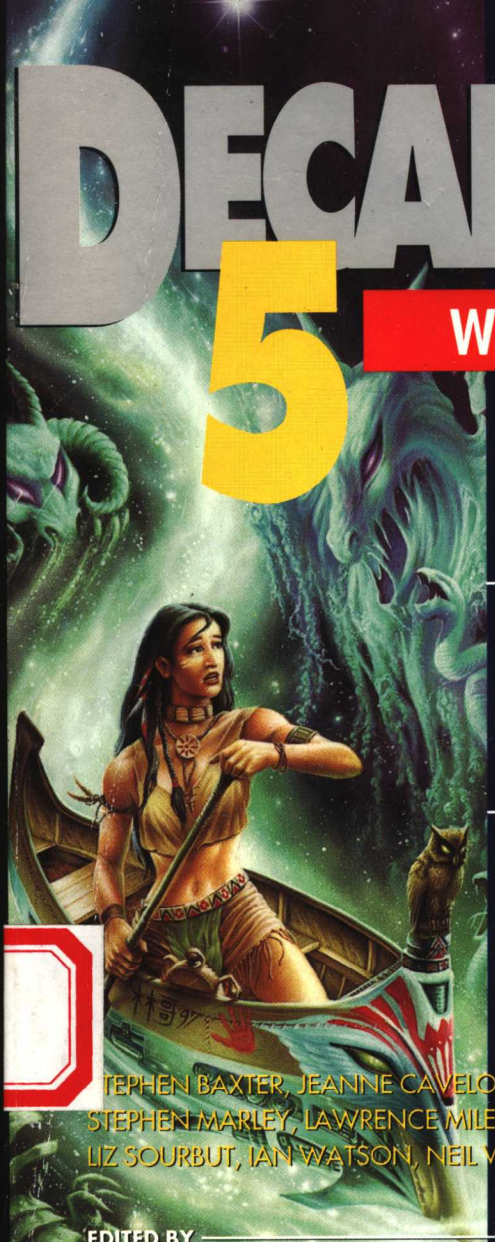
DECALOG 5

WONDERS

TEN STORIES

A BILLION YEARS

AN INFINITE UNIVERSE



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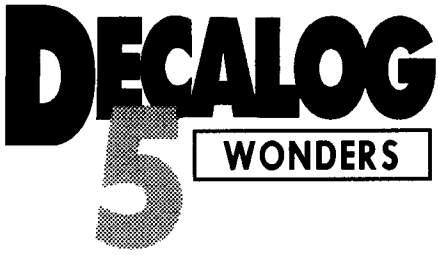

TEN STORIES
A BILLION YEARS
AN INFINITE UNIVERSE

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The Place of All Places

Based on an idea by Nakula Somana

Oasis is full of the sun. It lies over everything: cloying, clanging, a golden cloth. And not just gold but saffron, cadmium, zinc, amber, apricot, parchment, ochre, tan, bronze, all the yellow that God ever made lies here. The land and the sky are so full of colour that there is scarcely room for Boy.

Boy hides among the palm trees, squeezed into a narrow strip of ground between wetland and desert, life and death; near enough to the dhobiis ghat *to taste the moisture in the air with the* harijans *songs as they beat dirty clothes in dripping arcs against sloping rocks to clean them.*

The harijans *work, an untouchable machine endlessly building the foundation of a culture which will only ever mark them with non-existence. And yet they smile, these human mirages, and their faces glow like mountains in the sun: dark, gnarled, rivers of sweat mobilizing the geography of their faces.*

As always they are singing about Desert.
Desert and existence.

The River of Stars is dying. Desert is all that remains.
Desert remembers the universe but Desert, too, will pass away.
The country of Man is dying. Oasis is all that remains.
Man remembers Desert's stories but Mankind, too, must pass away.
Every night there are fewer stars. Every day there are fewer stories.
Desert is dying. Man is dying.
Who will remember? Who will remember?

Boy listens, the song's ignorant prisoner; he listens but does not understand. The harijans *sing of Desert's stories as if they were real. But the stories aren't real, are they? Boy stays among the palm trees and considers this until the sun stands*

high upon Oasis and the yellow land has turned salt-white, but cannot conceive an answer to the question.

Later that day Uncle comes to the dhobiis ghat. *He comes with a thing Boy cannot name. Uncle plants the thing in Oasis. It has silver leaves that chase and catch the sun, oiled arms that work without rest in metal sleeves, mouths that drink from Oasis and punch the dirty clothes with fists of water.*

For the first time that Boy can remember, the harijans *stop work.*

-What is it?- Boy points excitedly. -What does it do?-

-It is a machine,- Uncle responds proudly. -A machine for washing. I built it.-

Boy does not understand. -But the harijans *do washing.-*

Uncle sees that Boy is confused. -It has been my life's dream to build this machine for the harijans. *This mechanism will ease the burden of their work.-*

Boy still does not understand. -But what will the harijans *do if they do not have to work?-*

Uncle laughs. -Anything they want.-

The harijans *are laughing too, shouting their thanks above the voice of machine. Already it has done a day's work.*

Boy is angry. -Do you love the harijans *so much more than me that you give them this gift and me nothing?-*

Uncle smiles sadly. -But you already have what I have given the harijans.*-*

Boy is confused. -But I have no machine that does washing.-

-That is because you are the Last Born; you do not need to work. Time is precious now. I have given the harijans *time to dream, to wonder.-*

Boy sighs impatiently. -You say you have given them time and wonder, but I see only a machine.-

Uncle takes Boy's face in his big, dry hands and turns so they are both looking at the desert. -Think of the stories Desert tells. They affect you even though you cannot see their cause.-

-I don't understand. The harijans *say the stories Desert tells are real.-*

Uncle smiles wistfully. -Is a story less wonderful because it exists only in your mind?-

Boy stands in the grey rushes and considers his Uncle's words. He thinks until the sun is gone and night stands black upon Oasis, until Uncle has returned to his home to contented sleep and the harijans *song has gone from the night, but cannot conceive an answer to the question.*

And so, as the sun chases night from Oasis, Boy faces Desert and begins to walk. He walks until Oasis is gone, until only the sand and the sun remain, until the days and weeks and years make a desert rock of him, skin dry-scoured and full of mouths greedy for moisture.

And as his skin thirsts, so too does his heart.

He has but one question, and no answer.

Desert tells stories.

Are the stories real?

Poyekhali 3201

By Stephen Baxter

It seemed to Yuri Gagarin, that remarkable morning, that he emerged from a sleep as deep and rich as those of his childhood.

. . . And now, it was as if the dream continued. Suddenly it was sunrise, and he was standing at the launch pad in his bright orange flight suit, his heavy white helmet emblazoned 'CCCP' in bright red.

He breathed in the fresh air of a bright spring morning. Beyond the pad, the flat Kazakhstan steppe had erupted into its brief bloom, with evanescent flowers pushing through the hardy grass. Gagarin felt his heart lift, as if the country that had birthed him had gathered itself to cup him in its warm palm, one last time, even as he prepared to soar away from its soil, and into space.

Gagarin turned to his ship.

The A-1 rocket was a slim white cylinder, forty metres tall. The three supporting gantries were in place around the booster, clutching it like metal fingers, holding it to the Earth. Gagarin could see the four flaring strap-on boosters clustered around the first stage, the copper-coloured clusters of rocket nozzles at the base.

This was an ICBM – an SS-6 – designed to deliver heavy nuclear weapons to the laps of the enemies of the Soviet Union. But today the payload was no warhead, but something wonderful. The booster was tipped by his Vostok, shrouded by a green protective cone: Gagarin's spaceship, which he had named *Swallow*.

Technicians and engineers surrounded him. All around him he saw faces: faces turned to *him*, faces shining with awe. Even the *zeks*, the political prisoners, had been allowed to see him today, 12 April 1961, to witness as the past separated from the future.

They were right to feel awe. Nobody had travelled into space before! Would a human body be able to survive a state

of weightlessness? Would cosmic radiation prove lethal to a man? Even to reach this deadly realm, the first cosmonaut would have to ride a converted missile, and his spaceship had just one aim: to preserve him long enough to determine if humans, after all, could survive beyond the Earth – or if space must for ever remain a realm of superstition and dread.

Gagarin smiled on them all. He felt a surge of elation, of command; he basked in the warm attention.

. . . And yet there were faces here that were strange to him, he realized slowly, faces among the technicians and engineers, even among the pilots. How could that be so, after so many months of training, all of them cooped up here in this remote place? He thought he knew everybody, and they him.

Perhaps, he wondered, he was still immersed in his dream.

. . . For a time, he had been with his father. He had been a carpenter, whose hands had constructed their wooden home in the village of Klushino, in the western Soviet Union. Then the ground shook as German tanks rumbled through the village. His parents' home was smashed, and they had to live in a dugout, without bread or salt, and forage for food in the fields . . .

But that was long ago, and he and his family had endured, and now he had reached this spring morning. And here, towering over him, was the bulk of his rocket, grey-white and heavy and uncompromising, and he put aside his thoughts of dreams with determination; today was the day he would fulfil the longings of a million years – the day he would step off the Earth and ride in space itself.

Gagarin walked to the pad. There was a short flight of metal stairs leading to the elevator which would carry him to the capsule; the stairs ran alongside the flaring skirt of one of the boosters. White condensation poured off the rocket, rolling down its heroic flanks; and ice glinted on the metal, regardless of the warmth of the sun.

Gagarin looked down over the small group of men gathered at the base of the steps. He said, 'The whole of my life seems to be condensed into this one wonderful moment. Everything that I have been, everything I have achieved, was for this.' He lowered his head briefly. 'I know I may never

see the Earth again, my wife Valentia, and my fine children, Yelena and Galya. Yet I am happy. Who would not be? To take part in new discoveries, to be the first to journey beyond the embrace of Earth. Who could dream of more?'

They were hushed; the silence seemed to spread across the steppe, revealing the soft susurrus of the wind over the grass which lay beneath all human noises.

He turned, and climbed into the elevator. He rose, and was wreathed in white vapour . . .

And, for a moment, it was as if he was surrounded by faces once more, staring in on him, avid with curiosity.

But then the vapour cleared, the dreamlike vision dissipated, and he was alone.

'Five minutes to go. Please close the mask of your helmet.'

Gagarin complied and confirmed. He worked through his checklist. 'I am in the preparation regime,' he reported.

'We are in that regime also. Everything on board is correct and we are ready to launch.'

Swallow was a compact little spaceship. It consisted of two modules: a metal sphere, which shrouded Gagarin, and an instrument module, fixed to the base of Gagarin's sphere by tensioning bands.

The instrument module looked like two great pie dishes welded together, bristling with thermal radiation louvres. It was crammed with water, tanks of oxygen and nitrogen, and chemical air scrubbers – equipment which would keep Gagarin alive during his brief flight in space. And beneath that was the big TDU-1 retrorocket system which would be used to return the craft from Earth orbit.

Gagarin's cabin was a cosy spherical nest, lined with green fabric. His ejection seat occupied much of the space. During the descent to Earth inside the sphere, small rockets would hurl Gagarin in his seat out of the craft, and, from seven kilometres above the ground, he would fall by parachute. In case he fell in some uninhabited part of the Earth, the seat contained emergency rations of food and water, radio equipment, and an inflatable dinghy; thus he was cocooned from danger, from the moment he left the pad to the moment he set foot once more on Earth.

There were three small viewing ports recessed into the walls of the cabin, now filled with pure daylight.

At Gagarin's left hand was a console with instruments to regulate temperature and air humidity, and radio equipment. On the wall opposite his face, TV and film cameras peered at him. Below the cameras was a porthole mounted with Gagarin's Vzor optical orientation device, a system of mirrors and optical lattices which would enable him to navigate by the stars, if need be . . .

'Three minutes. There is a faulty valve. It will be fixed. Be patient, Major Gagarin.'

Gagarin smiled. He felt no impatience, or fear.

He reached for his controls, wrapped his gloved hands around them. There was a simple hand controller to his right, which he could use in space to orientate the capsule, if need be. To his left there was an abort switch, which would enable him to be hurled from the capsule if there were some mishap during launch. The controls were solid in his hands, good Soviet engineering. But he was confident he would need neither of these controls, during the launch or his single orbit of Earth.

The systems would work as they should, and his body would not betray him, nor would his mind; his sphere was as snug as a womb, and in less than two hours the adventure would be over, and he would settle like thistledown under his white parachute to the rich soil of Asia. How satisfying it would be, to fall all but naked from the sky, to return to Earth on his own two feet!

'Everything is correct. Two minutes more.'

'I understand,' he said.

At last, he heard motors whining. The elevator gantry was leaning away from the rocket, power cables were ejected from their sockets in the booster's metal flanks, and the access arms were falling back, unfolding around the rocket like the petals of a flower.

Gagarin settled in his contoured seat, and ordered himself to relax.

'Ignition!'

He thought he heard a sigh – of wonder, or anticipation. Perhaps it was the controllers. Perhaps it was himself.

Perhaps not.

* * *

Far below him, sound erupted. No fewer than thirty-two rockets had ignited together: twenty main thrust chambers, a dozen vernier control engines. Hold-down bolts exploded, and Gagarin felt the ship jerk under him.

He could feel vibration but no acceleration; he knew that the rocket had left the ground and was in momentary stasis, balanced on its thrust.

Already, he had left the Earth.

Gagarin whooped. He said: '*Poyekhali!*' – 'Off we go!'

He heard an exultant reply from the control centre, but could make out no words.

Now the rockets' roar engulfed him. Acceleration settled on his chest, mounting rapidly.

Already, he knew, strapped to this ICBM, he was travelling faster than any human in history.

He felt the booster pitch over as it climbed. After two minutes there was a clatter of explosive bolts, a dip in the acceleration. Staging: the four strap-on liquid rocket boosters had been discarded.

He was already more than fifty kilometres high.

Now the main core of the A-1 burnt under him, and as the mass of the ship decreased the acceleration built up, to four, five, six times gravity. But Gagarin was just twenty-seven, fit as an ox, and he could feel how his taut muscles absorbed the punishment easily. He maintained steady reports, and he was proud of the control in his voice.

Cocooned in the artificial light of his cabin, exhilarated and in control, he grinned through the mounting pain.

Swallow's protective shroud cracked open. He could see fragments of ice, shaken free of the hull of the booster; they glittered around the craft like snow.

At five minutes the acceleration died, and Gagarin was hurled forward against his restraints. He heard rattles as the main booster core was discarded. Then came the crisp surge of the 'half stage' which would, at last, carry him to space.

Gagarin felt his speed mount, impossibly rapidly.

Then the final stage died. He was thrown forward again, and he grunted.

The automatic orientation system switched on. *Swallow* locked its sensor on the sun, and swivelled in space; he could

feel the movement, as gentle and assured as if he was a child in the womb, carried by his mother's strong muscles, and he knew he was in orbit.

It was done. And, as the ship turned, he could see the skin of Earth, spread out beneath him like a glowing carpet.

'Oh my,' he said. 'Oh my. What a beautiful sight.'

That was when the voices started.

. . . Much was made of the fact that Yuri Gagarin was an ordinary citizen of the Soviet Union. He was born in the Gzhatsk District of Smolensk and entered secondary school in 1941. But his studies were interrupted by the German invasion. After World War Two Gagarin's family moved back to Gzhatsk, where Yuri resumed his studies. In 1951 he graduated with honours from a vocational school in the town of Lyubersy, near Moscow. He received a foundryman's certificate. He then studied at an industrial technical school in Saratov, on the Volga, from which he graduated with honours in 1955. It was while attending the industrial school that the man who would be the first to fly in space took his first steps in aviation, when he commenced a course of training at the Saratov Aero Club in 1955 . . .

Voices – chattering and whispering around the capsule – as if he was dreaming. Was this some artefact of weightlessness, of the radiations of space?

The voices faded.

. . . And yet this *was* dreamlike, voices or no voices. Here he was falling around the Earth, at a height nobody had approached before. And objects were *drifting* around him in the cabin: papers, a pencil, a small notebook, comical in their ordinariness, pushed this way and that by tugs of air from his life-support fans. This was weightlessness, a sensation no human had experienced before.

Briefly, he was overwhelmed with strangeness.

And yet he felt no ill effects, no disorientation; it was remarkably comfortable, and he knew it would be possible to do good work here, even to build the cities in space of which the designers dreamt.

He would complete a single orbit of the Earth, passing across Siberia, Japan, the tip of South America, and west Africa.

He peered out eagerly, watching Earth as no man had seen it before. There were clouds piled thickly around the equator, reaching up to him. Over the baked heart of the Soviet Union he could see the big squares of the collective farms, and he could distinguish ploughed land from meadows. It would take twenty minutes, of his orbit's ninety, just to cross the vast expanse of his homeland.

The Earth seemed very near, even from two hundred kilometres.

. . . And again he heard a voice – this time his own, somehow echoing back at him, from somewhere beyond the hull of the spacecraft: *We are peace-loving people and are doing everything for the sake of peace. The Soviet man – be he a geologist, polar explorer, builder of power stations, factories or plants, or space engineer and pilot – is always a seeker . . .*

The voice, echoing as if around some gigantic museum, faded and vanished.

He felt irritation, mixed with apprehension. Strange voices were not in the flight plan! He had not been trained for this! He had no desire for his mission to be compromised by the unexpected!

The voices could not, of course, have been real. He was cocooned in this little craft like a doll in wood shavings. The padded walls of his cabin were just centimetres from his gloved fingers. Beyond that, there was *nothing*, for hundreds of kilometres . . .

And yet it was as if, briefly, he had no longer been alone. And still that feeling refused to leave him; suddenly the Vostok seemed small and absurdly fragile – a prison, not a refuge.

As if someone was watching him.

For the first time in the mission, he felt the breath of fear. Perhaps, as the psychologists had warned, the experience of his catapulting launch from the Earth had affected him more deeply than he had anticipated.

He put his uneasiness aside, and fulfilled his duties. He reported the readings of his instruments. He tried to describe what he saw and felt. Weightlessness was 'relaxing', he said. And so it was: with his restraints loosened, floating above his

couch, Gagarin felt as if he was flying his favoured MiG-15, low over the birch trees around Star City.

He recorded his observations in a logbook and on tape. His handwriting had not changed – here in space it was just as it had been on Earth, just as he had learnt so long ago in the schools of Klushino – but he had to hold the writing block or it would float away from his hands.

And he maintained his stream of messages, for the people of Earth. '. . . The present generation will witness how the free and conscious labour of the people of the new socialist society turns even the most daring of mankind's dreams into reality. To reach into space is a historical process which mankind is carrying out in accordance with the laws of natural development . . .'

Even as he spoke, he studied Earth through his Vzor telescope.

White clouds, curved blue sea: the dominant impression. The clouds' white was so brilliant it hurt his eyes to look at the thickest layers too long, as if a new sun was burning from beneath them, on the surface of the Earth. And the blue was of an extraordinary intensity, somehow hard to study and analyse. The light was so bright it dazzled him, making it impossible to see the stars; thus, the Earth turned, as it always had, beneath a canopy of black sky.

It was easier to look at the land, where the colours were more subtle, greys and browns and faded greens. It seemed as if the green of vegetation was somehow filtered by the layer of air. Cultivated areas seemed to be a dull sage green, while bare earth was a tan brown, deepening to brick red. Cities were bubbly grey, their boundaries blurred. He was struck by the land's flatness, the way it barely seemed to protrude above the ocean's skin . . . There was truly little separating land and sea.

But it was hard to be analytical, up here, on the ultimate flight; it was enough simply to watch.

He flew into darkness: the shadow of Earth. Reflections from the cabin lights on the windows made it hard to see out, but still Gagarin could make out the continents outlined by splashes of light, chains of them like street lights along the coasts, and penetrating the interiors along the great river

valleys. The chains of human-made light, the orange and yellow-white spider-web challenging the night, were oddly inspiring. But Gagarin was struck by how much of the planet was dark, empty: all of the ocean, of course, save for the tiny, brave lights of ships, and great expanses of desert, jungle and mountain.

Gagarin was struck not so much by Earth's fragility as by its immensity, the smallness of human tenure, and the Vostok, for all the gigantic energy of its launch, was circling the Earth like a fly buzzing an elephant, huddled close to its hide of air.

Over the Pacific's wrinkled skin he saw a dim glow: it was the light of the Moon.

He turned his head, and let his eyes adapt to the new darkness. Soon, for the first time since the launch, he was able to see the stars.

The sky was crowded with stars, he saw; it was something like the sky over the high desert of the Gobi, where he had completed his survival training, the air so thin and dry as to be all but perfectly transparent. Craning to peer through the tiny windows, he sought the constellations, star patterns familiar since his boyhood, but the sky was almost too crowded to make them out . . .

Everywhere, stars were *green*.

The nearby stars, for instance: Alpha Centauri and Sirius and Procyon and Tau Ceti, names from science fiction, the homes of mankind in the ages to come. Green as blades of grass!

He tipped his head this way and that. Everywhere he looked it was the same: stars everywhere had turned to chlorophyll green.

What could this mean?

Yuri Gagarin flew on, alone in the dark of the Earth, peering out of his warm cabin into an unmarked celestial night.

At last he flew towards the sunlight once more. This first cosmonaut dawn was quite sudden: a blue arc, looking perfectly spherical, which suddenly outlined the hidden Earth. The arc thickened, and the first sliver of sun poked above the horizon. The shadows of clouds fled across the

ocean towards him, and then the clouds turned to the colour of molten copper, and the lightening ocean was grey as steel, burnished and textured. The horizon brightened, through orange to white, and the colours of life leaked back into the world.

The green stars disappeared.

Space was a stranger place than he had imagined.

He looked down at the Earth. To Gagarin now, the Earth seemed like a huge cave: warm, well lit, but an isolated speck on a black, hostile hillside, within which humanity huddled, telling itself stories to ward off the dark. But Gagarin had ventured outside the cave.

Gagarin wished he could return now, wished his brief journey was even briefer.

He closed his eyes. He sang hymns to the motherland. He saw flashes of light, meteoric streaks sometimes, against the darkness of his eyelid. He knew this must be some radiation effect, the debris of exploded stars perhaps, coursing through him. His soft human flesh was being remade, shaped anew, by space.

So, the minutes wore away.

It would not be long now. He anticipated his return to Earth, when the radio commands from the ground control would order his spaceship to prepare itself. It would orientate in its orbit, and his retrorockets would blaze, slamming him with a full-body blow, forcing him back into his couch. Then would come the brief fall into the atmosphere, the flames around his portholes as the ablative coating of *Swallow* turned to ash, so that he became a manmade comet, streaking across the skies of Africa and Asia. And at last his ejection seat would hurl him from the spent capsule, and from seven thousand metres he would drift to Earth on his parachute – landing at last in the deep spring air, perhaps on the outskirts of some small village, deep in the homeland, such as his own Klushino. The reverie warmed him.

Have you come from outer space?

Yes, he would say. *Yes, I have. Would you believe it? I certainly have . . .*

But the stars, he would have to tell them, are green.

* * *