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STORY IN ENGLISH

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SYMMES HOLE

Hamilton, Ohio, is a place you could find only by accident, as you're unlikely to go there deliberately. In the 1970s the town changed its name to Hamilton!—a scheme dreamed up by some local Babbitt. When the expected vim, vigor, and pep failed to materialize, the exclamation mark faded away and the dreariness of the unadorned Hamilton returned. But Hamilton—or Hamilton!—has retained one item of interest to passersby.

Under the shade of an old oak in a weedy town park is a simple if enigmatic grave monument—a stone obelisk topped by a granite sphere. This sphere has a large hole drilled through the center. Underneath, amid a crazy quilt of patching concrete, are several bronze plaques, bolted in over original stone inscriptions that were scoured into illegibility by over a century of wind, rain, and neglect. They read, in part:

John Cleves Symmes joined the Army of the U.S. as an ensign, in the year 1802. He afterwards performed daring feats of Bravery in the Battles of Lundy's Lane and Sortie from Fort Erie. Capt.

John Cleves Symmes was a Philosopher, and the originator of the "Symmes Theory of Concentric Spheres and Polar Voids." He contended that the Earth was hollow and habitable within.

The monument, erected by Symmes's son in the 1840s, is surrounded by the sort of wrought-iron fencing typically found around old cemetery plots. Nearby, on hot and dusty summer days, locals play on a basketball court. They utterly ignore the old obelisk in their midst—a more apt reflection of the life of the man buried beneath it, perhaps, than the monument itself ever was.

SYMMES WAS INDEED a brave man, although at first this bravery took a rather obvious physical form. Born in Sussex County, New Jersey, in 1780 and the namesake of a famous uncle who had developed the Northwest Territory, Symmes received a tolerable if brief common school education. He was literate, but hardly polished; he did, however, have a love of learning that often drew him to haunt public libraries. His scant schooling was not unusual for the time—other than clergy, lawyers, and doctors, few men in the late eighteenth century had the luxury of a formal college education.

In 1802 Symmes enlisted in the army. He first saw action on an open field—in a duel,

that is, with a bullying fellow officer named Lieutenant Marshall. In moments Marshall was lying on the ground with a broken leg and Symmes was bleeding from a shot to his wrist. Symmes reported shortly afterward, "I wanted to know if he desired another shot, and being informed in the negative . . . with my handkerchief wrapped around my wound, I went home and ate a hearty breakfast." He was no less fearless as a captain in the War of 1812. At the Battle of Bridgewater his company repelled three bayonet charges, and at Fort Erie he captured a British artillery position and destroyed its cannon.

Retiring as a war hero, Symmes took the well-worn career route of becoming a supplier to his old employer: he set up shop as a military provisioner and Indian trader in the upper Mississippi. He set aside some money and married a widow, and soon the two were living in St. Louis and presiding over a brood of ten children. He could have retired into the comfortable life of a respectable patriarch looking ahead to a lifetime of steady military business. But something was eating at John Cleves Symmes.

He had discovered that an entire world lay hidden beneath our feet—and only he knew how to find it.

SYMMES SPENT HIS military retirement in contemplation, observing migratory patterns and perusing books on geology and maritime exploration in his local libraries. There is no telling how long the notion of a hollow earth had occupied his mind, but he had now become obsessed by it. Writing up a brief tract in unadorned prose, he trudged down to his local printer and ordered up enough copies to send to every college, municipal government, senator, and eminent scientist in the country—and then some more copies, to go to every major foreign university as well. Titled Circular Number 1—for indeed many more were to follow—the publication introduced Symmes to the world on April 10, 1818:

I declare that the earth is hollow and habitable within; containing a number of solid concentric spheres, one within the other, and that it is open at the poles twelve or sixteen degrees. I pledge my life in support of this truth, and am ready to explore the hollow, if the world will support and aid me in my undertaking.

I ask one hundred brave companions, well equipped, to start from Siberia, in the fall season, with reindeers and sleighs, on the ice of the frozen sea; I engage we find a warm and rich land, stocked with thrifty vegetables and animals, if not men, on reaching one degree northward of latitude 82; we will return in the succeeding spring.

With this, Symmes thoughtfully attached a certificate of his sanity.

THE CIRCULAR WAS not well received. He was rebuffed by scholars and eminent statesmen across the country, and the French Academy of Sciences tabled his paper as unworthy of consideration. In a crowning insult, the London Morning Chronicle

doubted the provenance of Symmes's certificate of sanity.

The theory itself was a relatively simple one, even if Symmes was at times a little unclear on specifics. Concentric spheres were, Symmes pointed out, a most efficient arrangement of natural architecture.

Bones, plant stems, trees, lava tubes, insect limbs—all showed the biodesign of hollow tubes or concentric structures.

Enquire of the botanist, and he will tell you that the plants which spring up spontaneously agreeable to the established laws of nature, are hollow cylinders. . . . Enquire of the anatomist, and he will tell you that the large bones of all animals are hollow . . . even the minutest hairs of our heads are hollow. Go to the mineralist, and he will inform you that the stone called Aerolites, and many other mineral bodies, are composed of hollow concentric circles.

Symmes simply applied this principle of structure at a planetary level. And with the planet revolving, centrifugal force would fling material out along the axis, creating convenient holes at the poles through which intrepid souls like himself could venture into the inner world. Inside, Symmes believed, were multiple spheres, each accessible via a series of polar holes. Sunlight pouring through the holes and refracted through a dense interior atmosphere of "aerial elastic fluid" suffused these inner worlds with light and heat sufficient to sustain life.

Symmes believed this theory could account for all sorts of phenomena—magnetic fluctuations, the mysterious migrations of geese, caribou, and herring, and even the ocean's currents, for like a gigantic Charbydis, the earth's seas poured into one pole and gushed out from the other. Moreover, recent expeditions beyond the Arctic Circle had found open water where many had expected only frozen tundra. That, Symmes said, was from the outrush of warmed air from the interior world. After crossing 'the icy circle,' explorers would find a liquid and perhaps even tepid sea all around the poles, thus making for easy sailing into the interior realms, or what Symmes dubbed "the mid-plane space."

As it turned out, Symmes was not the first person to propose a hollow earth theory, and this was seized upon by learned critics to discredit him. In his 1618 work *Epitome astronomiae Copernicanae*, Johannes Kepler had pondered the notion of the earth and other planets being composed of concentric shells. As one reference book published by Abraham Rees in 1813, *The Cyclopedia*, put it: "If this [Kepler's theory] be the case, it is possible that the ring of Saturn may be the fragment or remaining ruin of his former exterior shell, the rest of which is broken or fallen down upon the body of the planet."

The hollow earth theory continued to attract distinguished support after Kepler's

death. In 1692, Edmund Halley, the astronomer of comet fame, was confounded by distinct sets of fluctuating magnetic data. His ingenious solution was to theorize that three internal spheres within the planet, revolving at different rates, were causing these distinct sets of data to appear. Perhaps, he imagined, there existed a luminous atmosphere between these shells, giving off sufficient light and heat to sustain life. In a 1716 article he even suggested that the aurora borealis was caused by the escape of this gas.

Five years later, Cotton Mather cited Halley's theories in his book *The Christian Philosopher*, and by mid-century the Swiss mathematician Leonhard Euler, the court mathematician to Frederick the Great of Russia, also lent his support to Halley's theory. But in the intervening century little attention was paid to the notion, which in any case had never achieved any popular currency.

Symmes was unlikely to have read these obscure works, and so his was an act of discovery made all the more impressive by his humble education. Moreover, his theory included a polar opening—Symmes Hole, as it came to be widely known—and that meant that contact with the interior world could be made. In Halley's theory, the earth's outer shell was five hundred miles thick and had no hole, which gave his readers little reason to pursue the theory much further. Symmes, though, had offered them a gateway to new worlds.

SYMMES WROTE AND printed up seven more circulars over the next year, applying the hollow earth theory to such disparate subjects as the migration of caribou, the geometric principle of concentric spheres, and the formation of the Allegheny Mountains. After moving to Kentucky, he published another circular in August 1819, *Light Between the Spheres*, which was then reprinted in the *National Intelligencer* and distributed to a wide audience. Symmes was becoming known to the public, but mostly through ridicule; in Cincinnati, local mathematician Thomas Matthews derided Symmes for having written "a heap of learned rubbish." The more he wrote, the more Symmes was ridiculed. And the more he was ridiculed, the more determined and angry he got. . . and the more he wrote.

It soon became clear that neither the press nor the scientific establishment was going to bother with what they considered to be the lunatic ramblings of a half-educated veteran. His only other option was to take his case directly to the people. This was not an easy decision for Symmes. For all his bravery under fire, he was deeply uncomfortable appearing before any crowd, and he lacked magnetism or even the most basic qualities of public speaking:

[There is] scarcely any thing in his exterior to characterize the secret operations of his mind, except. . . the glances of a bright blue eye, that often seems fixed on something beyond immediate surrounding objects. His head is round, and his face rather small and oval. His voice is somewhat nasal, and he speaks hesitatingly and with apparent

labour. His manners are plain, and remarkable for native simplicity. . . . Captain Symmes's want of a classical education, and philosophic attainments, perhaps, unfits him for the office of a lecturer.

It may be a measure of Symmes's ill-suitedness for the job that this description was written by James McBride, who was one of his greatest supporters.

Still, he had dedicated himself to spending the rest of his life, if needed, to vindicate his theory. He had a polished wooden globe built, cleverly designed to reveal the polar holes and multiple shells within, and in 1820 he set about traveling from town to town on the American frontier—first in Cincinnati, and then in Kentucky and the small Ohio towns of Zanesville and Hamilton—lecturing before any crowd that would listen to him, at times even addressing rapt if rather uncritical groups of schoolchildren.

For all his fumbling inability as a speaker, when this modest man addressed a roomful of listeners, spinning his cross-sectioned globe as he spoke of worlds within worlds, a hush would fall across the room. And when he had finished and made a polite plea for his listeners to write to their civic leaders in support of his expedition, a few members of the crowd would come forth to donate a little cash or to pledge themselves as expedition volunteers should his ship ever sail. He did not make much money from lecturing—scarcely enough to travel on to the next town, really. But he did make believers. Perhaps to his consternation, his fame began to grow, and by the summer of 1820 the nature artist John Audubon even had him sit for a portrait to be displayed in the Western Museum.

It didn't take long for fiction writers to see the value of Symmes's theories. The same year that Symmes began lecturing, and just two years after his first missive, a pseudonymous "Captain Adam Seaborn" issued a science fiction novel titled *Symzonia: Voyage of Discovery* (1820). In it, Seaborn recounts how, in the thrall of the theories of the ingenious Symmes, he lured his sealing crew beyond the Antarctic rim and into the very bowels of the earth.

As they approach the icy polar circle blocking the rim of the hole to the inner earth, and the ship's compass begins to go haywire, an argument ensues on deck. *Symzonia* is so obscure and difficult to find that at this point I must give over the rudder to Captain Seaborn, if only because most readers may never have another chance to read any part of his book:

"And a pretty condition we shall be in, Capt. Seaborn, if the ice closes the passage after we have dashed through it!" replied Mr. Slim. "We shipped with you, sir, for a sealing voyage; not for a voyage of discovery."

"You will please to remember, Mr. Slim, that I am expressly authorized by articles, to cruize and seek for seals wheresoever I may judge expedient and proper, and that any

opposition to my authority will involve forfeiture of your share—recollect that, Mr. Slim."

"I do recollect that, sir; but at the same time I do know, Capt. Seaborn, that you have no right to hazard our lives, by running into dangers, greater than ever encountered by human beings, to gratify your mad passion for discovery, instead of pursuing the interest of all concerned, by endeavoring to find seals in the usual manner. How will you justify yourself to the world, to our families, or to your own conscience, if we should, after effecting a passage through this 'icy hoop' you speak of, find it closed against our return, and thus be forever lost to our wives, our children, and society? We must in such a case all perish, and our blood would be upon your head."

A plague upon your lean carcass, thought I, how am I to answer so many impertinent questions. I could not tell him of my belief of open poles, affording a practicable passage to the internal world, and of my confident expectations of finding comfortable winter quarters inside; for he would take that as evidence of my being insane, and by means of it persuade the crew to dispossess me of my command, and confine me to cabin for the remainder of the voyage.

After knitting my brows a short time, I replied, "Mr. Slim, you are a sufficiently capable officer, and can get your duty well enough when you choose to do it, but you don't know every thing; your mind is too dense to admit the rays of intelligence. I would have you know, Sir, that I command this ship, and am not to be thwarted or dictated to by any man. I have noticed your rebellious spirit; now mark me, Sir, so sure as I have any more of your opposition to my will, or hear any more of your murmuring; the moment I detect you in uttering one discouraging word in the hearing of any of my officers or men,—I will confine you, and carry you home in irons, to take your trial for conspiring to make a revolt in the ship, which is death by the law; remember that, and go to your duty, Sir."

With his officers thus disciplined, Seaborn continues on to the Inner World. There he finds a strange Utopian land—Symzonia, he dubs it—populated by gravely wise pale beings in plain white clothing, who know little of greed, envy, or vice. Gold and pearls are plentiful in this inner world—so much so, in fact, that they are something of a nuisance to the pragmatic inhabitants. They travel in airships and, for their defense, have developed a giant mobile flamethrower of near-nuclear destructiveness. But, after much debate, they find the Externals (Seaborn and his crew) too corrupt in morals to be trusted, and deport them from their realm. A dejected Seaborn returns Gulliver-like to Boston, only to have his fortune swindled out of him, and is ultimately reduced to telling his fantastic tale for a publisher's pennies.

With public sentiment for a polar expedition fired by such tales and by Symmes's lectures, by 1822 members of Congress found themselves being beseeched by enough citizens and petitions that action needed to be taken. In one of the stranger moments

of the Senate's history, Richard Johnson, the senator from Kentucky, took the floor with this proposal:

MR. R. M. JOHNSON, of Kentucky, presented a petition from John Cleves Symmes, of Cincinnati, in Ohio, stating his belief of the existence of an inhabited concave to this globe; his desire to embark on a voyage of discovery, to one or other of the polar regions . . . and suggesting to Congress the equipment of two vessels of 250 to 300 tons for the expedition, and the granting of such other aid as Government may deem requisite to promote the object. A motion was made to refer the petition to the Committee on Foreign Relations, which was refused; and after some conversation, it was decided to lay it on the table—ayes 25. {Annals of Congress, Senate Proceedings for Thursday, March 7, 1822)

The initial suggestion that Johnson's petition first go to the Committee of Foreign Relations was sensible, as the voyage would surely result in establishment of trade relations with inhabitants of the Interior World. But despite having a number of supporters in the Senate, the entire petition was indefinitely tabled by the end of the day's debate. Still more petitions and letters came in. The next January it came to a vote again, this time in the House of Representatives, but was again tabled. Supporters lobbied hard, and in the following month seven more bills appeared in the House—five from Ohio, one from Pennsylvania, and one from South Carolina. All were tabled or struck down in rapid succession.

Amid these political maneuverings, ridicule and disbelief dogged Symmes in many quarters. The August 27, 1822, issue of the Charleston, West Virginia, Courier was fairly typical in this regard. In an article titled "The Year 2150 Anticipated," an anonymous satirist imagines a world in which Symmes is lauded to a ludicrous extent as the greatest genius who ever lived, thanks in large part to the usefulness of the Inner World as a depository for criminals, the insane, and the criminally insane.

Symmes pushed onward. After another fruitless attempt in both houses of Congress in late 1823, he moved to a newly inherited family farm in Hamilton(!), Ohio, and took his case directly to his new home state, petitioning the Ohio general assembly to pass a bill supporting his theory. It failed. Discouraged and nearly broke, Symmes's health began to falter, and he spent much of 1824 and 1825 ill. But his earnest guilelessness had impressed some people so much that whether or not they believed his theory, they would write to him or press just enough money into his palm to sustain him. When a benefit was held for him on March 24, 1824, at the Cincinnati Theatre, Symmes was even treated to a bit of well-meaning doggerel penned for the occasion by local poet Moses Brooks:

Has not Columbia one aspiring son, By whom the unfading laurel may be won? Yes! history's pen may yet inscribe the name Of SYMMES to grace her future scroll of fame.

Symmes had also attracted a disciple who was to prove both his greatest boon and bane in the remaining years of his life. Jeremiah Reynolds was an ambitious young editor of the *Wilmington Spectator*, and a great admirer of Symmes's theories, when he approached the great man himself with a plan. What good was it, he argued, if Symmes only addressed paltry crowds of frontier bumpkins? The places to go were the great urban and manufacturing centers of the Northeast—rather than nibbling at the margins. Symmes should go straight to the financial and intellectual heart of the republic.

Symmes blanched at the thought of this. Facing crowds of simple homesteaders was nerve-racking enough for him; the idea of lecturing before audiences of cosmopolitan intellectuals was simply terrifying. But Reynolds was persistent—they would both go! This reassured Symmes somewhat, for Reynolds had the polished magnetism and youthful energy that Symmes lacked. "With great hesitation, Symmes set off for the East with his twenty-six-year-old disciple in September 1825.

Their timing was fortuitous, for another Symmes admirer—one who perhaps had his best interests a little closer to heart—had during Symmes's 1824 illness set about compiling a book that would explain Symmes's theory with much greater aplomb and clarity than Symmes himself had ever managed. Released just months after the tour began, James McBride's *Symmes's Theory of Concentric Spheres* anticipated the arguments and examples of nearly even-subsequent work on the subject. And while McBride does not shy from some of the more arcane aspects of Symmes's theories, such as the "elastic fluid" aerating the inner earth that acts as a source of antigravity force, it was his homely examples that struck a chord with many readers. Any reader could ascertain the truth of Symmes's theory within a matter of minutes:

If you will take the trouble to examine a mechanic grinding cudery on a large stone that is smooth on the sides and has a quick motion, you may observe that if a certain portion of water be poured on the perpendicular side whilst the stone is turning, it does not settle or form itself into a body round the crank or axis, but forms itself on the side of the stone into something resembling concentric circles, one within another. The surface of the earth, I apprehend, revolves with much greater velocity than any grindstone: and the substances composing the spheres are much heavier than water.

For the keen observer—or the keen believer, at least—concentric circles were everywhere in nature, whether in the ripples propagating upon a pond or in the mysterious alignments of iron filings around a lodestone.

It was just such devices that Symmes and Reynolds unveiled to audiences in their traveling show, playing to packed houses at fifty cents a head. With magnets, boxes of sand, whirling stones, and Symmes's well-worn wooden globe, audience members were brought face to face with the laws of the universe . . . laws that inexorably led to

a hollow earth. Skeptics who arrived at a Chambersburg, Pennsylvania, lecture in January 1826, one local editor observed, sat dumbstruck by the force of the pair's argument—"a breathless silence prevailed"—and erupted in applause at the end of the lecture. Even the editor, who had before written Symmes off as a loon, conceded the next day in his paper:

Facts, the existence of which will not admit of a doubt, and the conclusions drawn from them are so natural . . . that they almost irresistibly enforce conviction on the mind. . . . The cost of an experiment [expedition] would be trifling, and discoveries of importance would most probably be made, tho' Symmes should be found erroneous.

This last sentiment proved to be Symmes's undoing. The pair moved on to Harrisburg, where they addressed the Pennsylvania legislature, which responded with an enthusiastic letter of support for the man who had managed to stand up "in awe of the world's dread laugh." Still, Symmes's fragile health was brought to the breaking point by the touring, and after the two finally reached the apex of their tour, Philadelphia, Reynolds had to take on most of the lecturing. Reynolds had noticed the audience's enthusiasm for a polar expedition, regardless of the veracity of the hollow earth theory, and started simply omitting Symmes's theory from most of his lectures. The two soon parted.

Symmes staggered on through the winter of 1826-27, lecturing with his props and his grand notions throughout New York and New England and all the way up into Canada, but the strain of stage fright exacerbating his already poor health was simply too much, and he called off the rest of his tour. For the next two years he stayed with an old friend in New Jersey, hoping merely to gain enough strength to go back home to his Ohio farm. When he finally did make the long journey back home, his son later recalled, "he was so feeble that he had to be conveyed on a bed, placed in a spring wagon, to his home near Hamilton."

From his sickbed he continued to churn out circulars on his proposed expedition, but with bitter knowledge that Reynolds, who had once promised so much, was now in Washington lobbying Congress to explore the south pole ... for whaling and sealing.

In May 1829, Symmes died, believing right up to the end that the greatest discovery in the human history had eluded his grasp.

AND YET THE dream did not die with the dreamer. Although Reynolds succeeded in getting President Adams's approval for an expedition, successor Andrew Jackson canceled the project, and it was not revived for nearly a decade. But in the meantime, Reynolds found a sympathetic ear in a wealthy New York patron named Dr. Watson. Watson and Reynolds outfitted an expedition for the south pole and set off in the SS Annawan from New York Harbor in October 1829. Upon reaching sight of the shores of Antarctica, they found their way through the "icy circle" blocked by towering

icebergs and crashing fields of floating ice:

After coasting the base of several icebergs and making our way through the field-ice floating around us, we reached the neighbourhood of a long and dangerous reef. . . . The dashing of the heavy swell upon the breakers, as it poured from the south, heaved in vast quantities of field-ice. As they plunged forward upon other floes in advance, the whole body was broken into atoms, and a mist, like the smoke from the crater of a volcano. . . . Let the imagination of the reader picture the savage features of the shore, whence the overtowering cliffs of ice are not unfrequently separated from the main body by the undermining rush of the billows; let him conceive the plunge of the disparted ruin; the thundering crash of its collision with the ocean; the vortex of foam and spray which mark where it fell; and even then, be his fancy ever so vivid, he will fail to realize the sublime realities of the Antarctic.

Sublime as it was, it was also impassable. On their way back, the crew mutinied and stranded Reynolds and Watson, and then turned the Annawan from polar expedition to a more profitable trade: piracy. Reynolds wound up wandering the rocky shores of Chile, briefly served as a soldier in a tribal revolt, and eventually joined the passing frigate Potomac as a secretary, spending 1831 to 1834 circumnavigating the globe.

After returning, he quickly published a popular account of the Potomac's voyage, and then went back to earning his pay by lecturing on the poles and the hollow earth. At one lecture in Baltimore, it is thought that Henry Allan sat in the audience listening intently. He went home and related all he heard to his adopted brother—Edgar Allan Poe—and the greatest Symmes convert ever was created.

The hollow earth became an obsession for Poe. He was broke, alcoholic, and living on bread and molasses in cramped urban hovels with his tubercular teenage wife, and the notion of a wide-open frontier beneath his feet had an understandable pull upon his soul. His first published story, "MS Found in a Bottle," relates the disastrous end of a ship approaching one of the polar holes. In the only novel he ever wrote, *The Narrative of Arthur Gordon Pym*, the titular narrator discovers a lost Antarctic island populated by savage exiles from Symzonia, and breaks off in the closing lines with a kaleidoscopic plunge into the Interior World:

And now we rushed into the embraces of the cataract, where a chasm threw itself open to receive us. But there arose in our pathway a shrouded human figure, very far larger in its proportions than any dweller among men. And the hue of the skin of the figure was of the perfect whiteness of the snow.

When Poe printed the first installment of *Pym* in the January 1837 issue of the magazine he edited, the *Southern Literary Messenger*, he pointedly printed it alongside a factual lecture on polar exploration by Reynolds.

By mid-century, Jules Verne had steeped himself in the work of Poe, Reynolds, and Symmes enough that he wrote not one but three hollow earth works—a continuation of Poe's Pym titled *An Antarctic Mystery*, his 1866 novel *The Adventures of Captain Hatteras*, and his famous *Journey to the Center of the Earth*. These were not mere works of fancy. Not only had no one ventured far enough south to entirely disprove Symmes yet, but the 1848 discovery of a frozen woolly mammoth in the Siberian tundra seemed to prove Symmes's contention that just beyond the cold polar rim was a world plentifully populated by herds of animal life.

And if the ideas of Symmes had not yet faded, it was due in no small part to the efforts of his own family. It is a mark of Symmes's good nature that even after forsaking a steady career to face a decade of poverty, illness, and ridicule, he was most fondly remembered by his family. After his son Americus Vespucci Symmes erected the monumental obelisk to his father in Hamilton, he went on to publish a booklet updating his father's writings, *The Symmes Theory of Concentric Spheres* (1878). He did this in part because hollow earth theories had now become popular enough that other writers were passing off Symmes's ideas as their own.

For his zealous lobbying for his late father in newspapers and magazines, Americus received his own share of ridicule. When he sued a company for not fixing holes in the local turnpike, during the trial their lawyer turned to the jury and archly remarked that "Mr. Symmes could see a hole where nobody else could, like his father before him: indeed, it seems to be a family failing."

Symmes's progeny could hardly help inheriting a propensity for ambitious pursuits of the impossible; another son, following in his father's quixotic footsteps, retired as a captain from the army and moved to Germany to build a "flying-machine"—which, regrettably, did not fly.

BY THE LATE nineteenth century, expeditions had begun to approach the poles; the expected holes were not there, and thus the hollow earth theory fell in a decaying cultural orbit, sinking from dreamy scientific speculation to the discredited obsession of ignorant cranks and savvy charlatans. One such fellow was a Civil War veteran and quack herbalist bearing the melodious moniker Cyrus Reed Teed. He published a divine vision in 1870, *The Illumination of Koresh: Marvelous Experience of the Great Alchemist at Utica, N.Y.* It argued that the earth was hollow and that we lived on the inner surface of the sphere, looking in toward a center filled with diminutive planets and stars. At the center of it all was a sun that was light on one side and dark on the other, thus producing the effect of day and night.

A handsome and charismatic thirty-one-year-old, Teed at one point attracted up to four thousand mostly female followers. And like any good prophet, he declared himself the messiah and changed his name from Cyrus to the Hebrew equivalent, Koresh. He then proceeded to move his congregation to a commune outside Fort Myers, Florida. He

prepared for the arrival of eight million followers in his self-proclaimed "Capital of the World." Two hundred showed up.

Teed had made a point of sending his key works, like *Cellular Cosmogony* (1898), to libraries around the world. These and his numerous pamphlets and magazines later turned up in, of all places, Nazi Germany. Nazism's anti-intellectual bent made the Reich susceptible to pseudoscience, and so when German aviator Peter Bender started preaching Teed's doctrine, it was not too surprising that his theory found some favor in the German Admiralty. But this interest didn't do Bender much good—he died in a concentration camp.

When Teed himself died in 1908, his followers had gathered and dutifully waited for him to resurrect himself. After a few days, though, the messiah had developed a definite pong, and finally local health officials pushed their way through the crowd and unceremoniously shoveled the immortal prophet onto a waiting cart. Perhaps his ostensive employer was unamused by it all, for later Teed's body was swept out to sea in a hurricane.

STILL, FOR A long and charming spell in the history of science, it was possible for a reasonable fellow to believe that entire worlds, unexplored and teeming with life, existed right beneath our very feet. It is not strange that Edgar Allan Poe, who had spent much of his final days attempting a sort of unified field theory of the universe in his cryptic essay "Eureka," would cling until his last desperate moments to the majestic vision of Symmes and his disciples.

Poe had contracted rabies—enemies later claimed alcohol poisoning—and was found senseless in the streets of Baltimore. In the final and fatal stages of infection, delirious with a fever and maddened with the excruciating throat spasms of hydrophobia, he thrashed about in convulsions of agony on his hospital pallet. The nurses could not understand what he was raving after as he cried over and over for the unseen guide to the underworld that awaited him:

"Reynolds, Reynolds . . . Reynolds!"