourishment strategies by examining the components of an Almond Joy candy bar: coconut palm, cacao beans, almond, corn. The stamina, insight, and acuity of seeds are illustrated in a chapter aptly titled “Methuselah,” where Hanson alerts us to a date palm in Israel germinated from a two-thousand-year old seed. In one of my favorite



images in the book, Hanson describes a wild mustard seed capable of “responding to changes in the angle and length of daylight through six feet of snowpack.” And in discussing inventive thinking around storage strategies, he brings our attention to a basil seed that was able to germinate after spending a year bolted to the exterior of the International Space Station.

The defense systems of seeds are no less vast and complex. Because it is their lot in life to stay put, as Hanson points out, seeds protect themselves with stony shells and chemical effects that include pungent heat and bitter taste. If you have not understood seeds as insecticides and assassins, you will now, learning, for example, that the protein in a castor bean is the lethal substance, ricin. Yet the grand opera of the tiny seed’s life is perhaps most lavish in matters of

travel and dispersal, and in the book we learn of an Austrian aviator who found inspiration in “the single backswept wing” of a Javan cucumber seed.

Philosophical questions emerge as well. During a discussion about the dormancy of seeds, one biologist asks Hanson, “Does metabolism define life? If seeds are alive but aren’t metabolizing, maybe we need to rethink our definition of what it means to be alive.”

While Hanson is eloquent on the natural, cultural, and even existential life of seeds, he generally avoids their political life, explaining at the outset that he will not fully explore the science or ethics of GMOs. Still, he states that climate change will affect what seeds we plant. In his investigation of seed banks, he notes the irony that while the diversity of traditional farming ensured seed banks in the soil, the refrigerated vaults of today’s seed banks are

a response to seed uniformity mandated by industrial agriculture. With his background, research, and knowledge, Hanson is uniquely positioned to take the discussion further, and I wished that he had.

Still, his efforts here are to engage and educate us about seeds, clarifying just “why we care so much,” an approach, he implicitly suggests, that will better enable us to think these things through for ourselves. In the end, that’s probably enough as he explores the enduring power and influence of the infinitesimal.

—Akiko Busc

---

## The Jaguar’s Children

JOHN VAILLANT

Houghton Mifflin Harcourt, 2015.

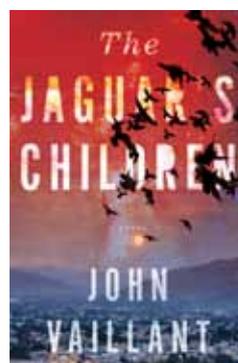
\$26.00, 280 pages.

---

**THE CARIBOU AND WOLF**, the fig and fig wasp, the monarch and milkweed—some species are so interdependent, they seem to constitute a single organism. John Vaillant’s debut novel, *The Jaguar’s Children*, opens with the hint of another interspecies relationship, that of Mexico’s indigenous Olmec people and the jaguar. An epigraph,

from Ignacio Bernal’s *Olmec World*, prepares the reader: “Anyone attempting to classify Olmec figures will be borne imperceptibly into those of the jaguar. Gradually, human faces will acquire feline features, blending into one another before turning, finally, into jaguars. What is important is the intimate connection between the man and the animal.”

In the novel’s earliest scenes, we meet



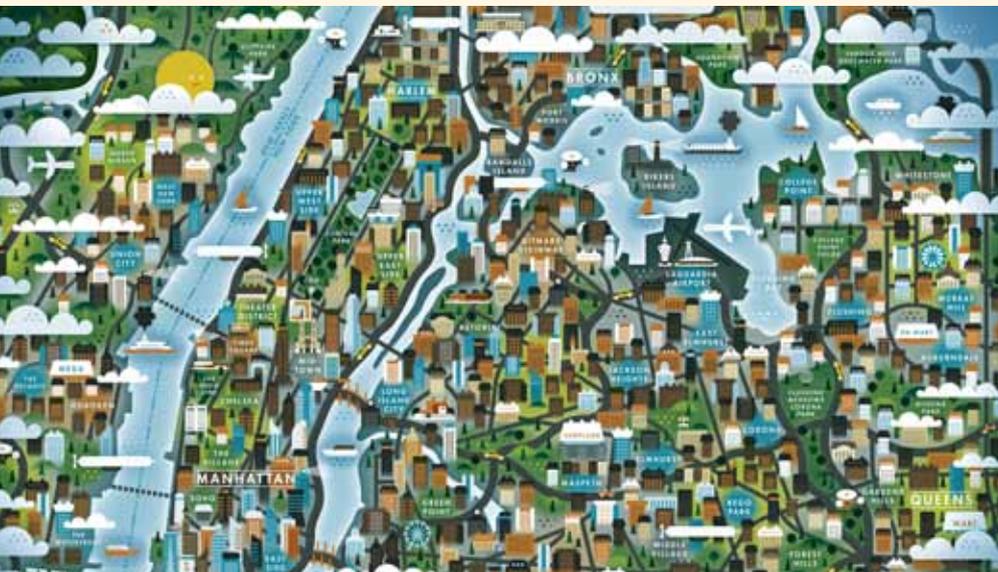
## Atlas of Design, Vol. 2

Edited by Daniel P. Huffman and Samuel V. Matthews

THE NORTH AMERICAN CARTOGRAPHIC INFORMATION SOCIETY, 2014. \$35, 96 PAGES.

A good map tells a story. In the *Atlas of Design*, we are given stories of landscape, of human settlement and infrastructure, of the natural world, and of the intersections between them. The project highlights an array of places, real and imagined, brought to life through the art of cartography. From “Florida Wildlife Corridor,” intended educate viewers about the scope of the project to the hand-drawn map of “The Family Farm,” displaying the things that make the artist’s hometown special to the map of Manhattan 311 noise complaints, this book shows that in creating maps, we develop a deeper, and often surprising, understanding of a place. [[rough]]

—Kristen Hewitt



Details from *blah blah blah*

Hector, who, along with his friend Cesar and thirteen other Mexicans, has paid smugglers known as “coyotes” to sneak him into the United States within the welded-shut belly of a water-transport truck. When the truck is stranded in the desert, and when the coyotes ditch their cargo, Hector and the others are thrown into a potentially lethal situation. There is little food, only a liter of water, and a half-charged cell phone, which Hector uses sparingly to send emergency sound files.

“Since yesterday we are in this truck with no one coming,” Hector implores via phone recording. “We need water and a doctor—and a torch for cutting metal.” The filing of these messages into wireless ether becomes the novel’s text, an accruing transcript that is at once a plea to a stranger for immediate assistance, as well as, possibly, a final testimony relating some hundred years of family and cultural lore.

As Hector attempts to reach Anniac, his phone’s single American contact, his stories become sustenance, and the reader a privileged eavesdropper. We learn, for instance, how Hector’s ancestors were delivered to Oaxaca on the back of a jaguar. “My skin is a map of the world,” the jaguar told the area’s first inhabitants, showing them how the spots on its fur mark the foretold pueblos. We also learn how, millennia later, Hector’s grandfather uncovered an ancient Olmec figurine: “Pulling the Jaguar Man from the earth,” his grandfather became “the first man to touch it in who knows how many lifetimes.” We learn, too, that this reunion of man and mythic animal connects Hector’s grandfather with Professor Payne, a New York archaeologist whose passion for Olmec culture will have a significant influence on Hector’s life. As Hector whispers his messages after twenty-six hours inside the broken truck—the truck with the graffitied letters *J* and *R* bracketing the word *agua* on the exterior—he tells Anniac that “before the Spanish padres

... the people honored Grandfather Jaguar because he alone kept order in the forest and the milpa both.”

Though fictive, Hector’s plight recalls factual events, such as the story of thirty-three Chilean miners trapped with only a 3.19-inch-diameter tunnel connecting them to the outside, or of eleven immigrants sealed inside an empty Iowa grain car in 2002. (When the train stopped, the hatch went unopened for more than three months.) Without pedantry, and without the statistics and pithy quotes native to nonfiction, Vaillant’s novel sheds light on the complex makings of stories like these. *The Jaguar’s Children* drops readers into a society incurring both small and great breaks with tradition and culture—and it provides a visceral understanding of why individuals are compelled to look for work elsewhere, of how the culmination of larger forces can lead to a broken truck stranded on the U.S.–Mexico border, full of people with hope for jobs and something to send back to the villages where the jaguars, in all their biological and mythological significance, verge on extinction. In this sense, Vaillant’s debut novel isn’t so much a book as a unique vehicle, which, much like Hector’s water truck, contains beautiful, urgent stories of interconnection.

—Julia Shipley

---

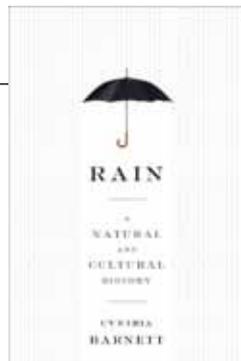
## Rain

CYNTHIA BARNETT

*Crown, 2015. \$25, 368 pages.*

---

**IN HIS ESSAY** “Rain and the Rhinoceros,” Thomas Merton celebrates the mystery of rain. “I listen,” he writes from his hermitage on a stormy night, “because it reminds me again and again that the whole world



runs by rhythms I have not yet learned to recognize.” In *Rain: A Natural and Cultural History*, science writer Cynthia Barnett approaches her subject with full recognition of that mystery, bringing to it a cogent understanding of rain’s complex part in the hydrologic cycle. Barnett, who in previous books has written extensively on the water crisis in contemporary America, excels at explaining the complexities of that cycle and the consequences of our modern compulsion to manipulate it.

As she makes clear, the human attempt to control the rain is nearly timeless. Before the cloud seeding of modern science we used prayer and witchcraft, for the story of rain is also the story of floods and droughts that determined the fates of civilizations. Barnett sweeps across centuries and continents, now considering modern life on the Olympic Peninsula, now the civilization of Mesopotamia—undone by parched earth—now the hunter-gatherers of the Holocene. She pays particular attention to Thomas Jefferson at Monticello, inveterate recorder of rain, and his short-sighted attempts to provide water for his farm based solely on his observations of precipitation.

It seems that there is nothing that rain does not touch, and Barnett, often wittily, packs her book not only with essential findings, but also small, strange facts: that raindrops, for instance, don’t resemble water dripping from a faucet; rather they “fall from the clouds in the shape of tiny parachutes, their tops rounded because of air pressure from below.” Her forays into the cultural history of rain also chronicle writers on rain (a vast subject she touches upon in one short chapter), the scent of rain, the cataloguing of clouds, and the development of the Mackintosh raincoat, but she is most at home with the science of rain, and the chapters devoted to the wonders, complexities, and