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Earth Stealers

by Don Wilcox

Lester and June Allison found themselves facing a grave menace to Earth—and once more the famous "battering rams" went into action!

An A\NN/A Preservation Edition. Notes

"CALL for Lester Allison! Call for Lester Allison!"

The loud speakers blared through all the New York space port.

Kirk Riley dropped a grease rag and trudged over to the telephone.

"Hello! Headquarters! This is Kirk Riley. Lester Allison hasn't been around. Anything I can do?"

"Some professor from Canada is trying to reach Allison. Will he be in today? This seems to be urgent."

"I'll call his wife."

"Right. And give us a ring right away."

Kirk Riley muttered to himself as he put in the call to Lester Allison's Rocky Mountain resort home. "As if every call for Lester Allison wasn't urgent. That's what comes of having a famous name." It was a cinch that there was no space man with such a remarkable record as Allison's. In the realm of solar conquests he and his wife, formerly June O'Neill, were tops. "The Allison ranch? I want to speak to June Allison… Hello, June. Where's the boss?"

June Allison's voice came over the wire sleepily.

"Who is it? Kirk? You are always disturbing my afternoon nap."

"Just as I thought. Sleeping your afternoons away. Go wake up the boss and tell him there's an urgent call."

"He's not here. He's in Mercury. Called in last night at four o'clock. That's why I'm walking around in my sleep today. He'll be back in a week—"

"There's some perfessor in Canada that wants him. Can you get the word through? They say it's an emergency."

"If I get through I will call you before four o'clock this afternoon, and if I don't—"

"I know, you will be sound asleep."

Kirk Riley went back to work in a disturbed mood. He found himself absent-mindedly waving the grease rag over the control board of a huge Battering Ram, leaving a dingy smear on the dials.

"Now what could a perfessor in Canada want with Lester Allison?"

Two hours later the low siren at the space port sang out an announcement that a ship was coming in. Kirk watched the dot in the sky as it swelled into a blazing silver disc.

That was the Mercury Special. It nosed down at the west end of the field, and came skimming over like a gigantic bumble-bee. With a low, smooth buzzing it circled to a stop near the shed where Kirk waited.

The space locks flew open. Lester Allison stepped briskly down the ramp, pressed a button, and glanced back to make sure the entrance folded back into place. In his silver space suit he was as slender and streamlined as the ship itself, thought Kirk.

"Greetings, grease monkey!" Lester Allison grinned. "What's new on earth?"

Kirk returned the merry greeting, jerking a little as the taller man slapped him on the shoulders. But he braced with importance as he conveyed the news.

"This way to the telephone, my friend. They're hot on the wire to get you. Something has happened up in Canada. Perfessor somebody or other. Here's the number."

Kirk Riley waited as patiently as he could. He was burning up with curiosity.

"Is that so?…" Lester Allison's brows knitted with interest. Then—"No, I never heard of such a thing… You say it weighed five tons?… Is there any way to preserve it? Pickle it in alcohol or something?… Oh, you have… Of course I want to see it… Yes, I will come up this afternoon."

Lester turned to Kirk.

"Get the Red Wing ready. And get out of that monkey suit. You are spinning with me to Canada right

away."

"Huh? What the devil—?"

"No time to waste. We will be off in ten minutes."

"You say it weighs five tons and they are pickling it in alcohol? Come on, Allison, give me a hint."

"Oh, sure," said Allison casually. "It's a five-ton brain."

CHAPTER II

A Mountainside of Protoplasm

THE truck wound around the mountain road at a slow speed. Professor Harley Haycox kept mumbling to himself, or if his voice became distinct occasionally, it was to order the driver to look out for that rock or slow down for that bump or take that corner easy. Or honk for that approaching car.

"Pull into the side there, driver. There's not room for us to pass. We will park and let the other fellow swing around us."

"He's stopping, too," the driver growled. "He's coming over."

Professor Haycox leaned out through the door and lifted his spectacles. Sure enough, two figures were approaching on foot, and one of them waved a greeting. But Professor Haycox was so nervous about his cargo that he imagined these men might be dangerous highwaymen.

"They are stopping us," he whispered hoarsely to the driver. "They might be men from Ubruff's Laboratories. Do you have a gun?"

"Take it easy," said the driver. "They look friendly. Can't you see the grin spread all over that little fellow's face?"

Professor Haycox breathed a little easier and readjusted his spectacles.

"They are little fellows, are they? That's good. If they are from Ubruff's we can handle them. We have got to get back to the Institute with this truck load. It's a million-dollar specimen."

"You've told me that six times already," said the driver.

The taller of the two men called out, "Hello, there, Professor Haycox! I was afraid we had missed you. Where are you going with this big truck?"

"Oh, it's Allison. I didn't suppose you would come out into these mountains."

Professor Haycox ambled down the road to meet the veteran space man.

"It is most remarkable—most remarkable. The world has never seen anything like it. I will tell you the whole story."

"This is my friend, Kirk Riley," Lester interrupted. "I had to bring him along. If there is a mystery involved, Kirk will be sure to give you all the wrong answers."

The Professor acknowledged the introduction and went on with his account. "The call came last Saturday, and everyone in the Institute was sure it must be a fake," said the Professor, and his eyes shone with pride. "But I was determined to investigate. I maintained that it is these unusual and, I might

say, unclassifiable phenomena that add the most momentum to our scientific progress. And so I gathered a small expedition of brawny man power—truck drivers, stevedores, and the like, and we set out to the scene of the accident."

"Accident?"

"There was a mangled body across the mountain-side. An old French hermit was an eyewitness to its fall."

"From where?"

"Right out of the skies," he said. "He guessed it to be a twister, it came down in such a cloud of smoke. Then—splash—splash. And there it was. A major catastrophe. With gray colored blood flooding down into the ravines."

"Can we go back to it?" Lester Allison was scowling with skepticism.

Kirk was tugging at his sleeve and nodding eagerly like a schoolboy. But he was disturbed by Lester's apparent refusal to take the story at face value.

"You are doubting it," said the professor. "You are just like all the rest of the Institute. But I have the figures, and I have already arranged for a complete salvaging of the skeletal remains. And if you think it's a fake—"

"If it is a fake," said Allison, "it's the most stupendous thing I ever heard of. Have the reporters got hold of it yet?"

Professor Haycox shook his head. "Everything's under my hat. There's too much rivalry among these scientific laboratories for me to give anything away. Especially between us and the Ubruff's. They have literally stolen discoveries from us. Once they actually resorted to gunfire to beat us out of an anthropological treasure. But we have this brain, pickled, as you say, right in our truck, and by tomorrow I hope to have it under our microscopes."

"Very well," said Lester, "we will go back with you."

"Ah, heck!" said Kirk Riley. "I wanted to see that mountainside where the thing crashed."

"If you want to hoof it, go ahead," Allison suggested. "But I will return with the Professor."

"Go ahead. See you later," said Kirk.

HE STOOD by the cliff's side and watched the car roll away, followed by Professor Haycox's mammoth truck. His curiosity was jumping off on many a tangent, and he wished, among other things, that he were on top of that truck looking down into the big steel tank. However, somewhere down the canyon the scene of the catastrophe waited. He trudged along, and soon gave up the hope of thumbing a ride. This road was little traveled. Perhaps that was the reason Professor Haycox had chosen it. There had been talk of trouble from a rival laboratory, Ubruff's.

Deeper in the canyon he observed the first signs of "the fallen body." No one had said what kind of body it was. From the broken tops of trees, he might have guessed it an astronomical body. But those torn branches appeared to have been sprayed with some sort of gray liquid.

Now he could hear the voices of workmen and see the tops of derricks that were at work hoisting huge objects out of the maze of rocks. These were Professor Haycox's workmen. It was their responsibility to

salvage all parts of this mysterious specimen. He approached them cautiously, and for a long time looked on the scene without being observed.

Someone tapped him on the shoulder. He looked up sharply. He had supposed himself well hidden with these jagged rocks.

“Hello, pal. Quite a sight, eh?”

Kirk nodded, studying the newcomer suspiciously. The face was too friendly, the eyes quick and nervous. Perhaps this was only a stray farmer. He was dressed in overalls and a slouch jacket. His shoes belonged in an office—not on a mountain trail.

“Musta been some little job, pickin’ up all that mess of jelly,” the stranger observed, grinning.

“Did you see it?”

“Well, I was a little late comin’ on the scene. They hauled the chief remnant away before I pulled in.”

“What was that?” Kirk asked, more suspicious than ever.

“Hell, I don’t know what you would call it. It was a big, globe-like affair, seven or eight feet across. It didn’t come out of a skull, exactly. Jest a ball of cartilage. Of all the freak animals—”

“It’s a freak, all right,” Kirk admitted. “It must have been some sort of a flying whale or sea monster.”

“No, I don’t reckon it was. There weren’t no bones to speak of. It was mostly a mass of jelly.”

“How much do you think it weighed?” Kirk asked.

The stranger allowed his eyes to run over the scene. The rocks for fifty yards around showed signs of being sprayed with the jelly-like gray substance.

“Hard to guess,” the man drawled, “but thirty-five or forty ton wouldn’t miss it too far.”

The two of them watched in silence for several minutes. It was interesting to see what care the workmen were using salvaging each particle, classifying according to size and structure.

Kirk began to picture in his mind an imaginary creature that was all nerves and flesh—a gigantic jelly fish—that had somehow lived, not only without benefit of bone, but even without any tough covering of skin.

“Whatever it was,” said Kirk, “it could not have lived in this world.”

“What do you mean?”

“It fell, didn’t it? Well, then, it came from some other planet. Don’t ask me why or how. But you can see for yourself that a creature of that kind could not have bumped up against the tough elements in our world.”

Kirk was so well satisfied with his observation that he rose and started off. He would go to Lester Allison, tell him of these things.

The tall, overalled stranger tagged after him. “Goin’ down the trail, buddy?”

“Up the trail,” Kirk retorted. “See you again.”

“I’m goin’ up the trail, too. My name’s Kite—Bill Kite.”

Privately, Kirk wished that Kite would fly on his own way, for as the two of them climbed up the mountainside together, Kite’s coat would fall open just enough to reveal a letter in the inside pocket—a letter which bore the letterhead of Ubruff’s Laboratories.

“What do you think,” Bill Kite asked, continuing his not-too-natural drawl, “that those fellows are going to do with the brain they salvaged?”

“Grind it up for chicken feed,” said Kirk. “Lovely day, ain’t it? Do you have long summers in this part of Canada?”

CHAPTER III

A Hardboiled Brain Expert

WHEN Kirk parted company with the mysterious Bill Kite he took the trouble to check up. Kite had been left at a filling station on the edge of a mountain village. Kirk had gone over to the general store, and then had ducked back to see what Kite was up to. The latter was telephoning.

“Ubruff’s Laboratories? I want to talk to Ubruff himself… But this is urgent!… I don’t care where he is—get him on… Hello, Ubruff. That rumor was on the level… Yes, there was enough of a specimen that they have got a whole crew on the job… The brain? Yes, I got there in time for a glimpse. They trucked it away… But I couldn’t. I’m no one-man army. Besides, I was on foot… Where? At the laboratory, I suppose… Sure… Tell them to meet me here—at Benton Ridge. And bring plenty of firearms.”

Kirk Riley felt his pulse give a quick jump. He was not sure what he was going to do—he would not be sure until he had done it. That was Kirk’s way—act first and figure it out afterward.

Ten minutes later, along a little path that led down to a mountain spring, Kirk finished knotting the ropes around Kite’s wrists and ankles.

“Lucky I bumped into you again,” Kirk said dryly. “Better get a piece of beefsteak over that black eye. And don’t worry if you have to spend the night right here. The summers are warm in this part of Canada.”

“I’ll get you for this, you and your devilish tribe. I’ll—”

“Don’t forget your mountaineer accent,” Kirk advised. “See you later.”

With good fortune Kirk walked only two miles before he got a ride that sailed him right into the laboratory of Professor Haycox.

The echoes of his footsteps over the cool concrete floor resounded. The two figures on the elevated platform above the vat turned to give him a casual glance.

“Come on,” Lester agreed, and he reassured the professor. “It’s only my good man Friday.”

Kirk mounted the ladder, and for the next hour he watched, over the shoulders of these two scientists, listening to their strange discussion of the mysteries underneath their telescopes. Much of the talk went over his head—speculations over rates of metabolisms, compositions of various types of living cells, physiological systems of feeding, and elimination of waste. In every respect the mass of grayish white protoplasm was mystifying. To be sure, there was a resemblance between this five-ton object and the brain of a man. It was a similarity of form. The convolutions were present over the surface, looking like a

maze of valleys. The brain was clearly divided into two lobes, well balanced as to markings.

The nerve structure was the matter which fascinated Professor Haycock, and he was debating with himself as to whether he should break into the brain surface. Lester Allison tried to counsel with him to call in a host of authorities from all over the world.

“This is an opportunity that may never strike again,” Allison said. “While I appreciate your interest in exalting the name of your own laboratory, I believe this is the time to forget professional jealousies. The world of science would never forgive you if you made less than the most of this find.”

Professor Haycox did not deny this. Verbally he was in agreement. But there was an inarticulate fear within him—almost an instinctive leaping of emotions that frightened him from this course of action.

“Yes,” he would say, “I could name a hundred scientists who might have something to offer in analyzing this brain. I wish that they were here. I wish I could get them without allowing an iota of publicity to reach the papers.”

“You are sure to get publicity sooner or later,” said Allison.

“If I may interrupt,” Kirk Riley began. “I’ve got a strong hunch.”

“You had better keep out of this,” Allison said.

“But if you are anxious to avoid letting the cat out of the bag—”

KIRK’S intrusion was silenced by a chilling frown from Professor Haycox. “This is no cat and there’s no bag, and I hate slang. If you have anything to offer on the subject, put it in technical writing and mail it to me.”

Lester Allison gave the professor a consoling tap on the shoulder. “Kirk didn’t mean any harm. You mustn’t mind.”

“Make him go away,” said the professor. “I am trying to concentrate.”

Kirk blurted, “You’ve got to listen to me I They already know. I heard one of Ubruff’s men calling in for a confab with the big cheese himself. The next thing you know they will be sandbagging you.”

Professor Haycox readjusted his spectacles nervously and almost stepped off the platform.

“I demand that you cease speaking in this inelegant language. ‘Cheese!’ ‘Sandbags’! Are you trying to turn this laboratory into an abattoir?”

Lester Allison shook the professor to silence. “Don’t you understand? He’s telling us that Ubruff’s have our secret. They are going to make trouble. Now you had better call your experts in while there is still a chance.”

Then a new voice broke in upon the discussion.

“So you want an expert, do you? Very well, I have come just in time.”

Kirk and the others turned to see a stocky, well-dressed man sauntering across the floor toward them, levelling a huge pistol.

“Who is he?” Allison whispered. Kirk had no answer, and the professor was too scared to answer.

“Come down,” said the gunman in a low voice. “You first, Professor Haycox. Take it easy, old man. We are going to need you later on. All right, you next, Allison. No, not so fast. Take your station right there at the far corner of the platform where I can keep my eyes on you. All right, Scrub, your turn, and no monkey business.”

Kirk found himself lined up with the other two at the far side of the tank. Now the gunman mounted the ladder himself. On top of the elevated platform he assumed a very casual and friendly manner, waving the gun idly.

“Sorry I had to bring in a little artillery for a calling card,” he said, and his sarcasm showed in a sinister twist to his lips. “But you never know what kind of people you are going to bump into these days. Now, you take my pal, Bill Kite—that’s one of his names—he had a little encounter with a fellow who was so handy with his fists that I don’t suppose Bill will go out nights any more. He’s nursing a black eye all right, and scared? He’s so scared he can hardly wait until he gets his hands on some puppy of a stooge from this biscuit bakery that calls itself a laboratory.”

Whenever the man stopped talking, Kirk thought he could hear a slight hum from the gun. It was large, as pistols go, and it might have concealed something besides bullets. Perhaps a ray mechanism. Kirk wondered. All the while the instrument of death kept waving back and forth in the gunman’s hand. Kirk took comfort in the fact that it was not pointing toward him or either of his friends. If it had been a garden hose it would have sprayed the brain from one end to the other, time and again, the way the man was waving it. Now Kirk guessed that the hum was something the gunman meant to control by his incessant talk.

“Do you reckon he’s sweeping that brain with a death ray?” Kirk tried to whisper.

“Shut up, you,” the man shouted, “I will do the talking.”

And he did, for another ten minutes. Then, suddenly, he ran dry.

“Thank you, gentlemen, for a very interesting evening,” he said, and climbed down the ladder and strolled across to the exit.

Lester Allison started toward him. The man flourished the gun in a desperate manner. “Better stay where you are, friend Allison. You are a good space pilot, and the world would hate to lose you.”

Lester did not stop. He plunged ahead, like a football player bent on a touchdown.

“Don’t aggravate him,” the professor squealed. “He will disintegrate you.”

Kirk was thinking the same thing, only in words of fewer syllables.

But the gun didn’t shoot, and Lester Allison stormed straight at the man who, for some strange reason, decided to drop his weapon in favor of his fists. Those fists were no match for Allison’s. The gunman ducked two blows, then an uppercut got him on the jaw, and he went sprawling against the wall. It was a clean knockout, and the fellow’s eyes went closed.

“Get some rope, Kirk. Tie him up until we can find a suitable room to lock him in. What’s the matter, Professor? Nervous?”

The professor was edging around the gun as if it were a charge of dynamite with the fuse lighted.

“Do you think it will blow up?”

“Certainly not,” said Lester. “It’s no gun—it’s a movie camera. This thug came to capture our brain on film.”

“This is only the beginning,” said Kirk. “That Ubruff gang is gathering up for an attack—with firearms. I heard the whole thing in a telephone conversation.”

CHAPTER IV

Flying Starfish

IF A CERTAIN warning had not come to Lester Allison from his wife, he might have walked out on this mysterious situation.

He had no official business connection with Professor Haycox and he felt out of place here, trying to lend advice to a problem he knew nothing about.

“I really have nothing to offer,” he assured the Professor as they breakfasted together. “I repeat that I have never seen a specimen in any of my travels that remotely resembles this creature with the brain.”

“Maybe you will,” the professor suggested, “in your future travels.”

Kirk felt a glow of enthusiasm. He had been lucky to follow Allison into this event. Nothing could suit him better than to be taken along on a few excursions to other planets in search of massive monsters with five-ton brains.

“It would not be easy for me to drop all of my present connections,” said Allison, “to go skylarking around in search of the unknown. If that was your thought in calling me here—”

Professor Haycox tapped him on the arm. “Please don’t jump at any hasty conclusions. I will compensate you for your time and trouble in coming here. If this ends your connection with the case, don’t you see that you have already lent a valuable assistance?”

“How so?”

“By scrutinizing this specimen and stating that you have never seen anything like it. I will use your name when I am ready to announce my discovery to the world. Have you any objection?”

“Certainly not,” said Allison.

Then he fell silent, frowning. The mystery was taking root in his mind, Kirk guessed.

Then a telegram was handed to Allison, and he excused himself to read it. It was from his wife.

EXCITEMENT HERE OVER STRANGE CONDITIONS IN ATMOSPHERE STOP ALL OBSERVATORIES PUZZLED BY YELLOW CLOUDS IN SKIES STOP RADIO RECEPTION FROM SMITT IN MERCURY VERY BAD STOP WHAT CAN MATTER BE STOP

JUNE

Allison passed the telegram around. The three men abruptly rose and left their breakfast unfinished. They walked out to the gardens on the south slope.

“There is a strange light,” Allison observed. “I had not noticed it before. Was it there yesterday?”

“I noticed it yesterday,” said Kirk, “when I was on the mountainside. But I have never been in Canada

before. I figured maybe the air was just naturally a little more yellow up here."

"Don't be absurd," said the professor. "We have the clearest, finest air in the world. And now, if you gentlemen are through gazing at the clouds, would you care to resume our conferences?"

Allison was still gazing. "It reminds me of a covering that surrounded the Earth during those terrible raids from the warriors of Venus, when Sasho was the emperor. I will never forget the view of the Earth I had from a space ship, one of our old reliable Battering Rams. Sasho had sprayed the continents with explosive gas, and the rocket fire from his ships had ignited it. I never saw such a mass of red and yellow flame in my life." Professor Haycox began to take interest in the sullen, amber-colored skies. "Do you mean that might be a blanket of explosive gas?"

"If I thought so," said Allison, "I wouldn't be standing here. I was simply reminiscing, but I didn't mean to borrow trouble. However, think I'll spin out to the Rocky Mountain observatories and stop in at my resort home. Mrs. Allison must be a little upset or she wouldn't have wired me. I'll go at once."

"I will call my chauffeur," said Professor Haycox, "and accompany you to your plane."

There was a waste of time for Allison in this arrangement, but it was a well-meant courtesy. The professor was groping for help, and his anxiety to talk with someone about his discovery made him seem rather too insistent.

"Won't you come back next week, Mr. Allison? I will guarantee your expenses, of course. By that time I may have some data on the nature of the planet from which this monster must have come. By piecing together the evidences you understand, such as the strength of muscles, response to air pressure and adjustments to temperature, we should be able to guess what sort of climatic and gravitational habitations the creature lived in."

"I wish you all success," said Allison. "But I must remind you again that this is out of my line. I strongly advise that you call in other experts in biology for consultation."

"THEY arrived at the private airport. While Kirk checked the plane, he kept one ear turned to their conversation.

"Then perhaps after we settle upon a probable planet," the professor was saying, "you will be so good as to make an expedition and take me along."

Lester Allison laughed. "You should visit my office and see the pile of work that is waiting for me. I am afraid my time is pretty well filled for a year to come. But there are many apprentice pilots, and if you get ready for an expedition, I will be glad to recommend one. Our friend Kirk here might be the very man."

Kirk had a happy vision of returning from a heroic adventure, of stepping down from his space ship to receive a wreath of honor from a group of beautiful girls. Then he thought of Professor Haycox, who would be standing beside him, and in his vision the wreath slipped from his shoulders to those of the professor. And then there was cheering, and the professor unwound a long speech in words Kirk could not understand.

"What are you dreaming about, Kirk?" Allison asked.

Kirk came to himself with a jerk. He shook his head dubiously.

"I wouldn't be the pilot for Professor Haycox. I'm afraid," he confessed, "unless the perfessor and I could get together on the King's English."

The leave-taking was delayed for a moment when someone from the laboratory came speeding out to the port.

“Pardon me, Mr. Allison. This is my assistant. Let me see what he wants,” the professor said.

The assistant was in a state of high excitement. He wanted to tell everything at once. He and the Institute’s lawyer had tried to talk with the culprit who had caused yesterday’s trouble.

“We have still got him locked in the back room. He is raving something awful. He says he will have our place blown up if we don’t let him out. He claims he has got a bunch of friends on the way already.”

“From Ubruffs?”

“That’s our guess. Once he talked about Bill Kite—”

“I know Bill Kite is from Ubruffs,” said Kirk.

“But now he is trying to claim he never heard of them, and he dares us to try to arrest him. He tried to make out that he was some sort of a Government agent.”

“Did he tell you his name?”

“He said we could call him Champ Gaskell, and if we would give him a chance to use his fists he would prove he was a champ.”

Professor Haycox was highly disturbed. He was not a man to take trouble in his stride, and so far his attempt to get a monopoly on this unique physiological specimen had brought him nothing but trouble.

“Call the police,” Professor Haycox said. “We will tell the story to them even if it does get to the papers. We have got to have protection.”

At this point the chauffeur broke into the parley. He had a morning paper in his pocket.

“Take a look at this, Professor Haycox. If you think you are going to keep this big news out of the papers, I am afraid you are behind the times.”

The professor adjusted his glasses, and Kirk Allison gathered round for a glimpse of the front page.

The photograph filled a quarter of the page. It was a cloud scene. Hanging low in the sky was a dark amorphous object—a sort of flying star-fish.

The caption read, “Is it a cloud or a flying fish?”

Allison read the brief paragraph aloud.

“Name it and you can have it. The amateur photographer who got this unusual picture swears that it is no fake. He thought he was seeing a huge bird or a new type of flying ship. He seized his camera, got the object as it was sailing over him, and here it is. But what is it? No one knows, least of all the amateur photographer. The creature floated out of sight, however, hidden among the low-hanging clouds.”

For a few moments no one spoke, and for no reason at all everyone seemed to be gazing off toward the yellow skies.

Allison asked, “Did your truckmen get in with the rest of that specimen last night?”

Professor Haycox turned the question to his assistant, and he nodded.

“We have the whole staff of Room Three busy on it, trying to piece it together. But they are going to need more room. It is turning into a big forty-ton star-fish with six points. Just like the one in the picture.”

Allison caught Kirk’s curious eyes. “All right, fellow, we will go back and take a look.”

CHAPTER V

Sky-Hooked

IT WAS late that afternoon when Allison and Kirk set their plane down in the little clearing in front of the Allison mountain resort. They mounted the steps of the cottage, rang the bell, waited. No one answered. Allison turned a key and they went in.

“June! June! Are you here?” Then they discovered the note on the table. It was in June’s handwriting.

“Dear Lester: I was not sure how soon you would come, so I have taken the space flivver for a little errand. Everyone at the Rocky Mountain Observatory is so bewildered by what happened in the sky that I offered to take them up. Leaving at 2:00 p.m. Will soar straight to the zenith from the observatory. Be back tonight. Love. June.” ‘

Allison turned the note over and wrote on the back, “This is in case I miss connections. It is now 4:00 p.m. Kirk Riley and I will probably join you above the stratosphere if the Battering Ram at the Denver port has been put in condition. We are off to a late start, so if I miss you on our space jaunt will see you here tomorrow. We will spend the night overhead. Love. Lester.”

Thirty minutes later they reached the Denver port and climbed into the recently serviced Battering Ram. It was a large ship for only two passengers, but Lester preferred it to any other. He had invented this model himself. It had once been his escape from Mercury.

Kirk was proud to take over the controls. “It’s my first time to sail one of these ships. From what I’ve heard, they’re the toughest model in the world.”

“They are the best flying ship I know anything about,” said Allison. “You have probably heard of the part they played when the emperor Sasho tried to take over this Earth of ours.”

“How could I miss it?” said Kirk. “Every one on earth has seen the famous painting of a Battering Ram crashing through the S-37.”

“You see,” said Allison, “those red and black metals from Mercury have a strength and flexibility that are unequaled. It was sheer luck that I was able to take over those mines and shops in Kilhide’s Underworld. But it came to good use. This very ship is the one Smitt used in the final combat with Sasho.”

“And here I am at the controls,” Kirk grinned.

“Are you accelerating too fast for your blood? You’re acting a little giddy.”

“Sheer pride,” said Kirk. But he settled down to an even speed.

Allison spent several minutes at the telescope, but failed to sight the space flivver. June and her party must have swerved from their intended course.

TAKING advantage of the remaining daylight, Allison and Kirk cruised back and forth, trying to guess

the elevation that June and her party would probably seek. But two hours of searching proved fruitless, and Allison concluded that the other party must have already descended.

“We will follow the daylight and see what we can make of this business,” said Allison.

The Battering Ram was now high above the stratosphere. Allison could look back and see the yellow gas toward the Earth. It was in the atmosphere. It was like a dust storm hovering high above the land.

“I don’t understand it,” Allison muttered over and over. “That blanket of yellow seems to be a complete sphere. Do you see any limit to it?”

Kirk shook his head. “What puzzles me, I didn’t see when we passed through it.”

“That’s because it is nothing solid. It’s all steamy—a yellow fog. But who ever heard of a fog rising above the stratosphere?”

“Above? Are you sure?”

Kirk could not quite conceive of there being *anything* above the stratosphere.

“Air can be very thin,” said Allison. “They say it extends outward from the earth three or four hundred miles. But this little gauge is sensitive enough”—he pointed to a dial in the control panel—“that I have detected thin atmosphere as much as 1100 miles out. How far are we now?”

Kirk pointed to the altimeter. It indicated 1800 miles from the Earth’s surface—a quarter of a diameter away.

“Shoot us back down again,” Allison advised. “Let’s course through that band of yellow a few times. If it is not atmosphere, we are going to find out what it is.”

“I suppose you will ride out with a test tube and dip yourself a sample.”

“Not such a screwy idea at that. I might open the air locks and fill up with it, and see what happens.”

“I told my girl in Brooklyn I would be back by the end of the week,” said Kirk, “but I didn’t warn her that I would want flowers and a casket.”

“Get into an oxygen suit, Kirk. We are going to do it. Even if it’s poison gas, it is worth a try.”

“Gee! You don’t want to get this boat full of poison, do you?”

“We can air it out again.”

“Maybe it’ll be explosive gas. Hell, Allison, you will have us blown up higher than the stars.”

“Get into your suit and clamp the parachute locks on good and tight. Here we go.”

By the time they were dressed for any emergency, the Battering Ram had skimmed down toward the 1500-mile level.

Allison took the controls. The altimeter went down—12—10—8—7—750—

“We’re retarding.”

“What happened?” Kirk barked.

Allison shook his head gravely. He touched the accelerator.

“We are still retarding.”

“We are running into something,” said Kirk.

“It is air pressure that’s cushioning us.”

“We are stopping!!”

“Don’t scream,” said Allison. “We still have plenty of power.” He bore down on the accelerator.

“But look at the speed. We are stopped. We are caught in space.”

CHAPTER VI

The Mysteries of Pink Dust

IN A LAND of mighty creatures a teacher had been instructing a class in the mysteries of atoms.

In his graceful seven-fingered hands he had held a chunk of pink colored radioactive substance which he

simply termed a piece of “fuel.”

“What is it? Where does it get its energy? What would we find if we could analyze it—break it down into its smallest components?”

Some of the pupils volunteered answers, for they were acquainted with the journals of science of that far-away land. Others sat in dumb bewilderment, drubbing their seven-fingered hands on their desks, waiting to be taught, unwilling to probe the matter for themselves.

“You are familiar with the fact that all matter can be broken down into molecules, and these molecules into atoms. But what lies beyond? Is there any limit to our pursuit of these infinitely smaller divisions of matter?”

Some student volunteered a partial answer. Atoms, he said, had been found to be made of particles of energy in motion—electrons spinning around a nucleus.

The teacher was pleased.

“There is no limit to how deep our investigations may go. If you have been following the journals, you know that we have recently hit upon certain remarkable methods of investigation. Our telescopes are wonderful. We could not do without them. But we have found ways of surpassing them. We have learned to borrow the faculties of tiny creatures whose sense of perception are much more delicate than ours.”

The bright students nodded to each other. They had heard of this before.

“This bit of fuel which I hold in my hand,” the teacher continued, “is a very small part of our own universe. But if you can imagine ourselves to be tiny creatures only one-billionth our present size, then perhaps one grain of dust which might be scraped from this chunk of fuel would seem large enough to be worthy of our respect.”

Now the idle drubbing upon the desks had ceased. The imaginations were alert to follow this intricate explanation.

“The remarkable fact is that this particular bit of pink substance did chance to furnish the grains of dust upon which certain investigators are working. And what is the method that they have used to gain new insights upon its composition?”

One of the students replied that “intelligent microbes” had been used.

“Correct,” said the teacher. “In recent generations certain investigators have given their lives to the most difficult task of establishing and improving communication with the intelligent microbes. At first it was believed that these tiny creatures, invisible to our naked eyes, were incapable of a mental life. But now that we have a system of common symbols, we have interchanged ideas with them, and they have given us a first-hand verification of our theories of the composition of matter.”

The teacher held the pink substance up to the light and looked at it admiringly.

“Grains of dust from this fuel are still under observation by a colony of so-called ‘graduate’ microbes. Our knowledge of what they have learned is only fragmentary. But would it not be exciting if we could reduce ourselves to their size, to know what they are seeing?”

CHAPTER VII

The Graduate Microbes

THE entire room had been given over to the graduate microbes.

Here they had been installed from the moment the superior creatures of this land had made the revolutionary discovery that microbes could be utilized for their own intelligence. It was dangerous for the great creatures to enter this room, not for themselves but for the damage they might do. The graduate microbes were invisible. One could never be sure whether they suffered from being stepped on. Or, more important, whether they might have installed scientific equipment of their own which could be endangered.

The graduate microbes, however, were intelligent enough to make their own adjustments to those massive creatures who had provided this world for them.

"It is a new age for us," they would say. "There was a time when we lived in the darkness of our masters' ignorance. In those times all microbes were viewed with suspicion, but now our masters know that we are many species and classes, and in each class we have our own individual differences. Now that they have segregated the more intelligent of us, we have come into our rightful glory."

If the microbes were somewhat amazed at their success in contributing to the knowledge of their great masters, it was purely because they had worked under the handicap of smallness. It was no easy matter to communicate with creatures so large that they could not see you. Generations of effort had gone into the building of a system of common symbols. There had been wasteful trial and error before the first signs of success.

But the graduate microbes were exultant for another reason. If they boasted and strutted and ballyhooed their success in glowing terms, one of the reasons was that they had acquired the services of another race of creatures.

"We are wonderful business men. We have the traits of genius," they would say. "We have not done this work ourselves. We have found subordinates to do it for us—tiny creatures to whom the microbes seem to be giants."

The civilization of the graduate microbes was dominated by this psychology. It made up for their smallness in comparison to their masters. It gave them a sense of domination which compensated for everything.

Though the big creatures were their masters, they in turn were the masters of this subordinate race—*the civilized fleas*.

There was a proverb in the language of these intelligent microbes which ran: "The two-legged flea is the lowest of all creatures. It is an abomination, deserving nothing but destruction."

This proverb had been handed down from those dark ages of the forgotten past when all fleas were thought to be pests.

But time had changed the status of the lowly flea.

It was, in fact, the development of scientific instruments in the laboratory of the microbes which led to this discovery. These parasites, so tiny they could hop over the bodies of microbes without being noticed, were found to be industrious. They boasted a language of their own. They had energetic, green-coated bodies which were capable of leaping through a distance many times their own height.

In size they were only about one ten-thousandth the weight of their masters, the graduate microbes—very insignificant little creatures indeed.

But to the eye of the microbe they were visible. Therefore, they could never hope to be out of mind. There had been trouble, of course, but as time went on the badly behaved members of the flea race had been killed off, while those showing a capacity for adjustment had found a place for themselves in this heterogeneous social system.

The fruits of this relationship were at last being harvested. The knowledge of the fleas was being passed up the line to their gigantic masters, the microbes, who in turn would communicate this knowledge to their mammoth superiors.

When the biggest of these varied forms of life decided to investigate the nature of matter, they called upon their servants to provide the fineness of their microscopes and other atom-splitting equipment.

The microbes themselves were much too large to see into atoms, but their servants, the civilized fleas, looked into the matter.

The fleas reported what they saw. Their discovery was far more startling than the most daring theory had suggested.

Yes, there were component parts to be discerned within the atom itself. There was a nucleus—a comparatively tiny ball at the center—surrounded by several spinning balls of slighter dimension. This whirligig of energy—mostly space—was what the fleas found the atom to be. Around them was an immense and boundless universe of atoms—known to the greatest creatures as a bit of pink dust!

But the exciting details which they added to this description were that some of these tiny whirling bodies were *inhabited*!

THE amazing discovery skyrocketed upward through a series of jumps, to penetrate the minds of the great creatures who had prompted this investigation.

“How do you know? What evidence did you find to suggest that these tiny electrons can be inhabited planets?” The question filtered down by way of the microbes to their parasite slaves.

“How do we know that those balls are inhabited?” The civilized fleas hopped around nervously before they would answer the question which caused them considerable agitation. They were not sure whether they wanted to give away their secret.

“We know it is true,” they would reply. “Take our word for it.”

Their microbe masters bore down upon them with renewed pressure—pressure which had been applied from above. When pressure failed, they appealed with an argument for fair play. This sort of friendship demanded the utmost frankness and honesty. There should be no secrets.

“Our very security in this laboratory—our universe—depends upon our cooperation with the great creatures above us,” they warned. “For your own survival you dare not break the chain of friendship.”

The fleas saw the reasonableness of this argument. They walked the wide floors of their boundless world (which was nothing more nor less than the broad table-top in the corner of this wide room). They joined in parades for or against the policy of revealing their secrets. Their green bodies might have been seen by their master microbes massed in throngs of thousands, assembled to listen to the arguments, pro and con.

And if the microbes had taken the time to follow the details of this conflict they could have witnessed

many a fist fight, many a life and death struggle with metal weapons. For these little green two-legged creatures realized that this was a crisis. Their independence was at stake.

Some would argue that it would be impossible ultimately to withhold any secrets from the master race. "We are vulnerable. They can see us with their naked eyes. If we cheat them of our most important secret, they may bring our idyllic existence to an end."

"But they cannot afford to do that. They need us."

"There are other fleas. We are not indispensable."

In the end a compromise was reached. The lively, headstrong, conceited leaders persuaded their masses that a small amount of information could be imparted, but not all.

"Let's admit to our giant masters, the microbes, that we possess high-grade scientific instruments of our own. Let us acknowledge that we have learned to carry on our own investigations through the use of lenses, telescopes and microscopes. This will be enough to tell them."

And so an agreement was reached. But the most important secret was withheld. All the fleas agreed that they would not reveal that *they, too, had a set of living servants—the "one-cells"—little invisible lives who were all nerve and brain.*

CHAPTER VIII

Starfish Outward Bound

LESTER ALLISON had been something of a legend to Kirk Riley until now.

First, he had been a picture in the papers and on the television screen. Then he had been the hero in the mayor's car that paraded down the streets under a deluge of ticker-tape.

He had been the subject for inspirational lectures, movies, and books for schoolboys. He had been these things because of his supreme achievements in two great crises which could have been surmounted only by a genius of space.

But now Kirk was seeing the real Lester Allison—a hero in a jam. In comparison to the valiant space man, Kirk himself felt helpless, paralyzed.

His interest in watching the elder man's schooled hands play over the controls made him a useless spectator.

He came to life when Allison shot a sharp glance at him. It was a look that said, "Do something!"

Kirk looked around helplessly, made several false starts, found himself completely bewildered. According to the dials the ship was suspended at an elevation of 750 miles.

"What am I supposed to do? Grab an ax and chop away an invisible jungle?"

"Get on the radio," Allison snapped. "We will try to get a call through to June."

Beside the radio controls there was a small chart, and Kirk found the wave-lengths listed. In a moment the instrument came to life and the receiver began to hum.

"Calling June Allison… calling June Allison…"

“Up a little higher on your rheostat,” Allison advised. “That’s O.K. Hold it right there. Keep on trying.”

“Calling June Allison… calling June Allison…”

This routine went on for many minutes. It gave Kirk freedom to watch Allison as he tried to shoot the ship out of this dead spot.

The countermotors roared. The dials showed that the ship was achieving a slight lateral motion. Then the accelerators went down, and the big rocket motors bounded and there was a brief forward jerk. The ship might have been lurching into a vast invisible elastic ribbon. Its momentum was lost in a cushion.

“We are getting nowhere fast,” Allison grumbled. “Whatever this thing is, it is getting thicker. We had better head for the open spaces.”

“Or can you? I figured we were all tangled up in a mess of invisible wire or something.”

“Keep on that radio,” said Allison.

The boat ceased to plow the space in a vertical direction with the Earth as the goal. Little by little it nosed around, until it was going into the invisible band of obstruction on a shallow angle.

Kirk jumped with enthusiasm. “That’s it, Allison. Give her the old works—er—calling June Allison… calling June Allison…”

The boat swept back and forth and was at last rocketing along at a moderate speed.

“Are we out?” Kirk asked.

“We are in,” said Allison. “We have nosed through like a rat through a maze. Take a look, since you are not doing anything else. See that yellow air?”

“Gollies! If it wasn’t for the color I’d think the Milky Way was closing in on us.”

“The tail of a comet would be more like it,” said Allison. “The next time you have an evening off you had better brush up on your astronomy.”

“The girl friend in Brooklyn gets all my evenings off.”

THEY drifted along at what Allison called his atmosphere speed—snail travel compared to his normal pace through the great skyways, but a safe speed for penetrating the friction-producing air that hovered around several of the solar planets.

But Kirk saw that they were not heading for a port. If he read his hero’s expression correctly, he guessed that this mysterious challenge had got under Lester’s skin.

Now the radio came through: “This is June Allison… this is June Allison… are you there, Lester?”

Allison took the microphone. “Hello, June. I am calling from the Battering Ram. Altitude 650 miles. Kirk Riley and I have just pulled out of a tangle with the atmosphere. I don’t understand it. Did you and the astronomers get up this way?”

“We have just now landed,” came June’s voice. “We reached 700 and skirted along the under side of that yellow layer, whatever it is.”

“What did the astronomers make of it?”

“They tried to take dimensions and measurements, and you never heard such a conglomeration of mathematics. But they don’t have any idea what it is.”

“You didn’t have any trouble getting away?”

“When we got our samples of atmosphere from the highest elevation, I thought I was running into a belt of friction. But I pulled right out. When do I see you, Lester?”

“In a few hours, honey. There is only half a globe to surround before I will be home.”

They sent the Battering Ram on a bee-line, and Lester continued at the radio, trying to contact a few of his business associates.

What news he could gather was no more than he had found for himself. The astronomers all over the Earth were in a state of amazement. Chemists had arced over the stratosphere to capture a few samples of what they thought might be a poisonous or explosive gas. Newspapers were said to be screaming headlines warning of some impending catastrophe. Inevitably the news made comparisons to the gas war which Sasho had brought to the Earth only a year ago. America was still rebuilding as the result of the wide-scale explosions. The terrors of the past were on tap.

Allison grew grave as he contemplated these things.

“There will be a regular panic of fear,” he said, “but in twenty-four hours we may know. If the chemists analyze their samples of the yellow atmosphere and find it harmless, there will be nothing to do but wait. After all, the color may not be a gas at all. It may be some curious accumulations of planetary magnetism, coming together in a new combination.”

Kirk was seeing his hero now as a person afflicted with normal human weaknesses. Like anyone else, Allison was given to optimistic gropings. But no hypothesis sounded at all hopeful.

The Battering Ram swung back to the Rocky Mountain area just as the pink of dawn was showing on the horizon. As the ship settled down, Kirk, seated at the telescope, gave an exclamation of surprise.

“Come here a minute, Allison. Take a look at this.”

“What have you got?”

“The biggest flying bat you ever saw. Or is it a starfish?”

“Give me that telescope!”

Allison’s eyes narrowed on the lens, and he kept the instrument turning slowly along the northward line of the horizon.

“Good eye there, Kirk. I’ll fill your chest with medals for this.”

Allison leaped back to the controls and set the ship in motion.

“Wait a minute. Where we going?” Kirk gasped.

“There’s no time to change to a plane,” Allison snapped. “Get on the radio and call June. Tell her we’re on the trail of something and I won’t be home until I get a photograph.”

CHAPTER IX

Shadow Out of Nowhere

THE "flying starfish" hovered along at an elevation of two or three miles, so close to the Earth that an observer might have thought it an odd-shaped space ship looking for a spot to land. It was seeking the twilight zone. It moved along just fast enough to keep ahead of the rays of the rising sun.

"Do you ever get hungry?" Kirk asked.

"I could do with some eggs and bacon," said Allison. "Why?"

"Because in three hours we are going to be over the wide Pacific at the rate we're going. And there won't be a restaurant in sight."

They were skimming along at an elevation even lower than that of the flying starfish. Allison's object was to find a way around without attracting the creature's attention, so that he could catch a picture against the white eastern sky.

"Why don't you want it to see us? I hope you don't figure it's big enough to do any damage to the Battering Ram."

"Certainly not," said Allison, "but if it has a nest somewhere over these mountains, I'd like to know it, and if it's just taking an easy swing around the globe for exercise, I'd like to know that, too. We can eat breakfast when we get back."

"Twenty-four hours to breakfast!"

Kirk pressed his hand against his forehead and pretended to pass out.

"All right, Hungry. Trot yourself back to the kitchen and see what you can find in those upper drawers. There should be a few packages of food concentrates."

For the next half hour Kirk puttered around in the kitchen. This was another new luxury for him—eating on board a space ship. It was a cinch that a grease monkey in a space port missed out on all the fun.

He found coffee, too, among the shelves of food pills, and was soon preparing the breakfast, that would have made all the boys back in the space port jealous. He would tell his girl friend in Brooklyn about this.

Not until he brought a tray of food to Allison did he realize that the ship had been accelerated.

"My stars and comets! We are rocketing along at 100,000 miles an hour! When did that happen?"

"Get your blinkers up against the telescope," said Allison. "Tell me if you see anything."

Kirk obeyed. "I don't see anything but space. There's Uranus off to the left. Where the devil are we? It's all velvety black."

Kirk tried to turn the telescope back to the Earth's atmosphere, but if he wanted to see the Earth now, he would have to view it from the tail of the ship. He was gasping.

"Did you mean to do it, Allison? You have got us leaping straight across the solar system. I thought you were chasing a starfish."

Allison drew a worried breath. "I'll be blasted if I can figure what it is all about. But a few minutes ago,

the most gigantic object I ever saw reached through this space between planets, and by George, the sailing starfish zigzagged until he got aboard that thing."

"What thing?"

"That long bar that came reaching out of space. As nearly as I can describe it, it was a long, straight shadow. But it must have had substance. Somehow it took the flying starfish aboard, and then it pulled away."

"Pulled away to where?"

"That's what I'm trying to find out. I am right on the line of its retreat. But my honest opinion is it has swung clear out of the solar system."

"And you are trying to chase it?" Kirk gasped. "My stars! Is my gal friend in Brooklyn going to miss me!"

WHETHER the world of green fleas was afflicted with a larger share of conceited personalities than any other society of intelligent creatures, may be a subject of interest for some social analyst in the future. It may be found that this race of two-legged, two-armed, twin-horned animals had reasons for developing along the lines of self-glorification.

"We are the ones who do the work. Without us, the fine plans of those masters who overshadow us would come to nothing."

This announcement, expressed by one of the most voluble of the civilized fleas, was a sort of keynote. It expressed what all of the hard-working fleas felt. They were the gropers, the toilers, the over-proud executors of this chain of scientific investigation.

It was a flea by the name of Lyon who sounded off with this keynote announcement.

Lyon was no greener than his brothers; he was no taller. Perhaps he was half a girth rounder than the average. It is certain that he was considerably noisier than most.

When the new instrument, with its finely ground lenses was to be hauled up in place, Lyon was the one who stood by the path, shouting in a stentorian voice: "Heave, boys! Don't lag there! Keep it moving!"

Eight hardworking fleas had put their shoulders to the wheels and were making good progress. But the hearty encouragement from Lyon added to their energies, it seemed. With renewed vigor they rolled their burden down the trail.

One of their brothers, a slightly scrawny individual named Zeerat, who was considered by some to be a chronic complainer, muttered unhappily over this outburst of energy.

"Why do we let Lyon tell us what to do? We know where we are going. If he wants more speed, why doesn't he put his shoulder to the wheel?"

"Lyon is too fat to work," one of his companions rejoined, "but what he lacks in muscle he makes up in voice."

"Very generous of him," Zeerat grunted.

"I maintain that Lyon is an individual of great force," said Ark-Lark, the companion. "He has encouragement for everyone."

And another flea added, “We need fellows like Lyons to make our speeches. There will be an occasion for a speech as soon as this telescope is mounted and ready for action.”

Several thousand fleas were gathered at the appointed spot when the hour for the speech arrived. There was a shouting and a beating of hands to welcome the dignitaries of the occasion. Around the base of the telescope there was a semi-circular platform of concrete.

The train of dignitaries mounted the steps.

The most important figure was Prince Zaywoodie. He was tall and handsome. His eyes were very black, his horns very green. It was said that Prince Zaywoodie had won the jumping contest every season since he had grown to maturity.

Now the Prince spoke.

“We are living in an age of enlightenment. For many seasons past there has been a shadow over our race. But recent advancements are bringing us into the light.

“We must no longer feel that we are inferior to the microbes. They may be ten thousand times as large as we, but that does not make them ten thousand times as important.”

Mass cheering greeted this assertion. Lyon, sitting at the end of the platform, made himself the unofficial leader of the applause by urging the crowd to keep on.

But Prince Zaywoodie waved for silence and continued, “Some great creatures higher up have conceived of the idea of investigating what they call the ‘atom’. They think that this is an original idea. We know that it is not.”

This brought an outburst of laughter, and again Lyon led the cheering.

“We are close enough to the atom that we can see into it,” Prince Zaywoodie went on. “When it comes to exploring a mystery, we are on the ground floor. But these vast creatures who think themselves our masters are handicapped by too much size. We know that they are so large that they have to use instruments even to see our master microbes!

“We in turn are so much smaller that the microbes themselves used to consider us pests. The very name ‘flea’ which they gave us was once a term of scorn. But today we are proud of that name. It is a symbol of greatness. *We are fleas!”*

The tumult with which this masterful bit of oratory was received excelled anything on record. It was not confined to shouting, but included a considerable amount of leaping. Even the dignitaries on the stage bounded up and down with joy. Lyon jumped clear over the telescope, and came down to the stage shouting, *“We are fleas! We are fleas!”*

IT TOOK several moments for Prince Zaywoodie to calm the crowd so that he could continue.

“At last we have perfected an instrument which will enable us to do what none of our superiors can do. We shall be able to examine the surfaces of those electrons which make up the atoms of that ‘pink dust’ which has been dumped into our universe. We are now making arrangements to capture one of these electrons.”

There was more cheering and much gazing into the great atmosphere overhead. As most of these highly developed fleas realized, the atoms which had been brought into this universe were largely space—space that abounded with energy—space whose only form was that of the whirling electrons which it contained.

It had been a source of never-ending amazement to these fleas to watch the spinning and whirling of these bodies.

“The surprising thing that has come to us,” said Prince Zaywoodie, “is a rumor brought back by some of our slaves—the one-cells. Before attempting to capture one of the electrons from our laboratory universe of atoms, we took precautions to send a squad of one-cells into the midst of this pink universe to explore. A few of these have returned. By means of manipulating their six arms, they have transferred their knowledge to us through the established six-arm code. And what is this surprising fact they brought us?”

The speaker paused, and the thousands of civilized fleas waited with bated breath.

“We find that some of these electrons are actually inhabited. Yes, inhabited by living animals which roam over its surface, even as we roam over the surfaces of our larger universe.”

A low murmur spread through the audience. Imaginations were challenged. How could one conceive of animals tiny enough to dwell upon the surface of these little electrons?

“We have considered the electrons of our laboratory atoms to be too dangerous for handling. As you know, they vary in size. Some of them have diameters no greater than our height. Others would outweigh us thousands of times. All of them spin with such regularity that we have not dared to interfere with their courses.

“But now that our one-cells have observed living creatures upon them, what could be more logical than our ambition to carry our research further? For this purpose we have built and we now dedicate this great telescope.”

Prince Zaywoodie bowed time and time again in acknowledgment of the enthusiastic response from his audience.

There were other brief speeches. There were warnings that these further experiments might involve dangers, but fears were overshadowed by hopes. And above all, the spirit of the occasion was a promise of new features of achievement, which were sure to make an everlasting impression upon the master microbes and their superiors.

The occasion was climaxed by the appearance of one of the one-cells, who had made an excursion to the surface of an electron.

Compared to the fleas, this one-cell was much too small to be visible to the audience. But the inventive fleas had provided for this emergency. By a series of reflectors they magnified the image of the one-cell so that it showed upon a screen.

Through clumsy processes of waving its six arms, the one-cell communicated a few words to the audience. The more educated of the fleas read the symbols as they came forth: “One… of… the… electrons… is… inhabited… by… tiny… creatures… who… walk… on… two… legs… and… resemble… fleas.”

CHAPTER XI

Crystallized Yellow

THE Battering Ram rocketed along at full speed for several hours, and Lester Allison and Kirk Riley didn’t give the telescope a moment’s rest.

“How much farther are we going?” Kirk asked. “Where’s our limits?”

“Our limits are our fuel supply,” Allison replied, “but we may as well turn around. It is a wild goose chase now.”

“That’s what I figured. This thing you’re chasing was just a dream.”

“It was something from outside the solar system,” Allison declared.

Kirk shook his head. “I know how it is. A fellow drops off to sleep for just half a second and he can see the stars jumping around, but they are back in place now and I’ll keep an eye on you to be sure you don’t doze off again.”

Allison chuckled. “So you think I have been seeing things. Well, I hope you are right.”

They turned the Battering Ram back toward the Earth.

Several hours later they were seeing that strange thing again—a sphere of yellow encompassing the planet. It was larger than before. It appeared to be a thin, transparent balloon, inflated to the breaking point.

Through this amber-colored, diaphanous covering they could see the Earth itself, neatly centered within.

Allison did not have much to say. This phenomenon was unbelievable. It could not be, and yet there it was. But Allison now thought of all of the alert astronomers on Earth who had seen this strange thing in the making. He only hoped that they would have some clue as to its origin.

“My stars and comets!” Kirk kept saying. “Do you reckon we can bust through that thing and get back home?”

Allison drew a deep breath. “We will soon find out.”

The great surface of transparent substance rose and spread wider and wider until the space ship seemed about to land on an endless floor of glass.

It was a tricky business. The instruments reacted as if this were the surface of the Earth. But the gravitation gauge was misbehaving, its arrows jumping erratically.

A good share of the Sun’s light filtered through to the Earth so that there was a soft amber glow coming up through the transparent floor. On the upper surface, rays of the Sun blazed brightly, like a morning light off a wet pavement.

“We will never get through there,” said Kirk.

“If the Battering Ram can’t, nothing can.”

For three hours they circled, searching for some flaw or break in the surface. They spun round the entire Earth at high flight speed. Everywhere it was the same. The search was futile. The Earth could not be reached without a forcible penetration of this shell.

Allison slowed the ship down as if for a landing, and lowered it until the landing gear touched the surface. There was a sharp scream of friction and the ship shuddered. On the instant Allison cut for elevation and was again well above the surface.

“Look back, Kirk. Did we cut a break?”

“You didn’t even leave a dent.”

“All right,” said Allison, “strap yourself into your seat and set the levers for a take-off shock.”

“What you gonna do?”

“Take a long chance. Are you all set?”

Kirk felt himself getting pale around the gills. “If you’re figurin’ on smashin’ head-on, just let me out. I will gladly walk home.”

“It’s a long, long way to Brooklyn,” said Allison. “Hold tight.”

SEVERAL minutes were spent in checking the mechanisms to make sure that the ship could withstand a series of shocks. At last, when the landing gear had been drawn in, the airlocks checked, and the two oxygen-suited pilots fastened in their take-off seats, the Battering Ram accelerated.

The angle was chosen with care—the shallowest shot that Allison could take that would still give the nose of the ship a chance to go into the surface.

The Battering Ram charged down like a bullet.

“Here we go! Hold tight!”

Kirk did not have to be warned. He was holding on for dear life and his eyes were closed. Then—

BRROOOMMM!!!

At the instant of striking Allison’s hand jerked down on the stick.

Kirk opened his eyes, a little surprised to find that he was still alive. He glanced out to see what had happened. The ship had bounded up like a bouncing ball—a grounder skimming along close to the surface.

“Here we go again!” Allison shouted. The ship nosed down.

BLAANNNGG!!!

Kirk was afraid to open his eyes this time, but when he did he snapped them closed again. The ship was shooting down once more.

This time when it struck, Kirk emitted a painful groan.

“What’s the matter?” said Allison.

The take-off seats glided back and forth and came to a dead stop before Kirk opened his eyes to answer.

“If I live through this, I will go back to Coney and hire out as a human skyrocket.”

“If you have any bright ideas about how to get back to Coney, tell them to me. We are up against it, Kirk. We are three thousand miles from the Earth’s surface and we are locked out.”

CHAPTER XII

A Job for Mercury Metal

"WHAT are we gonna do?" asked Kirk. "Can we land and wait to see what happens?"

"What do you think will happen? Do you figure some expedition will come to our rescue if we settle down and wait?"

"Well, they ought to see a speck on the surface sooner or later and come up and investigate."

"I am afraid we would have a long wait, partner. I'll admit this thing has me stumped. But in the first place, we have got to think of something besides our own necks, and as long as we are on the outside we have a chance to contact other planets for help. Now, Kirk, do you have any ideas?"

It was a challenge to the younger man. He stopped to realize then that his hero worship had built up a dependence upon Allison. But this problem was new, and there was no reason to assume that Allison knew all the answers.

"Well, if I had got into this jam by myself," said Kirk, "and was drifting around up here alone, I'd try to figure out something, by Gollies!"

Lester smiled. "Now you're talking. Where do we go from here?"

"Well, first of all," said Kirk, "we better try to communicate with the space port on the earth. And second, if they can't give us any answers, we had better get to another planet in a hurry, before we are out of fuel."

Allison nodded. "Very good, Kirk. We will do both at once. You take the controls. I'll get on the radio."

"Shall I shoot for Venus?"

"It happens to be on the other side of the Sun," said Allison, "and besides, my shops are in Mercury. Can you get your bearings from the three-dimensional chart?"

"I'll figure it out," said Kirk. "So long, Brooklyn! We're Mercury-bound."

Several hours later the storm surfaces of the planet nearest the Sun were swelling and boiling like a ball of smoke. The planet was right in front of the Battering Ram's nose, and as it grew to fill the whole sky, Kirk had the sensation of falling headlong. He was a little dizzy from his long siege at the controls, but he was willing to pick a spot for landing if Allison wanted to give him the chance.

However, Allison had been disappointed in his efforts to get through to the Earth by radio. Perhaps he felt the need of working off some nervous energy. Without a word, he motioned Kirk to one side and he took over.

The ship circled, after retarding, before it dipped down toward the mountainous region where heavy forests made landing seem impossible.

"It's too bad June isn't along with us," said Allison. "This is our old stamping-ground. If you will look carefully, you'll see the landing chute that we are headed for. There is an underground world here. Once an American scientist named Kilhide made a good thing out of the natives who lived her."

"You mean the Dazzalox?" Kirk had heard the accounts.

“Right,” said Allison. “We had some stormy times, June and I and Smitt and the others, when we were brought down here as slaves. But as things turned out, it was really a lucky break. We have yet to find any metals that can stand up against these Mercury products. In a few minutes you will get to see the Kilhide shops.”

Kirk watched the ship thread its way slowly down through the long rock tunnel.

There was a low roar of landing gears echoing through the walls. The headlights reflected gleaming steel tracks along the field. Soon a number of space flivvers and rudders and rocket motors and neat stacks of sheet metal came into view.

“The finest metal in the world,” Kirk gasped. He was beginning to catch the spirit of this place—a space port and factory from which the Battering Rams themselves had come.

“We call this the Red Suburb,” said Allison, as he brought the ship to a stop. “In time you will get to know this place as well as you know your own space port. And I think you’ll like it. It has an atmosphere of its own.”

“THE air locks opened, and Kirk followed Lester out. He took a deep breath.

“It does have an atmosphere of its own,” Kirk gasped. “I think I’m gonna faint.”

“You will be dizzy for a few minutes, but you will get over that. This is the longest space ride you ever had, isn’t it?”

“It isn’t the ride,” Kirk whispered, “it’s this light air, and I’m wobbly on my pins.”

“We are in light gravitation here. You will get used to it before long. There’s an exhilaration in it when you discover you can jump five times as far—say, you’re pale. You had better sit down.”

Kirk went him one better and lay down. He closed his eyes. “Give me time. I’ll be all right in a minute.”

Allison went back into the ship to get a blanket. Kirk felt like a sissy as the veteran pilot rolled him over onto the makeshift bed.

Voices could be heard echoing through the Red Suburb, calling their greetings to the newcomers.

“You catch a nap, Kirk, and come on down to the shops when you feel like it. You will find me down there at work. I have got to get the crew busy, and there is no time to lose.”

Kirk slept the hours away, but as he came to consciousness the problems of the Earth were very much on his mind.

“Here I am on Mercury,” he mumbled to himself before his eyes opened. “We have come here to get more fuel, and we will go back and try to break through that strange shell that is around the Earth. The world’s toughest metals are here, but what good are they gonna do? The Battering Ram’s made of them already and it couldn’t get through… We are stymied… We are locked away from the Earth. And my gal friend in Brooklyn won’t know what became of me.”

Then Kirk dozed off again, as if sleep would lift him out of his troubles. But the big worries mounted before him like grotesque nightmares, staring at him, frightening him. He saw a few flying starfish flying after him, and now they seemed to have great eyes that, leered and mocked. In vast formations they swept the skies, weaving the weird yellow fabrics that imprisoned the Earth in a gigantic, transparent shell.

Abruptly he awoke. Allison was standing above him, smiling.

"Come out of it, Kirk. We need your muscles. I'll help you down to Headquarters. You'll meet the gang, and as soon as you've taken on a little nourishment I want you to lend a hand on the black metal lathe."

"O.K., if my legs will help me up." Kirk climbed to his feet weakly and ambled along, bearing on Allison's arm. "I have just dreamed up some big ideas. You know those flying starfish—I've got a notion they did it."

"Did what?"

"Built the shell. Don't ask me how, but we've got it figured out that they must have come from some other planet, and the way I've got it doped out, why, if there was a thousand of them workin' together—"

Allison gave a low laugh.

"How many million square miles of surface do you think there are in that shell? If that substance had been convoyed to the earth by flying starfish, the telescopes would have seen them—hundreds of millions of them blacking out the Sun."

"But you did see some great black object coming through space, you said."

"You're right, that has got me going. I can still see it in my mind, and Smitt and the rest of the gang have had me describe it over and over to them. But whether it and the flying starfish with the big brains and the shell that has formed around the earth have any connection is more than I can say."

Kirk could hear the hum of generators and the clanking of derrick chains from the windows of the stone walled shop. A moment later he was being introduced to the engineers who made this world of magic go—Smitt, Laughlin, Bob Wakefield, and their crews of mechanics. These were all Americans who, with their families, were living here, keeping the wheels of the Kilhide Mills turning.

Salutations were brief, for, as Allison explained, "We have got a big job on, cooking." Then, as Kirk was led into the noisy shop, he saw what was happening. The Battering Ram stood outside with its nose pointed through the huge aperture in the side of a building. The point was being removed by three workmen.

"We are going to transmit power to the Ram's nose," said Allison, "and there's the mechanism we will add."

He pointed to a blueprint. Kirk's eyes took in the plans: a Battering Ram with an augur in the front.

"If this metal is as tough as I think it is, we will go back to that shell and bore through it," said Allison.

CHAPTER XIII

Rude Awakening

AT LAST they were off again, with high hopes that their scheme would come to some good.

Kirk watched through the windows for a long time, after he had been dismissed from the duties of piloting. To gaze out at that velvety blackness and know that these were the spaceways of which Lester Allison had become the master was an ever-increasing thrill for Kirk. The deepest blue of midnight on the Earth was never so black as this never-ending ether.

But Kirk realized more than ever that he was a novice in comparison with Allison. The veteran flyer had an instinct for direction and distance, and he knew the Battering Ram well enough to guess the approximate speed without glancing at the dials. It must have taken hundreds of thousands of miles of lonely travel to develop this sense.

"You'd better get some sleep, Kirk," said Allison. "I have the controls set so that we will zoom straight for the Earth at a high speed, and I'm setting the alarm to wake me up twenty-five thousand miles from the Earth's core. That will give us ample time for retarding before we approach the shell."

"You remember that the shell was expanding," said Kirk.

"I think it has ceased to expand." Allison reassured. "I have studied it through the telescope for the past half hour. Take a look if you want to."

"Thanks. Believe I will. Oh, Les—"

"Then get yourself some sleep," Allison repeated.

"Are you sure, Les, that you will hear that alarm?"

Allison smiled. "Don't worry, Kirk. I never sleep overtime. I'll be up ahead of it."

Allison trailed off to his bunk.

Kirk took another look at the controls, set for steady cruising. Then he turned to the forward telescopes and spent several minutes gazing at the distant Earth.

What a strange sensation—to be seeing your own home planet from thousands of miles away. That was the Earth all right.

Through the crystal shell the very continents could be seen, with their shadowy mountain ridges. Allison was right about the shell, too. It was still a concentric circle around the Earth, and Kirk guessed it to be about three thousand miles out from the surface.

What was going on back there now, he wondered. What had happened with Professor Haycox and his excitement over new specimens? Had the scientists determined upon some planet as the home of the gigantic flying starfish? What had they learned of the mysteries of that creature's brain? And what speculations must be going on in the Rocky Mountain Observatory?

And what were the boys at the New York space-port thinking? Did they realize that all space business was about to crash head-on into an immovable object? Perhaps there had been accidents already. At any rate, all the sirens and loud-speakers would be screaming warnings for the benefit of every amateur navigator who hoped to take off for another planet.

And what of Brooklyn? Ten to one, the girl friend was crying her eyes out because she had not had so much as a telephone call from Kirk for several days.

Just how many days it had been Kirk wasn't sure. As he went to his bunk and piled down for the "night," he kept puzzling over this matter of time. Without the benefit of dark nights and bright days, he had lost track of how many times the hour hand of his watch had gone round. And that wouldn't have told him anything accurate. The light gravity of Mercury had speeded up the time-piece.

But as Kirk dreamed off he kept seeing the busy scenes in the Kilhide shops, hearing the hum of machines, watching the sweating workmen with their electric torches and giant lathes. The sparks were

still flying in his mind, and he closed his eyes tighter to put that vivid nightmare aside.

He had learned things out of that work siege. He had seen the admiration of every member of that little colony for the leadership of Lester Allison. He had seen the finest example of co-operation under pressure. No bickerings, no disputes, no alibis for mistakes. Trial and error had been taken in their stride. And above all, there had been a strong faith evident throughout every hour of the work.

KIRK wished that his cronies back in the New York space-port could have seen those engineers at work. They were a picked bunch. They were pioneers in this new age of interplanetary travel. And every grease monkey from Nome to Rio would have got a new perspective to have looked in on such a show.

Kirk slept like a log.

Blang!… Blang!… Blang!… Blang!!!

Kirk groaned and roused up. "Alarm clocks! Alarm clocks! Even out in space they won't let you rest. Twenty-five thousand miles from Earth, and the darned alarm clock still hounds you. Where can a man go to get a bit of rest?"

Kirk kept on mumbling as he got into his clothes. He heard no response from Allison and decided that the latter was still sleeping.

"It's a good thing I came along, Les. I bet you'd have slept on until you crashed that shell. Hey, Les, wake up! Don't you know it's time?"

Then Kirk discovered that Allison's bunk was empty. So the seasoned space man had awakened for his appointment, after all.

Kirk rubbed his eyes and marched down the aisle to the control room to make sure. Yes, there was Allison busying himself at the telescope.

"Morning!" said Kirk. "If it *is* morning."

Allison was evidently too busy to answer. Kirk gazed dreamily through the windows. The sky was still full of blackness. A tinge of thin amber sunlight glinted off the Battering Ram's nose. That Sun was millions of miles to their rear, and the other suns—the stars—were hundreds of millions of miles distant—tiny pin-points of white light in the opaque velvet.

Vaguely Kirk realized that something was strange in this scene. He had expected to see the Earth spreading into a wide white disc right over the Battering Ram's nose. At twenty-five thousand miles it should fill a considerable share of the sky.

But it was not there, and Kirk wondered if for some reason Allison had changed the course.

Kirk studied the instruments, and the more he studied the more deeply he frowned.

"Look here, Les, what's happened to the Earth? Somehow I can't seem to get my bearings."

"The Earth," said Lester Allison, "is gone!"

CHAPTER XIV

Through Eyes Too Large to See

IN THE land of great creatures, the teacher went over certain fundamentals with his class.

Some of the pupils drubbed their seven-fingered hands listlessly, for they knew the story by heart. Others were catching it for the first time.

The teacher turned a piece of pink substance in his seven-fingered hands as he talked.

"We should stand in awe of the wonders which make up our world. This bit of fuel feels solid to our touch. I press it and it does not give. If I hammer it, it breaks, but we call it hard. If I scrape it with a knife, it crumbles into dust, but it has offered strong resistance that only a sharp blade can successfully overcome.

"But if we analyze this substance, or any substance, whether it be stone or wood, or the blood from your veins or the air that you breathe we find it to be largely *space.* But within the space there are tiny particles of energy—particles which we may call electrons. And the rapid-fire whirling of these electrons in their courses gives the atom which they comprise a semblance of substance.

"There are veritable universes of these tiny bodies of energy making up the dust from this bit of fuel."

Then the teacher added that thought which always fired the imagination of every student.

"At last we know that certain electrons within this invisible system *do sustain life*.

"We shall never see this life. We shall never have any feeling to give it, no hatreds, no loves or sympathies. Our understanding is too shallow for that. But I say to you that if we could somehow bring to light the ebb and flow of life that is hidden here, we would spend the rest of our days marveling.

"Our invisible servants, the graduate microbes are too large to see into the space which pervades these miniature universes. But there are other creatures, only one ten-thousandth as large as these microbes, much, much too small for us to see. Those creatures were once parasites which lived upon these microbes almost unnoticed. The microbes inform us that these unbelievably tiny creatures are green and that they have a body, a head, two arms and two legs. But to our great eyes they can never have color or form. Our instruments cannot even detect the faint energy waves which constitute light to them.

"But the miracle is this—that these little green parasites are nearly as large as some of the electrons that we are investigating. They can see these electrons. They are sure that some are inhabited. And now it is their plan to accommodate their masters and us by endeavoring to capture one of these electrons, to isolate it for observation.

"How will they do this? Obviously by methods we cannot hope to observe or understand. But we do know this. They will take great risk of life and limb in meddling with any of the established motions of these swiftly flying particles."

CHAPTER XV

Electron on a Straw

IN THE colony of civilized fleas there was a great pandemonium.

Lyon, who had grown more bombastic from the hour that the telescope had been dedicated, was bouncing around the thoroughfares, clamoring to his fellow citizens:

"This is a fine state of affairs. Why don't we do something? Get together, my fellow fleas, and demand that your leaders give you action. There's that fine expensive telescope sitting idle out on the Green Plains."

Some of the fellow fleas shrugged apathetically. They could not be bothered by matters outside their customary routine. Others were stirred, but they had no ideas about what should be done.

But the leaders of the colony were far from complacent. The pressure was upon them. Censure, too, for they had not come through with their promises.

“I knew they would not be able to do it,” said Zeerat, the cynic. “Those flying balls are too big to be pulled out of their paths.”

“Bah! Such talk!” Lyon was indignant. “You are always knocking, Zeerat. What a gloomy civilization we would have if everyone were like you! Give the boys a boost. Tell them you know it can be done, even if you have to roll up your sleeves and do it yourself.”

“They’d tell me to do it,” Zeerat growled.

“And why shouldn’t you? Pitch in, my friend. Maybe you’re just the man to put this deal over.”

“Why don’t *you* do something?” Zeerat cracked. ,

Lyon gave him a disdainful look. “Me? I am the spirit of this great movement. I supply the pep and ambition. I point the way. When the job’s done—”

“I know,” said Zeerat, “you will take the credit.”

“Exactly,” said Lyon, and he puffed up his chest and marched on to continue his ballyhoo.

The thoroughfares were soon lined with anxious fleas who demanded to know what had happened to Prince Zaywoodie’s promises. They turned themselves into organized demonstrators. They shouted, chanted, chased around in circles and indulged in all sorts of high-jumping antics.

At length, this clamor brought forth Prince Zaywoodie and his entourage of dignitaries. Prince Zaywoodie motioned the crowd to join him at the platform on the parade grounds. When they were assembled, he silenced them and made his report.

“Fellow fleas, the news which I bring you carries a promise of ultimate success. Our early experiments have been costly, but we are learning the way. You must bear in mind that the wheels of progress do not spin as swiftly as those balls of energy which we hope to capture.

“What have we done? I will report to you.

“Our invisible servants—the one-cells—are co-operating in a most satisfactory manner. Even now our microbes are trained upon a cluster of key one-cells, whose six arms are waving to us in symbols of our established code. And what do they tell us?

“They tell us that they have singled out a ball which is rich in inhabitants. It is this electron that I told you about before, inhabited by creatures patterned after ourselves—creatures with heads and bodies, two arms, two legs. These creatures can be seen through the eyes of our one-cells. They live in great swarms. They protect themselves with sturdy roofs and walls. They depend upon an abundance of tiny plant life for their food. They have at their command a wealth of mechanical contrivances—machines which our one-cells could see from the air—machines which would build for them, dig for them, transfer them through space or over the surface of their ball.”

The great assemblage of fleas was no longer a clamoring mob. Every listener, including the blustering Lyon and cynical Zeerat, was lost in amazement.

“I am sad to report,” Prince Zaywoodie continued, “that some of our one-cells did not return. Now they are imprisoned somewhere within the chosen ball. For we have succeeded at last in our first step, to draw it out of its universe of motion. Our chemists have cleverly encased it within a shell. The gases which they spread over its surface have crystallized. This shell will enable us to remove the ball from its position without injuring the life contained thereon.”

The Prince explained in careful detail that the chosen electron was surrounded by gases of its own, which would serve as a cushion within the newly formed shell. Thus it was hoped that the ball might be drawn out of its orbit without being bumped against the sides of the shell which encased it.

“As you know, my fellow fleas, it is a perilous undertaking for us to insert the long straw which our master provided us to make contact with this electron. The first two starts with which we experimented were disastrous. The accidents occurred when we allowed the straws to pass too close to the nucleus of an atom. But with the utmost care we at last succeeded in reaching far into the universe to make contact at last with an electron of one of the interior atoms.

“With this success we were able to send forth our one-cells to explore.

“Later we inserted the straw again. Some of the one-cells climbed aboard and returned. Others remained.

“Now at last we have got the chosen electron on the end of the straw and with utmost caution we are drawing it little by little out of its universe.”

This announcement brought forth a prolonged cheer. For the first time in history, an electron was about to be captured.

“And so, in conclusion,” said Prince Zaywoodie, “I ask you to be patient. It will be a slow process, dragging this captured ball out of its universe. We find we are dealing with magnetic attractions of surprising strength. The atom which was deprived of this electron was forced to revise its system of motion, and every atom that this captive electron passes exerts a pull upon it. We will be fortunate indeed if our prize is not disintegrated by a blast of energy from some other atom’s nucleus.”

CHAPTER XVI

A Girl Out of a Storm

IN THE annals of the solar system nothing like this had ever happened before. Planets had their orbits. They followed regularly through their years and days. The most that astronomers could detect in the way of change was a gradual slowing down of the system of motion.

Years ago, too many million of them to count, a fiery mass had whirled off the burning surfaces of the Sun, it was assumed, and had found its gravitational balance at least 93,000,000 miles away. This was the Earth. Its history had been similar to that of the other planets. They were the children of the Sun, and each had found its place in relation to the other.

The astronomers of the Earth had often speculated upon what might happen if one member of the solar family were to be removed. Such a conjecture was fanciful, they thought, but useful in illustrating the happy balance of forces which had developed around the Sun.

Now the impossible had happened. In defiance of all the established predictions, the Earth had become involved in the machinations of some other universe far stronger than that of its own galaxy. Not only had the Earth been captured within a solid spherical shell. It was also being pulled out of its orbit.

How could this be?

SCIENTISTS by the hundreds flew to the icebound villages of Little America to catch what evidence they could, for the pull upon the Earth's shell made contact near the South Pole. It was the actual physical tug of a tremendous beam, dark and shadowy. No one knew just when it had appeared, but the geologists had recorded seismographic records of the jolting of the Earth. This had occurred, they believed, at the moment that the shell first went into motion.

Now the dark shadowy beam was drawing the shell slowly through space. And that was what brought a physical upheaval to the Earth's continents and seas, unmatched by any phenomena since the Earth's cooling.

The shadowy arm through space must have been very flexible. Either that, the astronomers reasoned, or its action must have been guided by some wonderful intelligence. For the change in the Earth's direction of motion was not abrupt. The drawing away from the orbit was so gradual that it seemed to be performed by a skilled hand.

"To illustrate what is happening," one of the astronomers explained over the radios, "if you tie a ball to a string and swing it in a circle, you have the Earth in its normal orbit. The string is the gravitational attraction which holds the ball a certain distance from the Sun. In this relationship the Earth has been coasting round and round for countless ages.

"The new force which has attacked it may be illustrated by the pull of a second string. If you imagine the ball to be whirling in a horizontal plane, the new force is applied vertically, as from above. And so the ball continues to swing round and round in its annual orbit, except that it is being drawn upward. The effect is spiral. But how far this will go, no one can tell. None of the other planets is undergoing such a process. Mercury and Venus are believed to have swung out a little. The other planets, too, may be making readjustments.

"But the great question is: Are we to be drawn out of the solar system? At present, it would seem that we are. This may mean that we are the chance victim of some astronomical force as unpredictable as meteors but billions of times as large. If this be true, we are in the hands of the gods. Sooner or later we are likely to crash into a star, and the Earth and all its creatures will perish."

So spoke the astronomer, and the civilized world trembled.

June Allison spent the most frantic hours of her life trying to make contact with Lester.

The wireless just would not reach through to Mercury nor to any of the other planets. Every few minutes June received a call from the Rocky Mountain Observatory, within a few hours after the lateral movement of the Earth had begun. The telephone calls and wires were coming in from all over the country.

Where was Lester Allison? How could they get in touch with him? What did he know about these strange happenings?

Some of June's friends, who had come in to ask the same questions, stayed to help her take care of the onslaught of messages.

OUTSIDE the lodge of the Allison ranch high winds were blowing. Black clouds boiled down from the mountaintops. The valleys roared with echoes of hard dashing rains. Streaks of purplish lightning stabbed down at the whipping treetops.

“I’ve got to be off in the space flivver,” June Allison declared. “Don’t know what’s going to happen, but my one job is to find Lester.”

The radios were crackling with static now. Emergency warnings were coming in every few minutes. The high winds were ripping the whole North American continent. Across Canada blizzards were raging.

June’s friends agreed to stay and care for incoming calls. They didn’t know what else to do. June thought she had never seen such terrorized faces as those of the friends she was leaving.

Alone, she went out to the clearing and checked the motors of the space flivver. As the rain streamed off her goggles, she gazed up into the black sky. It was a fearful prospect, trying to take off in weather like that. The space flivver was sturdy enough, once out of the Earth’s thickest atmosphere, but accidents of the past had proved that high winds could queer a take-off.

Suddenly June was aware that an airplane was thundering along unsteadily, flying low beneath the clouds.

The plane swerved down and circled the clearing, as if in search of a place to land.

A blaze of lightning gave June a vivid glimpse of a face at the window of the plane—the face of a young girl. She was calling to June, beckoning, and her expression was one of pitiful beseeching.

The plane circled a second time and came down in a rush of wind.

“The fool!” said June. “She can’t possibly land—”

The plane touched on one wheel, ricocheting along crazily, and ripped off a wing. There was a sullen grinding and crunching of metal, then the blast of an explosion and a spurt of flame and smoke.

Instantly June was running toward the wreck.

Through the smoke a figure came stumbling toward her. And again she saw the white, frightened face of the young girl.

“Is there no one with you?” June caught the girl by the hand and led her back through the rain.

“There’s no one but me,” the girl said. She glanced back at the burning plane. “Whew! That was a close one. But I had to get here. I have tried for hours to reach you—”

The girl collapsed in June’s arms. June looked toward the lodge, then to the space ship. She felt that she could not take the time to help this girl. The storm was getting worse. Allison was lost, and the world was calling for him.

June slapped the girl’s cheeks. “Come out of it. Who are you? What did you come here for?”

“My boy friend Kirk,” the girl said weakly. “He went with Lester Allison. He’s been gone for days.”

The girl closed her eyes again. June got the girl up and carried her to the space flivver. This youngster had nerve, all right. Together they pushed their way through the air locks.

Two minutes later they shot up through the clouds like a giddy skyrocket, outward bound.

CHAPTER XVII

Combing the Glass Walls

THE space flivver sought the highest elevation possible within the transparent shell. To June Allison and

her sandy-haired companion, Diana Scott, it was a strange contrast to be soaring through this peaceful, cloudless realm.

Colored sunlight filtered through the crystal shell. The Earth was far above them now. At least, it seemed above, for June had inverted the flivver and set the instruments for automatic flying at a safe elevation, as measured from the inner surface of the shell.

In effect, they were skimming along a mile or so above the transparent floor, through which they could catch glimpses of the Sun, the Moon, and the neighboring planets. By looking through the upper windows, they saw the Earth cloaked in cottony clouds that appeared harmless here from the Sun's side.

Diana Scott understood why they were following the surface of the shell. It was a foregone conclusion that Lester Allison and Kirk Riley were not on the Earth.

"The natural thing for them to do," June reasoned, "was to get word through to the other planets. They probably went to Mercury, and now they have been left behind. Do you know where the astronomers say we are? We have already passed the range of Mars and Jupiter and Saturn."

Diana Scott's eyes were wide. She said nothing. She was a nervy little thing. If Lester and Kirk had been left behind, there was nothing she could do about it, other than put her faith in June Allison.

"The one thing we can do," said June, "is to comb these surfaces. If Lester is still in the neighborhood of the Earth, he must be up here some place, observing everything he can."

Hours and hours of search ensued.

Every few minutes the radio brought in new and startling announcements.

Never in the annals of science had there been so many predictions of man's fate in so short a time.

"If the world is coming to an end," one astronomer observed, "it is certainly a far more spectacular end than any of us dared imagine. It seems obvious now that we are actually being lifted out of the solar system. Whether we shall be taken to a new galaxy is already a matter of conjecture."

June thought there was a certain eagerness in that astronomer's voice. These terrifying wonders were probably a fool's paradise for him and his ilk.

That the world was coming to an end was the prevalent note. Reports from far off societies in Africa told of great mass meetings that were being held. Huge sacrifices were being made to appease the wrath of the gods.

From great cathedrals in Europe religious services were being broadcast. Long prayers were being delivered, and there was nothing artificial about their fervor. In the presence of terror, millions of people were renewing old devotions. Any doctrine which offered hope to man in times like these was seized upon. It might never be known how much the world believed that man's own sins had brought about this cataclysm.

But from the reports of observers on the streets, it would seem that many forgotten emotions within the common man had swiftly risen to the surface.

"Do not lose hope," one announcer kept saying. "Stay at home. Prepare yourselves for more severe storms. This world is not lost yet. Unless the Earth strikes the outer shell, mankind has a chance to survive."

Gradually the storm warnings became more pronounced. The scientists declared that the pull had thrown the Earth toward one side of the enclosure. Consequently, as the Earth continued to spin on its axis, each hemisphere would be subjected to terrific storms every twenty-four hours. However, the Earth might not crash against the wall of the shell, owing to the fact that the air acted as a cushion.

The air, as well as the Earth itself, was being hurled to one side of the shell. This increased the violence of the storms. The friction of the Earth's turning was said to be rising with each passing hour. Soon it was known that buildings could not withstand the terrific blasts. Already some cities had been leveled.

THE last hopeful bulletin was that appeal from the Rocky Mountain Observatory. It declared that the Earth had already moved farther out from the Sun than the orbit of Neptune, and that the rate of moving was rapidly accelerating. But there was no reason to give up hope of life. After all, half of every twenty-four hour period at least was safe. And the Rocky Mountain scientists thought it worth while to keep on gathering data.

"During the night hours," the announcer said, "we urge all amateur photographers and astronomers to make the most of these strange phenomena. We urge you to take pictures of the sky. Only by a series of moving pictures which catch the entire panorama will we be able to piece together the whole story, especially the concomitant actions of other heavenly bodies."

"Amusing, isn't it?" Diana Scott gave a mirthless laugh. "He thinks we will live to figure it out."

A little later the radios began to come through with a single ominous theme song.

"Go underground… take to the caves… no buildings on the surface are safe… every city on Earth is doomed to destruction… go underground… go underground."

And June Allison and Diana Scott, a few thousand miles above the agonized Earth, kept flying.

CHAPTER XVIII

Enter the Battering Ram

JUNE suddenly cut her speed. She had seen something unusual—a black blotch against the amber surfaces that were streaking along beneath the flivver.

Diana looked back. Her eyes were watery from watching, and she was holding a damp cloth against her aching head.

"Whatever it was," said June, "we are going to investigate."

She turned the space ship through a wide circle. There it was again—just a tiny dot on the crystal floor a mile beneath her. Retarding to atmosphere speed, she spiraled downward. Diana brushed her eyes and gazed.

"Careful, June, it's some sort of an explosion. There's smoke flying."

"I will be careful," said June, and she brought the ship down to easy landing a full hundred yards from the fan of smoke. The flivver wheeled up cautiously.

Until now June had had no guess as to the thickness of the crystal shell. But here it was before her eyes, a long line which represented a cross-section.

It was a tunnel coming through vertically from the outside. Perhaps there was a mile or more of it. It was not quite complete.

The thing which interested June most, however, was the mechanism which was cutting the tunnel. It was a long, red. cigar-shaped space ship, and she recognized it at once as a Battering Ram.

“It isn’t smoke, after all,” Diana Scott observed. “It’s just a lot of waves through that funny glass stuff. Vibrations, I guess you would say. What’s happening? It looks as if that thing is a big borer, coming right up through.”

June was so happy she could hardly answer. “It’s good news; that’s what it is.”

Twenty minutes later the Battering Ram nosed up through the surface and came down with a bouncing motion upon the smooth amber floor. The great boring mechanism on its nose idled to a stop.

June wheeled the space flivver around until it was within fifteen yards of the mammoth Battering Ram. Then at last the radio brought her something besides the bad news from the Earth.

“June Allison! As I live and breathe! Greetings from Mercury!”

June could almost feel Lester’s arms around her, the way he was chuckling into the microphone.

“We’ve been chasing the Earth ever since the day before yesterday. Twice we thought it was a losing race. But after we finally caught up, it didn’t take us long to get a solid hitch. Did you see how we cut our way through? Say, what are you doing up here anyway?”

“Looking for you,” said June. “We have been combing the skies. We just got away in time. The storms are furious. They say that cities are being blown down.”

June and Diana could hear the two men mumbling to each other.

“We are not surprised, exactly,” said Allison. “We could see that the Earth was off center inside this shell. The shell is turning, too, only not very fast. When we first hitched on, this side was nearest the Sun, and the Earth was already leaning that way. We had better get together on our planes—”

“Aren’t you going to let me talk?” Diana Scott suddenly exploded. “Is that dark man with all the whiskers by any chance Kirk Riley?”

“Diana, darling! Is that you?” came Kirk’s voice.

“Gee, honey, I was so afraid—but you are really alive! Put your face up to the window so I can see you.”

A somewhat bewhiskered Kirk could be seen grinning from the side window of the Battering Ram, waving and making comic motions. Then there was more rapid-fire chatter from the radio, with such heart-warming sentiments that Lester said he would have to put a stop to it before someone burned out the wires.

It was not advisable to transfer from one ship to the other, partly because of the rarity of the atmosphere, partly because the gravitational forces at this point were almost perfectly balanced. The ships barely clung to the surface. It was reasonable to guess that they would have descended to the Earth if that planet had been more nearly centered within the shell.

“I have just one wisp of a plan at present,” said Allison. “If we are doomed, we are doomed. But I have a hunch that before the Earth checks in I may learn something from Professor Haycox. Have you kept in touch with him, June?”

“He kept calling. He wanted to see you again. But he didn’t give me any message.”

“Are you game for a flight to his laboratory? It has probably been blown to smithereens. But he had a queer biological specimen laid out on the basement floor when I was there last. I want to see it again. We may have to dig through snow to find him, but if you are willing to take a chance—”

“We are on our way,” said June.

CHAPTER XIX

The Professor Has the Blues

IN THE blinding blizzards, nothing but mountain landmarks could have shown Allison the way. But at last he and his party fought their way through the makeshift storm barriers which had been erected out of the ruins of some of the Institute buildings. Like burrowing animals they padded along through the icy tunnels, and at last they were within the basement rooms of what had once been the Institute.

Professor Haycox and his staff, such of them as remained, were a silent and dreary lot. They were stupefied by the swift destruction that had come upon them. Most of their projects had been ruined completely. A few experiments which had been located in the lower rooms were still being tended by halfhearted laboratory workers. No one could see the use of going ahead with such things. Every radio report indicated that the Earth was being accelerated in its movement away from the solar system. The end might come any time.

Allison and his wife and Kirk and Diana could readily appreciate the tragic spirit that had settled upon this place. They joined the others listening at the radios. They all but lost track of time as the new astronomical developments came to them.

Now and then the story of tragedy was brought home by some pitiful account of rescue workers. For the most part, the cities had been obliterated. The sturdiest of buildings had not been constructed to cope with such windstorms as these. People were said to be swarming into the tornado-proof tunnels that had once been subways or underground freight lines or water mains.

For a time Lester Allison did not have the courage to approach the despondent professor. Whatever mysteries there might be waiting to be answered by evidences stored here, Professor Haycox seemed likely to let go the way of all his ruined experiments.

But the monster brain was still intact, and Allison and his companions spent many hours gazing at it.

It was now submerged in a preserving fluid in an immense glass jar. Other jars held other fragments that had been salvaged. A plaster of paris model showed what sort of creature the owner of the brain had been.

It was a starfish-shaped beast, similar to those which Allison and Kirk had followed out into space.

The professor’s clay model coincided with Kirk’s mental picture of those huge, shadowy, six-armed monsters. Newspaper clippings proved that several specimens had been seen and a few of them captured.

No scientist had any satisfactory classification for them. Nor any name. They were variously referred to as “flying brains,” “other-world squids,” and “flying starfish.” Their brainy heads formed the center of their puffy gray bodies; their arms were not the slender tentacles of the squid, but rather the well-spread points of a star. The name “flying starfish” was generally accepted.

They could fly swiftly or drift along motionlessly like a lazy balloon—almost always with their arms extended horizontally. No one had been attacked by them. But when they first appeared, before the Earth was hurled out of its orbit, many people were thrown into a panic when star-shaped shadows half a block long passed over them.

Professor Haycox was in no mood to concentrate on these matters. Like the rest of the human race, he had a bad case of the blues. Could anything less than a final, all-consuming crash be in store?

But as days went on it was inevitable that men should not accept this doom lying down. That fortunate share of the Earth's population whose lives had been spared did more than simply dig in. They began to plan for underground lines of transportation, underground dwellings, complete subterranean cities.

Even while they were imprisoned beneath snowdrifts at the Institute, Professor Haycox and his companions found themselves inevitably building up schemes for getting back on their feet, figuratively speaking.

The surfaces of the Earth would somehow be utilized, of course. And if the destructive winds continued at regular twenty-four-hour intervals, man's work in the fields and forests would simply have to be confined to the hours of calm. It was conceivable that new types of grain and trees could be developed to withstand the daily lashing of the tornadoes. In time, sturdier breeds of domesticated animals might possibly adapt themselves to the new conditions.

But these hypotheses were dealt a severe setback two or three weeks after Allison and his party came to the Institute. A new phase of the Earth-wide catastrophe swept in. For the time being all hopes were blacked out.

CHAPTER XX

Across the Universe

"GO UNDERGROUND!… Go underground!… The Earth is going to crash the shell!… The American continents are about to crash!… Go underground!… Go underground!"

Lucky for mankind indeed that the preliminary accelerations had already prepared him for taking refuge in caves and tunnels and basement rooms. The impact of tornadoes and hurricanes had been nothing to what came now.

To Diana Scott and Kirk Riley and their associates at the Institute, it began with a trembling of the floor under their feet. The walls quivered, and every few minutes a test tube or some other bit of delicate laboratory equipment would snap and crash to the floor. The radio was full of terrifying reports of earthquakes.

But by midforenoon the ether waves were choked with static, and soon all North American stations were off the air. By that time Kirk could hear the growing rumble of thunder.

That roar was afterward referred to as the End of the Earth.

To the generation of human beings who lived through that day and the two days that followed, no more accurate designation would be possible. For few and far between were the persons who did not believe that that prolonged thunder signified *the end.*

But such was not the case. On the fourth day, when the deep-throated death groans of the Earth ceased, and even the regular high winds began to subside, men climbed out of their foxholes to see what had actually happened.

The Earth had bumped against its shell. The friction of its great rotating body had cut deep scars in those glassy surfaces high overhead. But the effects upon the Earth itself had been far more pronounced.

"It's like when you make a machine," Kirk observed to his space hero, "and you have to provide for a friction surface. You fix it so that one of the two rubbing surfaces will take all the wear and tear. Whatever space god worked up this deal fixed it so the Earth would take all the hell."

This was putting it mildly. Between the abrasive action and the accompanying earthquakes the tops of mountains had been rounded off, seaboards had been flooded by oceans on the rampage, sporadic fires had wrought further destruction among the ruined cities.

"Your principle of two rubbing surfaces," Allison commented, "assumes some intelligence. One part of a machine is made to take all the wear so that only one part will have to be replaced. But where's the chance of ever replacing a worn-down Earth?"

"I dunno," Kirk replied blankly. In his mind full of mechanical principles there was only dizzy confusion when he tried to conceive of "space gods" powerful enough to perpetrate these doings.

"If there's some great power back of it all," Kirk decided, "that power probably doesn't care if the Earth gets smoothed and polished up a little. And maybe folks like us don't matter at all."

The tone of this remark was disturbing to Diana Scott. Tears suddenly filled the eyes of the girl friend from Brooklyn. Kirk couldn't understand what was the trouble.

"Folks like us do matter," Diana sobbed. "Anyway, you matter, Kirk. If it weren't for you I wouldn't want to go on living."

"There, there, honey, I didn't mean anything. It's just hard to figure things out in times like these, that's all." Kirk was floundering. But Diana's convictions had stood the test of fire already, he realized.

"Poor kid, she's been running on nerve," said June Allison. "She hasn't had an hour's rest from her worries since her plane crashed."

"I'm all right," the younger girl said in a muffled voice.

"I'll say you are," June declared. "But you need some rest. I'm going to take care of you."

And so it happened that June and Diana missed out on the next few flivver hops into space.

THE Earth was being pulled along at such a terrific speed by now that the Milky Way was left behind. New galaxies were being passed. Thousands of new stars and planets came into view. But the nearest of these bodies had to be photographed on the fly. Some of them were only momentary streaks of light.

The universes were fairly spinning. The Earth's astronomers, the fortunate ones who had escaped injury from the storms, became the most important of living men. When the daily presses resumed work it was the astronomers who made the headlines. They pressed into service great numbers of photographers and space navigators. Allison and Kirk, along with several dozen less experienced pilots, were kept busy.

It had been discovered that the passing stars could be seen more clearly through certain unscratched areas of the great shell, and upon some of the better observation areas telescopes were planted. The tunnel which the Battering Ram had once drilled had closed under the massive pressures of the transparent substance. Nevertheless, there was talk of drilling another such hole if a plan could be devised for filling it with a mile-long telescope that could resist the compression.

Allison's flights to the shell gave him a chance to listen in on the conferences of the bewildered scientists. He retained Kirk Riley as his assistant, and between the two of them they kept tab on the course of the Earth's weird race through the universe.

Professor Haycox had allowed Allison to study the great brain, between space flights. But Allison was still disappointed in the professor's attitude of secrecy regarding his find.

"You've never called in other biologists for a look at that mountain of gray matter?"

"No, not yet," the professor said, half apologetically. "The storms disrupted everything. If the Earth settles down so we can get something done, we'll go ahead with our secret studies. If the Earth is doomed to crash, there's no need—"

"Let's assume it isn't," said Allison. "The astronomers say it's being pulled through a thousand gentle curves. It swings clear of so many danger zones that its course can't be an accident. The astronomers think we're being towed."

Professor Haycox nodded knowingly. His beaming bespectacled countenance was reluctant to reveal that he sometimes didn't know all the answers. "Towed? Yes, of course. Indeed we're being towed. But by what, or whom?"

"By something intelligent," said Allison. "By something that knows about the gravitational pull of the great bodies we're passing, and the heat of the stars, and the dangers of passing too close."

"Exactly, exactly," said the professor, nodding from Allison to Kirk as if this theory were his own brainchild.

Professor Haycox knew very little about astronomy. His eyes were habituated to microscopes, not telescopes.

But he yielded to the persuasion of Allison and Kirk and accompanied them on a few of the frequent space trips.

"Get an earful of those astronomers goin' to town," Kirk would say, as the party of scientists on the observation level would go into conference.

"And take note, Professor," Allison would add, "that they're pooling their knowledge and co-operating."

It was hard to tell whether Haycox was impressed. At any rate, these trips were good for his frayed nerves. He began to accept their viewpoint. The Earth wasn't skyrocketing through the heavens on a blind fall. It was dodging danger too skillfully.

There was hope in that theory.

But another theory, interlocked with the first, rode in on a fresh wave of terror. The wise astronomers themselves were chilled by the implications of their findings.

Ahead of the Earth's course something was causing a few of the heavenly bodies to bounce a little way out of line. As if some huge object were running ahead of the Earth, bumping them or *stepping on them.*

It was a theory that defied proof, and the evidence was slow accumulating. By now the Earth's speed was so much greater than the speed of light that the scientists were forced to rely on the subtle messages of pre-light vibrations.

Gradually the facts which there was no time for light to reveal were captured by other means.

The stars were not being disturbed—only a few of the large, non-burning planets around them. As if some mammoth sky monster were running ahead of the Earth, pulling the shadowy beam attached to the "south pole" of the Earth's shell—as if this sky monster were bounding from one heavenly stepping-stone to another.

As if this monster had a stride that had traversed numberless Milky Ways in a few swift bounds!

As if this monster had the sense to pick its step *without treading on hot stars*!

And now came a further discovery that made the scientists gasp for breath.

On three or four of the passing planets the pre-light vibrations revealed *mammoth footprints*, smoking hot, as wide as a continent—only one footprint to each planet!

CHAPTER XXI

Big Brains No Significance?

IT WAS a breathing spell for the Earth to be shooting through the series of galaxies at a regular speed.

Philosophically minded persons took advantage of this respite for discussion and gathered new courage for the dangers that were doubtless ahead.

Kirk Riley went back to his New York space port. He looked for his old cronies. Many of them, like himself, had gone to new jobs. But his girl friend found that nothing was the same in Brooklyn. The catastrophes had struck heavily upon the eastern seaboard.

The few friends that Kirk and Diana found were glad to know of their new connections with Lester and June Allison. Eyes would grow wide at the mention of these names. It was obvious that the Allisons were ranked high among the leaders who offered hope to this shocked civilization.

The couple returned to the Rocky Mountain resort, and Diana remained there to assist June, who was providing transportation for the observatory astronomers.

Allison was gone again and had not been heard from for three days. Word from the Institute was vague.

"Allison is probably around," said Professor Haycox over the telephone. "He's been rummaging through the laboratory at will. The last time I remember seeing him he was taking down some notes on that monster brain."

"Will you have him call me today?" June requested.

But no call came, and Kirk flew back to Canada to join his hero there.

"No, I can't tell you where he is," said Professor Haycox. "It's all I can do to keep track of myself."

"What did he say when he talked with you last?"

"He wanted to know what happened to the man who took the pictures of the brain. And he asked about the pistol that contained the movie camera."

Kirk frowned. There was something he had almost forgotten. Lots of unfinished business had resulted from the recent astronomical upheavals.

“If I remember right,” said Kirk, “a fellow by the name of Bill Kite was going to whip me. I wonder if he lived through all this trouble. And ‘Champ’ the gunman—”

The professor was preoccupied with troubles of his own, but Kirk continued to question him and at length got a glimmering of what had happened to the daredevil who had come in with the camera pistol.

The fact was that “Champ” had made a useful person of himself for a time after the Earth shocks began. The professor had released him from his bonds, and Champ had pitched in to help clear the wreckage and build barriers against the descending blizzards. After that, everyone had lived down in the basement rooms. All jealousies had been forgotten in the presence of these new terrors.

But after the blizzards and storms had subsided and a few makeshift transportation lines had been set up, Champ had shown signs of restlessness. Then one day he was gone, and the pistol camera with the films had gone with him.

“Does Allison know all of this?” Kirk asked.

“Allison was the one who discovered the film had been taken,” said the professor.

“I think I will go over to Ubruff’s.”

AT UBRUFF’S Laboratories Kirk was gratified to discover that the leading scientist was not an ogre. He had known of Haycox’s suspicious manner. It was hard to believe that he had sent gunmen out to claim any prize specimens or fossils.

But scientist Ubruff did know about the great flying starfish. In fact, he had managed to secure three of the live ones which had been captured in that part of the country. Neither they, nor the film of their brother’s brain, however, had yielded any information of significance, Ubruff said.

“That being the case,” said Kirk, “you no longer have any interest in the dead one over at the Haycox Institute, I presume.”

Ubruff shook his head. “Some of my men were over-eager about the starfish brain that Haycox salvaged. Whenever they heard of anything new they raced for it. But I have discharged them. Moreover, I have rid my laboratory of the three live flying monsters.”

“You got rid of them?” Kirk was greatly surprised. “You mean you killed them?”

“I sold them to another laboratory,” said Ubruff. “They were too expensive to keep, and the tornadoes wrought havoc upon our animal pens.”

Kirk took his leave somewhat disappointed over his conversation with Ubruff. If there had been anything remarkable about the flying starfish, Ubruff wouldn’t have let them go. But evidently that scientist considered them a bad bet. Big brains, no significance.

Professor Haycox had likewise failed to make much of his specimen. Kirk knew that he had a report half prepared that dealt with the areas of the monster’s brain, making comparisons to the human brain. There was a little novel interest in the discovery that the beast’s brain areas of his motor activity were merged with those of speech—or so it would seem if the comparison to man’s brain was a fair one.

But neither Haycox nor Ubruff had any theories as to the origin or purpose of these monsters on this planet.

At the next laboratory Kirk found he was still on Lester Allison’s trail. Here the story was the same. This

fountain of science had also acquired a few of the captured beasts other than those bought at Ubruff's. But here the conviction was strong that astronomy, and astronomy only, deserved the attention of scientists during these times. It was not a moment to be expanding in other directions.

"We sold the whole lot of our flying starfish to the Ohio Zoo—yes, I think that's where your friend Allison went. I don't know whether he was interested in the monsters or their caretakers. You see we acquired some workers from the Ubruff Laboratories—men who claimed to be expert at handling these beasts."

Kirk extended his thanks for this information and betook himself to the Ohio Zoo.

Before the storms the Ohio Zoo had been the country's finest. Its pens were large enough to give all animals free range. Lofty structures as high as skyscrapers had housed the eagles and condors and other bird life.

Part of these pens were being reconstructed following the devastation. And Kirk could see from a distance, as he taxied toward the place, that the live six-armed starfish were here, imprisoned in a half mile of pens over the hilltop.

Kirk walked around this structure. Through the lofty grill of bright steel bars he could get a clear view of that nearest beast hovering high in the air. It might have been a gigantic spider suspended from an invisible web. But no, it was supporting itself by stationary flying. The gray finlike flaps along each of its six outstretched arms were barely in motion.

"What a strange creature!"

"Patient old brutes, aren't they?" said a familiar voice at Kirk's elbow.

"Can this be Curator Allison?" Kirk asked, extending his hand to the veteran space man. "So you have become a collector of fifty-ton spiders."

"They are not mine, sorry to say. But they are as interesting as a herd of elephants. I have decided, Kirk, that if I get ready to take a vacation I will buy a cot and camp right here where I can look up at them."

"Strange ambition," Kirk commented, "but I suppose you are turning biologist. I know of one perfessor who gave his life to the study of snails."

"They are all of fifty yards long," said Allison, "from the point of their longest arm to their shortest."

"I supposed you crawled up there and measured them."

"I measured the shortest," said Allison. "They run pretty even, don't they? But you would be surprised. They have their individual differences. Now, you take those three over in the far corner. They are not only smarter, but they are active. Maybe some of these others are sick."

KIRK studied Allison's expression curiously. The more Allison talked, the more he seemed to be in earnest. Kirk gave up trying to identify the expressions of intelligence which his friend attributed to these animals. But Kirk saw more than he had seen in the first place.

Most of the beasts continued with their gentle motions, and if one watched them closely, it did seem that they were particular which of their several arms they chose to move. So soft was their skin that these fan motions were made in complete silence.

"Do you see those men across the way?" Allison asked. "They are the new caretakers. They used to

work for Ubruff's. We had a little tussle with one of them at the Haycox Institute."

"Champ," said Kirk. "I remember him. And that taller fellow looks like Bill Kite. Do the boys know you?"

"Oh, we are quite buddies. They have what they want, and they don't mind letting me sit around like a schoolboy at a circus."

The manager of the Ohio Zoo came to the pen a few minutes later, and he and the group of caretakers fell into a noisy argument.

"We have got to get rid of them," the manager asserted. "It costs too much to feed them."

There was considerable quarreling, and it continued until Allison and Kirk strolled over and called the manager aside.

"How much?" Allison asked, "would it take to keep feeding these monsters for another month?"

"Too much. The Zoo Board says we have to get rid of them."

"If I could collect a five thousand dollar donation," suggested Allison, "would you go on with them?"

"These are not times to be throwing money into dumb beasts. We can't even collect taxes. When we got them in here, we thought we could bring the crowd back. But everyone's too busy building. We're losing money."

Allison repeated, "Would five thousand dollars change your mind?"

"Well, at the rate they eat it won't take them long to run through it, but if you know where we can get five thousand dollars—"

To Kirk's bewilderment, Allison wrote a check for the entire sum.

"There. Treat them right. Don't let them go hungry."

CHAPTER XXII

The Earth on a Tripod

SOMEWHERE on the outer limits of the universe the Earth came to a gradual stop.

This was a strange experience indeed for the denizens of this solar planet. No one could get used to the idea of days without a succession of light and darkness. But now there was a soft white light on all sides of the planet. The shell which had once given a yellowish cast to the sunlight was still hovering round the Earth, but the swift race through space had transformed it into something clearer. People could gaze through it as if it were a thin pane of purest glass—an endless window curving three thousand miles above the Earth's surface.

Astronomers thought that their telescopes could discern signs of their own lost universe. But all this new outlook was so vague that the Earth had lost its sense of direction.

The new objects which loomed up were huge shadows like heads as large as little moons. Sometimes these shadows came quite close to the outer shell, and it could be seen that they were not only heads but also bodies. In size they compared with the largest continents. Under certain light these bodies had a greenish cast. If the Earth had been back in its own orbit, these unnatural appearances would have been

unnerving. But mankind had already gone through the crisis of facing ultimate destruction, and had been left stunned, fatigued. Like one who has gone through a thousand deaths and still finds himself alive. Mankind was slowly rallying.

"We're seeing them at least," was about all the astronomers could say. "We knew there were few tracks along our trail through the universe. Here then are the creatures they have clambered through the planets, dragging us away."

The astronomers were baffled by the base upon which the Earth had come to rest. They could not determine whether it was a dead star or some new type of heavenly body. Through their telescopes it appeared to be flat rather than round—a floor that stretched endlessly until its smooth surface was lost in the purple haze of distance.

Three great towers had been built upon this floor to form a sort of tripod. Upon these three towers the Earth's surrounding shell had been placed.

Oddly enough, the gravitational forces were too slight to draw the Earth down to the bottom of the shell. Instead, it remained centered. Its own gravity had undergone very little change. The pull of the moon and the sun upon the tides was missing. The effect of such bodies upon the weight of all things on the Earth had been lost.

The cushioning effect of the air had played its part in more ways than one. The friction had slowed the Earth down. After those terrible times when the Earth and its shell made contact, the speed of rotation had gradually diminished.

Now the Earth hovered like something lifeless within its glass prison. Its people would look out upon the moving shadows and call them "green moons." Already man was nerving himself to explore the unknown.

Among the green moons and green Milky Ways—the heads and bodies of those great creatures outside the shell—something else was distinguished. At first it was called "the black moon." Telescopes revealed that it was an instrument whose cannon-like projection was pointing at the face of the Earth.

The green creatures could be seen manipulating this dark instrument so that its shadowy barrel aimed first at one continent and then at another.

Conventions of space men and astronomers met to consider what might be done. It was taken for granted that a weapon of some sort was being made ready to effect the Earth's complete disintegration. This black moon was nothing more nor less than a gigantic cannon. One blast from it would blow the planet into smithereens.

Pictures of the instrument were assembled from a series of gigantic photographs. Every newspaper carried a series of these, and each day other details became more refined. At last earth men knew the terrifying truth, that the great green two-legged monsters were settling themselves down into the seats on either side of the leviathan cannon. They were operating wheels and levers which turned the instrument and adjusted its length. The great barrel would center upon a single point for a time and follow it with the Earth's gentle turning.

WHEN the people of this chosen region were told that they were directly in line with the aim of the instrument, they were losing no time moving themselves from this spot. It was a natural thing to do, though the astronomers chided them for their trouble.

If an explosion was destined to come from that cannon, the whole Earth would be gone at once.

There were great speculations on the possibility of a mass migration.

“We’re in a trap,” the news commentators would howl. “Death is in store. We don’t know what lies beyond this shell. But there must be atmosphere, and that is enough. Why don’t we have our expert space men cut tunnels through this shell and take us out of here?”

“We can’t agree with those calamity howlers,” the astronomers would retort, “who assure us that there is atmosphere outside our shell. There are living creatures, to be sure, but we are in another universe now. We do not know whether these living creatures require air to breathe, as we do, or whether they run on some other kind of fuel. However, if the expert space men are willing to make an expedition to investigate the conditions that lie beyond, this should be done at once.”

The space men answered this challenge. “We are probably too late. All the space ships in the world could not handle one percent of the Earth’s population for an immediate mass migration. For years we have argued for huge space fleets, but our argument has been ignored. Whether there is any escape for us, it will soon be known. We can break through the shell. The Battering Rams equipped with augers are equal to the task. And everyone knows we can count on Lester Allison to lead the way.”

Something in this proposal caught the imagination of the people. No longer were they paralyzed with fear. This panic in contrast to former ones was a call for action.

“Build more ships! Cut tunnels through the shell! Break away from this civilization! Start afresh!”

Perhaps it was more a mania of unrest than a sane, calculated plan of action. The conservative engineers were sure that the proposal was utterly impossible.

Kirk Riley was one of the first to go to work. He knew the Battering Rams by now, and he had helped Allison with one drilling job. While other Battering Rams were being prepared with the automatic boring mechanisms, Kirk selected a crew of his own and opened his power drive upon the crystal wall.

Meanwhile, June Allison and Diana Scott went to the Ohio Zoo to appeal to Lester. Their meeting was disheartening. Allison did not want to talk. He was taking a vacation, he said.

They came away resolved to leave him alone until he had had a rest. It was true he had been under great pressure in recent weeks.

But the space men were sending out such urgent calls for him that June decided to make another effort. She and Diana Scott enlisted Professor Haycox in the cause, and the three of them went back to Ohio.

Haycox was not much help. In the presence of these huge specimens, flapping silently against the top of a pen, he was something of a goggle-eyed schoolboy himself.

“I think it was a mistake,” June whispered, “for us to bring him along. Now we can’t get a word out of either of them.”

“I was that way the first time I saw an elephant,” said Diana, “but those boys act a little goofy to me. ’Scuse me, June, I didn’t mean to insult your husband.”

“That’s all right. I know Lester’s not goofy.” But June’s voice was troubled.

Then, to make matters worse, the manager of the zoo sauntered past and made a comment.

“Were you noticing that tall, good-looking fellow sitting over there on the bench? Well, he sits there all day long, just watching. It’s too bad, isn’t it? But don’t be afraid of him. He’s harmless.”

CHAPTER XXIII

Bright Lights for Starfish

KIRK was a hero now. He had succeeded in cutting a straight tunnel through the shell. He had gone out and come back and lived to tell the story. He had even taken the supreme risk of drawing breath while outside the shell. Yes, there was oxygen to be breathed.

The air had been so thick, in fact, that he had not chanced a long flight outside the shell. The friction was as great as at a takeoff from sea level. But he had gone far enough to get a clear view of the amazing green creatures. He had been much too small for them to see. He had flown around the head of one and had circled back between the creature's horns.

His most startling news from this expedition was that he had seen no signs of any ammunition in the vicinity of the weapon. He believed that it was not a mammoth gun, but a telescope.

In the next few days other space travelers ventured out to corroborate these findings. They came back with tales of an endless host of the great green creatures, who were said to be parading along the flat green plain.

These discoveries were revolutionary. The whole program of space ship building was temporarily shelved. If no gun was going to blow up the Earth, the migration would be folly.

The new plan was to cut more tunnels through the crystal wall and build within them colossal telescopes.

This plan received immediate action from the heads of the various scientific groups. Since the job would require much co-operation between space men and other engineers, they decided that Lester Allison should be called in to direct the project.

Kirk conferred with June and Diana on this matter. He could not understand their reluctance to ask Lester to accept this responsibility.

"But he's the only man for the job," Kirk insisted. "Everyone says so. I will go to him. He will be rested up by this time."

Kirk found Allison perched high in the side of a concrete cliff which had once been the domicile of the monkeys. It was raining, and Allison called down to Kirk.

"Come on up. It's dry up here."

Kirk circled the stony path and presently found himself under the ledge of concrete. He removed his raincoat and settled down on the burlap rugs.

"Well, Les, this is a surprise. So you've turned monkey. Nice little cave you've got here. Kind of lonely, isn't it?"

Allison laughed softly. "A little, but I don't notice that as long as I am busy."

Kirk scrutinized the surroundings. He saw nothing that had the remotest connection with space ships or flight plans. A dim electric light burned overhead, and wires were strung around. There were papers with sketches of the flying starfish, some of the arms turned in curious positions. These, and the wires, and a set of electric switches, were the extent of Allison's scientific equipment.

"You don't have much to entertain yourself with," Kirk observed.

“I still have the flying starfish. There’s an excellent view from here. Not so good just now, with these clouds spilling down.”

“You have a radio?”

Allison patted the pocket of his space coat. “Can’t get over the habit of relying on a portable. I must say the news has been better the past few days.”

“All right, you know what’s going on. There was no point in my coming here. You know you have been appointed Director of the new projects to get outside the shell. They are going to start with telescopes, but the big plan is still to locate greener pastures somewhere beyond.”

“Something tells me,” said Allison, “that there will never be time to do much exploring beyond our present position.”

“Why? Do you have some inside dope?”

“Not a bit. I just hear the radio reports. But I know what I would do if I were one of those great green creatures outside the Earth.”

Kirk narrowed his eyes. “Don’t tell me you are studying these flying starfish to read the thoughts of other world creatures.”

ALLISON smiled. “Not a bad idea at that. But here’s the point. These creatures, whatever they are, have gone to lots of trouble to pick us out of the middle of our universe. It’s obvious that they sent these flying starfish to do the preliminary surveying. Now that they have followed through and captured us, do you think they are going to stop?”

Kirk was puzzled. He could not see his way through Allison’s thoughts. He took refuge in a facetious comment. “So you said to yourself, ‘It’s time to take to the caves. Let the rest of mankind look out for itself.’ You will go back to Nature. Maybe change back into a gorilla or something, and be safe. What’s the game, Allison? Trying to turn evolution in reverse?”

Allison laughed, and for a few minutes Kirk felt that he was back on the old friendly footing.

“But here’s what you have to consider,” said Allison. “These green creatures will go right on with their investigation. This big telescope they have turned on us is just the beginning. The next thing you know, they will be collecting human specimens by the hundreds and putting them under the microscope. Wouldn’t you do it, too, if you were they?”

The clouds thickened until the soft light of the eternal day was almost lost.

Kirk could barely see the huge starfish in the wide pen on the nearby hilltop.

“Some of these times,” said Kirk, “they will pull away from you in a heavy fog. Anyway, if they get smart enough, I have a hunch they could tear those bars apart and fly off.”

“I keep a light burning for them,” said Allison. “When I show you this you will think I am very fond of them. Well, I am. I am devoting the rest of my life to writing a book on the home life of flying starfish.”

Allison pressed a switch, and a cluster of light bulbs flashed on in the ceiling of the hilltop cage. Looking up through the rain, Kirk could see that those lights formed the shape of a star with six points. Another switch brought forth another illuminated star nearer at hand. Until this moment Kirk had not noticed the similarity between the top of the pen and an electric signboard. When he had flown over, Kirk had

looked down upon this pen. It was fully half a mile long, and its thin steel bars were almost invisible from the high altitude. What Kirk had seen was simply the dark forms of the starfish themselves, black against the wide white concrete floor.

"When I flew over I could hardly see the pen," said Kirk. "What I saw looked like a bunch of black stars waving their points. You must have had a sweet time climbing over that network of steel, stringing up your lines. What's the idea? Trying to teach the brutes to play night baseball or something?"

"Just a little notion about experimenting," said Allison. "I will give Professor Ubruff some credit for helping work out the idea. He used to experiment with the electric light bulbs and goldfish, he said, with the most amazing results. But this sort of thing takes a lot of patience, and the professor had worn his patience down on the goldfish, so he left this to me."

Kirk was staring at Allison now, and for some reason he recalled the troubled expressions of June and Diana. Was it possible that Allison had become so fatigued or worried that he had suffered a mental lapse?

"I think I will be going," said Kirk. "If you need me you can get in touch through the Rocky Mountain Observatory."

"Come again," said Allison, "and notice how that big starfish down at the end is performing. I'll leave the lights on while you sail over."

Out of hearing Kirk found himself muttering aloud.

"Performing starfish! Great stars and planets! How can a space man like Lester Allison fiddle his time away trying to make pets of these fifty-ton brutes? It don't make sense!"

As Kirk's plane lifted, he circled for elevation and got another sight of the pen from overhead. A huge six-point star of light showed through the fog. Allison must have been busy at the switches, for the points were being made to wave around in different positions. But the most startling thing was that a huge black starfish could be seen directly below the lights, waving its arms. The one great arm remained stationary. The other five continued to shift positions, and with every shift of the starfish Allison was making the lights change accordingly.

"Now isn't that a happy little game?" Kirk muttered in disgust. "The starfish calls the tune and Les plays it on his organ of electric lights."

CHAPTER XXIV

Rewards for the Gang

ALLISON was dead right about one thing. These great gray monsters with their six flapping arms were the servants of the immense green creatures of the outside world.

This was proved a few days later. An alarm from the vigilant watchers at one of the observatories first sighted the invasion of these smaller foreign creatures. The warnings spread around the world in a flash. The great shadows from outside the shell had cut an opening on one side and had released through that opening fifty or sixty of the flying starfish.

Newspaper presses hummed. Extras were on the streets within a few minutes. And newer underground cities came to life with the fearful realization that they were no safer than the rest of the world. This might be the beginning of a much greater invasion.

The civilized world knew by this time that these creatures were no strangers. From the earlier samples, people had retained their mental images of the long, shadowy, gray creatures.

Rewards were offered at once.

If there were only fifty or sixty invading starfish, the space hunters might make short work of them. Along mountain ranges and waterways many hunters gathered to keep watch. The coast artilleries of some countries were mobilized. These creatures would be fair game, and the reward was enough to make the hunt worth anyone's while.

Every few minutes the radios would report that a flock of strange birds had been sighted in this region or that. Kirk Riley excused himself from a conference with the central committee of the Migration Planners. He made for his airplane and headed straight for the Ohio Zoo. He radioed ahead. But he could get no answer from the Zoo's office. Why not?

Before he landed he know that his hunch was a good one. Other visitors were ahead of him, and they had come, Kirk was sure, to make trouble. They had brought an army tank. A truck might have been too light. They had come to *steal* a reward.

Kirk landed on the field at the edge of the Zoo grounds. He made sure the revolver he carried was loaded. As he bounded up the steps toward the tiers of hillside cages, he could hear the clanking of steel against steel. He dashed toward the old pen which Allison had made his cliff side home.

"Allison! Allison! Are you up there? Do you know what's happening?"

No answer. Kirk raced up the cliff-side path and ducked under the ledge. A little yellow light was burning. The electric wires and switches were in a tangle. Kirk could see, from the rumpled condition of the burlap rugs, that there had been a scuffle. Fresh scratches marked the dust down the side of the ledge.

"Allison! Are you down there?"

Kirk looked for something to hold him in his climb down the step bank. He seized upon a stray electric wire, fastened an end of it around a pillar of rock, knotted a loop in the other end and swung down.

Now he discovered bloodstains on the lower ledge of concrete, and a little farther on he came upon the figure of Lester Allison, lying in a heap.

"My stars and comets! What have they done to you?"

He bent down to slip an arm under Allison's shoulders. The poor fellow had toppled and fallen, like a wedge between stone. Must have cut his breathing to almost nothing. Kirk worked on him.

Allison began to groan and gave with a heavy sigh. His lips were bleeding; there were minor gashes on the side of his head. His eyes were half open.

"Come out of it, Les. Wait, I'll get some water. Take it easy now."

WHEN Kirk came back with the handkerchief he had soaked in a nearby pool, Allison was sitting upright.

"Here, I'll take it," said Allison. "Don't mind me. Go after those rats."

"You'd better lie down and forget about them. I knew the minute I heard about the reward that Champ

and Bill Kite and the gang would be right over here."

"Have they caught any yet?"

"They are about to get one."

Kirk looked across the hilltop. The seven or eight men had succeeded in fastening a chain on one arm of a starfish. The other end of the chain was attached to the army tank. Now the men were trying to break a wide opening through the bars so they could drag the beast through.

"Don't let them get away," Allison groaned. "Shoot 'em if necessary. Wait, I'll go with you."

"You'll stay right where you are," Kirk demanded. "Leave it to me."

"Go back to my cave," said Allison. "There's a revolver back on the shelf at the left. A little more of this water and I'll be back on my feet. I'm not hurt, just stunned. They pounced on me without warning. I think they've knocked out the whole camp."

Kirk made his way back to the cave and found the extra gun. But when he returned to Allison, the latter was lying down.

"That's good," said Kirk. "You stay right here. I don't think they'll come back—"

"You stay, too," said Allison. "Get down—out of sight!"

"But I'll be careful. I'll slip up on the blind side—"

"Get down, I tell you," Allison snapped. "Do you see that cloud—that *streak*?"

Kirk fell silent. He was looking up into the sky, trying to locate whatever it was that Allison saw. But now his attention was distracted by the curious antics of one of the starfish nearest the end. The creature was waving its many arms in slow rhythmic regularity. Its longest arm remained motionless. The others kept swishing through the air, as if participating in some weird ritual.

Then Kirk saw the dark streak overhead. It was no cloud. It was a line of flying starfish.

Suddenly he and Allison were aware that the whole line was swooping downward, straight toward the pen. Wider and wider their flapping arms grew as they skyrocketed down.

Across the hilltop the busy figures of Champ and Kite and their cronies suddenly became motionless. They saw it coming—a swift retribution for their misdeeds.

The line of starfish swept down upon them. For a moment there was a swarm of waving gray arms. Somewhere beneath that mass of starfish, Bill Kite and his gang were fighting for their lives. Gunfire sounded, along with the yelling and cursing.

But apparently gunfire was not enough. In a moment the line of beasts swung upward. The first seven or eight had grabbed as many victims.

Kirk could hear the low shout of Champ changing into a choked squeal as the gangster was carried off into the sky. The whole gang was gone. The flying starfish became a dim streak of darkness drifting over the horizon.

And Allison's pets, still safe in their pen, drifted around silently as if nothing had happened.

CHAPTER XXV

Souvenirs from the Captive Electron

THE new stand on the thoroughfare attracted a great deal of attention, partly because of Lyon's bluster, partly because there was something of genuine interest to be seen.

"You have never seen anything like it. They are the daintiest little creatures that ever came under a microscope. Here they are, my fellow fleas, waiting for your inspection."

Lyon held up a tiny glass box that reflected the green of his fingertips.

"Don't let your eyes deceive you. This box looks empty, but it contains hundreds of them. Step right up and pay the price of admission. In a moment I will place these creatures under the microscope, and you will see their pictures projected on the screen."

The fellow fleas crowded around, squinting their eyes at the glass box. They could not see anything. This talk of two-legged, flea-like creatures sounded like a fake. But the gullible and the skeptical alike paid the price and entered Lyon's dark room to see for themselves.

"They are like fleas!" the crowd was soon gasping. "Look at them walk. There's one running. See them chase back into the corner. They act scared."

"There you have it," said Lyon, "the most remarkable demonstration of invisible life that has even been seen."

"How much for the lot?" someone sang out.

"I will sell them individually," said Lyon, and he named his price.

"It's a hold-up. What are they good for? They are only a microscopic novelty."

"All right," Lyon agreed, "they are a microscopic novelty. When you see them once you have seen the whole show. Don't ask me to sell them. I will keep them myself. But let me tell you something. This little batch of invisible life will be a most valuable collection as time goes on. They are the first to be captured from the first electron ever imprisoned, and if you don't like my price I will hold them for an investment."

"What was that price you quoted?" someone asked.

This time Lyon doubled the figure. The crowd roared.

"All right, they are not for sale. The time will come when the graduate microbes and even their masters will have instruments delicate enough to see these little beings. And then what a handsome price I will command! My monopoly—"

Lyon broke off suddenly. Prince Zaywoodie and his friends were coming along the thoroughfare. The Prince called out a greeting.

Lyon told his crowd to wait. He would be right back. He went out to meet the Prince.

"You are taking good care of those little creatures, I trust," said Prince Zaywoodie. "We don't want any of them to get away until we have further requests from our masters higher up."

The Prince went on, and Lyon returned to his customers. "The price I quoted you still goes," said Lyon. "Now, do I have any buyers?"

A few of the fleas made purchases. They were instructed to go elsewhere for glass boxes in which to house their pets. When they returned their merchandise would be ready. The more money Lyon took in, the more loudly he shouted.

Within their group there was a grumbler, the cynic named Zeerat. He was scornful of Lyon's knowledge of the little creatures. His sly talk drew listeners.

"I have it straight from the one-cells that these little fellows are very remarkable. In fact, if I knew them as well as I know my fellow fleas, I might be able to admire them just as much as I admire you—and you—and you."

Lyon did not like Zeerat's talk. He stormed loudly. What was this—an attempt to belittle the greatness of the fleas? The walls shuddered with Lyon's shouting.

"I only said," Zeerat replied, "that these little electron dwellers may have virtues of their own. I learned from a one-cell that they have machines to make their voices loud or soft. Think of it—a machine to soften the voice! We might use that to advantage on some of our loud flea mouths!"

This enraged Lyon so that he hurled the first thing he could get his hands on straight at the cynic.

Zeerat jumped, as any flea would, to keep from getting hit. The little glass box smashed against the wall and the splinters flew.

What happened to the microscopic creatures inside was more than any monster flea could hope to guess.

* * *

THE teacher passed out some reports which his pupils received in their seven-fingered hands.

"The latest data upon our probing into the atom," said the teacher, "are indeed amazing. We learn that the electron has been successfully isolated, and that its inhabitants are being removed."

"Is there more than one inhabitant to an electron?" a pupil asked.

"According to the estimates set forth in this report," said the teacher, "there may be two billion of them on this particular electron. It was indeed a fortunate choice."

"Are they easily captured? Don't they even have the simple instinct to escape danger?"

"They seem to be powerless to help themselves. They are completely trapped. But a few of the more vigorous specimens are said to be flying against the sides of their trap, with machines, trying to break out."

"What will become of them?"

"This report suggests that they are to be sold as souvenirs. In fact, this traffic has already begun." The teacher shook his head and folded his great hands sadly. "We may never know whether such infinitely small beings are capable of feeling hurt or wronged by this action."

CHAPTER XXVI

Goodbye to the Pets

SOMEWHERE in the continent of America June Allison was appealing to her hero-husband with all her heart.

“Please, Lester. Come away from the Zoo. The Migration Planners are about to give up. Every hour there are reports of new captures.”

“But no killings?”

“How can we know what these flying starfish do with their human prisoners? They take them outside the shell, and that’s the end of it. They keep coming back in droves, and wherever they find people they sail down and scoop them up and sail away.”

Allison looked up at his flying starfish pets. “Interesting, isn’t it, that our captive starfish are so quiet and well-behaved. You’d think they would try to break out when their brothers keep coming over in flocks.”

“Lester, how can you be so—so devoid of feeling?”

“But my pets just look up and wave at their brothers and let it go at that.”

“Is that all you have to say?”

“I do hope, June,” Allison went on, “that the human prisoners outside the shell are getting as good treatment as I’ve given these brutes. But I—Wait, June. Where are you going?”

“I don’t know.” She was walking away from him as fast as she could go. She called back angrily. “But I do know we’ll never see Diana and Kirk again.”

“What’s that?” Allison shouted, hurrying to catch her.

“They were working at the shell with a Battering Ram crew. But they and the space ship are all gone now.” There were tears in June’s eyes. “Oh, I wish our Mercury friends were here—Smitt and the Wakefields and Mary and—”

“June, believe me,” Allison spoke earnestly. “I’ve been gambling my time on a hunch. Not until this hour have I been sure enough to try—”

“Look!” June cried. “Your pets! They’re flying away!”

“I bought off the Zoo,” said Allison, “and had them open the gate… Yes, there they go. They’re pretty, flying, aren’t they?”

“Then maybe you have come to your senses.”

“We’ll see,” said Allison. “Come on, let’s find a telephone. I’ll know in a few minutes whether Professor Haycox learned his lesson of co-operation. These flying starfish slipped through his fingers and Ubruff’s. But I’ve told those two gents how to save their reputations. By getting together and putting over a big job—”

“Haycox and Ubruff are deadly enemies,” June gasped.

“If there’s any goodness in human nature, those enemies have come through like a pair of pals. They agreed to have all the electric power companies in North America all set for me and ready to go.”

“*Electric power companies*?” This was too much for June. She gestured helplessly as her husband dashed toward the Zoo office telephone.

A minute later he was conferring over some vague business concerning the switches of an electric light organ.

“That’s correct, Haycox. Only one switch for the point in Canada. It remains constant… All right, then the whole network is complete and the organ is ready to go…”

June pressed her forehead with both her hands. “What next? Organ grinding?” she thought. “Maybe I ought to coax him into a cage and lock the gate.”

CHAPTER XXVII

Message Through Microscopes

“THIS is most remarkable,” said the teacher, rubbing his seven-fingered hands in delight. “It is the most amazing thing I have ever encountered. *The inhabitants on the captured electron are signalling.”*

He read the report, and his pupils listened with breathless interest.

“There we have it—a completed chain of communication from one universe to another. Let me summarize.

“One: We have learned to talk with the graduate microbes, which are too small for us to see.

“Two: The microbes, infested with parasitic fleas, sorted out the intelligent ones and utilized their smallness for scientific purposes. Through a common code of symbols the fleas passed knowledge up to their master microbes, who have passed it on to us.

“Three: The fleas have invisible servants, we have recently learned. Though the fleas can see them only through microscopes, these smaller creatures, known as one-cells, are, in their own peculiar way, very brainy. They talk by waving the points of their star-shaped bodies, and the fleas understand.

“And so do the microbes.

“And so do we.

“And now comes the final link in this marvelous chain. The infinitely small creatures on the newly captured electron *have already learned to communicate in the code of the one-cells*.”

After an impressive silence the curious pupils began questioning. What would such creatures have to say? Did they possess genuine thoughts of their own or were they simply parroting the actions of the one-cells? And how could they perform these actions?

Did they also possess star-shaped bodies?

“They talk by means of lights,” said the teacher. “Our latest report tells us this: So highly organized is their system of co-operation that they are able to turn on millions of separate lights all over the face of the ball on which they live.

“Even more remarkable, they can extinguish some of these lights and flash on others *instantly*, so that the star’s points can be made to talk.”

By this time all the class was so eager to know what messages were coming through that the teacher obliged by leading them to the vast laboratories, where a series of photographed messages from the telescope of the green fleas were being relayed upward, via the graduate microbes.

“The message, as it comes through to us, seems rather crudely worded,” the teacher observed, “but it carries an unmistakable message. Our receivers are interpreting it as follows:

"We who dwell on this ball appeal to the great creatures seeking to understand us. Our single wish is to be restored to our own position in our own universe. If this can be done, then we will welcome your messengers from this outside universe. But do not make slaves of us. We are creatures of freedom. Though we are small compared to you, we have the will and the ingenuity to choose our own way of living, and if necessary we will deal severely with intruders who are not wise enough to respect us. And so we repeat our plea. If any of you great creatures have the hearts to appreciate your tiny brothers, please take us back."

"That is the message," the teacher concluded.

After a long respectful silence came a question. What was done with the captives that were being taken from the ball?

"It seems that there is much bickering among the green fleas over their claims to these prizes," the teacher replied. "Already some fleas are doing a profitable business in selling microscopic souvenirs."

One of the pupils suggested that this was taking unfair advantage. Another mentioned that the captives might be able to make good their threat.

"True," said the teacher. "A single electron removed from this miniature universe may lead to any explosion of all the power hidden within these scrapings of dust. You are all aware that this pink fuel is exceedingly potent." The pupils began to back away. "But explosion or not, we are faced with an appeal for mercy in the name of fair play. Now it will be most interesting to see how a little pressure from us will filter down."

CHAPTER XXVIII

Back!

BACK through the electrons shell the prisoners were carefully transported. Flocks of the faithful one-cells—those silent flying creatures of the immense brains and the pointed arms—were kept busy for several days, bringing back what they had obediently borrowed.

Back came Kirk and Diana—Mr. and Mrs. Riley, to be accurate. With them came the proud magistrate and several thousand witnesses, who hailed the bride and groom as the first Earth couple ever to be married outside the solar system.

Probably no such hectic honeymoon would ever befall another couple as long as the Earth turned.

To be married within a huge crystal box amid thousands of fellow prisoners, all reflecting the green of some great monsters' fingers in their faces; to be hurled through half a continent of space immediately after saying "I do," and next to find one's bride and one's self and all the witnesses floating down through the thick air amid the splinters of the shattered crystal; and then to spend days and days *completely lost* somewhere outside one's own universe—this was Kirk's unique honeymoon adventure.

"We're glad," Kirk said to June and Lester Allison in a fervent little speech that he and Diana thought worth remembering, "to be back."

"If we ever get back, really," June suggested, "you two will have to take a honeymoon to the moon, now that you're veteran space flyers."

"*If* the moon can be found at this late date," Allison added.

"But we didn't miss the moon at all," Diana declared happily. "We had the most beautiful star. It was

six-pointed and it was spread all across the United States. And one point was up in Canada, and another down in Mexico, and we could see the whole thing at once! And the points would wave!"

"Les knows all about that, I'll bet," Kirk laughed. "He would be the first one to talk starfish."

Meanwhile, back toward its own corner of the universe went the Earth, towed by one of Prince Zaywoodie's fellow fleas, who knew how to get there the shortest way.

The End.

Notes and proofing history

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