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*A great
science novel*

FIRES OF

RAAH did not know that, but for the very peculiar circumstances of his birth, his name would have been Forster. But Raah had never heard of Chicago, where, twenty years ago, during the beginning of trouble, the Forsters had been famous.

He had never heard of men such as Einstein and Arrhenius. He had never seen the hell that was overwhelming the planet of his ancestors; in fact he had never seen Earth at all. And he had but a dim conception of the tragic heroism of his mother who had died soon after his birth.

She had come here to Wan in a space ship, in quest of something—she had not known what it was—that might help to check the inexorable progress of human extinction, which, by a strange paradox, had not begun its ghastly threat and promise with the forces of death, but with the very fires of genesis itself, anachronistically unleashed.

Always Raah had been here on Wan, a beautiful, wild, verdant, tremendously deep valley of an otherwise almost dead world. In a primitive environment he had grown to young manhood; he had learned to speak, in so far as his human vocal organs were able, the soft, liquid tongue of the furry elves of Wan.

His life, in spite of hardship, had not been unhappy. There was danger, of course, and fear. The Tegati were the bogies of his existence.

During the protracted day they slept somewhere high up in the tremendous mountain barriers that ringed Wan. They were alive; they were horrible, they were tenuous almost as ghosts, with their thin, bubblelike bodies, and the clawed tendrils that dangled around their fanged mouths.

At dusk they came down into the

valley to feed. And woe betide any hapless creature, not provided with a hard shell, who chanced to be away from the refuge of its lair at that time!

Then, too, there was the constant threat of quake and volcanic eruption. Wan was fifty miles below the level of its surrounding inner barrier, and it penetrated close to the internal fires which still glowed faintly and dangerously in the heart of this small husk of a world. Ikaah, the black lake at the center of the valley, had once been an active volcano. In fact, carbon dioxide, bubbling from its depths, must have been the source of Wan's rich oxygen, which was freed from the compound by the action of the chlorophyl in green plants.

But in spite of these dangers and worries, there had been much to hold the attention of a growing boy. Old Treb, who on Earth might have been called a wizard or a magician, could tell tales of things incredible. Then, too, he was Raah's foster parent, replacing, since the boy's infancy, the mother whom he could not remember. Thus Treb held, for Raah, a position of authority and respect.

There had been a time not so long ago, Treb had said, when many meteors had fallen. Soon afterward the Sun had arisen one dawn, its face tinged with a faint, glowing green. Before it was halfway toward its zenith this green veil had faded. But unfamiliar cancerous diseases had come to plants and animals alike, and an odd, corrosive scum had appeared on the surface of Ikaah. The diseases had now died out, but the scum still lingered.

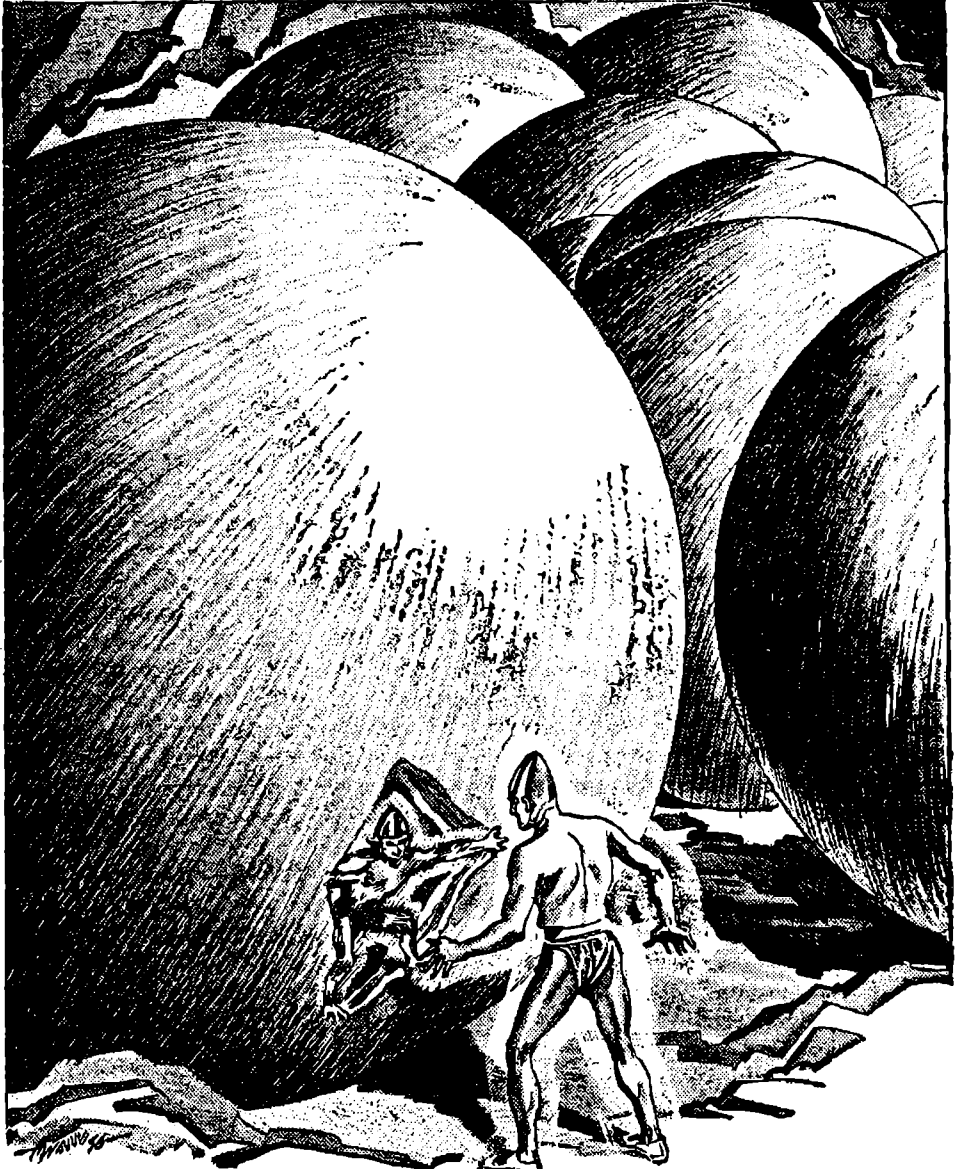
Then, a while later, a huge, gleaming thing that spat flame had appeared over the eastern mountains. It had paused in its flight; it had wavered; and then,

GENESIS

*And so the Tegati—
creatures of the Moon—
come to Earth—*

by

RAYMOND Z. GALLUN



Instantly, dense air puffed from its interior; but the tough, gummy texture of the balloonlike dome of translucent vegetable matter was sufficiently rigid to prevent its collapse.

with a roar, it had plunged straight into the waters of Ikaah. But before it had fallen it had disgorged a being who had floated to the ground, supported by a bulging contraption of white fabric. She had been like Raah, only more fragile.

She had lived on Wan for some time, cared for by old Treb. She had spoken little, and in an unknown language; but there had frequently been, in her eyes, a look of horror eloquent of some cosmic catastrophe beyond the grasp of any Wanite.

Yet a number of Wan's long day-and-night periods, totaling in duration a terrestrial year, after her son was born, she had died; and her grim secret had perished with her. Treb had never been able to learn her language, and she had done but little better with the speech of the furry elves.

This much Raah knew of his mother and of his origin. The result was an intense natural yearning to know more, which had grown upon him gradually during his adolescence.

ONCE the ancestors of the elves of Wan had been slaves, serving a people of godlike learning. The latter had dwelt in magnificent cities, not far beyond the inner barriers of Wan.

But in spite of their control over natural forces, the godlike ones had suddenly disappeared. Whether, moved by a hidden motive, they had committed universal suicide, or whether their science had enabled their intellects to discard the limitations imposed by tangible and mortal bodies, was unknown.

Bereft of masters now, the furry elves had journeyed down through mountain gorges into warm and fertile Wan, bringing much marvelous equipment and loot with them. The transport system had still been functioning, and so the migration had been easy.

But those tiny slaves were simple creatures. What knowledge they had,

had swiftly decayed; and they had reverted to semisavagery, living in crude stone huts, tilling little patches of ground during the long day periods, and hibernating during the night.

Only Treb's direct family line—his father, his grandfather, his great-grandfather, and so on back—had made any attempt to preserve the ancient sciences. Invoking the magic of those sciences, Treb had scaled the mountain walls of Wan during his youth and had visited the region of dead glories.

The experiences of this venture had provided him with many wonderful tales to tell his foster child, who was almost his only friend and associate, for his own people were suspicious of his great learning.

While he and his pupil cultivated their garden patch, while they roamed the bizarre forest, searching for fruits and useful herbs, while they toiled over strange experiments in the wizard's workshop, and while at sunset and dawn they viewed the grotesque grandeur of the valley that was their home, Treb had talked of the things he had done and of the mystic miracles he had seen.

The effect was an inevitable one. Raah was only a half-naked savage under the passive spell of primitive Wan; but even during his early childhood we can imagine him lisping in the soft speech of the furry elves: "Some day we shall climb up there beyond the barriers. Some day we shall descend to the bottom of Ikaah, won't we?"

The wizard's great, catlike eyes would shine with enthusiasm and he would reply: "Yes, child of the unknown. When you are adult, we shall do those things, if to do them is stamped in the fixed course of the future. I am too old to act alone."

II.

TWENTY YEARS after the beginning of the catastrophe that had brought Amy Forster to this mysterious vale,

which was a deep hole, five hundred miles wide, in the center of a much larger valley that scarred almost half a world, master and disciple began to make definite plans.

And a sudden, severe quaking of the ground forced the issue. The time was near to sunset. Raah had wandered off into the prickly forest of cactiform trees. For hours he had lain sprawled in the mosslike grass, looking up dreamily through the warm, insect-flecked haze, toward the jagged peaks of the western barrier that loomed clear and harsh in the partial vacuum that enveloped it.

The first temblor passed quickly. The tortured, subterranean groaning that accompanied the shock died out. By then Raah was bounding down the forest trail toward Treb's lair.

Through rifts in the jungle, he glimpsed Ikaah, its surface looking black and awesome now, like the stare of a devil. The lake was set between high cliffs of black, fire-formed basalt, which reflected specks of sunshine. Yet the water was lusterless and turbid now.

Volcanic vapors were boiling up angrily through it, and above the lake hung a sulphurous, yellow pall. Soon, perhaps, Ikaah would be changed back into the volcano it had once been.

The wizard's workshop, built of roughly masoned stone, was located on a low, rocky knoll, isolated by several miles from any Wanite village.

His lithe, athletic young body glistening with the sweat of exertion, Raah approached the structure. He hammered on the massive copper door. Its stout bolts grated, and he was admitted into the cool, dusky interior. The door was reclosed and bolted in his wake.

From close beside him came a series of musical twitters, too soft and beautiful ever to be reproduced accurately by human vocal organs. To any other Earthman they would have been mean-

ingless, but to Raah's practiced mind they formed the words and sentences of coherent speech.

It was Treb who spoke. "I was waiting for you, youth of another world," he said. "I knew that you would come. The shaking ground told you that we must hurry. Though we face grave danger in our dive into Ikaah, we cannot delay it longer. The lake bubbles as I have never known it to bubble before. If we delay too much, the things we seek at its bottom may be destroyed. Dusk and the Tegati will come soon. We must wait until then, for now my people are away from their lairs; they would kill us if we dared to approach Ikaah, whose fire devils they fear we have aroused with our magic."

Treb was scarcely three feet tall. The fine, gray fur that covered his body was silvered at the tips; but his age, indicated thus, detracted nothing from his feline alertness. Dynamic energy snapped in each darting glance of his glowing, catlike eyes. But in those orbs, too, there was an indefinable something that was a reflection of the stuff of dreams.

Raah nodded slowly, uttered a few words, coarse and grating to Wanite ears, but understandable. In him were the tensions, fears and fascinations of approaching adventure.

Together Raah and his teacher moved about the cavernous chamber, gathering the things they needed. Any Earthman, suddenly transported to Treb's lair, would have found his surroundings a quaint and mystic miracle. In it, the crude barbarisms of tools and devices, hammered roughly from copper, mingled incongruously with mechanical refinements which could not be realized on Earth in less than a thousand years.

Arranged on shelves, woven from the stems of grotesque plants, were various glittering pieces of apparatus, belonging to another era. All that was here in the

workshop represented the attempt of a keen mind to cling to the wisdom of a past that was dead.

Treb and Raah donned small conical caps which some forefather of the wizard had brought down from the heights above Wan. Each of the adventurers provided himself with a stout copper bar and a coil of fibrous rope. Twice, while they waited, sharp temblors rocked the ground.

Dusk came at last, soft, soothing and purple, mellow with a warm and shadowy stillness, yet heavy with grim portent. After several minutes there was a rustle, like the sound of a breeze in the forest. But it was not caused by a breeze.

Delicate leaves were withdrawing, like animate things, into hard sheaths that would protect them from the hungry maws of the Tegati, that presently would be swarming down in incalculable hordes from above the barrier, and from the coming cold. Even warm Wan, unexposed to the Sun's rays during a night two weeks in length, could become a blizzard-racked hell.

Other plants, whose environmental adaptation had not provided them with means to protect themselves, but had given them the faculty of swift and fecund growth, waited stolidly motionless for the end, which only their myriad spores could cancel at the coming of dawn.

And the furry elves retired to the shelter of their dwellings. Not even their fear of blasting death from Ikaah could smother their terror of the ghastly Tegati. The latter loved a moving, animate quarry best; thus they always swarmed thickest about the Wanite villages.

SO when two grotesque figures emerged from their workshop, they looked out upon a deserted valley. Far up toward the west, where bright stars were beginning to burn, a ruby streak

of sunset still lingered. Against it were thousands of black specks, wavering and hurtling nearer. The whisper of their flight was already audible.

Raah and Treb had acquired a limited immunity from attack by the weird monsters. They wore no material armor, but an auræ of soft, amber flame streamed from the conical caps on their heads and enveloped their entire bodies, protecting even the soles of their bare feet with a thin film of insulating energy.

The flame, invented in a dimly remembered age, had several functions. Within limits, its tough, substanceless texture could resist violence delivered by sharp weapons such as the fangs of the Tegati. It also could maintain normal atmospheric pressure within its shell; for, in effect, the auræ were like any tough, air-tight garment, such as a diving suit.

Moreover, the air contained in the purposely enlarged cephalic portions of the flame mantles was constantly kept pure by the action of the energy, the carbon dioxide exhaled by the wearers of the caps being split up, the oxygen being freed for rebreathing, and the pure carbon being expelled in the form of microscopic diamond granules, through the texture of the mantles.

Their movements completely unhampered by the auræ, Raah and Treb made their way down to the rocky shores of Ikaah. Here they paused at the brink of an abrupt hundred-yard drop to the seething surface of the water beneath.

While acrid vapors coiled around them, they fastened long copper bars to their waists with part of the rope they carried. The bars would act as weights while the adventurers were making their dive to the bottom of the lake; and they might prove useful as tools during the submarine exploration.

Raah, forgetting the peculiar properties of the auræ, attempted to loop the

rope, which he had tied to his bar, around the belt of his breech cloth, only to discover that this was impossible. His flame mantle resisted the effort just as any other stout, flexible garment, put on over his belt, would have done. He chuckled sheepishly, and, aping Treb, tied the ends of the rope around his waist, over his aura.

The ancient, metal sphere, which was their most important piece of equipment, was, except for a boss of black mineral set in its surface, perfectly smooth and shiny. There were no hooks or projections to which one might cling, or to which anything might be fastened in an ordinary manner.

When Treb's tiny tentacular fingers turned the boss a trifle, there was an interesting effect: The sphere floated in the air without visible support. Raah felt a gentle tug, as if he were a bit of steel attracted to a magnet. His hands were drawn back into contact with the silvery globe. A gentle surge of power was now active in its mechanism and could be increased when necessary.

Wanite and Earthman peered from the clifftop at the churning surface of Ikaah far below. The frothy, steaming water was almost boiling-hot. Floating masses of scum bobbed and danced here and there, like the foam in a bubbling caldron. Poisonous vapors writhed lazily up the face of the cliff.

But there was a mounting whisper that mingled with the seething voice of the lake. The adventurers glanced over their shoulders. The air behind them swarmed with balloonlike monstrosities that, with odd, jerking, pulsating movements, approached nearer. From them, like trailing, tattery streamers, dangled slender tendrils, covered throughout all their length with sharp, curved claws. These aerial devils were the Tegati.

The most prominent organ of a Tegati's body was a large bladder of parchmentlike skin, the latter roughened by many dead-air cells, as a protection

against cold. The vital organs were grouped close around the fanged mouth orifice, from the lips of which trailed the creature's poisonous tendrils. Breathing was one of the functions of the bladder; but it also served as the mechanism of flight.

By spasmodic contraction it could eject through the mouth of the creature puffs of air which served not only to propel the light-weight body somewhat after the fashion of a rocket, but could sustain its altitude against the weak force of gravity. Blood, rich in hæmoglobin—the oxygen-collecting pigment in red corpuscles—veined the thin, translucent texture of the bladder. To the Tegati, this blood development was necessary, for they lived much of their lives in an extremely rarefied atmosphere.

Treb and Raah looked at the swarming, voracious hordes of them, and then back at malevolent Ikaah. Any fear they may have felt at the prospect of descending into the latter suddenly seemed trivial in the face of a greater, more repugnant evil.

Treb turned the boss on the metal globe a trifle farther, feeding its mechanism more energy. At once the bodies of both himself and his companion were pulled firmly against its shiny surface, and with it, floated free of the ground.

A sucking down draft of cool air, drawn toward the hot waters of the lake, wafted them from the clifftop. Gently they began to settle, at the same time moving forward above Ikaah.

The Tegati caught up with them. They felt, through their flame mantles, the vigorous jabs of sharp, poisonous fangs and claws; and, cold with revulsion, they struck back.

III.

AT LAST Earthman and Wanite alighted in the water. Still held firmly to the metal sphere, along with dozens of Tegati which the attraction of the

device had captured, they began to skip over the surface of the churning lake by kicking at the water with their feet. Their weight, under the influence of the silvery ball, was still almost nothing.

Presently they reached a place close to the shore of an island, whose jagged pinnacles reared, black and awesome through the dusk and murk, like some lost soul in hell groping for the stars. The water here was coated with thick slime.

Tegati, braving the acrid vapors with devilish persistence, were trying to reach and devour the slime, but the choking gases forced most of them back.

"Here we go down," said Treb, his musical voice muffled by his aura.

He readjusted the boss on the sphere, shut off the power. Relieved of the mechanism's buoying force, and dragged by the density of the copper bars tied to their waists, the two adventurers sank at once into Ikaah, and the globe sank with them.

Their flame mantles continued to function normally in the new medium, protecting them from heat and supplying them with fresh air to breathe.

Minutes passed. They could feel pressure building up around them, though this process was not nearly as rapid as it would have been under similar conditions on Earth, and their flame mantles fought back its force to a certain extent.

Buffeted by boiling currents, enveloped by thick darkness, the adventurers continued to sink. And at last they settled deep into mucky ooze that trembled with sharp seismic vibrations.

They groped around for the sphere, which had slipped from their grasp during the descent. Finding it, each fastened an end of the remaining rope to a rocky projection near by.

Each grasped the other end of his rope, and began to circle in the thick darkness, seeking the unknown thing which must lie submerged here.

Presently Raah's groping fingers came in contact with a curved surface. Tactile exploration of it revealed the riveted frame of what was obviously a small circular window. This was the corroded hull of the space ship they were looking for!

He cried out to his Wanite companion: "Reeco! Treb! Come quickly! Here is what we seek!" The excited sound of his words penetrated his flame mantle and was transmitted easily by the surrounding water, in spite of the grinding rattle of seismic shocks.

From a little distance came the wizard's reply, sounding eerie and slurred in the strange medium: "I come! I come!"

A few moments later Treb and Raah began to creep slowly around the slim thing. It was long and beautifully tapered. One end was finned. Great, tubular vents, like the flaring nostrils of a demon, were set between the fins. The other end was crumpled and embedded in Ikaah's bottom.

The dim glow of the flame mantles was of almost no use to them in making their inspection in the murky, turbid water; but they still had their senses of touch.

Now they clambered to the curved back of the thing. Here there was a long hump, fitted into a groove. They soon found that the hump was not properly a part of the greater metal fabrication; for it was fastened into the groove with stout bands, the ends of which were joined by means of what a native Earthman would have thought of as complicated buckles. The hump was a tapered cylinder with a finned tail, like its parent enigma.

The adventurers, attracted by more intriguing mysteries, sought means of entrance to the larger vehicle. Presently, they found in its flank what seemed to be a door.

Clumsy with eagerness, they tugged and twisted at the T-shaped handle pro-

jecting from the edge of the door. At first it refused to yield to their efforts, for corrosion must have welded the metal a little. Then Raah untied the copper bar from his waist, and, using it as a hammer, tapped lightly on one arm of the door handle. The latter turned on its pivot, and rusty bolts responded to the movement. Treb's tiny hands tugged at the handle. The portal opened.

There was a gurgle of bubbles, and a momentary suction, as water rushed into the small, closetlike compartment which had been sealed behind the door.

Now the Wanite and the Earthman clambered into the compartment. Again their way was blocked by a second portal, identical to the first. Raah groped for the handle that worked its lock, but the wizard checked his intended act with a warning hand.

"Not yet," he said. "Whatever lies beyond this valve may be injured if the flood of Ikaah is allowed to enter. We must close the outer portal first."

THE ELF of Wan pulled the external door to, sealing himself and his friend in what might easily become their tomb if the bolts chanced to jam. Almost coincident with his act, a particularly violent temblor of the lake bottom caused the stout metal around them to groan and crackle.

Tensely he and Raah waited for the vibration to end, not knowing whether, in the next second, they would be alive or dead.

Raah found the inner valve of the air lock easy to open, for there was no corrosion here. As the hinged mass of metal folded inward, there was a gurgling, rushing sound, and the water in the compartment—approximately two cubic meters of it—flowed from around them. They were standing free, in air.

Automatically they advanced into the black hole before them. The amber glow of their flame mantles relieved the

dense gloom to some slight extent—enough to reveal curved, untarnished walls and banked instruments.

At first Raah was dumb with awe, knowing that all these strange miracles around him might have told tales of fear, courage, love and devotion on another planet—a planet which was his real home.

But soon he grew more accustomed to his surroundings. He chuckled and clucked as any pleased savage might have done in the presence of civilized novelty. Now he began to wander about, touching and fingering this and that.

Thus, inevitably, he found a light switch, pressed it. At once the compartment was flooded with hard, white radiance, as rarefied gases in quartz bulbs, responded to an electrical stimulus. To the young Earthman who had never seen Earth, this was like a major accomplishment of the gods. He gasped raggedly, but, recovering himself, he gave a nervous laugh.

Treb's wider experience, with even greater marvels, made him less responsive, though there was no doubt that he was intensely intrigued, too. He advanced to a little black box, surmounted by a screen of ground quartz. Experimentally, he twisted dials and snapped switches. Presently a glow of activity awoke in the vitals of the apparatus. A dim, electrical crackle followed. Then a voice spoke, an Earthly voice, uttering words beyond the comprehension of these two from Wan.

Raah wheeled about, stood staring at the box. Treb remained impassively near. Neither understood anything that the voice from the radio said, but they listened anyway, bound by a spell of fascination, and sensing in the tone of the words an indefinable suggestion of tragedy and defiance.

"TO lose hope would mean the end, without question," said the voice. "We

must not do that. We must always believe in our powers. Perhaps some whim of chance will favor us. Till a thing is finally accomplished, we cannot be certain of its outcome. I have the means to assure our survival, if only there were sufficient time to develop it. Three months is all I ask. Many say that the remaining refuges cannot stand longer than a few weeks. But they must! You of the Pittsburgh refuge and of the Los Angeles refuge must fight with all you have, as we of Kansas City are fighting. The destiny of mankind is in our hands, for there are no other strongholds left.

"But now, back to our subject: What, in general, is life? Few things are more difficult to define. Though protoplasm is the basis of all known organisms, life is not protoplasm, but a process which goes on within protoplasm. It is a complex phenomenon of motion and of change, involving complicated compounds of hydrogen, oxygen, nitrogen, and carbon, though, unknown to us on distant worlds, it might possibly involve the compounds of other elements.

"It is capable of feeling and responding to sensation, and it can propagate. It has the will or desire to continue to exist, and in its higher forms it possesses consciousness and intelligence. In many respects it is the strangest, most unfathomable miracle of the universe.

"Never yet, in spite of extensive study, has the nature of its driving forces been quite understood. Not so long ago it was actually considered a supernatural phenomenon.

"Science has long known that the normal, complex organisms of the Earth were developed through a process of evolution. But how, in the beginning, did the first one-celled amœbas and bacteria, which supplied the raw material for evolution, arrive here?

"Arrhenius conceived brilliantly when he advanced the theory that the

normal fauna and flora of Earth may be descended from minute spores propelled here from other inhabited planets by light pressure and by the negative electrical repulsion of stars. The latter force is the reason why comet's tails, composed of tenuous gases, are always directed away from the Sun, which, of course, is much like any of the other stars.

"But brilliant though Arrhenius' idea was, it evaded an issue; it explained the origin of organisms on Earth, but it failed to explain the real birth of life itself—the misty transformation of inanimate elements into the moving, changing substances of animate tissue. Where, in the great cosmic plan, lies the hidden spark of genesis?

"We have been through much in recent years. But in spite of our rapid reduction in numbers and resources, we have learned much. We were misled at first. We thought the diseases, which we have now controlled, and the slime which promises our extinction, came to Earth in the form of spores, either in the manner that Arrhenius outlined, or, more probably, in pits and crevices in the many meteors that fell.

"But I feel sure now that the whole spore theory is incorrect. It would be impossible, of course, for us to detect the arrival of isolated spores into our atmosphere; but in the case of the meteors at least, repeated culture tests and microscopic examinations have failed to provide us with the slightest evidence that they are anything but sterile.

"No, I am sure that we have seen a greater wonder than we have ever more than dreamed of. I have checked the evidence and now, after all these years, I think I have a glimmering of the truth!

"New, alien life was actually created here on Earth, just as at the beginning of this planet's biological history! By a combination of natural circumstances

somewhat out of the ordinary, anachronistic forces were set in motion. They were of the same character as the original forces of creation, but probably of greater intensity, and of much lesser duration. But while they lasted they did their diabolical work well, producing forms of life far too young to be highly organized, but possessing the vitality and the fecundity to crowd out all lesser organisms, and to promise death even to mankind.

"I am sure that I know something of the nature of those forces, and of the causes of their release. I am sure——"

IV.

SO the sonorous tones continued, probing a detail in the vast plan of the universe. Yet the ideas expressed remained hidden to the two listeners on the bottom of Ikaah. Of English they knew nothing; but catastrophe, masked yet terrible, they could sense, and mystery still could intrigue them; so they faced possible death here in a metal coffin on the floor of the volcano lake, to listen. And the voice droned on, while the two listened to sounds they could not understand.

Raah toyed with a small silver mirror which he had picked up from the wet plating under his feet. The article, he could guess, had belonged to the dim, beautiful, legendary entity—his mother. Treb, his first surprise gone, began absently to fumble again with the controls of the radio. Thus, after a moment, the television plate went into action.

As if by some enchantment, the gaunt, austere visage of the speaker appeared on the screen of ground quartz. His lips moved with his words, his gray, leonine head nodded in defiance and emphasis. There was bitterness in the angle of his jaw, but there was courage and determination there, too. The two from Wan looked at his image in mute surprise. Though they could not have

known it, he was John Maynard, friend of Raah's long-dead father.

Around him was his laboratory; bright metal and glass had been fabricated there into devices which enabled him better to understand nature and to control it a little.

Without that control this savant of Earth would have long since ceased to be. That was obvious to the two observers who watched and heard what was evidently intended for other ears and eyes than theirs.

There were massive, steel-ridged windows in the walls of the terrestrial laboratory. Visible beyond them was a yellowish twilight, like faint sunshine seeping through a curtain of miasmatic fog. Hills could be seen, marked with the gaunt stumps of dead trees that thrust their broken tops through a morass of green slime which throbbed and pulsed with a restless and malevolent animation.

The slime was everywhere, and it was alive. Other life had succumbed to its noxious onslaught. The girders of buildings, grotesquely twisted like nightmare fingers against the drab sky, were wrapped in quivering shreds of the stuff. Acids produced by it had corroded them, eating away their substances, until nothing but a fragile relic remained of their former strength.

And the fate of this refuge, of which the laboratory was a small part, seemed destined to be the same. Its lower walls, braced by gigantic concrete buttresses, were covered with the slime. The smallest chink and cranny were being spread by invading pseudopods of this fiendish protoplasm. Slowly the structure was being weakened, the very ground beneath its foundations being softened by seeping acids.

Reënforcing metal was crumbling away. Strained by sagging foundations, the walls seemed inevitably doomed to fall. If they did, the slime would ooze swiftly into the refuge, and though its

inhabitants might not perish violently, the machines which made their continued existence possible would soon afterward be acid-eaten and useless, and their masters would die of starvation.

Many men, clad in grotesque, bulging attire, were out there beyond the walls, battling the slime with small flame throwers and seeking to make repairs of the damage done; but their fight against the brainless, viscous flood which knew no fear, was like trying to dam a river with one's bare hands.

In the sky several planes moved back and forth steadily, spraying thin clouds of poison, which might have been more effective in protecting the refuge, except for the frugality with which the chemical was used. Evidently the supply was low and tottering resources could not even meet the demands of necessity.

The speaker continued with his odd jargon, rasping to ears accustomed to the soft language and more highly developed vocal organs of Wan. Raah and Treb kept their gazes riveted on the television screen.

For many minutes there was no one in the laboratory chamber but the gray scientist. Then a door opened, and the click of footsteps announced the arrival of another person. Presently she was beside the old man.

Sight of her, to Raah, was almost as great a surprise as the first words which had issued from the radio. Never before had he seen an Earthgirl; so her pert, blond presence worked a subtle and startling magic, such as few of his kind have ever quite felt, on the young Earthman.

She spoke, and he who was accustomed to the beauties of Wan's speech, still thought her voice as beautiful as her face and figure. Her words were controlled and poised, but in her amber eyes there was a grief that could not be mistaken.

"Roland has just come back, father,"

she said. "The Pittsburgh refuge has fallen. They are trying to bring the survivors in, but there are so few planes left, and so little food. How much longer can we hold out, father?"

John Maynard's lips trembled with emotion, whose weight Treb and Raah could perceive. They listened to feel the intensity of his reply even though they could not understand his words. But destiny canceled their expectations, and grim facts which directly concerned themselves took the upper hand.

THE FLOOR beneath them rattled with a jarring shock. The fiery forces under Ikaah were at last really breaking loose. The first jolt of the quake was followed by twenty seconds of swaying, tooth-cracking vibration. All around them they heard the growl of churning water, fighting the heat of molten lava. The view in the television screen trembled and fluttered. The lights in the submerged space craft winked out, then burned again briefly, before lapsing forever into darkness.

The quartz screen of Earthly visions was now eternally dark, too, and there was no sound in the black box of the radio apparatus. Perhaps strain of the ship's weakened hull had snapped some power cable. Anyway, marvelous equipment that had remained intact and in working order after long years of disuse, had at last lost its capacity to function.

"They are my people," Raah shouted above the groan of tortured metal. "They are in danger. I want to go to them, Treb. Why can't I? Why must it be impossible? Or is it?"

He gazed around the trembling, gloomy compartment with new vision. His attention centered on a great black lever, dimly visible in the glow of his flame mantle. The lever was the most conspicuous of all the controls here.

"Maybe I *can* go to them!" he shouted. "This monstrous thing came



"Tegati!" he yelled. For that was what they were, beyond question. But how had they come to Earth?

across the emptiness to Wan. Why can't it return, whence it set out, taking me with it?"

Savage impulse sent him, in one lithe bound, to the housing from which the lever projected. His fingers closed on the massive grip. Without thought of consequences, he jerked it back. In the flooded rocket tubes there must still have been a residual trace of fuel; for from somewhere astern there came the crashing thud of a heavy explosion.

Half dazed, Raah and his companion were both hurled prostrate. There was a moment of conspicuous silence, followed by the gurgle of entering water. A seam had opened somewhere in the rusted, crumpled hull. It had withstood much abuse in the past, but now the limit of its endurance had been reached. Soon the entire ship would be flooded.

Then Treb toppled his way to the Earthman's side. "We are not yet defeated," he said. "There is the little craft resting in the groove on the back of its parent. It is intact, and doubtless your mother brought it with her for a purpose. The sphere of the ancients will enable us to lift it out of Ikaah. Who knows that we shall not be able to carry it to a point from which it can be hurled to the world of your parents?"

"Then we shall try!" Raah stated fiercely.

Treb opened the inner valve of the air lock. A moment later he and his companion were out in the seething chaos of Ikaah. There was a sort of illumination now. The murky water looked like a flickering, red-lighted fog. Somewhere, the bottom of the lake had split open, and white-hot lava was oozing up from the depths of the world of Wan. The swirling, battling water could not cool it at once, and so there was light.

With their copper bars, the adventurers contrived to pry the metal straps loose from the little space craft, nestled

into the streamlining of the larger ship. The ancient hoisting globe, in the excitement of discovery, they had left carelessly on the lake bed; but they located it now without special trouble.

Raah, staggering in the uncertain currents of the hot flood around him, carried it to the sunken vessel and held it against the curved top of the little craft. Treb manipulated the boss of the globe cautiously, to achieve the desired result. Too much energy must not be used, else this hoisting device of the ancients, influencing all surrounding substance, would try not only to lift the small rocket but the larger one as well, and that would mean—

At last the lesser craft broke free from its mountings. With Raah and Treb on its back, held close to the sphere, it began a swift rise through Ikaah. The water, being a much better conductor of sound than air, now throbbled with ear-splitting vibrations.

Then the rocket, still supported by the globe, was floating upward through the air. About it swarmed and bobbed myriad hosts of Tegati, whose senseless determination seemed to fear nothing—not even the red glow that burned in the depths of Ikaah, or the hot chunks of volcanic material which shot upward like a geyser of flame from one spot in its turbulent surface. Only the reek of poisonous vapor could keep them from approaching too close to the hell of tortured fire and water.

Beyond the crumbling, shaking cliffs that surrounded the lake, nature seemed deceptively peaceful by contrast. The dusk had deepened a little, but not much, for the world to which Wan belonged rotated very slowly. The stars were bright and motionless.

In the shadows, it was not easy to see the valley floor buckling and crumbling. But shrill, birdlike screams could be heard above the tumult of Ikaah. They were the screams of fear and death. Treb's people had been driven out of

their lairs by the quake, to meet more horrible ends under the fangs and claws of the Tegati.

V.

THE SPACE BOAT floated perhaps two hundred yards above the lake now. Treb, crouching on its hull, looked about. Pity for his strange, decadent fellows was in his eyes; but he could do nothing for them.

Slowly, pulled by the hoisting sphere, the rocket gained another hundred yards of altitude. Tegati circled and bobbed around it, their thin bubblelike bodies pulsing, their tendrils lashing, their beady eyes, almost hidden in fleshy folds close to their mouths, agleam with brainless malice.

Treb and Raah struck out at the encumbering masses of them with flailing arms, as before; yet, for the moment, the adventurers felt less revulsion for the things, and accepted their attack more stoically. Perhaps the destruction and death going on in the world below had temporarily dulled their emotions.

A tiny breeze was blowing them toward the west. But it was only an atmospheric eddy caused by the heat from Ikaah; and even if it were active over a large area, its speed was so low that it could not carry them far.

Treb knew that the energy supply of the supporting globe was limited. If the power ran down, they would settle into Wan to die with its other inhabitants.

"There is only one way for us to attempt escape, Raah," said the wizard. "It might be successful, and it might not."

He moved gingerly over the curved back of the rocket, presently locating a double hatch which operated like the air lock of the larger ship. He crept through it, beckoning Raah to follow.

The latter closed the hatch behind him, to keep the Tegati from entering.

The controls of the craft differed in no important respect from those of its parent rocket. Treb, lying prone in the low cylindrical compartment, pulled the throttle lever a trifle. For half a minute there was no result. In fact, there seemed small reason to hope for any result, considering how long this fantastic machine from across space had lain submerged.

But hard, costly alloys had resisted corrosion very well; besides, the fuel tanks of the little ship, unlike those of the ether shell that had brought it here, were full.

And so, when the heat of an electric spark had dried hidden ignition points, normal action came. There was a ponderous, southing roar accompanied by a powerful forward thrust.

Treb's small, furry visage registered a grotesque travesty of a grin. He had not known how this terrestrial fabrication was meant to propel itself; he had had only Raah's experience with the lever aboard the larger ship to prompt him to move this other lever. Yet the effect, as far as he could see, was satisfactory.

The space flier, still supported by the hoisting sphere, and driven now by blasting streamers of flame from the vents at its stern, shot steeply westward through swarms of Tegati, toward the nearer ramparts of Wan. It was pointed in a good direction, and its natural stability kept it on a straight course; hence there was no need to steer.

Its tiny airfoils, no doubt, provided a lift which, had it been guided by a skilled pilot, would have been adequate alone to maintain its flight. But Treb was not a skilled pilot; he was only a daring experimenter who, so far, had been lucky.

Using his judgment as best he could, he kept the rocket's mechanism active

for several minutes. The sensations he experienced were quite as thrilling as any he had ever known; so he did not pull the throttle any farther, though there was plenty of room to do so.

As matters were, the craft soon attained a speed rivaling that of a bullet. Finally, because of the danger of collision with the mountain barrier, and because energy must always be conserved, the wizard shut off the driving blasts. The flier glided on steadily. In the thin air of the altitude that had been attained, there was only a gradual loss of velocity through friction.

Raah, who had gone through this latest piece of adventure without a word of comment, continued to crouch stonily beside a small, round window, absorbed with his own thoughts.

Wan passed beneath, a blurred hole filled with elusive, gloomy shapes, that flickered in the waxing red light from Ikaah. At last the mighty western barrier loomed close ahead. Some seconds later the rocket, its velocity now much reduced, bumped heavily against stone.

Raah clambered through the hatch; Treb went closely after him. They fastened rope about their middles, tethering themselves to ring bolts in the space boat's flanks. Then they sought footholds in the vibrating walls before them and began to climb, drawing the vehicle upward in their wake.

The buoyancy of the hoisting sphere, strained by a load and an ascent beyond its intended capacities, was beginning to wane; and so, if the energy of the mechanism was to hold out for coming work, it must be supplemented.

UPWARD the two went, risking the danger of great chunks of rock, which, dislodged by the quake, frequently came tumbling down from above. In actual distance it was not far to the top of the inner barrier from the place where the rocket had struck; but the going was almost vertical all of the way.

Hours passed, and weariness gradually took its toll. The inner barrier was scaled, but the end of effort had by no means been reached. The country still rose, and though the ascent was less steep, the way was continually encumbered by masses of broken stone. Temblors were much less violent here, however, and this was some advantage.

Treb led the way. Still aided by the sphere, they carried the rocket up a deep, winding gorge in which once, during this planet's warm youth, a mountain torrent must have cascaded. There was no light here except the amber glow of their flame mantles and the cold starlight.

Fine snow sifted down, whitening rock pinnacles. The silence was deathly. A few Tegati bobbed sluggishly in the gorge, like lost spirits.

The air was so thin now that it was very difficult to converse, except with hands in contact. The sound waves could travel along the channel of flesh and bone thus established, enabling the two from Wan to understand each other's speech.

While they were taking a brief rest from their exertions, Raah clasped hands with his tiny friend. "You do not know that we shall find what you are looking for, Treb," he stated quietly. "You only hope. Yet you do not wish to tell me that this is true."

"Your comprehension is complete, child of the unknown," Treb replied. "The land of the ancients is very big, and I have covered but a small part of it. I have never been in this place before."

They continued with their quest. More torturing hours dragged by. The minds of Earthman and Wanite became hazed with weakness. Treb staggered noticeably, his eyes glassy behind his flame mantle. Yet they could spare themselves only occasional moments of rest. The energy supply of their protecting auras, vitally necessary here in

the cold, rarefied atmosphere, was not beyond exhaustion, and so they must make their time count.

And at last their search was rewarded. They arrived at an open space between towering crags. Several tunnel mouths were visible in the starlight. The surface on which they stood was of smooth metal. Grooved tracks marked it in crisscross pattern, and curious vehicles stood motionless and deserted in the tracks. Treb had used such vehicles before, during the explorations of his youth.

"We go now to the metropolis?" Raah demanded anxiously.

"Perhaps, if to do so lies in the path of the future," the wizard replied.

He hobbled weakly about this ancient transport station, studying the odd symbols stamped at track junctures and above tunnel openings, seeking out among them the odd, irregular trapezoids which were the hieroglyphics for the chief city of the ancients. Finally he selected a car designed to carry freight. It was fitted with a curious, cradlelike rack.

Using the sphere, Raah and he hoisted the rocket ship into the vehicle. Then they entered the Earth-made shell, sealing themselves within. There were no controls to adjust, for the operation of the car was automatic; or maybe there was some delicate guiding apparatus which could respond to the telepathic waves of a living will.

In a moment the vehicle was moving toward a tunnel mouth. The vibration of its progress became almost impossible to detect as it tore on at mounting velocity through heavy darkness. It was looping back toward the east, through the successive ramparts of Wan which rose to ever greater and greater heights, mounting toward a region as airless, nearly, as space itself.

The exhausted bodies of the wizard and his companion cried out for sleep; but they felt thirst, too, and hunger.

Since they had been forced to act on impulse, they had made no preparation to meet either.

A tentative exploration of the rocket's interior revealed only a small flash of water and a box of strange wafers of concentrated nourishment, which neither of the two primitives could recognize as food. There were several flasks of oxygen, however; and Treb's chemical knowledge was sufficient to recognize the gas and to understand its importance.

The adventurers moved switches on their metal caps, dissolving their auras momentarily while they wet their lips with moisture from the flask. Then they lay down to sleep, with their flame mantles active. Treb was suspicious of using the Earthly oxygen, thinking it best to conserve it.

VI.

WHEN Raah awoke, the ancient vehicle was shooting along its grooved track, under bright stars. It was clear of the tunnel. Shadowy rocks and mountain crags fled past. After several more minutes of progress the car slanted down into a deep pit. It passed through a circular gateway in a vast wall of black stone. Looming all around now were the spires and domes of a slumbering antiquity.

The car came to a smooth halt beneath a colossal, phosphorescent rotunda. Treb had visited the metropolis before, and so he knew his way about.

"We are here," he said. "We are here in the place of uncertainty, where anything may seem possible. Here we must wait and rest until the coming of dawn. And then— We must go to a place of refuge, and we must seek food and drink. Our flame mantles wane in strength, and if they are inactive for a time, the caps will draw a little fresh energy from the forces of space. Come. Fortunately, our path

lies through a building of many wonders."

When the wizard spoke of "the forces of space," he meant the cosmic rays. All ancient machines drew their power from them. The old-time lords of this region had learned to concentrate the rays, hastening the process of charging any given piece of apparatus.

They left the shell and strode across the great room, threading their way among many deserted cars that rested in grooved tracks. They saw nothing that moved or breathed, yet the attenuated atmosphere around them seemed to swarm with elusive presences, suggesting in a way that was not visual the machines and beings of another era.

Perhaps something invisible *was* here—something belonging to the realm of fine, etheric vibration—that endured from the last days of glory. Or maybe the ancients were not truly gone at all; maybe their science had surmounted the difficulties of existence even here in this dead place.

Staggering a trifle because of cold and hunger, Treb led the way through a broad courtyard and along a street. Presently he and Raah reached a gigantic edifice which we might call a museum, though it was not that exactly. Rather, it contained what was meant to produce a colossal illustration of the cosmos.

The two from Wan moved slowly now, and cautiously; for Treb was warned by past experience. As they passed through the monumental gates of the structure, Raah knew that he was on the threshold of incredible revelation.

He soon learned that it was not a material revelation—there were no rusty relics here, no crude models wrought in simple material form. Instead, there was something in this place that acted upon brain and nerve tissue, to produce visions of strange, phantasmal vividness. It must have been some form of

telepathic wave, mechanically amplified, and drawn, perhaps, not from any sort of living mind, but from a mechanical record.

The two from Wan lost all sense of contact with their actual surroundings. The bright starlight from the entrance of the structure was blotted out, in so far as their sensations were concerned. Even the stone pavement under their feet seemed to vanish, and they floated in a rayless gulf which some subtle intimation told them represented the two most eternal things—time and space. Always they had existed and always they would exist; a condition or state without them was inconceivable.

Matter and energy, too, were eternal, though they were interchangeable and constantly undergoing various transformations. As if in direct rapport with some colossal intellect burdened with the wisdom of the ages, Treb and Raah grasped these simple truths. And other truths crowded into their minds in bewildering succession.

AGAINST the darkness around them they saw great, nebulous clouds swirling and contracting, forming at last hot, young stars. They saw those stars pass close to each other, pulling from each other's substance the hot droplets of planets. They saw those planets cool, and they saw life spring up on their surfaces—life born out of a special and temporary process which went on within the stars themselves.

They saw that life develop, bent and molded by various environmental conditions, into myriad, diverse forms; and they beheld some of those forms rise toward perfection, in which seemingly complete control of natural forces is achieved, only to be wiped out again in various, cataclysmic ways.

All this appeared chaotic and disordered; but then there came another subtle intimation to Raah and Treb: There was no such thing as disorder.

All that happened and existed was ruled, not by chance but by certainty. The law of cause and effect, absolute and unchangeable, made it so.

A given group of causes, if completely taken into account down to their last-minute detail, could produce but one result: Causes lying in the past not only influenced events of the present, but absolutely dominated them. And causes lying in the present exerted a similar dominance over events of the future.

Thus, things to come—both the slightest and the greatest of them—were just as fixed and definite as the things that had passed and had become history. Even minute electrons and tiny waves of the ether did not possess free will, but were rigidly directed by the law of certainty.

And even living intellects, which seemed so independent in thought and action, were not really free at all, but were ruled and swayed first by heredity and then by circumstance.

Time and space were both circular. If one moved far enough in either, one came back to the point of starting. The universe was finite but unbounded; and in anything finite there is a limit to possible combinations. Thus, there must be repetitions. Worlds that had once been would be again, repeating their ancient course of history. In the gulf of infinite time, the past must inevitably become the future, and the future the past.

Thus, for the first time, the immutable course of destiny was revealed to the young Earthman. Treb had experienced all this before; hence, he was less affected; but out of the miraculous grandeur of it, he, too, must have drawn a sense of solemn peace. Human thought on Earth had conceived ideas such as these, but they had been only theories. An older, wiser science had probed the universe, and had proven the truth.

Teacher and pupil, both humble, both awed, emerged at last from the black fog of rapport with greater wisdom. They were in a real room now, crowded with machines arranged in orderly rows. But there was nothing here to aid them in filling their needs. So they continued on, out into the frigid, moveless glory of the night.

Grown amid crumbling walls were bulbous things, massed closely together like gigantic soap bubbles. They were plants, or rather, parts of plants that had adapted themselves admirably to the rigors of their environment.

It was these growths that Treb sought. His primitive ingenuity had found them useful on his other venture; and now they would be useful again, providing the means of survival for himself and his friend until the sun shone once more.

He approached one of the largest of the bubblelike mysteries, and with a bit of sharp rock ripped an opening in it, close to the ground. Instantly, dense air puffed from its interior; but the tough, gummy texture of the balloon-like dome of translucent vegetable matter was sufficiently rigid to prevent its collapse when deflated. Treb crept through the opening, motioning Raah to follow.

The elasticity of the material caused the edges of the rent to close together at once, and adhesive sap, warmed enough by the warmth of life to flow, in spite of the cold, would swiftly knit those edges together again, making the growth as sound as if it had never been punctured.

Treb grasped his friend's hand for communication: "There will be new air here presently," he said. "All these queer hollow bladders are connected, forming a colony. And so air will be admitted here from the others, since no individual plant must be allowed to perish."

Any terrestrial savant, given an op-

portunity to examine this bizarre vegetation, would have been dumfounded at the simple way in which life can sometimes surmount terrific obstacles to its continued existence.

The glutinous domes covered the more delicate parts of the plants, protecting the latter from cold and confining the necessary atmosphere and moisture. The latter—both air and water—had an interesting origin. Hoarfrost, both of moisture and of carbon-dioxide crystals—the latter congealing out of the free atmosphere of this region during the colder parts of the night—was the chief source of both.

Tendrils, which were developments of the root structure, groped up sluggishly at dawn through holes in the soil, raking the crystals together and drawing them underground, where they melted later in the day. The water in the frost thus reached the roots, while the carbon dioxide arose into the domes in gaseous form, there to provide the raw material for starch and oxygen.

After a moment air came hissing into the dome that Treb and Raah had invaded. They dissolved their flame mantles and breathed the chill, musty gas. It was highly oxygenated and could have contained but little nitrogen, the inert part of it being chiefly carbon dioxide—which, while not specifically poisonous, was somewhat detrimental to the metabolism of animals and men. But Treb had done his best. Being here was better than suffocating in the brittle cold without.

VII.

SHIVERING, the two groped about in the weak starlight that found its way through the translucent dome. Their hands came in contact with masses of hairy stems, slightly warm to the touch. Like animals, these plants manufactured their own heat, probably in much the same way. The stems were tipped

with small, globular knobs which might have been seed pods.

Treb, whose eyes were better adapted to the dark than an Earthman's, picked some of the knobs and crammed them into his mouth.

"Food," he said. "Not good food, but better than nothing. And there is juice, too, to quench our thirst."

They ate the bitter, acid fruit. Then they wrapped themselves in the warm stems around them and prepared for a long period of slumber. Worn out, Treb soon fell into the comalike state of hibernation, natural to his kind.

But Raah did not have the same ability to woo Morpheus. For a long time he stared up at the dome, thinking, with a furious, maddening intensity, of the things he had seen and experienced, and of the colossal riddle of his home planet, which he could not quite place in the scheme of things.

And so it was during most of the long, long darkness. He had accustomed himself to the conditions of Wan, and in so far as the duration of day and night went, they were practically the same here. But his sleep was fitful and was punctuated by visions of a hell on a dim, foggy Earth which was little more than a legend to him.

Over all his thoughts of danger, horror and tension was the beautiful face and pert figure of one whose name he did not know. Ellayne Maynard was a mystery that disturbed him and fascinated him in a way that he found hauntingly sweet and utterly new.

And so, finally, came the quick, ghostly, colorless dawn. The Sun was a corona-wrapped disk of dazzling brilliance. Shadows were long and dense, and suggestive of frozen death. Slowly the solar rays crept down into the pit of the incredible city. The gray soil, born of ancient volcanic ash, processed by the erosion of ages, glared dully with reflected sunshine.

The spires and ramparts of the

metropolis caught the slanting light in their grotesque and fanciful arabesques. Quartz rotundas, which must once have confined air, glittered ethereally. And outlandish plants, protected by flexible bubbles which were part of themselves, began their daily growth and activity.

Raah felt the stirring of vegetable stems around him. He arose and peered out upon the new morning. His head ached dully from the effects of the obnoxious air around him; but because it was necessary he began to feed on the sour fruit of the stems within the dome. Treb was presently awake and doing likewise.

"Perhaps soon you shall see the world of your ancestors, as I have seen it, long ago," the wizard said. "Within a little time we will be able to answer much of the question of success or failure. Much depends on what punishment our flesh can endure. Come."

Protected by flame mantles, renewed to some slight extent but still weak, they broke out of the huge bubble that had sheltered them. The viscous sap that flowed in it, more sticky now in the sunshine, could not cling to their substanceless auras; but it was easy to imagine what would happen to any stray Tegati who chanced to foolishly attack a colony of this vegetation.

The adventurers did not pass through the place of revelation on their return to the rotunda where they had left the rocket ship, but strode along its massive outer wall. It was necessary to shift the rocket to another car; but this caused little trouble, for Treb had traveled to their present destination before, and knew exactly what track to follow.

PRESENTLY the car which now bore the shell from Earth moved slowly around a curve and along a grooved track which headed up, out of the pit and across a plain which lay toward the rising Sun. Treb and Raah watched

from the windows of the rocket's cabin.

An hour after the outset, the car stopped in a tremendous gulch, pitted with mines and crowded with battered, Gargantuan retorts—relics of the mineral industry of an unthinkable antiquity. From here the track did not continue.

"Now comes the real test. Now we must carry the ship," said Treb.

The gulch was very deep, pocketing air that was unusually dense for this region. It swarmed with roosting Tegati. How they could have reached this place was a wonder, until one saw the mine tunnels. Some of them must have rambled far back through mountain ranges, opening into lowlands where air was denser, and providing an avenue through which the Tegati could come and go.

Utilizing the remaining energy of their hoisting sphere to help them, Treb and Raah bore the space craft straight into the packed host of Tegati.

Had not the creatures been sluggish and inactive, the two invaders of their realm would undoubtedly have been killed; for sharp, poisoned fangs and claws directed with any enthusiasm could have punctured their enfeebled flame mantles.

Even as matters were, going through the deepest part of the gulch was a ghastly experience. The repellent monstrosities were everywhere. They impeded walking; they clung to the space ship like swarming bees, and their forms, bouncing lazily from the ground, made vision for any distance impossible.

But Raah and Treb won through at last. In the rising slope and thinning air at the end of the gulch, the Tegati deserted them.

The next two hours, however, were filled with the sheer, maddening torture that flesh can feel when opposed to conditions with which it was never meant to cope. More and more tenuous grew the atmosphere the two from Wan

breathed, as the altitude increased, and the strength of the flame mantles waned.

Without Raah's help, tiny Treb would have faltered and given up many times; but the strong young Earthman was driven by a determination that seemed to carry him beyond even the limits of his body. There was so much to call him, to beckon him—to insist that he reach Earth!

Thus, driven by an instinctive animal persistence when reason had grown fuzzy, he reached the top of the last jagged slope, and saw, notched between the serrated peaks of two mountains, a mottled, gray-green globe which glimmering consciousness told him was the goal of his dreams and his efforts.

Grandly it hung there in the black sky, just above the horizon. The designs of Europe, Asia, and Africa were unmistakably visible through the haze of the planet's atmosphere. This, beyond question, was Earth.

The world in whose reverse face the valley of Wan nestled was the Moon. It was the proximity of Earth to Luna that had made Wan possible. The two worlds had been born together, dragged out of the substance of the Sun by an invading star. They had come close together in space—much closer than now. And the Moon had had to yield to the molding effect of her larger sister's fierce attraction.

First it had slowed lunar axial rotation until always the satellite must keep one face turned toward its primary. Then it had pulled and distorted still, plastic lava, causing the Earthward side of the Moon to bulge, and leaving the other side slightly concave.

On its Earthward half, Luna had no atmosphere except for a tiny trace. But the other half could not be so easily looted by the covetous fingers of terrestrial gravity. Cupped and protected there in a deep valley, some of it would surely remain through many future ages.

Treb was limp and unconscious now, and had been so for several minutes. Raah had been carrying him with one arm, while with the other he shoved the rocket forward. The supporting sphere, not quite run down, had held out. Its energy was still sufficient to hold the space craft an inch or so off the ground.

The nose of the vehicle was pointed straight toward the disk of Earth. With the remnants of his expiring powers, Raah entered the rocket with Treb and sealed the hatch.

Then, rough with wooden clumsiness, he jerked the throttle wide—much too wide for a sane take-off. There was a dazing roar, a smothering thrust of acceleration.

Wanite and Earthman were hurled to the rear of the compartment. As the rocket cleared the Moon, they lay bloody and motionless in its cabin.

VIII.

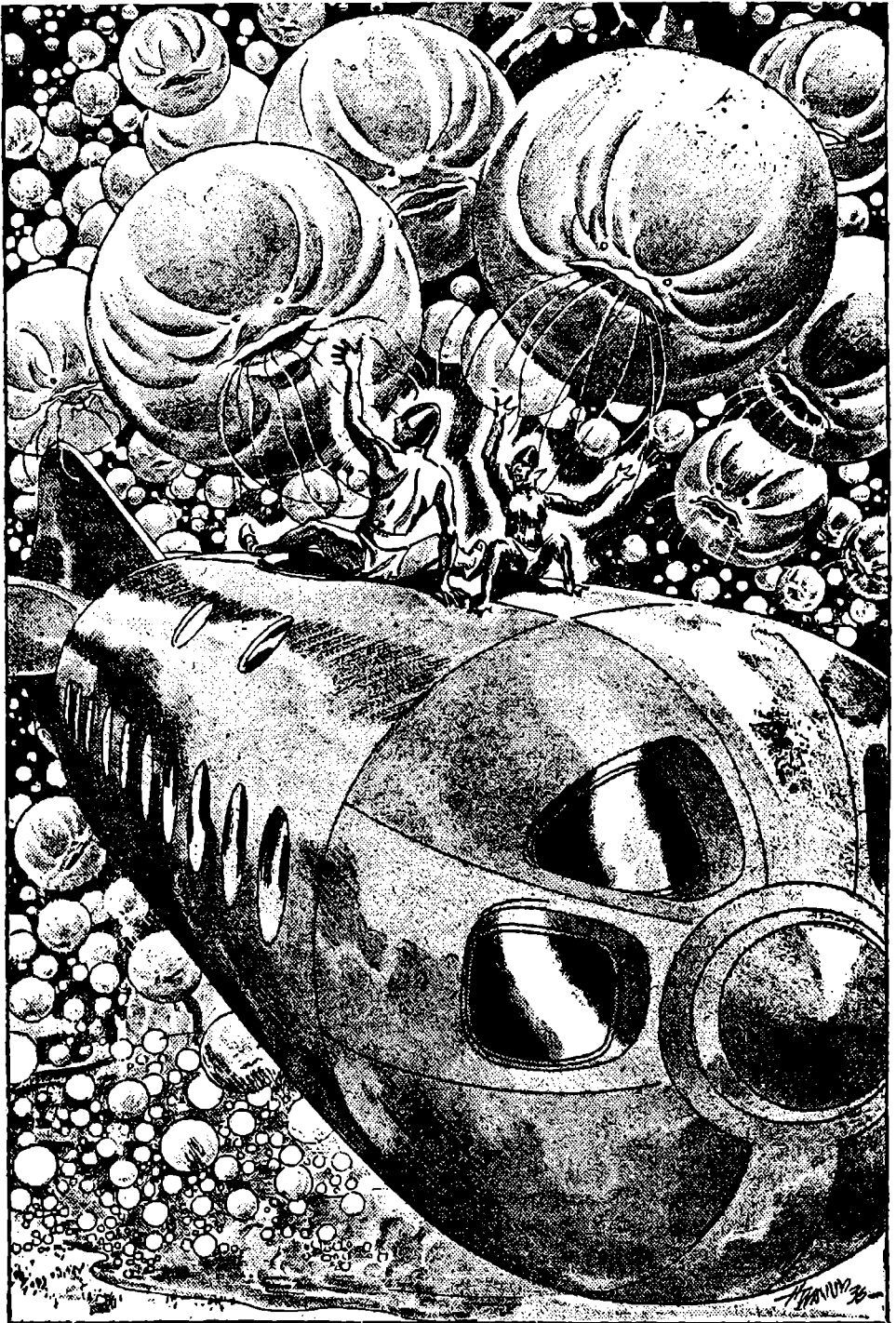
THE PLACE was the Kansas City refuge. It was after sunset. Into the sky, made murky by the effluvia of an alien form of life, a man peered with a large telescope. The expression on his angular, æsthetic face was eager and intense with the puzzlement of discovery.

He turned to the girl beside him in the glass-domed chamber. The curve of his lips was almost one of mischief. "Funny things happen, Ellayne," he said. "Here. Have a look!"

Ellayne Maynard frowned quizzically, then peered into the eyepiece of the telescope. Swimming close to the lunar disk was a tiny speck of flame. The girl's reaction to the sight of it was less cool than her companion's had been.

"Amy Forster!" she burst out. "Amy Forster returning, after spending twenty years on the Moon!"

Roland Maynard nodded. "Yes, sis," he said. "I don't think that anything but a rocket could make that speck of light. And probably Amy's piloting it;



Slowly, pulled by the hoisting sphere, the rocket gained another hundred yards of altitude. Tegati circled and bobbed around it.

though, by a bare chance, it could be somebody else. It could be a Lunarian—or it could be—Amy's child."

Brother and sister faced each other with mutual expressions of worship for the tragic heroine, whom Roland could not remember very clearly, and whom Ellayne had never seen at all in the flesh.

The girl nodded. "Dad used to talk so much about Frank and Amy Forster," she said. "Both of 'em were nuts about stratosphere planes and things—so nuts that their experiments always kept them broke. Then, just before the meteors came, and the Sun began to act up, they finished building the first practical space ship."

Both of the younger Maynards knew the story perfectly. Frank Forster had piloted the rocket around the Moon; but on his return, the landing 'chute of the craft had failed to work. He had crashed to his death.

But the notes and photographs he had taken had survived the accident. Amy had gone through them, had found something—something that had given her hope that the hell scum might be conquered. So, though she was going to have a child, she set out in another, better space ship, equipped with a smaller rocket, which would provide for return after an actual landing on the Moon. She had had to go, because there was no one else who knew enough about ether flying.

"If Amy's coming back now, that'll mean that maybe there's a chance for us poor devils to survive," said Roland.

Ellayne shrugged. "Let's talk about something less harrowing with suspense," she suggested. "Tell me about dad's creation theory. I've had so much to do, I've scarcely had a moment to listen to a clear presentation of it."

"Well," Roland replied, "I'll give it to you in brief first, and discuss its aspects afterward. Life had to begin somewhere, you'll admit, even if that

beginning was on a planet of another star. But dad thinks there was a separate beginning for each solar system. He says that during a certain brief period of their history almost all stars throw off a certain combination of corpuscular and etheric radiations, which acts to create simple life on the planets of those stars.

"All right. That's dad's idea. The physicist, Benson, made careful tests of the Sun's radiations when it was giving off green light. Nobody paid his work much attention then, and probably he didn't think it particularly important himself. But, mixed with the green light—which was just plain green light—he found emanations somewhat like the corpuscular alpha and beta rays of radium, and other radiations belonging to the realm of etheric vibration, like light and cosmic rays, but of shorter wave length than either.

"Coming, as these emanations did, just before the beginning of our troubles, it was natural to suspect a connection. Just how close that connection seems to be was not apparent, however, until dad tested the meteors and found them all sterile and sporeless. There had to be some other source or course of the hell scum. So he constructed his theory. Circumstances alone—the mere fact that there is no other explanation for what has happened—is almost sufficient proof that the idea is fact.

"WHAT happened was this, as dad sees it: The vast cloud of meteors which came into the solar system was largely absorbed by the Sun. The shock of those falling stones from space did things to old Sol. Maybe he felt younger, or something. Maybe materials which exist in his center to-day, but once were also part of his photosphere, were caused to rise briefly to his light-giving outer shell by the impact of the meteors. There those materials or elements acted to produce the radiations,

perhaps by the disintegration of their atoms. Any comments or questions so far?"

"Yes," Ellayne replied. "Life and rays of any sort are a long way apart. How can there be any connection?"

"You're all wrong there, sis." Roland responded earnestly. "Everybody knows that without the Sun's rays there couldn't be any living creatures on the Earth. To green plants light is food, and without those plants there wouldn't be any animals. And there are other facts to consider when judging the Maynard theory:

"X rays and the radiations of radium exert a tremendous influence upon both fauna and flora grown where they are present. Experiments of this sort were conducted many years ago. Normal young of any species developed into freaks or sports, quite different in physical characteristics from their parents. Brown rats became albino rats. Fruit flies were curiously distorted.

"It has long been suspected that the radium present in mountainous regions is a powerful cause of mutation, which furthers quickly the progress of evolution, both animal and plant. Cosmic rays and the periodic radiations of Sun spots have been accused of exciting comparatively innoxious bacteria, thus producing terrible plagues.

"So, you see, radiations of various kinds can direct, control and sustain vital processes. To suppose that the first primitive life was actually created by a combination of special and transient solar emanations is just another step in connecting this evidence with the great scheme by which our universe operates.

"Think of the warm, azoic seas at the beginning. Nothing lived in them, even though conditions were ideal. The world was like a tinder pile, waiting for the spark of life. That spark might be, in part, an arrangement of the elements

involved—nitrogen, oxygen, carbon, and hydrogen—but a condition that was special and inevitable could aid enormously. Our present visitation began a little differently, for the radiations were stronger than the original ones, and they didn't last nearly as long. The creation of the scum was more sudden than the first creation. I guess that's about all I can say, Ellayne."

The girl nodded slowly, her mind lost in her brother's explanation of the great riddle. But abruptly her thoughts came back to the practical present. She moved to the telescope.

"We've got to plot the rocket's course," she said. "We've got to know exactly where it is going to land. Maybe Amy Forster will be able to tell us what to do."

Around the refuge, green slime oozed, its corrosive acids eating metal and softening earth. Beyond the walls men fought the dread menace; while within those walls other men thought and planned and toiled. One of them—a gray, old scientist who slaved in his laboratory, had an idea, among his other ideas, that might make Earth a safe place for human habitation once more. But time was so limited—

IX.

RAAH OF WAN stirred and opened his eyes. There was no sound in the frosty stillness. A glance at the windows of the compartment told him that he was in space.

Raah raised himself, feeling dizzy, ill and sore. But his own injuries were superficial. His first concern was for Treb. Both the Wanite and the Earthman were at the rear of the compartment, where the jolt of acceleration had thrown them.

The furry little Lunarian was half buried in ruined glass and metal. His body was stiff and cold. Raah extricated him from the wreckage, wiped the

gore from the great oozing wound on his shoulder.

Then, for several moments, he chafed the tiny, three-fingered hands of his small friend. This producing no immediate result, he looked about for something to wrap Treb in, and presently found a blanket in a locker. Raah did not know what the blanket's intended function was, but he used it to good purpose.

There was nothing more that he could do for the Wanite wizard. And so he crouched dumbly beside him, waiting and hoping for a sign. Once Treb voiced a few plaintive, birdlike twitters, and then lapsed again into a coma.

Concern forced Raah's attention to other things. The meters on the broken instrument panels could give him no information now, even if he had been able to read them. But he could look through the windows and learn much. The Moon had dwindled astern, while the Earth was now a huge globe ahead and a little to the right.

The ship's propelling mechanism had flamed until all the fuel had been burned up; now all was silence.

Could the craft reach Earth? Raah had used no mathematics to plot his take-off. The ship had been pointed, very simply, toward its destination; that was all. Time units, and the movements of celestial bodies involved had not been taken into consideration.

It is a far simpler task, however, to reach Terra from Luna than the reverse. Earth's gravity, much stronger than that of its satellite, naturally dominates a much larger portion of space, and would tend to correct any slight errors in aim.

Moreover, since the Moon always keeps the same face turned toward its primary, the Earth, except for the small shiftings occasioned by libration, does not move in its sky; so, relatively, the position of Terra from the lunar point of view, changes scarcely at all.

But how about landing? What provision might this primitive savage make for so delicate a task at so great a speed? Or had such provision been made by the builders of the vehicle?

Such questions could give Raah little worry, for his knowledge of the factors involved were too slight. He could only crouch beside the silent Treb, sullen with grief and loneliness.

Presently he noticed the stuffiness of the air. He opened the valve of an oxygen flask slightly, and after that he felt a bit better. His and Treb's flame mantles had dimmed until they were almost invisible, even in the semidarkness. Since they were useless now, he shut them off.

Time dragged slowly by. The Earth was nearer now. It did not take long to consume many thousands of miles while hurtling through the frictionless vacuum at terrific speed.

Finally Treb became conscious enough to speak a few, halting words. There was hope, and a doglike affection, in his great, glazing eyes.

"I think—everything—will be well—child of—the unknown," he said, seeming to draw wisdom from some source beyond his own personal experience.

The Earthman touched his tiny friend's forehead reassuringly. "Everything will be well," he repeated.

In so far as Treb was concerned, everything was well within an hour. While the rocket sped on toward grim adventure, he passed into the kindly shadows.

Other hours went by, and Earth appeared to creep nearer and nearer until it was a vast, slightly convex expanse of blurred gray, reflecting bright sunshine. Oceans and continents swept beneath the rocket, as the planet turned slowly on its axis.

AT LAST a faint whispering filled the narrow compartment. The craft had touched the terrestrial atmosphere.

The whisper mounted to a shrill hiss. Then there was a slight grating sound astern, followed by a sharp jolt, which was the beginning of the thrusting, crushing agony of deceleration.

Flattened, pain-racked, against the forward extremity of the chamber, Raah could see through the windows the vast parachute of metallic fabric which had opened up in the still tremendously tenuous air. Had the 'chute been drawn from its metal case astern by a denser medium, the terrific speed of the ship would have torn it to shreds and burned it like a meteoric fragment. But here the resistance was not so dangerous. For once the landing device of a space ship appeared to be working as it should. Twice before, there had been failures.

Impotent as a scared animal, Raah waited. He felt the creaking and straining of the stout shroud cables of the 'chute. Then there was a snapping jerk, as one or several of them parted. After that the pressure of deceleration was not as intense.

Down through the atmosphere the rocket fell, its speed still rapidly diminishing. A broad, murky plain was rushing up toward it. Raah saw the sad, jagged skeleton of a ruined city leaping closer. Then the crash came.

Somehow his senses were not quite wiped out by the impact. Gradually, the initial numbness of shock gave way to searing torture. His left arm was broken; his ribs were cracked; his brain was jangled, until the least attempt at coherent thought was aching effort.

Weakly, gripped by a gravity six times as strong as Wan's, he dragged himself to a shattered window, muttering words to the dead Treb. As he looked out on the alien world of his ancestors, nostalgia came over him like a wave. The very daylight seemed obstructed by the pall of doom.

Thick, pulsating slime, like that which had once floated on the surface of Ikaah, the devil lake, was everywhere. It in-

crusted the hills and the plain, and the hideous shreds of it dangled from the deserted wreckage of the city near by.

The spectacle aroused in Raah a mighty wish that he could go back to Wan—even the fiery, quaking Wan that he had last seen. It was a better place to be than this horrible, murky planet of death and swarming, primal life!

Then he remembered that this was the world of his people, and of the girl whose fresh young beauty had captivated him. His haggard face hardened.

If he was to accomplish anything, he must act immediately; for he did not know how long his depleted stamina would last.

He crept to the hatch of the crumpled rocket. A moment later he stood unsteadily atop the battered vehicle, fighting his weakness and his new and unaccustomed weight. The hoisting sphere might have helped sustain him, but it had been lost in space.

The musty air was humid and hot. Though he did not know it, the presence of the alien hell scum had altered Earth's climate, so that snow and ice did not form, even in the extreme north and south. The character of the terrestrial atmosphere had been changed; more carbon dioxide, resulting from the vital processes of the scum, had been put into it, increasing its capacity to absorb and retain the warmth of Sunshine. The resulting hot climate had also made the air much more than normally humid, providing a source for heavy rains, which had defeated even the driest deserts on the face of the planet.

Vaguely Raah heard a distant, droning sound; but it scarcely registered on his numbed faculties. And so, moved by impulse born of the desire to reach his mysterious people, he lowered himself from the broken rocket. He sank to his knees in the sticky, squirming ooze, which, under a microscope, would have revealed itself to be composed of

minute droplets of protoplasm, part animal and part plant.

At once his agony increased, as the minute creatures tried to absorb the flesh of his bare legs. Now he moved the switch on his metal cap, but the flame mantle thus recreated was far too faint to provide any real protection.

Voicing a thick cry, he swooned, his body toppling forward into the voracious slime. Raah of Wan had been strong and courageous, but flesh has its limitations and there are problems which even the keen, trained minds of scientists cannot solve.

He was not aware of it when a plane's pontoons splashed into the scum and glided toward him. Young hands, protected by the gloves of air-tight armor, raised him and carried him into the craft.

X.

A WEEK passed, during which Raah was the victim of a fevered delirium, which was perhaps partly the result of exposure to microbes that were part of the hell scum. But in spite of his illness, he was conscious of a thousand novelties. Strange clothing covered his body; unfamiliar bandages swathed his injuries; he was lying in a curious white bed in a white room. Antiseptic odors were always in his nostrils.

Many people with weary faces and eyes bright with the terror of doom came to talk to him—and to plead with him. He could not understand their tongue, but he knew that they were pleading, and he knew why; but he had no information to offer them that would be of the least help. Sometimes he heard distant cries of fear, and felt the vibrating jolts of walls shifting on their foundations. He sensed that the end of this great Earthly fortress was not far off.

The situation, of course, had many aspects which even his sharp intuition

could not see. He could know little of the shortages of synthetic food, of the scarcity of poisons and other materials used in combating the scum. So many people had been drawn from the small populace to engage in the actual fighting that few remained to handle the less immediate, though just as vital, demands of manufacture.

And Raah could, of course, have no inkling of the countless, teeming thoughts that flashed across the busy brain of old John Maynard, toiling in his laboratory, struggling with a problem which he knew would yield in time, if the time was given him.

Only once did the scientist come to look at Raah; then he turned away with regret in his old eyes. This visitor from the Moon was scarcely more than a simple cave man, and could be of no help.

After that old John spent his scant moments of relaxation in the botanical and zoölogical gardens of the refuge, finding some scant, reminiscent comfort in the plants and animals that had belonged to the old Earth of his younger days.

With Ellayne Maynard it was different. She came to the hospital quarters as often as she could. Frequently she was weary and grimed from work in the factories; but she never seemed to lose her poise and her jaunty gayety.

Somehow, in spite of his illness and his apparent ignorance, there was a reassuring quality about this strange young man whose muscles were unusually hard and supple, and whose incoherent, alien words were softer and more beautiful than the words of any language spoken on Earth. Besides, there was an unmistakable resemblance between this stranger and Amy Forster, whose cool-eyed picture hung in John Maynard's study. This was her child, beyond doubt.

And so Ellayne studied the enigma he represented, her judgment vague but

hopeful. This boy was a hard one to restrain; always he was trying to get out of bed, apparently to join the battlers beyond the walls. Always he was calling some one or something named Treb.

Ellayne tried to talk to him, not so much in the hope that he would understand, as to relieve her own feelings. Mutual attraction was swiftly becoming mutual need; for to Raah the girl's visits seemed as essential to his recovery as food and rest.

"It's funny about you, Forster," she'd say companionably. "Maybe you don't even realize it, but your mother went to the Moon for a purpose. You see, when your father circled the satellite, he found that there was a valley on its hidden hemisphere. In his notes, which were read after his space ship crashed and he was killed, he mentioned that in so far as he had been able to discover, there was no hell scum in the valley, or at least not much. And that is something we can't understand.

"This was odd, because the Moon must be exposed to the same conditions—they weren't understood then—which had produced the scum on Earth. Some other condition, causing immunity, must exist there. So your mother went to find out what that condition was. It might help us out a lot if we knew. Did you happen to learn anything?"

IT WAS no use. Gaining mastery of a totally alien language is not an easy task for any one. Raah could understand the motive of the girl's obvious plea; but even if these two could have conversed fluently, it is doubtful that the man could have supplied information the importance of which a native Earthling could see.

"The cap you wore," Ellayne would continue, pursuing a different lead, "it has some interesting qualities, which, if we could analyze them, might prove helpful. But the thing's too intricate

for our scientists. Who made it, and how does it work?"

This son of Amy Forster could tell her nothing, and even if he had been able to reveal the secrets of the metal cap, the marvelous device belonged to a science too advanced to be handled by Earthmen. The most skilled watchmaker could not have built anything so intricate.

Another week went by; Raah's fever left him. With his broken arm still in a sling, he went out with the other battlers to sweep the scum back from the walls. Clad in a clumsy asbestotex armor, he wielded a little flame thrower sparingly, aping his companions' actions faithfully, though he could mimic only a few of their words.

Two days later all the fuel for the flame throwers had been used up. Through the night that followed, the defenders continued to battle doggedly, beating at the senseless, viscid enemy with shovels and with anything else that was available.

Then, in the wee hours of the morning, a radio message was received. It was from a plane—Roland Maynard's plane. He had flown to the Los Angeles refuge in the hope of getting aid, and now he was returning, without having been successful in his mission. Los Angeles was no better off than Kansas City.

But his voice buzzed excitedly in the speaker diaphragm before the weary and frightened listener at his home station: "Something new," he said. "Something very new and very queer! Just for luck, I flew over the place where the Forster rocket landed. Thousands of odd animals were circling and bobbing about the spot. They aren't Earthly; they can't be. There must have been eggs or spawn or something on the rocket—spawn from the Moon! It hatched, and since there's plenty of hell scum to serve as food, the things that came out of it have grown very

rapidly. . . . Don't call me a liar! Seeing is believing, isn't it, even if what you see looks cockeyed?

"All right! Now listen while I tell you what I think and what I'm going to do. I've got a hunch that these animals are the secret of the lunar valley's immunity from the scum. They ate it up there as fast as it could grow, and so the stuff never got a decent start there. Just an old case of biological balance. Cats used to keep the prolific mice in check, you know. But Earth, unlike the Moon, didn't have any sort of creature that could master the scum.

"Now, however, I'm sure the right kind of animals have been introduced here. The next step is to bring them to the vicinity of the refuges, where they will do the most good.

"I can see now that this isn't going to be a very difficult job. As soon as these crazy lunar devils spotted my ship, they tried to chase me, their object probably being to eat up both me and the plane. But the gravity is too strong here to allow them to fly very well, so I'm giving them a break. I'm doing a lot of circling at low speed and close to the ground, just to egg them on. But all the time I'm working gradually closer to you folks at Kansas City. That's all I can say for the present. Keep watching!"

RAAH OF WAN could not understand what was said when a man rushed along the straggling line of battlers beyond the walls of the refuge, shouting the news. But he could guess, by the awed looks on the faces of his companions, and by their fresh enthusiasm, that the news was good.

Comprehension came to him with the first gray streak of dawn. First he heard the distant throb of a plane motor, somewhere to the west. The craft glided low over the slimy morass which had once been the Missouri River; then it doubled back, approach-

ing the eastern wall of the great oval refuge.

In its wake, bobbing and bouncing over the hell scum, was a horde of black, ominous specks, silhouetted against the sky.

Sight of familiar objects in a foreign environment often gives an observer a pleasant surprise, even if those objects have once been looked upon with hatred and distrust.

"Tegati!" he yelled through the breath vent of his transparent mask. "Tegati!" For that was what they were, beyond question.

How had they come here to Earth? It took but a moment for Raah to find the explanation to the mystery. He remembered that deep gulch on the Moon, where an ancient mining camp had been located. The gulch had swarmed with thousands of torpid Tegati. They had gathered on the space ship as Treb and he had sought to bear it through their packed and sluggish masses, and they had deposited a quick-crusting jelly upon the hull of the craft. The gulch had been the spawning place of the Tegati, and the jelly had contained their eggs!

Though airless and utterly cold, space is not as hostile a region as is popularly believed. Heat can be lost by an object in only one way—through radiation. In a vacuum there is no such thing as convection and conduction. Besides, during part of the journey, the ship's rockets had supplied warmth. And last but not least, the eggs themselves, in their normal environment, were adapted to conditions almost as rigorous as those of the void.

Within several minutes the Tegati host was swarming about the armor-clad defenders. But the latter, protected as they were, were safe from poisonous fangs and claws.

They were small Tegati, Raah could see; even they could not reach full growth in so short a time. But with

Food as plentiful as it was, there was small reason to doubt that their numbers would multiply rapidly, even under the alien conditions of Earth. These creatures were prolific.

They could not, of course, conquer the scum, now that it was deeply entrenched in an entire planet; but their powers were promising. At least, they might clear it from around the weakened walls and foundations of the refuges, saving them from destruction; and that was all that would be necessary.

In the gray half light, Raah saw some of the creatures settle on the scum. They bit into it savagely, lashing at it with the poisoned claws of their tendrils. The viscid stuff in their immediate vicinity quivered and died as virulent venom was injected into it.

The defenders began to cheer raggedly. Some minutes later, most of them retreated into the refuge. Only a small crew was left behind to make tentative repairs of the dangerous fissures in the walls and buttresses.

ELLAYNE MAYNARD met Raah in one of the public hallways. Out of sheer impish jubilation she threw her arms around his neck and gave him a hearty hug. "Maybe you don't even know how you did it, Forster," she said, "but that doesn't change the facts. My friend, you're tops!"

Raah wouldn't have minded the compliment, had he been able to understand it, but the situation otherwise was so entirely new, pleasant and upsetting, that he felt extremely uncomfortable.

But there was a quiet friendship and love in the girl's amber eyes in spite of her gayety, and it reassured the young savage a little.

"Thank you, Ellayne," he said in English that was soft and accentless. These were almost the only Earthly words that he knew. He understood the meanings of all of them, yet he was not quite sure why he said them now.

He only knew that he wanted to say them.

In the two remaining refuges—the one at Los Angeles and the one at Kansas City—despair became hope, and hope gradually was changed to certainty. Lured by three planes, some of the Tegati were transferred to the Los Angeles refuge. In a wide ring around the great oval structures, the aerial devils from the Moon poisoned and ate the scum. The seeping flow of destructive acids was stopped.

Ten thousand people, relieved of the burden and tension of defense, went back to work. Materials that were needed were manufactured. And at last John Maynard completed his invention.

Not long thereafter, a squadron of planes set out from each of the refuges. Both squadrons dispersed, their object being to circle the entire Earth in every direction, forming, with their various courses, a wide but consistent and all-enveloping network. At the end of every fifty miles of its flight, each of the planes ejected a puff of luminous vapor.

This vapor was no mere poison; its potency was far stronger than that. It was a subatomic reagent, which reacted with a tiny and insignificant quantity of the nitrogen in the atmosphere, freeing its atomic energy.

But though the quantity of the nitrogen that was disintegrated was small the power released was enormous. When the planes returned to their bases, there was already a very noticeable rise in atmospheric temperature. Occasional gusty winds blew, but they were not expected to become dangerous, for the heat was evenly distributed throughout the Earth.

No flames or similar phenomena were visible, but the thermometer readings climbed steadily, reaching a peak of one hundred and twenty degrees Centigrade,

or twenty degrees above the boiling point of water. No protoplasm, exposed to such heat, could live. The hell scum was dying, and with it, except for a few specimens kept for study, the Tegati.

For a month the broiling heat endured unabated, cooking the life from remnants of the scum which had seeped for a considerable distance into the ground.

Meanwhile, mankind remained within its concrete and metal refuges, sweltering but happy. Cooling systems made the temperature endurable. And at last the curing process was over.

It grew cooler. Heavy rains began to fall, laving the Earth, preparing it to receive its old familiar fauna and flora, for which the zoological and botanical gardens of the refuges could supply a start. Even the oceans were cleared of the scum, for the latter had existed only on the surface of the water. The dark inferno, springing from the fires of genesis that I burned out of time in the solar atmosphere, was at an end.

ONE DAY John Maynard called his son, his daughter and Raah to his study. On the wall beside his desk the picture of Amy Forster smiled a faint, almost amused smile. John Maynard could remember very clearly a gayer, sadder, more defiant smile on her face during the moment that she had waved

farewell just before she had entered the ill-fated Moon rocket.

"I don't know just why I asked you young folks to come here," he said. "Just to relieve some haunting feelings of mine, I guess. This should be a time of all times to think of the future. But we can never forget the past. That lady on the wall, for instance. No tribute we can pay her could ever be too great. Of course, we shall always remember her. But for her brave and tragic journey to the Moon, we would have nothing to look forward to; in fact, we would not even exist! Sometimes it strikes one as strange how the past rules the future."

Raah's knowledge of English was still far too limited for him to grasp much of the meaning of the scientist's words. Yet his own thoughts were of a similar nature, and his comprehension was more complete; for he had partaken of the wisdom of the ages in an ancient lunar city of a dead and glorious time.

He looked down at the girl at his side, and wondered, half in hope and half in awe, what days to come might bring. Between him and Ellayne there was a wide gap of training and background; still, he could learn. Perhaps she would even help him to learn. Yes, the gentleness of her eyes told him that she would.

