

Forgetfulness

John W. Campbell

RON THULE, the astronomer, stood in the lock gate and looked down across the sweep of gently rolling land. Slowly, he breathed in the strange, tangy odors of this planet. There was something of a vast triumph in his eyes, and something of sorrow. They had been here now scarcely five hours, and the sun was still low in the east, rising slowly. Out beyond, above the western horizon, a pale ghost of the strange twin world of this planet, less than a third of a million miles distant, seemed a faint, luminous cloud in the deep, serene blue of the sky.

It was triumph, for six long years of travel, at a speed close to that of light, lay behind them; three and a half light years distant was Pareeth, and the crowding people who had built and launched the mighty two-thousand-five-hundred foot, interstellar cruiser that had brought this little band of one hundred. Launched in hope and striving, seeking a new sun with new planets, new worlds to colonize. More

than that, even, for this new-found planet was a stepping-stone to other infinities beyond. Ten years of unbroken travel was the maximum any ship they could build would endure. They had found a planet, in

fact, nine planets. Now, the range they might explore for new worlds was extended by four light years.

And there was sorrow there, too, for there was a race here now. Ron Thule turned his eyes toward the little clustering village nestled in the swale of the hills, a village of simple, rounded domes of some opalescent, glassy material. A score of them straggled irregularly among the mighty, deep-green trees that shaded them from the morning sun, twenty-foot domes of pearl and rose and blue. The deep green of the trees and the soft green of the mosslike grass that covered all the low, rounded hills gave it a certain beauty; the sparkling colors of the little gardens about the domes added color and further beauty. It was a lovely spot, a spot where space-wearied, interstellar wanderers might rest in delight. A village, indeed, where anyone might rest in ease and enjoyment, after long, long labors.

Such it was. There was a race on this planet the men of Pareeth had found after six long years of space, six years of purring, humming atomic engines and echoing gray steel fabric that carried and protected them. Harsh utility of giant girders and rubbery flooring, the snoring drone of forty quadrillion horse power of atomic engines. It was replaced now by the soft coolness of the grassy land; the curving steel of the girders gave way to the brown of arching trees; the stern ceiling of steel plates gave way to the vast, blue arch of a planet's atmosphere. Sounds died away in infinitudes where there was no steel to echo them back; the unending drone of the mighty engines had become breezes stirring, rustling leaves—an invitation to rest.

The race that lived here had long since found it such, it seemed. Ron Thule looked across the little village of domes to the largest of them, perhaps thirty feet across. Commander Shor Nun was there with his archeologist and anthropologist—and a half score men of this planet. Rhth, they called it.

The conference was breaking up now. Shor Nun appeared, tall and powerful, his muscular figure in trim Interstellar Expedition uniform of utilitarian, silvery gray. Behind him came the other two in uniform—young, powerful men of Pareeth, selected for this expedition because of physical and mental perfection, as was every man of them.

Then came Seun, the man of Rhth. He was taller, slimmer, an almost willowy figure. His lean body was clothed in an elastic, close-fitting suit of golden stuff, while over his shoulders a glowing, mag-

nificently shimmering cape of rich blue was thrown. Five more of these men came out, each in a golden suit, but the draped capes glowed in deep reds, and rich greens, blues and violets. They walked leisurely beside the men of Pareeth. An unconscious force made those trimly uniformed men walk in step between the great, arching trees.

They came near, and Shor Nun called out, "Is the expedition ready?"

From the forward lock, Toth Mour replied, "Aye, commander. Twenty-two men. What do these people say?"

Shor Nun shook his head slightly. "That we may look as we wish. The city is deserted. I cannot understand them. What arrangements have you made?"

"The men you mentioned are coming. Each head of department, save Ron Thule. There will be no work for the astronomer."

"I will come, Shor Nun," called out the astronomer, softly. "I can sketch; I would be interested."

"Well enough, as you like. Toth Mour, call the men into formation; we will start at once. The day varies in length, but is some thirteen hours long at this season, I am told."

Ron Thule leaped down to the soft turf and walked over toward the group. Seun looked at him slowly and smiled. The man of Rhth looked taller from this distance, nearly six and a third feet in height. His face was tanned to a golden color that came near to matching the gold of his clothing. His eyes were blue and very deep. They seemed uncertain—a little puzzled, curious about these men, curious about the vast, gray bulk that had settled like a grim shadow over the low hill. Half a mile in length, four hundred feet in diameter, it loomed nearly as large as the age-old, eroded hills it had berthed on. He ran a slim-fingered hand through the glinting golden hair that curled in unruly locks above a broad, smooth brow.

"There is something for an astronomer in all this world, I think." He smiled at Ron Thule. "Are not climate and soils and atmospheres the province of astronomy, too?"

"The chemists know it better," Ron Thule replied, and wondered slightly at his replying. He knew that the man of Rhth had not spoken, simply that the thought had come to be in his mind. "Each will have his special work, save for me. I will look at the city. They will look at the buildings and girders and the carvings or mechanisms, as is their choice. I will look at the city."

Uneasily, he moved away from the group, started alone across the field. Uneasiness settled on him when

he was near this Seun, this descendant of a race that had been great ten millions of years before his own first sprang from the swamps. Cheated heir to a glory five million years lost.

The low, green roll of the hill fell behind him as he climbed the grassy flank. Very slowly before his eyes, the city lifted into view. Where the swelling curve of the hill faded softly into the infinite blue of the sky, first one little point, then a score, then hundreds appeared, as he walked up the crest—the city.

Then he stood on the crest. The city towered before him—five miles away across the gently rolling green swale. Titan city of a Titan race! The towers glowed with a sun-fired opalescence in the golden light of the sun. How long, great gods of this strange world, how long had they stood thus? Three thousand feet they rose from the level of age-sifted soil at their bases, three thousand feet of mighty mass, stupendous buildings of the giants long dead.

The strange little man from a strange little world circling a dim, forgotten star looked up at them, and they did not know, or care. He walked toward them, watched them climb into the blue of the sky. He crossed the broad green of the land, and they grew in their uncaring majesty.

Sheer, colossal mass, immeasurable weights and loading they were—and they seemed to float there on the grace of a line and a curve, half in the deep blue of the sky, half touching the warm, bright green of the land. They floated still on the strength of a dream dreamed by a man dead these millions of years. A brain had dreamed in terms of lines and curves and sweeping planes, and the brain had built in terms of opal crystal and vast masses. The mortal mind was buried under unknown ages, but an immortal idea had swept life into the dead masses it molded—they lived and floated still on the memory of a mighty glory. The glory of the race—

The race that lived in twenty-foot, rounded domes.

The astronomer turned. Hidden now by the rise of the verdant land was one of the villages that race built today. Low, rounded things, built, perhaps, of this same, strange, gleaming crystal, a secret half remembered from a day that must have been—

The city flamed before him. Across ten—or was it twenty—thousand millenniums, the thought of the builders reached to this man of another race. A builder who thought and dreamed of a mighty future, marching on, on forever in the aisles of time. He must have

looked from some high, wind-swept balcony of the city to a star-sprinkled sky—and seen the argosies of space: mighty treasure ships that swept back to this remembered home, coming in from the legion worlds of space, from far stars and unknown, clustered suns; Titan ships, burdened with strange cargoes of unguessed things.

And the city peopled itself before him; the skies stirred in a moment's flash. It was the day of Rhth's glory then! Mile-long ships hovered in the blue, settling, slow, slow, home from worlds they'd circled. Familiar sights, familiar sounds, greeting their men again. Flashing darts of silver that twisted through mazes of the upper air, the soft, vast music of the mighty city. The builder lived, and looked out across his dream——

But, perhaps, from his height in the looming towers he could see across the swelling ground to the low, rounded domes of his people, his far descendants seeking the friendly shelter of the shading trees——

Ron Thule stood among the buildings of the city. He trod a pavement of soft, green moss, and looked behind to the swell of the land. The wind had laid this pavement. The moving air was the only force that maintained the city's walks. A thousand thousand years it has swept its gatherings across the plain, and deposited them as an offering at the base of these calm towers. The land had built up slowly, age on age, till it was five hundred feet higher than the land the builder had seen.

But his dream was too well built for time to melt away. Slowly time was burying it, even as, long since, time had buried him. The towers took no notice. They dreamed up to the blue of the skies and waited. They were patient; they had waited now a million, or was it ten million years? Some day, some year, the builders must return, dropping in their remembered argosies from the far, dim reaches of space, as they had once these ages gone. The towers waited; they were faithful to their trust. They had their memories, memories of a mighty age, when giants walked and worlds beyond the stars paid tribute to the city. Their builders would come again. Till then—— naught bothered them in their silence.

But where the soft rains of a hundred thousand generations had drained from them, their infinite endurance softened to its gentle touch. Etched channels and rounded gutters, the mighty carvings dimming, rounding, their powerful features betrayed the slow effects. Perhaps—it had been so long—so long—even the city was forgetting what once it was. They had waited, these towers, for....

And the builders walked in the shade of the trees, and built rounded domes. And a new race of builders was come, a race the city did not notice in its age-long quiet. Ron Thule looked up to them and wondered if it were to be that his people should carry on the dream begun so long ago.

Softened by the silence, voices from the expedition reached him. "—diamond won't scratch it, Shor Nun—more elastic than beryl steel. Tough——" That was Dee Lun, the metallurgist. He would learn that secret somehow. They would all learn. And Shor Nun, commander, executive, atomic engineer, would learn the secrets that their power plants must hold. The dream—the city's life—would go on!

Ron Thule wandered on. No duty his, today, no responsibility to study carefully the form and turn of sweeping line, the hidden art that floated ten millions of tons of mass on the grace of a line. That for the archeologist and the engineer. Nor his to study the cunning form of brace and girder, the making of the pearly walls. That for metallurgist and chemist.

Seun was beside him, looking slowly about the great avenues that swept away into slim canyons in the distance.

"Your people visited ours, once," said Ron Thule softly. "There are legends, the golden gods that came to Pareeth, bringing gifts of fire and the bow and the hammer. The myths have endured through two millions of our years—four and a half millions of yours. With fire and bow and hammer my people climbed to civilization. With atomic power they blasted themselves back to the swamps. Four times they climbed, discovered the secret of the atom, and blasted themselves back to the swamps. Yet all the changes could not efface the thankfulness to the golden gods, who came when Pareeth was young."

Seun nodded slowly. His unspoken thoughts formed clear and sharp in the astronomer's mind. "Yes, I know. The city builders, it was. Once, your sun and ours circled in a system as a double star. A wandering star crashed through that system, breaking it, and in the breaking making planets. Your sun circled away, the new-formed planets cooling; our sun remained, these worlds cooling till the day life appeared. We are twin races, born of the same stellar birth. The city builders found that, and sought your worlds. They were a hundred thousand light years distant, in that time, across all the width

of the galaxy, as the two suns circled in separate orbits about the mass of the galaxy.

"The city builders went to see your race but once; they had meant to return, but before the return was made they had interfered in the history of another race, helping them. For their reward the city builders were attacked by their own weapons, by their own pupils. Never again have we disturbed another race."

"Across the galaxy, though. The Great Year—how could they— so many stars——"

"The problem of multiple -bodies? The city builders solved it; they traced the orbits of all the suns of all space; they knew then what sun must once have circled with ours. The mathematics of it—I have forgotten—I cannot develop it. I am afraid I cannot answer your thoughts. My people have forgotten so many things the city

builders knew.

"But your people seek entrance to the buildings. I know the city, all its ways and entrances. The drifting soil has covered every doorway, save those that once were used for the great airships. They are still unblocked. I know of one at this level, I think. Perhaps——"

II

Ron Thule walked slowly back toward the group. Seun was speaking with Shor Nun, and now they angled off across the city. Their voices hushed; their footfalls were lost in the silence that brooded forever over the towers. Down timeless avenues they marched, a tiny band in the valley of the Titans. The towers marched on and on, on either side, up over low hills, beyond the horizon. Then, before them, in the side of one of the milky walls a great opening showed. Some five feet above the level of the drifted soil, it led into the vast, black maw of the building. The little party grouped at the base, then, laboriously, one of the engineers boosted and climbed his way to the threshold and dropped a rope to a companion.

Seun stood a bit apart, till Shor Nun lifted himself up to the higher level and stood on the milky floor. Then the man of Rhth seemed to glow slightly; a golden haze surrounded him and he floated effortlessly up from the ground and into the doorway.

The engineers, Shor Nun, all stood frozen, watching him. Seun stopped, turned, half smiling. "How? It is the lathan, the suit I wear."

"It defies gravity?" asked Shor Nun, his dark eyes narrowing in keenest interest.

"Defies gravity? No, it does not defy, for gravity is a natural law. The city builders knew that. They made these suits shortly before they left the city. The lathan simply bends gravity to will. The mechanism is in the filaments of the back, servant to a wish. Its operation—I know only vague principles. I—I have forgotten so much. I will try to explain——"

Ron Thule felt the thoughts parading through his mind: Nodes and vibrations, atoms and less than atoms, a strange, invisible fabric of woven strains that were not there. His mind rebelled. Vague, inchoate stirrings of ideas that had no clarity; the thoughts were formless and indistinct, uncertain of themselves. They broke off.

"We have forgotten so much of the things the city builders knew, their arts and techniques," Seun explained. "They built things and labored that things might surround and protect them, as they thought. They labored generations that this city might be. They strove and thought and worked, and built fleets that sailed beyond the farthest star the clearest night reveals. They brought here their gains, their hard-won treasures—that they might build and make to protect these things.

"They were impermanent things, at best. How little is left of their five-million-year striving! We have no things today, nor any protecting of things. And we have forgotten the arts they developed to protect and understand these things. And with them, I am sorry, I have forgotten the thoughts that make the lathan understandable."

Shor Nun nodded slowly, turned to his party. Ron Thule looked back from this slight elevation, down the long avenue. And his eyes wandered aside to this descendant of the mighty dreamers, who dreamed no more.

"Seek passages to lower levels," said Shor Nun's voice. "Their records, their main interest must have centered near the ancient ground level. The engineers—we will seek the lowest, subsurface levels, where the powers and the forces of the city must have been generated. Come."

The opalescent light that filtered through the walls of the building faded to a rose dusk as they burrowed deeper into the vast pile. Corridors branched and turned; rooms and offices dust-littered and barren opened from them. Down the great two-hundred-foot corridor by which they had entered, ships had once floated, and at the heart

of the building was a cavernous place where these ships had once rested—and rested still! Great, dim shapes, half seen in the misted light that filtered through wall on translucent wall.

The room blazed suddenly with the white light of half a dozen atomic torches, and the opalescent walls of the room reflected the flare across the flat, dusty sweep of the great floor. Twoscore smooth shapes of flowing lines clustered on the floor, a forgotten company of travelers that had stopped here once, when

the city roared in triumphant life. A powdery, gray dust covered their crystal hulls.

Slowly, Shor Nun walked toward the nearest of them, a slim, thirty-foot-long private ship, waiting through eternity for a forgotten hand. The open lock at the side lighted suddenly at the touch of his foot, and soft lights appeared throughout the ship. Somewhere a soft, low humming began, and faded into silence in a moment. "Drus Nol —come with me. Seun, do you know the mechanism of these ships?"

The man of Rhth hesitated, then shook his head slowly. "I cannot explain it." He sighed. "They will not function now; they drew their power from the central plant of the city, and that has ceased operation. The last of the city builders shut it down as they left."

The men of Pareeth entered the ship hesitantly, and even while they walked toward the central control cabin at the nose, the white lighting dimmed through yellow, and faded out. Only their own torches remained. The stored power that had lain hidden in some cells aboard this craft was gone in a last, fitful glow. Somewhere soft, muffled thuds of relays acted, switching vainly to seek charged, emergency cells. The lights flared and died, flared and vanished. The questing relays relaxed with a tired click.

Dust-shrouded mechanism, etched in the light of flaring torches, greeted their eyes, hunched bulks", and gleaming tubes of glassy stuff that, by its sparkling, fiery life must be other than any glass they knew, more nearly kin to the brilliant refraction of the diamond.

"The power plant," said Shor Nun softly, "I think we had best look at that first. These are probably decayed; there might still be some stored power in the central plant they could pick up and give us a fatal shock. The insulation here——"

But the city builders had built well. There was no sign of frayed and age-rotted insulation. Only slight gray dust lay in torn blankets, tender fabric their movements had disturbed.

Seun walked slowly toward the far end of the room, rounding the silent, lightless bulks of the ancient ships. The dust of forgotten ages

stirred softly in his wake, settled behind him. The men of Pareeth gathered in his steps, followed him toward the far wall.

A doorway opened there, and they entered a small room. The archeologist's breath whistled; the four walls were decorated with friezes of the history of the race that had built, conquered and sailed a universe—and lived in domes under sheltering trees.

Seun saw his interest, touched a panel at his side. Soundlessly, a door slid from the wall, clicked softly, and completed the frieze on that wall. The archeologist was sketching swiftly, speaking to the chemist and the photographer as he worked. The torches flared higher for a moment, and the men moved about in the twenty-foot room, making way for the remembering eye of the little camera.

As Seun touched another stud, the door slid back into the wall. The room of the ships was gone. Hastily, the men of Pareeth turned to Seun.

"Will that elevator work safely to raise us again? You said the power was cut off——"

"There is stored power. Nearly all had leaked away, but it was designed to be sufficient to run all this city and all its ships, wherever they might be, for seven days. There is power enough. And there are foot passages if you fear the power will not be sufficient. This is the lowest level; this is the level of the machines, the heart of the city —nearly one thousand feet below the level at which we entered."

"Are the machines, the power plant, in this building?"

"There is only one building, here beneath the ground. It is the city, but it has many heads. The power plant is off here, I think. It has been a long time since I came this way. I was young then, and the city builders fascinated me. Their story is interesting and——"

"Interesting——" The thought seemed to echo in Ron Thule's mind. The story of the conquest of a universe, the story of achievement such as his race dreamed of now. They had dreamed—and done. And that, to their descendants, that was—interesting. Interesting to this dark, strange labyrinth of branching corridors, and strange, hooded bulks. Production machinery, he knew, somehow, production machinery that forgotten workmen had hooded as they stepped away temporarily—for a year or two, perhaps till the waning population should increase again and make new demands on it. Then great storerooms, bundled things that might be needed, spare parts, and stored records and deeds. Libraries of dull metal under gray dust. The unneeded efforts of a thousand generations, rotting in this quiet

dark that he, Ron Thule, and his companions had disturbed with the moment's rush of atomic flame.

Then the tortuous corridor branched, joined others, became suddenly a great avenue descending into the power room, the heart of the city and all that it had meant. They waited still, the mighty engines the last of the builders had shut down as he left, waited to start again the work they had dropped for the moment, taking a well-earned rest. But they must have grown tired in that rest, that waiting for the resurgence of their masters. They glowed dimly under the thin blankets of grayed dust, reflecting the clear brilliance of the prying light.

Shor Nun halted at the gate, his engineer beside him. Slowly, Seun of Rhth paced into the great chamber. "By the golden gods of Pareeth, Drus Nol, do you see that insulation—those buss-bars!"

"Five million volts, if it's no better than we build," the engineer said, "and I suppose they must be busses, though, by the stars of space, they look like columns! They're twenty-five feet through. But, man, man, the generator—for it must be a generator—it's no longer than the busses it energizes."

"When the generator operated," Seun's thoughts came, "the field " it created ran through the bars, so that they, too, became nearly perfect conductors. The generator supplied the city, and its ships, wherever in all space they might be." And the further thought came into their minds, "It was the finest thing the city builders had."

Shor Nun stepped over the threshold. His eyes followed the immense busses, across in a great loop to a dimly sparkling switch panel, then across, and down to a thing in the center of the hall, a

thing——

Shor Nun cried out, laughed and sobbed all at one moment. His hands clawed at his eyes; he fell to his knees, groaning. "Don't look—by the gods, don't look———" he gasped.

Drus Nol leaped forward, bent at his side. Shor Nun's feet moved in slow arcs through the dust of the floor, and his hands covered his

face.

Seun of Rhth stepped over to him with a strange deliberation that yet was speed. "Shor Nun," came his thought, and the man of Pareeth straightened under it, "stand up."

Slowly, like an automatum, the commander of the expedition rose, twitching, his hands falling to his sides. His eyes were blank, white things in their sockets, and horrible to look at.

"Shor Nun, look at me, turn your eyes on me," said Seun. He stood half a head taller than the man of Pareeth, very slim and straight, and his eyes seemed to glow in the light that surrounded him.

As though pulled by a greater force, Shor Nun's eyes turned slowly, and first their brown edges, then the pupils showed again. The frozen madness in his face relaxed; he slumped softly into a more natural position—and Seun looked away.

Unsteadily, Shor Nun sat down on a great angling beam. "Don't look for the end of those busses, Drus Nol—it is not good. They knew all the universe, and the ends of it, long before they built this city. The things these men have forgotten embrace all the knowledge our race has, and a thousand thousand times more, and yet they have the ancient characteristics that made certain things possible to the city builders. I do not know what that thing may be, but my eyes had to follow it, and it went into another dimension. Seun, what is that thing?"

"The generator supplied the power for the city, and for the ships of the city, wherever they might be in space. In all the universe they could draw on the power of that generator, through that sorgan unit. That was the master unit; from it flowed the power of the generator, instantaneously, to any ship in all space, so long as its corresponding unit was tuned. It created a field rotating"—and the minds of his hearers refused the term—"which involves, as well, time.

"In the first revolution it made, the first day it was built, it circled to the ultimate end of time and the universe, and back to the day it was built. And in all that sweep, every sorgan unit tuned to it must follow. The power that drove it died when the city was deserted, but it is still making the first revolution, which it made and completed in the first hundredth of a second it existed.

"Because it circled to the end of time, it passed this moment in its swing, and every other moment that ever is to be. Were you to wipe it out with your mightiest atomic blast, it would not be disturbed, for it is in the next instant, as it was when it was built. And so it is at the end of time, unchanged. Nothing in

space or time can alter that, for it has already been at the end of time. That is why it rotates still, and will rotate when this world dissolves, and the stars die out and scatter as dust in space. Only when the ultimate equality is established, when no more change is, or can be will it be at rest—for then other things will be equal to it, all space equated to it, because space, too, will be unchanged through time.

"Since, in its first swing, it turned to that time, and back to the day it was built, it radiated its power to the end of space and back. Anywhere, it might be drawn on, and was drawn on by the ships that sailed to other stars."

Ron Thule glanced very quickly toward and away from the sorgan unit. It rotated motionlessly, twinkling and winking in swift immobility. It was some ten feet in diameter, a round spheroid of rigidly fixed coils that slipped away and away in flashing speed. His eyes twisted and his thoughts seemed to freeze as he looked at it. Then he seemed to see beyond and through it, as though it were an infinite window, to ten thousand other immobile, swiftly spinning coils revolving in perfect harmony, and beyond them to strange stars and worlds beyond the suns—a thousand cities such as this on a thousand planets: the empire of the city builders!

And the dream faded—faded as that dream in stone and crystal and metal, everlasting reality, had faded in the softness of human tissue.

III

The ship hung motionless over the towers for a long moment. Sunlight, reddened as the stars sank behind the far hills, flushed their opalescent beauty with a soft tint, softened even the harsh, utilitarian gray of the great, inter-stellar cruiser above them into an idle, rosy dream. A dream, perhaps, such as the towers had dreamed ten thousand times ten thousand times these long aeons they had waited?

Ron Thule looked down at them, and a feeling of satisfaction and fulfillment came to him. Pareeth would send her children. A colony here, on this ancient world, would bring a new, stronger blood to wash up in a great tide, to carry the ideals this race had forgotten to new heights, new achievements. Over the low hills, visible from this elevation, lay the simple, rounded domes of the people of Rhth—Seun and his little clan of half a hundred—the dwindling representatives of a once-great race.

It would mean death to these people—these last descendants. A new world, busy with a great work of reconquering this system, then all space! They would have no time to protect and care for these forgetful ones; these people of Rhth inevitably would dwindle swiftly in a strange, busy world. They who had forgotten progress five millions of years before; they who had been untrue to the dream of the city

builders.

It was for Pareeth, and the sons of Pareeth to carry on the abandoned path again——

CONCLUSION OF THE REPORT TO THE COMMITTEE OF

PAREETH

SUBMITTED BY SHOR NUN, COMMANDER OF THE FIRST INTERSTELLAR EXPEDITION

—thus it seemed wise to me that we leave at the end of a single week, despite the objections of those members of the expedition personnel who had had no opportunity to see this world. It was better not to disturb the decadent inhabitants of Rhth in any further degree, and better that we return to Pareeth with these reports as soon as might be, since building operations would soon commence on the twelve new ships.

I suggest that these new ships be built of the new material rhthite, superior to our best previous materials. As has been shown by the incredible endurance of the buildings of the city, this material is exceedingly stable, and we have found it may be synthesized from the cheapest materials, saving many millions in the construction work to be undertaken.

It has been suggested by a certain member of the expedition, notable Thon Raul, the anthropologist, that we may underestimate the degree of civilization actually retained by the people of Rhth, specifically that it is possible that a type of civilization exists so radically divergent from our own, that it is to us unrecognizable as civilization. His suggestion of a purely mental civilization of a high order seems untenable in the face of the fact that Seun, a man well respected by his fellows, was unable to project his thoughts clearly at any time, nor was there any evidence that any large proportion of his thoughts were to himself of a high order of clarity. His answers were typified by "I have forgotten the development———" or "It is difficult for me to explain———" or "The exact mechanism is not understood by all of us—a few historians———"

It is, of course, impossible to disprove the assertion that such a civilization is possible, but there arises in my mind the question of advantage gained, it being a maxim of any evolutionary or advancing

process that the change so made is, in some manner, beneficial to the modified organism of society. Evidently, on the statements made by Seun of Rhth, they have forgotten the knowledge once held by the mighty race that built the cities, and have receded to a state of repose without labor or progress of any kind.

Thon Raul has mentioned the effect produced on me by close observation of the sorgan mechanism, and further stated that Seun was able to watch this same mechanism without trouble, and able to benefit me after my unfortunate experience. I would point out that mental potentialities decline extremely slowly; it is possible that the present decadent people have the mental potentialities, still inherent in them, that permitted the immense civilization of the city builders.

It lies there, dormant. They are lost for lack of the driving will that makes it effective. The Pareeth, the greatest ship our race has ever built, is powered, fueled, potentially mighty now—and inert for lack of a man's driving will, since no one is at her helm.

So it is with them. Still, the mental capacity of the race overshadows us. But the divine fire of ambition has died. They rely wholly on materials and tools given them by a long-dead people, using even these in an automatic and uncomprehending way, as they do their curious flying suits.

Finally, it is our conclusion that the twelve ships under consideration should be completed with all possible speed, and the program as at present outlined carried out in full; i.e. seven thousand, six hundred and thirty-eight men and women between the ages of eighteen and twenty-eight will be selected on a basis of health, previous family history, personal character and ability as determined by psychological tests. These will be transported, together with a basic list of necessities, to the new planet, leaving in the early months of the coming year.

Six years will be required for this trip. At the end of the first year on the new planet, when some degree of organization has been attained, one ship, refueled, will return to Pareeth. At the end of the second year two ships will return from Rhth with all data accumulated in that period. Thereafter, two will sail each year.

On Pareeth, new ships will be manufactured at whatever rate seems practicable, that more colonists may be sent as swiftly as they desire. It is suggested, however, that, in view of the immense scientific advancements already seen in the cities of Rhth, no new ships be made until a ship returns with the reports of the first year's studies, in order that any resultant scientific advances may be incorporated.

The present crew of the Pareeth have proven themselves in every way competent, courageous and cooperative. As trained and experienced interstellar operators, it is further suggested that the one hundred men be divided among the thirteen ships to sail, the Pareeth retaining at least fifty of her present crew and acting as guide to the remainder of the fleet. Ron Thule, it is specifically requested, shall be astronomical commander of the fleet aboard the flagship. His astronomical work in positioning and calculating the new system has been of the highest order, and his presence is vitally needed.

Signed by me, SHOR NUN, this thirty-second day after landing.

UNANIMOUS REPORT OF THE

COMMITTEE OF PAREETH ON

THE FIRST EXPEDITION TO

THE PLANET RHTH

The Committee of Pareeth, after due consideration of the reports of Folder Ri 27-56-! i, entitled "Interstellar Exploration Reports, Expedition I" do send to commander of said expedition, Shor Nun, greetings.

The committee finds the reports highly satisfying, both in view of the successful nature of the expedition, and in that they represent an almost unanimous opinion.

In consequence, it is ordered that the ships designated by the department of engineering plan as numbers 18834-18846 be constructed with such expedition as is possible.

It is ordered that the seven thousand six hundred and thirty-eight young people be chosen in the manner prescribed in the attached docket of details.

It is ordered that in the event of the successful termination of the new colonizing expedition, such

arrangements shall be made that the present decadent inhabitants of the planet Rhth shall be allowed free and plentiful land; that they shall be in no way molested or attacked. It is the policy of this committee of Pareeth that this race shall be wards of the newly founded Rhth State, to be protected and in all ways aided in their life.

We feel, further, a deep obligation to this race in that the archeol-ogical and anthropological reports clearly indicate that it was the race known to them as the city builders who first brought fire, the bow and the hammer to our race in mythological times. Once their race

J -

gave ours a foothold on the climb to civilization. It is our firm policy that these last decadent members of that great race shall be given all protection, assistance and encouragement possible to tread again the climbing path.

It is ordered that the first colony city on Rhth shall be established at the spot represented on the accompanying maps as N'yor, as called in the language of the Rhth people, near the point of landing of the first expedition. The near-by settlement of the Rhth people is not to be molested in any way, unless military action is forced upon

the colonists.

It is ordered that if this condition shall arise, if the Rhth people object to the proposed settlement at the spot designated as N'yor, arbitration be attempted. Should this measure prove unsuccessful, military penalties shall be exacted, but only to the extent found necessary for effective action. The colonists shall aid in the moving of the settlement of the Rhth people, if the Rhth people do not desire to be near the city of the colonists.

In any case, it is ordered that the colonists shall, in every way within their aid, advance and inspire the remaining people of Rhth.

It is further ordered that Shor Nun, commander, shall be plenipotentiary representative of the committee of Pareeth, with all powers of a discretionary nature, his command to be military and of unquestioned authority until such time as the colony shall have been established for a period of two years. There shall then have been established a representative government of such nature and powers as the colonists

themselves find suitable.

It is then suggested that this government, the State of Rhth, shall exchange such representatives with the committee of Pareeth as are suitable in the dealings of two sovereign powers.

Until the establishment of the State of Rhth, it is further ordered that ——

IV

The grassland rolled away very softly among the brown boles of scattered trees. It seemed unchanged. The city seemed unchanged, floating as it had a thousand thousand years halfway between the blue of the sky and the green of the planet. Only it was not alone in its opalescent beauty now; twelve great ships floated serene, motionless, above its towers, matching them in glowing color. And on the low roll of the hill, a thirteenth ship, gray and grim and scarred with

eighteen years of nearly continuous space travel, rested. The locks moved; men stepped forth into the light of the low, afternoon sun.

To their right, the mighty monument of the city builders; to their left, the low, rounded domes of the great race's descendants. Ron Thule stepped down from the lock to join the eight department commanders who stood looking across toward the village among the trees.

Shor Nun turned slowly to the men with him, shook his head, smiling. "I did not think to ask. I have no idea what their life span may be. Perhaps the man we knew as Seun has died. When I first landed here, I was a young man. I am middle-aged now. That time may mean old age and extinction to these people."

"There is one man coming toward us now, Shor Nun," said Ron Thule softly. "He is floating on his—what was that name?—it is a long time since I heard it."

The man came nearer leisurely; time seemed to mean little to these people. The soft, blue glow of his suit grew, and he moved a bit more rapidly, as though conscious of their importance. "I—I think that is Seun," said the archeologist. "I have seen those pictures so many times——"

Seun stood before them again, smiling the slow, easy smile they had known twelve years before. Still he stood slim and straight, his face lined only with the easy gravings of humor and kindness. He was as unchanged as the grassland, as the eternal city. The glow faded as he settled before them, noiselessly. "You have come back to Rhth, Shor Nun?"

"Yes, Seun. We promised you that when we left. And with some of our people as well. We hope to establish a colony here, near the ancient city; hope some day to learn again the secrets of the city builders, to roam space as they once did. Perhaps we will be able to occupy some of the long-deserted buildings of the city and bring life to it again."

"A permanent colony?" asked Seun thoughtfully.

"Yes, Seun."

"There are many other cities here, on this planet, nearly as large, equipped with all the things that made this city. To my race the quiet of the unstirred air is very dear; could you not as easily establish your colony in Shao—or Loun—any of the other places?"

Shor Nun shook his head slowly. "I am sorry, Seun. We had hoped to live near you, that we might both discover again those forgotten

secrets. We must stay here, for this was the last city your people deserted; here in it are all the things they ever built, the last achievements of the city builders. We will aid you in moving your colony if you wish, to some other meadowland near the sea. All the world is the same to your people; only this city was built in this way; it was the last to be deserted."

Seun exhaled softly, looked at the ten men of Pareeth. His mind seemed groping, feeling for something. His deep blue eyes misted in thought, then cleared slowly as Ron Thule watched. Slowly, they moved from man to man of the group, pausing a moment at the anthropologist, catching Shor Nun's gaze for an instant, centering slowly on Ron Thule.

Ron Thule looked into the deep eyes for a moment, for a long eternity—deep, clear eyes, like mountain lakes. Subtly, the Rhthman's face seemed to change as he watched the eyes. The languor there changed,

became a sense of timelessness, of limitlessness. The pleasant, carefree air became, somehow—different. It was the same, but as the astronomer looked into those eyes, a new interpretation came to him. A sudden, vast fear welled up in him, so that his heart contracted, and a sudden tremor came to his hands. "You have forgotten———" he mumbled unsteadily. "Yes—but you———"

Seun smiled, the firm mouth relaxing in approval. "Yes, Ron Thule. That is enough. I sought your mind. Someone must understand. Remember that only twice in the history of our race have we attempted to alter the course of another's history, for by that you will understand what I must do."

Seun's eyes turned away. Shor Nun was looking at him, and Ron Thule realized, without quite understanding his knowledge, that no time had elapsed for these others. Now he stood motionless, paralyzed with a new understanding.

"We must stay here," Seun's mind voice spoke softly. "I, too, had hoped we might live on this world together, but we are too different. We are too far apart to be so near."

"You do not wish to move?" asked Shor Nun sorrowfully.

Seun looked up. The twelve great interstellar cruisers hovered closer now, forming, almost, a roof over this conference ground. "That would be for the council to say, I know. But I think they would agree with me, Shor Nun."

Vague pictures and ideas moved through their minds, thoughts emanating from Seun's mind. Slowly, his eyes dropped from the

twelve opalescent cruisers to the outstretched palm of his hand. His eyes grew bright, and the lines of his face deepened in concentration. The air seemed to stir and move; a tenseness of inaction came over the ten men of Pareeth and they moved restlessly.

Quite abruptly, a dazzling light appeared over Seun's hand, sparkling, myriad colors—and died with a tiny, crystalline clatter. Something lay in his upturned palm: a round, small thing of aquamarine crystal, shot through with veins and arteries of softly pulsing, silver light. It moved and altered as they watched, fading in color, changing the form and outline of light.

Again the tinkling, crystalline clatter came, and some rearrangement had taken place. There lay in his hand a tiny globe of ultimate night, an essence of darkness that no light could illumine, cased in a crystal surface. Stars shone in it, from the heart, from the borders, stars that moved and turned in majestic splendor in infinite smallness. Then faded.

Seun raised his eyes. The darkness faded from the crystal in his hand, and pulsing, little veins of light appeared in it. He raised it in his fingers, and nine of Pareeth's men fell back. Ron Thule looked on with frozen, wooden face.

A wave of blue haze washed out, caught and lifted the men and carried them effortlessly, intangibly back to the lock, through the lock. From the quiet of the grassland they were suddenly in the steel of the ship that clanged and howled with alarms. Great engines bellowed suddenly to life.

Ron Thule stood at the great, clear port light of the lock. Outside, Seun, in his softly glowing suit, floated a few feet from the ground. Abruptly, the great atomic engines of the Pareeth shrilled a chorus of ravening hate, and from the three great projectors the annihilating beams tore out, shrieking destruction through the air—and vanished. Seun stood at the junction of death, and his crystal glowed softly. Twelve floating ships screamed to the tortured shriek of overloaded atomics, and the planet below cursed back with quarter-mile-long tongues of lightning.

Somewhere, everywhere, the universe thrummed to a vast, crystalline note, and hummed softly. In that instant, the green meadowland of Rhth vanished; the eternal city dissolved into blackness. Only blackness, starless, lightless, shone outside the lock port light. The soft, clear note of the crystal hummed and beat and surged. The atomic engine's cry died full-throated. An utter, paralyzed quiet descended

on the ship, so that the cry of a child somewhere echoed and reverberated noisily down the steel corridors.

The crystal in Seun's hand beat and hummed its note. The blackness beyond the port became gray. One by one, six opalescent ships shifted into view in the blackness beyond, moving with a slow deliberation, as though forced by some infinite power into a certain, predetermined configuration. Like atoms in a crystal lattice they shifted, seemed to click into place and hold steady—neatly, geometrically arranged.

Then noise came back to the ship, sounds that crept in, afraid of themselves, grew courageous and clamored; pounding feet of men, and women's screams.

"We're out of space," gasped Shor Nun. "That crystal—that thing in his hand——"

"In a space of our own," said Ron Thule. "Wait till the note of the crystal dies down. It is weakening, weakening slowly, to us, but it will be gone, and then——"

Shor Nun turned to him, his dark eyes shadowed, his face pale, and drawn. "What do you know—how——"

Ron Thule stood silent. He did not know. Somewhere, a crystal echoed for a moment in rearrangement and tinkling sound; the universe echoed to it softly, as the last, faint tone died away.

"Shor Nun—Shor Nun——" a slow, wailing cry was building up in the ship. Scampering feet on metal floors became a march.

Shor Nun sobbed once. "That crystal—they had not lost the weapons of the city builders. Space of our own? No—it is like the sorgan: It rotates us to the end of time! This is the space we knew —when all time has died, and the stars are gone and the worlds are dust. This is the end of the nothingness. The city builders destroyed their enemies thus—by dumping them at the end of time and space. I know. They must have. And Seun had the ancient weapon. When the humming note of the crystal dies—the lingering force of translation——"

"Then we shall die, too. Die in the death of death. Oh, gods— Sulon—Sulon, my dear—our son——" Shor Nun, commander, seemed to slump from his frozen rigidity. He turned abruptly away from the port light toward the inner lock door. It opened before him suddenly, and a technician stumbled down, white-faced and trembling.

"Commander—Shor Nun—the engines are stopped. The atoms

will not explode; no power can be generated. The power cells are supplying emergency power, but the full strength of the drive does not move nor shake the ship! What—what is this?"

Shor Nun stood silent. The ship thrummed and beat with the softening, dying note of the universe-distant crystal that held all the beginnings and the endings of time and space in a man's hand. The note was fading; very soft and sweet, it was. Through the ship the hysterical cry of voices had changed; it was softening with the thrum, softening, listening to the dying thread of infinitely sweet sound.

Shor Nun shrugged his shoulders, turned away. "It does not matter. The force is fading. Across ten million years the city buildings have reached to protect their descendants."

The note was very low—very faint; a quivering hush bound the ship. Beyond the port light, the six sister ships began to move again, very stealthily away, retreating toward the positions they had held when this force first seized them. Then——

Shor Nun's choked cry was drowned in the cries of the others in the lock. Blinding white light stabbed through the port like a solid, incandescent bar. Their eyes were hot and burning.

Ron Thule, his astronomer's eyes accustomed to rapid, extreme changes of light, recovered first. His word was indistinct, a cross between a sob and a chuckle.

Shor Nun stood beside him, winking tortured eyes. The ship was waking, howling into a mad, frightened life; the children screamed in sympathetic comprehension of their elders' terror.

White, blazing sunlight on green grass and brown dirt. The weathered gray of concrete, and the angular harshness of great building cradles. A sky line of white-tipped, blue mountains, broken by nearer, less-majestic structures of steel and stone and glass, glinting in the rays of a strong, warm sun with a commonness, a familiarity that hurt. A vast nostalgia welled up in them at the sight——

And died before another wave of terror. "Darun Tara," said Shor Nun. "Darun Tara, on Pareeth. I am mad—this is mad. A crazy vision in a crazy instant as the translating force collapses. Darun Tara as it was when we left it six long years ago. Changed—that half-finished shed is still only three quarters finished. I can see Thio Roul, the portmaster there, coming toward us. I am mad. I am five light years away——"

"It is Darun Tara, Shor Nun," Ron Thule whispered. "And the city builders could never have done this. I understand now. I——"

He stopped. The whole great ship vibrated suddenly to thwang like the plucked bass string of a Titan's harp. Creaks and squeals, and little grunting readjustments, the fabric of the cruiser protested.

"My telescope——" cried Ron Thule. He was running toward the inner lock door, into the dark mouth of the corridor.

Again the ship thrummed to a vibrant stroke. The creaking of the girders and stakes protested bitterly; stressed rivets grunted angrily.

Men pounded on the lock door from without. Thio Raul, Ton Gareth, Hoi Brawn—familiar faces staring anxiously in. Shor Nun moved dully toward the gate controls——

V

Shor Nun knocked gently at the closed metal door of the ship's observatory. Ron Thule's voice answered, muffled, vague, from beyond.

The commander opened the door; his breath sucked in sibilantly. "Space!" he gasped.

"Come and see, come and see," the astronomer called softly.

Shor Nun instinctively felt his way forward on tiptoe. The great observatory room was space; it was utter blackness, and the corridor lights were swallowed in it the instant the man crossed the threshold. Blackness, starred by tiny, brilliant points, scattered very sparsely, in every direction.

"Seun took the telescope, but he left me this, instead. I understand now; he said that only twice had they attempted to alter a race's history.

"This is space, and that is Troth, our own star. Watch——"

The star expanded; the whole of this imageless space exploded outward and vanished through the unseen walls of the observatory. Troth floated alone, centered in the invisible room. Seven tiny dots of light hung near it, glowing in its reflected light.

"And that is our system. Now this is the star of Rhth——"

Space contracted, shifted and exploded, leaving one shining, yellowish star, attended by five brightly visible worlds.

"The other planets are too small or too dimly illumined to see. When I came there was a new system displayed. This one."

Another planetary system appeared.

"That is the system of Prothor."

"Prothor!" Shor Nun stared. "Five and a half light years away—and planets?"

"Planets. Uninhabited, for I can bring each planet as near as I will. But, Shor Nun"—sorrow crept into the astronomer's voice—"though I can see every detail of each planet of that system, though I can see each outline of the planets of Rhth's system—only those three stars can I see, close by."

"No other planetary systems!"

"No other planetary system that Seun will reveal to us. I understand. One we won on the right of our own minds, our own knowledge; we reached his worlds. We had won a secret from nature by our own powers; it was part of the history of our race. They do not want to molest, or in any way influence the history of a race—so they permitted us to return, if only we did not disturb them. They could not refuse us that, a breach in their feelings of justice-

"But they felt it needful to dispossess us, Shor Nun, and this Seun did. But had he done no more, our history was altered, changed vitally. So—this he gave us; he has shown us another, equally near planetary system that we may use. We have not lost vitally. That is his justice."

"His justice. Yes, I came to you, Ron Thule, because you seemed to know somewhat of the things that happened." Shor Nun's voice was low in the dark of the observatory. He looked at the floating planets of Prothor. "What is—Seun? How has this happened? Do you know? You know that we were greeted by our friends—and they turned away from us."

"Six years have passed for us. They wanted to know what misfortune made us return at the end—of a single year. One year has passed here on Pareeth. My son was born, there in space, and he has passed his fourth birthday. My daughter is two. Yet these things have not happened, for we were gone a single year. Seun has done it, but it cannot be; Seun, the decadent son of the city builders; Seun, who has forgotten the secrets of the ships that sailed beyond the stars and the building of the Titan Towers, opalescent in the sun; Seun, whose people live in a tiny village sheltered from the rains and the sun by a few green trees."

"What are these people of Rhth?"

Ron Thule's voice was a whisper from the darkness. "I come from a far world, by what strange freak we will not say. I am a savage, a rising race that has not learned the secret of fire, nor bow, nor hammer. Tell me, Shor Nun, what is the nature of the two dry sticks I must rub, that fire may be born? Must they be hard, tough oak, or

should one be a soft, resinous bit of pine? Tell me how I may make fire."

"Why—with matches or a heat ra—— No, Ron Thule. Vague thoughts, meaningless ideas and unclear. I—I have forgotten the ten thousand generations of development. I cannot retreat to a level you, savage of an untrained world, would understand. I—I have forgotten."

"Then tell me, how I must hold the flint, and where must I press with a bit of deer horn that the chips shall fly small and even, so that the knife will be sharp and kill my prey for me? And how shall I rub and wash and treat the wood of the bow, or the skin of the slain animal that I may have a coat that will not be stiff, but soft and pliable?"

"Those, too, I have forgotten. Those are unnecessary things. I cannot help you, savage. I would greet you, and show you the relics of our deserted past in museums. I might conduct you through ancient caves, where mighty rock walls defended my ancestors against the wild things they could not control.

"Yes, Ron Thule. I have forgotten the development."

"Once"—Ron Thule's voice was tense—"the city builder made atomic generators to release the energy bound in that violent twist of space called an atom. He made the sorgan to distribute its power to his clumsy shells of metal and crystal—the caves that protected him from the wild things of space.

"Seun has forgotten the atom; he thinks in terms of space. The powers of space are at his direct command. He created the crystal that brought us here from the energy of space, because it made easy a task his mind alone could have done. It was no more needful than is an adding machine. His people have no ships; they are anywhere in space they will without such things. Seun is not a decadent son of the city builders. His people never forgot the dream that built the city. But it was a dream of childhood, and his people were children then. Like a child with his broomstick horse, the mind alone was not enough for thought; the city builders, just as ourselves, needed something of a solid metal and crystal, to make their dreams tangible."

"My son was born in space, and is four. Yet we were gone a single year from Pareeth." Shor Nun sighed.

"Our fleet took six years to cross the gulf of five light years. In thirty seconds, infinitely faster than light, Seun returned us, that there might be the minimum change in our racial history. Time is a function of the velocity of light, and five light years of distance is precisely equal to five years of time multiplied by the square root of minus one. When

we traversed five light years of space in no appreciable time, we dropped back, also, through five years of time.

"You and I have spent eighteen years of effort in this exploration, Shor Nun—eighteen years of our manhood. By this hurling us back Seun has forever denied us the planets we earned by those long years of effort. But now he does not deny us wholly.

"They gave us this, and by it another sun, with other planets. This Seun gave not to me, as an astronomer; it is his gift to the race. Now it is beyond us ever to make another. And this which projects this space around us will cease to be, I think, on the day we land on those other planets of that other sun, where Seun will be to watch us—as he may be here now, to see that we understand his meanings.

"I know only this—that sun I can see, and the planets circling it. The sun of Rhth I can see, and those planets, and our own. But— though these others came so near at the impulse of my thoughts, no other sun in all space can I see so near.

"That, I think, is the wish of Seun and his race."

The astronomer stiffened suddenly.

Shor Nun stood straight and tense.

"Yes," whispered Seun, very softly, in their minds.

Ron Thule sighed.