HEALING

FROM

HIMALI SINGH SOIN

ALEXIS RIDER

Some years ago, we encountered a strange fata morgana in Antarctica. Instead of mountains doubling or ships hovering above the horizon, we saw men bent over in scrutiny, squinting at irregular, dark objects-like asterisks on a page-in pristine white space. The meteorite hunters stood suspended on the horizon, magnetized between the indestructible iron on the ground and the looming mirages. Antarctica, cold and clear, has long been seen as an ideal spot to gaze up at the skies, but the skies had finally fallen and were entombed in the ice beneath our feet. These primordial morsels mark a moment in the ice, producing, through their interjection, new and strange stratigraphies. If the word "mirage" comes from wonder, it left us marvelling at the layers of deep time embedded in a single geographical point: a helix of histories gathered in a blip. We imagined a meteor blazing across the clear skies, the stars dimming in its radiance. A title in embossed gold in an as-yet-unlocked library of supernal secrets.

> In 1954, a shimmering object spiralled from the dark depths of the galaxy past the perihelion, into Earth's atmosphere. Ann Hodges lay down on the couch in her living room in Oak Grove, Alabama. The radio glitched in and out between static and the whirr of people discussing the film Godzilla, which had recently premiered in Tokyo. A pot of water simmered on the stove. She wondered why people were fascinated by a movie about monsters; they seemed irrelevant, so far away from the present. Maybe they were marvelling at the technology, but watching her garden grow was technology enough for her. She dozed off. The meteor burned the skies, plunged through the roof, and bounced off the radio, which, after a few seconds of incoherence, went silent. Now a meteorite, it scorched the carpet and bruised her awake. The water boiled over. She looked around, confused, at the innocuous fist-sized rock, at the tattered ceiling. She wondered if she was still dreaming, but remembered that in her dreams she rarely felt physical pain, one of the reasons she spent her afternoons napping on the couch, to travel distances she might otherwise never have had a chance to.

METEORITES

In order to make meaning from a meteorite, we must not think simply of its mysterious origins or its temperamental points of rest, but of what the geographer Nigel Clark might call its stratobiography, "a story of traversals of the deep, sedimented time of the earth itself. And for this the apposite question might be not only where but when do I belong?"

> Like other rare and seemingly unexplainable natural phenomena, such as earthquakes and monstrous births, reports of meteorite falls were for a long time understood as signs of divine portents or dismissed as fanciful fabrications. As late as 1790, a meteorite shower that fell on Barbotan, France-witnessed and attested to by 300 citizens-was dismissed in the Journal des sciences utiles as "an apparently false fact, a physically impossible phenomenon." Little scientific interest was directed at these seemingly fabricated stones: how can these げてもの, monstrously odd rocks, as described by the Japanese Antarctic Research Expedition of 1969, fall from the air, anyway?



Interstellar beings must necessarily pass through a series of thresholds-affects-before they land on Earth. What do they accumulate on the way and how do they change in substance or form through this succession of strata? And what do they bring with them? Splashing into warm lakes billions of years ago, it is possible that meteorites leeched something vital into the water, starting a chaotic chain reaction that led to life itself. "The assemblage is between two layers, two strata," say Gilles Deleuze and Félix Guattari in A Thousand Plateaus. While theirs is not a dialectical argument, we suggest an even messier, osmotic mesh in which hierarchies completely dissolve and new possibilities emerge. The meteorite is advait, nonduality and oneness and emptiness at once. It is emergent.

In 1992, a meteorite fell from the air on Mukisa's head in Mbala, Uganda, but its velocity had been slowed down by a canopy of banana leaves. It came whirling through the atmosphere, tails of white smoke forming figures of mythical creatures in its wake, announcing its arrival on the ground with a sonic boom. Newfangled insects with horns buzzed and algae bloomed the size of the sun, and sponges and corals and mollusks and bryozoans and crinoids and barnacles and platypuses and turtles with eyes like the Sphinx and hands like Saturn shuddered awake. Mukisa, named for good fortune, was unscathed by the stone, but felt a shiver in the backs of his knees. People in the city considered him a healer and he was said to have a magnetic field that allowed him to predict the future, or at least to alert the world to the exact moment when cosmic energies might align for a revolution.

The mirages, the radio, the ice, and the banana leaves are operating both on a spatial, horizontal plane and on a temporal, vertical one. They are membranes that curb the meteorite's momentum. But, as each plane is breached, the meteorite is learning, absorbing through contact a sliver of knowledge, a continually shifting and perpetual relationship with Earth. Gathering in its wake a chrysalis of emergencies: A Momentary Taste of Being. What can being in time with a meteorite teach us, we began to wonder, before it is consecrated by the cold whiteness of ice?

A METEORITE IS AN ARTICULATION OF CATASTROPHE

Until the mid-17th century, abrupt change was more legible than an endless, unwavering temporal plane. Naturalists suggested spontaneous generation or sudden, sharp showers of stones during full moons to explain "tongue stones": dark, triangular, serrated rocks that we now call fossilized shark teeth. Tiny, toothy catastrophes. In Antarctica, meteorites appear like tongue stones, arriving as strangely shaped black instances in sheets of blue ice. Multiply the scale, zoom outward into the cosmos, and their arrival is as spontaneous, as temporally surprising, as a rock suddenly forming teeth. The meteorite hunters know this, as they scour the sheet in an attempt to travel through time. Frozen meteorites cradled in ancient ice, the tongue stones of the cosmos, as if they had something important to say in a language of their own.

> Catastrophe is etymologically derived from the Greek word for an overturning of fortune, much like the process of discovering a meteorite. A futile and arduous search undertaken with the ever-dimming hope that one of the many rocks overturned might have its origins on another planet or the Moon, often even just the detritus of a planet that didn't form: a piece of primordial matter that didn't congeal into a world. The word *catastrophe* originated simultaneously with the word *disaster*, rooted in the word *astro*, implying a sense of misfortune under the influence of the stars.

Rooted in the word astro, but by the 19th century lost in geology. As T.C. Chamberlain shrugged in 1890, "The geological significance of meteorites is that they have no geological significance." As mines were dug downward to extract matter, the holes themselves began to tell a tale-encoded in the strata was a natural history of how Earth had changed, geologically and biologically, through time. How these changes happened was a point of contention: did the palimpsest beneath our feet suggest sudden, absolute, catastrophic change-an erasure and renewal of life on Earth? Or did it suggest a slow, gradual evolution of changedocile and constant? The latter won out and geology embraced the world of uniformitarianism: change that was knowable and gradual. No miracles, no sudden shocks, free of a deus ex machina. Tides were pulled by the moon and seasons dictated by the sun, but the rocky planet was, at its core, a closed and selfproducing system, free from the influence of the cosmos. But just because we couldn't see them didn't mean that meteorites weren't arriving, intercepting Earth with the time and matter of the cosmos.

Meteorites may change everything, imprinting on Earth a shock of heat and light: a tremulous beginning of nearly everything. The full stops of such large encounters are now known well: the Cretaceous collision threw mud into the air and coated the world in iridium—a clear mark in the strata of beginning-end. But can catastrophe be understood as something less absolute, less sudden—the constant insistence of the presence of otherness? These monsters arrive endlessly on Earth to remind us, as planetary geologist Ursula Marvin suggests, that "Earth hurtles around the Sun along a path that is gritty with interplanetary dust and rubble," colliding violently and sensuously with morsels of cosmic ephemera.

Could the catastrophic event of a meteorite falling on Earth be a geological glitch, an interstellar error? Legacy Russell calls the glitch a "catalyst" in her manifesto, *Glitch Feminism*, which "prompts us to choose-our-own-adventure... and turns the gloomy implication of *glitch* on its ear by acknowledging that an error in a social system that has already been disturbed by economic, racial, social, sexual, and cultural stratification and the imperialist wrecking-ball of globalization—processes that continue to enact violence on all bodies—may not, in fact, be an *error* at all, but rather a much-needed erratum." As objects that simulate emergence, insist on the relationality of strata, remind us that nature iterates multiplicity, can the meteorite provide us with a different way of knowing, a disturbance that strengthens our resistance? Russell insists that "this glitch is a correction to the 'machine' and, in turn, a positive departure." With the accumulated knowledge of its ancestral journey, could meteorites be an invitation to begin again?

It was a chauvinistic assumption that rational science could will away catastrophe. In divine justice, Lunacy herself intervened to prove these scientists wrong. Through the 20th century, the Moon was recognized as a mirror of Earth's past: covered in a million craters, speckled with cosmic interjection. How could two celestial bodies, joined as they are at the hip, have such different stories? How could the Moon be so dented and Earth unscathed? Of course, hidden beneath its lively skin, Earth bears the truth: craters so vast they make you weak at the knees, the residue of impacts so forceful they shifted the geology of the entire planet. Dinosaurs departed and something unearthly arrived.

In much of Himalayan Buddhist, Bon, and animistic thinking, a catastrophe, such as a violent storm or an earthquake, spells a good omen. The Earth shook when the Buddha attained enlightenment. Earthquakes can also herald the reincarnation of an important teacher or yogin. Comets and shooting stars, like rainbows, can also be interpreted as a message from the heavens communicating the (re)birth of such persons, or their location, when search parties are looking for them. Can a simple anodyne rock fallen from a distant past overturn our fortunes—for the better? Help us heal from the bruises of the present?

Our ancestors' traumas reside in the deep jungles and vast deserts of our bodies. Cosmic grief is not dissimilar: the catastrophe of meteorites can perhaps inform our understanding of how to cradle those histories into radical new futures. A meteorite is the only natural source of metallic iron in Earth's crust. The Tibetan Thogcha, meaning "thunder iron," is an amulet made from meteorites, believed to contain medicinal powers, having been blessed by the celestial realm before arriving on Earth. Thogchas are considered to be self-formed, selfarising objects, manufactured by naturalistic designs. The iron is placed in milk to energize it with the spirit of the object, after which Mukisa drinks the liquid to incorporate its magical properties before conducting rituals.

> A meteor has been traveling through space since before human thought. It has been orbiting the Sun for 4.5 billion years waiting for a diversion from its path. Eons have passed as life struggled on Earth, staggering finally from swamp and sea. A tempting target, this planet, thrumming with breath and legs and squabbles: a chance, perhaps. The meteorite plops onto the Antarctic ice, a perfect pocket of negative entropy, a spot of unconformity, an unexplainable catastrophe, a repeating and rejuvenating little death. A means of worlding that meteorites insistently offer.

Alice Sheldon has three typewriters in her attic, one for each author inside her. Tiptree—her most popular and masculine persona—sits down to write, perhaps a flirtatious letter to Ursula Le Guin, perhaps a sketch of a story about an alien-ballof-energy, perhaps a cascading diary entry, perhaps a suicide pact. She gazes into the rocks that she has pocketed over the years and that litter her desk like snow globes or crystal balls. She has never encountered a meteorite, though she dreams with them often, searching in the stars for a means of escape. The thought of a universe expanding, stretching out, diluting until it wafts away is not just cruel to her, it is affronting. What a homogenized, boring way to end: so absolute, so dripping in masculine singularity. The only way to escape this entropy, she types, is by living it. A lake was formed as a result of several collisions. Tso, meaning lake. So, a continuation, an obliteration, an adjustment of the present. A shrug, what. A crater of water magnetized by matter fallen from space. A comet spun out of orbit and swung toward the Sun, releasing vapour, burning before it barely lived, completing its life's work in the span of one full day on Earth. It singed into the lake and a lotus bloomed. Then the rock sank and interstellar dust mixed with seabed sediment and it lost itself. Anyone who drinks from the lake remembers every detail of their lives-every small town they stopped at, every guest who visited their homes-perfectly. Memory from a mysterious source. If you stare at the lake long enough, you will see reflections, refractions, projections, possessions, other dimensions. Mollusk waves forming and dving like stars, and, suddenly, you're gliding through a night sky, a bolt of metal in outer space if outer space had the consistency of wax. Impressions, impacts, lost remains. Tantalizing tantras, every few years, the lake climaxes into being, recovering the lost rock from the lips of the lotus with perfect recall, recalled by uniting with your body, bodies forgetting that they exist, existing by remembering as a ritual, the ritual of spotting the shore, now a surface of glistening potential, recurring planes of possibility. Tso long.

> Can something as simple as a rock falling from space onto Earth form a crater of possibility? If its presence suggests a not-knowing knowing that releases us from a measurable, hegemonic, patriarchal system, then its preservation allows for other bodies, Black bodies, Brown bodies, bodies in transition to live with their own mouldable rights and rhymes and reasons. The meteorite desires refusal. It wants to deny your claims to its body: deny Ann Hodges, who lays claim to it through the blue of her bruise; deny the institution's vitrines; deny even those for whom it is sacred and who revere it. It wants to say no to being named, becoming a taxonomy, something secondary to science.

> > When a mass spectrometer is trained on a meteorite, colours refract and allude to the cosmic abundances of elements in the universe. Meteorites articulate difference, insisting on a capricious potential for change materialized in matter. The meteorite says, we will always all have different lithologies. It bounces off the radio, insisting on illegibility such that it cannot be decoded. It knows that real freedom lies in the ability to interpret. We are many and not monolithic. We are marked and metered. It says, we are made of kryptonite and sugar both. We are not normative and our trajectory is guided by the weather alone. The meteorite asks us to look up so we can sift through strata gingerly, in a generative and judicious way. Look up, where we will see it streaking across the skies, not downward with the territorial impulses of early explorers, and dream. Look at us with geopoetic wonder, it begs, not with the cunning utilitarianism of geohistory. We are our own medicine. We are reverse, inverse, obverse, queer. We are otherwise. We are clocks without the constraints of time.

Meteorites, often found embedded in ancient blue ice, acted as useful natural chronometers that could be analyzed geochemically to gain insight into the very deep past of the universe, aiding in developing a picture of deep time that extended beyond Earth. These "poor man's space probes" were gathered with the care devoted to lunar samples, plucked from the ice with sterilized tongs, re-entombed in Teflon bags. The meteorite says, I am a deposition you can't decode, an alien that cannot be assimilated. I refuse your linear stratigraphy, your white rock and bearded tool. I am punctuation on your white page, a dot, a blot, a speck, a blemish, a smear, a stain, a trace, a sign, a pause, an aside, a caveat, an ellipsis. The thing that begins the sentence again, yes. It says, your field is not flat, your discipline is discriminatory. It says, I will not be categorized by your ageist ideals or monetized into your transactional dialectic. It says, I am part of you. I am the exotic "out there" manifested here. I am glimmering joy and pain at once, it says, as it emerges through the curtain of banana leaves. I am sudden, but I am also perpetual, perceptual, precarious. It says, I escape entropy by being. I am always transforming, it says, like Earth and its plates pushing, pulling, and sliding against each other across vast swaths of time, the many Earths, the multiverses, the many-mes. Not perfectly preserved, instead always bearing, accumulating, shedding, mutating, turning, crashing. I am queer and proud. Your dull conformity is naive and bores me. I am a chasm, a dissonance, plural potentials, a myriad of meanings and endless erasures. It is you who turns away from impact, from affect. It is you, who, detached, cynical and perverse, will not notice me, or, if you happen to overturn a pebble at your foot, will, disappointed, kick it away.

> She is drawn to a dark object at her feet, it glints. She picks it up and studies it. It gazes back at her, punched and pummelled. It looks like a clock, but imprecise and erratic. She sympathizes with it. She puts it in her pocket, planning on placing it on her writing desk as a paperweight or a portal into the graveyard of her undermined desires. She walks to the lake, which has by now frozen, milky. Still, it reflects light in curious ways, sending up warmth. A mirage alters her vision. She changes her mind and tosses the rock into the lake. It skims the surface, sound bouncing, signalling, as if the lake were a launchpad for UFOs. A radio somewhere crackles, a fluttering of banana leaves. It has a long way to go and it needs time to send the stars off course again.



