# THE ICE WAR

by Stephen Baxter

"The Ice War" is related to Stephen Baxter's 1993 novel *Anti-Ice*, which was his first major attempt at alternate history. He recently completed his Time's Tapestry alternate history series for Ace, with the fourth book, *Weaver*. He tells us he enjoys AH so much that this year he's serving as a judge on the Sidewise Award. Stephen's next project is a two-book sequence of climate and disaster called *Flood and Ark; Flood* has just come out from Gollancz in the United Kingdom.

The historians have painted March fifth 1720 as a day of infamy, for that was the day the Ice War was declared upon Britain by monsters from the sky. But my own poor life might have ended that ominous morn even before the war's tremendous events began to unfold.

As I lay in my narrow bed in that dawn, Fred Partridge's voice drifted up to me from the chill road outside. "Jack Hobbes! I know you are up there, you blackguard. If you're alone in your pit or if you're not, come down and face your justice like a man!" All this to a counterpoint of a hammering on the tavern door by mighty agricultural fists.

My immediate stratagem was to follow that course that has served me so well throughout my life, that is to hide until the danger had passed. So I burrowed under the coarse sheets, pulling my jerkin tighter around me and my battered old felt hat down upon my ears, for in that spring the cold would freeze the marrow in your bones, and I kept on layers of clothes even during the night. I could guess why Fred was there, but even in that moment of peril I wished I had his daughter in the bed beside me again: full-breasted, empty-headed, sixteen years old, what a bedwarmer Verity had made!

The banging and shouting went on, and for a moment I thought I might get away with it. But then I heard old Mary, wife of the innkeeper, come to the door and demand of Partridge in querulous tones what he was at, frightening her pigs and splintering her woodwork. The crux of it was she opened the door and old Fred got in, and he lumbered up the stairs, sounding like a great horse loose in the house.

Well, I sprang out of bed. As I have said I was already dressed, and had only to pull on my woolen overcoat and my boots and I was ready for the road. I glanced around my room one last time, this mean hovel that had been my home for a year. I snatched up my purse and my pocket knife, and my father-in-law's Perspective, stolen by me as I fled Edinburgh in not

dissimilar circumstances to this, all that and a bit of bread from last night's supper, which I crammed into the pockets of my coat. I considered my school books and my heaps of teaching notes, but even if I survived the morn I would not be going back to the Grammar School in Jedburgh. That was that and time to leave, Jack.

I hurried to the window and snatched back the curtain—and just for a heartbeat, despite my own peril, I was taken aback by the spectacle before me. From my elevation on this first storey I saw the town of Jedburgh set out before me in the dawn. Winter ice lay everywhere, months old and cracked and brown with mud. And the Comet sprawled over a grey dawn sky, that astounding tail sparkling as if flecked with gunpowder. And as I watched I thought I saw a bit of that tail, a sparkling fragment, come loose and slide over the sky.

But a fleshier peril than any Comet was closing on me, and I was maundering. I fumbled with the window, but it was frozen in its socket, and my heart pounded.

The door slammed open and Fred Partridge filled the frame, more like one of his bulls than a man. His face was bright with his temper as with the cold, and his grey hair stuck up around his bald pate. "Hobbes, you black-hearted coward!"

In that moment the window flew up, ice cracking around its frame, and my mood switched to reckless cheer. "That's me, Fred!"

He strode toward me. He had the biggest hands I have ever seen, even among farmers, and his fists looked like sides of beef. "Stand and take what's coming to you."

"Not likely," says I. And with a skip I got my legs over the window sill and wriggled around so I was dangling down the wall of the house, and then it was a question of a drop of a few feet to the ground. I finished up in the inn's yard, not a pace from old Mary, who stood glaring in her doorway.

Fred got his head and one huge fist out of the window. "You nimble beggar!"

I laughed. "Yes, Fred, and at the ripe old age of twenty-four years it's ploughing your daughter that has kept me so."

His face turned from red to purple. "I'll wring your neck! My girl's with child, ruined by your stinking seed. Why, to think I paid for you to stand in

front of my own son in that school, with your Mathematicks and your Philosophies—”

I stood up straighter, for I do have some professional pride. “You got the teaching you paid for, Fred, and if it was good enough for a kirk school in Edinburgh, it was more than good enough for your jug-brained offspring. I’m sorry about Verity for she’s a good girl and no wanton, but I won’t have you pointing fingers at me.” And to bring that home I grinned at Mary. “I know how loose your own breeches are, Fred!”

Old Mary gasped at that, and to my shock she went for me. She had muscles herself from hauling kegs of ale all her life, and she gripped my shoulders hard and shook me. Meanwhile Fred roared like a stag and disappeared from the window, on his way down. Trapped, my skull rattling from the shaking, I began to think that last thrust had been a bit too bold.

But I have never been one for hypocrites. I had a breed of Christianity beaten into me as a boy by my high churchman of a father, whose whippings seemed to demonstrate to me the non-existence of God rather than the opposite, for if He lives why would He permit those struggling to believe to suffer so? Catch me if you can, punish me as you will, but spare me your cant and your piety!

Little enough of this flashed through my head as I loosened the grip of the innkeeper’s wife on my shoulders and scarpered. And even as I ran I saw that bit of the Comet slide down through the air, sparking and brightening, dropping toward the south-east and so descending ahead of me in my flight, a Star of Bethlehem guiding a man who was anything but wise.

* * * *

I soon got through the heart of Jedburgh, which is pretty beside its river but has been battered by centuries of war between English and Scots, its poor abbey burned and looted over and over, leaving it a stunted and fearful sort of place, and I wasn’t sorry to shake its dust from my boots. From Jedburgh town I meant to head off down Dere Street, the Romans’ old track, cutting across the country to join the Great North Road at Newcastle. With any luck I would find a bit of transport before I had worn out my poor feet with too many miles.

I had long mapped out various routes for the day when escape from Jedburgh should become necessary. My final goal was to return to London, full of opportunities for a fellow like me, and I hoped that by now the various

misdemeanors that had caused my father to curtail my Philosophical studies at the university there and haul me off to teach in Edinburgh would have been forgotten, if not forgiven—although the likely existence of a few young Hobbeses running around among the Cockneys countered that. My return from Scottish exile so far had got me only to this border town, where, lazy to a fault, I had got stuck for a year. But now at last I would resume my southward route toward the metropolis.

As it happened the road passed Fred Partridge's own farm, and I remembered how I had trod this track many times in search of the delights of young Verity—damnable bad luck she had got with child! But the circumstances were less happy now. Though it was Fred's own fists I mostly feared I was cautious as I walked a field boundary, eyeing the rude farmhouse and the tumbled stables and the big barn that Fred liked to boast he had built himself with his father. The sun was up by now, a pale ghost that shed no heat. I stumbled a bit on soil frozen hard as Roman concrete, and the winter cabbages in the field glistened with frost.

And suddenly my shadow sprawled over the ground afore me, cast not from the sun, which lay ahead of me, but from behind, and it shifted as I watched, quite unnatural. I whirled around, afeared that some lout of Fred's had after all come after me with a torch or a lantern.

But it was nothing human that cast that shadow. It was that bit of the Comet, the fragment of the tail that was falling out of the sky. It had been a mere spark of light, a star, but now I could see it had grown into a lump, irregular, a glowing potato that tumbled as it fell. It sparked and flashed all over. I heard a kind of roaring, too, like a distant storm approaching.

And as I watched those few seconds I heard that roar grow louder, and the potato swelled larger, and I realized that this spitting monster was falling to the ground right on top of me!

I ran, a healthy instinct born of a lifetime of cowardice. I made for the nearest shelter, which was Fred Partridge's barn. Still the light brightened, still that dread roaring pounded my ears, and I felt a breath of hot wind. As I fled into the barn a pair of cows in their byre gazed at me with dull surprise.

There was an enormous bang, a flash like a detonating sun, and a fist mightier than Fred's slammed me in the back. I flew through the air and hit something hard and I knew no more!

* * * *

II

It was dawn when I was knocked unconscious, night when I woke. Thus I slept through the whole of a day.

Night it might have been but the light was bright, a silver glow that sent shafts between the slats in the roof of the barn, and made a cow low fretfully. The light was not the moon, of course, but the Comet that still dominated the sky.

All this I saw as I stirred in my impromptu sick bed. It turned out I had been flung across the barn to clatter against a wall; having been lucky to survive the Comet fall, I was lucky again to drop, insensible, into a heap of straw that cushioned me—and then the straw had kept me warm through the long day, for otherwise I might have perished from the cold. Lucky too was I to find, as I shifted my limbs, that I was whole in the skeleton despite my battering, and uninjured save for an aching chest and a pounding in the head. Lucky several times over then, though you might not have thought it from my self-pitying mumbling as I sat in my straw, sore, giddy, hungry, thirsty, and desperately cold, and picking bits of urine-flavored straw from my mouth. I have never been brave in the face of injury.

But I shut up when I heard voices outside, and saw the flicker of lanterns. I was still on old Fred's farm, I reminded myself, and had best be careful who found me there. I crept out of my shadowed corner to see what I could.

I was amazed to find that little had survived of the barn, save the end of it where I had been thrown. Where the barn's big doors had opened, a great pit had been dug in the earth, shallow like a saucer but as wide as fifteen or twenty paces, and perhaps five deep at its center. Around this the roof was blown away and the doors and walls scorched and fallen. One of those poor cows still stood in her byre, lowing softly as if she needed milking; of the other nothing remained but a splash of blood and some bits of hide. It was evident a great explosion had taken place here.

And at the center of the crater, sitting like a potato on a plate, was a sort of boulder, perhaps six feet high and as broad, its surface scorched and steaming, evidently still hot. Despite my concussion I immediately deduced that this object must be that piece of the Comet tail that I had seen penetrate the air. Under a coating of soot, I thought it glimmered, like ice. Oddly enough I also saw what looked like hen's eggs nestling in the rubble of that crater, and that I could not understand; perhaps they had somehow been thrown here from a shattered hen coop.

But I heard voices again, and ducked back into the shadows. Here came Fred Partridge with a party of his hinds, equipped with rakes and shovels. He set them to clearing away the debris of the shattered barn, and I thought that he might have been waiting out the day until the crater cooled enough for his men to approach, and get it filled in. But the ground in that pit was still too warm and the steaming lump too hot to handle, as one wretched hind learned at the cost of a scalded palm.

Stuck in my shadows, hungry and chilled to the bone, I waited as the lads abandoned their tools and drifted off.

Then I crept forward to spy out the land. The Comet light was bright. I had hoped to find a deserted field, and a way off this wretched farm and back to Dere Street and salvation. But a bonfire had been lit not far from the barn, and two of Fred's hinds sat huddled in blankets beside it. For all his piety old Fred was always a greedy sort as well as a hypocritical lecher, and I thought he must be setting his barn to protection against thieves. Cursing, I retreated into the dark.

Gnawed by hunger and thirst I hunted through the ruin of that barn, but there was nothing to eat but the stale bread I had put in my pockets, and even the cows' water was frozen solid in its trough. I even ventured to explore the crater for those hen's eggs. It was too hot to walk through, but I lay on my belly and reached in to pluck out one of those scattered eggs. But I snatched my hand back, for the egg was hard and heavy and cold and slick—an egg of ice! Whatever these strange formations may have been, none of them had been near a hen—and there was nothing for me.

For a chap who believes he is so clever, it took me a while to recognize there was one tap in that barn that might run for me, and that was the udder of the one surviving cow, who remained ignored by Fred and his boys. I hurried over to the poor animal, found a knocked-over bucket, and rummaged around for her teats. I am no farmer's hind, and my only knowledge of milking was acquired through observing one or two farmers' daughters or maids whose own pretty udders I had my eye on at the time. Still I labored at my task, grateful for a bit of warmth, and the cow mooed her relief, and thus we were united in our physical needs. Mammals, the lot of us! It is only hubris that makes us think we are better than the beasts of the field, so like us in every particular.

After I had drunk of her lactation, warmed and refreshed, I stuffed my coat and hat with straw and huddled in a corner to endure the night. It was as uncomfortable an evening as any I have spent.

I am city bred, having been born in Bristol, and had lived my life mostly in London and Edinburgh, capitals both. I was schooled in London and went up to university there at age fourteen, but was dismayed by the cold modern teachings of the Natural Philosophers with their Systems of the World and their Natural Religion: “Reason, not Revelation, boys!” This may be the new fashion of the day, but I was as repelled by a vision of a God who is absent from the Universe as by one who clouted me daily through my father’s fists. I almost missed the old Tyrant!

Well, though my brain is fine enough I became a poor sort of scholar in that place, and at nineteen was forced to flee London through scandals of my own making, which I will not test the reader’s patience by listing here. As for Edinburgh, I soon discovered a certain facility for teaching, but I fell into my former sorry habits, and the old Presbyterian whose daughter I tupped there had gone one better than Fred in holding me to account, and after a thrashing I was stood up to marry the girl. We had some months of contentment, I would say, when we could get away from the father, and I think we both felt it in our hearts when she lost the bairn before its birth. After that I went to the bad once more, and was close to gambling away the last of her dowry when the latest Jacobite rebellion erupted and it became prudent to decant Jack Hobbes to somewhere less full of men with steel and muskets, and I fled for the border country.

In short, in all my complicated career I had never been a farmer, and huddled in that barn that night I envied old Fred’s hinds not one jot. Those fellows held to their duty, however. All night I heard their conversation continue, ever more drunken.

And during that long night I watched what became of the bit of heaven that had fallen into Fred Partridge’s barn.

For a start I saw where those eggs came from.

They were propelled out of the soot-covered kernel itself ! One by one the eggs sailed through the air like dried peas spat out by a boy. It took a bit of watching to observe this, for it was not a frequent event. Stranger yet, the eggs underwent their own evolution. They would burst open with a snap like melting ice and scatter fragments onto the earth. And then—so I surmise, for I did not observe this directly—those fragments gathered themselves up again into a sort of dome, perhaps the width of a man’s hand, shallow as an upturned saucer. You could see that the dome incorporated bits of the earth, from the way the ice was streaked and dirty.

A curiosity it was, but I am no nature-watcher; my intelligence is earthier than that. I fancy I slept a little.

* * * *

I was disturbed by a tickle, an awareness of something moving before my face, small and furtive. A rat, perhaps. Without opening my eyes I swept my arm around, fancying I might make a snack of him in the hinds' bonfire. But my reward was not the squeaking I had expected but a kind of tinkle, like a falling icicle. Startled by that, I sat up. I found a little heap of icy fragments before me: a thing like a lens, perhaps six inches across, and fine rods no wider than straws, broken, splintered and piled up on the ground. It had not been there when I fell asleep.

I looked about. Outside the ruined barn the sky was brightening, the sun's light seeping behind the Comet tail. The bonfire had burned down, and Fred's two hinds lay sleeping, one snoring loudly. At last, I saw, I had a chance to make a run for it. But I was distracted by motion in the pit before me.

There was a stirring in the broken earth around one of those domed forms. Then, to my surprise, thin pipes scraped up out of the ground like fast-growing flowers, standing quite vertically, making a sort of crown all around the lip of the dome. These icicles were perhaps a foot long; I had never seen the like before. Then, stranger yet, the dome itself quivered and shook, and with an icy grind it rose up from the ground, rising through its cage of icicles to the top. Now I saw that the "dome" was as convex beneath as above, and that this ice artifact was in effect a lens, opaque and streaked with the dirt of old Fred's floor.

The lens settled for a moment, and then the icicles themselves began to move. They slid under the carapace of the lens, remaining dead straight, clustered, moved again. And as they did so the lens itself began to shift to and fro, the whole assemblage migrating across the pit, inch by inch. The thing was something like a toy of a Greek temple on the move, those upright pillars sliding around beneath the lenticular roof. It was a strange manner of movement quite unlike anything I had ever heard of, though I have read plenty of travelers' tales. And yet it had the semblance of life, like an ungainly crab made of ice. I realized that such a beast had disturbed me as I slept, and I had thoughtlessly smashed it up.

And now that I knew how to see them, I realized that more of the creatures were shifting about their pit, those odd lenticular bodies sliding up and down the ice pipes, and shimmying to and fro with that odd, disturbing

movement that would become so familiar across all of England in the days to come. Some of them, indeed, seemed to me to be venturing away from the pit, and even out of the barn. I could not count them; there might have been hundreds.

And I heard voices coming from outside the barn, old Fred's gravelly tones as he rebuked his drunken hinds, and the shouting of men and the barking of dogs. Distracted by the ice novelties I had let slip my only chance of a fast escape from that wretched place. Trapped, still! Steadily cursing my own foolish curiosity, I slithered through the shadows to see what was what.

* * * *

This time Fred had gathered a veritable army, armed with staves and half-pikes and even a few fusees, fowling pieces, and the like. I observed this with a sinking heart, imagining Fred was setting off a hunt after me, his fox. But the men were heading not for the barn but in the direction of Fred's farmhouse, and I shook off my funk, for now I observed that the farmhouse too was damaged.

The house was always a rude affair, built largely of stone robbed from the abbey in Jedburgh. Now one end of it, where the kitchen was built, was crumpled up and disheveled, the brick wall cracked, the chimney stack askew. I wondered if some fresh piece of Comet had come tumbling to earth, but I had heard nothing in the night. But I saw that what had damaged the house had come from not from above the earth but from beneath it. The kitchen had been nudged up by a great dome of dirty ice that had pushed its way rudely out of the ground, quite regular, the cousin of one of the tiny domes I had observed in my pit—but huge, as I could tell from the perspective of the men who walked around it and even over it. All this had erupted from the earth overnight.

And as I framed that thought I felt the ground shudder like the slope of Etna, rattling the barn and alarming the cow. I thought I knew what was to come next, and that if I were one of those hinds around the big dome I would run fast.

I did not have long to wait. Needles of ice shot out of the ground all around the hillock of ice, no splinters this time but pillars each a yard wide. Earth was scattered, the ground shook, and those hinds ran like mice. The pillars grew like weeds until they were perhaps a hundred feet tall.

And then came the second act as that mountain of ice shuddered and

clean ripped itself out of the frozen turf, and rose to the top of its circle of pillars with a deafening scrape. It was astounding; save perhaps for waterfalls and floods, I had never seen such a mass in motion. And if I was startled by all this, imagine how it was for the hinds, men whose minds were a void of ignorance broken only by the pious babblings of their ministers. Fred Partridge, meanwhile, was hopping about furiously, because the rise of the ice lens had toppled over his farmhouse as easily as a man kicks over an ant hill.

Already those great limbs broke from their circular stations and slid back and forth beneath the belly of the lens, and gradually began to carry that ice carcass across the countryside, like legs bearing an animated tabletop. Fred and his men fled without looking back, and I was free at last.

But the spectacle wasn't done yet. I saw another beast, even bigger, erupt from Fred's turnip field beyond. And then came another up from beneath the riverbed that shattered a water-mill into flying splinters, and another beyond that, so far off it was misted by distance, huger even than its Titanic brothers. As soon as they emerged all these beasts began the purposeful movement of the first, those limbs moving back and forth like sunbeams cast through a cloud. It did not take me long to deduce that the beasts were converging on Jedburgh.

In the turmoil of the 'Nineteen, as the Stuart-led mob of hairy-arsed highlanders had come down from the hills, Jack Hobbes had scarpered quick. Likewise now as those ice monsters bore down on the unfortunate town I ran the other way, heading south-east down the rutted old Roman road, ran until my lungs were fit to burst!

* * * *

III

When I was sure there was no chance of pursuit from Fred Partridge and his men, I slowed my pace to a walk, and began at last the purposeful part of my journey, heading down the rutted old Roman road toward Otterburn. The day was just as cold as those before, the ice holding fast to the land. But I was young enough and fit, and soon walked off the effects of my narrow squeak with the ice meteor and my night in the barn. I had my purse and had every intention of making a comfortable journey of it, lodging in inns and farmhouses with perhaps the bonus of a plump innkeeper's wife or two to keep me interested, and if I was lucky I might catch a coach service.

But these plans came to naught.

It was soon apparent that the icefall on Jedburgh had not been an isolated event. The country hereabouts, and even as I walked over Carter Bar into England, was pocked with craters, many of them tremendous pits that dwarfed the one that had almost killed me in Jedburgh. Too, I observed a multiplicity of the little ice crabs scuttling about the countryside, which would get under your feet when you were walking, particularly when the evening came on. I took no particular care about crushing the little pests. But I saw their greater brethren loom on the horizon, those lenticular bodies horizontal and their legs always dead straight and shuffling back and forth, and gleaming a cold blue when the rare sunlight caught their carcasses. And though I could not see them at it, I suspected they too moved about more at night, from the icy grinding that echoed across the dark country as I huddled for shelter in ditches or in woods.

In response to this invasion the villages on my route, Campdown and Byrness and Rochester, were abandoned like plague towns. It seemed the people had fled in panic, though where they had imagined to go I could not fathom, for the whole country was assailed by the beasts. It seemed to me that the monsters might not be interested in humanity at all, and that the damage they did to our communities might be as incidental to their purpose as the flattening of a molehill under the boot of a marching soldier. Still, there was often an empty cottage or two that offered me a bed, and a bit of bread or hanging meat or moldy cheese, and I got myself warmed up regularly.

When I came on Otterburn I had a choice to make. I could continue on Dere Street to the south and east making across the fell for Newcastle, or I could cut east and follow the valley of the Coquet toward Alnwick. Though I would come on the Great North Road further north than Newcastle, this latter course I decided on. I was not the only footsore traveler, and the villages were becoming increasingly emptied out, and I fancied I might provision myself with the fishing on the Coquet. And I fretted how things might be in the south if the vast population of England was taking flight from its cities. It might be better to make for the north and Edinburgh, where I would have to deal with an irate Presbyterian father-in-law, but better that than a mob of starving Londoners.

So I followed the Coquet as far as Rothbury, provisioning myself with fish from the frozen river, and then cut across the moor toward Alnwick. I repeatedly saw the ice monsters march in the distance, and saw more ice meteors crash to the earth.

Before I reached the town itself I came at last upon the Great North Road, that great old rutted artery of ours. I had traveled this way with my father from London to Edinburgh some years before; it and the rest of the Romans' old routes are still the best roads in the country. We live in the shadow of a better past, and I have often believed myself born into a wrong age! The North Road, in fact, was at the time of the Ice War being improved for the first time since a legionary last wiped his backside on this island thirteen centuries ago, these enhancements being paid for by a system of tolls and turnpikes as legislated by Parliament. This system of maintenance I thoroughly approved, and I intended to tip my cap at each of the turnpike gates that I jumped over with my purse unopened.

But that day I did not have the road to myself. I was dismayed, if not surprised, by the volume of traffic thereupon.

I stood on a slight rise by the side of the road and considered it. There were stagecoaches and broughams and farmers' carts, and people on foot and dragging barrows and the like that bore bundles of victuals, clothing, barrels of water, even furniture, tables and chairs and carpets. Some of these walkers looked as if they had never set foot upon a road in their lives, and yet were now as cold and mud-spattered as the rest. The odd thing was that while the bulk of this stream of people and horses and vehicles came from the south, perhaps originating in Newcastle and the southern cities, there was a counter-stream of it coming from the north. Standing there watching this great purposeless to-and-froing, I had to laugh.

"Sir, I'm glad in all this distress somebody manages to find something funny."

I turned. A fellow had come to stand beside me. He was perhaps sixty and well enough dressed, though his coat was torn open at the back, his gaiters mud-splashed and his wig askew. He had a long nose and heavy eyebrows, and eyes that could pierce, but which rarely met your gaze. Behind him, as I noticed now, was a coach toppled over in the ditch, and boxes and cases tumbled in the road. By the side of the coach another man was crouching, and talking softly to somebody within.

I said, "By the look of you, you've come out of that spill."

He brushed at his grimy coat. "So I have and I'm grateful for no more than a knock or two." He had the thin tones of the Londoner. "And you, sir, laughing your head off !"

“Oh, not at your upturning—I did not witness it, I assure you.”

“Then what?”

“At all this.” I indicated the crowd. “People fleeing this way and that like ants from a broken-open nest.”

“Ants, eh? You have a lofty view of humanity, sir. It’s worse in the south, I can tell you—we’ve come from London, and even the capital is in a ferment as the Phoebeans burst from the Thames clay. The road is a river of suffering! Can you not see that?”

“Ants,” I repeated. “If the ice monsters are everywhere, what earthly use is fleeing?”

His eyes narrowed as he studied me. “That’s just as Swift says.”

“Swift?”

“The Dean, my companion.” He indicated the man by the coach. “You must have a heart as cold as his. Your name, sir?”

I bridled a bit at his peremptory tone, but I gave him my “Jack Hobbes” readily enough. “And you?”

He extended a hand. “Defoe. Daniel Defoe.”

I shook his hand in something of a daze. “Really? Then that’s a remarkable coincidence, for I read a book by a namesake of yours not six months back: ‘The Life and Strange Surprising Adventures of—’”

“That was one of mine,” he said, and he nodded, adopting a rather superior expression.

I was quite enthused, for I had enjoyed the book. “A rattling tale, sir. Although I never quite believed that a man as self-reliant as your Crusoe would start bleating about Providence. What Providence need he but his own hands?”

“Ah, but my purpose in writing the yarn was wider than moral fabulating. I am greatly taken by the tales the travelers bring back from the unexplored corners of our world. It seemed to me that such an adventure as Crusoe’s might never have happened to any man before in the whole history of the world, for never have explorers sailed so far and into such

unknown domains, not even the Phoenicians. My story is a new genre that explores novel possibilities: *what if this were so*?"

I nodded. "I enjoyed the passages of his endurance. He changed his island forever, as the Romans made Britain."

Defoe gestured at the road. "And we live in their shadow yet. But no Roman ever saw the Americas, man! We live in an age of a great unfreezing of the mind, of the transforming of the fortunes of man—"

"Oh, for God's sake don't let him debate his vulgar scribblings." This was the fellow Swift, who came clambering up to join us. He was a bulkier man with a rather clipped accent, perhaps a few years younger than Defoe.

Defoe sneered. "Going to press your old Tory pamphlets on him, are you, Swift?"

"For something to read when he's finished wiping his arse on your Crusoe, perhaps, *Foe*—for that is his name, you know, sir, the 'De' being the affectation of a man born in Cripplegate...."

And so they bickered, two gentlemen of letters preening at the side of a road full of the destitute, while their coach lay in the dirt. I could not help but laugh again.

"Look here," Defoe said to me. "You look strong enough, and you are evidently no fool if your reading tastes are anything to go by. You must help us."

Swift seized on that. "Yes! You can see how we're fixed; our wretched coachmen took off on our horses and left us helpless. We're neither of us men of vigor, and we must get to Edinburgh, for the sake of the King, the country—for all mankind, I wouldn't wonder! Now the first task is to get poor Isaac out of the coach. When that is done you can find us some alternative transport. And then—"

"And then," I said, tipping my hat, "I will flap my wings and fly up to yon Comet, for there's as much chance of my doing that as buttling for you. Good day to you, gentlemen."

Swift was outraged. "We three and others were convened at the orders of King George himself—the King! We are a Grand Council of Mathematicians, Alchemists, Astronomers, and other Philosophers—the Great Minds of the age, salted by a few traveler types like this fraud Foe

here. Our commission is to find a solution to the blight of the Phoebeans. Having been forced to flee London our destination is Edinburgh, a city with a great concatenation of scholars and yet, according to accounts, less afflicted by Phoebean assaults. Now our coach is overturned, we are abandoned by our men—it is your duty to help us, sir, duty as commanded by the King!"

"A fat lot of good the King has ever done me. And as for duty, mine is to preserve my own life, not to jump to the tune of codheads however high-born."

Defoe grinned. "Ah, a cynic! A man after your own heart, Swift. Well, then, sir, what will induce you to help us? The Crown is not without means."

"What use is money? Those—what did you call them?"

"Phoebeans. For some had thought they came from the moon."

"Ask them their price to forsake the earth for the sky from whence they came."

Defoe laughed. "A cynic indeed, but a man who's honest even to himself. You should read Swift's 'Tale of a Tub,' sir, though it pains me to recommend it. Then if not for duty or money, what would motivate you to look in our carriage? How about curiosity? No man as intelligent as you can be without a smidgen of that. Could you walk away without ever knowing who's in there—eh?"

I eyed him. "You have me there, Mister Defoe. Very well."

And so, escorted by the two eminent gentlemen, I walked toward the overturned carriage.

Inside, on his back where he had been thrown by the crash, lay a portly man of great years—he might have been eighty. His hair was long and flowing, and truth be told if it was a wig it was as great an artifice as I have seen. His nose was fleshy, his mouth small, and he had an odd, wary look about the eyes. He peered up dimly; I must have been silhouetted against the sky. "Who's there? Is that you, Maclaurin?"

"No, Isaac," Defoe called, not unkindly. "We've had something of a tumble, and it's rather a long haul to Edinburgh yet."

"Then who is this young man?"

Rather rudely I snapped back, “My name is Jack Hobbes, if it’s your business. More to the point—who, pray, are thee?”

Defoe dug me in the ribs. “Good God, man, this is Isaac Newton! Have you not read the ‘Principia’? Thou art in the presence of greatness!”

I had taught at some good schools and studied at better, and was not ignorant of modern Philosophy. “Of course! You are the vortex fellow, are you not?”

“No,” Newton said icily. “That was Descartes.” As of course I knew, but I could not resist tweaking his tail. “Will you help me out of this damn box, or not?”

Grinning, I could hardly refuse.

* * * *

IV

It took the three of us, the others pulling, me down in the coach pushing, to haul poor Isaac’s bulk out of that tipped-over coach; fleet his mind may have been, nimble his great body certainly wasn’t. And as we worked, I was aware of a certain shiftiness in the light, of pivoting shadows that brought unpleasant associations to my mind.

At last we had him out by the side of the road. Newton looked about at the ragged, fleeing people and the icebound landscape with his eyebrows raised; he habitually had a rather supercilious expression. “It seems to me self-evident that we must hail one of these carriages, or a cart would do, and continue our journey post-haste.”

Defoe and Swift immediately started arguing about what category of vehicle would suffice, and how much of their luggage they, or rather I, should try to salvage. And all the while, entirely unnoticed by them, our shadows shifted below our feet.

I cut through the chatter. “I humbly submit that we adjourn this meeting to the ditch yonder. Or else your three eminent heads are likely to be stove in by *that.*” And I pointed to the sky, from whence fell another Cometary fragment, this one a blazing ball that looked to dwarf the piece I had seen fall in Jedburgh.

People started screaming and scattering, picking up their children and running off the road, while helpless elderly folk stumbled as they could. As for the scholars, I never saw before or since three men with a combined age of one hundred and ninety-two years hop in a ditch with such alacrity.

And the fragment struck.

* * * *

As the ground shook, Swift and Defoe to their credit took care to cushion Newton in the ditch, elderly fellows both but putting aside their own discomfort, Defoe lending an arm as a pillow, Swift offering his cloak as a blanket. Newton, though, seemed oblivious; he had a battered leather-covered Bible that he produced from a coat pocket, and he began to thumb through this, muttering verses from the Book of Daniel.

When all seemed calm, I crept up out of the ditch.

The latest icefall had dug a new hole in the earth, bigger than any I had seen before, that pretty neatly cut the Great North Road in two. I learned later that this was near the village of Shilbottle, if you know it. I could see nobody living; everybody who was able seemed to have fled north or south, depending on which side of the hole they happened to be on.

And others, caught up in the tremendous impact, had been scorched, crushed and, worst of all, *dismembered*. I do not pretend to be a strong man, and the sight of scattered limbs and burst-open guts on the road reminded me of what a fragile bit of clockwork housed my own soul. Aside from that, there were overturned carts and scattered bundles of possessions littering the road—an unrolling carpet of quite good quality, a poor horse with a broken back that neighed pitifully as it tried to raise itself.

In the crater, eggs were already spitting out of the carcass of the fallen bolus, a new generation of chilly colonists come to our frozen world. Not only that, I saw, looking wider, more of the great ice beasts, which Defoe had called “Phoebeans,” were sliding across the landscape, mighty structures like cathedrals on the move—toward us.

I scuttled back into the ditch and reported my findings. “We’re the last breathing humans within half a mile, I should judge,” I said. “And the Phoebeans are on the way here, I know not why.”

Defoe said, “We should scarper like the rest. Perhaps we can fix an abandoned cart to give Sir Isaac a ride.”

Without looking up from his Bible Newton pronounced: “No.”

I near exploded. “What means ‘no’?”

But Swift counseled patience. “A moment, Hobbes. What is your thinking, sir?”

“The Phoebeans, whether sentient or no, are a presence in our world now—that seems clear enough. They are a force like the weather, and if we run from them we will be as animals in the field, or as savages in the Indies who flee the storm. We will deal with the Phoebeans as we deal with nature’s other challenges, by the power of reason.”

Swift, to my dismay, was nodding enthusiastically. “Yes—yes, reason, that’s the key.”

“But reason relies on observation,” Newton declared from the ditch. “I was able to deduce the law of universal gravitation from Tycho’s masses of astronomical sightings, rendered by Kepler into his rules of planetary motion. Now we must similarly observe these Phoebeans.”

“Us?” moaned Defoe. “Why us?”

“Is that not the King’s commission?” Swift thundered. “Did we agree to serve on his Council, did we take his shilling, on condition there would be no risk to our persons?” Shuffling in the mud, he bowed from the waist to Newton. “You know I have issues with your over-reliance on Mathematicks, sir, and the reduction of the world to a few computations.” He raised his muddy arms. “We degenerate creatures pronounce one System of the World after another, all based on whimsy and fumes, and each contradicting all the others! What hubris. But I side with thee in your championing of reason. I will be honored to be your Tycho.”

Defoe sneered. “You pompous popinjay. Why, you wouldn’t even be on the Council if I had not persuaded Walpole of it, after the way you pamphleted agin him—”

I got to my haunches. “I’ll leave the debate to you, gentlemen. I’m off.”

Defoe grabbed my arm. “Wait, Jack. For all our bluster—if you go we three will surely die here.”

“That’s of no concern to me, for many men will die before this episode is done. Can I save them all?”

Swift gestured at Newton. “But you could save *this* man. If he were to die here in this ditch could you live with your conscience?”

“Blame the Phoebeans, not me!”

I spoke defiantly—yet I was not being honest. The truth was that his pomp and piety penetrated my defenses; Swift, a churchman, reminded me too much of my father, damn his eyes.

Defoe, wiser than the others and a wheedler, was still hanging on to my arm. “Just stay a while, Jack. Help us get sorted out before you go.” He glanced at the sky. “It will be dark soon enough. Let’s go and have a rummage in the spill on the road, man, you and I. Do you remember how my Crusoe plundered his wrecked ship for provisions? Let’s you and I do the same—eh? It will be an adventure.”

I gave in. “For you and your book, then,” I said to Defoe. “For I do believe all the rest is nonsense.”

“Good man,” Defoe said, and he started to move. “Come on. Help me out of this damn ditch before I freeze in place.”

* * * *

So Defoe and I crept out of the ditch.

In the abandoned luggage that littered the road we found much that was useful—clothing, blankets, flagons of beer, victuals like cheeses and salted meats—and much that was not. I was startled to discover what people will carry with them when they flee for their lives: we found a trunk entirely full of hat boxes; and we found a spinet, carefully wrapped up in a blanket. Well, the fond owners of these pieces were learning to get by without them now.

Defoe watched me working through this stuff. “You have a ruthless way about you with other people’s possessions, Jack.”

Having had my conscience poked by Swift, I wasn’t in the mood for any more. “I have never been a thief to any great degree. A wastrel, a faithless lover, and a coward, yes. But I cannot believe that the owners of these items will ever return to collect them.”

“Quite right. So we have a moral right to make use of them, do we not?” That sounded like sophistry to me, but I did not remark on it. “Come. Let’s lug our haul back to the scholars.”

For all their elevated intellects, both Newton and Swift fell on the meat and cheese readily enough, and spread blankets over their legs. Swift in fact had used a pocket flint to start a fire, of timber from a smashed-up trunk. I fretted over this, worrying that the smoke might give away our location, but Swift sneered at me. “You aren’t dealing with highwaymen, boy; you must set your instincts aside. The Phoebeans are another order of creature entirely. You might as well try to hide from the Eye of God.” I had no convincing counter-argument.

And Newton sat upright like an elderly bear waking from hibernation, and he pointed. “In this changed world, even a scrambled-together bonfire has lessons for those with eyes to see.”

I looked where he was pointing, and saw there was an ice crab in the ditch with us, only a few inches high, like a milking-stool built for a doll. It was stuck in a kind of gully in the frozen mud, and to emerge it would have had to pass by the fire, and this it was remarkably reluctant to do. When at last it inched toward the flame it grew sluggish and then immobile. But when, at a gesture from Newton, Swift shielded the beast from the heat with his hat, it quickly revived and scuttled away.

“It doesn’t like fire,” I breathed.

Swift snorted. “Nor would you if you were made of ice.”

Newton said, “Indeed it seems to suffer a kind of heat paralysis—a calenture, if you like.”

Defoe mused, “Yet they arrive in heat, in those steaming projectiles that fall from the sky.”

Newton said, “You, sir, entered this world through a birth-passage of flesh and bone; if I were to stuff you back there now it would surely kill you.”

“And my mother,” Defoe murmured, but the point was made.

Swift declared, “Sir Isaac has shown us the way by example. We must observe, observe! That is our task.” He glanced at the sky. “There is light yet for the two of you to return to the road and study our

visitors—whatever they are up to in their pit."

Defoe and I glanced at each other. Defoe asked, "And why not you, Jonathan?"

"I have the fire to attend to. Besides, Defoe, spying comes naturally to you, does it not?"

Defoe glared at him. But he turned to me. "Are you game for a bit more adventure, lad?"

I was reluctant to leave the warmth of the fire, but I grabbed a handful of cheese and a small keg of beer, and led the way out of the ditch.

* * * *

V

Despite Swift's theorizing, we followed our instincts and crept out of sight along the road until we came to a tipped-over coach. We hid inside its carcass, thus sheltering from the raw wind, and feasted on cheese and beer while we peeked out through broken slats at the Phoebeans. To inspect them we used my father-in-law's Pocket Perspective, which we passed from one to the other.

The pit their latest bolus had dug out was a nest of industry. Phoebeans from miles hence were sliding across the country to converge on this place, which appeared to be of importance to them, and many of them already stood over the crater. Some were wider than they were tall, if you can picture it, like immense tables with that characteristic lenticular shape to their tops, but a few towered over the others. When they were at rest they were entirely still, with no signs of life, and the gang of them together gave you the impression of some fantastic city, with those tall fellows like the water-towers you see in some dry countries. But others moved, even clambering in and out of the pit, as if engaged on some vast construction work.

"When they move," Defoe said, "that sound—I have met travelers who have visited the Frozen Sea, and chill Tartary. They describe the groan of the ice that plates the sea, and of the ice rivers that pour down from the mountains. Swift mocks my interest in such fellows and their tales—he says he is planning a travel book of his own, entirely mendacious, that will spite my Crusoe and the whole genre—let him! If not for such interviews I would not know of the sound of ice en masse, which is just that noise the

Phoebeans make."

"But nothing more purposeful," I said.

He glanced at me. "What do you mean?"

"They have no voice I can hear. They do not even bellow like oxen, the calls of the dumb animals. They are silent save for the grind of their icy limbs."

"That's a good observation," Defoe said. He fumbled for a battered journal and, with a bit of charcoal, made a note. "No apparent communication. Look, though." He passed me the Perspective. "Can you see a sort of light playing about their limbs when they move?"

In the darkling light, I discerned a sort of sparking about their tall legs when the creatures were in motion, and especially the seamless joints where the limbs slid under the icy carapaces. "I have seen such sparks before," I murmured.

"You have?"

"It is a kind of Electrick. If you rub a bit of amber with a cloth, it might spark, and will pick up scraps of paper." I used to perform such tricks in my classes, trying to induce an interest in the world's phenomena in the generally cloddish minds of my students. I felt an odd pang, then, for those rows of innocent faces in Edinburgh and Jedburgh—more dependents you have abandoned, Jack, in a lifetime of selfish flight, and think too of Verity in Jedburgh with her unborn child, and poor Millie in Edinburgh with hers born dead—think on and have done with it!

Defoe made more notes. "Old Newton will pat our heads for this."

I ventured, "The Dean said you were suited to life as a spy."

Defoe snorted. "Spiteful old fool. It's true it's an adventurous life I've had, lad—perhaps you know something of my biography?"

"Not a thing."

He looked offended, and while we were stuck in that broken box he whispered to me more than I wanted to know about his life: his birth to dissident Presbyterians, the dowry he gambled away, his career as a merchant that ended up with him arrested for debt, and then his

pamphleteering that got him pilloried and put in prison, from whence he was hoiked out by a Tory minister on condition he spy for the English government. His greatest triumph had been in Scotland, where he had spread doubt and division in the Scottish parliament during the negotiations that led up to the Act of Union with England.

"If I'd been exposed the Edinburgh mob would have torn me apart! I'm nervous enough in going back there now. So you see, Jack, yes, I have spied, Swift is right about that. But life has a way of compromising one. Few of us have the luxury *he* does of indulging his damnable Augustan superiority from his seat in Saint Pat's in Dublin...."

On he went, dissecting the flaws in the Dean's complicated character, while the Phoebeans built their city in the dirt, and I wondered whether such rivalries ever raged in a termite hill before a human boot came along to crush it.

* * * *

We returned to the ditch, where Newton and Swift had made a merry nest before the fire with blankets and coats spread over them, while Defoe and I had been shivering on the road.

Defoe eagerly reported our observations, stressing the evidence of Electrick, but Newton seemed unimpressed. "It might be so. Electrick is related to an effluvium in the body, which may be removed by friction. If there is an opportunity to dissect one of these Phoebeans, small or large, we may detect the flow of that effluvium in its veins. Perhaps there is some analogy of the circulation of the blood in a man, which Harvey mapped. And indeed perhaps heat induces some calenture in them that impedes that flow."

I said, "Sir, I do not understand why you refer to the beasts as 'Phoebeans.' What have they to do with the moon?"

"Nothing!" Swift declared for him. "But the head of the Comet that brought the Phoebeans to the earth sailed *past* the moon. Some ignorant astronomers believed it originated there and labeled it accordingly, and that is the name that reached the court of King George—and stuck."

Defoe shook his head. "If only its course had differed by a few degrees, and it had struck the moon and not come to the earth!"

I said, "But if the Comet did not come from the moon, then where did

it arise?”

“That we do not know,” Newton said. “But the Astronomer Royal sent me observations which, before I was rudely turfed out of London, enabled me to use Halley’s methods to figure the Comet’s path as a hyperbola; it has come in from the trans-Saturnian dark, and will sail around the sun and return there. I determined that it passed close to the planet Mars; and I consulted recent observations of that planet. You may know that in the Plague Year the Italian Cassini observed caps of white close to the dynamical poles on that world....”

“Really?” I was intrigued; I had not known that the surface of any other world had been mapped.

“In the years since, his nephew Maraldi has seen how these caps wax and wane with the seasons. Maraldi speculates that the caps are made of ice or frost, which congeals in the winter of Mars and melts in the summer. And last year, when Maraldi watched yon Comet sail by Mars, he saw a prickling of light over the north polar cap of that world.”

I was stunned by this. “So perhaps this Italian saw icefalls on Mars, just as here!”

“It is clear that the Phoebeans are creatures of the cold realm beyond the sun, who have come sailing on their Comet to plant their crab-like seeds on the inner worlds.”

Swift was agitated by this talk of the Phoebeans coming from the heights of heaven. “But surely the Phoebeans could be some atmospheric phenomenon—spawned in high clouds of ice, could they not? Surely they cannot have a heavenly origin. For as Aristotle himself observed, ‘Order and definiteness are much more plainly manifest in the celestial bodies than in our own frame; while change and chance are characteristic of the perishable things of earth.’”

Defoe snorted.

But Newton regarded Swift gravely. “It is disturbing indeed to imagine that such disorder as this can rain down on our poor Earth from that celestial realm, the seat of order I myself have figured in my work. And yet it seems to be so; Maraldi’s observations prove it.”

“No, no.” Swift stood up in the ditch, trying to glimpse the Phoebeans and their works through the debris on the road. “No, I won’t have it. Such

giant, beautiful creatures as agents of chaos? A heavenly origin for demons of destruction? Rather they may be an example of the truly rational being, Sir Isaac, that which we degraded creatures only imagine ourselves to be."

Defoe said, "And what 'truly rational beings' go around digging holes in the earth and blowing up carthorses?"

Swift waved an arm. "This may all be a part of a grand design that we cannot discern, any more than a worm comprehends meaning in a man's footfall."

Defoe laughed at him. "So you dance in your thinking like a maiden at a gavotte, Swift. If they are chaotic they cannot be from heaven; if Newton proves they are from heaven, they cannot be chaotic—despite the evidence of your eyes. Well, if they are so superior as all that, you had better hope that they treat us better than you English in Ireland treat the natives there."

Swift, growing enraged, would have responded again, but I held up a hand. "It is growing dark. The Phoebeans are more active at night, have we not observed? *Listen*."

The scholars fell silent and duly listened. And after a moment they all heard, as I had, a groaning of ice, a crackle like the crushing of an autumn leaf. I risked a slither out of the ditch to see.

That groan was the sound of stressed ice, the crackle the sparking of the Electrick effluvium that might be Phoebean blood. The Phoebeans were on the march.

* * * *

VI

A great convoy of them, pale in the fading light, slid down the Great North Road and the ground around it, heading south toward us.

And behind this marching city, I saw a still more tremendous sight. From the latest crater gigantic pillars shot into the air, mountainous; I had not seen the like before; they might have been a thousand feet high. And a tremendous ice lens of similar dimensions soared up the column of pillars to tower over even the marchers before it; indeed on the back of this new ice behemoth rode more Phoebeans, structures the size of cathedrals like fleas on a dog's back.

As the twilight gathered and the Comet unfurled its spectral sail across the sky, this behemoth ground into motion. It was like a mountain on the move. Where its mighty limbs scraped the ground, ramparts of turf and soil the height of a man were casually thrown up. And from its sharp circular rim ice eggs flew out to arc to the ground, each the birth of yet another Phoebean.

I scurried back into the ditch and described what I saw. “It is like a tremendous mother. The Queen of the Phoebean hive, come to lay her eggs.”

Newton nodded his great head. “I fear you have it. The Phoebeans want the rocks of England for their cold nests, not her people. And we have happened on the heart of the invasion—the Queen herself, as you say, Hobbes.”

But Swift was growing agitated again. “I won’t believe it! If the Phoebeans are here to smash up the old human order of corruption, greed, and stupidity, then good! But they will replace it, not with chaos, but a new world order of reason. They need only be convinced that we lowly beasts are capable of reason too, and we will be spared.” And with that he jumped to his feet. He staggered; later I learned that the man was an habitual sufferer of vertigo and hearing loss. But he jumped out of the ditch, and he strode toward the Phoebean procession, arms uplifted. “Master Phoebean! Hear me!”

Defoe called after him, “Don’t be a fool, man! Jack—we must bring him back.”

“Not I. If you want to emulate Swift in being squashed like a bug, please do so.”

He glared at me. “Showing your true colors at last, Jack? Despite all you said I thought better of you.”

“Then you’re to be disappointed, aren’t you? And nor do I believe you will get yourself killed trying to save a clear enemy.”

“Then you don’t know me,” Defoe said. And to my great surprise he hopped up and out of the ditch, and was gone after Swift.

Newton eyed me, but did not speak. As we waited in silence, I was brutally glad I had not gone with the others, and stretched out my miserable

life a few more minutes.

Defoe returned, alone. He would not meet my eye.

He told us how Swift had approached the Phoebean caravan, arms aloft like a preacher, calling out in English, French, and High and Low Dutch. Defoe tried to pull him away, but Swift would not respond. Finally he settled on Latin, the tongue of better men than us, and stuck to it—stuck to it, Defoe said, as the lead monster in that walking city loomed over him, and its sliding limb erased him in an instant.

That was that for Jonathan Swift. I have never known a man so disappointed in the world he found himself in, and we low humans with whom he had to share it, and it was that disappointment that killed him in the end, for it blinded him to the realities.

* * * *

We three sat stunned by this turn. I offered Defoe some of the beer; he did not respond. The rumble of the Phoebean caravan was loud, a grinding of ice that made your teeth ache, and it went on and on.

It was Newton who stirred first, a grave figure, huge in his mound of coats and blankets. “We must fight back,” he said. “If not, and if they continue on their course and that behemoth Queen reaches London, the whole country will be seeded with their eggs.”

Defoe nodded. “And when England is all churned up into crawling ice bodies, where will *we* be?”

“France!” said I.

Defoe looked at me blackly. Then he asked Newton, “How, sir? How shall we fight back?”

“We must make for Newcastle. If we find a trap and horses, we might yet outrace the Queen’s caravan, which is tremendous but slow.”

Defoe said, “We might find a horse or two in Shilbottle. And in Newcastle?”

Newton said, “The city is walled, is it not? And it stands over the Great North Road. We will make our stand. If we can stop the Phoebeans there we may save England. But if we fall then all falls with us, and eternal night

for mankind will follow."

"Then we must not fall."

"In the morning," Newton said. "The Phoebeans are relatively quiescent by day. In the morning we will outrace them." He closed his eyes, and fell into a kind of slumber. He was a very old man, I remembered, and must be exhausted.

Defoe looked me square in the face. "So, Jack?"

"You go to Newcastle if you want. I'm off."

Defoe pulled a grubby overcoat higher over the great man's chest. "If you won't help us for my sake—if not for the sake of your family, if you have 'em, or your own unborn children—if you won't do it for your own honor, then do it for *him*."

"Isaac? What has he to do with me?"

"Isaac helps us understand, Jack. If not for the laws he has discerned in the sky we would not know the Comet, or where it has come from. We would cower from it, and when the Phoebeans sprout from the ground we would fall at their feet, or we would frantically sacrifice each other to appease those icy gods, as the savage Indians did as Cortez approached. We need Newton, Jack. Without him we really are as Swift saw us, as degraded animals who do not even understand what destroys them. Help me save him."

I sat stubborn, not wanting to face him, or the gnawing doubt that was undermining my determination. Yet I hesitated; I did not leave.

"I'll do you a deal," Defoe said, wheedling once more in that damnable way of his. "Come out with me now, in the night, and help me bring the horses back from Shilbottle. Only that. Then you can do as you like. Will you consider that?"

And so it went! You will not be surprised if you have followed me this far to learn that my indecision almost matches my cowardice, and that by the end of that day I was driving a purloined trap with a precious scholarly cargo through the New Gate in Newcastle's city walls.

* * * *

VII

Newcastle is a lumpy sort of a city, built on the hills that surround the mouth of the Tyne. It is one terminus of Hadrian's Wall, Carlisle being the other on the west coast of England. So this was the end of civilization even in those better days, and the Romans had the right idea, if you ask me, in leaving as their most enduring legacy a bridge across the river to take their Great North Road on to more congenial realms in the south. That bridge has gone, but another has been built in its place, itself elderly, a crowded gangway crammed with shops and houses.

The city itself is skirted, just as Newton said, by a curtain of walls, a semi-circle complete with turrets and towers and gates that abuts onto the north bank of the river. The walls were built by the English to keep out the Scots, and then built up again by one lot of Englishmen to keep out another lot during the Civil War.

If you pass inside the walls you will find a city cut in two by a stream they call the Lort Burn, and dominated by a spectacularly ugly Norman castle on its keep, and a cathedral and a handsome church or two. And that is pretty much it. If you like twisting clutter, backyards full of sheep and goats and cows and pigs, streets full of sailors and traders and the riff-raff who prey on 'em, and all spiced by a pall of smoke and the dust of the coal they ship out of here to all parts of the realm, Newcastle's your town.

We arrived in the evening. As we sought a house to lodge, Defoe commandeered a few boys and paid them a penny piece each to find the mayor, the army captain, the bishop, the guild presidents—anybody who could be of use in putting Newton's program in place.

But the city was in a ferment.

The Phoebean caravan had slowed during that day, coming to rest near Morpeth. By now the Phoebeans had formed a front a mile wide, sprawling to either side of the Roman road as the ice crabs proliferated and grew into fresh monsters. The icy force was only a few miles away, a tide that would surely overwhelm the city when night came, or the next, and the Phoebeans marched again.

And all we had to fight off the monsters was a thin line of troops who manned the walls. The town's garrison had been stripped on orders from London, for there were panicky rumors abroad that with England prostrate beneath the heel of the Phoebeans, the Scots were once more rebelling under their Stuart Pretender in the north, and to the south the French,

smarting after the War of the Spanish Succession, were crossing the Channel to have another go.

And so people fled. All through that night, even as Defoe and Newton labored to put a bit of backbone into the city's governors, the townsfolk packed up their goods and streamed south over that crowded old bridge, the richer folk taking to broughams or coaches and the poor going on foot and suffering as the poor usually do. Only a few ships left the port, packed to the gunwales.

As for me, I walked down through the old center of the town until I came upon the river, which as every winter was frozen solid, save where the ice had been broken to allow the ships to escape. I made for the quayside, and through that night I spent the last of my money in the taverns and whorehouses that line that fine boulevard.

You may wonder why I didn't run, as I had threatened to do since Shilbottle. The simple answer is that Defoe and Newton had between them gotten under my skin. I was more afraid of the blackness in my soul that would close on me if I ran than of the ice monsters if I did not run. So there you are; my integrity as a coward is intact.

By the time the sun came up I was flat broke and had a head that felt as if it had been stamped on by a Phoebean, and I cared nothing of it. For we had all survived the night; the Phoebeans had not fallen on us, not yet.

* * * *

In daylight that seemed brighter than for some days—though that might have been the liquor working in me—a boy came to find me, sent by Defoe. He would escort me to the rather grand house close to the New Gate that Defoe had secured for himself and Newton.

On the way, I noticed a change in the town. The criers were out this morning, ringing their bells and working their leather lungs, announcing that on the orders of King George all able-bodied men and women should report to the gates in the wall's north curtain. Firewood was to be carried, and oil and fat, anything flammable, and spades and picks. Those ships' companies in port were ordered to lend their efforts to the common cause. Hastily printed bills bearing much the same proclamation were pasted to the walls all through the town, and riders went out into the countryside with a similar command.

Well, just as it had been the day before, I saw plenty of people

making ready to flee, some of them indeed alarmed by the very call to arms. But as I headed north with the lad, out of the old town center and up Newgate Street, a few sturdier folk gathered, armed with shovels and buckets of pitch and so forth, men and women and a few older children. That determined, grim-faced throng swelled, and a few pastors joined us and led the singing of psalms, so it was quite a band of Christian heroes that approached the New Gate.

The lad brought me to Defoe's house without difficulty; he asked me for a penny, and his reward was a clip around the ear. Defoe was gone from the house, supervising works outside the city.

But here was old Newton, sitting in a huge armchair beside a blazing fire, wrapped so thick in blankets that only his face showed, and his mane of hair, and the withered hands that held his Bible. Bottles of physicals stood on the mantle by him. He looked like a great toad squatting there, but after the ditch at Shilbottle I did not begrudge him this bit of warmth.

I sat beside the fire myself. There was a decanter of brandy and I helped myself to a snort; it helped clear the fumes of my indulgence.

Newton eyed me and my stained clothing. "Out all night, were thee?"

"What's it to you?"

"Would have been better to get your sleep. It's a long day and night we face. And while you drank and whored we worked." There was an occasional table before him; he kicked this.

The table bore a map, a printed-up image of the city and its surrounds, neatly lettered. A coarse slash had been marked in charcoal across the country a mile or so to the north of the walls. "What's this?"

"Our defense against the Phoebeans. An earthwork—one of the greatest since the Romans, I dare say—a trench like the vallum that the Romans strung along behind their Wall."

I snorted. "How long is this, three, four miles? You wouldn't impress the Caesars." I felt embittered, and took another slug of brandy, perhaps unwisely. "And this is your defense of mankind—a scrape in the ground, to stop a species that has traveled between worlds?"

He said angrily, "It's the best we can do, and what's the best *you* can do, Hobbes? Have you ever explored that limit? Anyhow you have served

your purpose, or so future ages will believe. You have been the instrument of Providence in bringing Isaac Newton safely to this place."

I resented that. "I'm nobody's instrument. I'm not a bit part player in your drama, sir. Anyhow, who's to say there will be future ages to make a judgment one way or the other? Perhaps the world ends here tonight at the feet of the Phoebeans."

"No. The battle may be won or lost, but humanity will go on."

"How do you know?"

He tapped the Bible. "I have spent my life learning to read God's truth, boy, which is coded in the motion of the planets, in the colors of a rainbow—in the fall of an apple from a tree. And it is likewise coded in the holy books, which are similarly God's creation. I have deduced that without a shadow of a doubt the world has three more centuries to run at least, for the Second Coming of Christ can be no earlier."

I was awed by his words, yet I have always been repelled by holy fools. I stood, grabbing the decanter. "You are an old man. The Phoebeans will kill you before the sun rises again, as they will kill all of us here."

He looked at me closely. "What is it you fear so bad, man? The pain of death, or God's justice thereafter?"

"Neither," I said bitterly, "but oblivion." And I treated Newton to a précis of my own theological journey. "My father's pious beatings taught me to dread God and His punishment—but at least He was there, present in the pain! But then at college I encountered your new breed of Natural Philosophers with their Natural Religion, who speak of God as having created the world and then stepped out of it. Thus they removed Him from the fabric of life altogether. And they quoted you, sir, saying that your equations revealed a bonfire of Immanence."

Newton nodded. "They misquoted me, then. The Natural Religionists use my Mathematick to prop up their dubious French Philosophies." He tapped his Bible. "I do not believe in the primacy of reason over revelation, man, though I do believe we have been given our reason to riddle out God's truth, as He has revealed it in scripture and in nature. But I have grown old seeing this argument unfold. You, though, are of the first generation to grow up being taught that God has abandoned you. No wonder you are afraid—terrified of oblivion! But you need not fear. God is grander than you or I, Jack, but He is not gone."

“You know no more about Him than I do, you old fraud.”

“Go to the vallum, boy,” he said tiredly. “Add your strength to the shovels and the pitch bearers. Perhaps you will be the instrument of Providence in saving the world.”

“I will go to laugh at the fools who toil like ants there, and who will soon die. There is no Providence, Newton. There is no God, or He has abandoned us. Write that in your Philosophy.”

And with that I stormed out, the brandy steaming in my head, taking the decanter with me.

* * * *

VIII

The vallum might indeed have been dwarfed by the Romans’ mightier works, but it was an impressive enough sight as I approached. It was a great brown gouge that sliced through the fields and copses to either side of the Great North Road, sore disrupting the farmers’ tillage, and stretched off to either horizon. All along its length people toiled, supervised by a few soldiers, churchmen, merchants, and other dignitaries.

Already wood was being piled up in the gully, and waiting by the lip were queues of carts bearing barrels of pitch and oil and camphor and fat. Looking further afield I saw that woodsmen were at work in the patches of forest nearby, and more carts brought fresh-cut timber to add to the construction. I began to see the design. This was not a mere ditch, but a vast linear bonfire.

It was about noon as I came upon the vallum and saw this, all of it thrown up in a few hours. And on the northern horizon I could see the mobile city of the Phoebeans, their animate structures both tall and short, motionless now but waiting for the night.

I asked a clerk for Defoe, and soon found him. He had had a sort of command tent set up for him, with the mayor, the captain of the city garrison, and other officials. Within was a large-scale map of the works, and runners came to and fro bearing messages to the workers and the surveyors who guided them. But Defoe himself was not in the tent but down in the vallum, wielding a shovel with the rest. When he saw me he clambered out and sat with me on the lip.

I offered him a swig of Newton's brandy. He was stripped to his shirt, and was sweating with the work. He said, "I will swear the day is a tad warmer than it has been. Perhaps the winter is loosing its grip at last—eh?"

I looked up at a sky that was a shield of grey, and the frost on the broken ground, and felt the chill in my own bones. "You are warm because you are sixty years old and working like a navvy."

"Ah, but I'm alive. Alive, eh! Just like my Crusoe, and determined to stay so. You saw Newton, then?"

"He believes we will survive because it says so in the Book of Daniel."

Defoe grunted. "He sees further than the rest of us, Jack. And if there are forces at work in the world for whose purposes we are mere instruments—well, then, it is up to us to behave as if it were not so. Eh? Come now, be a sport. Grab a shovel and a bucket of pitch, and help build this wall of fire to keep out those Phoebean monsters. What do you say?"

"I say it's a waste of time." I pointed out the obvious flaw, that even if the Phoebeans were repelled by this improvised barrier, there was nothing to stop them flanking us by simply walking around it, and then on into Newcastle, and that would be that.

"Ah, but at least digging it will pass the time until nightfall, when we will see what's what. And what else are you going to do—read a book? Never find another like my Crusoe, you know."

"Your ebullience is unbearable," I said. But I stood and stripped down to my jerkin. "Give me a shovel; I would banish the cold."

So we labored through the rest of the day, the two of us side by side. We made hasty meals of army tack, and I fortified myself with swigs from my brandy decanter. And, if you want to know, I took some care to save my strength. If all failed I wanted to have the wind to do a bit of running. Defoe noted my slacking without comment.

Dark fell too soon, and we worked still as the Phoebeans started to move, revived by the night and its deepening cold. You could hear them, a dreadful grinding as if one of Defoe's northern ice rivers were pouring down on us. The captain sent runners out to illuminate their position with torches, but it was scarce necessary as you could see the Electrick fire crackle around their limbs, eerie flashes in the dark. I made out that Queen, a

quarter of a mile tall, with acolytes monstrous in themselves scuttling around the ground at her feet, and dancing on her back. Still we kept digging, though some lost their nerve and fled back to the city; still Defoe and the other commanders held off ordering the lighting of the great bonfire until the Phoebean army should be close enough, lest we waste our fuel.

At last I heard a kind of singing in the air, and something clattered to the frozen ground beside me. I bent and picked it up. It was an egg of ice, spat out by the Queen or one of her attendants. I dropped it and crushed it under my heel.

* * * *

"That's it, lads," Defoe called. "If they start to seed the ground we're standing on we're in trouble. We can't leave it any longer—light the fires! Light, light!"

The word was echoed by calls all along the length of our vallum. "Light, light!" Workers scrabbled to get out of the ditch, and I saw wheeling sparks as torches were hurled into the works. A wall of fire raised itself up before us, and the thousands who had labored here cheered.

As they neared our fire the lead Phoebeans slowed, moving jerkily as Newton's calenture afflicted them, heat congealing their strange Electrick blood. Some of them suffered more directly, their limbs softening before the flame; they were after all creatures of ice. But they would soon have overwhelmed our line if simple melting were their only weakness; it was the calenture that stalled the lead units and blocked their passage before they could reach us.

Now the army's guns spoke, sending balls and shells raining into the crowd of Phoebeans. It was like firing into an ice grotto; delicate limbs smashed with tinkles like broken windows, and those fat lenticular bodies fell to their ruin. But the shells were few, their aim erratic, and the Phoebeans many, and there were always more to take their place.

And even now ice eggs were landing behind the line of the vallum. They were met with boots and spades and thrown into the fire. Here and there, however, ice crabs emerged, their lenticular bodies sliding up their temples of limbs; we knew from experience that before the night was done such seedlings could grow into mighty trees of ice and Electrick, and we smashed and stamped them down. But many eggs sailed over our heads into the dark, and I knew we could not get them all, and that new monsters were already birthing in the dark behind us.

We labored on through the night. I stayed close to Defoe, so I could hear the reports brought by the runners. The line was holding everywhere, the citizens of Newcastle showing a courage I for one would not have anticipated.

And likewise I did not anticipate that the Phoebeans made no attempt to flank us; instead they simply came onto our fire in waves, one replacing another when it fell, and the great crowd bunching up being the barrier. It was this that finally convinced me that the Phoebeans are animals, not sentient in any degree; we were fighting a plague, or a stampede, not an army.

“Ha!” I said bitterly to Defoe, swigging at my brandy. “Swift should have stayed alive to learn that.”

He eyed me with some disgust. “You might chuck that brandy on the fire. It would do more good than in your belly.”

I laughed at him and walked away.

After that the night became a simple race between the turning of the world and the exhaustion of our fuel, and the growth of the new beasts behind us. If we could hold out to the dawn we might have a chance, and to that end we worked flat out to bring more fuel to the fires. We even had carts coming up from the city piled high with roof timbers from broken houses, and bits of furniture—anything that would burn.

In the small hours the skies cleared, and the Comet’s tail stretched. It was a pretty sight by the vallum, that wall of flame sending sparks high up into a star-strewn sky. But none of us had eyes for beauty, not that night, for the cold helped the Phoebeans.

We came heartbreakingly close to winning it.

I could actually see the first roseate glow in the eastern sky when our lumber ran out, and then the pitch, and we fell exhausted from the hauling of it. And as our fires died at last the Phoebeans closest to the flames began to stir, the strange calenture leaving their limbs, and they probed ever closer to the vallum.

We fell back. People slipped away, returning to their homes to face the end.

It was when a brute of a Phoebean burst out of the ground not ten feet from me, smashing up Defoe's command tent in the process, that I decided enough was enough. "That's it for me, Defoe."

Defoe looked done in, for he had labored all night and labored still, a work for which he was too old. But he yelled, "We're not dead yet!" He ran toward the tent and swung his pickaxe against a Phoebean leg, and the delicate limb smashed into pieces. Of course the beast had many other limbs that slid around to take the weight, but Defoe laid about him like a madman, smashing limbs until the air was filled with tinkling ice fragments. And the great lenticular body began to tip, a roof over Defoe's head.

I scrabbled out of the way. "Get out of there, man!"

But even if he were not exhausted he could not have reached safety. He ran and he fell, and the sharp rim of the Phoebean's carcass came down and fair pinned his right leg. Yet he lived. He lifted his head, his face contorted with pain, and looked me in the eye. "For God's sake, Jack!" He reached out his hand.

I did not run, not yet. I might have freed him, even if I had to chop off his trapped foot with an axe. But another Phoebean burst up not yards away, sending a squad of soldiers wheeling in the air. And another beyond it, and another. We were overrun, and it was not a place for Jack Hobbes to linger.

Defoe saw the intent in my face before I moved a muscle. He roared, "So you are a coward at heart after all."

"Save your breath for God, Dan, for you will meet Him in a minute." I threw the brandy decanter down before him, and turned and ran.

Amid the clamor of the battle, the huge creaking of the Phoebeans as they overwhelmed the vallum, and the roar of the guns that were still manned, I heard Defoe's voice calling, "Damn you, Jack Hobbes! Damn you to hell!"

* * * *

I ran back down the Great North Road, pushing my way through a fleeing crowd of soldiers and citizens alike. As I have said, I had conserved my strength for the trials to come, and now that stratagem paid off as I outran the exhausted.

Newcastle’s walls were manned by soldiers and citizens preparing to mount a last defense of the city with half-pikes and muskets that must have been old in the time of King Charles. Antients taken from the ships on the Tyne fluttered over their heads, and it was a brave sight. But I laughed at them all as I shoved my way through the crowds at the New Gate.

I ran on down Newgate Street. The cathedral was packed to the gills with weeping penitents. I kept running for I knew sanctuary was to be found only to the south, far from the Phoebeans, not within the flimsy walls of any church.

I pushed past the castle and made it to the bridge that led over the river to the south, but this, you may well imagine, was blocked by struggling humanity, a good few of them soldiers flying from the colors, all rendered as static by the sheer numbers as the waters of the frozen Tyne below. And in this mass my own flight came to an end, for no matter how hard I punched and kicked and trampled I could make no progress. I found myself stalled at last under the sign of a pawnbroker’s shop, long icicles dangling from the three balls; it was a type of establishment that had won much trade from me in the past, and I laughed again, this time at myself, for I wondered if those hanging icicles would be my last sight on earth.

Then a tremendous groan came from beneath the bridge. There was a surge of the curious and the frightened, and I found myself propelled to the parapet and crushed there, looking down into the river. The ice surface, months old, littered and scarred by bonfires, was heaving and cracking into great concentric circles. I fought viciously to get away from that place, for I knew what was coming, but I was trapped.

The Phoebean’s limbs shot into the air, scattering chunks of Tyne ice that rained down over the crowded bridge. We screamed and struggled, helpless. Then up came the lenticular body, and soon a Phoebean no less than a hundred feet tall was grinding its way through the river ice toward land. It rose up out of the water near the abutment of the bridge, and strode easily into the streets of the city, scattering cobbles and people with effortless strength. It mounted the castle mound itself, demolishing the ancient buildings; and it stood in the ruins, monarch of all it surveyed.

And there it stopped.

On the bridge, still we struggled against each other, but I stared at the Phoebean, wondering why it was so motionless, and wondering why its fellows did not rise up after it out of the river. And I felt a splash of water on my neck.

I looked up. I was back under those pawnbroker's spheres once again. A shaft of sunlight, cast by the mighty solar hull rising above the eastern horizon, played on the dangling icicles—and for the first time in months the sun delivered enough heat to melt a grain of ice.

The people around me grasped the essence of it, and a great roar went up along the bridge. Suddenly the Phoebeans could not escape their deadly calenture, and their Electrick blood congealed. Everywhere they perforce stood still.

I saw citizens scrambling up the castle mound. They used half-pikes and staves and lumps of masonry from the castle to smash at that Phoebean's limbs until it fell to the ground.

* * * *

IX

Ten years have gone by since that momentous morning—ten years before I could bear to put pen to paper to set down my recollections of the tumultuous times in which, all unwitting and very unwilling, I found myself at the very center.

It was not over when the sun rose that morning, of course, and the first breath of the belated spring halted the Phoebeans and saved us. Night fell soon enough, and the battle resumed. But as the world warmed day by day we knew we had gained an invaluable reinforcement in Nature herself.

In temperate latitudes all over the world, the Phoebeans were driven off or destroyed. Now they lurk in the wastes of the Frozen Ocean, and are beaten back when they try to venture south. In Britain it is said that some Phoebeans haunt the Scottish Highlands, and the King has had Hadrian's Wall built up as a firewall against any future advance—though he has named it the Geordie Wall.

Newton lived on only a few years after the Ice War, but other Philosophers have followed in his eminent footsteps, and we have learned much of the Phoebeans since his day, though I opine that for every hard fact learned from a dissection of a Phoebean carcass there are a hundred interpretations. Still, I think we know that the Phoebeans are indeed creatures born in the cold outer halls of our system of planets; perhaps the moons of Jupiter and Saturn are balls made entirely of ice among which Phoebeans swarm and play like nymphs in a spring. They may have spread

inward as far as Mars, which is a small, chill world and so ripe for a Phoebean colony. But to them our Earth is a torrid zone, and the calenture that afflicts them is like the tropical diseases that assail Europeans who sail too close to the equator.

The future may be more secure. Those who study the weather assure us that the world was once warmer than it is now—once the Romans grew grapes in Newcastle, which gives you some indication. Perhaps the cold age that afflicts us now will pass; perhaps there will come a day when we will no longer be able to build bonfires on the Thames and the Tyne every winter, and our fortress of heat will become stronger yet.

The Phoebeans have a foothold on our Earth, but no more. But they wait for us out there in the cold and the dark, as beasts of Norse myth lurk in the chill beyond the glow of the hall's fire.

There are some, in fact, who dream of just such encounters. The study of the Electrick blood of the captured Phoebeans is making a revolution of our Philosophies. Just as Newton theorized, there are paths in those icy carcasses where currents of Electrick effluvium may run forever without friction, generating powerful Magnetick attractions in the process. It is this that gives the Phoebeans their extraordinary strength. A new generation of scholars is bending Newton's Calculus to explain it all, and they dream of harnessing such energies to drive Engines far more powerful than a water-wheel—they dream of building Comets of their own that might sail out among the planets, so we can go and see for ourselves.

And they will be comets with Jesuits aboard! Some pious codheads argue that Phoebeans must have souls, and dream of saving them with God's word, as Saint Augustine saved the Saxons. Missionaries to the moons of Jupiter! But fools they are, for I saw for myself how the Phoebeans dashed themselves over and over on our fires in the vallum that night, all instinct and no wit, like stampeding cattle.

All this for the future, which I am glad I will not see, for I will be dead like the others. Dead, yes, like Newton, and Defoe whom I betrayed with his best book probably behind him, and poor Swift with his best book not yet written, for I am assured by those wiser than me that the satirical traveler's tale Defoe so feared would have been a masterpiece.

It was my fortune, though, that Defoe and Swift took the secret of my final cowardice to the grave, with Newton too addled to speak of it, so that for my part in the adventure, especially the saving of Newton, I was rewarded by the King himself, with a knighthood and, more importantly, with

a handsome payment. Sir Jack Hobbes! What an injustice. At least I did not disappoint the shade of Defoe in what followed, for within a year I had lost the lot in a speculative South Sea stock venture, and I was upon the Parish once more. No matter! I do not expect to die rich.

I did not deserve such rewards, of course. Newton called me an instrument of Providence, just as some claim the thaw that defeated the Phoebeans was a miracle. But the truth of the matter was that humanity was threatened by one insensate force in the Phoebeans, and saved by another in the turning of the seasons. All our struggling made not a bit of difference to any of it, and where's the Providence in that? In a universe like a purposeless machine there is nothing before us, nothing after us, nothing for us to do but make the most of our moments in the light. I need have no shame in my clinging to life.

And yet I am haunted by my last vision of Defoe under the Phoebean carcass, and how he hurled his curses at me even with his dying breath.