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I collect geodes: round, hollow rocks, the cavities of which are lined with sparkling minerals. From the exterior, a geode is a plain, bumpy, gray-brown sphere (*geode* is derived from the Greek *ge*, meaning "earth," and *eidoes*, meaning "form") with diameters typically ranging from two to six inches, though some may be thirty inches across and some others may be smaller than a marble. If you insert a screwdriver into a fine crack in a geode and give the screwdriver a light tap with a hammer, the rock will crack open. Then, the orb's crystalline interior will be touched, for the first time, by the light of day and the crystals will sparkle.

When collectors find geodes in the field, they heft the rock and tap it firmly as if it were a melon. What they're listening for is the disappointing

sound of fullness or the promising sound of hollowness. It's the hollow interior with its greater exposure of the crystals that collectors covet. More sparkle per pound, we'll tell you. The half of the grapefruit-sized geode that functions as a bookend in my office is completely filled with intergrown crystals. While I appreciate these halos of buff, gray white, and caramel, I don't marvel at them as I do the two halves of a plum-sized geode on display in my living room. Clear, rock-candylike crystals line the inner shell of this geode; nearer the hollow center are clusters of charcoal-gray "diamonds." I move this wonder back and forth in my hand, watching the light play on the flat surfaces of the crystals.

While geodes are found in carbonate-rich rocks throughout the world, the best ones, in terms of the variety of crystal formations and mineral inclusions, are found in cavities in the limestone and shale laid down in the Mississippian strata some 310 to 340 million years ago in what is now southeast Iowa, northeast Missouri, and west-central Illinois. More precisely, the geodes with the most beautiful crystals were formed within a thirty-five-mile radius of the confluence of the Des Moines and the Mississippi rivers. My mother's mother's people lived a few miles from that watery intersection in Keokuk, Iowa, and I've spent over half of my life within an hour's drive of there. The geodes found within an area bounded by Burlington, Iowa, to the north; Keosauqua, Iowa, to the northwest; Kahoka, Missouri, to the south; Colchester, Illinois, to the east; and Dallas City, Illinois, to the northeast are known as "Keokuk" geodes and the dominant color of the crystals are white, off-white, pale pink, and yellow. For my father's seventy-third birthday, I bought him a Keokuk geode, cracked into halves, each half lined with milky white crystals, and shipped it to him in Ohio, where he now lives, as a reminder of the place that we came from.

Geologists aren't sure how geodes were formed, though most agree that they have an ancient, watery origin. During the Paleozoic era, much of the center of North America was covered by a wide sea. The last time the area producing the Keokuk geodes was submerged beneath carbonate-producing seas was during the Mississippian period, a time of fluctuating

sea levels. Where the sediments contain fossils and quartz sand, the waters were probably shallow. Where there are no fossils in the rock, the area was probably deeply immersed. It was during the deep, quiet periods that concretions—round, often compact accumulations of mineral matter in gas bubbles, animal burrows, and other hollow pockets—formed in the rock or the mud. Later silica replaced the calcite and began to form the hard but slightly permeable chalcedony shell that is found on the exterior of all Keokuk geodes. This outer mineral layer of chalcedony, a type of quartz, is more resistant to weathering than the host rock (limestone or shale in Keokuk geode country), which is why the geodes have persisted to this day.

Over time, mineral-bearing water slowly seeped through the sediments and the tiny fractures in the chalcedony shell, causing the core concretion inside the geode to dissolve and leaving a hard, hollow cavity in which minerals could precipitate. Because different silicas cool at different temperatures, layers of various types of mineral crystals formed within the cavity. White or transparent quartz is the most common mineral found in Keokuk geodes. Chalcedony with its blue, white, or gray crystals and calcite with its clear to cream-colored crystals are also common. Secondary materials include iron pyrite, kaolinite, ferron dolomite, chalcopyrite, barite, marcasite, sphalerite, pyrolucite, geothite, and selenite. Growth proceeds toward the center, with the youngest crystals nearest the middle. When some hollow geodes are cracked, water runs out, which means that these geodes were still in the process of forming the mineral layers where light will dance and dazzle upon opening.

The best places to hunt for these ancient and deeply formed Keokuk geodes are in places where water and weather have eroded the strata. In Keokuk geode country, ice-age glaciers scraped away the Pennsylvanian and upper Mississippian strata, exposing the lower Mississippian section of marine sedimentary rocks. The Warsaw formations within the lower Mississippian strata are the most geodiferous. These layers are particularly well exposed around Keokuk, especially on the Illinois side of the Mississippi River. Geodes are easy to identify, says Stephen R. Sinotte,

a geologist who grew up in Keokuk. Due to their spherical shape, "they appear to be quite conspicuously 'out of place.'" Sometimes one finds them strewn on the ground at excavation sites, along river and creek banks, or on sandbars. Other times one must dig the geode out of the limestone or shale with a crowbar or electric hammer. In October 2005, a geode-hunting expedition centered in Keokuk, Iowa, permitted people to hunt geodes on private land for a fifteen-dollar admission fee and a fifteen-dollar charge for each bucket of geodes collected. I suppose that the expert geode hunters that came to the Rocktober Geode Fest saw the spectacular interior in the plain exterior. Cracking the rock only confirmed what they already knew.

In Burlington where I grew up, geodes are on display everywhere it seems: in the lobby of the old hospital, embedded in cement at St. Mary's Grotto, in every other rock garden. But the most remarkable geode is the 750-pound North Cedar Creek Gem, which E. N. Smith, a Henry County, Iowa, geode collector, found in 1935 on the North Cedar Creek in what is now Geode State Park. Since 2005 this gem has been on permanent display in the Iowa Store on the riverfront in downtown Burlington, which is where I saw it. It has a forty-inch diameter and is whole except for a place where someone has chipped away just enough of the exterior, a tiny window, a peephole, to reveal the clear crystals within. "It should be cut open so people can see what's inside," an employee of the Iowa Store said to me. But I wonder if the glittering interior of this massive rock might not be more than we could bear.

The outer edge, be it a shell, coastline, brink, border, or threshold, is where things thin out, wear away, or fall off. It is the boundary between this and that, and so it contains, in some combination, attributes of both. Middle age, with its double edge, is the old age of youth, the youth of old age. The line between summer and fall is blurred, partaking both of summer's lush prodigality and autumn's seedy retreat. Some who live near the state line have dual affiliations. My grandparents drove a few miles from their home in Keokuk, Iowa, to Alexandria, Missouri, to buy

gas and cigarettes because the tax on each was lower south of the border. They took my brother Jamie and me there to buy the fireworks that we couldn't get in Iowa; to eat in the truck stop where the clocks above the counter showed the local times of the various Alexandrias in the world (Egypt, England, Virginia, Louisiana, and ours, Missouri); my grandfather and Jamie hunted for rabbits and squirrels in the woods near the river; and they showed us Shefflers' geode shop just west of Alexandria on U.S. Highway 61, where one could extract geodes from mines or buy them in the shop. After the Mississippi River Flood of 1993, my granny grieved a bit that "Alec" had been taken away by the river and that what little remained had been bulldozed or abandoned. If she had been alive in 2006, she'd surely have grieved that Shefflers' horseshoe-shaped house and business, with the rose quartz-, Colorado serpentinite-, and geode-studded walls, were razed on May Day of that year to make way for a wider Highway 61. "Intimate domain" is what seventy-nine-year-old Betty Sheffler called the legal maneuver that took her home of fifty-nine years.

The center, heart, or interior, whether of a region, season, song, or love affair is where one finds the most intense expression of the thing. The watermelon is the most sugary, the cabbage the most sulfurous at the heart. The identities of people who live in the interior of the country tend to be more homogeneous than is the case with those who live near the border. The heart of the home, whether the kitchen table or a corner of the living room is where the best talk is carried on and where all that is right and wrong about that home and family is most evident. Philosophers identify the "interior" as that which belongs to or exists in the mind or soul, rather than the body or world. In *The True Religion*, St. Augustine wrote that we arrive at God by going into ourselves, by making the heart perfect, so that our desire is pure and uninterrupted. "Do not look outside; return to yourself," Augustine writes. "In our interior the truth resides. Go inside, where the light of reason is illumined."

The interior can be a desirable place to dwell. It can be a point where opposing forces balance or come to rest and so is a place of stillness. But, too, it can be the place where forces collide, and to reside there is to

always know chaos or tension. Interior places can also be sites of growth and activity: the ovary within the corn kernel, the narrow cell in the convent, the darkest depths of a crisis, the hub of the city, though any one of these may turn from a place of growth and wholeness and insight into a place of retreat, stagnation, or fear. Some interior places—a cave high in a limestone wall, a deep and primal fear, an assembly line within a nuclear weapons factory, a distant memory—are more difficult to penetrate. Crack them carefully or they will shatter. Others—a celebrity's hometown, a cornfield, a declining river city, the organization of an ant colony, the contents of a wood-duck nest box—reveal themselves to anyone who lingers and looks.

We better understand the interior if we know what lies beyond its borders; we better understand the exterior by exploring what lies within. The knowledge such places offer may be ripe for the picking, like a proverb whose meaning is obvious or a violet which catapults its dry, ripe seeds over the ground. Or it may be tightly held like the revelation within the koan or the walnut meat within the hard, bony shell, within the fleshy, green outer casing. Whatever its nature, there is something to be gained by voyaging to the interior.

I wrote the sixteen essays in this collection between 2001 and 2006. The title, *Interior Places*, came to me before I'd written a single one. From the beginning, I appreciated how this title allowed me to ramble freely over the outer and my inner terrain. Directly or indirectly, each of these essays explores how one perceives or knows an interior place, how one might be changed by being within, how being within informs one's experience of being without. Perhaps I am so fascinated by this topic because that is where I now find myself: at home in the center of North America, right over the continent's beating heart in Nebraska and Iowa; deeply settled into my vocation, art, and faith; so far into middle age that I couldn't disguise the fact if I wanted to. In short, I am far from the edges. Or perhaps because I grew up in the rich, geode-bearing region of southeastern Iowa, living for almost three decades in Burlington, briefly in Keokuk, briefly

in Mount Pleasant, briefly in western Illinois, and occasionally sitting on the beach at Geode State Park in Henry County, Iowa, I know that what I might find within a rough, bland shell is a hollow, spectacularly bejeweled interior. Or perhaps I am drawn to this topic for both reasons, and so for me it is doubly charged. These sixteen essays are my geodes. Some I found tumbling in creek bottoms. Some I found strewn along creek banks. Some I chipped from the limestone. Some I bought at souvenir shops or church rummage sales or on the Internet. Some were gifts. I collected them, carefully cracked them open, and brushed the crystals with soap and water until they gleamed. Now, I offer them to you.

Certainly there is no better form for exploring interiority than this pliant, self-absorbed, reflective form, the essay. Michel de Montaigne, widely acknowledged as the "inventor" of the contemporary essay, called his prose pieces *essais*, derived from the Old French *assayer*, meaning "to try, to attempt; to endeavor; to make an experiment of; to test the quality of; to try out." What the essayist tests or probes through this wonderfully open, malleable form are his or her own experiences, perceptions, philosophies, and conclusions. That means exploring the interior. That means cracking oneself open and revealing one's own light-catching crystals.

The one who essays is, as Cynthia Ozick observed, "heir to nothing, and sets out with empty pockets from scratch." I take that to mean with no road map, guidebook, or compass in hand, no itinerary or destination in mind, save to discover, through the writing, myself and this interior place in which I'm situated.