

VERTHANDI'S RING

IAN MCDONALD

British author Ian McDonald is an ambitious and daring writer with a wide range and an impressive amount of talent. His first story was published in 1982, and since then he has appeared with some frequency in *Interzone*, *Asimov's Science Fiction*, *New Worlds*, *Zenith*, *Other Edens*, *Amazing*, and elsewhere. He was nominated for the John W. Campbell Award in 1985, and in 1989 he won the *Locus* Best First Novel Award for his novel *Desolation Road*. He won the Philip K. Dick Award in 1992 for his novel *King of Morning*, *Queen of Day*. His other books include the novels *Out on Blue Six* and *Hearts, Hands and Voices*, *Terminal Cafe*, *Sacrifice of Fools*, *Evolution's Shore*, *Kirinya*, a chapbook novella, *Tendeleo's Story*, *Ares Express*, and *Cyberabad*, as well as two collections of his short fiction, *Empire Dreams* and *Speaking in Tongues*. His most recent novel, *River of Gods*, was a finalist for both the Hugo Award and the Arthur C. Clarke Award in 2005, and a novella drawn from it, "The Little Goddess," was a finalist for the Hugo and the Nebula. Coming up is another new novel, *Brasyl*. Born in Manchester, England, in 1960, McDonald has spent most of his life in Northern Ireland, and now lives and works in Belfast. He has a website at <http://www.lysator.liu.se/~unicorn/mcdonald/>.

In the brilliant story that follows, one with enough dazzling idea content crammed densely into it to fuel many another author's eight-hundred-page novel, he shows us that total war between competing interstellar races will be slow and bloody and vast, and, well—*total*. With no room left in the galaxy—or even the universe—for the losing side.

● After thirteen subjective minutes and five hundred and twenty-eight years, the Clade battleship *Ever-Fragrant Perfume of Divinity* returned to the dying solar system. The Oort cloud web pulled the crew off; skating around the gravity wells of hot fat gas giants and the swelling primary, the battleship skipped out of the system at thirty percent light-speed into the deep dark. Small, fast, cheap, the battleships were disposable: a football of construction nanoproducts and a plod crew of three embedded in the heart of a comet, a comet it would slowly consume over its half millennium of flight. So cheap and nasty was this ship that it was only given a name because the crew got bored five (subjective) minutes into the slow-time simulation of Sofreendi desert monasticism that was their preferred combat interface.

The Oort cloud web caught the crew, shied them to the construction yards skeined through the long, cold loops of the cometary halo, which flicked them in a stutter of light-speed to the Fat Gas Giant relay point, where the eight hundred habitats of the new Clade daughter fleet formed a pearl belly chain around the planet; then to the Cladal Heart-world herself, basking in the coronal energies of the senile, grasping, swollen sun, and finally into fresh new selves.

"Hi guys, we're back," said the crew of *Ever-Fragrant Perfume of Divinity* as they stepped from the bronze gates of the Soulhouse, down the marble staircase into the thronged Maidan of All Luminous Passion. Irony was still a tradable commodity on this innermost tier of the hundred concentric spheres of the Heart-world, even if not one woman or man or machine or beastli turned its head. Battleship crews knew better than to expect laurels and accolades when they re-souled after a hundred or a thousand or ten thousand years on the frontline. Word of *Ever-Fragrant Perfume of Divinity's*

victory had arrived almost three centuries before. A signal victory; a triumph that would be studied and taught across the Military Colleges and Academies of the Art of Defense for millennia to come. A classic Rose of Jericho strategy.

Early warning seeds sown like thistledown across half a light-millennium had felt the stroke of the Enemy across their attenuated slow senses and woke. Communication masers hastily assembled from the regoliths of cold moons beamed analyses back to the Heart-world, deep in its centuries-long task of biosphere salvation: eighty thousand habitats on the move. The Clade battle fleet launched instantly. After two hundred and twenty years, there was not a nanosecond to lose. Thirty-five ships were lost: systems malfunctions, breakdowns in the drives that kept them accelerating eternally, decades-long subtle errors of navigation that left them veering light-years wide of the target gravity well, loss of deceleration mass. Sudden total catastrophic failure. Five hundred years later, *Ever-Fragrant Perfume of Divinity* alone arrived behind the third moon of the vagrant gas giant, which wandered between stars, a gravitational exile, and began to construct the rain of antimatter warheads and set them into orbit around the wanderer. A quick plan, but a brilliant one. A Rose of Jericho plan. As *Ever-Fragrant Perfume of Divinity* accelerated away from the bright new nebula, its hindward sensors observed eighty thousand Enemy worlds plow into the bow wave of accelerated gas at forty percent light-speed and evaporate. Twenty trillion sentients died. War in space-time is slow and vast and bloody. When the species fight, there is no mercy.

In the dying echoes of the culture fleet, the three assassins of *Ever-Fragrant Perfume of Divinity* caught a vector. The fleet had not been aimed on a genocidal assault on the Clade Heart-worlds clustered around the worlds of Seydatryah, slowly becoming postbiological as the sun choked and bloated on its own gas. A vector, and a whisper: *Verthandi's Ring*.

But now they were back, huzzah! Harvest Moon and Scented Coolabar and Rose of Jericho, greatest tactician of her flesh generation. Except that when they turned around on

the steps of the Soulhouse to bicker among themselves (as they had bickered the entire time-slowed twenty-six minutes of the transtellar flight, and the time-accelerated two hundred years of the mission at the black wanderer) about where to go and do and be and funk first:

"Where's Rose? Where's the Rose?" said Harvest Moon, whose rank approximated most closely to the historical role of Captain.

Only two resouls stood on the marble steps overlooking the Maidan of All Luminous Pleasure.

"Shit," said Scented Coolabar, whose station corresponded to that of engineer. A soul-search returned no trace of their crewmate on this level. In this innermost level, the heart of the heart, a sphere of quantum nanoprocessors ten kilometers in diameter, such a search was far-reaching—the equivalent of every virtual mouse hole and house shrine—and instantaneous. And blank. The two remaining crew members of *Ever-Fragrant Perfume of Divinity* understood too well what that meant. "We're going to have to do the meat-thing."

Newly incarnated, Harvest Moon and Scented Coolabar stood upon the Heaven Plain of Hoy. Clouds black as regret bruised the upcurved horizon. Lightning fretted along the edge of the world. Harvest Moon shivered at a fresh sensation; stringent but not unpleasant—not in that brief frisson, though her new meat told her that in excess it might become not just painful, but dangerous.

"What was that?" she commented, observing the small pimples rising on her space-black skin. She wore a close-to-species-modal body: female in this incarnation; elegant, hairless, attenuated, the flesh of a minimalist aesthete.

"I think it was the wind," said Scented Coolabar who, as ever, played against her Captain's type and so wore the fresh flesh of a Dukkhim, one of the distinctive humanesque subspecies that had risen after a mass-extinction event on the world of Kethrem, near-lost in the strata of Clade history. She was small and broad, all ovals and slits, and possessed of a great mane of elaborately decorated hair that grew to

the small of the back and down to the elbows. The crew of the *Ever-Fragrant Perfume of Divinity* was incarnate mere minutes, and already Harvest Moon wanted to play play play with her engineer's wonderful mane. "Maybe you should have put some clothes on." Now thunder spilled down the tilted bowl of the world to shake the small stone stupa of the incarnaculum. "I suppose we had better get started." The Dukkhim had ever been a dour, pragmatic subspecies.

Harvest Moon and Scented Coolabar spent the night in a live-skin yurt blistered from the earth of Hoy. The thunder cracked, the yurt flapped and boomed in the wind, and the plain of Hoy lowed with storm-spooked grazebeastlis, but none so loud or so persistent as Harvest Moon's moans and groans that her long black limbs were aching, burning; her body was dying dying.

"Some muscular pain is to be expected in the first hours of incarnation," chided the yurt gently. "As muscle tone develops these pains generally pass within a few days."

"Days!" wailed Harvest Moon. "Pload me back up right now."

"I can secrete general analgesia," said the tent. So until the lights came up all across the world on the sky roof ten kilometers overhead, Harvest Moon suckled sweetly on pain-numb milk from the yurt's fleshy teat, and, in the morning, she and Scented Coolabar set out in great, low-gravity bounds across the Heaven Plain of Hoy in search of Rose of Jericho. This innermost of the Heart-world meat levels had long been the preserve of ascetics and pilgrim souls; the ever upcurving plain symbolic, perhaps, of the soul's quest for its innate spiritual manifestation, or maybe because of its proximity to the virtual realms, above the sky roof, where the ploads constructed universe within universe, each bigger than the one that contained it. Yet this small grassy sphere was big enough to contain tens of thousands of pelerines and stylites, coenobites and saddhus, adrift in the ocean of grass.

"I'm sure we've been this way before," Scented Coolabar said. They were in the third monad of their quest. Eighty days ago, Harvest Moon had discovered beyond the pain of

exercise the joy of muscles, even on this low-grav prairie, and could now be found at every unassigned moment delightedly studying her own matte black curves.

"I think that's the idea."

"Bloody Rose of Jericho," Scented Coolabar grumbled. They loped, three meters at a loose-limbed step, toward a dendro-hermit, a lone small tree in the wave-swept grass, bare branches upheld like prayers. "Even on the ship she was a damn ornery creature. Typical bloody selfish."

Because when Rose of Jericho went missing after the routine postsortie debrief, something else had gone missing with her. Verthandi's Ring, a name, a galactic coordinate; the vector upon which the Enemy migration had been accelerating, decade upon decade. In the enforced communal-ity of the return flight—pload personalities intersecting and merging—Captain and Engineer alike had understood that their Mistress at Arms had deduced more than just a destination from the glowing ashes of the annihilated fleet. Soul etiquette forbade nonconsensual infringements of privacy and Rose of Jericho had used that social hiatus to conceal her speculations. Jealous monotheistic divinities were not so zealous as Clade debriefings, yet the Gentle Inquisitors of the Chamber of Ever-Renewing Waters had swept around that hidden place like sea around a reef. A vector, and a name, confirmation of the message they had received three hundred years before: Verthandi's Ring.

Even before they saw the face framed in the vulva of living wood, Harvest Moon and Scented Coolabar knew that their small quest was ended. When they first met on the virtual desert of Sofreendi for the Chamber of Ever-Renewing Waters' mission briefing (as dense and soul-piercing as its debrief), a closeness, a simpatico, suggested that they might once have been the same person; ploads copied and recopied and edited with mash-ups of other personalities. Empathy endures, across parsecs and plain, battlefronts and secrets.

"Does that hurt?" Scented Coolabar said. Greenwood crept down Rose of Jericho's brow, across her cheeks and chin, slow and certain as seasons.

"Hurt? Why should it hurt?" Wind souged in Rose of Jericho's twigs. Harvest Moón, bored with this small world of grass, surreptitiously ran her hands down her muscled thighs.

"I don't know, it just looks, well, uncomfortable."

"No, it's very very satisfying," Rose of Jericho said. Her face was now a pinched oval of greening flesh. "Rooted. Slow." She closed her eyes in contemplation.

"Verthandi's Ring," Harvest Moon said suddenly. Scented Coolabar seated herself squatly on the grass beneath the wise tree. Beastli things squirmed beneath her ass.

"What is this game?" With life spans measurable against the slow drift of stars, millennia-long games were the weft of Clade society. "What didn't you tell them, couldn't you tell us?"

Rose of Jericho opened her eyes. The wood now joined across the bridge of her nose, her lips struggled against the lignum.

"There was not one fleet. There are many fleets. Some set off thousands of years ago."

"How many fleets?"

Rose of Jericho struggled to speak. Scented Coolabar leaned close.

"All of them. The Enemy. All of them."

Then Rose of Jericho's sparse leaves rustled and Scented Coolabar felt the ground shake beneath her. Unbalanced, Harvest Moon seized one of Rose of Jericho's branches to steady herself. Not in ten reconfigurings had either of them felt such a thing, but the knowledge was deeply burned into every memory, every cell of their incarnated flesh. The Clade Heart-world had engaged its Mach drive and was slowly, slow as a kiss, as an Edda, manipulating the weave of space-time to accelerate away from bloated, burning Seydatryah. Those unharvested must perish with the planet as the Seydatryah's family of worlds passed beyond the age of biology. Calls flickered at light-speed across the system. Strung like pearls around the gas giant, the eight hundred half-gestated daughter-habitats left their birthing orbits: half-shells, hollow environment spheres; minor Heart-worlds of a handful of tiers.

A quarter of the distance to the next star, the manufactories and system defenses out in the deep blue cold of the Oort cloud warped orbits to fall into the Heart-world's train. The Chamber of Ever-Renewing Waters, the military council, together with the Deep Blue Something, the gestalt übermind that was the Heart-world's participatory democracy, had acted the moment it became aware of Rose of Jericho's small secret. The Seydatryah system glowed with message masers as the call went out down the decades and centuries to neighboring Heart-worlds and culture clouds and even meat planets: after one hundred thousand years, we have an opportunity to finally defeat the Enemy. Assemble your antimatter torpedoes, your planet killers, your sun-guns and quantum foam destabilizers, and make all haste for Verthandi's Ring.

"Yes, but what is Verthandi's Ring?" Scented Coolabar asked tetchily. But all that remained of Rose of Jericho was a lignified smile, cast forever in bark. From the tiny vacuum in her heart, like a tongue passing over a lost, loved tooth, she knew that Rose of Jericho had fled moments before the Chamber of Ever-Renewing Waters' interrogation system slapped her with an unbreakable subpoena and sucked her secret from her. Scented Coolabar sighed.

"Again?" Harvest Moon asked.

"Again."

In all the known universe, there was only the Clade. All life was part of it, it was all life. Ten million years ago, it had been confined to a single species on a single world—a world not forgotten, for nothing was forgotten by the Clade. That world, that system, had long since been transformed into a sphere of Heart-world orbiting a sun-halo of computational entities, but it still remembered when the bright blue eye of its home planet blinked once, twice, ten thousand times. Ships. Ships! Probe ships, sail ships, fast ships, slow ships, seed ships, ice ships; whole asteroid colonies, hollow-head comets, sent out on centuries-long falls toward other stars, other worlds. Then, after the Third Evolution, pload ships, tiny splinters of quantum computation flicked into the dark.

In the first hundred thousand years of the Clade's history, a thousand worlds were settled. In the next hundred thousand, a hundred times that. And a hundred and a hundred and a hundred; colony seeded colony seeded colony, while the space dwellers, the Heart-world habitats and virtual pload intelligences, filled up the spaces in between which, heart and truth, were the vastly greater part of the universe. Relativistic ramships fast-tracked past lumbering arc fleets; robot seed ships furled their sunsails and sprayed biospheres with life-juice; terraforming squadrons hacked dead moons and hell-planets into nests for life and intelligence and civilization. And species, already broken by the Second and Third Evolutions into space-dwellers and ploads, shattered into culture dust. Subspecies, new species, evolutions, devolutions; the race formerly known as humanity blossomed into the many-petaled chrysanthemum of the Clade; a society on the cosmological scale; freed from the deaths of suns and worlds, immune, immortal, growing faster than it could communicate its gathered self-knowledge back to its immensely ancient and powerful Type 4 civilizations; entire globular clusters turned to hiving, howling quantum-nanoprocessors.

New species, subspecies, hybrid species. Life was profigate in the cosmos; even multicellular life. The Clade incorporated DNA from a hundred thousand alien biospheres and grew in richness and diversity. Intelligence alone was unique. In all its One Giant Leap, the Clade had never encountered another bright with sentience and the knowledge of its own mortality that was the key to civilization. The Clade was utterly alone. And thus intelligence became the watchword and darling of the Clade: intelligence, that counterentropic conjoined twin of information, must become the most powerful force in the universe, the energy to which all other physical laws must eventually kneel. Intelligence alone could defeat the heat-death of the universe, the dark wolf at the long thin end of time. Intelligence was destiny, manifest.

And then a Hujjain reconnaissance probe, no bigger than the thorn of a rose but vastly more sharp, cruising the edge of a dull little red dwarf, found a million habitats pulled

in around the stellar embers. When the Palaelogos of the Byzantine Orthodoxy first encountered the armies of Islam crashing out of the south, he had imagined them just another heretical Christian sect. So had the Hujjain probe doubted; then, as it searched its memory, the entire history of the Clade folded into 11-space, came revelation. There was Another out there.

In the six months it took the Seydatryah fleet—one Heart-world, eighty semi-operational habitats, two hundred twelve thousand ancillary craft and defensive systems—to accelerate to close enough to light-speed for time-dilation effects to become significant, Harvest Moon and Scented Coolabar searched the Tier of Anchyses. The world-elevator, which ran from the portals of the Virtual Realms through which nothing corporeal might pass to the very lowest, heavy-gee Tier of Pterimonde, a vast and boundless ocean, took the star-sailors forty kilometers and four tiers down to the SkyPort of Anchyses, an inverted city that hung like a chandelier, a sea urchin, a crystal geode, from the sky roof. Blimps and zeps, balloon clusters and soaring gliders fastened on the ornate tower bottoms to load, and fuel, and feed, and receive passengers. Ten kilometers below, beyond cirrus and nimbus, the dread forest of Kyce thrashed and twined, a venomous, vicious, hooked-and-clawed ecosystem that had evolved over the Heart-world's million-year history around the fallen bodies of sky dwellers.

The waxing light of tier-dawn found Scented Coolabar on the observation deck of the dirigible *We Have Left Undone That Which We Ought to Have Done*. The band of transparent skin ran the entire equator of the kilometer-long creature: in her six months as part of the creature's higher-cognitive function, Scented Coolabar had evolved small tics and habits, one of which was watching the birth of a new day from the very forward point of the dirigible. The Morning Salutationists were rolling up their sutra mats as Scented Coolabar took her place by the window and imagined her body cloaked in sky. She had changed body for this level; a tall, slightly hirsute male with a yellow-tinged skin, but she

had balked at taking the same transition as Harvest Moon. Even now, she looped and tumbled out there in the pink and lilac morning, in aerobic ecstasy with her flockmates among the indigo clouds.

Dawn light gleamed from silver wing feathers. Pain and want and, yes, jealousy clutched Scented Coolabar. Harvest Moon had been the one who bitched and carped about the muscle pain and the sunburn and the indigestion and the necessity to clean one's teeth; the duties and fallibilities of incarnation. Yet she had fallen in love with corporeality; reveled in the physicality of wind in her pinions, gravity tugging at the shapely curve of her ass; while Scented Coolabar remained solid, stolid, reluctant flesh. She could no longer remember the last time they had had sex; physically or virtually. Games. And war was just another game to entities hundreds of thousands of years old, for whom death was a sleep and a forgetting, and a morning like this, fresh and filled with light. She remembered the actions they had fought: the reduction of Yorrrt, the defense of Thau-Pek-Sat, where Rose of Jericho had annihilated an Enemy strike-fleet with a blizzard of micro-black holes summoned out of the universal quantum foam, exploding almost instantly in a holocaust of Hawking radiation. She watched Harvest Moon's glider-thin wings deep down in the brightening clouds, thin as dreams and want. Sex was quick; sex was easy, even sacramental, among the many peoples and sects that temporarily formed the consciousness of *We Have Left Undone That Which We Ought to Have Done*. She sighed and felt the breath shudder in her flat, muscled chest. Startled by a reaction as sensational, as physical, as any Immelman or slow loop performed by Harvest Moon, Scented Coolabar felt tears fill and roll. Memory, a frail and trickster faculty among the incarnate, took her back to another body, a woman's body, a woman of the Teleshgathu nation; drawn in wonder and hope and young excitement up the space elevator to the Clade habitat that had warped into orbit around her world to repair and restore and reconstitute its radiation shield from the endless oceans of her world. From that woman of a parochial waterworld had sprung three entities,

closer than sisters, deeper than lovers. Small wonder they needed each other, to the point of searching through eighty billion sentients. Small wonder they could never escape each other. The light was bright now, its unvarying shadow strict and stark on the wooden deck. Harvest Moon flashed her wings and rolled away, diving with her new friends deep through layer upon layer of cloud. And Scented Coolabar felt an unfamiliar twitch, a clench between the legs, a throb of something already exposed and sensitive becoming superattuned, swinging like a diviner's pendulum. Her balls told her, clear, straight, no arguments: she's out there. Rose of Jericho.

Twenty subjective minutes later, the Clade fleet was eighty light-years into its twelve hundred objective-year flight to intercept the Enemy advance toward Verthandi's Ring, the greatest sentient migration since the big bang. Populations numbered in logarithmic notation, like outbreaks of viruses, are on the move in two hundred million habitat-ships, each fifty times the diameter of the Seydatryah Heart-world. Of course the Seydatryah cluster is outnumbered, of course it will be destroyed down to the last molecule if it engages the Enemy migration, but the Deep Blue Something understands that it may not be the biggest or the strongest, but it is the closest and will be the first. So the culture cluster claws closer toward light-speed; its magnetic shield furled around it like an aurora, like a cloak of fire, as it absorbs energies that would instantly incinerate all carbon life in its many levels and ships. And, nerve-wired into an organic ornithopter, Scented Coolabar drops free from the *We Have Left Undone That Which We Ought to Have Done*'s launch teats into eighty kilometers of empty airspace. Scented Coolabar shrieks, then the ornithopter's wings scrape and cup and the scream becomes *oooh* as the biological machine scoops across the sky.

"Where away?" Scented Coolabar shouts. The ornithopter unfolds a telescope, bending an eye; Scented Coolabar spies the balloon cluster low and breaking from a clot of cumulus. A full third of the netted balloons are dead, punctured, black

and rotting. The ornithopter reads her intention and dives. A flash of sun-silver: Harvest Moon rises vertically out of the cloud, hangs in the air, impossibly elongated wings catching the morning light, then turns and tumbles to loop over Scented Coolabar's manically beating wings.

"That her?"

"That's her." *You are very lovely*, thought Scented Coolabar. *Lovely and alien*. But not so alien as Rose of Jericho, incarnated as a colony of tentacled balloons tethered in a veil of organic gauze, now terminally sagging toward the claspers and bone blades of Kyce. The ornithopter matched speed; wind whipped Scented Coolabar's long yellow hair. A lunge, a sense of the world dropping away, or at least her belly, and then the ornithopter's claws were hooked into the mesh. The stench of rotting balloon flesh assailed Scented Coolabar's senses. A soft pop, a rush of reeking gas, a terrifying drop closer to the fanged mouths of the forest: another balloon had failed. Harvest Moon, incarnated without feet or wheels, for her species was never intended to touch the ground, turned lazy circles in the sky.

"Same again?" Scented Coolabar asked. Rose of Jericho spoke through radio-sense into her head.

"Of course."

Foolish of Scented Coolabar to imagine a Rose of Jericho game being ended so simply or so soon.

"The Deep Blue Something has worked it out."

"I should hope so." The balloon cluster was failing, sinking fast. With the unaided eye Scented Coolabar could see the lash-worms and bladed dashers racing along the sucker-studded tentacles of the forest canopy. This round of the game was almost ended. She hoped her ornithopter was smart enough to realize the imminent danger.

"And Verthandi's Ring?" Harvest Moon asked.

"Is a remnant superstring." A subquantal fragment of the original big-bang fireball, caught by cosmic inflation and stretched to macroscopic, then to cosmological scale. Rarer than virtue or phoenixes, remnant superstrings haunted the galactic fringes and the vast spaces between star spirals; tens, hundreds of light-years long. In all the Clade's

memory, only one had ever been recorded within the body of the galaxy. Until now. "Tied into a loop," Rose of Jericho added. Scented Coolabar and Harvest Moon understood at once. Only the hand of the Enemy—if the Enemy possessed such things, no communication had ever been made with them, no physical trace ever found from the wreckage of their ships or their vaporized colony clusters—could have attained such a thing. And that was why the Chamber of Ever-Renewing Waters had launched the Heart-world. Such a thing could only be an ultimate weapon.

But what does it do? Scented Coolabar and Harvest Moon asked at once, but the presence in their brains, one humanesque, one man-bat-glider, was gone. Game over. A new round beginning. With a shriek of alarm, the ornithopter cast free just in time to avoid the tendrils creeping up over the canopies of the few surviving balloons. The tentacles of the forest clasped those of the balloon cluster and hauled it down. Then the blades came out.

How do wars begin? Through affront, through bravado, through stupidity or overconfidence, through sacred purpose or greed. But when galactic cultures fight, it is out of inevitability, out of a sense of cosmic tragedy. It is through understanding of a simple evolutionary truth: there can be only one exploiter of an ecological niche, even if that niche is the size of a universe. Within milliseconds of receiving the inquisitive touch of the Hujjain probe, the Enemy realized this truth. The vaporizing of the probe was the declaration of war, and would have given the Enemy centuries of a head start had not the Hujjain craft in its final milliseconds squirted off a burst of communication to its mother array deep in the cometary system on the edge of interstellar space.

In the opening centuries of the long, slow war, the Clade's expansion was checked and turned back. Trillions died. Planets were cindered; populations sterilized beneath a burning ultraviolet sky, their ozone layers and protective magnetic fields stripped away; habitat clusters incinerated by induced solar flares or reduced to slag by nanoprocessor plagues; Dyson spheres shattered by billions of antimatter warheads.

The Clade was slow to realize what the Enemy understood from the start: that a war for the resources that intelligence required—energy, mass, gravity—must be a war of extermination. In the first two thousand years of the war, the Clade's losses equaled the total biomass of its original prestarflight solar system. But its fecundity, the sheer irrepressibility of life, was the Clade's strength. It fought back. Across centuries it fought; across distances so vast the light of victory or defeat would be pale, distant winks in the night sky of far future generations. In the hearts of globular clusters they fought, and the radiant capes of nebulae; through the looping fire bridges on the skins of suns and along the event horizons of black holes. Their weapons were gas giants and the energies of supernovae; they turned asteroid belts into shotguns and casually flung living planets into the eternal ice of interstellar space. Fleets ten thousand a side clashed between suns, leaving not a single survivor. It was war absolute, elemental. Across a million star systems, the Clade fought the Enemy to a standstill. And, in the last eight hundred years, began to drive them back.

Now, time dilated to the point where a decade passed in a single heartbeat, total mass close to that of a thousand stars, the Clade Heart-world Seydatryah and its attendant culture cluster plunged at a prayer beneath light-speed toward the closed cosmic string loop of Verthandi's Ring. She flew blind; no information, no report could outrun her. Her half trillion sentients would arrive with only six months forewarning into what might be the final victory, or the Enemy's final stand.

Through the crystal shell of the Heart-world, they watched the Clade attack fleet explode like thistledown against the glowing nebula of the Enemy migration. Months ago those battleships had died, streaking ahead of the decelerating Seydatryah civilization to engage the Enemy pickets and, by dint of daring and force of fortune, perhaps break through to attack a habitat cluster. The greater mass of the Clade, dropping down the blue shift as over the years and decades they fell in behind Seydatryah, confirmed the astonished reports of those swift, bold fighters. All the Enemy was here; a car-

avanserai hundreds of light-years long. Ships, worlds, had been under way for centuries before *Ever-Fragrant Perfume of Divinity* located and destroyed one of the pilgrim fleets. The order must have been given millennia before; shortly after the Clade turned the tide of battle in its favor. Retreat. Run away. But the Enemy had lost none of its strength and savagery as wave after wave of the cheap, fast, sly battleships were annihilated.

Scented Coolabar and Harvest Moon and Rose of Jericho huddled together in the deep dark and crushing pressure of the ocean at the bottom of the world. They wore the form of squid; many-tentacled and big-eyed, communicating by coded ripples of bioluminescent frills along their streamlined flanks. They did not doubt that they had watched themselves die time after time out there. It was likely that only they had died, a million deaths. The Chamber of Ever-Renewing Waters would never permit its ace battleship crew to desert into the deep, starlit depths of Pterimonde. Their ploads had doubtless been copied a million times into the swarm of fast attack ships. The erstwhile crew of the *Ever-Fragrant Perfume of Divinity* blinked their huge golden eyes. Over the decades and centuries, the light of the Enemy's retreat would be visible over the entire galaxy, a new and gorgeous ribbon nebula. Now, a handful of light-months from the long march, the shine of hypervelocity particles impacting the deflection fields was a banner in the sky, a starbow across an entire quadrant. And ahead, Verthandi's Ring, a starless void three light-years in diameter.

"You won them enough time," Scented Coolabar said in a flicker of blue and green. The game was over. It ended at the lowest place in the world, but it had been won years before, she realized. It had been won the moment Rose of Jericho diverted herself away from the Soulhouse into a meditation tree on the Holy Plains of Hoy.

"I believe so," Rose of Jericho said, hovering a kiss away from the crystal wall, holding herself against the insane Coriolis storms that stirred this high-gravity domain of waters. "It will be centuries before the Clade arrives in force."

"The Chamber of Ever-Renewing Waters could regard it as treachery," Harvest Moon said. Rose of Jericho touched the transparency with a tentacle.

"Do I not serve them with heart and mind and life?" The soft fireworks were fewer now; one by one they faded to nothing. "And anyway, what would they charge me with? Handing the Clade the universe on a plate?"

"Or condemning the Clade to death," said Scented Coolabar.

"Not our Clade."

She had been brilliant, Scented Coolabar realized. To have worked it out in those few minutes of subjective flight, and known what to do to save the Clade. But she had always been the greatest strategic mind of her generation. Not for the first time Scented Coolabar wondered about their lost forebear, that extraordinary female who had birthed them from her ploded intellect.

What is Verthandi's Ring? A closed cosmic string. And what is a closed cosmic string? A time machine. A portal to the past. But not the past of *this* universe. Any transit of a closed timelike loop led inevitably to a parallel universe. In that time-stream, there too was war; Clade and Enemy, locked in Darwinian combat. And in that universe, as the Enemy was driven back to gaze into annihilation, Verthandi's Ring opened and a second Enemy, a duplicate Enemy in every way, came out of the sky. They had handed the Clade this universe; the prize for driving its parallel in the *alternate* time-stream to extinction.

Cold-blooded beneath millions of tons of deep cold pressure, Scented Coolabar shivered. Rose of Jericho had assessed the tactical implications and made the only possible choice: delay the Chamber of Ever-Renewing Waters and the Deep Blue Something so they could not prevent the Enemy exiting this universe. A bloodless win. An end to war. Intelligence the savior of the blind, physical universe. While in the second time-stream, Clade habitats burst like crushed eyeballs and worlds were scorched bare and the Enemy found its resources suddenly doubled.

Scented Coolabar doubted that she could ever make such a

deal. But she was an Engineer, not a Mistress of Arms. Her tentacles caressed Rose of Jericho's lobed claspers; a warm sexual thrill pulsed through her muscular body.

"Stay with us, stay with me," Harvest Moon said. Her decision was made, the reluctant incarnation; she had fallen in love with the flesh and would remain exploring the Heart-world's concentric tiers in thousands of fresh and exciting bodies.

"No, I have to go." Rose of Jericho briefly brushed Harvest Moon's sexual tentacles. "They won't hurt me. They knew I had no choice, as they had no choice."

Scented Coolabar turned in the water. Her fins rippled, propelling her upward through the pitch-black water. Rose of Jericho fell in behind her. In a few strong strokes, the lights of Harvest Moon's farewell faded, even the red warmth of her love, and all that remained was the centuries-deep shine of the starbow beyond the wall of the world.