

April

Wonder Stories



HUGO GERNSBACK Editor

Other Science Fiction Stories
In This Issue:

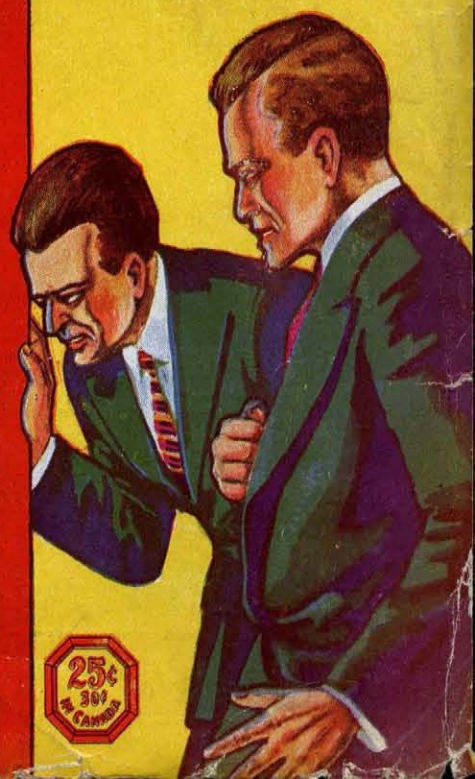
"AN ADVENTURE IN FUTURITY"
by Clark Ashton Smith

"THE EMPEROR OF THE STARS"
by Nathan Schachner and Arthur L. Zagat

"THE RETURN FROM JUPITER"
by Gawain Edwards



"THE MAN WHO EVOLVED"
by Edmond Hamilton



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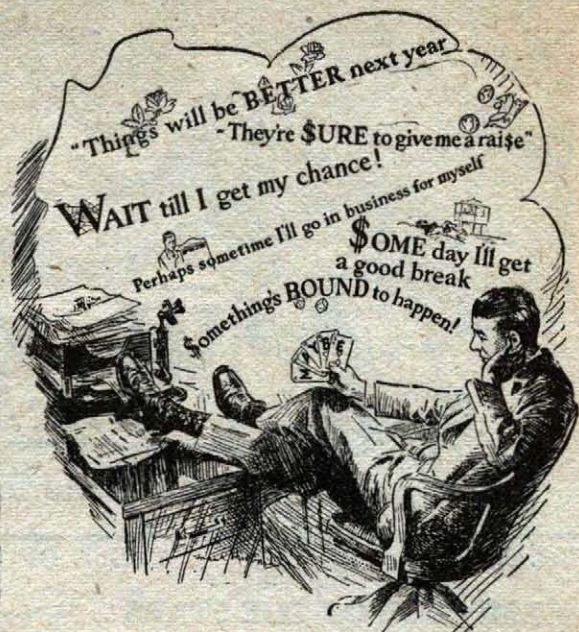
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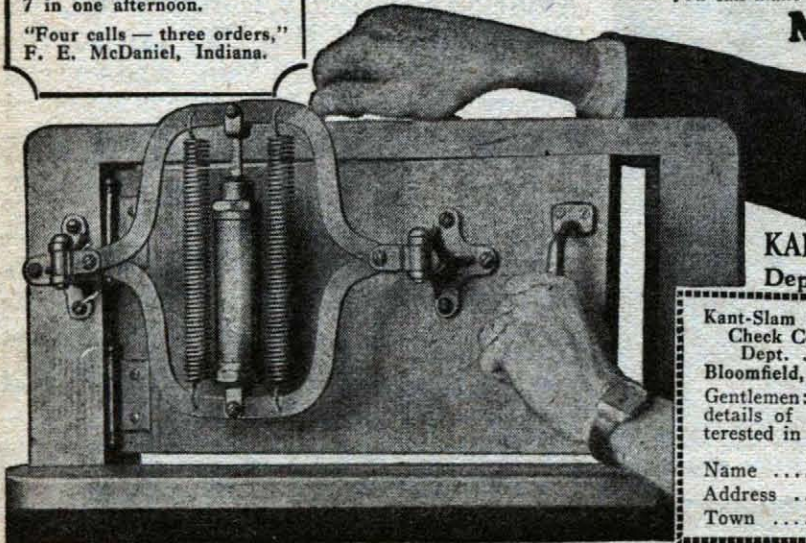
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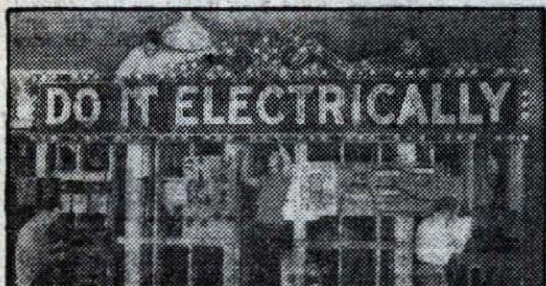
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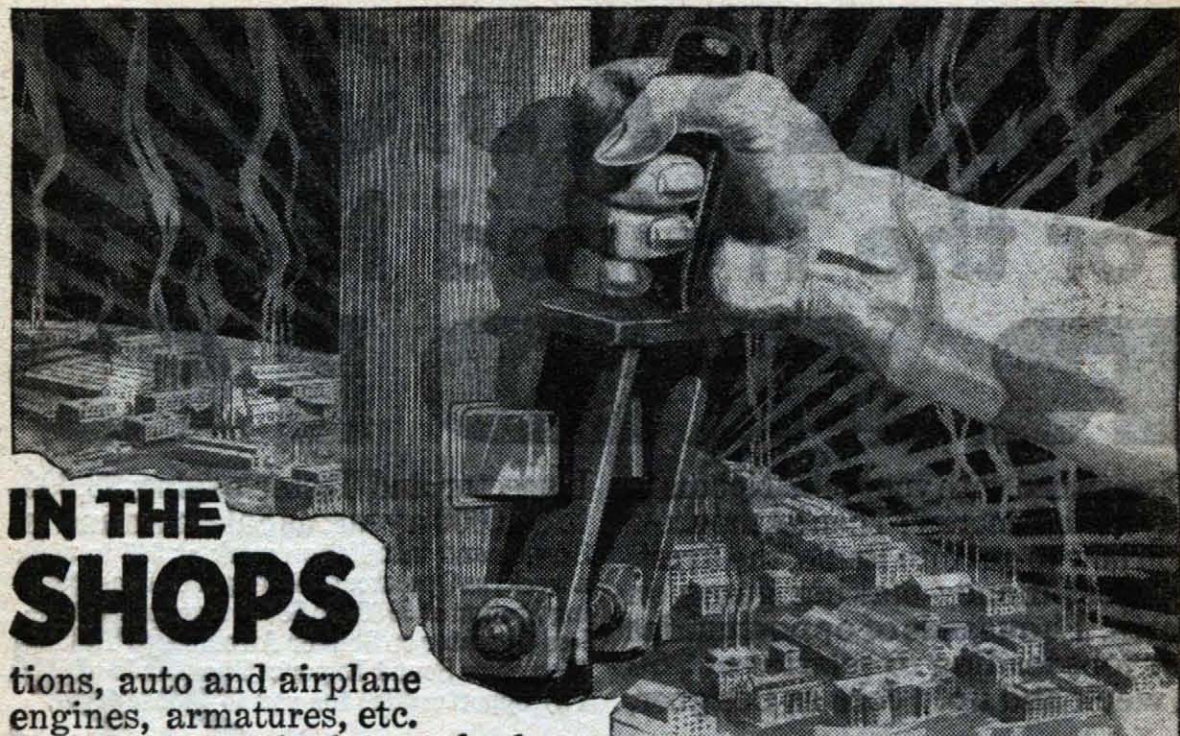
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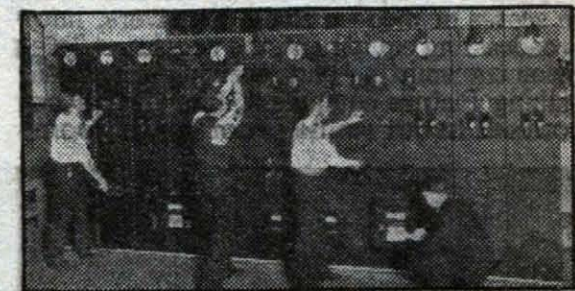
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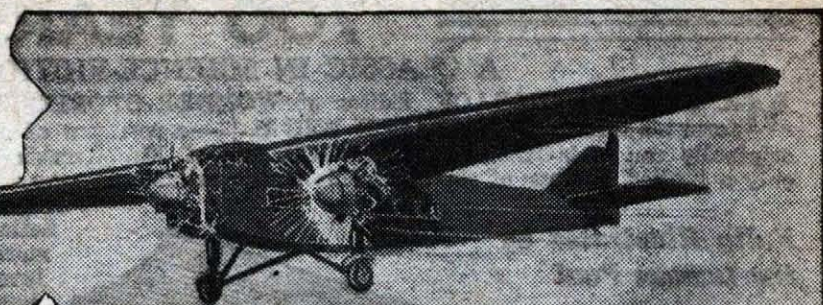


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THE WONDERS OF CREATION

By HUGO GERNSBACK



VERY recently, Prof. Einstein had a change of mind and announced that he no longer believed in his original concept of a closed universe. Originally, Einstein pictured the limits of space as similar to that of a bubble, the material world being enclosed completely inside but the surface having no end, any more than a sphere can have an end. Einstein was not concerned with what lay outside of the sphere. In order to understand this concept, one must be a mathematician because it does not fit in with the reasoning processes of the non-mathematical mentality.

For one I have always been reluctant to accept this part of Einstein's concept of the universe, and the idea of a limited space is as repugnant as the idea of a finite infinity or the finiteness of time.

Of course, everything along this line of thought must for a long time be purely speculative, and perhaps will always remain so. There is indeed much doubt that the ultimate nature of space will ever be fully understood by the human mind for it is not constituted to deal with such immensities.

The mathematical mind will tell you that space cannot exist without matter. Supposing we consider a star on the very limits of this cosmic universe. The present concept is, at least from a mathematical viewpoint, that anything that lies beyond the star is not space because there is no matter there. Of course, to the non-mathematical mind this seems an absurdity because the mind will insist that there must be space beyond the star, even if there is no matter. The point can be argued pro and con and we will probably not get much farther in the end. Then too, such questions as *when* space originated, how long it has lasted and if there is to be an end to space, may all seem fruitless speculations, but they are questions asked by the average curious mind.

Lately, Tolman has come forward with

the idea of an expanding universe, which again conflicts with older concepts because an expanding universe also brings with it the thought of an expanding space.

All of these theories do not in the least conflict with the general Einsteinian theory of relativity, as they really have nothing to do with it and they do not disturb the space-time concept of Einstein in the least.

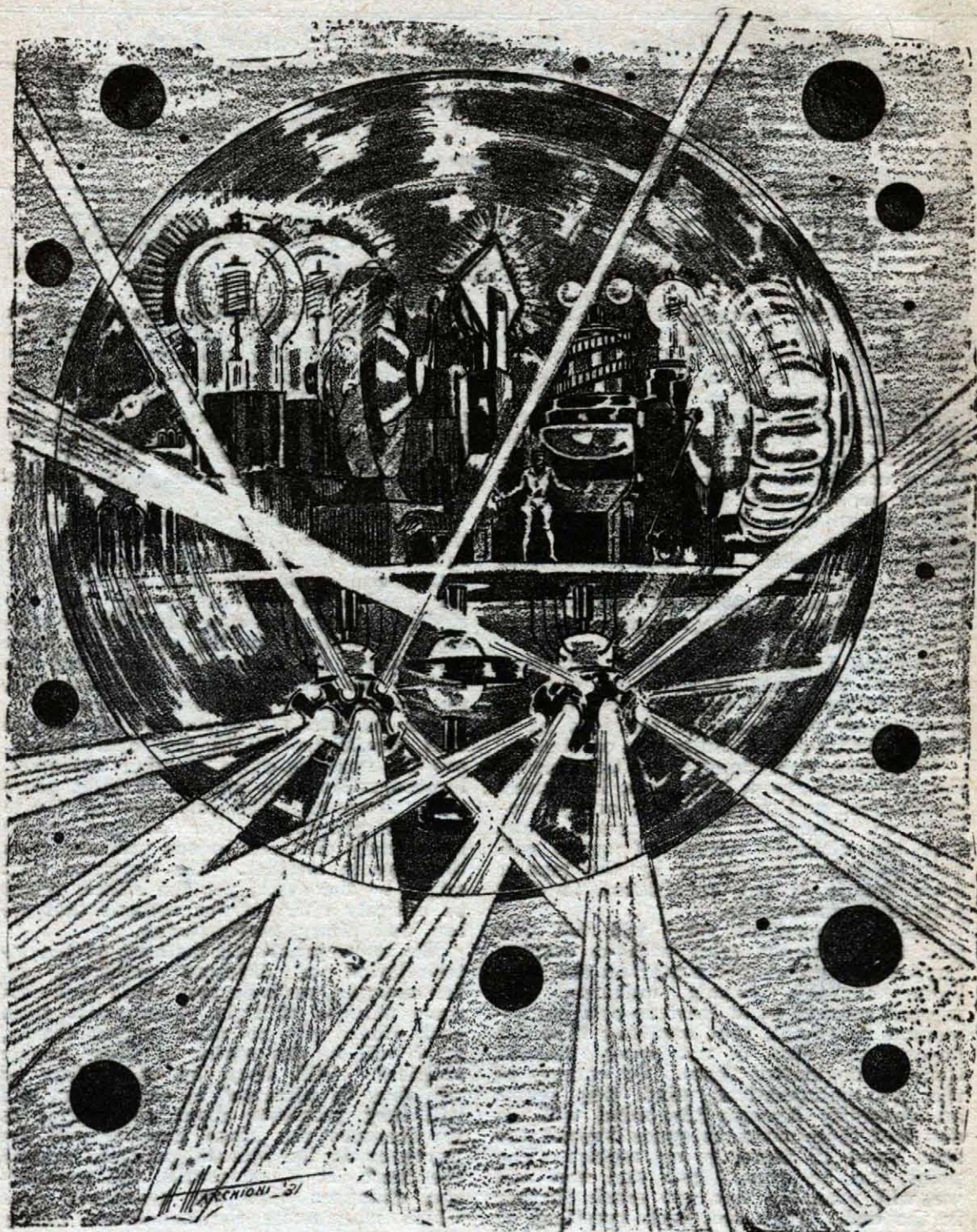
In the meanwhile, the only answer to the riddle that might be given in the future will be direct astronomical observation and it is here that we can look for perhaps a partial answer to the riddle. Every time a new and larger telescope is trained on the skies, we learn more about the secrets of space, and the farther we penetrate into its immensity, the more we will be able to deduce.

For instance, it is not at all certain that conditions within our own galaxy, are the same as those of other universes, located millions or billions of light years away from us. The interplay of forces such as gravitation, for instance, might be entirely different in one universe than they are in another. The universal laws might be the same, yet the effects might be entirely different for reasons that we can but dimly vision today.

We know practically nothing of the inter-relation of different universes. If, for example, we have two island universes some millions of light years apart from each other, with no other matter nearby, what will be the status of these cosmic entities? Will they be motionless or will they be attracted to each other, and will they gravitate about each other as for instance the Moon does around the Earth or as the planets gravitate around the Sun? It is, of course, the tremendous distances that are concerned here which may make the conditions totally different than if comparatively minute distances, such as planetary or ordinary interstellar distances, were involved. On these tantalizing problems future astronomical researches will no doubt throw a great deal of light.

The Emperor of the Stars

By Nathan Schachner and Arthur L. Zagat



(Illustrated by Marchioni)

A vast transparent sphere had floated into their space. Inside the shell, bathed in blue light, was observed the queer "human" creature.

“WE’RE a quarter of a million miles off our course!”

Joe Burns looked up from the oxygenation apparatus, whose valves he had been adjusting. “That’s lovely! What’s happened?”

“Don’t know,” replied Al Fries, navigator of the first terrestrial expedition to the planet Pluto, outpost of the solar system.

“We’ve swung that much off in the last four hours. And I can’t find a damn thing wrong. Speed relative to the Sun hasn’t varied from a steady thousand miles per second. Corrective side rockets have exploded regularly and the meters show full power.

“I’ve checked and rechecked my calculations till I’m dizzy. All correct. Didn’t want to tell you till I was sure I couldn’t find the error. No use bothering you, you’ve enough to do keeping us alive in here, inside’s your job, outside’s mine. But I’m stuck now!”

They had passed Neptune in their flight, and were out in the untraveled reaches of space, midway in their journeying to the new planet.

“Two hundred and fifty thousand miles off, you say. Which way?” Burns’ steady tones revealed no perturbation over the alarming news.

“Minus on the plane Alpha 45 deg. 10’ 24”; on Gamma 12 deg. 10’ 54”*

*Space navigation is plotted by reference to three planes having Earth as their common intersection. One of these planes (Alpha) is determined by the plane of the ecliptic, and uses therefore the celestial sphere. The others (Beta and Gamma) are at right angles to this plane and to each other.

“Perhaps we’ve gotten into the attraction sphere of some unknown planet,” Burns suggested.

“Impossible. Any body which could exert enough attraction to swing us so rapidly off our course against the inertia our great speed gives us would be clearly apparent to the naked eye, or at least in our telescope. There isn’t any. I’ve looked my eyes out.

Besides, I’ve searched every direction with the gravito-statoscope* and found no evidence of any attractive force not accounted for by known bodies. You know that instrument will respond to the attraction of a grain of dust at a distance of five hundred miles. No, Joe, there just isn’t any explanation.”

“Have you tried the emergency corrective rockets?”

“Sure have. Used as many as I dared. The explosions didn’t have the slightest effect!”

“Hell, Al, you must be off your nut. What you tell me just can’t be so. Wish I knew enough math to check your figures. Not that I haven’t all the confidence in the world—I mean universe—in you, but maybe this

long lonesome journey is getting you.”

Fries paled. “Do you really think that’s it, Joe?”

The chemist laughed. “Oh forget it, old boy. Of course I didn’t mean it. But you stop thinking along that line or it will be so. Here, let me get at that telescope—I’ll find the mischief-maker.”

Joe stepped smilingly to the eye-piece of

*An instrument for detecting new gravitational influences acting on the ship.

“THERE are more things,” said Hamlet, “than are dreamt of in your philosophy.” This story by our popular team of authors serves but to prove this oft-quoted phrase.

Sir James Jeans has only recently assured us that the world we inhabit is but a product of our senses, and may be simply a three-dimensional projection from a super world. Similarly it is possible for other worlds to exist all about us, whose laws may be entirely different than ours.

All our physical laws such as gravitation, etc. are possibly peculiar to our universe; and in another universe particles of matter may repel each other instead of attracting.

Surely the possibilities of a corking story in a theme like this are endless. Our authors have taken advantage of them to create a stirring tale of the adventures of two Earth-men in an alien universe.

the powerful electro-optical refractor. He turned one or two gleaming thumb-screws, then squinted into the tube. The smile slowly died from his face, instead a look of amazement took its place that turned to terror. His face was white. "Al, come here!" he whispered.

"What is it, what do you see?"

"Nothing."

"Then why are you looking like that?"

"I said *nothing*, not *nothing new*! I see *absolutely nothing*!"

"What!" Fries almost shouted. "Here, give me that 'scope."

In his turn the navigator gazed long and searchingly through the eyepiece. His bronzed face too, betrayed the blood withdrawn, called back to an affrighted heart.

IN all that vast sky, space had been swept clean! Nothing but blackness. The numberless points of dazzling lights that were great worlds and

huge suns had gone as if some cosmic hand had erased them from the skies! Their staunch ship floated in total emptiness!

"Al, look here, look!" Burns, imperturbable no longer, was pointing with trembling finger to the bank of white dials.

Fries looked. The pointer of every instrument, showing their relation to some outside body, was at zero! The velocimeter, the deviatoscope, even the gravito-statoscope. None was functioning!

The two adventurers gazed at each other in blank wonderment. What could this mean? It could not be true, that they had passed beyond all other matter, that they were alone in space, that within the shell of

this little space-flier was the entire material universe! Incredible!

And yet—what other explanation could there be?

While still their reeling brains strove with the problem, there was a lurch—one only—a flash of blinding light at the quartz port-hole—then all was as before. But no—Joe's fingers dug into Al's arm, as with his free hand he again pointed to the banked dials.

They were functioning once again! But how! It seemed as though all these staid mathematical instruments had gone suddenly crazy.

The pointer of the velocimeter was swing-

ing wildly against the brass pin at the zero line in an endeavor to push past it. As though it were trying to register negative velocity! The deviatoscope was wobbling in all directions at once. The gravito-statoscope was registering negative quantities, indicat-

ing tremendous repulsion.

"My God, have the instruments been put out of commission, or have we gotten into a topsy-turvy world?" cried Al, rushing to the telescope, while Joe jumped for the port-hole. Simultaneous exclamations burst from both.

No longer was there the black of unlit space; but neither were there the shining points of light, the old familiar constellations spangling the velvet back drop of space. Instead they were swimming in an intense blue light deeper by far than the fairest earth sky. Against the blue were silhouetted black disks and lesser points—myriads of them.



ARTHUR L. ZAGAT



NATHAN SCHACHNER

The earth-men stared at each other blankly. Joe spoke first. "Where are we? What has happened to us?"

Al was frankly stumped. "I don't know. This is not our world, our universe. I may be crazy but maybe we've been pushed into a different universe. That might account for the strange gyrations of our instruments." He warmed to the idea. "After all, there's something in that. According to Einstein our space, our universe, is curved around into an enormous sphere. True, he assumes that there is absolutely nothing inside or outside that sphere, not even emptiness.

"But suppose he were wrong. Suppose that there are other universes, all spheres of space, floating in a great super-space. Suppose that one of these sphere universes in some manner impinged on our space, tangentially. Through a freak of fortune we happened to hit that one spot. Since the two spaces touch, we went hurtling from our own familiar universe into this strange one, the existence of which has never even been dreamt of by our scientists."

"Impossible," gasped Joe. "I can't believe it." He shook his head as though his disbelief gave him no comfort.

Once more they gazed out at the unknown. In the blue radiance, the black disks had grown perceptibly smaller.

"Hello," cried Al, "we're being pushed away from those dark worlds, if worlds they really are."

"That's fine; maybe we'll be thrown clear back into our world again." Joe's face showed that slowly he was yielding to the belief that this impossible thing must have happened.

"What," Al yelled in his indignation. "Do you mean to stand there and tell me that you are willing to leave all this—the greatest, the most sensational adventure that happened to mortal men, without even a look around?"

"All right, keep your shirt on," retorted the castigated one. "If you want to investigate this nightmare I'm with you. Only please remember, that as it is, we have only an infinitely small chance of locating that

one small point of contact again. And if we move about here, we'll lose that one chance."

But the fire of the pioneering scientist blazed too brightly in Al. "I don't care what happens. We stay. Think of it, man, a new, a different universe!"

"You're the doctor. I hope though, we find a world we can live on. And some interesting people. For make up your mind we'll never see old Terra Firma again."

Al ignored him. "Hm, there doesn't seem to be any gravity here. We're being repelled instead of attracted. Tell you what you do, Joe. Use some of our rear rockets. That'll force us ahead."

Accordingly, two rockets were fired. Intently Al watched the instrument board. Sure enough, the velocimeter registered a forward velocity, the deviatoscope acted normally again; only the gravito-statoscope continued to evidence repelling influences.

A Topsy-Turvy World

AS they drove ahead, both men watched the new heavens anxiously. One of the black disks was gradually disengaging itself from its fellows, and growing slowly, perceptibly larger. About the size of the moon now.

Al looked once more at his instruments. Their velocity was decreasing. "Shoot off another rocket, Joe," he ordered. Once more they forged ahead.

"Queer sort of matter in this world," he continued, ruminatively. "Repels us instead of attracting. Everything seems just the reverse of what we know. The space glows and the stars are dark. And I see no evidence of suns or anything to account for the queer blue light."

Meanwhile the dark world they were aiming for, was growing steadily larger. Then a queer thing happened. The nearer they approached, the higher it rose above them, until it was directly overhead, a vast ball filling half the firmament.

Joe was surprised, and told his friend so.

"Not at all," Al responded. "Up and down are purely relative terms that have no meaning in space. It is only when you come

within range of matter, that these words have any significance.

"In our universe, a material body, responding to gravitational influences, attracts your body to it. In other words, you fall toward it,—which means that the attracting body is beneath.

"Here in this universe, on the contrary, matter possesses only the property of repulsion. You are driven away from the world; in other words, you are falling from it,—which means that this world is overhead as far as we are concerned. To reach it, we shall have to climb straight up."

"Then how in blazes are we going to land on it to see what it's all about. We'll be like flies on a ceiling."

"You're right," Al confessed. "I didn't think of that. However, we'll get as close as we can, and see what we can discover."

With the aid of rockets, they drove on and up, until they touched the huge ceiling.

The two gazed out upon an illimitable expanse of black lava-like rock, craggy and bare. No life, no movement was visible in the spectral blue glare that beat upon the immense rocky plain. Indeed, no life as we know it could be possible, for aside from the difficulty of clinging to a ceiling of rock, Joe's tests quickly showed the absence of any atmosphere.

"I can't see the sense of wasting any more time hanging here," he said finally. "Let's try and find a more inviting world."

"Hold on a moment, what's that?" Al was pointing excitedly through the port-hole.

Not half a mile off, a broad orange beam of light had suddenly shot out from the black surface. Even as they gazed, a long cylindrical object appeared at the base of the beam, steadied itself a moment, then shot out downward into space. Its flight was so swift that it vanished instantaneously. The orange light contracted until it too disappeared.

"That's either an upside down volcanic eruption, or else—," Joe paused uncertainly.

"Or else—that's just what we're going to investigate." Al sprang to the controls. Rapidly he propelled the space-ship to the point where the orange ray had appeared,

and hovered directly underneath it.

They gazed up at a huge inverted funnel, tapering on top to a flat narrow area.

"Turn on the searchlight, Joe. Let's see what's up there."

Obediently, Joe swung the parabolic reflector into focus, and turned on the current. An invisible ray stabbed through the blue space, impinged inside the funnel, and lit it up with a blinding light.

Al whistled. "Look how smooth the walls are, how regular the curve. That's an artificial orifice, Joe. And something just came out of it. I'm going in there to investigate."

"Hold on there. Don't let your enthusiasm run away with you," Joe cautioned. "In the first place, I've seen volcanic cones as smooth and regular as this one. And if it is—you remember that orange flare—another eruption while you're squinting at it will mean the end of this little expedition. Besides, this boat's too big to fit in there. And if we get out, what'll hold us and the ship from all flopping down—God knows where—in this crazy space."

"I'm not worrying much about the volcano idea," retorted Al. "As for our falling, just run us as far up into the opening as you can, and I'll attend to the rest. Careful that the air lock is on top, though."

Joe shook his head doubtfully, grumbled a bit, but followed instructions. Once snugly in position, the beams of the searchlight illuminated the interior. There was no question about it now—the funnel was patently artificial. The walls were of black polished stone; at the tip overhead was a flat slab of the same material. A circular incision, about four feet in diameter, was evident in the slab.

CHAPTER II

The Green Terrors

AL was hastily donning his space suit, electrically heated and containing oxygen-respiratory apparatus.

"For God's sake, Al, what do you intend doing?" Joe cried out in alarm.

"Do? Tie this ship to the sides of the

funnel so she stays put. Remember we have four steel rings welded on the outside of our ship."

By this time he had donned the suit; only the helmet was not yet clamped into position. He took out of the tool chest two huge steel spikes, two lengths of massive chain ending in huge hooks, an electric drill, and picked up a disruptor tube.

"Now I'm ready; you hold the boat steady while I work. When the ship's securely fastened, I'll wave in at the porthole. Then you get into your space suit, and climb out. Bring a crowbar along, and your disruptor tube."

He climbed up into the air lock, shut the panel behind him, slid open the outer panel, and climbed on top of the space flier.

He chose a spot in the polished rock close to one of the ship's steel rings. With the electric drill it was a matter of minutes to fashion a deep hole. Al then inserted a spike at an angle, slipped a length of chain over it. The chain was secure. Next he slipped the great hook at the other end, into the steel ring. Repeating the operation on the other side, the space-ship was hanging, securely fastened.

Then he waved in signal. Shortly Joe was clambering out also enclosed in a space-suit. He carried a long crowbar with him. Fortunately the top slab was only a few feet above their heads. With right good will, they shoved against the inside stone. It moved slightly. Greater grew their exertions. Finally it lifted, as though on a hinge. Eagerly they pushed harder, until it fell over inside, revealing a circular hole, through which an orange light streamed.

Al spoke through the wireless phone included in the helmet equipment. "Just give me a leg up, Joe, like a good fellow."

Joe bent, clasped his hands in front. Al put one foot onto the clasped hands and Joe heaved until he was able to clamber through the opening. Immediately he extended an arm down, and with great exertion, pulled Joe up alongside of him.

They found themselves at the bottom of a slanting well. Far in the distance was a circular opening through which an orange light filtered.

Slowly, laboriously they negotiated the steep climb. At last they emerged panting, into the orange glare.

What they saw was so inconceivably strange, so opposed to all their preconceived notions that they stood still, gasping with astonishment.

They were standing on a vast plain, composed of the same rocky material as the outside; bleak, barren, thrown into giant crags and mountains. There was no horizon; the plain curved upwards until it was lost in the distant haze. The whole atmosphere was bathed in an orange glow, emanating from a huge globe of fire overhead, the sun of this interior world.

No sign of life revealed itself in the hideous barrenness of the huge concavity.

"Good Lord, what is this anyway!" Joe spoke through his phone. "We have to climb up to land on this place, then bust our way through; and then we find ourselves standing inside a hollow shell, with a sun and everything. It's certainly confusing. And why, if this matter has no gravitation, as you say, but exercises a repulsive force, why isn't it down on this side too, so that we would fall kerplunk into this space also?"

"Because," Al spoke up, "that sun overhead must be the source of the repulsion. I get it all now. The waves of repulsion emanating from the sun keeps this shell properly spaced around it, and causes everything to be pushed against it, including us. That would give exactly the same effect, as far as we are concerned, as though we were held here by force of normal gravity. Furthermore, the repelling waves must penetrate this shell of material, and flow out into the blue space of this universe. That was why our ship was being forced away."

"How about removing our space suits? I always feel uncomfortable in them," Al continued.

"Just a moment while I test this atmosphere to see if it's livable."

Joe extracted from a pocket of his suit a clever little device. The turn of a valve, the pressure of a button, and an electric coil heated a sample of the atmosphere. A glance

through the tiny spectroscope attachment, and its constitution was revealed.

"Oxygen, nitrogen, carbon dioxide—the same gases that make up our air. And just about in the same proportions. Alright, Al, we can breathe this atmosphere. Off go the suits!"

S WIFTLY the two tore off their helmets, opened the zippers of the overalls. Quickly the protective garments were folded into compact bundles, stowed in the shoulder knapsacks prepared for their reception. The two drew in long breaths of air. It seemed good to breathe freely again, reckless of consequences, free from the everlasting necessity of watching dials, and switches, and levers.

"That's good! Glad to get rid of that synthetic mixture we've been living on ever since we left Mother Earth. Wonder if there's any life here."

"Let's scout around a bit, though from the looks of things, it doesn't seem likely. Yet how about that hinged slab, and the cylinder we saw shoot out of it?"

Meanwhile they explored the chaotic terrain. Suddenly, Joe halted. "What's that, behind that rock?"

Around a boulder, not far ahead, appeared a jelly-like creeper. As the startled earth-men watched, the creeper swelled, expanded, and lo, there before them was a nightmare creature. Up it towered, a quivering green jelly, formless, yet multiform,—its malevolent aspect sent a thrill of horror through the adventurers.

"There's your specimen of life, Al. Hope you like it!"

Cautiously they approached the creature, disruptor tubes handy. Motionless, it appeared to be unaware of their presence. They were about ten feet away, when suddenly, a tentacle spurted out from the formless mass, straight for Joe. So lightning swift was the attack that he barely had time to spring beyond its reach.

A cry from Al. Another and yet another of the horrible jelly masses had appeared from behind the strewn rocks. They were rolling rapidly nearer.

"I don't like this so much—let's get back

to the ship while we can," Joe exclaimed.

"I'm afraid it's too late—we'll have to fight our way," Al replied grimly. "Look over there."

The entire plain was alive with the heaving forms of the protoplasmic denizens of this queer world. Especially were they numerous around the tunnel exit. The Earth-men were ringed about now with the quivering menaces—their ever-forming tentacles flicking out toward them with inconceivable rapidity.

Disruptor tubes in hand, the beleaguered explorers advanced toward the passage, their only chance being to blast a path to safety. The jellied bodies drew together solidly blocking the way. Simultaneously Joe and Al pressed the triggers of their weapons. The long pale beams sprang out, impinged upon the heaving forms.

A cry of despair burst involuntarily from both men. The disruptor rays had absolutely no effect upon these creatures. Matter was differently constituted here — earth forces were unable to break up these atoms.

All was lost! The end of the great adventure was near. In great waves the green terrors advanced. Desperately the men searched about for some opening, some gap through which to seek escape. There was none. Enringed, they stood at bay, defenseless, now that the disruptor tubes, potent weapons of destruction on earth, were useless.

As disaster bore down upon them, Al's thoughts flashed back to the commencement of their flight; the vast crowds gathered to see them off—aspirants for the great million dollar prize to the space navigators who first explored the pale planet, Pluto, enigma of the solar system.

Almost was the prize within their grasp. Another few hundred million miles and they would have reached Pluto. But now they were thrown into this. Now they were doomed, never to return, or bear witness to the wonders they had seen.

A clammy yielding tentacle encircled his body, dragging him down. Joe, too, was struggling in the grip of an amorphous monster. Desperately they fought, but to no avail. Even as they broke through one

grip, another viscid tentacle would flow over them. Already they were being engulfed into the bodies of these creatures. What a horrible end—to be ingested alive—to be dissolved in the digestive fluids of this horribly strange green beings.

Even as the two had given up all hope, were weltering at the bottom of a mass of viscid, clammy matter, there was a sudden change. A shudder ran through the monstrous jelly engulfing them, the horrible stuff flowed away. They were left lying there, stunned, suffocated, senses reeling into oblivion, but still alive!

Strange Beings

SLOWLY life flowed back into the adventurers. What had brought about this sudden change? What had saved them from certain extinction? They raised their heads, then dropped them with simultaneous groans. What nightmare was this they were living through? Impossible, the things they had seen! Again they looked about them. True enough, two shapes were standing there. But what shapes!

Two orange, dome-shaped creatures, somewhat like diving bells. The front of each bell was flattened, and in the center was a huge oval opening, covered by a translucent mica-like substance. Directly over and on each side of the opening protruded two antennae, at the end of which were round faceted knobs.

Beneath the orifice were two long waving tentacles, ending in two opposing spatulates. The whole dome or bell rested on innumerable little jointed legs, the creatures were able to travel with a fair degree of rapidity. Altogether they were not over three feet in height.

Joe and Al sprang to their feet. In the distance they could see a swelling mass of the green jelly-creatures that had so nearly done for them. Driving them on with green flashes from tubular weapons held in their tentacles, moved a horde of queer beings similar to the two immediately in front of them.

"Holy mackerel!" Joe exploded, "these things have saved our lives, alright, but what

the devil are they? Bird, beast, or devil? Do you see the same thing as I, Al, or have I gone daffy?"

But Al was not listening. He had been watching the forms intently. "Look," he cried, gripping Joe's arm. "Look at that, will you!"

On the translucent mica-like coverings over the orifices, appeared reddish characters. There were four of them, delicate, intricate tracings, lit up by some interior fire. They resembled somewhat the old cuneiform writing of the Babylonians, or the Egyptian hieroglyphics. Even as the earth-men watched with bated breath, the glyphs vanished, and others, different in form, took their place.

Al was greatly excited. "I believe they're trying to communicate with us. That membrane is a screen on which they can flash symbols that represent their language, just as we do in printing."

"Then how in blazes are we going to talk to them. Wonder if they can hear." Joe cupped his hands and shouted a great "Hello!"

There was not the slightest movement to show that they had heard, but at the gesture, strange fiery characters danced and changed with great rapidity on the screens.

Joe was disgusted. "What are we to do now? Draw pictures for them?"

"That isn't such a bad idea," declared Al. "But first we'll try pantomime."

Accordingly he pointed to the open doorway up through which they had come, and then with a sweep of his arm denoted their travels through far space.

For the first time, the creatures showed excitement. They shuffled their innumerable feet and waved their long tentacle arms. One of them propelled itself like a huge centipede to the jade slab and quickly shut it. On the screen of the other there flashed a scene—the deep blue of space in which whirled innumerable worlds.

Now it was Al who danced excitedly. "There you are, Joe," he cried, "they're making pictures for us, moving pictures; just what you spoke of so contemptuously. See, they've understood me." He nodded his head vigorously in confirmation.

Evidently this gesture was also comprehended, for the picture changed to one in which the Earth-men beheld themselves escorted along an alabaster road.

"They want us to go with them, Al; think it safe?"

"Safe?" echoed Al scornfully, "why, they couldn't hold me back. Miss up examining this civilization! I should say not!"

"All right, all right," Joe retorted good naturedly. "Keep your shirt on; I'm going; just thought I'd ask."

Al in pantomime declared his willingness to go with them. Immediately one trotted ahead, while the other moved along with the two adventurers.

FOR a long time they moved across the black and dismal plain, swept clear now of the grim green menaces that so nearly had been their doom. Then they came to a precipitous ascent, up which a roughly hewed road spiralled. Breathless, the Earth-men reached the top. Then they stopped, thunderstruck.

They were gazing down upon a rolling landscape that gently undulated and curved upwards until lost in the haze. A warm, golden orange glow enveloped the scene in a glamorous bath. Overhead shone the source of the illumination—a mild, kindly orange sun, whose rays were not too dazzling.

Below them stretched a view that made them catch their breaths.

A long, curving snow-white road led down into a deep valley. Filling the hollow was a vast city, a golden gleaming city of rounded shapes. Immense structures; domes, diving bells, magnified duplicates of their inhabitants.

Joe was the first to break the silence. "This is something like. These people must have considerable brains and skill to build that wonderful city."

Al said nothing, but broke into a rapid walk, so fast this his guides could barely keep up with him. As for Joe, "Good Lord man, hold on a bit. I'm not in training for cross-country, you know."

Unwillingly Al slowed his pace. The true explorer's fervor blazed in him. As

they descended into the valley, they began to meet more and more of the strange denizens. Without exception, each one that they met stopped short in his tracks, bright red symbols chasing each other intricately over his translucent screen, to be met with answering hieroglyphics from their guides.

"Sort of giving them the low down on us," Joe explained it. Invariably the curious one fell in behind until by the time they entered the city, they were accompanied by a veritable guard of honor.

On a broad white highway between the golden domes, mosaics of intricate designs in which gold predominated, went the procession. A weird soundless procession, except for the slight rustle of innumerable little feet.

It struck Joe for the first time. "Say, Al, have you noticed that there is no noise in this world. None of the usual sounds we're accustomed to. Positively uncanny, I think."

"It struck me too. These people cannot speak, and evidently cannot hear either. Because of the silence in nature. Were there natural sounds or poises, evolution would have equipped them also with the necessary apparatus."

Just then their guides swung onto a long ramp that led into a dome more magnificent than the rest. Guards at the entrance, armed with gleaming tridents, permitted them to enter, and promptly barred the way to the unofficial escort.

The vast interior was crowded with Prostaks (the name of these bell-shaped people). On a raised platform at the farther end stood one taller than the rest. In one tentacle he carried a great trident whose prongs darted golden flames. Near him stood contemptuously,—if such earth terms could be applied to so strange a being—an *elongated cylinder*, entirely enclosed in a deep blue shimmering aura. Lifeless though it seemed, purely geometric its form—yet the explorers sensed immediately the presence of a living force—a malignant, evil influence that caused their flesh to prickle with nameless shudders.

"Good God, that damned cylinder is the center of something horrible, Joe," Al ex-

claimed involuntarily. "I feel it in my bones. These other people—I know they *are* kindly, gentle folk. I can sense it, even though they *are* so different from us. But that over there, it gives me the creeps."

Joe nodded soberly. "I had the same feeling as soon as I saw it. I'm afraid we're going to have trouble with that beastly figure before we're through. And these inhabitants, I think they already have felt the force of its devilry."

CHAPTER III

A Silent Drama

EVEN as he spoke, the blue aura enfolding the cylinder began to flicker. Streamers shot out from it; long ones, then short, then long; evidently a sort of Morse code.

The imposing Prostak on the platform, whom the earth-men already recognized as the ruler or King over these people, faced the other being with what seemed the greatest attention.

When the flickering streamers ceased, the Ruler bowed submissively. Instantly all the Prostaks in the hall tossed their tentacles about wildly, shuffled their little feet, while on the screens dashed a perfect frenzy of symbols. The uncanny silence was unbroken, but Joe and Al looked at each other. Both had felt it. Immense waves of lamentation exuded into the vitalized atmosphere—these people were suffering intensely. Within the Earth-men's breasts, hearts hammered suffocatingly under the surge of an immense pity.

"Al!" Joe whispered hoarsely, his eyes suspiciously wet.

"What is it?" responded Al in a queer choked voice.

"There's something damnable going on here!"

Al nodded fiercely. "I know it—I feel it."

Joe continued hurriedly. "That alien cylinder has just made some filthy demand on that big fellow—the Ruler here—and he was forced to give in. And all these poor people are crying inwardly—they haven't even

the consolation of honest-to-goodness tears and wailing that we have. Some frightful doom is hanging over them."

"Wish we could do something to help."

"Hold your horses, Al. Mustn't go off half cocked. Wait until we learn a bit more about things here before we butt in."

Their attention was once more attracted to the ivory platform. The Ruler was motioning with his huge trident to a group of guards armed with smaller tridents.

Instantly the guards set in motion. Down through the crowded hall they moved, the Prostaks shrinking and shuffling away from them with every evidence of terrible fright. Suddenly the guards swooped, and six frantically struggling figures were borne bodily to the platform. The Ruler emanated inutterable sadness, and a host of pallid red glyphs flashed in rapid succession on the thought screen. Afterwards, the Earth-men found they could detect the mental mood of the Prostaks from the depth of color of these symbols. When the Prostak was cheerful and gay, the characters danced a brilliant red; when sad or uneasy, the red was dulled and pallid.

The guards carried their writhing victims down the length of the hall and out into the open. The vast concourse of people bowed down almost to the ground, their long spatulated tentacles waving wildly, heart-breakingly.

The cylinder stood erect, as though contemplating the despairing people. Was that a mocking leer that subtly emanated from it? Joe could have sworn it was. Instinctively his hand reached for the revolver in his pocket. He had a wild desire to shoot down that alien tyrant.

Al saw his movement, and gripped his arm just in time. "For God's sake, Joe, stop it. Are you mad? You don't know what it's all about. And besides, you're liable to expose us to some terrible danger by your foolhardiness. Wait until we learn more about what's happening."

Grumbling, Joe allowed himself to be persuaded. He returned the weapon to its place. "I know damn well what it's all about. That grinning, leering cylinder—I'd like to shoot it full of holes and see

what it's made of. But I suppose you're right—we'd better wait and get acquainted first." Notwithstanding his acquiescence, he sighed regretfully.

The blue cylinder began to flick out a message. Once more the King bowed in token of submission. Then the blue flames increased in volume, until the baleful cylinder was only faintly visible. Suddenly it shot up into the air, circled about the hall three times, (a derisive gesture, Joe thought) then darted straight for the roof of the dome. Without hesitation it plunged through the solid stone as though it were non-existent and disappeared. A nameless oppression, a foreboding of ultimate doom, lifted from the travelers' hearts with its passing.

WRAPPED as they were in the mighty drama just terminated, no one had noticed the intrusion of these two visitors from another universe. But now the Prostaks discovered their presence, and once more excitement resumed its sway. The hall was filled with inquisitive waving tentacles, and their pictured remarks glowed with a livelier red.

The Ruler raised his body at the turmoil, and saw the cause of it. You could almost see his start of surprise. He held his golden trident aloft. The two guides, heretofore discreetly in the background, now pushed forward. The Earth-men followed.

A rapid exchange passed between the guides and their King. Then he turned to his visitors, and, raising his trident aloft, waved it three times. Al, who was already almost *en rapport* with this strange race, said to Joe. "He's evidently welcoming us."

Then picture began to flash on the oval screen. Intently they watched. They saw themselves being led through long corridors to a great hall, filled with bizarre machines, busily attended by Prostaks. "Looks like a scientific laboratory to me, Joe; he wants us to communicate with their scientists." Then they watched themselves going to other chambers, where food was served, and ultimately to a place where they stood motion-

less in fixed attitudes, when the pictures went blank.

"That must be their sleeping quarters. They must sleep standing up. In fact, I can't see how they could lie down if they wanted to," interjected Joe, proud of his acumen.

Al attempted in pantomime to show he understood. The King waved his trident once more, and two guards appeared. Ranging on either side of the explorers, they led them down a long corridor into a chamber full of queer apparatus, exactly as had been pictured to them. The scientist Prostaks came forward to greet them.

It would serve no good purpose to enter into a lengthy discussion of the methods employed to establish understandable communication between the representatives of these so alien races; the slow and tortuous stumbling before a fair degree of success was attained.*

Suffice it to say that the earth-men discovered that the symbols employed by the Prostaks were conventionalized ideographs, having originally been exact representations of objects and actions. They never were able to find out just by what living internal mechanism these beings were able to flash their pictures, or glyphs on the sensitive screen. As for the Earth-men's communication with them, Al, who was a clever sketcher, and fortunately had a note book and pencil along with him, employed his talent with great success. That and pantomime did the trick until the men learned the Prostak language and the meaning of the symbols. Then matters progressed smoothly, for they could sketch the characters to express their thoughts.

Almost the first question they asked, when understanding was established, was an explanation of that terrible drama in the Hall of the Ruler.

The chief scientist told them the story.

* * * *

In the center of the universe, he said, there existed a mighty Ruler, a being who,

*Any one interested may find a full and complete account of the language, customs, and scientific achievements of the Prostaks in the monograph by Burns & Fries in the *Interworld Geographic*, Vol. 252, p. 1063.

strangely enough, resembled most closely the Earth-men.

When he had come, no one knew. But many pilasters ago (a pilaster is ten months and twenty-one days), a vast transparent sphere had floated into their space. Inside the hollow shell, bathed in blue light, was observed the queer "human" creature. A maze of strange instruments surrounded him, whose use the Prostak scientists, watching eagerly through the funnel orifices with powerful telescopes, were unable to fathom.

Even as they gazed, the strange being manipulated various levers, and great streamers of cold blue light shot out into the black void of space, until the entire universe was luminescent with the glaring blue flames.

To the amazed view of the Prostaks, there were illumined innumerable dark worlds, similar to their own. Of the existence of these, they had been apprised for ages by means of mental communication with the inhabitants, but this was the first time the orbs had become visible. In the interiors were peoples and civilizations comparable to that of the Prostaks. By a system of thought transference the races of these hollow orbs could communicate with each other.

The History of a Race

BUT some few of the rolling balls in space were uninhabited. Possibly, they thought, these barren worlds were solid throughout, and therefore unable to support life.

Attempts to establish communication with the strange new creature in the hollow transparent shell were unsuccessful. At length they resigned themselves to watching for further developments. These were not long in coming. The great sphere moved methodically from one to another of the dark solid worlds. In front of each it rested motionless in space. The man creature busied himself with his instruments. Pale beams impinged steadily on the lifeless hulks, until to the watchers' vast astonishment, a deeper blue haze, strangely resembling an atmosphere, enveloped the dark spheres. Unbelievably, it seemed to cling to the surface,

instead of being violently repelled into space.*

The scientists puzzled over the meaning of these strange events without success. Soon, too soon, were they to realize the full horror of this irruption into their hitherto peaceful universe.

One day they noticed that the strange, enclosed being was exceptionally active. Instrument after instrument whirled and gyrated. Suddenly, an elongated cylinder of blue flame leaped into life, passed through the transparency as though it did not exist, darted through space straight toward a sister world. With barely perceptible pause it shot through a tunnel opening, and disappeared into the interior.

Agog with excitement, the Prostaks attuned themselves to the thought waves of the orb, to learn the meaning of this strange invasion. They were not long left in the dark.

The cylinder of blue flame was demanding that a certain number of the Arkabs (the name of that race) be placed in elongated cylinders of its Master's contriving, whom it called "The Emperor of the Stars", and ejected into the void. They were to be drawn to the new worlds so strangely made livable by the Emperor, there to live and die as slaves, working his will, tilling the barren soil to grow the curious foods necessary for the well-being of the self-constituted Emperor. As the population grew from the enslaved beings of this and other worlds, certain secret plans were to be made effective. If they refused, the direst retribution was threatened.

Scornfully, the rulers of their sister world had rejected the barbarous terms. The strange cylinder betook itself haughtily back to its Master.

What followed was dreadful. First the heavens turned an intense blue. Then luminous blue streamers shot athwart the sky. Rapidly they approached the doomed world. They touched, enveloped it. Before the fascinated watchers' eyes it seemed to crumble, to disintegrate. When the terrible blue rays

*The Prostaks were not acquainted with the phenomena of attraction.—Burns & Fries.

withdrew, the great world was gone—whiffed clean out of existence.

Since that demonstration of power, no world dared refuse its tribute. Rapidly the desolate worlds were populated by slaves from many spheres. By some strange power they remained on the surface and did not tumble off into the void. Many pilasters passed. Wearily, hopelessly, the slaves could be seen toiling, digging, performing strange tasks, under the cruel supervision of the Emperor's minions, the cylinders of blue.

Unknown growths appeared on the ground, were harvested, and carried in long cylinders to the glassy shell of the Emperor. Strange, oblong structures reared their heads on the colonized worlds; vast new cities of new shapes and forms. More and more slaves were demanded and procured from the subject races for the Emperor had found work for them digging minerals that he needed, refining them, etc.

Heretofore, the Prostaks had been unmolested. They grew confident in their immunity. They were exempt from the killing toll. Not for them the ghastly pall that overhung the denizens of other orbs.

Then suddenly, like the crack of doom, appeared the frightful messenger of the Emperor. In the universal sign language, he had made his demand for slaves. Six Prostaks were to be supplied regularly each dinaster (corresponding roughly to nine days).

After prolonged consultation, one Prostak, greatly daring, had volunteered to speed through space, to intercede with the Emperor direct. He had departed, it was his cylinder Joe and Al had seen leaving the surface of Prostakon. Almost immediately the messenger of the Emperor had reappeared in the council chamber. Gloatingly it had told of the enslavement of the hero ambassador. Then it had repeated the inexorable demand for tribute, reminded the horror-struck Prostaks of the fate of that other world that had dared to defy the Emperor.

There was nothing to do but submit. The Earth-men had witnessed the frightful scene of their seizure, and the universal lamenta-

tion of this gentle, kindly people. What they had not seen was the thrusting of the struggling victims into a cylinder awaiting them at the exit into outer space, and their ejection. Here the narrator paused; the hieroglyphics fading to the dullest red of despondency.

In a dreshiar more (slightly less than two days), another six of the wretched inhabitants must be sent to join the tribute from other worlds to glut the greed of the dread Emperor. Already the terrified Prostaks were fleeing the City, fearful that they might be seized in the next batch to go.

No longer would there be peace and the ordered pursuit of knowledge, the scientist concluded sadly. Now and forever, the people would be under the dreadful doom, none knowing whose turn was next. There was no hope but ultimate extinction.

The Earth-men had watched the pictured story with growing horror until the last symbol had faded away. Their hearts bled at the thought of this gentle race, so advanced in culture and achievements, fated to be the slaves to the ambitions of an alien Lord.

Simultaneously they looked at each other. Each read the resolve in the other's eyes.

Al wrote for the aged Prostak. "All may not be as hopeless as you think. Possibly we may be able to find some means to combat the fiend."

Startled, the scientist waved his antenna in a flickering hope, but then the dulled red characters appeared: "Nay, no one can hope to overcome him. He is mighty, the Emperor of the Stars. We are only finite beings. He is omnipotent—no puny weapon of ours can harm him. Alas, I am afraid our bitter destiny must be fulfilled."

"In the world from which we come, nothing is recognized as impossible," Al replied. "Though we cannot promise, we say again, hope on. Perhaps we shall be able to requite your kindness by delivering your nation from this menace."

With that, they left the unconvinced scientist.

CHAPTER IV

"We Shall Go!"

"WHAT have you in mind?" asked Joe eagerly, as they returned to their quarters. "I'd give a great deal to release these people from their horrible fate. I've honestly come to like them quite a bit."

"You may think it's damnably rash and dangerous," Al answered slowly, "what I'm going to propose. And it is, no question about it. But I feel the same way about the Prostaks as you do, and I for one am willing to take the chance. Here it is.

"You remember what the old Prostak told us about this Emperor. How strangely he resembles us in form. That he is an alien to this universe. And more particularly that he is able to endow matter with gravitational attraction, instead of the universal repulsion it has here. It occurs to me that possibly this potent Emperor is a being from some planet in our own system, or even—it is not too fantastic—a man from our own Earth. He might have been a scientist of extraordinary attainments, who had in secret discovered and developed new natural forces as yet unknown to us.

"An overweening ambition may have led him to the idea of conquering the planets of our Solar System with the forces under his control. Accordingly he built his vast hollow shell, which from the description seems to be made of pure fused quartz.

"Launching himself secretly into space, he intended to overpower and render subject each planet in turn. Some freak of destiny, just as in our case, led him to the exact tangential point with this universe, and precipitated him through.

"Adjusting himself quickly to the new conditions, he set about enslaving these kindly peaceful peoples. Now he is creating new worlds in the image of that one with which he was familiar.

"Can you conceive the upshot? A vast horde of trained, submissive subjects with which to win back to our universe? I dare not picture the fate of poor old Earth!" Al shuddered at the vivid image he himself had conjured up.

Joe became excited. "That settles it. We must conquer this scientist Emperor, not only for the sake of the Prostaks, but for that of our own world. But how?"

"I've thought of something. Just as our weapons proved ineffective against the alien matter and reversed natural laws of this universe, so the weapons of the denizens were unavailing against this marauder from our universe. On the other hand, our weapons may prove useful against this being who was originally subject to the laws of our space. Of course," Al continued, "this is all guesswork on my part. I may be absolutely wrong. But somehow I am convinced that we shall be able to defeat the Emperor of the Stars."

"But you still haven't told me what method of attack you expect to use," objected Joe.

"All," was the prompt retort. "If I knew exactly the nature of the Emperor, I could specify. But as I don't, we'll use every available method, and trust to luck that one is the right one. We have our ray projectors, our atomic disruptors, our rocket bursts. One of these may be successful. Who knows?"

"I'm game to try it anyway," Joe declared. "The worst that can happen is that we don't come back. And I for one am not too keen about spending the rest of my days here, no matter how decent the Prostaks are. After all they're not our kind. And I also have a hunch—laugh if you will—that our only chance of ever returning is connected in some way with this Emperor of theirs."

Al nodded. "I've also had the same feeling. It's agreed then. Everything on the ship's just as we left it, I'm sure, so everything is in readiness."

* * * *

ONCE more the two earth-men stood in the great hall. Once more the Ruler stood sadly on the platform. Again the mocking, malevolent cylinder radiated blue emanations on the right side of the King. The fatal day had come for the second tribute. The great hall was nearly empty. Almost every one had fled. Only the officials, the scientists were present—those whose pride or abounding courage did not

permit them to seek safety in flight. Even though they stood their ground, who can say they were not desperately afraid!

Once more the cylinder made its foul demand; again with bowed body, the troubled Ruler acquiesced. His trident was raised aloft in signal to the guards to perform their odious duty, the very bravest shrank away in dread anticipation,—when suddenly the evil ambassador stood erect, shot a blue ray in the direction of the earth-men, as though in triumphant inquiry, then flashed staccato streamers toward the Prostak ruler.

Al had learned to read this code also. An exclamation of horror froze on his lips.

"What is it?" Joe wanted to know.

"He is demanding that we two be a part of the tribute," Al cried.

"My God, we're cooked, done for," groaned Joe.

Just then the Ruler raised his body proudly erect, and angry, vivid red hieroglyphics chased each other rapidly across his thought screen.

Al dug his fingers deep into Joe's arm, joyfully, half unbelieving.

"My God, Joe, the old boy is a wonder. Know what he's saying to that damned cylinder? He's answering that we are his guests—the guests of the Prostaks. Never in all their history have they ever permitted harm to befall any strangers, any aliens who once had shared their hospitality. And he doesn't intend starting now. He will *not* deliver us to destruction, and the cylinder and his Master can be damned to it. (Al was translating rather freely in his excitement.) Rather his whole world be consumed by the tyrant than accede to this infernal demand."

A wave of soundless applause broke from the assembled Prostaks, even though the defiant speech of their King spelled certain destruction to all of them.

Joe's eyes positively blazed. "Al, it's wonderful, inconceivable, the nobility of this race. Think of our people on earth, and what they would say and do in a similar situation. Al!", he gripped his friend tightly with sudden alarm, "you're not going to let them sacrifice themselves like that to save us, are you?"

The reply was emphatic. "I should say not!"

Meanwhile the blue cylinder was sputtering an angry message. Very well then, it threatened, it would report to its Master, and retribution would be swift and terrible.

"Hold on a moment," Al cried out, darting forward, forgetting in his excitement that no one could hear him. Joe was close behind him.

Recollecting himself, Al dashed to a niche in the wall where was kept for him the thin black square and red chalk-like substance he used for conversation in public.

Quickly he dragged them out, and set to work to convey his message. Forgetful of all else in the tense drama of the moment, the Prostaks eagerly crowded about the pair.

"Noble Ruler of the Prostaks," Al sketched hastily, "we deeply appreciate your unexampled sacrifice, but we cannot permit it. This fair world of yours shall not be destroyed because of us. No, we are ready to go as tribute to this insatiable Emperor—this Monster of your universe. We visitors from another space are not afraid of him."

All over the vast hall, on one and all, danced in vivid red the single legend, iterated and reiterated. "No! no! no!"

"What a race!" murmured Joe, exultantly.

Again Al fiercely sketched. "We thank you—it is worthy of you. But our minds are made up, we *shall* go. Tell that damnable cylinder we shall be ready."

Sadly the Ruler bowed to their wishes. In symbols barely visible, he informed the ambassador of their acquiescence.

A Million to One Chance

THERE was no question of it now. The blue cylinder flared in leering triumph. Once more it sprang up through the ceiling to speed the news to its powerful Master.

Left to themselves, the Prostaks tossed their tentacles in soundless uproar. They were expostulating angrily with their visitors for this violation of their ancient hospitality. With difficulty, Al managed to concentrate their attention to his writing.

This once accomplished, however, they

followed him closely without interruption. He explained just what he and Joe had in mind; their plans for battle with the Dread Lord, and the possible freeing of the universe for all time from its frightful doom. They would go alone in their own space ship to meet him in his very lair, the center of his power.

When he was done, a tremendous demonstration took place. The Prostaks grabbed drowningly at the straw just offered. Who knew—perhaps these aliens from outside their space might prove the saviors of their world.

Immediately, a vast procession formed to escort the daring Earth-men to the place where their ship was moored. As they moved along, more and more of the Prostaks flocked out of their hiding places, appraised by swift broadcasting of the meaning of the march.

"They're treating us like conquering heroes already," Joe smiled wryly at Al, "but to tell you the truth I don't feel like one at all. My knees are just a bit wobbly at the thought of what's ahead of us."

"Buck up, old man," Al encouraged him, "the worst that can happen is death. We must chance it. And I feel rather confident we can turn the trick."

"I'm not backing out," Joe replied earnestly. "I'm with you to the bitter end."

"I know you are, old fellow," Al said affectionately.

At last the procession reached the entrance hall of their first acquaintance. In the presence of their awestruck friends, they donned the space suits, and descended the long ramp to the lower trap door. Opening it, they peered down into the funnel, and beheld their good old space flier still faithfully swinging as they had left it.

The Prostak scientists crowded at the trap door to gaze curiously at the strange contrivance of their visitors. Then the last farewells were said between these members of alien races—the Earth-men were choked with emotion—and they screwed their helmets in place.

The last they ever saw of this noble, gentle people as the trap closed were the waving

tentacles and flaming characters equivalent to "God speed".

Into the air lock they passed; the mechanism functioned smoothly, and once more they found themselves in the familiar interior of the ship; ready to start on the most tremendous, the strangest adventure ever undertaken by mortal men!

THE grapples were cast off. Immediately the space ship left the surface, rapidly the velocimeter needle passed up the dial, indicating greater and greater speed. Through the vast reaches of unknown space the devoted craft sped, fast in the grip of a force whose nature was unfathomable.

The adventurers were sober now. The lively curiosity, which had hitherto sustained them through the strange experiences which had thus far been their lot, was now overlaid by the knowledge that they were starting out to combat a vast and terrible unknown. In this weird universe, infinitely far from all that was familiar, they were challenging an obscene power, a power so great that it had subjugated an infinity of worlds, had dominated them and levied horrible tribute upon them. Was it conceivable that these two puny men, in their midget ship, could successfully meet and conquer so great a power?

With a wry grin Al spoke. "Joe, I think we are the prize fools of two universes. Why should we risk ourselves in this attempt, for the sake of worlds which are not even of our own universe? My wild surmise as to the danger to our own space is far-fetched. Let's think it over again, before it's too late. We can still turn aside—find another sphere where conditions are suitable for our existence—and pass the rest of our days in comfort! What do you say?"

The usually flippant Joe was very subdued now. Gravely he replied, "You know I dislike heroics, Al. Melodramatic speeches aren't in my line at all. But, isn't this a glorious way to die, if die we must? To set out, two little men in a little ship, to battle the master of a universe? Just think, what is the alternative? To land in one of these strange globes, to rot away our lives in an alien atmosphere.

CHAPTER V

The Emperor of the Stars

"That may suit you, I don't want to pass out that way. Rather fail, but fail gloriously, in this great adventure, this wild, quixotic attempt to free a universe from slavery. Come, Al, pep up! I know what's on your mind. You feel that you got me into this, and it worries you. Forget it! When I joined up, I knew that the chances were a thousand to one against our ever getting back. They're a million to one now, what of it? Funny thing, I've got a hunch that we'll win through yet."

Fries stuck out his hand, grasped that of his friend in gratitude. "Thanks Joe, I feel better now. I did think that I had gotten you into something that I had no right to. Now that I know how you take it, I can carry on. We'll win through yet, they can't lick us. Let's go!"

Onward, ever onward, the space-ship rushed. The speed was terrific, black spheres rushed by with the speed of light. Ever brighter, ever more intense, grew the blue of the firmament. A dull sense of foreboding settled down on the two friends, an oppressive sense of awe.

At last there came a time when the tremendous velocity of their progress began to slacken. By this time the glaring blue illumination had grown so intense that it was necessary to keep the portholes thickly covered. Only a tiny slit had been left, through which, eyes protected by thick-covered goggles, the adventurers took fleeting glimpses of the space around them. For long, now, they had passed beyond the last vestige of the dark worlds of this universe. There was nothing without but that intense blue glare.

Slower and slower, the ship seemed to hover in that interminable emptiness. A mere 500 miles per second was the speed indicated by the meter which Al had adjusted to the new condition of this new space. A mere 500 miles per second, but ever onward toward the unknown menace.

Bulking in the firmament ahead, now appeared the Thing they had sped to combat, the vast transparent shell of the Emperor of the Stars. A huge hollow sphere it was, almost a thousand feet across, of fused, clear quartz, the walls tremendously thick!

IN the center of the great hollow floated a disk that almost reached across the globe. On it appeared a hive of great machines and apparatus. Giant pistons slid back and forth, huge vacuum tubes glowed with electronic discharges, motors and dynamos were surging with power. Bathing all, and pulsing out into the unfathomable space, was the strange blue glare.

No sign of sentient life! Only the machines that spun and flared interminably.

An exclamation from Al as he peered through the telescope brought Joe to the other eyepiece of the binocular. There, on the platform, out of a cabin-like affair, walked—a man! An Earth-man, too, no doubt about about it. A weazened, shrivelled creature, with straggly white hair, and deep furrowed cheeks. But the eyes—they were burning coals, aflame with relentless cruelty. Once they lifted up in the direction of the onrushing space ship and the hearts of the watchers skipped a beat. Evidently they were too far away to be visible, for the evil eyes turned indifferently away, and the Emperor busied himself about his apparatus.

Joe turned an awed look on Al. "Gosh, but you hit the nail on the head, all right. If I weren't with you all the time, I'd think you had sneaked a look at this bird before you concocted your deductions."

"Just a lucky guess," Al decried modestly. "But let me tell you something. Just because this bird is a human being just like ourselves, doesn't mean that we're not in for the fight of our lives. He looks puny enough, but he's possessed of undreamt-of powers. I'm very much afraid our weapons will prove no match for those which he commands."

"Well, a man can die but once," Joe responded philosophically.

Slower and slower drifted the space ship.

And now, here and there in the weird blue light, dark specks appeared, floating silently in that immensity. At first they thought them worlds—tiny . . . far off . . . But when the telescope was focussed on the black

objects, they proved to be elongated cylinders, the cylinders in which the tribute slaves were being carried to the Emperor's domain. Nearer and nearer they plunged, irresistibly drawn to the great quartz sphere.

One came rushing by, then on beyond in headlong plunge. Straight into the effulgent radiance it dived, then, suddenly, a section of the quartz shell swung open, the cylinder sped in, the section slid simultaneously back into position.

With bated breath, the daring adventurers waited to see what would happen next.

The cylinder floated directly to the platform, came to a quivering halt against a huge plate, evidently a powerful magnet. The old man swiftly pressed a button. The head of the cylinder opened on a hinge. A nozzle directly opposite, sprayed a liquid into the interior.

"Chloroform, or something like it," hazarded Joe.

Then a mechanical arm reached in, pulled out, one by one, six denizens of some world of this universe, akin in general structure to the Prostaks.

Gloatingly, the evil scientist surveyed the limp, unconscious forms. Then with a strength amazing in one so frail looking, he lifted a body to what seemed to be an operating table. A huge hypodermic appeared in his hand, the keen point pierced the outer tissue of the helpless unfortunate, and the contents squirted home.

Joe's eyes were glued to the telescope in horror. "Know what the old beast is doing?" he shouted excitedly to Al. "Injecting some fiendish solution into their brains to make them submissive slaves to his evil will. Come on, I can't stand watching it any longer. Let's get him before he works on the others."

"Hold your horses," Al raised his voice in warning. "We're liable to hit sudden death if you keep going off half-cocked. Let's see what happens further before we attack. Maybe we can get a line on his vulnerable points."

Again and again the ghastly operation was repeated. Then the yet unconscious creatures were replaced in the metallic cylinder, lid clamped into place. The Em-

peror pulled a switch, the cylinder moved swiftly off the platform, darted through an automatically opening section, and vanished into the blue empyrean.

"Headed straight for one of the slave worlds," commented Al grimly. "We'll have to get busy now. Check up on the disruptor tube, Joe."

MOUNTED on the outer housing of the space ship, a great tube thrust its copper nose menacingly forth. Latest product of the scientific skill of the Earth, it had done yeoman service in dissipating the clouds of wandering meteors that had disputed the passage of the spheroid through space. Would it avail now, against this super-scientist, Emperor of the Stars?

It was Joe who noticed it first. "My God, Al, we're moving fast again, and *towards the sphere.*"

Al sprang to the instrument panel. Sure enough, they were caught in a vast attraction force, were being drawn irresistibly to the enemy. "Quick Joe, let loose the forward rockets to hold us back," while he sprang to the trigger of the disruptor tube.

In an instant the rockets let loose their fierce surge of power. The staunch ship trembled with the force of the reaction. The velocimeter needle hesitated, slid backward a trifle, then slowly, remorselessly, crept forward again into full speed ahead. The mighty attraction was overpowering their puny efforts.

Now, for the first time, as they rushed closer, the weazened Emperor looked up, saw the oncoming space ship. Al, taut at the telescope, saw the startled blaze of recognition, to be succeeded by a maniacal glare of hatred. The bloodless lips curled into a soundless screech, the man darted for a huge lever, reached it, threw it with all his might.

A blinding blue flame scorched through the firmament, straight for them. Frantically, Al swerved the ship. A cataclysmic glare, the crash of a thousand thunderbolts, a ripping, tearing sound as the blue death seared the side of the space flier. Had it not been for the sudden swerve, the fight would have been over then and there.

"Now," Al shouted, and the great disruptor

tor tube roared its electronic discharge. A section of the shell buckled and melted at the impact, but the quartz was too tremendously thick. It was not more than one quarter penetrated.

Meanwhile the death rays were darting in continuous streams about their devoted ship. The rocket tubes, the electronic projector, roared deafeningly. The air within the flier was bursting with the terrific tumult.

Another blinding flash, a shattering crash, another ray had found its mark, sheared off in its glancing flight a stout metal plate. How long could this one-sided combat continue? It was only a question of time before a death ray would hit its target squarely, and then—!

Desperately Joe worked at the controls, twisted and turned the ship in irregular zig-zag dashes. Al pumped the trigger of the disruptor tube in continuous bursts. All over the face of the great transparent sphere, the quartz shattered and pitted, but still there was no break.

The eyes of the straggly haired Emperor envenomed triumphantly as he reached for another lever. Immediately the staunch ship twisted and groaned in torment. A giant force seized and crushed it, the metal plates were straining, buckling under the tremendous pressure. A few minutes, and the great steel rivets would be sheared from their holes.

White lipped, Al ceased his aimless firing. In all the hellish tumult, he forced his weary brain into activity. There was only one chance in a million. Emulate the woodpecker, he thought grimly.

COOPLY, methodically, he put his plan into action. While the blue flames leaped and crashed about them, while the ship shuddered in the grip of that hellish force, he carefully trained the disruptor gun on one spot on the great quartz shell. Steadily he loosed the stream of electrons, steadily he swerved the gun with the gyrations of the ship to cover the rapidly deepening pit as the deadly discharge pecked and pecked away.

The Emperor looked up, saw the havoc. For the first time there was a gleam of fear

in the hate-crazed eyes. The pressure increased, the blue death crashed and roared, but Al was not to be diverted. All his being was concentrated in breaking through that one point.

The quartz was fusing, wearing thin. The Emperor saw the danger, sprang to a new machine. Al rubbed his eyes in amazement, gave vent to a great shout of jubilation.

"By Jingo, he's licked. He's turning tail and running for it!"

"We've won, boy, we've won!" Joe beat his friend's shoulder in an ecstasy of joy.

"Not yet," came the grim reply.

"Why, what do you mean?" demanded Joe. "Aren't we here, alive, unhurt. He's had enough, hasn't he?"

"That's true enough. Better than I anticipated. But you forget what we set out to do; rid this universe of his evil tyranny. He's still alive, in full control of his forces. Unless you've had enough, I'm going after to finish him."

"By Jove, you're right! Let's go. We've got him on the run."

And so these indomitable Earth-men, not content with having successfully escaped almost inevitable doom, sent their vessel hurtling after the retreating menace. Rockets blazing, green flashing disruptor tube projecting its coruscating ray, the spheroid darted across the sky. Straight for the vast shell it plunged, straight into the fierce blue light.

But the enemy was a beaten thing, his courage was gone. He could but turn and flee, rushing across the vast stretches of space, with the Earth ship darting after him, worrying, harrying. What a spectacle it was, this cosmic flight across infinite space, the great bulk streaking its mass across the empyrean, with the baffled Emperor crouched in a frenzy of agony on the platform, gazing ever backward at his pursuer, the midge darting after, plunging, biting, harrying, slicing, ever pecking away at the doomed spot.

Did the Prostak scientists watch the transcendental spectacle in their powerful telescopes? If so, what joy there must have been in that world, what a waving of tentacles, what a shimmering procession of bright

red glyphs across their strange communication disks! How that orange glowing air must have vibrated to emanations of joy and of thankfulness!

The blue light was growing dim, the victory was almost complete. At last, with startling suddenness, the end came. A final roaring electronic stream, and the last thin layer of quartz buckled and broke. A blinding burst, and the great shell smashed into a million flying sparks. All space was filled with blazing, coruscating debris. The awed earth men caught a last glimpse of the doomed Emperor, his eyes filled with unutterable horror, and then—there was blackness, blessed unrelieved blackness. The Emperor of the Stars was dead!

Joe shut off the rockets, Al released the trigger-lever of the ray. With unutterable thankfulness the two turned to one another, gripped hands in silent congratulation. Then, characteristically, the incident was closed.

"What now? In this interstellar blackness, unrelieved by any stars, what will become of us? Seems like we've hopped from a burning plane to a blazing forest." Thus Al expressed it.

"Pessimist as usual! After all we've gotten through so far my bet is that we'll get back home. Somehow I can't believe that after our miraculous escapes from the dangers that have threatened us since we found ourselves in this space, we are doomed to drift endlessly—"

Joe was interrupted by a blinding flash of white light from without, a sudden violent lurch of the craft. Both men rushed to

look without, to discover what new danger threatened them.

A moment of stunned silence, the men looked at each other, then out again at—the stars! Stars, myriads of them! Softly, almost reverently, Al spoke.

"Joe, look at the stars! Do you know what they are? *The suns of our own space! There's Orion, there's Cassiopeia, there's Lyra, there's Old Sol!* We're home again."

True enough. Dotted the blackness of interstellar space were the old familiar constellations. Billions of miles from Earth, yet the adventurers were back in known space, and fair and clear lay their route before them.

"I can't understand it," Al, ever the scientist, pondered. "Wait, I have the glimmering of an idea. You remember, we were pulled out of our course by some attraction, pulled into that other space. Now, everything in that space repelled, save only the globule of the Emperor. When we destroyed that, its attraction was gone. Apparently forces from either world can make themselves felt in the other through the point of contact. With the stronger pull of the blue horror gone, the gravitational pull of the worlds in our own space took hold of us, and brought us back!"

"By Jove, you know everything! Well, old croaker, here we are. Now get us back to old Earth pronto. I've got a hankering for a nice juicy sirloin steak, smothered in onions, and a great big schooner of beer! Then a good exciting teletalkie play, and a poker game with the bunch to wind up the evening!"

THE END

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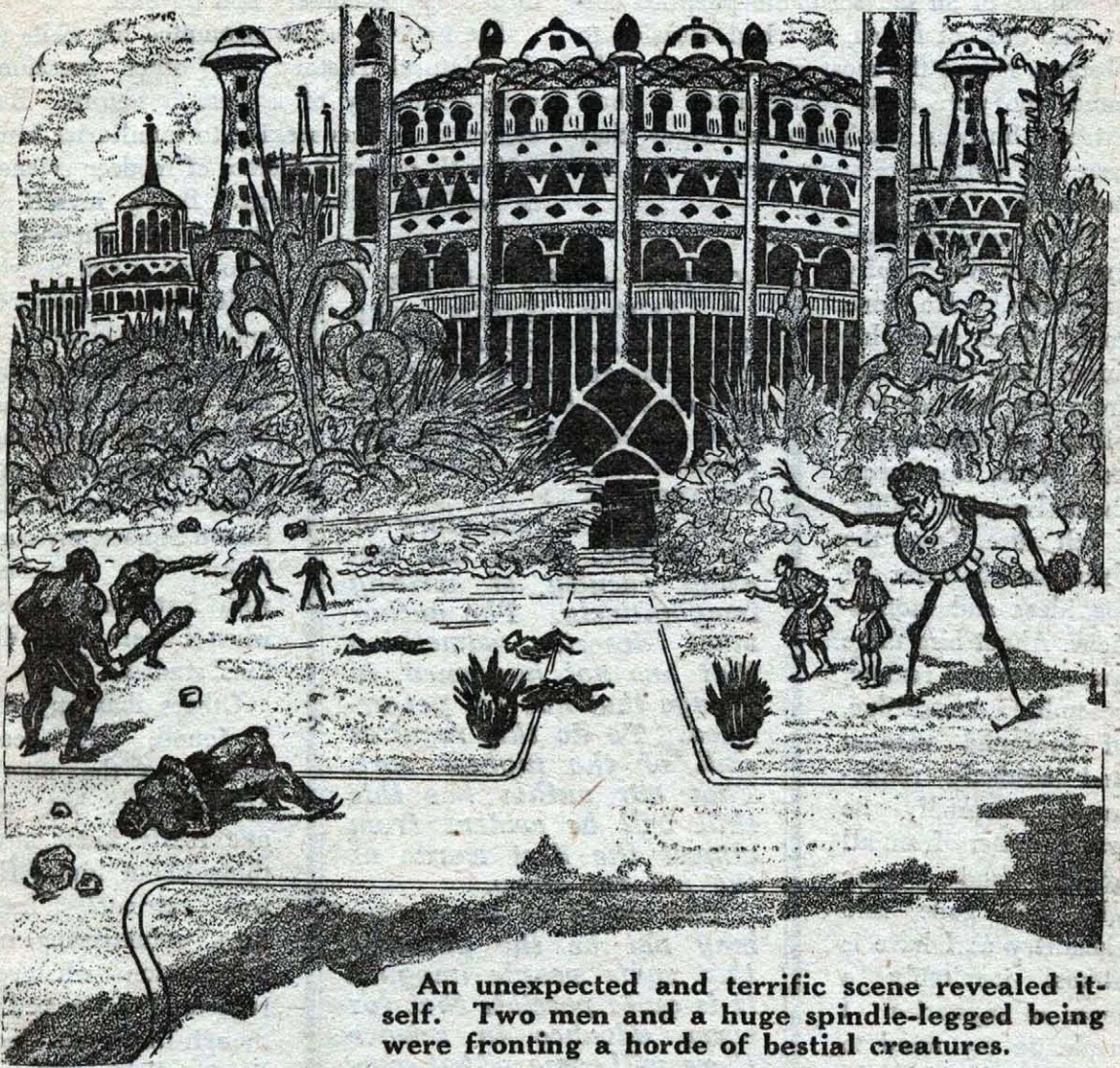
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A SURVIVOR from the lost continents of Mu or Atlantis, appearing on our modern streets, would have seemed no stranger, no more different from others, than the man who called himself Conrad Elkins. And yet I have always found it difficult to define, even in my own thoughts, the many elements which served to constitute this strangeness.

It would seem (since we think mainly in words and are often dependent upon them for the clarification of our ideas) that the

adjectives which would fitly describe Elkins were as yet non-existent in our vocabulary; that they could be found only in some unimaginably subtle, complex and refined language, such as might be developed through long cycles of elaborating culture and civilization on an older and riper planet than ours.

Even at first sight I was greatly struck—not to say startled—by the man's personality. Perhaps the thing which arrested me more than all else was the impossibility



An unexpected and terrific scene revealed itself. Two men and a huge spindle-legged being were fronting a horde of bestial creatures.

of assigning him to any known ethnic stock. It is my theory that no human being is so individual that he does not possess obvious ear-marks which place him immediately among the tribes of mankind; and I am prone to pride myself on a sedulously cultivated gift for analyzing off-hand the nationality and racial affiliations of any given person.

But Elkins baffled me: his extreme pallor, his fine hair and clear-cut lineaments were, in a general sense, indicative of Caucasian origin; yet I could not find the distinguishing features of any American, European or Asiatic branch of the white race. Also, I could not have told his age: he seemed young, when one considered the smoothness of his face; and yet there was

a hint of something incalculably old in his expression.

His garb was modish and well-tailored, with nothing in the least unusual or eccentric. In this, as in all other things, he gave always the subtle impression of desiring to avoid notice. He was a little under medium height and of strangely delicate build; and his features, considered by themselves, were almost effeminate, apart from the great brow of uncorrugated ivory, which resembled the one that we see in the portraits of Edgar Allan Poe.

The small, intricately convoluted ears, the short, deeply curved lips, and the queer exotic moulding of the sensitive nostrils all seemed to bespeak the possession of more highly developed senses than are normal to

mankind. His eyes were very large and luminous, of an indescribable purplish color, and did not flinch, as I had occasion to observe, before the most intense light. His hands too were quite remarkable: in their extreme fineness, flexibility and vigor, they were the hands of a super-surgeon or a super-artist.

The man's habitual expression was wholly enigmatic. No one could have read his mind, and this not from any lack of mobility or expressiveness in the lineaments themselves, but rather, I felt sure, from the unknown character of his ideas and motivations. About him there was an aura of remote, recondite knowledge, of profound wisdom and aesthetic refinement. Assuredly he was a mystery from all angles; and anyone who has gone into chemistry as I have is almost inevitably a lover of mysteries. I made up my mind to learn all that I could concerning him.

I HAD seen Elkins a number of times, on the streets and in libraries and museums, before the beginning of our actual acquaintance. Indeed, the frequency of our meetings in the multitudinous babel of New York was so phenomenal that I soon decided that he must have lodgings near mine and was perhaps engaged in similar studies. I made inquiries regarding him from librarians and curators, but learned nothing more than his name and the fact that he had been reading the works of Havelock Ellis and other mod-

ern authorities on sex, as well as many books on biology, chemistry and physics.

The motives which prompted his visits to the Natural History and other museums were seemingly of a general nature. But evidently he was seeking to familiarize himself with certain branches of modern science as well as archaeology. Being myself a

student of chemistry, who had given nearly a decade of collegiate and post-graduate effort to the subject, and also several years of independent work and experimentation in my laboratory on Washington Square, my curiosity was touched with fraternal interest when I learned of Elkins' studies.

Others than myself, I found, had been struck by the man's appearance; but no one really knew anything about him. He was extremely taciturn, volunteering no information whatever regarding himself, though impeccably polite in all his dealings with others. Apparently he desired to avoid making friends or acquaintances — a far from difficult procedure in any large city. Yet oddly enough I did not find it hard to know him—which, as I later learned, was

due to the fact that Elkins had somehow conceived an interest in me and also was well aware of my interest.

I came upon him one May afternoon as he was standing in the Natural History Museum before a case of artifacts from the Mounds of the Mississippi Valley. To all appearance he was deeply absorbed. I had

THE stories of Clark Ashton Smith ring with truth. He writes so well and so easily that the scenes that he tries to picture cannot help but be impressed on the minds of his readers.

To write a real story of the future, needs this unusual faculty of writing imaginatively. The author must describe something that has not happened, in an age that has not yet arrived. To do this requires skill of the highest sort. That our author has this skill will be evident from almost the first words of the present story.

The world of the future may not be the paradise that some people imagine. It is quite possible that for every advance in science there will come with it some subtle damage to our bodies, our minds, our civilization. And it is quite possible that even when the day has come when man thinks that he has found a golden age, he may realize, as the Greeks did, that destruction is just around the corner.

made up my mind to address him on some pretext or another, when suddenly he forestalled me.

"Has it ever occurred to you," he said in a grave, finely modulated voice, "how many civilizations have been irretrievably lost, how many have been buried by deluge, glacial action and geological cataclysm, and also by profound social upheavals with their subsequent reversions to savagery?"

"And do you ever think that present-day New York will some time be as fragmentary and fabulous as Troy or Zimbabwe? That archaeologists may delve in its ruins, beneath the sevenfold increment of later cities, and find a few rusting mechanisms of disputed use, and potteries of doubtful date, and inscriptions which no one can decipher?"

"I assure you, this is not only probable but certain. The very history of America, in some future epoch, will become more or less legendary; and it would surprise you to know the theories and beliefs regarding the current civilization which will some day be prevalent."

"You speak as if you had some inside information on the subject," I replied half-jestingly.

Elkins gave me a quick, inscrutable glance.

"I am interested in all such things," he said. "And by the same token, Mr. Pastor, I believe you are something of a speculative thinker yourself, along different lines. I have read your little thesis on the cosmic rays. Your idea, that these rays might become a source of illimitable power through concentration, appeals to me. I can safely say that the idea is quite ultra-modern."

I was surprised that he knew my name; but obviously he had made inquiries similar to mine. Also, of course, I was pleased by his familiarity with a treatise that was generally looked upon as being rather ad-

vanced, not to say fantastic, in its theories.

The ice being thus broken, the growth of our acquaintance was rapid. Elkins came to my rooms and laboratory many times; and I in turn was admitted to his own modest lodgings, which as I had surmised were only a few blocks away from mine on the same street.

The Man of Mystery

A SCORE of meetings, and the development of a quasi-friendship, left me as fundamentally ignorant concerning Elkins as I had been at first. I do not know why

he liked me—perhaps it was the universal human need of a friend, inescapable at all times and in all places. But somehow the half-affectionate air which he soon adopted toward me did not make it any easier to ask the personal questions that seethed within me.

The more I came to know him, the more I was overcome by a sense of impossible seniority on his part—by the feeling that he must be older, and intellectually more evolved than myself, in a fashion that could not be

measured by tabulated years or classified knowledge. Strangely—since such a feeling has been unique in my experience—I was almost like a child before him, and grew to regard him with something of the awe which a child conceives toward an elder who is seemingly omniscient. Nor was the awe conditioned at first by anything which he actually said or did.

The furnishings of his rooms were as non-committal as the man himself. There was nothing to seize upon as indicating his nationality and antecedents. However, I saw at once that he was a linguist, for there were books in at least four modern languages. One, which he told me he had just been reading, was a recent and voluminous Ger-



CLARK ASHTON SMITH

man work on the physiology of sex.

"Are you really much interested in that stuff?" I ventured to ask. "There is, it seems to me, overmuch discussion and all too little knowledge regarding such matters."

"I agree with you," he rejoined. "One hears of special knowledge, but it fails to materialize on investigation. I thought that I had an object in studying this branch of 20th century science; but now I doubt greatly if there is anything of value to be learned."

I was struck by the tone of intellectual impersonality which he maintained in all our discussions, no matter what the subject. His range of information was obviously vast, and he gave the impression of boundless reserves, though there were certain avenues of science, generally looked upon as important in our day, to which he seemed to have given only a somewhat cursory and negligent attention.

I gathered that he did not think much of current medicine and surgery; and he startled me more than once by pronouncements on electricity and astronomy that were widely at variance with accepted ideas. Somehow, at most times he made me feel that he was discreetly curbing the full expression of his thoughts. He spoke of Einstein with respect and seemed to regard him as the one real thinker of the age, mentioning more than once with great approval his theories concerning time and space.

Elkins showed a tactful interest in my own chemical researches; but somehow I felt that he looked upon them as being rather elementary. Once in an unguarded manner, he spoke of the transmutation of metals as if it were already an accomplished every day fact; explaining the reference, when I questioned him, as a rhetorical flight of imagination in which he had lost himself for the moment.

The late spring and early summer passed, and the mystery which had drawn me to Elkins was still unsolved. I did indeed learn from a casual remark that he was a native of North America—which failed to render his ethnic distinction any the less baffling. I decided that he must represent

a reversion to some type whose lineaments have not been preserved in history, or must be one of those rare individuals who anticipate in themselves a whole era of the future evolution of the race. I will not deny that the truth occurred to me more than once; but how was I to know that the truth was a thing so utterly improbable?

Much as I had grown to admire and even revere him, Elkins was to me the most incomprehensible and alien being on earth; and I sensed in him a thousand differences of thought and emotion, and a world of unfamiliar knowledge which for some reason he was trying to withhold from my apprehension.

One day, toward the end of the summer, he said to me:

"I must leave New York before long, Hugh."

I was startled, since hitherto he had made no reference to leaving or to the duration of his stay.

"You are returning home, perhaps? I hope it will at least be possible for us to keep in touch with each other."

He gave me a long, unreadable glance.

"Yes, I am going home. But, odd as it may seem to you, there will be no possibility of future communication between us. We part for all time—unless you should care to accompany me."

My curiosity seethed anew at his cryptic words. Yet somehow I was still unable to ask the questions that arose to my lips.

"If you mean that as an invitation," I said, "I shall be glad to accept and pay you a visit sometime."

"**Y**ES, it is an invitation," he rejoined gravely. "But before accepting, would you not prefer to know where you are going? Perhaps, when you hear the truth, you will not care to accept. And perhaps you will not even believe me."

For once, my inquisitiveness was stronger than my respect.

"Do you live on Mars or Saturn, then?"

He smiled. "No, I am a denizen of the Earth; though it may surprise you, in the present infantile condition of astronautics, to learn that I have made more than one

voyage to Mars. I realize your natural curiosity concerning me; and an explanation is now necessary. If, when you have learned the truth, you still care to accompany me as my guest, I shall be overjoyed to take you with me and to offer you my hospitality for as long as you wish to remain."

He paused a moment. "The mystery that has troubled you will be fully explained when I tell you that I am not a man of your own era, but have come from a period far in the future—or what is known to you as the future. According to your notation, my proper time is about 15,000 A.D. My real name is Kronous Alkon—I have assumed the vaguely analogous one of Conrad Elkins, as well as the speech and garb of your time, for reasons which will be fairly obvious.

"At present I shall give you only a brief summary of the causes which prompted my visit to the 20th century. It would require a long discourse to even offer you an adequate sketch of our social anatomy and problems; and I speak merely of one aspect.

"Humanity in our age is menaced with gradual extinction through an increasing overpreponderance of male children; and a method of sex-control, which would restore in some degree the balance of nature, is urgently desired.

"Your age, the first great mechanistic era, is a well-nigh mythical period to us, and less known even than certain earlier periods, because of the all-engulfing savagery to which man reverted at its end. There ensued long dark ages, through which only the most fragmentary records survived, along with a legendry of vast, uncouth machines which the superstition of peoples identified with avenging demons. Perhaps they were not without reason, since the abuse of machinery was one of the main causes of your *debacle*.

"Also, there remained a widespread popular belief, accepted even now by many of our scientists, that the people of the 20th Century could determine at will the sex of their offspring; and that the secret of this determination was lost in the ensuing barbarism, along with certain minor secrets of

chemistry and metallurgy which no later civilization has ever re-discovered.

"The former belief has no doubt arisen because the sexes are well known to have been numerically equal in your time; and because they have not been equal since. For many thousands of years after the rebuilding of an enlightened civilization on the ruins of yours, girl-children predominated; and the whole world became a matriarchy.

"The period known as the Amazonian wars, which were the most sanguinary and merciless wars in history, put an end to the matriarchy by wiping out all but a few hundred thousand of the human race. These reverted to the most primitive conditions: there were more dark ages, and then, slowly, the evolution of our present cycle of renewed culture, in which the male predominates both numerically and intellectually. But our difficulties were not over.

"It was to recover the fabled secret of sex-determination that I came back through the ages, and have lived among you for a full year of 20th Century time. It has been a fascinating experience, and I have learned many things regarding the antique world which are altogether unknown and unverifiable to my fellows.

"Your crude, cumbrous machines and buildings are not unimpressive in their way; and your science is not without a few inklings of our later discoveries. But obviously you know even less regarding the mysterious laws of biology and sex than we do; your supposed method of determination is truly fabulous, and I have no reason for tarrying any longer in an alien epoch.

"Now to become personal. Hugh, you are the only friend I have cared to make in the epoch. Your mind is in some respects beyond the age; and though everything will seem different to you in our time, and much will be incomprehensible, I am sure you will find a surpassing interest in the world of 15,000 A.D. I shall of course provide you with a safe means of return to your own era whenever you wish. Will you go with me, Hugh?"

I could not reply for a moment. I was awed, astonished, bewildered even to stupe-

faction by the remarkable things that my friend had just told me. His statements were no less than miraculous—yet somehow they were not incredible. I did not doubt his veracity for an instant. After all, it was the only logical explanation of everything that had puzzled me in Conrad Elkins.

"Of course I'll go with you," I cried, overcome and dazzled by the strange opportunity which he offered me.

CHAPTER II.

The Time Machine

THERE were a hundred obvious questions that I wanted to ask Elkins. Anticipating certain of these, he said:

"The machine in which I travelled through time is a vessel commonly used among us for space-travel. I will explain to you later the modification of the original mechanism which rendered possible a journey in that fourth-dimensional space known as time. I have reason to believe that the invention is wholly unique and has never been duplicated.

"I had nurtured for many years my project for visiting your period; and in preparation for this, I made a prolonged study of all available historic data bearing thereon, as well as the archaeological and literary remains of antique America. As I have said, the remains are fragmentary; but the language, being the root-stock of our own tongue, is fairly well-known to our scholars.

"I took pains to master it as far as possible; though I have since found that some of our pronunciations and definitions are erroneous; also, that the vocabulary is much ampler than we had supposed.

"I studied likewise the costumes of your period, of which a few plates are still extant, and made for myself habiliments which would enable me to pass unnoticed upon my arrival."

Elkins paused, and went to his clothes-closet. He opened it and brought out a suit of some soft brown fabric. It was not badly tailored, though the cut was unfamiliar. Later, I found that the actual plate from which it had been designed belonged

to the year 1940, ten years in advance of our own date.

Elkins went on. "My departure was carefully planned, and I am supposed to have gone on a voyage to the asteroids, several of which, notably Pallas, Vesta and Ceres, have been colonized by human beings for hundreds of years past.

"I made the actual time-journey in a state of unconsciousness. This, as you will soon learn, was inevitable because of the temporary abstraction from everything that creates or contributes to what we know as consciousness. I was prepared for it, and had made all the necessary calculations and adjustments beforehand, and had carefully synchronized the movement of the vessel in the time-dimension with the movement of the earth and the solar system in space. Geographically speaking, I would not move an inch during the entire trip.

"Rising to an elevation of thirty thousand feet above the earth, I started the time-mechanism. There was a period of absolute oblivion (a second or a million years would have seemed the same) and then, with the ceasing of the time-flight, I recovered my senses. Knowing that I was now in the 20th Century, if my calculations were correct, and not choosing to advertise my strangeness, I sought for a place where I could land quietly and without detection.

"The place which I selected after much circumnavigation and study was an inaccessible cliff in the Catskill Mountains, far from any settlement. There I descended at night and left my machine, whose presence was undetectable either from below or above. I finished my descent of the cliff by the use of an anti-gravitational device, and made my way from the wilderness.

"The next day I was in New York, where, for the most part, I have remained ever since and have carried on unobtrusively my studies of your civilization. For monetary needs, I had brought with me some disintegrated coins of your period, and also a few small ingots of chemically wrought gold."

He showed me one of the coins—a silver dollar that was stained almost beyond recognition, like an ancient obolus, by the oxidation of untold centuries. Then he

brought out another garment from the clothes-closet—a short flaring tunic of dull red with a long graceful mantle that could be detached at will, since it was fastened to the shoulders by two clasps of carven silver. The fabric, as well as the garment itself, was strange to me. Kronous also brought out a pair of sandals, vaguely resembling those of the ancients, though they were not made of leather but of some stiff, indestructible cloth.

"This," he said, "is the raiment in which I left Akameria, the America of 15,000 A.D. I will have a similar tunic made for you by some costume-tailor here in New York—and also sandals, though I suppose the sandals will have to be of leather, since the material used in these is a chemical product of my own time. I am planning to leave day after tomorrow, and I hope that will not be too soon for you."

"Indeed it won't," I replied. "I haven't many preparations to make—there's nothing to do but lock up the laboratory and phone a few friends that I am leaving for a world-tour of indefinite length. I don't imagine there'll be any search-parties."

TWO days later, with an hour of daylight still before us, Elkins and I had reached the base of the unsurmountable cliff on which the time-machine was hidden. The last four hours of our journey had been on foot. We were in the wildest section of the Castkills; and staring up at the terrible mountain-wall, I felt an increased awe of my strange companion, who seemed to have no doubt whatever of his ability to scale it.

He opened a small satchel, whose contents he had not hitherto revealed to me, and took out the anti-gravitational device of which he had spoken. The thing was a hollow disk of some dull, unidentifiable metal, with chains of an equally ambiguous material which secured it to the body. Elkins showed me the simple operation of the mechanism which, he said, was electronic in its nature. Then he strapped it to his chest, set the apparatus running, and rose slowly in air till he reached the top of the precipice. There he disappeared from view; but a few moments later, the metal disk was

lowered at the end of a long cord for my use in surmounting the cliff.

Following directions, I proceeded to adjust the mechanism and start it going. The feeling of utter weightlessness as I floated upward was a most unique experience. It was as if I were a feather wafted on an imperceptible air-current. Being unused to the apparatus, I did not understand the finer technique of movement beneath its influence; and when I came to the cliff-edge I would have continued to drift skyward if my companion had not reached out and stopped me.

I found myself standing beside him on a broad ledge overhung by another cliff which rose immediately above it. Certainly Elkins could not have chosen a safer hiding-place for his time-machine.

The vessel itself, whose door Elkins now proceeded to unlock, was a long, spindle-shaped affair, evidently designed for swift movement in air or ether. It could not have carried more than three people. Inside, it was lined with lockers and machinery, and there were great slings or cradles in which the driver and passengers were immovably suspended. This, of course, was requisite during the loss of gravity and normal weight in ether-flight. Elkins said that he had found it equally convenient to strap himself into one of the slings during his voyage in time.

Both of us were still dressed in 20th century attire. Elkins now donned the tunic and sandals of his own age, which he had brought along in the satchel together with the duplicates that had been made for me by a somewhat mystified costumer. These Elkins directed me to put on. I obeyed, feeling like a masquerader in the odd garb.

"That is the last of Conrad Elkins," said my companion, pointing to his discarded suit. "Henceforth you must call me Kronour Alkon. Your name will seem pretty outlandish among us; so I think I will introduce you as Huno Paskon, a young colonial born on Pallas."

Kronous Alkon now busied himself with the machinery of the vessel. This, to my untrained eye, was awesomely intricate. He adjusted a series of movable rods that were

set in a notched board, and seemed to be winding up a clock-like apparatus with a numbered dial and three hands. There were hundreds—perhaps thousands—of figures on the dial.

"That," he said, "is to control within precise limits the extent of our forward movement in the time-dimension. We are all set for the proper year, month and day."

He now fastened me, and then himself, in the complicated slings, and turned to a small key-board with many knobs and levers, which seemed to be distinct from the rest of the machinery.

"These," he said, "are the controls for atmosphere and ether-flight. Before turning on the time-power, I shall rise to a higher altitude and fly south for about fifty miles."

He turned one of the knobs. There was a low, drumming sound; but I would not have been conscious of any movement, if a sudden sunset-glow through the vessel's ports had not shown that we were rising above the level of the cliffs.

After a few minutes, Kronous Alkon moved one of the levers; and the drumming ceased. "The power of space-flight," he said, "is provided by atomic disintegration. Now, for the time-flight, I shall make use of a very different kind of power—a strange, complex energy derived from the repercussion of cosmic rays, which will transport us into what, for lack of a better name, is called the fourth dimension.

"Properly speaking, we will be outside of space, and, from a mundane view-point, will be non-existent. I assure you however that there is no danger. When the time-power shuts off automatically in 15,000 A.D., you and I will awaken as if from a deep sleep. The sensation of dropping off may prove rather terrific, but no more so than the taking of certain anaesthetics. Simply let yourself go and realize that there is nothing to fear."

Mutiny!

HE SEIZED a large rod and gave it a powerful jerk. I felt as if I had received an electric shock that was tearing all

my tissues apart and disintegrating me into my ultimate cells and molecules. In spite of the re-assurance of Kronous Alkon, I was overwhelmed by an unspeakably confusing terror. I had the sensation of being divided into a million selves, all of which were whirling madly downward in the maelstrom of a darkening gulf. They seemed to go out one by one like sparks as they reached a certain level; till soon all were gone, and there was nothing anywhere but darkness and unconsciousness

I came to myself in a manner which was like the direct reversal of my descent into oblivion. First, there was that sense of remote and spark-like entities, which increased to a multitude, all of them drifting upward in cosmic gloom from an ultimate nadir; and then the gradual merging of these entities into one, as the interior of the time-machine resumed coherent outline around me. Then I saw before me the figure of Kronous Alkon, who had twisted about in his sling and was smiling as he met my gaze. It seemed to me that I had slept for a long, long time.

My companion pressed a knob, and I had the feeling of one who descends in an elevator. It was not necessary for Kronous Alkon to tell me that we were sinking earthward. In less than a minute, trees and buildings were visible through the ports, and there was a slight jar as we landed.

"Now," said Kronous, "we are on my country estate near Djarma, the present capital of Akameria. Djarma is built on the ruins of the city of New York, but is hundreds of miles inland, since there have been extensive geologic changes during the past 13,000 years. You will find that the climate is different too, for it is now sub-tropical. Weather conditions are pretty much under human control, and we have even reduced by artificial means the permanent areas of ice and snow at the poles."

He had unstrapped himself and was performing the same service for me. Then he opened the door of the vessel and motioned me to precede him. I was met by wafts of warm, perfume-laden air as I stepped out on a stone platform adjoining a sort of aerodrome—a great, shining edifice in which

were housed various air-craft of unfamiliar types.

Not far away was another building, marked by a light, graceful architecture, with many tiers of open galleries, and high, fantastic, Eiffel-like towers. There were extensive gardens around this building; and broad fields of vegetables that I did not recognize ran away on each side of the distance. Somewhat apart, there stood a group of long, one-storied houses.

"My home," said Kronous. "I trust that everything is well. I left the estate in charge of my two cousins, Altus and Oron. Also, there is Trogh the Martian overseer, and a barracoon of Venusian slaves, who do all the agricultural labor. All our necessary menial and industrial tasks are performed by such slaves, who have been imported to earth for many generations, and are now becoming a problem in themselves. I hope there has not been any trouble during my absence."

I noticed that Kronous had taken from an inner pocket of his tunic a small rod, vaguely resembling a flash-light and having a ball of red glass or crystal at one end. This he was now carrying in his hand.

"An electronic projector," he explained. "The current paralyzes, but does not kill, at any distance up to fifty yards. Sometimes we have to use such weapons when the slaves are recalcitrant. The Venusians are a low, vicious type and require careful handling."

We started toward the house, whose lower stories were half-concealed by tall trees and massed shrubbery. No sign of life was manifest, as we followed a winding path among fountains of colored marble, and palms and rhododendrons, and baroque, unearthly-looking plants and flowers that would have baffled a present-day botanist. Kronous told me that some of these latter were importations from Venus. The hot, humid air was saturated with odors which I found oppressive, but which Kronous appeared to inhale with delight.

Rounding a sharp turn in the path, we came to an open lawn immediately in front of the house. Here an unexpected and terrific scene revealed itself. Two men, attired like Kronous, and a huge, barrel-

chested, spindle-legged being with an ugly head like that of a hydrocephalous frog, were fronting a horde of bestial creatures who would have made the Neanderthal man look like an example of classic beauty in comparison.

There must have been a score of these beings, many of whom were armed with clubs and stones, which they were hurling at the three who opposed them. Their brown-black bodies were clothed only with patches and tufts of coarse, purple hair; and perhaps half of their number were adorned with thick, bifurcated tails. These, I learned later, were the females—the males, for some obscure evolutionary reason, being undistinguished in this respect.

"**T**HE SLAVES!" cried Kronous, as he ran forward with his projector levelled. Following him, I saw the fall of one of the two men beneath the impact of a large stone. A dozen of the slaves were lying senseless on the lawn; and I could see that the persons they were attacking were armed with projectors.

Our approach had not been noticed; and Kronous made deadly use of his weapon at close range, stretching slave after slave on the ground. Turning, and apparently recognizing their master, the remainder began to disperse sullenly. Their rout was completed by the heavy-chested giant, who hurled after them with his catapult-like arms much of the ammunition which they had dropped on beholding Kronous.

"I fear that Altus is badly hurt," said Kronous as we joined the little group on the lawn. The other man, whom Kronous now introduced to me as his cousin Oron, was stooping over the fallen figure and examining a hidden wound from which blood was streaming heavily amid the fine black hair. Oron, who acknowledged the introduction with a courteous nod, had himself been cut and bruised by several missiles.

The introduction had been made in English. Kronous and Oron now began to talk in a language that I could not understand. Apparently some explanation was being made regarding myself, for Oron gave me a quick, curious glance. The giant had ceased

hurling stones and clubs after the departing Venusians, and now came to join us.

"That is Trogh, the Martian overseer," said Kronous to me. "Like all of his race he is extremely intelligent. They are an old people with the immemorial civilization that has followed a different trend from ours but is not therefore necessarily inferior; and we of earth have learned much from them, though they are highly reserved and secretive."

The reddish-yellow body of the Martian was attired only in a black loin-cloth. His squat, toad-like features, under the high, bulging, knobby head, were impossible to read; and I was chilled by the sense of an unbridgeable evolutionary gulf as I looked into his icy green eyes.

Culture, wisdom, power, were manifest behind his gaze, but in forms that no human being was properly fitted to understand. He spoke in a harsh, guttural voice, evidently using human language, though the words were difficult to recognize as being in any way related to those employed by Kronous and Oron, because of an odd prolongation of the vowels and consonants.

Carrying among us the still unconscious form of Altus, Oron, Kronous, Trogh and myself entered the portico of the nearby house. Both the architecture and material of this building were the most beautiful I had ever seen. Much use was made of arabesque arches and light decorative pillars. The material, which resembled a very translucent onyx, was, as Kronous told me, in reality a synthetic substance prepared by atomic transmutation.

Within, there were many couches covered with unknown opulent fabrics of superb design. The rooms were large, with lofty, vaulted ceilings; and in many cases were divided only by rows of pillars, or by tapestries. The furniture was of much beauty, with light, curving lines that conformed to the architecture; and some of it was made from gem-like materials and gorgeous metals that I could not name. There were scores of paintings and statues, mainly of the most bizarre and fantastic nature, and testifying to supreme technical skill. I learned that some of the paintings were first-hand depictions

of scenes on alien planets.

We laid Altus on a couch. The man was indeed severely injured, and his breathing was slow and faint. In all likelihood he had suffered some degree of brain-concussion.

Kronous brought out a bulb-shaped mechanism ending in a hollow cone, which, he explained to me, was the generator of a force known as *osc*—a super-electric energy used in the treatment of wounds as well as of illness in general. It was of sovereign power in restoring the normal processes of health, no matter what the cause of derangement might be.

When the generator was set in action by Kronous, I saw the emission of a green light from the hollow end, falling on the head of the wounded man. The pulse of Altus became stronger and he stirred a little, but did not awaken as yet. When Kronous turned off the green ray after a few minutes, he asked me to examine the wound; and I found that it was already beginning to heal.

"Altus will be perfectly well in two or three days," said Kronous.

"The real problem," he went on, "is the Venusians—and not only for me but for everyone else. It was a dreadful mistake to bring them to earth in the beginning; they are not only ferocious and intractable, but they breed with the most appalling fecundity, in opposition to the dwindling numbers of the human race. Already they outnumber us five to one; and in spite of our superior knowledge and weapons, I believe that they constitute our worst menace. All that they require is a little organization."

CHAPTER III.

The World of 15,000 A. D.

EVENING had now fallen. Trogh had retired to his own quarters, presided over by his Martian wife, at some distance from the house. A meal consisting mainly of delicious fruits and vegetables, most of which were new to me, was served by Oron. I learned that one of the vegetables was a species of truffle imported from Venus. After we had eaten, a strong, delicately flavored liqueur, made from a fruit that vaguely

resembled both the peach and the pineapple, was brought out in deep, slender glasses of crystal.

Kronous now spoke at some length. He told me that he had already confided the truth concerning his time-voyage and myself to Oron. "The reason I did not want my trip to be known," he said, "is because of the mechanical principle involved, which might be stolen or duplicated by some other inventor. And I am dubious of its value to mankind in general.

"We of the present era have learned not to abuse mechanical devices in the gross manner of earlier generations; but even so, it is not well that man should know too much. We have conquered space, and the conquest has entailed new perils. On the whole, I think it would be better if the conquest of time should remain an isolated exploit. I can trust Oron, and also Altus, to keep the secret."

He went on to speak of various things which he felt that it was necessary for me to know. "You will find," he soliloquized, "that our world is motivated by desires and ambitions very different from those which are most prevalent in your own. The mere struggle for existence, for wealth and power, is almost alien to our comprehension. Crime is extremely rare among us, and we have few problems of administration or government. When such occur, they are submitted to the arbitration of a board of scientists.

"We have infinite leisure; and our aspirations are toward the conquest of remote knowledge, the creation of rare art-forms, and the enjoyment of varied intellectual and esthetic sensations, aided by the long life-span, averaging three or four hundred years, which our mastery of disease has made possible. (I myself am 150 years old, as it may surprise you to learn.)

"I am not sure, however, that this mode of life has been wholly to our advantage. Perhaps through the very lack of struggle, of hardship, of difficulty, we are becoming effete and effeminate. But I think we will be put to a severe test before long.

"Coming as you have from a commercial age," he went on, "it will no doubt interest

you to be told that half of our own commerce is interplanetary. There are whole fleets of ether-craft that ply between the earth, Mars, Venus, the moon and the asteroids. However, we are not on the whole a commercial people. Apart from those of us who have chosen to live in cities, the remainder are mostly the owners of large plantations where everything necessary is produced or manufactured by slave-labor. It is, of course, only our dwindling numbers that have made this system possible.

"We possess the power, if we so desire, of manufacturing everything through a mode of chemical synthesis. However, we find that natural food-stuffs are preferable to the synthetic kind; and we make less use of our knowledge in this regard than you might suppose. Perhaps the chief use of our mastery of atomic conversion is in the making of fabrics and building-materials.

"There is much more that I might tell you; but you will see and learn for yourself. Tomorrow morning, Oron and myself will begin to instruct you in our language."

THUS began several quiet weeks of life on Kronous' estate. I made rapid progress in the language, which bore about the same relation to English that English bears to Latin. I was given access to a fine and extensive library filled with the latest scientific works, with fiction and poetry of the latter-day world, and also a few rare items dating from periods which, though long subsequent to our own time, were nevertheless buried in the dust of antiquity. On several occasions Kronous took me through his laboratory, in which he could perform the most incredible marvels of atomic transformation, and feats of microscopic analysis that revealed a whole world in the electron. I realized that the science of our time was child's-play compared with that of the era into which I had been transported.

One day Kronous showed me a cabinet full of objects that had been recovered from the ruins of New York and other antique cities. Among them were porcelain dinner-plates, Masonic emblems, pearl necklaces, China door-knobs, twenty dollar gold-pieces,

and spark-plugs. The sight of them, and the realization of their extreme age, combined with their homely familiarity, aroused in me the most violent nostalgia—an intolerably desperate homesickness for my own period. This feeling lasted for days; and Kronous did not show me any more ancient relics.

Altus had recovered fully from his wound; and I heard of no more insubordination from the slaves of Kronous. However, I could not forget the terrible scene which had formed my initiation into life on the estate. I saw many times the savage-looking Venusians, who went about their agricultural labors with a sullen air of mindless brooding; and I was told much concerning them.

Their ancestors were inhabitants of the deep and noisomely luxuriant jungles of Venus, where they lived under the most primitive conditions, in perpetual conflict with terrible animals and insects, and also with each other. They were cannibalistic by nature, and their habits in this respect had proven hard to curb. Every now and then on the plantations one of their number would disappear surreptitiously.

The slave-trade had flourished for several centuries, but had languished of late years, since those brought to earth had now multiplied in excess of the required quota. The original Venusian slaves were mostly though not all, the captives of tribal raids and wars; and they had been purchased very cheaply by terrestrial traders in exchange for alcoholic liquors and edged weapons.

However, the Venusians had been willing to sell even members of their own tribes. Apparently there was little attachment or loyalty among them; and their instincts were those of wolves and tigers.

The Martians had come to earth mainly as traders; though their services were sometimes procurable for such positions as the one held by Trogh. They were taciturn and aloof; but they had permitted certain of their chemical and astronomical discoveries to be utilized by human beings.

They were a philosophical race, much given to dreaming, and were universally addicted to the use of a strange drug, known as *gnultan*, the juice of a Martian weed.

This drug was more powerful than opium or hashish, and gave rise to even wilder visions, but its effects were physically harmless. Its use had spread among human beings, till a law was passed forbidding its importation. It was still smuggled both by Martians and Terrestrials, in spite of all the efforts made to stop it; and addiction to the drug was still fairly common among humanity.

By means of radio and television, both of which were now employed in vastly simplified and improved forms, Kronous and his cousins were in hourly touch with the whole world of their time, and even with the earth-stations on Mars, Venus, the moon and the larger asteroids. I was privileged to see in their televisors many scenes that would have appeared like the maddest visions of delirium back in 1930.

The Black Rot

WE were posted on all the news of the world; and with my growing mastery of the language, I soon came to the point where I no longer required the interpretation of Kronous to understand the announcements. Much of this news was not reassuring, but served to confirm the prophetic fears that had been voiced by my host.

There were daily outbreaks on the part of Venusian slaves all over the planet; and in many cases much damage was inflicted before they could be subdued. Also, these outbreaks were beginning to display a mysterious concertion and a degree of mentality of which the Venusians had not hitherto been believed capable.

Acts of sabotage, as well as personal assaults, were increasingly common; and the sabotage in particular often showed a rational intelligence. Even at this early date, there were those who suspected that the Venusians were being aided and incited by the Martians; but there was no tangible proof of such abetting at the time.

One day, from Djarma, there came the news of that bizarre mineral plague known as the Black Rot. One by one the buildings in the suburbs of Djarma were being attacked by this novel disease, which caused

their synthetic stone and metal to dissolve inch by inch in a fine black powder. The Rot was the work of a micro-organism which must somehow have been introduced from Venus, where its ravages had been noted in certain mountain-ranges. Its appearance on earth was a mystery, but had all the air of another act of sabotage. It was capable of devouring half the elements known to chemistry; and off-hand, nothing could be discovered to arrest its progress, though all the Akamerian chemists were at work on the problem.

Kronous and I watched in the televisor the working of the Black Rot. Somehow, it was inexpressibly terrifying to see the slowly spreading area of silent and utter devastation, the crumbled or half-eaten buildings from which the occupants had fled. The thing had started on the outskirts of Djarma, and was steadily devouring the city in an ever-broadening arc.

All the best-known scientists of Akameria were summoned in conclave at Djarma to study the Rot and devise if possible a means of retardation. Kronous, who was a renowned chemist and microscopist, was among those called upon. He offered to take me with him, and of course I accepted with the utmost eagerness.

The trip was a matter of no more than forty miles, and we made it in a light air-vessel belonging to Kronous—a sort of monoplane run by atomic power.

Though I had already familiarized myself with many of the scenes of Djarma by television, the city was a source of absorbing fascination to me. It was far smaller than New York and was widely spaced, with many gardens and exuberant semi-tropical parks meandering through its whole extent. The architecture was nearly all of the same open, aerial type that I had seen in Kronous' home. The streets were broad and spacious and there were comparatively few large buildings. The whole effect was one of supreme grace and beauty.

The streets were not overcrowded with people, and no one ever seemed to be in a hurry. It was strange to see the grotesque Martians and bestial Venusians mingling everywhere with humans of the same type

as Kronous. The stature and build of Kronous were about the average and it was rare to see a man who was taller than five feet six inches. I, of course, with my five feet eleven, was very conspicuous and attracted much attention.

The conclave of savants was being held in a large edifice, built expressly for such meetings, at the heart of Djarma. Entering, we found that about two hundred men, some of whom were extremely old and venerable, had already gathered in the council chamber. Much general discussion was going on; and those who had ideas to suggest were listened to in respectful silence. Kronous and I took seats amid the gathering. So intent were all these men on the problem to be solved, that few of them even vouchsafed me a curious glance.

Peering at the faces about me, I was awed by an impression of supreme intellectuality and wisdom—the garnered lore of incalculable ages. Also, on many of these countenances I perceived the marks of a world-old ennui, and the stamp of a vague sterility, an incipient decadence.

For some time, Kronous and I listened to the discussion that was in progress. Pondering the various data brought forward, I was struck by the fact that all the elements assailed by the Black Rot belonged at the opposite end of the scale from radium in regard to their atomic activity and explosiveness.

SOTTO VOCE, I commented on this to Kronous. "Is it not possible," I suggested, "that radium might be of some use in combating the plague? I believe you have told me that radium, like any other element, is easily manufacturable nowadays."

"That is a striking inspiration," said Kronous thoughtfully. "And it might be worth trying. With our chemical mastery we can make all the radium we need at will in our laboratories. With your permission I am going to broach the idea."

He arose and spoke briefly amid the attentive silence of the assembly. "Credit for the idea," he announced as he ended, "must be given to Huno Paskon, a young colonial

from Pallas, whom I have brought to earth as my guest."

I felt myself abashed by the grave, unanimous gaze of these erudite and reverend savants, who all eyed me in a manner that I could not fathom. Somehow, it seemed unthinkable presumptuous to have made any suggestion in their presence.

However, there appeared to be much serious debate going on—a widespread discussion in which the proposed use of radium was manifestly meeting with great favor. At last a venerable savant named Argo Kan, who was spokesman of the assembly, rose and said:

"I vote for an immediate trial of the method suggested by Kronous Alkon and Huno Paskon."

Others, one by one, stood up and cast similar verbal votes, till the motion had been approved by nearly everyone present.

The meeting then dispersed, and I learned from Kronous that work was being immediately begun in local laboratories for the preparation of radium on a large scale and its utilization in the most effective form.

In less than an hour, several chemists were ready to visit the area of destruction with portable machines in which radium was disintegrated and used as a fine spray. It was magical in arresting the Black Rot, which had been eating its way continuously into the city, creeping from house to house along the crumbling pavements. The whole affected area, which now covered several square miles, was soon surrounded by a cordon of men equipped with the radium-machines; and, to the vast relief of the people of Djarma and Akameria, the plague was pronounced under control.

CHAPTER IV.

Captured by Cannibals

DURING our stay in Djarama, Kronous and I were guests in a fine building set apart for the use of visiting scientists. I was amazed at the sybaritic luxury developed by this people—a luxury which, though illimitably and unimaginably resourceful,

was at no time in excess of the bounds of good taste.

There were baths that would have been the envy of a Roman emperor, and beds that would have reduced Cleopatra to beggary. We were lulled by rich, aerial music from no visible source, and were served with food and with all other necessities as if by intangible hands, at the mere verbal expression of a wish.

Of course, there was a mechanical secret to such wonders; but the secret was cleverly hidden, and the means never obtruded itself. Humbly I realized how far ahead of ourselves were these men of 15,000 A.D., with their quiet and consummate mastery of natural laws—a mastery which none of them seemed to regard as being of any great value or importance.

I was somewhat embarrassed by the honor paid to myself as the originator of a means of retarding the Black Rot, and could only feel that my inspiration had been merely a fortunate accident. Compliments, both written and verbal, were showered upon me by scientific dignitaries; and it was only through the intercession of Kronous, who explained my aversion to publicity, that I was able to avoid numerous invitations.

Finding that he had certain business to transact, Kronous was not ready to return to his estate for several days. Since he could not devote all of his time to me, I formed the habit of going for long walks on the streets of Djarma and through its environs.

Walking slowly amid the changing scenes of a metropolis has always been a source of unending fascination to me. And of course, in this unfamiliar city of the future, where all was new and different, the lure of such wanderings was more than doubled. And the sensation of knowing that I trod above the ruins of New York, separated from my own period by 13,000 years with their inconceivable historic and telluric vicissitudes, was about the weirdest feeling that I have ever experienced.

It was a strange spectacle through which I sauntered. Vehicles were used, of a light, noiseless, gliding type without visible means of propulsion; and there were many air-vessels which flew deftly and silently over-

head and discharged their passengers on the roofs or balconies of the high buildings. And the landing or departure of great, shining ether-ships was an hourly occurrence. However, it was the throng of foot-passengers which engaged my attention most.

Both sexes and all ages were attired in gaily colored costumes. I was impressed by the practical absence of noise, tumult and hurry: all was orderly, tranquil, unconfused. From the scarcity of women in the crowd, I realized how true were the racial fears expressed by Kronous. The women whom I saw were seldom beautiful or attractive according to 20th Century standards; in fact, there was something almost lifeless and mechanical about them, almost sexless.

It was as if the sex had long reached the limit of its evolutionary development and was now in a state of stagnation or virtual retrogression. Such, I learned from Kronous, was indeed the case. But these women, because of their rarity and their value to the race, were shielded and protected with great care. Polyandry* was prevalent; and romantic love, or even strong passion, were unknown things in this latter-day world.

A horrible homesickness came over me at times as I roamed amid this alien throng and peered into shop-windows where outlandish food-stuffs and curiously wrought fabrics from foreign planets were often displayed. And the feeling would increase whenever I approached the Martian quarter, where dwelt a considerable colony of these mysterious outsiders.

Some of them had transported their own many-angled and asymmetrical architecture to earth. Their houses defied the rules of geometry—one might almost say those of gravity; and the streets about them were full of exotic odors, among which the stupefying reek of the drug *gnultian* was predominant. The place allured me, even though it disturbed me; and I strolled often through the tortuous alleys, beyond which I would reach the open country and wander among luxuriant fields and palmy woods that were

no less baffling and unfamiliar than the scenes of the city.

ONE afternoon, I started out later than usual. As I passed through the city, I noticed that there were few Venusians in the throng, and overheard rumors of fresh revolts. However, I paid little attention to these at the time.

Twilight had overtaken me when I turned back from the open country toward the Martian quarter. The sylvan wilderness, in which I had never met many people, was quieter even than usual. I was following a narrow path bordered with thick shrubbery and palmettoes; and I began to hurry with a vague apprehensiveness, remembering the rumors I had heard. Heretofore I had been unafraid; but now, in the thickening twilight, I was aware of some indefinable menace; and remembered that I had foolishly forgotten to arm myself with the electronic projector which Kronous had given me to carry in my wanderings.

I had not seen anyone in the neighborhood. But now, as I went along, I scrutinized the deepening shadows of the shrubbery on each side of the path. Suddenly I heard a sound behind me that was like the scuffling of heavy, naked feet; and turning, saw that seven or eight Venusians, several of them armed with clubs, were closing in upon me. They must have been crouching amid the leafage as I passed.

Their eyes gleamed like those of ravenous wolves in the twilight; and they uttered low, snarling, animal noises as they hurled themselves upon me. I avoided the viciously swinging weapon of the foremost and laid him out with a neat upper-cut; but the others were at me in a moment, using indiscriminately their clubs and dirty talons. I was aware of claws that tore my clothing and slashed my flesh; and then something descended upon my head with a dull crash, and I went down through reeling flame and whirling darkness to utter insensibility.

When I came to myself I was conscious at first only of my pain-racked head and limbs. The crown of my head was throbbing violently from the blow I had received. Then I heard a mutter of thick, unhuman voices,

*The condition of having more than one husband.

and opening my eyes, beheld the flame-lit faces and bodies of a score of Venusians who were dancing about a great fire. I was lying on my back; and it required only a tentative effort at movement to tell me that my hands and feet were bound. Another man, similarly bound and perhaps dead or dying, was stretched on the ground beside me.

I lay still, deeming it inadvisable to let the Venusians know that I had recovered consciousness, and watched the lurid scene. It was something out of Dante's *Inferno*, with the red reflection that ran bloodily on the uncouth, hairy limbs and hideous, demoniacal features of the interplanetary slaves. Their movements, though they had a semblance of some rude, horrible rhythm, were nearer to the capering of animals than they were to the dancing of even the lowest terrestrial savages; and I could not help but wonder that such beings had mastered the art of lighting a fire.

The use of fire, I was told, had been unknown to them in their own world till the advent of men. I remembered hearing also that they sometimes employed it nowadays in their cannibalistic revels, having acquired a taste for cooked meat. Likewise it was rumored of late that they were not averse to human flesh, and that more than one unfortunate had fallen a victim to their practices.

Such reflections were not conducive to my peace of mind. Also, I was oddly disturbed by a large sheet of metal grating, lying near the fire and having a grotesque resemblance to a giant gridiron, which was visible at intervals between the whirling figures. At second glance I recognized it as a sort of perforated tray which was used in the dehydration of various fruits. It was about eight feet in length by four in width.

Suddenly I heard a whisper from the man beside me, whom I had supposed unconscious.

"They are waiting for the fire to die down," he said, almost inaudibly. "Then they will broil us alive over the coals on that sheet of metal."

Ready to be Eaten!

I SHUDDERED, though the information was far from novel or unexpected.

"How did they get you?" I inquired, in a tone as low as that of my interlocutor.

"I am, or was, the owner of these slaves," he answered. "They caught me unaware this time; but I believe, or hope, that my family has escaped. I made the mistake of thinking the slaves were thoroughly cowed from punishments that I inflicted not long ago. I gather that there has been a concerted revolt this afternoon, from what the savages themselves (whose speech I understand) have let drop. They are not so unintelligent as most people believe them to be; and I have a theory that the terrestrial climate has served to stimulate their mentality.

"They possess secret means of communication among themselves over the most unbelievable distances, that are no less efficient than radio. I have long suspected, too, that they have a tacit understanding with the Martians, who are covertly abetting them. The micro-organism that caused the Black Rot was no doubt smuggled from Venus by the Martians in their ether-vessels; and there is no telling what sort of plague they will loose next. There are some queer and frightful things on those alien planets — things that are deadly to terrestrials though harmless enough to the natives. I fear that the end of human supremacy is near at hand."

We conversed in this fashion for some time; and I learned that the name of my fellow-captive was Jos Talar. In spite of our dire and seemingly hopeless predicament, he showed no evidence of fear; and the abstract, philosophical manner in which he viewed and discussed the situation was truly remarkable. But this, as I had occasion to observe, was characteristic of the temper of mankind in that era.

A full half hour must have passed, as we lay there bound and helpless. Then we saw that the huge fire was beginning to die down, revealing a vast bed of glowing coals. The light grew dimmer on the antic figures around it, and the beast-like faces of the

Venusians were more loathsome than ever in the lowering gloom.

The dancing ceased, as if at an unspoken signal; and several of the dancers left the circle and came to where Jos Talar and myself were lying. We could see the gloating of their obscene eyes and the slavering of their greedy mouths, as they dug their filthy talons into our flesh and dragged us roughly toward the fire.

In the meanwhile others had stretched the huge metal tray upon the bed of coals. All of them were eyeing us with a hyena-like avidity that made me shiver with sickness and repulsion.

I will not pretend that I was able to regard with any degree of complacency the prospect of becoming in the near future a Venusian *piece de resistance*. But I nerved myself to the inevitable, reflecting that the agony would soon be over. Even if they did not knock us on the head beforehand, there would be a swift though terrible death on the bed of coals.

Our captors had now seized us by our feet and shoulders, as if they were about to fling us upon the improvised gridiron. There was an awful moment of suspense; and I wondered why the Venusians did not complete the expected action. Then I heard from their lips a low snarling, with an unmistakable note of alarm, and saw that all of them were watching the starlit heavens. They must have possessed keener senses than those of humanity, for at first I could neither see nor hear anything to justify their attention. Then, far-off among the stars, I perceived a moving light such as was carried by the Akamerian air-vessels.

At first I did not connect the light with any idea of possible rescue; and I wondered at the perturbation of the slaves. Then I realized that the light was flying very low and was descending straight toward the fire. It drew near with meteoric rapidity, till Jos Talar and myself and the cowering savages were illumined by the full beams of the bluish searchlight. The vessel itself, like all of its kind, was almost noiseless; and it slid to earth and landed with preternatural speed and dexterity, within twenty paces of the fire.

SEVERAL men emerged from its dim bulk and ran toward us. The slaves had loosened their hold on Jos Talar and myself; and, growling ferociously, they crouched as if ready to leap upon the advancing figures.

The men were all armed with tubular objects, which I supposed were the usual electronic projectors. They levelled them at the Venusians; and thin rays of flame, like those from acetylene torches, issued from them and stabbed across the gloom. Several of the savages screamed with agony and fell writhing to the ground.

One of them dropped among the coals and howled for a few instants like a demon who has been taken in some pitfall prepared for the damned. The others began to run, but were followed by long, slender beams that searched them out in their flight, dropping several more. Soon the survivors had disappeared from view in the darkness, and the fallen had ceased to writhe.

As our rescuers approached, and the glow of the dying fire illumed their faces, I saw that the foremost was Kronous Alkon. Some of the others I recognized as scientists whom I had met in Djarma.

Kronous Alkon knelt beside me and severed my bonds with a sharp knife, while some one else performed a like service for Jos Talar.

"Are you hurt?" asked Kronous.

"Not severely," I replied. "But you certainly came just in the proverbial nick of time. A moment more, and they would have thrown us upon the fire. Your coming is a miracle—I cannot imagine how it happened."

"That is easily explained," said Kronous as he helped me to my feet. "When you did not return this evening, I became alarmed; and knowing the usual direction of your wanderings, I studied this part of the environs of Djarma very closely with a nocturnal televisor, which renders plainly visible the details of the darkest landscape.

"I soon located the Venusians and their fire and recognized one of the bound figures as being yourself. After that, it required only a few minutes for me to collect several companions, arm them, charter an air-vessel,

and seek the spot indicated by the televisor. I am more than thankful that we arrived in time.

"There has been," he went on, "a world-wide revolt of the slaves during the past few hours. Two of the continents, Asia and Australia, are already in their hands; and a desperate struggle is going on throughout Akameria. We are no longer using the electronic projectors, which merely stun. The weapons we used tonight are heat-ray generators, which kill. But come—we must return to Djarma. I will tell you more afterwards."

CHAPTER V.

The Struggle for the World

OUR flight to Djarma was uneventful; and Kronous and I were landed by our companions on the roof of the building in which we had been housed. Here we said good-by to Jos Talar, who went on with the rescuing scientists to find certain relatives and to learn if possible the fate of his family.

Kronous and I descended to our rooms, where we found Altus, who had just arrived from the estate. He told us that Oron had been killed in a terrific combat with the slaves that afternoon. Trogh had mysteriously disappeared; and Altus himself had been compelled to flee in one of the air-vessels belonging to Kronous. A truly horrible state of affairs.

My bruised head and lacerated body required attention, and Kronous gave me an application of the green ray, which marvelously relieved all my pain and soreness. Altus, miraculously, had escaped injury this time in his hand-to-hand fighting with the slaves.

We sat for hours while Kronous told us the events of the day and while fresh reports continued to arrive. The world-situation had indeed become serious; and apart from the universal revolt of the slaves, many new and unlooked-for perils had disclosed themselves.

In the actual conflict the Venusians had suffered more heavily than the Terrestrials,

and thousands of them had been slain and others compelled to flee before the superior weapons of mankind. But to counterbalance this, a number of new and baffling plagues had been loosed by the savages, who, it was now universally felt, were being assisted in this regard by the Martians. In the western part of Akameria great clouds of a vicious and deadly Martian insect had appeared—an insect which multiplied with the most damnable rapidity.

In other sections gases had been freed in the air that were harmless to both Venusians and Martians but deleterious to human beings. Vegetable moulds from Venus, which fed like malignant parasites on all terrene plant-forms, had also been introduced in a hundred places; and no one knew what else the morrow would reveal in the way of extra-planetary pests and dangers. I thought of the prophecy of Jos Talar.

"At this rate," said Kronous, "the world will soon be rendered uninhabitable for man. With our heat-rays and other weapons we might wipe out the revolutionists in time; but the plagues they have brought in are a different problem."

There was little sleep for any of us that night. We rose at early dawn, to learn the appalling news that the whole of Europe was now subject to the interplanetary slaves. The bacteria of a score of awful Martian and Venusian diseases, to which the outsiders had developed more or less immunity, were decimating the human population, and those who survived were unable to cope with their conquerors. Similar diseases were appearing in Akameria; and all the other plagues were spreading with malign celerity.

"We must go to my estate immediately and retrieve the time machine, which I left in the aerodrome," said Kronous to me. "You can then return to your own age—it is not fair to ask you to stay longer in a world that is nearing ultimate ruin and chaos. We, the last remnants of mankind, will fight it out as best we can; but the war is not yours."

I protested that I had no desire to leave him; that I would remain to the end; and also that I had implicit faith in the power

of humanity to overcome its extra-terrestrial foes.

Kronous smiled, a little sadly. "Nevertheless," he persisted, "we must recover the time-machine. Thus your means of escape will be assured, no matter what happens. Will you go with me? I intend to make the trip this very forenoon."

Of course, I could not object to this; and I was eager to accompany him. Apart from any use which I myself might make of it, the time-machine was too rare and valuable a thing to be left at the mercy of Venusian vandals, who might well destroy it in their campaign of nation-wide sabotage.

KRONOUS, Altus and myself made the brief trip in the same light air-vessel that had been used for the journey to Djarma. The fertile, luxuriant countryside with froned woods and tall, airy spires of embowered mansions above which we had flown less than a week before, was now patched and blotched with devastation. Many of the houses had been gutted by fire; and the ravages of the vegetable mould from Venus had blighted many fields and forests, whose grass and foliage rotted beneath it to a nauseous grey slime.

Approaching the estate of Kronous, we saw that we should arrive none too soon. The Venusians had fired the house, and even their own quarters, and columns of smoke were arising from the doomed edifices. A dozen slaves were nearing the aerodrome with the obvious intention of trying to set it on fire, or of destroying or damaging the vessels which it contained.

The features of Kronous were deadly pale with anger. He said nothing as he steered the atomic monoplane directly toward the slaves, who had now seen us and were running headlong in a futile effort to escape. Several of them had been carrying lighted torches, which they now dropped. We swooped upon them, flying only a few feet above the ground in the open space that surrounded the aerodrome.

Two of the slaves were caught and mangled by the sharp prow of the flier; and Altus and myself, using heat-ray projectors, accounted for five more as we passed them.

Only three remained; and wheeling the vessel around in a sharp curve, and steering with one hand, Kronous himself despatched them with his heat-ray.

We landed near the entrance of the aerodrome. Kronous went in; and a minute later, the time-vessel flew gently forth and settled on the platform. Kronous opened the door and called to me.

"You and I, Hugh, will return to Djarma in the time-ship; and Altus will take charge of the monoplane."

No more of the Venusians were in sight; though we saw enough of their handiwork as we circled above the plantation before starting for Djarma. Kronous sighed at the ruin that had been wrought, but otherwise he gave no evidence of emotion, and maintained a stoical silence.

Half an hour later we were back in our apartments in Djarma; and the time-machine was securely housed in an aerodrome nearby. Since it had all the appearance of a small interplanetary flier, no one but ourselves ever dreamt of its real nature and use.

Every hour brought fresh news of the national damage inflicted by the planetary aliens and their plagues. The Martians had now declared open hostility. Their first movement had been to destroy all the human embassies and trading-stations on Mars and to seize a vast amount of ether-shiping; but before these overt actions were generally known, they had also assumed the offensive everywhere on earth.

They possessed a frightful weapon, the zero-ray, which could penetrate animal tissue in an instant with fatal frost-bite. This weapon had been kept a secret; its invention and mode of operation were obscure to human scientists; and it was no less lethal and effective than the heat-ray. A battle was now going on in the Martian quarter of Djarma; and the Martians were holding their own.

Air-vessels had tried dropping explosives on the quarter; but this was found to be more dangerous to humanity than to the Martians; for the latter were using some sort of unknown ray which detonated the ex-

plosives in mid-air, or even while they were still on board the air-vessels.

The Death of a World

I WAS forced to marvel at the equanimity shown by the people of Akameria in the face of all these dire problems and dangers. Everywhere, scientists were coolly endeavoring to combat the new pests and were seeking to devise more efficacious weapons for use against the outsiders. No fear or alarm was exhibited by anyone. Probably the secret of this calm, imperturbable attitude lay in the lofty mental evolution and philosophic detachment that had been universally attained by the human race thru the past ages.

Knowing how insecure and impermanent was their tenure of existence among the inimical forces of the cosmos, men were prepared to meet their doom with resignation and dignity. Also, the race had grown old; and many, perhaps, were tired of the quotidian sameness of life and were ready to welcome anything, no matter how hazardous, in the nature of change.

Djarma was now full of refugees from the outlying plantations; and more were arriving hourly. But, gazing on the calm, unhurried throng, no one could have guessed the parlousness of the general situation. There was no evidence of strife or peril or apprehension; and even the war in the Martian quarter was conducted silently, since the weapons employed were all noiseless. Some of the Martian buildings, however, had been fired by heat-rays; and a pall of black smoke was rising and mushrooming above the ruddy flames.

Djarma had suffered less, so far, than most of the other Akamerian centers. The whole country was in disorder, and all communication was becoming seriously deranged. However, a few hours after the return of Kronous, Altus and myself, there came from southern Akameria the warning of a new and more lethal plague than any which had hitherto appeared.

A tiny Venusian micro-organism, a sort of aerial algae, which spread and increased

with phenomenal celerity, had been turned loose and was rendering the air unbreathable for human beings over a vast and ever-growing area. It was harmless to the Venusians themselves, for the thick, vaporous air of their native jungles was full of it; and though it was deleterious to the Martians, the latter had prepared themselves beforehand and were all equipped with respiratory masks and atmospheric filters.

But men were dying of slow asphyxiation, marked by the most painful pneumonic symptoms, wherever overtaken by the strange pest. It was visible in the air, which displayed a saffron color when invaded by the organism. For this reason, it soon became known as the Yellow Death.

Beyond the manufacture and distribution of air-masks on a large scale, nothing could be done by savants to combat the new plague. The saffron cloud was rolling northward hour by hour—a noiseless and irresistible doom; and the situation was indeed desperate. A conclave of scientists was called; and it was soon decided that humanity must evacuate the regions menaced by the dread aerial scourge. The only resource was for men to retreat toward the Arctic circle and entrench themselves in dominions where the organism could not penetrate, since it thrived only in warm, tropical air.

"This," said Kronous to me, sorrowfully, "is a preparatory step toward our final abandonment of the earth. The planetary aliens have conquered, as I knew they would. The cycle of human domination has completed itself; and the future belongs to the Venusians and Martians. I venture to predict, however, that the Martians will soon enslave the Venusians and rule them with a far stricter hand than we humans."

He went on. "Hush, the hour of our parting will soon arrive. You could leave us at any rate, as you know; but perhaps you will wish to see the drama to its end."

I pressed his hand but could say nothing. There was a tragic pathos in the swift doom which threatened the final remnant of the race. Remote and alien as these people

were in many of their customs and ideas and feelings, they were still human. I admired their stoical courage in the face of irretrievable disaster; and for Kronous himself, after our long association and mutual vicissitudes, I had conceived a real affection.

ALL of Djarma was now astir with preparations for the northward flight. Every air-vessel or space-craft available was mustered for use; and more were being built with miraculous expedition. There were great air-liners and freighters in which personal belongings, food-supplies and laboratory equipment were transported; and the skies were thronged with their departure and their return for new cargoes. Perfect order and organization prevailed, and there was no trace of hurry or confusion anywhere.

Kronous, Altus and myself were among the last to leave. An immense bank of smoke was looming above the Martian quarter, and the weird, hydrocephalous inhabitants were being driven forth by the flames and were invading the deserted streets of the human section when we rose above the city in the time-vessel and steered northward. Far to the south, we could see a saffron cloud that had covered the horizon—the micro-organic plague that was smothering the whole of Akameria.

Beneath the guidance of Kronous, our vessel rose to a lofty elevation where more than the ordinary atmospheric speed was possible. Flying at seven hundred miles per hour, we soon neared the realms of perpetual winter and saw the sheeted ice of the polar regions glittering far below us.

Here humanity had already entrenched itself; and whole cities were being reared as if by magic amid the eternal wastes of snow. Laboratories and foundries were erected, where synthetic foods and fabrics and metals were prepared in immense quantities. The polar domains, however, were too inhospitable, and the climate too rigorous for a warmth-loving race, to form more than a way-station in the flight of humanity.

It was decided that the larger asteroids, which had long been successfully colonized by man, would form the most suitable cosmic

refuge. A great fleet of space-vessels was soon assembled in readiness for departure; more were built amid the ice and snow; and each day was marked by the arrival of ships from mid-ether, plying among the planets, which had been warned by radio of existing terrestrial conditions and had come to assist in the universal Hegira.

In those days, before the ultimate farewell, I came to know Kronous better than at any previous time. His altruism and imperturbable fortitude aroused my deepest admiration. Of course he had cast in his lot with the people of his own era, and official posts on one of the ether-liners had already been assigned to Altus and himself. Those who displayed any interest in the matter were informed by Kronous that I, Huno Paskon, intended to return alone in a small ether-vessel to Pallas, my supposedly natal asteroid. Even between ourselves, we seldom mentioned the real nature of my journey.

Kronous gave me careful instruction regarding the mechanism, both spatial and chronological, of the time-machine; but to avoid any error, he himself arranged all the controls in preparation for my flight through backward time. All that I would have to do was to turn on the power of the cosmic rays; and the machine would land me in 1930. Then after it landed, an automatic device would shoot it back to his own day.

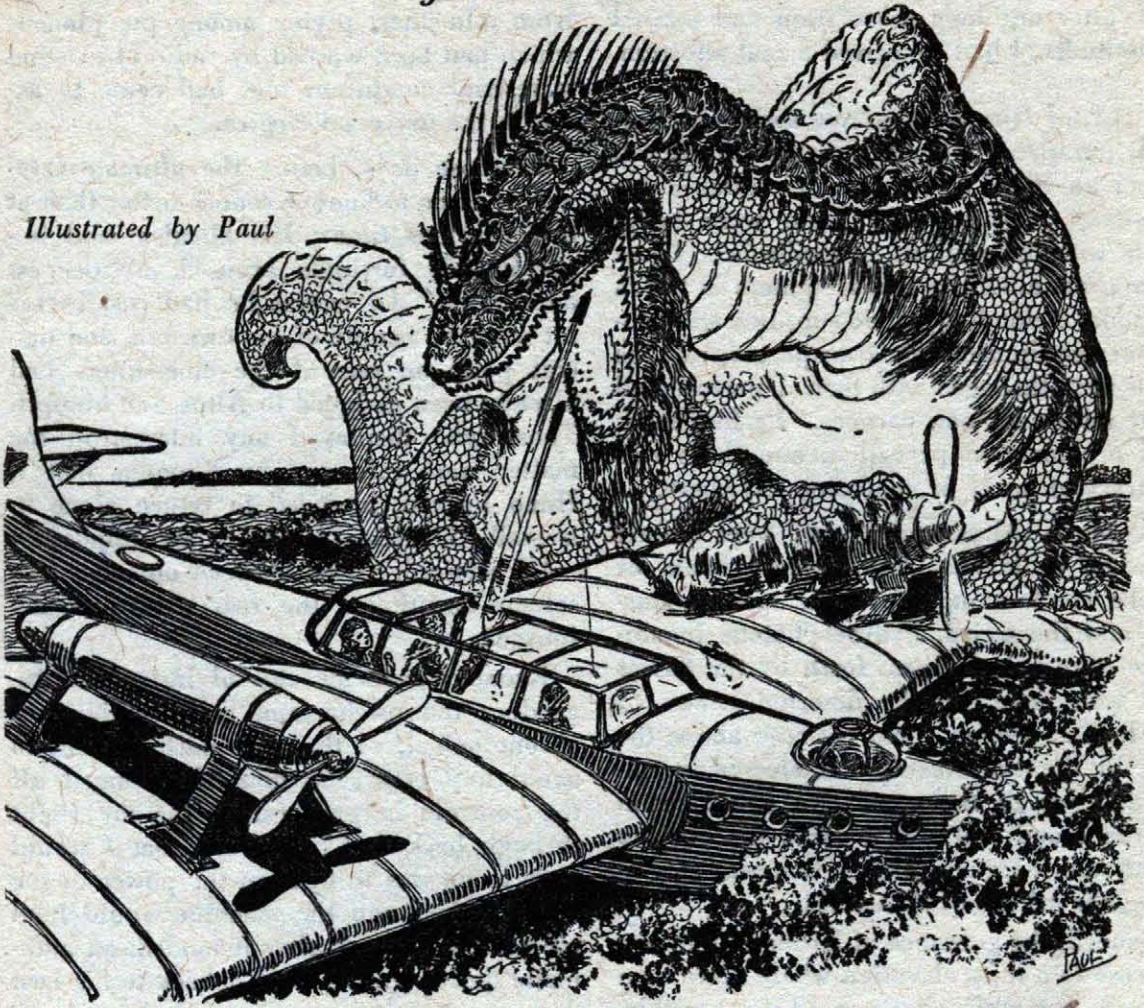
The day of departure came, when vessels were ready for the inter-cosmic transportation of the world's remaining people. It was an awful and solemn moment. Ship by ship and fleet by fleet, from the ice-founded platforms on which they had been resting, the long bulks of glittering metal soared upon the Aurora Borealis and disappeared in the chill, dreadful gulfs of outer space. The ship to which Kronous had been assigned was one of the last to leave; and he and I stood for a long while beside the time-vessel and watched the soaring of those skyward flocks. Altus had already said farewell to me and had gone aboard the great ether-liner.

(Continued on Page 1328)

The Sargasso Monster

By Edsel Newton

Illustrated by Paul



He sent it up through the skylight into the mouth of the monster.
Another . . . and another . . .

FOR the tenth time within an hour and a half, the pilot of the Tilden *Twin* amphibian reached for the radio-telephone and called the Bermuda station, and for the tenth time he placed the 'phone back on the hook and sat there staring almost frantically before him. Something had gone wrong with the radio. As the plane moved slowly north he had been trying for almost two hours to pick up Bermuda over the nose. The compass indicator needle said so. The gasoline left in his tank said so; it was only a matter of a few minutes until the last drop of the precious stuff would ooze through the lines to the carburetors of the two singing

Rickman-Conroff *Hummingbirds*. Then they would settle through the cushioning tropical atmosphere down to the surface, to drift there until aid reached them. That would be a gamble, since the radio was out.

Campbell's eyes took in all the instruments. They rested on that compass before him. It wobbled, suddenly. Yet the plane did not turn. She rode evenly, smoothly, through the air, like an ocean liner on a glassy sea. Over his shoulder he saw one of the seven passengers rise and go aft. Then the needle turned again, righted itself.

The pilot started up at the man. A hundred thoughts rushed through his mind. His

jaw set. There was something familiar about the passenger. Campbell had seen him somewhere before. Could he be one of the spies of the company's rival? Anything to play hell with the Tilden liners.

Two of the ships had been thrown off their course that way, had drifted at sea for days and days while patrol boats hunted for them. This would be the third within a week. Demoralization. Yet Campbell, or any of the others, for that matter, could prove nothing. Hard luck, the company heads had admitted.

But the pilot of the *Bolivar* believed differently, now. He was almost certain of himself. Yet it was too late to do anything about it. He was over the Sargasso,* already. Too late had he asked the compass station for his bearings, for he had not suspected anything. The amphibian had been flying smoothly. He had been trying to pick up the shore for two hours. And now the passengers were looking at him inquiringly. One of them, a girl, young and slender, found her way up to his side and asked, "Aren't we off the course, Captain?"

He looked upon the brown mass that fringed out into the blue off there before him. Then his eyes wandered to hers, for the second time that day—the first time had been at Rio—and he said evenly, "Compass haywire." His voice lowered as he saw that she took it calmly. "Help me keep up the morale of the passengers—we'll get out O.K."

"I'll do all I can," she answered simply. She asked no further questions. Like a thoroughbred, she walked gallantly back down the aisle, giving the questioning fellow passengers an answer that apparently satisfied them.

Then the two Rickman-Conroff *Hummingbirds* coughed and their steady drone died down to a despairing wheeze. Campbell pulled back on the wheel and held the big plane at the stalling point. He picked up the transmitter and called shore. It didn't answer. He tried it again. Nothing more than the rattling buzz of his own generator unit greeted his ears. He slammed the transmitter down and looked to his plane.

He was gliding swiftly through the light mist that hung like a veil over the mysterious Sargasso. He could see only the long expanse of seaweed, with an occasional break of blue where the weed did not cover the surface. He turned the nose of the plane toward a likely looking spot and drifted gently down to it. Soon the spray was fountaining about the plane and she was checking speed.

The *Bolivar*, of the Tilden Airlines, was down in the Sargasso,

out of gasoline, and her radio transmitter out of order.

CAPTAIN CAMPBELL waited until the plane came to a stop on the surface. Then he turned to look squarely, accusingly the man who had returned to the front seat. His eyes blazed on the suspected man's hands, which went to the pockets of

IF there is anything the airplane is doing for us, it is opening up to our inspection parts of the world that had remained previously unknown. The mapping of ancient Mayan cities from the air is but one example of the vast new fields of research and study made possible by man's new vehicle for transportation.

It is quite possible that in isolated parts of the globe, the course of evolution of living things may have been far different than anything we know of. And that very matter of isolation had, previous to the airplane, prevented us from learning about them. But now new wonders will open to us.

Mr. Newton uses as his theme the mysteries of the little known Sargasso Sea, and he constructs a thrilling, chilling story of mystery, intrigue and adventure.

*A great floating sea of dense weeds in the North Atlantic between 16° and 38° N, and 30° and 50° West.

a sport coat, and the pockets bulged threateningly.

Campbell had to admit to himself that he knew nothing yet, that he had no real grounds to accuse the man of anything. Yet the passenger's eyes avoided his. Campbell got to his feet, revealing six feet of lithe youth in a neat uniform. His first thought was of his passengers.

"We have been thrown off our course. Something went wrong with the compass," he began. "It should not be long before we are rescued. In the meantime, there is little danger. We are out of gasoline. I shall repair the radio and get in touch with shore."

They plied him with questions, which he answered as best he could. On his way back to the rear, he saw the girl comforting an elderly lady who had receded into the cushions of the seat and started weeping. The girl gave him a trusting look and he smiled.

He stopped before the water fountain where the man had gone for a drink. Glancing beneath it, he saw a pair of common wire cutters lying there, and he also observed the *counterpoise aerial* that he used for transmitting messages had been torn away. He thought of connecting the transmitter to the receiving aerial, but upon examining the conduit that had contained the wires he saw that they had been ripped out.

His body came to a standing position. He whirled to see the man in the front seat suddenly turn from watching him. Then it occurred to him that he had not yet looked over the passenger list to see who the man was. He took a card from his pocket and checked it. Of the four men and three women aboard—a scanty list, to say the least—he determined the man was Bunyan. His jaw snapped when he saw the name. The Tilden lines had once discharged him

for "doctoring" a plane. Paid by the rivals. He started forward again. The girl stopped him.

"That man up forward has been acting queerly all along the trip," she whispered, while the elderly lady at her side listened closely to gather what was being said. "He went back there several times. The last time he dropped a pair of pliers. He started to pick them up when he saw me looking at him, so he returned to his seat. Just now he threw something out of the window. It looked like a ring of iron."

"A magnet!" said Captain Campbell.

"I'm not sure," said the girl. But Campbell did not hear her. His hand suddenly shot under his thin coat and whipped out with an automatic, thinking to arrest the man and put him in confinement without any argument. But Bunyan turned as suddenly as he, and there was a gun in his own unsteady hand. Campbell leaped aside and a shot rang out. The passengers dropped down between the seats. The elderly lady fainted. The girl did not scream. Then the pilot's gun went into action. But already a bullet had torn along his wrist, cutting and burning deep into the flesh. Three times his gun blazed. Bunyan lay still, forward of the front seat.



EDSEL NEWTON

THERE was a sudden scurrying of passengers as the pilot-captain started forward. They leaped from their seats, men and women, and ran aft. Just then Campbell sensed danger. But before he could move to a position of vantage, Bunyan's gun barked again. A bullet stung Campbell's side as he darted between the seats. Then Bunyan emptied his automatic. Campbell heard the familiar click after the last bullet had been spent. He leaped from his kneeling position and ran forward. He was upon Bunyan in an instant.

His hands gripped the vandal's arms like the talons of an eagle. He threw all his weight upon the man, bearing him down upon the seat. Bunyan's knee came up and dealt him a fierce blow in the groin. It stunned the captain for a moment, with a terrifying pain. Yet he managed to deal a fierce blow upon Bunyan's face. He had all but subdued his man when there came a terrifying scream. He lifted himself up to follow the eyes of his passengers who were staring out the windows. He relaxed his grip upon Bunyan and leaped for the steering wheel.

The plane was being carried along in a swift current, through a channel of the dreadful Sargasso. Yet nothing he could do would check its speed. He kicked the rudder, hoping to turn the nose of the plane into the seaweed on either side of the channel. But the plane did not respond. Instead, the current swept them along with ever increasing speed.

They were as helpless as if they had been in a canoe without a paddle.

Campbell called to the passengers, "Some of you come forward and give me a hand!"

The three men passengers besides Bunyan started toward the captain's cockpit, but a nasal voice ordered them to halt. It was Bunyan, who, automatic in hand, stood against the panel between the captain and his passengers. He had Campbell's gun, too.

"But we want to hoist the outboard motor into place!" said Campbell. "What do you mean, anyway?"

"A lot of help that outboard motor will be with no fuel!" snapped Bunyan. "We're going to stick it out, Campbell, including the ladies. Tilden paid me to check on you, and I'm on the job."

"That's a lie!" said Campbell. "Old man Tilden is the squarest shooter that ever lived. You're working with that Inter-Continental gang, Bunyan. You're a pirate. You're trying to demoralize my passengers, to make them think I'm incompetent. The rotten literature your outfit distributed around Buenos Aires and New York didn't work, at least not altogether. We still get

a few passengers, and we're going to protect them."

"That's strong talk, Campbell, but it won't get you anywhere," answered Bunyan, a sneer on his lips. His eyes were bloodshot from the scuffle of a few minutes before. He raised the gun and pointed it at the defenseless pilot. Before Campbell could duck there came a deafening roar, then another

CHAPTER II.

In the Maelstrom!

"HE didn't hit you that time?" he heard the girl ask as he opened his eyes to see her bending over him. He was lying across one of the wide seats, and she had been washing his face with cold water.

"I don't think so," he said, blinking. "It was the one that hit me a few minutes ago. Broke a rib, I think. I'll be O.K. What happened?"

"This little lady put him out of business with a little pearl handled .22" said one of the three men who were looking on. "When the maniac started to shoot she simply let him have a dose of his own medicine."

Campbell rose to a sitting position to see his enemy sitting across the aisle, bound hand and foot. A bandage encircled his head. His sullen face scowled when Campbell arose and started toward him. But the Captain stopped, suddenly, and said, "I'll handle you later, Bunyan. But if you don't tell me where the wires you pulled from the conduit are, I'll choke you to death." He stepped forward again, his fingers bent as if ready to clutch the neck of the vandal.

"They're back there somewhere in the ocean," said Bunyan wincing.

The passengers gasped. Anger beyond words welled up in the captain. Yet he held himself in check, and he said, "Bunyan, I'll make you pay for this if it's the last thing I ever do."

With that he turned to look out the window. The horrified eyes of the passengers were already taking in the situation. The plane was being carried along at terrific

speed, and a tailwind was blowing down upon her.

Campbell hurried forward. He unlocked a box in the cockpit and began looking around for spare pieces of wire. But to no avail. He finally gave it up and turned to give the steering wheel another last despairing turn. The plane did not respond. He swore under his breath and started to open the window before him. The wounded arm pained as he held it up and he winced. Then a pair of feminine hands reached forth and raised the glass.

"Thanks," he said, looking around at the girl. She stood close to him like a guardian angel. "And thanks for saving my life," he continued.

She sighed heavily. "I couldn't have done anything else. It was the most cowardly thing in the world. One of the men is a doctor. He'll dress your wounds."

"But we've got to stop this drift," he explained. "If we could manage to nose the ship around into the seaweed we'd have a chance. As it is, God only knows where we'll end up. I never knew there was such a thing." He indicated the seemingly endless channel that cut through the seaweed before them. The growth on either side was becoming thicker and thicker.

"But you can't stop a heavy ship like this, surely—in so swift a current."

They stood looking at each other. Something about her thrilled the captain. It must have been her pluck. She wasn't too timid to shoot a murderer. She wasn't afraid of wherever they were going.

"You aren't afraid of anything!" he said. "What's your name?"

THE straightforward manner of the captain brought a smile from the girl. She held out her hand.

"A physical coward is generally a moral coward, Captain Campbell. The name is Rickman."

"You astound me!" he exclaimed. "I'll bet my wings you're Marcine Rickman!"

She nodded. "My father designed those two motors out there," pointing to the great pair of *Hummingbirds* that hung forward. "But they won't run without gasoline!"

"Hardly!" he laughed. "Well, we've got to think up some way of getting out of this." He started to climb up the steps to the deck on the bow. She assisted him, for he was obviously weak from loss of blood. One of the men had wrapped a handkerchief around his wrist to stop the flow from the deep wound therein. That was perhaps all that saved him.

As they reached the deck, the girl started suddenly and gasped. He followed her staring eyes ahead of them. They were bearing down upon a whirlpool, a literal maelstrom. The channel widened about it. It swirled threateningly, carrying with it bits of seaweed and debris. Even in this twilight hour he could see it whirling like a gigantic animal, waiting there to take the great plane in its grasp and pull it down into the depths of the sea. And here even the wind seemed to give way to the rush of the water.

There was no longer the singing sound in the struts and braces. Only the lash of the eddy current broke the silence. Before they could dash below and close the hatch, the plane had nosed into it. Pandemonium broke loose among the passengers, the elderly lady and another woman screaming.

The three men sat pale-faced and helpless. Bunyan sneered and laughed in turn. And while the captain and the girl stood there before them, the swirling eddy took hold of the plane. As the screams of the two women reached their highest pitch, something above them shattered into a wing, broke through, and came crashing down upon the top of the cabin. It was a moment when all were lost, when only the miracle of an unforeseen providence could help them.

"Here, you men! Jump there and close the ports!" Captain Campbell barked, as he himself began closing the windows forward. "Every one of you sit tight—" He saw the girl as she was pitched across the cabin. Others followed her.

He had held to the top of the seat when the eddy turned the ship about. Now he too was lying sprawled upon the deck. Before he could rise and assist Marcine and the other two women, he was against hurled downward, this time to lie still, until the

movement of the plane pitched him forward among the terrified passengers. Before he could get to his feet again, the plane was standing on her nose, and they were all thrown together before the door that opened into the cockpit.

Campbell made a desperate plunge for a stanchion, caught it on the swing as the plane reeled to port, wrapped his feet about it, and reached for Marcine. Her hands were outstretched to receive his. He pulled her toward him. She grasped the stanchion and held on. He then dived for a seat, reached it, and pulled her after him. While the plane was steady for a moment he strapped her in. Then he picked the elderly lady from the deck and did likewise with her. One of the men managed to place the other woman in a seat. Then when the women were assured the maximum of safety, the men sought their own seats, gaining them only by leaps when there came a lull in that everlasting tossing and pitching. But it did not last for long. As darkness fell upon the plane only hopeless despair prevailed in their spirits. Yet the girl smiled when Captain Campbell looked anxiously in her direction.

The maelstrom was tossing them around now, its whirl increasing in speed as the plane was pulled toward the vortex. In that awful spiral the great amphibian was twisted about, now on her nose, now on her side, with her wing down in the wash, and again with her gallant bows in the air like a whale leaping to the surface. It would be a matter of only a few minutes, the captain thought. He might have had a chance to save his passengers but for the crafty Bunyan, who, by all the laws of all the lands, was a pirate.

HIS company had sought at great risk to disable the Tilden line. It had begun by placing Bunyan in their employ in the early days of the line, when Lawrence Tilden had sent the first big twin amphibians southward on the trade routes between North and South America. Bunyan had been a traitor; though he had failed in an effort to wreck the first Twin that went out on the long trek to the lands beyond the equator.

For two years Bunyan had waited. Then something seemed to have struck every Tilden plane on the line. He remembered now, how Jimmy Trevelyn was lost, and turned up six days later to say that a little two-seater had come to take a single one of his passengers off the disabled plane there in the Caribbean, leaving a dozen more starving passengers staring at the fortunate man for whom the plane had come. And Jimmy's radio had been disabled.

Well, there was one thing for which Captain Campbell could be thankful. Bunyan would share the fate of the rest, whatever it was. And it seemed certain that it would be terrible. Perhaps the bottom of the sea

The captain started and looked at the girl. Her eyes were burning into his, as if she wanted to say something to him. He went to her side, risking being thrown against the deck or overhead, and while he braced himself to look down into her appealing face she still smiled. There was nothing to be said. This was one of those unearthly moments when conversation was out. But as far as that went the girl told him all with her eyes. She was telling him that she admired him for having done his best to avoid the disaster, that she was not afraid, that they would be together wherever they went.

But the swirl of the vortex did not take them down. By a miracle, just as they gained speed a wind caught the plane and lifted it up. It seemed to tremble unsteadily for a moment, nose upward slightly, and drift back under the pressure of a sudden gust.

The amphibian landed tail down with a resounding smack, and lay quite still upon the southernmost side of the open channel, beyond the vortex, beyond the rushing current, and beyond human aid.

Again the wind took her and tossed her about. It screamed down upon them, as Captain Campbell made an effort to open the forward hatch and go out on the deck, and shook the amphibian from nose to tail. It blasted against the helpless plane until it had to move and then carried it along with ease across the darkened mass of brown, finally landing it nose downward into some-

thing that gave enough to prevent a crash. Even then something crackled and broke until the strain, and the great plane seemed to fall upon its side. It righted itself when it struck the soft bed of weeds, and at last lay still there in the dark night, while the fierce tropical wind howled about them.

CHAPTER III.

The Continent of Seaweed

THEY remained awake almost all the night. The women did not sleep. Two of the men dozed. The others, including the captain and Marcine Rickman, probed the darkness beyond the windows. But it was useless. The sky overhead was inky. Even Campbell's penetrating flashlight revealed nothing more than a wide cushion of seaweed. The stuff had grown so thick that it could have supported a ship. It had drifted together at the edge of the whirlpool, thrown clear, and accumulated.

Campbell searched the plane for wire, with which he hoped to repair the radio, the new sleeping Bunyan had wrecked. But he found that every piece of wire had been pulled from the conduit. The cables in the steering apparatus wouldn't work. They were of common wire. Even then, he discovered that all the aerial wire in the world wouldn't help them. In the fall of the plane against the seaweed, a strut had broken through the forward end of the cabin, just above the water line, and torn away the transmitter. What a complete misfortune! A few hours before they had been flying safely. Now they were cut off from communication with the civilized world, lying on a bank of seaweed in the mysterious Sargasso, in the dead of the night.

"It looks like a diet of seaweed, Captain!"

Campbell, startled, looked again at the girl.

"Oh, I forgot. We can have some sandwiches. They're in the buffet—already prepared. There's coffee, too."

"That's luck," she said, turning aft to get them. While Campbell flashed his light through the inky darkness to determine

whether the motors were still holding, she served the other passengers with food. She brought delicate portions forward, and they sat side by side in the pilot's seat eating them. Her presence seemed to assure the captain that he would come through. Yet when he realized the apparent hopelessness of the situation he shuddered. He marveled that even the women could sleep. But Marcine herself was soon dozing.

He woke with the sun in his face, streaking through the window at his left. His right arm was around the girl's shoulder. He withdrew it when he heard footsteps back of the curtain in the main cabin. Two of the men were pacing back and forth, their faces white and unshaven, a worried look in their bloodshot eyes.

Campbell rose and looked over the bow. And utterly strange sight met his eyes. He gave a startled gasp that aroused the girl, so that she too stood up and looked. They were on an island of seaweed. It piled up in mounds and cliffs as far as they could see. It steamed like the jungle they had seen when flying over Brazil. And it was silent like a Pleistocene swamp—silent and dead.

"At least we aren't sunk!" exclaimed Marcine, as if this were a commonplace adventure.

Campbell lost all sense of anxiety then, save for the immediate comfort of his passengers.

"We'll come out," he said. "Will you continue to help me with the passengers? You know, even those men are frightened out of their wits."

"You forget the passengers!" she laughed. "I found some more excellent emergency rations in the buffet, and there's water enough to last awhile. While you're exploring the surrounding country I'll prepare breakfast." She turned suddenly and went aft, leaving him staring across the wastes of sea weed. A literal continent of it.

HE was inspecting the broken radio transmitter when she came with his breakfast. After drinking the coffee, which was excellent, he looked aft. All the passengers were silent. Unlike most crowds in a crisis,

they did not talk of their troubles. The men scowled at Bunyan. One of them, Carter of the Metropolitan and International Bank, threatened to smash Bunyan's face after having taken the thongs off his legs and wrists. Thomason and Mills, the other two, were chatting with the two women, the elderly lady and the middle-aged woman who had screamed so loudly.

When the captain went back into the cabin they all looked up, as if they expected him to work some sort of a miracle and take them on to their destination. He tried to smile at them, but he could not bring himself to meet their tragic stare. While he stood there, they began to venture timid questions.

"I'll be frank with you people," he said finally. "I know no more than you do. The radio is out. It is doubtful that we'll be able to get out of this mess without outside help. The left wing, as you see, is crumpled. It's fortunate that the cabin is left intact. We'll have to work together and make the best of it. I'm going to explore the surroundings. If you wish, two of you may follow me. The others will remain aboard."

Thomason and Carter rose to their feet and stepped forward. The banker handed Campbell one of the pistols he had taken from Bunyan, which the captain pocketed, glancing sidewise at his enemy.

"There won't be any plane to come out and pick you up, leaving the rest of us to drift," the captain told him. "If you had one following us, its pilot was too yellow to set down where we did."

With that, the captain, followed by the two men, turned and climbed through the hatch. But out on deck, he thought of Marcine. He had not seen her inside the cabin after breakfast. Hurrying back down the steps he called for her.

"The young lady went outside while you were talking to us," said Mills.

Campbell turned on his heel and ran back to the bow. He told Thomason and Carter of Marcine's disappearance. The three of them leaped to the matted seaweed and started off at a run toward the mounds that lay before them, Campbell searching for

traces of her footsteps. But so tangled was the mass that he could distinguish nothing.

The three halted when they came around the second mound and listened. Campbell yelled the girl's name. They waited, but there came no answer to their calls, only the scurrying of several strange reptile-like monsters broke the silence that hung over them.

An iguana, the size of a Florida alligator, lay blinking at them from one of the smaller mounds. A giant sea turtle, twenty feet across, with a head over three feet in diameter, advanced toward them. Its great soft body ambled over the tangled weed. Even three shots from Campbell's automatic did not stop the turtle. Thinking to save their ammunition, the men hurried on. But ere they had advanced twenty yards they were stopped suddenly by a woman's scream which came from ahead of them. Then shots rang out and all was silent once more.

The Sargasso Monster

CAMPBELL ran forward and topped another mound of seaweed. From there he looked southward. On the top of another mound he saw the girl and called to her. She did not answer. Instead, she leveled her gun at something below her and pumped several shots at it. She screamed again as he darted forward. Dashing ahead, Campbell came upon the mound just as she finished emptying the .22 again. She turned like a helpless child and ran to him. As he caught her up, she looked over his shoulder and screamed again. He turned and what he saw chilled his blood and froze him to inaction.

It was a nightmarish monster, seventy feet long and built like an eel. Its huge mouth could easily have swallowed five men at once. And it was emerging from the slimy depths of a swamp and encircling the mound. Thomason and Carter also froze when they saw it. Their advance was cut off by its threatening jaws. It raised its head toward Campbell and Marcine and came slowly toward them.

In an instant, Campbell reloaded his automatic and leveled it at the monster. Three shots seemed to take no great effect. In fact they only antagonized the thing. Its tail, which was blunt and almost as big around as its body, came swishing out of the slime. The monstrous jaws were open, and it was not more than fifteen feet from them. Before Campbell chanced another shot, the automatic that Marcine had now reloaded came into play. Then what happened amazed the captain.

The plucky girl had shot the monster's eyes out!

He leveled his own gun down upon the same spots, sending shot after shot from his heavy .44 into the thing's mouth and to a tiny round bump on the top of its head. But those immense slimy jaws were coming down upon them.

They backed off the other side of the mound together, leaped sideways just in time to avoid a brush of its heavy tail, and scurried to cover behind another mound, leaving Thomason and Carter to shift for themselves. More shots rang out, presumably from the banker's gun. There was a terrifying yell. It died suddenly.

"We've got to watch our step," said Campbell calmly. "Let's make our way back to the plane."

"But it's on the end of a peninsula and we're cut off by that thing," objected Marcine, loading her automatic with deft fingers.

Campbell pushed up the side of another mound. From its top they could see Carter making his way back to the plane. Thomason was not in sight.

"What could have happened to him?" said the pilot. The girl groaned and pointed to a spot just behind the retreating Carter, where a giant turtle was struggling with something in its jaws. They turned their eyes, terrified beyond speech.

"Why couldn't that have been Bunyan?" thought the pilot, shuddering because he could not avoid it. Marcine was clinging to his arm, sobbing hysterically. Together they found the power to turn and look again. Carter had disappeared over a mound in the direction of the plane. The turtle lay still. Their eyes followed the ground over

which they had escaped the terrible jaws of the Sargasso monster. It lay very still, its head upon the mound. From the relaxed position of its body, Campbell concluded it was dead. Taking Marcine silently by the arm he suggested that they return immediately to the plane.

BUT before they had gone ten paces a new horror gripped them. What they saw as they came upon a new mound of seaweed struck terror to their souls and sent their blood running cold. Their senses reeled and they stood there frozen to the spot.

An animal of such proportions that the largest African elephant would have looked like a pigmy at its side was slowly creeping up from the slime of a nearby marsh. If it was a saurian it was of a species different from anything in the records of any museum of natural history or archaeological research. It was over a hundred feet in length, and lay like a huge worm, a great, leather-like, bloated, beastly thing with a head slightly smaller than its body and eyes that glared out from the great sockets.

Only one thing the captain had ever seen could have so reminded him of its shape was a long, flexible sausage, save for the head and the mouth, which was round and so big that it could have swallowed the two of them without the slightest effort. Even as they watched, one of the great sea lizards that resembled an iguana darted by and was quickly covered by the cup-like lips of the monster.

And while the victim uttered a piercing scream, much like a captured rabbit, only louder—much louder—it was drawn into the jaws of the monster and swallowed.

The thing gulped with a satisfying blink of its hideous eyes, and then advanced upon them.

Marcine screamed. Campbell steadied her and looked around. Behind them, in the opposite direction from the plane, was only the waste of the Sargasso. There might be waiting for them there terrors far greater than those they had already experienced. But he must take a gamble with fate.

Speaking as calmly as possible as they

hurried back down the mound, he said, "Steady, Marcine! We'll find our way out over there, ahead of us."

He was pointing to the southeast. He did not realize that something unexpected awaited them just over the next mound. And the monster was coming toward them, slowly emerging from the marsh and revealing several fin-like feet that slapped against the weed with each lumbering step. They gained the top of the largest mound in the vicinity, stopped a minute to look around at the advancing monster, which was over two hundred yards away, and then started on down the slope. They stopped suddenly as if they had confronted a brick wall and looked with stark amazement at the sight before them.

CHAPTER IV.

A World of Monstrosities

BEFORE the pair on the mound was stretched a level plain that reached out to the horizon and probably beyond, a literal island of seaweed, thrown up here by the numerous whirlpools and decayed as the years fled. On either side of the island were tangled masses of the weed, reaching out into the sea, but apparently always thrown back to the main mass by the tides and the currents that rushed toward the different whirlpools about it. Vegetation grew here, much as that of the Amazon valley. A few palms dotted the landscape. A myriad of colours told of flowers in profusion.

Great flocks of birds lifted from the ground near Campbell and Marcine, and fluttered into the sky and off with the wind to the opposite shore. But what struck them most at this moment were the thousand round-shaped objects that rolled about the surface of the water at the edge of the island, some of them being thrown ashore by the tide, others rolling across the island as if propelled by the wind. Yet no wind was blowing.

They did not stop long to view the strange land. That hideous monster was behind them. It had gained and was now only a hundred yards behind them. Its great bulk

loomed up over the mound. Now its huge cup-like lips were extended and it was puffing as if from exertion. The two ran down the hill before them, reaching the level ground just as the monster gained the top. They kept fleeing, not daring to waste a minute or a single breath in speech. Yet when Marcine chanced a glance backward she screamed hysterically and pointed. Even while gathering her limp body into his arms, Campbell saw that the thing had turned sidewise, was beginning to roll down toward them! His own sense of action left him for a second. His brain failed him. His memory was gone. He was stunned to insensibility, yet that powerful something that lies deep down in the being of a man caused him to move, to try to run, to realize his position with the girl to protect.

Still that mountain of flesh was rolling down toward them, was almost upon them before the captain realized it. With the very last ounce of his strength called upon to aid him in flight, he leaped with his precious burden out upon the level plain. He was seventy or more yards away when the beast crashed down the slope, only to break through the thin crust that formed the island and disappear with a few gurgling sounds below the surface.

Campbell heard it and turned to see that the weight of the gigantic monster had caused its own defeat. "How heavenly fortunate!" he gasped.

"Floating islands are like that," said a voice near his ears.

He looked up into the girl's eyes.

"Gosh, I thought you were out!" he said quickly, thankful that her swoon had not lasted longer.

"Gee, but you're a man!" she said. "You saved our lives!"

"We save our own lives every day; we leap from before automobiles and street cars; we make forced landings and make medicine—what's the difference?"

"You ask that question because you don't know the difference—because you don't see the difference. If you were some other sort of a man, like Bunyan, you'd know what I mean. Or if you were a timid woman—"

"Timid!" he laughed. Then he realized

that his heart was pounding. He tried to lie to himself and say that it was because of the scare the monster had given him. He let her slide gently to her feet.

"Let's not get into a discussion on psychology. We'll find a way to get out of this if I have to build an airplane."

SHE looked at her wrist watch. "Why, we been out here only three hours! It seems like an age ago since we left the plane."

"And it's likely only a split second in the time of those monsters. They must be thousands of years old. I'm trying to make out what those round things can be." He pointed across the seaweed island. Several balls, the height of which looked to be about ten feet, were rolling slowly upon the beach.

Marcine studied them a minute. "It must be some sort of vegetation peculiar to this strange land," she speculated.

But as they looked they saw that the things were propelled by a sort of tentacle arrangement, a band of them extending around the leathery ball. As two of the strange things moved in their direction, they saw that the balls never touched the ground, but were held up in the air by the tentacles. As the ball rotated, the tentacle-legs reached forward, carried the weight until another leg came around, and then receded, to lie flat against the sides of the ball.

The two that were coming toward them were moving with express train speed.

"Monsters—of some sort!" gasped Campbell. "We've got to dive back up the hill. Watch your step!"

"I won't faint again," said the girl, gathering her breath. They skirted the edge of the hole where the gigantic monster had disappeared and started up the incline. Even as they ran they looked back to see the balls gaining upon them. But something moved in the weeds in the path of one of them. It looked like a sea lion. It could not move swiftly.

The ball bore down upon it. Then it opened on one side like an orange being cut in two, and the great mouth closed down upon the unfortunate seal. The other mon-

ster continued to roll toward Campbell and Marcine, but when it reached the incline it slowed down.

At close range, Campbell took careful aim and sent two shots from his .44 Colt at the thing. It stopped, dead still, and its tentacle-legs lowered it to the ground. It rolled back into the same hole wherein had disappeared the gigantic monster and lay very still upon the surface of the water. The other ball was also motionless. It was satisfied with the meal it had obtained.

"A world of monstrosities!" exclaimed the captain.

The girl did not answer. He looked at her suddenly, and he saw that she was reeling as she walked. He caught her up in his arms as her limp body gave way to the strain that had been upon it. He hurried quickly toward the plane.

But before the captain, on his way back to the plane with the burden of the lovely Marcine in his arms, lay hazards that come under the heading of things hideous and terrifying. Only the intelligence that held forth above the universe could know how he managed to escape the threatening jaws of another of the great monsters that looked like an eel. Or how his gun, in his free hand, happened to stop the charging trunk turtle that was so large it could have swallowed him with one gulp. The crocodiles and gigantic iguanas were like so many pets in comparison to the greater animals that had threatened their lives.

Yet it was not long before Campbell topped a mound to see the plane lying there, motionless. Tears filled his eyes as he looked at his great amphibian. She had been the pride of his heart. Now she lay with one wing dug deep into the mass of seaweed and crumpled, the other extended to the sky to invite the first fierce gust of wind that came down upon the Sargasso.

He collapsed as Carter and Mills hurried out to the listing deck to meet them. The strain of the past twenty-four hours left him weak and near to helplessness. Yet within an hour he sat up in his improvised bed and inquired about his passengers. Carter hesitatingly told him of Thomason's death. It was not until then that he learned that the

unfortunate passenger was the doctor Marcine had mentioned the evening before.

"**B**UT you have a nurse, Captain," said Mills, smiling.

"And what a nurse!" said Campbell, looking up to see Marcine standing over him.

"She didn't say anything bad about you," continued Mills. "How about those monsters—are we in any danger?"

"Imminent danger," said Carter, looking to Campbell for confirmation.

"If one of those things finds us here we're sunk," agreed Campbell. He sat up, suddenly, and demanded, looking about him, "Where is Bunyan?"

"When Carter got back he sent him for a walk," said Mills dryly. There was just a faint trace of a smile on his lips.

"For—" Campbell stopped suddenly. There wasn't really any use to start an argument. He shrugged his shoulders. "Well, all of you saw how he tried to kill me."

The two men nodded and walked away. The two women, the elderly one and the middle aged one, were preparing food over the emergency gasoline stove. They brought a bowl of milky soup and placed it before Campbell on the hinged table.

As he slowly sipped it, he thought over the circumstance that confronted them. It was likely that other planes of the Tilden lines were searching for them. But would they come far off the course here, beyond the latitude where he had been forced down? Would they discover the rushing current that carried everything far into the dark and mysterious Sargasso and follow it across the maelstrom?

They could only hope for rescue. Somewhere out there on the opposite shore of the strange island might lie a disabled ship. There might even be human inhabitants. But to reach them was something like old Lawrence Tilden would term "flirting with Hell," and that would be foolish. Those ball monsters would rush even a dozen men. The gigantic eel-like things, the turtles and that nameless creature so big that it would pigmy a whale, stood in the way.

Campbell's thoughts were interrupted by a single glance at the figure of Marcine out-

lined against the silken curtain up forward. But they were interrupted for only a minute. The sight of her made him all the more determined to effect an escape. He arose in spite of the warning of the two women and hurried into the pilot's cockpit. An idea occurred to him.

There were rockets, in the cabinet behind the fire extinguisher. He took his keys and unlocked the cabinet, bringing forth a dozen of them. Why hadn't he thought of them before? Where had been that pilot's sense of responsibility? Why, there was little need of a plane being entirely lost, of its crew and passengers being hopeless. He placed an armful of the rockets before the astonished girl. She picked one up and examined it, but did not speak.

"Send up three every five minutes," he said under his breath. He took out his cigar lighter and held it ready. He placed one of the rockets in the slots that had been provided on the side of the cabin for that purpose, and then touched it off. It hissed for a second, and then leaped into space, sailing high into the sky and bursting. A prolonged flame hung where it exploded. Then the flame died suddenly, and a black cloud took its place, so black and dense that it could not help but attract the most casual glance of a lookout or a cruising plane. Several minutes passed before the cloud dissolved into the blue of the Sargasso sky. Then one after another of the rockets were dispatched, some going higher than others, some lasting longer. After an hour, he looked at the number that lay before them.

"We'll rest a while," he announced. "You'd better go below and take it easy, Marc—Miss Rickman. I'll have Carter and Mills on watch up here."

"If anything happens you can depend upon me," she said, and her hand brushed his ever so slightly as she turned to go.

But she did not reach the cabin hatchway before she screamed and pointed off to the starboard side of the plane. Campbell followed her gaze. What he saw so terrified and unnerved him that he was frozen in his tracks. It was one of those huge monsters, like the one that had rolled after them down the slope. But this one was much bigger

and looked more ferocious as it ambled toward them, its fin-like feet slapping against the cushioning seaweed, and its gloating, monstrous eyes fastened upon them.

CHAPTER V.

The Last Stand

“GET below—quickly!” snapped Campbell. He followed Marcine down the steps and closed the hatch after them. “Close all the ports,” he snapped again. “That thing means business. Every one be still and silent. If it sees you move it will crush this cabin between its jaws.”

The middle aged woman sobbed. The older one fainted. The former became mad with fright.

“Take care of her,” ordered Campbell to Marcine, who, smiling bravely, went aft to the stricken woman and took her hands and held them gently. Merciful oblivion took possession of her. Carter and Wells were running about the cabin aimlessly, like frightened inmates in a cell of death.

“Snap out of it, fellows—I’ll need you!” sang out the pilot. “If anyone here has to die I’ll go first and show you how easy it is!”

Carter looked up. Something of the fellowship of men, that kindred feeling that too seldom motivates the acts of men in desperate situations seemed to have crept over him.

Easy to die—the words of Service. Both of the men looked up. Then they stood calmly before him. Campbell simply glanced between them and Marcine Rickman. He thought they caught his meaning.

“Drop to the floor and lie still. If it menaces the plane use these.” He handed each of them several of the rockets. They took out matches and made ready.

Marcine, having disposed of the two helpless women by leaving them relaxed in utter abandon upon the soft cushions, came forward and followed the example of the others, taking a handful of the rockets. Campbell knelt beside her. A single open porthole kept their attention.

“I hope it swallows one of my dad’s mo-

tors and chokes!” whispered the girl at the pilot’s side.

“One of them running,” added Campbell.

The monster of the dim past came closer and stopped. It raised its gigantic head like a conquering monarch. Nothing they had ever seen or dreamed of having seen was so gigantic or repulsive. Its great cup-like mouth was pink inside. The lips were extended toward the plane, a dozen feet from it. It loomed up over the helpless ship, its fin-like feet slapping the ground. An amphibious carnivore, Campbell knew, for his learning in ancient and natural history had taught him something of the animals of ancient seas. This giant saurian ate flesh. Perhaps it could smell them, if it had enough instinct to know that they were inside the cabin.

It ambled forward, two lumbering steps bringing it directly over the plane. Its mouth was open and its gigantic lips were almost touching the skylight directly over Campbell and Marcine. Slowly, the head descended upon them. Part of the upper wing crumpled as if it were made of tissue.

Terror struck the souls of them. Panic seized them. One of the woman screamed. Wells dived beneath a seat and lay there sobbing. Campbell whispered for them to be silent. Someone fell over his feet. It was Marcine. She got up and ran aft, opened a port hole, set a rocket in its and touched it off. There was a blinding flash, a hiss, and the rocket was gone.

Campbell reached for his own bundle of rockets. He held one in his bare hands and sent it up through the skylight, into the mouth of the monster. Another and another he let go as the great lips began to close. The rockets burst inside the saurian. There was a resounding blast, and then another that was muffled when the lips closed upon the fourth rocket that entered its mouth. The head swung away on the bulging neck, and the thing started on.

As it lumbered by them, one of its great feet crushed a motor off the wing and into the soft weeds. Campbell discharged his automatic into the side of the monster.

The foot barely missed the forward end of the cabin. Like a huge sea lion, it drag-

ged on past. The panic-stricken women were shrieking. They were pointing out the portholes toward the saurian's tail. It was held high, ready to crush down upon them. Several rockets blinded the captain's eyes.

The tail swung closer and splintered the wing. One of those ten-foot-wide finny feet scraped the nose of the cabin, breaking it off. A huge claw a foot thick and four times as long was sunk through the deck. But it was soon raised and the beast moved again.

But the rockets were bursting beneath it, where they had fallen to the ground. Where was Marcine? She was not in the cabin! Campbell hurried aft, calling for her. Through the porthole aft, he saw her shadow. She was standing on the tail of the plane, letting the rockets fly away at the touch of a match. One after another they hissed and flew away as Campbell climbed through the hatch and started to pull her down into the cabin.

"Get your people aft!" she yelled. "Look!"

Following her finger, he saw a black speck in the sky off there to the north. It was far away and so small that he could not determine whether it was a seaplane or a dirigible. But it was surely coming toward them.

"Bring more rockets!" pleaded the girl.

Campbell dropped through the hatch.

As he herded his passengers aft, the tail of the monster struck. It splintered through the top of the cabin, breaking off the nose, the pilot's cockpit and the other motor. But the lumbering mass of the thing was moving away. Its leather-like sides were heaving and its feet were slapping the ground. Its great length dragged by them slowly. It was several yards away when the first blast of the Rickman-Conroff *Hummingbirds* on the big Tilden Twin came to their ears. While they stood there elated beyond words, the big amphibian slid gently down across the whirlpool, swayed over the mound, and went into a turn. When it came back it landed in the water not a hundred feet from the plane.

"Hey, Campbell! What the devil's that?" yelled Jimmy Trevelyn of the Tilden Airlines, super-pilot and an all-weather airman,

from the cockpit of his amphibian as the six people came toward the plane. He indicated the monster.

"I think it's Bunyan's grave," answered the now elated Campbell, dragging his heavy feet forward to shake Trevelyn's hand.

"Let's get out of this mess—you can tell me all about it when we've lifted," said Jimmy, opening the door of the cabin. The two women and Carter and Wells hurried inside. All dropped to waiting seats in complete exhaustion. Campbell and Marcine followed into the pilot's compartment.

"I had a line on Bunyan," explained Trevelyn. "He was the fellow who was picked off my plane that day, leaving the rest of us to drift. That scuttler went ashore and disappeared. It was three days before the base knew our location, and he had promised to send a plane after us the minute he landed. The fellow who picked him off claimed to have been following my ship so as to be certain of keeping on the course. But that magnet story of yours explains things. I was out in the Caribbean, over a hundred miles off the course and bearing West, when the compass should have read Northeast."

"Well, he won't play that game again."

Strangely, it was not until that moment that he thought of introducing Marcine to the pilot. She had stood there listening, without comment. "I beg your pardon, Marcine," he said. "This is my old flying mate, Jimmy Trevelyn. She can send rockets higher than any one I know, Jimmy."

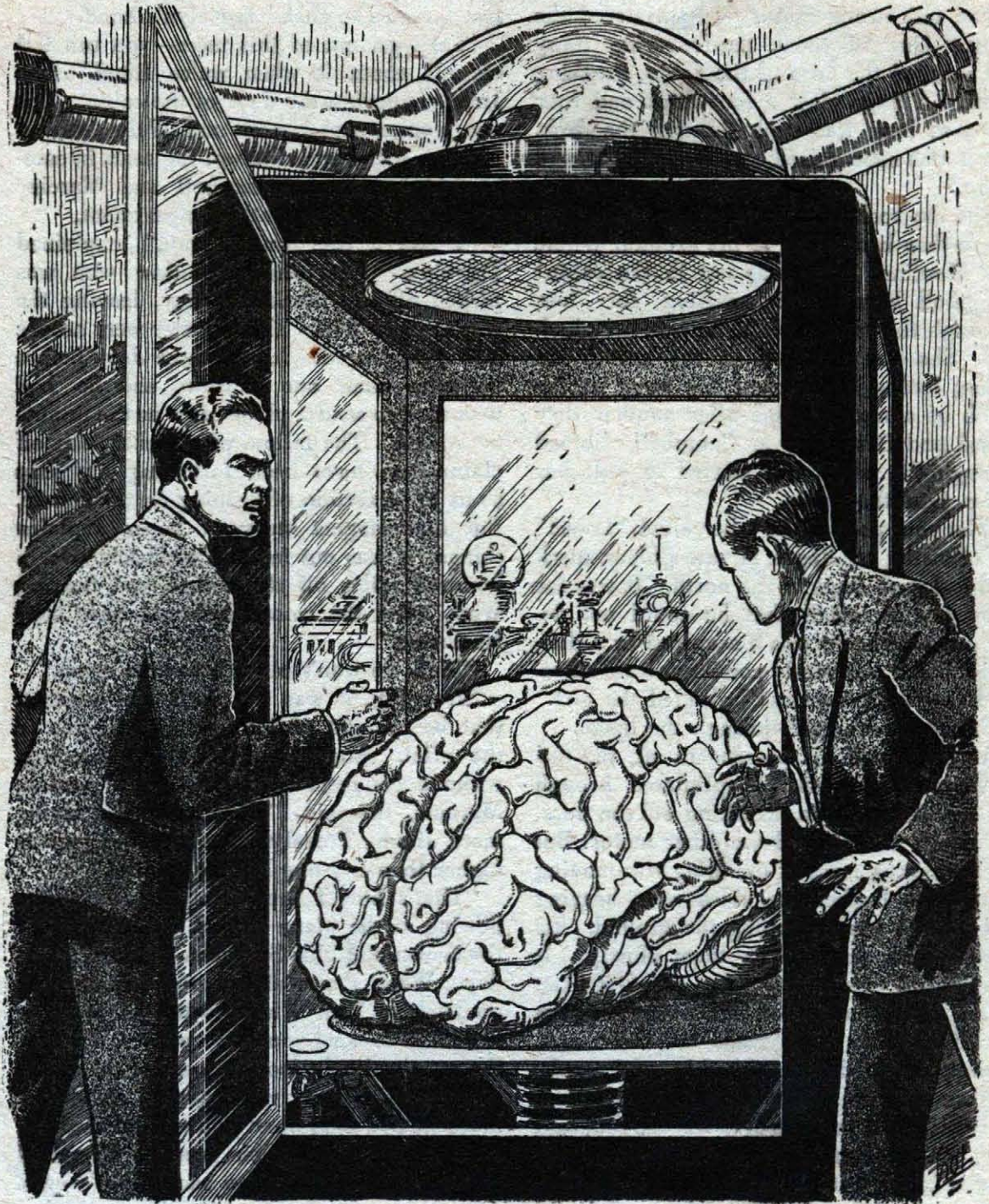
"That's how I found you," said Jimmy, bowing as the plane leveled off far up over the brown and blue Sargasso. "I cruised all day. When I was about to give it up and go back to Key West I saw one of those blackball rockets you sent up burst out over the most unlikely looking part of the whole ocean. I'll bet my wings there's something more in the story than you've told me."

Automatically, at his words, Campbell and the girl looked into each other's eyes. After that, for a full twenty minutes, Jimmy Trevelyn gazed straight ahead over the nose of the amphibian. Nor did he turn his eyes when he said, "There'd almost have to be."

THE END.

The Man Who Evolved

By Edmond Hamilton



(Illustration by Paul)

It was a great brain. It lay in the chamber, its surface ridged and wrinkled by innumerable fine convolutions.

THERE were three of us in Pollard's house on that night that I try vainly to forget. Dr. John Pollard himself, Hugh Dutton and I, Arthur Wright—we were the three. Pollard met that night a fate whose horror none could dream; Dutton has since that night inhabited a state institution reserved for the insane, and I alone am left to tell what happened.

It was on Pollard's invitation that Dutton and I went up to his isolated cottage. We three had been friends and room-mates at the New York Technical University. Our friendship was perhaps a little unusual, for Pollard was a number of years older than Dutton and myself and was different in temperament, being rather quieter by nature. He had followed an intensive course of biological studies, too, instead of the ordinary engineering courses Dutton and I had taken.

As Dutton and I drove northward along the Hudson on that afternoon, we found ourselves reviewing what we knew of Pollard's career. We had known of his taking his master's and doctor's degrees, and had heard of his work under Braun, the Vienna biologist whose theories had stirred up such turmoil. We had heard casually, too, that afterwards he had come back to plunge himself in private research at the country-house beside the Hudson he

had inherited. But since then we had had no word from him and had been somewhat surprised to receive his telegrams inviting us to spend the week-end with him.

It was drawing into early-summer twilight when Dutton and I reached a small riverside village and were directed to Pollard's place, a mile or so beyond. We found it easily enough, a splendid old pegged-frame house that for a hundred-odd years had squatted on a low hill above the river. Its outbuildings were clustered around the big house like the chicks about some protecting hen.

Pollard himself came out to greet us. "Why, you boys have grown up!" was his first exclamation. "Here I've remembered you as Hughie and Art, the campus trouble-raisers, and you look as though you belong to business clubs and talk everlastingly about sales-resistance!"

"That's the sobering effect of commercial life," Dutton explained, grinning. "It hasn't touched you, you old oyster—you look the same as you did five years ago."

He did, too, his lanky figure and slow smile and curiously thoughtful eyes having changed not a jot. Yet

Pollard's bearing seemed to show some rather more than usual excitement and I commented on it.

"If I seem a little excited it's because this

THERE is no more fascinating subject of speculation for man than that concerning his change through the millions of years of his life from the simple one-celled animal to his present high state of development.

Even today eminent biologists differ as to the forces that raised us from the primordial slime and gave us the intelligence and power to create a great civilization—with its impressive mechanical forces, its art, literature and culture.

The doctrine of Darwin that we changed because only the fittest species could survive does not explain anything. The idea of Shaw that we changed because we wanted to change is more understandable but less convincing. Science is working feverishly to find the true force or forces that cause mutations.

The second question that we dwell upon is what will be the road of our evolution? Is our path a spiral, ever upward to newer and newer glories and greater achievements? Or does the mystic future hold things that are strange, incredible or even horrible? Our well-known author answers some of these questions in this most engrossing story.

is a great day for me," he answered.

"Well, you *are* in luck to get two fine fellows like Dutton and me to trail up to this hermitage of yours," I began, but he shook his head smilingly.

"I don't refer to that, Art, though I'm mighty glad you've come. As for my hermitage, as you call it, don't say a word against it. I've been able to do work here I could never have done amid the distractions of a city laboratory."

His eyes were alight. "If you two knew what—but there, you'll hear it soon enough. Let's get inside—I suppose you're hungry?"

"Hungry—not I," I assured him. "I might devour half a steer or some trifle like that, but I have really no appetite for anything else today."

"Same here," Dutton said. "I just pick at my food lately. Give me a few dozen sandwiches and a bucket of coffee and I consider it a full meal."

"Well, we'll see what we can do to tempt your delicate appetites," said Pollard, as we went inside.

We found his big house comfortable enough, with long, low-ceilinged rooms and broad windows looking riverward. After putting our bags in a bedroom, and while his housekeeper and cook prepared dinner, Pollard escorted us on a tour of inspection of the place. We were most interested in his laboratory.

It was a small wing he had added to the house, of frame construction outside to harmonize with the rest of the building, but inside offering a gleaming vista of white-tiled walls and polished instruments. A big cube-like structure of transparent metal surmounted by a huge metal cylinder resembling a monster vacuum tube, took up the room's center, and he showed us in an adjoining stone-floored room the dynamos and motors of his private power-plant.

Night had fallen by the time we finished

dinner, the meal having been prolonged by our reminiscences. The housekeeper and cook had gone, Pollard explaining that the servants did not sleep in the place. We sat smoking for a while in his living-room, Dutton looking appreciatively around at our comfortable surroundings.

"Your hermitage doesn't seem half-bad, Pollard," he commented. "I wouldn't mind this easy life for a while myself."

"Easy life?" repeated Pollard. "That's all you know about it, Hugh. The fact is that I've never worked so hard in my life as I've done up here in the last two years."

"What in the world have you been working at?" I asked. "Something so unholy you've had to keep it hidden here?"



EDMOND HAMILTON

A Mad Scheme

POLLARD chuckled. "That's what they think down in the village. They know I'm a biologist and have a laboratory here, so it's a foregone conclusion with them that I'm doing vivisection of a specially dreadful nature. That's why the servants won't stay here at night."

"As a matter of fact," he added, "if they knew down in the village what

I've really been working on they'd be ten times as fearful as they are now."

"Are you trying to play the mysterious great scientist for our benefit?" Dutton demanded. "If you are you're wasting time—I know you, stranger, so take off that mask."

"That's right," I told him. "If you're trying to get our curiosity worked up you'll find we can scam you as neatly as we could five years ago."

"Which scamming generally ended in black eyes for both of you," he retorted. "But I've no intention of working up your curiosity—as a matter of fact I asked you

up here to see what I've been doing and help me finish it."

"Help you?" echoed Dutton. "What can we help you do—dissect worms? Some week-end, I can see right now!"

"There's more to this than dissecting worms," Pollard said. He leaned back and smoked for a little time in silence before he spoke again.

"Do you two have any knowledge at all of evolution?" he asked.

"I know that it's a fighting word in some states," I answered, "and that when you say it you've got to smile, damn you."

He smiled himself. "I suppose you're aware of the fact, however, that all life on this earth began as simple uni-cellular protoplasm, and by successive evolutionary mutations or changes developed into its present forms and is still slowly developing?"

"We know that much—just because we're not biologists you needn't think we're totally ignorant of biology," Dutton said.

"Shut up, Dutton," I warned. "What's evolution got to do with your work up here, Pollard?"

"It is my work up here," Pollard answered.

He bent forward. "I'll try to make this clear to you from the start. You know, or say you know, the main steps of evolutionary development. Life began on this earth as simple protoplasm, a jelly-like mass from which developed small protoplasmic organisms. From these developed in turn sea-creatures, land-lizards, mammals, by successive mutations. This infinitely slow evolutionary process has reached its highest point so far in the mammal man, and is still going on with the same slowness.

"This much is certain biological knowledge, but two great questions concerning this process of evolution have remained hitherto unanswered. First, what is the cause of evolutionary change, the cause of these slow, steady mutations into higher forms? Second, what is the future course of man's evolution going to be, what will the forms into which in the future man will evolve, and where will his evolution stop? Those two questions biology has so far been unable to answer."

Pollard was silent a moment and then said quietly, "I have found the answer to one of those questions, and am going to find the answer to the other tonight."

We stared at him. "Are you trying to spoof us?" I asked finally.

"I'm absolutely serious, Arthur. I have actually solved the first of those problems, have found the cause of evolution."

"What is it, then?" burst out of Dutton.

"What it has been thought by some biologists for years to be," Pollard answered. "The cosmic rays."

"The cosmic rays?" I echoed. "The vibrations from space that Millikan discovered?"

"Yes, the cosmic rays, the shortest wavelength and most highly penetrating of all vibratory forces. It has been known that they beat unceasingly upon the earth from outer space, cast forth by the huge generators of the stars, and it has also been known that they must have some great effect in one way or another upon the life of the earth."

"I have proved that they do have such an effect, and that that effect is what we call evolution! For it is the cosmic rays, beating upon every living organism on earth, that cause the profound changes in the structure of those organisms which we call mutations. Those changes are slow indeed, but it is due to them that through the ages life has been raised from the first protoplasm to man, and is still being raised higher."

"GOOD Lord, you can't be serious on this, Pollard!" Dutton protested.

"I am so serious that I am going to stake my life on my discovery tonight," Pollard answered, quietly.

We were startled. "What do you mean?"

"I mean that I have found in the cosmic rays the cause of evolution, the answer to the first question, and that tonight by means of them I am going to answer the second question and find out what the future evolutionary development of man will be!"

"But how could you possibly—"

Pollard interrupted. "Easily enough. I have been able in the last months to do something no physicist has been able to do,

to concentrate the cosmic rays and yet remove from them their harmful properties. You saw the cylinder over the metal cube in my laboratory? That cylinder literally gathers in for an immense distance the cosmic rays that strike this part of earth, and reflects them down inside the cube.

"Now suppose those concentrated cosmic rays, millions of times stronger than the ordinary cosmic rays that strike one spot on earth, fall upon a man standing inside the cube. What will be the result? It is the cosmic rays that cause evolutionary change, and you heard me say that they are still changing all life on earth, still changing man, but so slowly as to be unnoticeable. But what about the man under those terrifically intensified rays? He will be changed millions of times faster than ordinarily, will go forward in hours or minutes through the evolutionary mutations that all mankind will go forward through in eons to come!"

"And you propose to try that experiment?" I cried.

"I propose to try it on myself," said Pollard gravely, "and to find out for myself the evolutionary changes that await humankind."

"Why, it's insane!" Dutton exclaimed.

Pollard smiled. "The old cry," he commented. "Never an attempt has been made yet to tamper with nature's laws, but that cry has been raised."

"But Dutton's right!" I cried. "Pollard, you've worked here alone too long—you've let your mind become warped—"

"You are trying to tell me that I have become a little mad," he said. "No, I am sane—perhaps wonderfully sane, in trying this."

His expression changed, his eyes brooding. "Can't you two see what this may mean to humanity? As we are to the apes, so must the men of the future be to us. If we could use this method of mine to take all mankind forward through millions of years of evolutionary development at one stride, wouldn't it be sane to do so?"

My mind was whirling. "Good heavens, the whole thing is so crazy," I protested. "To accelerate the evolution of the human

race? It seems somehow a thing forbidden."

"It's a thing glorious if it can be done," he returned, "and I know that it can be done. But first one must go ahead, must travel on through stage after stage of man's future development to find out to which stage it would be most desirable for all mankind to be transferred. I know there is such an age."

"And you asked us up here to take part in that?"

"Just that. I mean to enter the cube and let the concentrated rays whirl me forward along the paths of evolution, but I must have someone to turn the rays on and off at the right moments."

"It's all incredible!" Dutton exclaimed. "Pollard, if this is a joke it's gone far enough for me."

For answer Pollard rose. "We will go to the laboratory now," he said simply. "I am eager to get started."

I cannot remember following Pollard and Dutton to the laboratory, my thoughts were spinning so at the time. It was not until we stood before the great cube from which the huge metal cylinder towered that I was aware of the reality of it all.

Pollard had gone into the dynamo-room and as Dutton and I stared wordlessly at the great cube and cylinder, at the retorts and flasks of acids and strange equipment about us, we heard the hum of motor-generators. Pollard came back to the switch-board supported in a steel frame beside the cube, and as he closed a switch there there came a crackling and the cylinder glowed with white light.

Pollard pointed to it and the big quartz-like disc in the cubical chamber's ceiling, from which the white force-shafts shot downward.

"The cylinder is now gathering cosmic rays from an immense area of space," he said, "and those concentrated rays are falling through that disk into the cube's interior. To cut off the rays it is necessary only to open this switch." He reached to open the switch, the light died.

The Man Who Evolved

QUICKLY, while we stared, he removed his clothing, donning in place of it a loose white running suit.

"I will want to observe the changes of my own body as much as possible," he explained. "Now, I will stand inside the cube and you will turn on the rays and let them play upon me for fifteen minutes. Roughly, that should represent a period of some fifty million years of future evolutionary change. At the end of fifteen minutes you will turn the rays off and we will be able to observe what changes they have caused. We will then resume the process, going forward by fifteen-minute or rather fifty million year periods."

"But where will it stop—where will we quit the process?" Dutton asked.

Pollard shrugged. "We'll stop where evolution stops, that is, where the rays no longer affect me. You know, biologists have often wondered what the last change or final development of man will be, the last mutation. Well, we are going to see tonight what it will be."

He stepped toward the cube and then paused, went to a desk and brought from it a sealed envelope he handed to me.

"This is just in case something happens to me of a fatal nature," he said. "It contains an attestation signed by myself that you two are in no way responsible for what I am undertaking."

"Pollard, give up this unholy business!" I cried, clutching his arm. "It's not too late, and this whole thing seems ghastly to me!"

"I'm afraid it is too late," he smiled. "If I backed out now I'd be ashamed to look in a mirror hereafter. And no explorer was ever more eager than I am to start down the path of man's future evolution!"

He stepped up into the cube, standing directly beneath the disk in its ceiling. He motioned imperatively, and like an automaton I closed the door and then threw the switch.

The cylinder broke again into glowing white light, and as the shafts of glowing white force shot down from the disk in the

cube's ceiling upon Pollard, we glimpsed his whole body writhing as though beneath a terrifically concentrated electrical force. The shaft of glowing emanations almost hid him from our view. I knew that the cosmic rays in themselves were invisible but guessed that the light of the cylinder and shaft was in some way a transformation of part of the rays into visible light.

Dutton and I stared with beating hearts into the cubical chamber, having but fleeting glimpses of Pollard's form. My watch was in one hand, the other hand on the switch. The fifteen minutes that followed seemed to me to pass with the slowness of fifteen eternities. Neither of us spoke and the only sounds were the hum of the generators and the crackling of the cylinder that from the far spaces was gathering and concentrating the rays of evolution.

At last the watch's hand marked the quarter-hour and I snapped off the switch, the light of the cylinder and inside the cube dying. Exclamations burst from us both.

Pollard stood inside the cube, staggering as though still dazed by the impact of the experience, but he was not the Pollard who had entered the chamber! He was transfigured, godlike! His body had literally expanded into a great figure of such physical power and beauty as we had not imagined could exist! He was many inches taller and broader, his skin a clear pink, every limb and muscle molded as though by some master sculptor.

The greatest change, though, was in his face. Pollard's homely, good-humored features were gone, replaced by a face whose perfectly-cut features held the stamp of immense intellectual power that shone almost overpoweringly from the clear dark eyes. It was not Pollard who stood before us, I told myself, but a being as far above us as the most advanced man of today is above the troglodyte!

He was stepping out of the cube and his voice reached our ears, clear and bell-like, triumphant.

"You see? It worked as I knew it would work! I'm fifty million years ahead of the rest of humanity in evolutionary development!"

"Pollard!" My lips moved with difficulty. "Pollard, this is terrible—this change—"

His radiant eyes flashed. "Terrible? It's wonderful! Do you two realize what I now am, can you realize it? This body of mine is the kind of body all men will have in fifty million years, and the brain inside it is a brain fifty million years ahead of yours in development!"

HE swept his hand about. "Why, all this laboratory and former work of mine seems infinitely petty, childish, to me! The problems that I worked on for years I could solve now in minutes. I could do more for mankind now than all the men now living could do together!"

"Then you're going to stop at this stage?" Dutton cried eagerly. "You're not going further with this?"

"Of course I am! If fifty million years development makes this much change in man, what will a hundred million years, two hundred million make? I'm going to find that out."

I grasped his hand. "Pollard, listen to me! Your experiment has succeeded, has fulfilled your wildest dreams. Stop it now! Think what you can accomplish, man! I know your ambition has always been to be one of humanity's great benefactors—by stopping here you can be the greatest! You can be a living proof to mankind of what your process can make it, and with that proof before it all humanity will be eager to become the same as you!"

He freed himself from my grasp. "No, Arthur—I have gone part of the way into humanity's future and I'm going on."

He stepped back into the chamber, while Dutton and I stared helplessly. It seemed half a dream, the laboratory, the cubical chamber, the godlike figure inside that was and still was not Pollard.

"Turn on the rays, and let them play for fifteen minutes more," he was directing. "It will project me ahead another fifty million years."

His eyes and voice were imperative, and I glanced at my watch, and snickered over the

switch. Again the cylinder broke into light, again the shaft of force shot down into the cube to hide Pollard's splendid figure.

Dutton and I waited with feverish intensity in the next minutes. Pollard was standing still beneath the broad shaft of force, and so was hidden in it from our eyes. What would its lifting disclose? Would he have changed still more, into some giant form, or would he be the same, having already reached humanity's highest possible development?

When I shut off the mechanism at the end of the appointed period, Dutton and I received a shock. For again Pollard had changed!

He was no longer the radiant, physically perfect figure of the first metamorphosis. His body instead seemed to have grown thin and shrivelled, the outlines of bones visible through its flesh. His body, indeed, seemed to have lost half its bulk and many inches of stature and breadth, but these were compensated for by the change in his head.

For the head supported by this weak body was an immense, bulging balloon that measured fully eighteen inches from brow to back! It was almost entirely hairless, its great mass balanced precariously upon his slender shoulders and neck. And his face too was changed greatly, the eyes larger and the mouth smaller, the ears seeming smaller also. The great bulging forehead dominated the face.

Could this be Pollard? His voice sounded thin and weak to our ears.

"You are surprised to see me this time? Well, you see a man a hundred million years ahead of you in development. And I must confess that you appear to me as two brutish, hairy cave-men would appear to you."

"But Pollard, this is awful!" Dutton cried. "This change is more terrible than the first . . . if you had only stopped at the first . . ."

The eyes of the shrivelled, huge-headed figure in the cube fired with anger. "Stop at that first stage? I'm glad now that I didn't! The man I was fifteen minutes ago . . . fifty million years ago in development . . . seems now to me to have been

half-animal! What was his big animal-like body beside my immense brain?"

"You say that because in this change you're getting away from all human emotions and sentiments!" I burst. "Pollard, do you realize what you're doing? You're changing out of human semblance!"

"I realize it perfectly," he snapped, "and I see nothing to be deplored in the fact. It means that in a hundred million years man will be developing in brain-capacity and will care nothing for the development of body. To you two crude beings, of what is to me the past, this seems terrible; but to me it is desirable and natural. Turn on the rays again!"

"Don't do it, Art!" cried Dutton. "This madness has gone far enough!"

Pollard's great eyes surveyed us with cold menace. "You will turn on the rays," his thin voice ordered deliberately. "If you do not, it will be but the work of a moment for me to annihilate both of you and go on with this alone."

"You'd kill us?" I said dumfoundedly. "We two, two of your best friends?"

His narrow mouth seemed to sneer. "Friends? I am millions of years past such irrational emotions as friendship. The only emotion you awaken in me is a contempt for your crudity. Turn on the rays!"

The Brain Monster

HIS eyes blazed as he snapped the last order, and as though propelled by a force outside myself, I closed the switch. The shaft of glowing force again hid him from our view.

Of our thoughts during the following quarter-hour I can say nothing, for both Dutton and I were so rigid with awe and horror as to make our minds chaotic. I shall never forget, though, that first moment after the time had passed and I had again switched off the mechanism.

The change had continued, and Pollard—I could not call him that in my own mind—stood in the cube-chamber as a shape the sight of which stunned our minds.

He had become simply a great head! A huge hairless head fully a yard in diameter,

supported on tiny legs, the arms having dwindled to mere hands that projected just below the head! The eyes were enormous, saucer-like, but the ears were mere pin-holes at either side of the head, the nose and mouth being similar holes below the eyes!

He was stepping out of the chamber on his ridiculously little limbs, and as Dutton and I reeled back in unreasoning horror, his voice came to us as an almost inaudible piping. And it held pride!

"You tried to keep me from going on, and you see what I have become? To such as you, no doubt, I seem terrible, yet you two and all like you seem as low to me as the worms that crawl!"

"Good God, Pollard, you've made yourself a monster!" The words burst from me without thought.

His enormous eyes turned on me. "You call me Pollard, yet I am no more the Pollard you knew, and who entered that chamber first, than you are the ape of millions of years ago from whom you sprang! And all mankind is like you two! Well, they will all learn the powers of one who is a hundred and fifty million years in advance of them!"

"What do you mean?" Dutton exclaimed.

"I mean that with the colossal brain I have I will master without a struggle this man-swarming planet, and make it a huge laboratory in which to pursue the experiments that please me."

"But Pollard—remember why you started this!" I cried. "To go ahead and chart the path of future evolution for humanity—to benefit humanity and not to rule it!"

The great head's enormous eyes did not change. "I remember that the creature Pollard that I was until tonight had such foolish ambitions, yes. It would stir mirth now, if I could feel such an emotion. To benefit humanity? Do you men dream of benefitting the animals you rule over? I would no sooner think of working for the benefit of you humans!"

"Do you two yet realize that I am so far ahead of you in brain power now as you are ahead of the beasts that perish? Look at this . . ."

He had climbed onto a chair beside one

of the laboratory tables, was reaching among the retorts and apparatus there. Swiftly he poured several compounds into a lead mortar, added others, poured upon the mixed contents another mixture made as swiftly.

There was a puff of intense green smoke from the mortar instantly, and then the great head—I can only call him that—turned the mortar upside down. A lump of shining mottled metal fell out and we gasped as we recognized the yellow sheen of pure gold, made in a moment, apparently, by a mixture of common compounds!

"You see?" the grotesque figure was asking. "What is the transformation of elements to a mind like mine? You two cannot even realize the scope of my intelligence!"

"I can destroy all life on this earth from this room, if I desire. I can construct a telescope that will allow me to look on the planets of the farthest galaxies! I can send my mind forth to make contact with other minds without the slightest material connection. And you think it terrible that I should rule your race! I will not rule them, I will *own* them and this planet as you might own a farm and animals!"

"You couldn't!" I cried. "Pollard, if there is anything of Pollard left in you, give up that thought! We'll kill you ourselves before we'll let you start a monstrous rule of men!"

"We will—by God, we will!" Dutton cried, his face twitching.

We had started desperately forward toward the great head but stopped suddenly in our tracks as his great eyes met ours. I found myself walking backward to where I had stood, walking back and Dutton with me, like two automatons.

"So you two would try to kill me?" queried the head that had been Pollard. "Why, I could direct you without a word to kill yourselves and you'd do so in an instant! What chance has your puny will and brain against mine? And what chance will all the force of men have against me when a glance from me will make them puppets of my will?"

A DESPERATE inspiration flashed through my brain. "Pollard, wait?" I exclaimed. "You were going on with the process, with the rays! If you stop here you'll not know what changes lie beyond your present form!"

He seemed to consider. "That is true," he admitted, "and though it seems impossible to me that by going on I can attain to greater intelligence than I now have, I want to find out for certain."

"Then you'll go under the rays for another fifteen minutes?" I asked quickly.

"I will," he answered, "but lest you harbor any foolish ideas, you may know that even inside the chamber I will be able to read your thoughts and can kill both of you before you can make a move to harm me."

He stepped up into the chamber again, and as I reached for the switch, Dutton trembling beside me, we glimpsed for a moment the huge head before the down-smiting white force hid it from our sight.

The minutes of this period seemed dragging even more slowly than before. It seemed hours before I reached at last to snap off the rays. We gazed into the chamber, shaking.

At first glance the great head inside seemed unchanged, but then we saw that it had changed, and greatly. Instead of being a skin-covered head with at least rudimentary arms and legs, it was now a great gray head-like shape of even greater size, supported by two gray muscular tentacles. The surface of this gray head-thing was wrinkled and folded, and its only features were two eyes as small as our own.

"Oh my God!" quaked Dutton. "He's changing from a head into a brain—he's losing all human appearance!"

Into our minds came a thought from the gray head-thing before us, a thought as clear as though spoken. "You have guessed it, for even my former head-body is disappearing, all atrophying except the brain. I am become a walking, seeing brain. As I am so all of your race will be in two hundred million years, gradually losing more and more of their atrophied bodies and developing more and more their great brains."

His eyes seemed to read us. "You need

not fear now the things I threatened in my last stage of development. My mind, grown infinitely greater, would no more now want to rule you men and your little planet than you would want to rule an anthill and its inhabitants! My mind, gone fifty million years further ahead in development, can soar out now to vistas of power and knowledge unimagined by me in that last stage, and unimaginable to you."

"Great God, Pollard!" I cried. "What have you become?"

"Pollard?" Dutton was laughing hysterically. "You call that thing Pollard? Why, we had dinner with Pollard three hours ago—he was a human being, and not a thing like this!"

"I have become what all men will become in time," the thing's thought answered me, "I have gone this far along the road of man's future evolution, and am going on to the end of that road, am going to attain the development that the last mutation possible will give me!"

"Turn on the rays," his thought continued. "I think that I must be approaching now the last possible mutation."

I snapped over the switch again and the white shaft of the concentrated rays veiled from us the great gray shape. I felt my own mind giving beneath the strain of horror of the last hour, and Dutton was still half-hysterical.

The humming and crackling of the great apparatus seemed thunderous to my ears as the minutes passed. With every nerve keyed to highest tension, I threw open the switch at last. The rays ceased, and the figure in the chamber was again revealed.

Dutton began to laugh shrilly, and then abruptly was sobbing. I do not know whether I was doing the same, though I have a dim memory of mouthing incoherent things as my eyes took in the shape in the chamber.

It was a great brain! A gray limp mass four feet across, it lay in the chamber, its surface ridged and wrinkled by innumerable fine convolutions. It had no features or limbs of any kind in its gray mass. It was simply a huge brain whose only visible sign of life was its slow, twitching movement.

From it thoughts beat strongly into our own horror-weighted brains.

"You see me now, a great brain only, just as all men will be far in the future. Yes, you might have known, I might have known, when I was like you, that this would be the course of human evolution, that the brain that alone gives man dominance would develop and the body that hampers that brain would atrophy until he would have developed into pure brain as I now am!"

"I have no features, no senses that I could describe to you, yet I can realize the universe infinitely better than you can with your elementary senses. I am aware of planes of existence you cannot imagine. I can feed myself with pure energy without the need of a cumbersome body, to transform it, and I can move and act, despite my lack of limbs, by means and with a speed and power utterly beyond your comprehension.

"If you still have fear of the threats I made two stages back against your world and race, banish them! I am pure intelligence now and as such, though I can no more feel the emotions of love or friendship, neither can I feel those of ambition or pride. The only emotion, if such it is, that remains to me still is intellectual curiosity, and this desire for truth that has burned in man since his apethood will thus be the last of all desires to leave him!"

The Last Mutation

"A BRAIN—a great brain!" Dutton was saying dazedly. "Here in Pollard's laboratory—but where's Pollard? He was here, too . . ."

"Then all men will some day be as you are now?" I cried.

"Yes," came the answering thought, "in two hundred and fifty million years man as you know him and as you are will be no more, and after passing all the stages through which I have passed through tonight, the human race will have developed into great brains inhabiting not only your solar system, no doubt, but the systems of other stars!"

"And that's the end of man's evolutionary

road? That is the highest point that he will reach?"

"No, I think he will change still from those great brains into still a higher form," the brain answered—the brain that three hours before had been Pollard!—"and I am going to find out now what that higher form will be. For I think this will be the last mutation of all and that with it I will reach the end of man's evolutionary path, the last and highest form into which he can develop!"

"You will turn on the rays now," the brain's order continued, "and in fifteen minutes we will know what that last and highest form is."

My hand was on the switch but Dutton had staggered to me, was clutching my arm. "Don't, Arthur!" he was exclaiming thickly. "We've seen horrors enough—let's not see the last—get out of here . . ."

"I can't!" I cried. "Oh God, I want to stop but I can't now—I want to see the end myself—I've got to see . . ."

"Turn on the rays!" came the brain's thought-order again.

"The end of the road—the last mutation," I panted. "We've got to see—to see—" I drove the switch home.

The rays flashed down again to hide the great gray brain in the cube. Dutton's eyes were staring fixedly, he was clinging to me.

The minutes passed! Each tick of the watch in my hand was the mighty note of a great tolling bell in my ears.

An inability to move seemed gripping me. The hand of my watch was approaching the minute for which I waited, yet I could not raise my hand toward the switch!

Then as the hand reached the appointed minute I broke from my immobility and in a sheer frenzy of sudden strength pulled open the switch, rushed forward with Dutton to the cube's very edge!

The great gray brain that had been inside it was gone. There lay on the cube's floor instead of it a quite shapeless mass of clear, jelly-like matter. It was quite motionless save for a slight quivering. My shaking hand went forth to touch it, and then it was that I screamed, such a scream as all the

tortures of hell's cruelest fiends could not have wrung from a human throat.

The mass inside the cube was a mass of simple *protoplasm*! This then was the end of man's evolution-road, the highest form to which time would bring him, the last mutation of all! The road of man's evolution was a circular one, returning to its beginning!

From the earth's bosom had risen the first crude organisms. Then sea-creature and land-creature and mammal and ape to man; and from man it would rise in the future through all the forms we had seen that night. There would be super-men, bodiless heads, pure brains; only to be changed by the last mutation of all into the protoplasm from which first it had sprung!

I do not know now exactly what followed. I know that I rushed upon that quivering, quiescent mass, calling Pollard's name madly and shouting things I am glad I cannot remember. I know that Dutton was shouting too, with insane laughter, and that as he struck with lunatic howls and fury about the laboratory the crash of breaking glass and the hiss of escaping gases was in my ears. And then from those mingling acids bright flames were leaping and spreading, sudden fires that alone, I think now, saved my own sanity.

For I can remember dragging the insanelly laughing Dutton from the room, from the house, into the cool darkness of the night. I remember the chill of dew-wet grass against my hands and face as the flames from Pollard's house soared higher. And I remember that as I saw Dutton's crazy laughter by that crimson light, I knew that he would laugh thus until he died.

* * *

So ends my narrative of the end that came to Pollard and Pollard's house. It is, as I said in beginning, a narrative that I only can tell now, for Dutton has never spoken a sane word since. In the institution where he now is, they think his condition the result of shock from the fire, just as Pollard was believed to have perished in that fire. I have never until now told the truth.

But I am telling it now, hoping that it will in some way lessen the horror it has

left with me. For there could be no horror greater than that we saw in Pollard's house that night. I have brooded upon it. With my mind's eye I have followed that tremendous cycle of change, that purposeless, eon-long climb of life up from simple protoplasm through myriads of forms and lives of ceaseless pain and struggle, only to end in simple protoplasm again.

Will that cycle of evolutionary change be repeated over and over again upon this and other worlds, ceaselessly, purposelessly, until there is no more universe for it to go on in? Is this colossal cycle of life's changes

as inevitable and necessary as the cycle that in space makes of the nebulae myriad suns, and of the suns dark-stars, and of the dark-stars colliding with one another nebula again?

Or is this evolutionary cycle we saw a cycle in appearance only, is there some change that we cannot understand, above and beyond it? I do not know which of these possibilities is truth, but I do know that the first of them haunts me. It would haunt the world if the world believed my story. Perhaps I should be thankful as I write to know that I will not be believed.

THE END

The
"Quarterly"
Interplanetary
NUMBER

IT WAS A CHASE THROUGH INNUMERABLE WORLDS

for that unknown Master C-X that led three valiant men to

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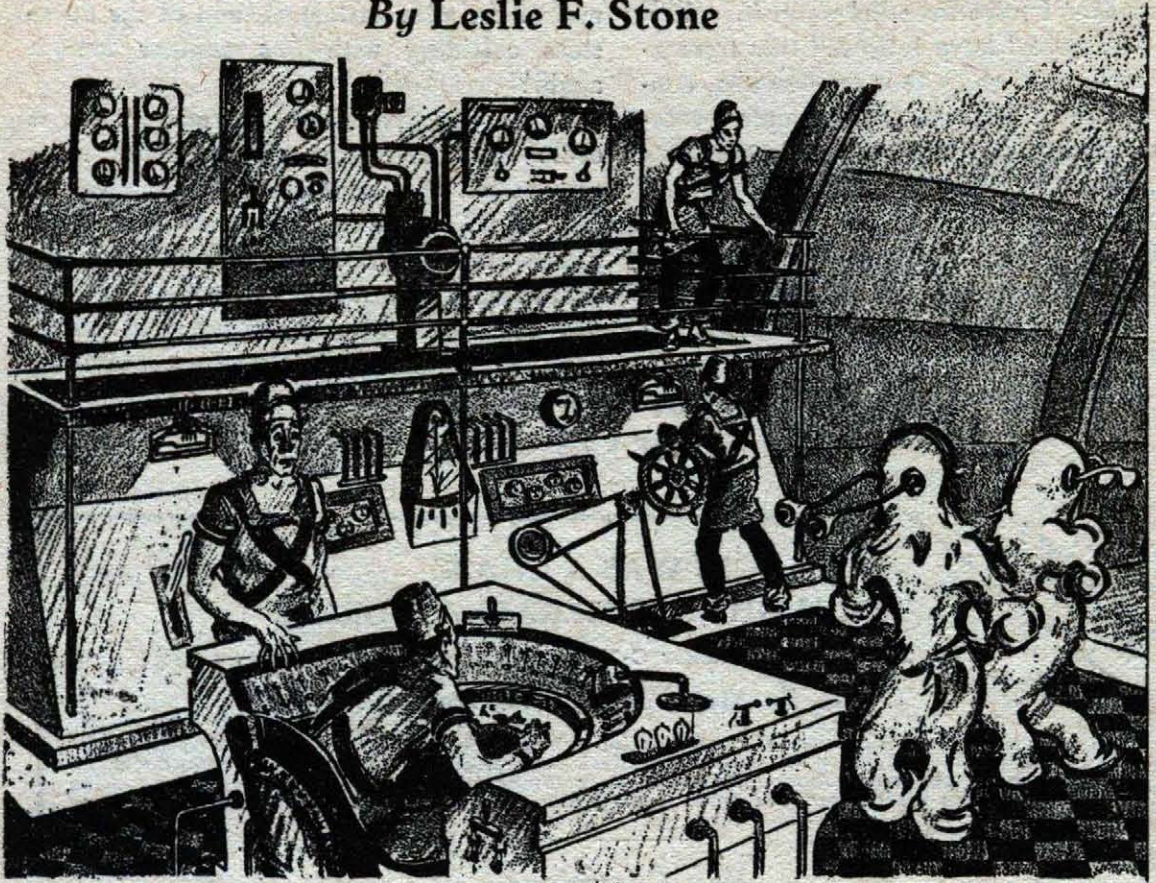
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NOW ON ALL NEWSSTANDS

The Conquest of Gola

By Leslie F. Stone



HOLA, my daughters (sighed the Mat-riarch) it is true indeed, I am the only living one upon Gola who remembers the invasion from Detaxal, I alone of all my generation survive to recall vividly the sights and scenes of that past era. And well it is that you come to me to hear by free communication of mind to mind face to face with each other.

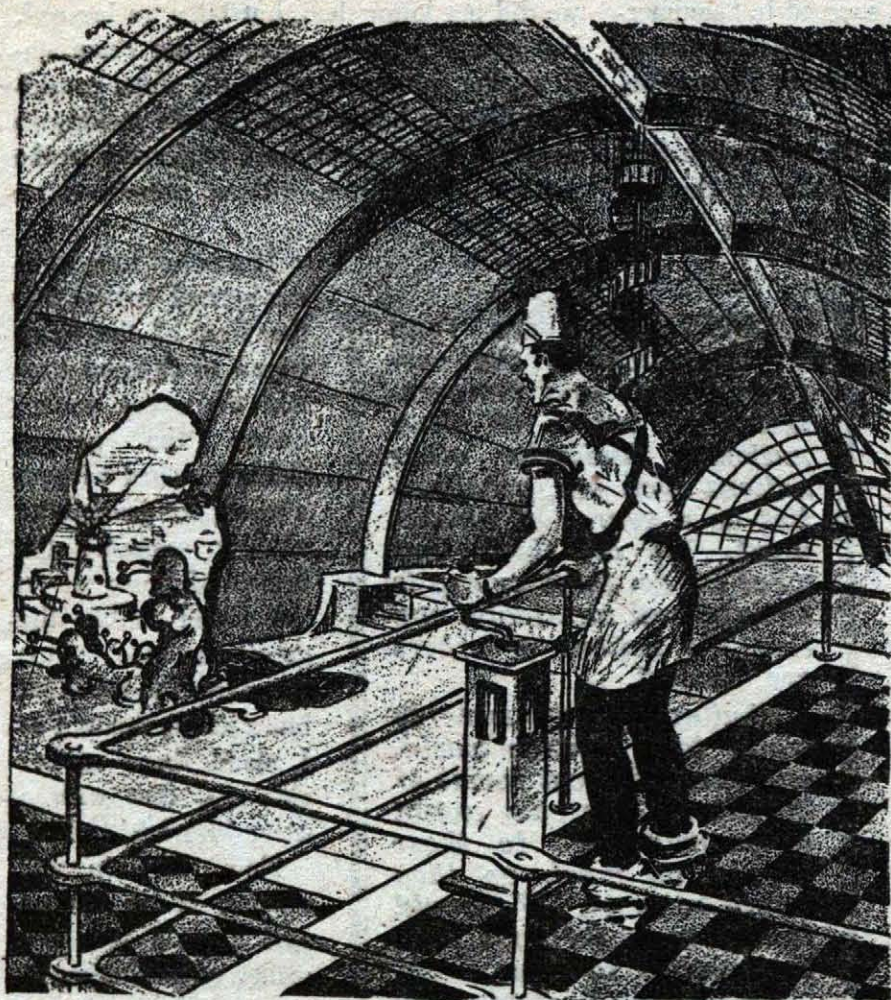
Ah, well I remember the surprise of that hour when through the mists that enshroud our lovely world, there swam the first of the great smooth cylinders of the Detaxalans, fifty *tas** in length, as glistening and silvery as the soil of our land, propelled by the man-things that on Detaxal are supreme

even as we women are supreme on Gola.

In those bygone days, as now, Gola was enwrapped by her cloud mists that keep from us the terrific glare of the great star that glows like a malignant spirit out there in the darkness of the void. Only occasionally when a particularly great storm parts the mist of heaven do we see the wonders of the vast universe, but that does not prevent us, with our marvelous telescopes handed down to us from thousands of generations before us, from learning what lies across the dark seas of the outside.

Therefore we knew of the nine planets that encircle the great star and are subject its rule. And so are we familiar enough with the surfaces of these planets to know why Gola should appear as a haven to their inhabitants who see in our cloud-enclosed mantle a sweet release from the blasting heat

*Since there is no means of translating the Golan measurements of either length or time we can but guess at these things. However, since the Detaxalan ships each carried a thousand men it can be seen that the ships were between five hundred and a thousand feet in length.



How
the
strange
people
of
Gola
repelled
the
barbarians
who came
to
conquer

We were astounded by what we saw. Geble interested herself only in the men, standing rigidly where our beam had caught them.

and blinding glare of the great sun.

So it was not strange at all to us to find that the people of Detaxal, the third planet of the sun, had arrived on our globe with a wish in their hearts to migrate here, and end their days out of reach of the blistering warmth that had come to be their lot on their own world.

Long ago we, too, might have gone on exploring expeditions to other worlds, other universes, but for what? Are we not happy here? We who have attained the greatest of civilizations within the confines of our own silvery world. Powerfully strong with our mighty force rays, we could subjugate all the universe, but why?

Are we not content with life as it is, with

our lovely cities, our homes, our daughters, our gentle consorts? Why spend physical energy in combative strife for something we do not wish, when our mental processes carry us further and beyond the conquest of mere terrestrial exploitation?

On Detaxal it is different, for there the peoples, the ignoble male creatures, breed for physical prowess, leaving the development of their sciences, their philosophies, and the contemplation of the abstract to a chosen few. The greater part of the race fares forth to conquer, to lay waste, to struggle and fight as the animals do over a morsel of worthless territory. Of course we can see why they desired Gola with all its treasures, but we can thank Providence and our-

selves that they did not succeed in "commercializing" us as they have the remainder of the universe with their ignoble Federation.

AH yes, well I recall the hour when first they came, pushing cautiously through the cloud mists, seeking that which lay beneath. We of Gola were unwarned until the two cylinders hung directly above Tola, the greatest city of that time, which still lies in its ruins since that memorial day. But they have paid for it—paid for it well in thousands and in tens of thousands of their men.

We were first apprised of their coming when the alarm from Tola was sent from the great beam station there, advising all to stand in readiness for an emergency. Geble, my mother, was then Queen of all Gola, and I was by her side in Morka, that pleasant seaside resort, where I shall soon travel again to partake of its rejuvenating waters.

With us were four of Geble's consorts, sweet gentle males, that gave Geble much pleasure in these free hours away from the worries of state. But when the word of the strangers' descent over our home

city, Tola, came to us, all else was forgotten. With me at her side, Geble hastened to the beam station and there in the matter transmitter we dispatched our physical beings to the palace at Tola, and the next moment were staring upward at the two strange shapes etched against the clouds.

What the Detaxalan ships were waiting for

we did not know then, but later we learned. Not grasping the meaning of our beam stations, the commandants of the ships considered the city below them entirely lacking in means of defense, and were conferring on the method of taking it without bloodshed on either side.

AMERICANS are fond of ridiculing the customs, habits and temperaments of people of other nations. Similarly other nations pick our peculiarities as a source of amusement. We all think that what we do, think or say is natural and inevitable, and that the actions of others are "queer".

Similarly if we were to travel to a strange world, and find different forms of intelligent life, we would be monstrosities to those people, as much as they would be to us. We would find it more difficult than we imagine to even establish the most elementary form of communication, because our mental processes would have practically nothing in common. That is all assuming that our mission is friendly. But if it is hostile, there is no doubt but that our career on that strange world, would be, as our author shows here, short and sweet. Here is a different and unusual story that you cannot help but enjoy and chuckle over.

It was not long after our arrival in Tola that the first of the ships began to descend toward the great square before the palace. Geble watched without a word, her great mind already scanning the brains of those whom she found within the great machine. She transferred to my mind but a single thought as I stood there at her side and that with a sneer "Barbarians!"

Now the ship was settling in the square and after a few moments of hesitation, a circular doorway appeared at the side and four of the Detaxalans came through the opening. The square was empty but for themselves and their flyer, and we saw them looking about surveying the beautiful buildings on all sides. They seemed to recognize the palace for what it was and in one accord moved in our direction.

Then Geble left the window at which we stood and strode to the doorway opening upon the balcony that faced the square. The Detaxalans halted in their tracks when they saw her slender graceful form appear and removing the strange coverings they wore on their heads they each made a bow.

Again Geble sneered for only the male-

things of our world bow their heads, and so she recognized these visitors for what they were, nothing more than the despicable males of the species! And what creatures they were!

Imagine a short almost flat body set high upon two slender legs, the body tapering in the middle, several times as broad across as it is through the center, with two arms almost as long as the legs attached to the upper part of the torso. A small column-like neck of only a few inches divides the head of oval shape from the body, and in this head only are set the organs of sight, hearing, and scent. Their bodies were like a patch work of a misguided nature.

Yes, strange as it is, my daughters, practically all of the creature's faculties had their base in the small ungainly head, and each organ was perforce pressed into serving for several functions. For instance, the breathing nostrils also served for scenting out odors, nor was this organ able to exclude any disagreeable odors that might come its way, but had to dispense to the brain both pleasant and unpleasant odors at the same time.

Then there was the mouth, set directly beneath the nose, and here again we had an example of one organ doing the work of two for the creature not only used the mouth with which to take in the food for its body, but it also used the mouth to enunciate the excruciatingly ugly sounds of its language forthwith.

Guests From Detaxal

NEVER before have I seen such a poorly organized body, so unlike our own highly developed organisms. How much nicer it is to be able to call forth any organ at will, and dispense with it when its usefulness is over! Instead these poor Detaxalans

had to carry theirs about in physical being all the time so that always was the surface of their bodies entirely marred.

Yet that was not the only part of their ugliness, and proof of the lowliness of their origin, for whereas our fine bodies support themselves by muscular development, these poor creatures were dependent entirely upon a strange structure to keep them in their proper shape.

Imagine if you can a bony skeleton somewhat like the foundations upon which we build our edifices, laying stone and cement over the steel framework. But this skeleton instead is inside a body which the flesh, muscle and skin overlay. Everywhere in their bodies are these cartilaginous structures—hard, heavy, bony structures developed by the chemicals of the being for its use. Even the hands, feet and head of the creatures were underlaid with these bones, ugh, it was terrible when we dissected one of the fellows for study. I shudder to think of it.

Yet again there was still another feature of the Detaxalans that was equally as horrifying as the rest, namely their outer covering. As we viewed them for the first time

out there in the square we discovered that parts of the body, that is the part of the head which they called the face, and the bony hands were entirely naked without any sort of covering, neither fur nor feathers, just the raw, pinkish-brown skin looking as if it had been recently plucked.

Later we found a few specimens that had a type of fur on the lower part of the face, but these were rare. And when they doffed the head coverings which we had first taken for some sort of natural covering, we saw that the top of the head was overlaid with a very fine fuzz of fur several inches long.

We did not know in the beginning that the strange covering on the bodies of the



LESLIE F. STONE

four men, green in color, was not a natural growth, but later discovered that such was the truth, and not only the face and hands were bare of fur, but the entire body, except for a fine sprinkling of hair that was scarcely visible except on the chest, was also bare. No wonder the poor things covered themselves with their awkward clothing. We arrived at the conclusion that their lack of fur had been brought about by the fact that always they had been exposed to the bright rays of the sun so that without the dampness of our own planet the fur had dried up and fallen away from the flesh!

Now thinking it over I suppose that we of Gola presented strange form to the people of Detaxal with our fine circular bodies, rounded at the top, our short beautiful lower limbs with the circular foot pads, and our short round arms and hand pads, flexible and muscularlike rubber.

But how envious they must have been of our beautiful golden coats, our movable eyes, our power to scent, hear and touch with any part of the body, to absorb food and drink through any part of the body most convenient to us at any time. Oh yes, laugh though you may, without a doubt we were also freaks to those freakish Detaxalans. But no matter, let us return to the tale.

On recognizing our visitors for what they were, simple-minded males, Geble was chagrined at them for taking up her time, but they were strangers to our world and we Golans are always courteous. Geble began of course to try to communicate by thought transference, but strangely enough the fellows below did not catch a single thought. Instead, entirely unaware of Geble's overture to friendship, the leader commenced to speak to her in most outlandish manner, contorting the red lips of his mouth into various uncouth shapes and making sounds that fell upon our hearing so unpleasantly that we immediately closed our senses to them. And without a word Geble turned her back upon them, calling for Tanka, her personal secretary.

TANKA was instructed to welcome the Detaxalans while she herself turned to her own chambers to summon a half dozen of

her council. When the council arrived she began to discuss with them the problem of extracting more of the precious tenix from the waters of the great inland lake of Notauch. Nothing whatever was said of the advent of the Detaxalans for Geble had dismissed them from her mind as creatures not worthy of her thought.

In the meantime Tanka had gone forth to meet the four who of course could not converse with her. In accordance with the Queen's orders she led them indoors to the most informal receiving chamber and there had them served with food and drink which by the looks of the remains in the dishes they did not relish at all.

Leading them through the rooms of the lower floor of the palace she made a pretence of showing them everything which they duly surveyed. But they appeared to chafe at the manner in which they were being entertained.

The creatures even made an attempt through the primitive method of conversing by their arms to learn something of what they had seen, but Tanka was as supercilious as her mistress. When she thought they had had enough, she led them to the square and back to the door of their flyer, giving them their dismissal.

But the men were not ready to accept it. Instead they tried to express to Tanka their desire to meet the ruling head of Gola. Although their hand motions were perfectly inane and incomprehensible, Tanka could read what passed through their brains, and understood more fully than they what lay in their minds. She shook her head and motioned that they were to embark in their flyer and be on their way back to their planet.

Again and again the Detaxalans tried to explain what they wished, thinking Tanka did not understand. At last she impressed upon their savage minds that there was nothing for them but to depart, and disgruntled by her treatment they reentered their machine, closed its ponderous door and raised their ship to the level of its sister flyer. Several minutes passed and then, with thanksgiving, we saw them pass over the city.

Told of this, Geble laughed. "To think of

mere man-things daring to attempt to force themselves upon us. What is the universe coming to? What are their women back home considering when they sent them to us. Have they developed too many males and think that we can find use for them?" she wanted to know.

"It is strange indeed," observed Yabo, one of the council members. "What did you find in the minds of these ignoble creatures, O August One?"

"Nothing of particular interest, a very low grade of intelligence, to be sure. There was no need of looking below the surface."

"It must have taken intelligence to build those ships."

"None aboard them did that. I don't question it but that their mothers built the ships for them as a playthings, even as we give toys to our 'little ones,' you know. I recall that the ancients of our world perfected several types of space-flyers many ages ago!"

"Maybe those males do not have 'mothers' but instead they build the ships themselves, maybe they are the stronger sex on their world!" This last was said by Suiki, the fifth consort of Geble, a pretty little male, rather young in years. No one had noticed his coming into the chamber, but now everyone showed their surprise at his words.

"Impossible!" ejaculated Yabo.

Geble however laughed at the little chap's expression. "Suiki is a profound thinker," she observed, still laughing, and she drew him to her gently hugging him.

A Nice Business Deal

AND with that the subject of the men from Detaxal was closed. It was reopened, however, several hours later when it was learned that instead of leaving Gola altogether the ships were seen one after another by the various cities of the planet as they circumnavigated it.

It was rather annoying, for everywhere the cities' routines were broken up as the people dropped their work and studies to gaze at the cylinders. Too, it was upsetting the morale of the males, for on learning

that the two ships contained only creatures of their own sex they were becoming envious, wishing for the same type of playthings for themselves.

Shut in, as they are, unable to grasp the profundities of our science and thought, the gentle, fun-loving males were always glad for a new diversion, and this new method developed by the Detaxalans had intrigued them.

It was then that Geble decided it high time to take matters into her own hands. Not knowing where the two ships were at the moment it was not difficult with the object-finder beam to discover their whereabouts, and then with the attractor to draw them to Tola magnetically. An *ous* later we had the pleasure of seeing the two ships rushing toward our city. When they arrived about it, power brought them down to the square again.

Again Tanka was sent out, and directed the commanders of the two ships to follow her in to the Queen. Knowing the futility of attempting to converse with them without mechanical aid, Geble caused to be brought her three of the ancient mechanical thought transformers that are only museum pieces to us but still workable. The two men were directed to place them on their heads while she donned the third. When this was done she ordered the creatures to depart immediately from Gola, telling them that she was tired of their play.

Watching the faces of the two I saw them frowning and shaking their heads. Of course I could read their thoughts as well as Geble without need of the transformers, since it was only for their benefit that these were used, so I heard the whole conversation, though I need only to give you the gist of it.

"We have no wish to leave your world as yet," the two had argued.

"You are disrupting the routine of our lives here," Geble told them, "and now that you've seen all that you can there is no need for you to stay longer. I insist that you leave immediately."

I saw one of the men smile, and thereupon he was the one who did all the talking (I

say "talking" for this he was actually doing, mouthing each one of his words although we understood his thoughts as they formed in his queer brain, so different from ours).

"Listen here," he laughed, "I don't get the hang of you people at all. We came to Gola (he used some outlandish name of his own, but I use our name of course) with the express purpose of exploration and exploitation. We come as friends. Already we are in alliance with Damin (again the name for the fourth planet of our system was different, but I give the correct appellation), established commerce and trade, and now we are ready to offer you the chance to join our federation peaceably.

"What we have seen of this world is very favorable, there are good prospects for business here. There is no reason why you people as those of Damin and Detaxal can not enter into a nice business arrangement congenially. You have far more here to offer tourists, more than Damin. Why, except for your clouds this would be an ideal paradise for every man, woman and child on Detaxal and Damin to visit, and of course with our new cloud dispensers we could clear your atmosphere for you in short order and keep it that way. Why you'll make millions in the first year of your trade.

"Come now, allow us to discuss this with your ruler—king or whatever you call him. Women are all right in their place, but it takes the men to see the profit of a thing like this—er—you are a woman aren't you?"

THE first of his long speech, of course, was so much gibberish to us, with his prate of business arrangements, commerce and trade, tourists, profits, cloud dispensers and what not, but it was the last part of what he said that took my breath away, and you can imagine how it affected Geble. I could see straightway that she was intensely angered, and good reason too. By the looks of the silly fellow's face I could guess that he was getting the full purport of her thoughts. He began to shuffle his funny feet and a foolish grin pervaded his face.

"Sorry," he said, "if I insulted you—I didn't intend that, but I believed that man holds the same place here as he does on

Detaxal and Damin, but I suppose it is just as possible for woman to be the ruling factor of a world as man is elsewhere."

That speech naturally made Geble more irate, and tearing off her thought transformer she left the room without another word. In a moment, however, Yabo appeared wearing the transformer in her place. Yabo had none of the beauty of my mother, for whereas Geble was slender and as straight as a rod Yabo was obese, and her fat body overflowed until she looked like a large dumpy bundle of *yat* held together in her furry skin. She had very little dignity as she waddled toward the Detaxalans, but there was determination in her whole manner and without preliminaries she began to scold the two as though they were her own consorts.

"There has been enough of this, my fine young men," she shot at them. "You've had your fun, and now it is time for you to return to your mothers and consorts. Shame on you for making up such miserable tales about yourselves. I have a good mind to take you home with me for a couple of days, and I'd put you in your places quick enough. The idea of men acting like you are!"

For a moment I thought the Detaxalans were going to cry by the faces they made, but instead they broke into laughter, such heathenish sounds as had never before been heard on Gola, and I listened in wonder instead of excluding it from my hearing, but the fellows sobered quickly enough at that, and the spokesman addressed the shocked Yabo.

"I see," said he, "it's impossible for your people and mine to arrive at an understanding peaceably. I'm sorry that you take us for children out on a spree, that you are accustomed to such a low type of men as is evidently your lot here.

"I have given you your chance to accept our terms without force, but since you refuse, under the orders of the Federation I will have to take you forcibly, for we are determined that Gola become one of us, if you like it or not. Then you will learn that we are not the children you believe us to be.

"You may go to your supercilious Queen

now and advise her that we give you exactly ten hours in which to evacuate this city, for precisely on the hour we will lay this city in ruins. And if that does not suffice you we will do the same with every other city on the planet! Remember ten hours!"

And with that he took the mechanical thought transformer from his head and tossed it on the table. His companion did the same and the two of them strode out of the room and to their flyers which arose several thousand feet above Tola and remained there.

The Triumph of Gola

HURRYING into Geble, Yabo told her what the Detaxalan had said. Geble was reclining on her couch and did not bother to raise herself.

"Childish prattle," she conceded and withdrew her red eyes on their movable stems into their pockets, paying no more heed to the threats of the men from Detaxal.

I, however, could not be as calm as my mother, and I was fearful that it was not childish prattle after all. Not knowing how long ten hours might be I did not wait, but crept up to the palace's beam station and set its dials so that the entire building and as much of the surrounding territory it could cover were protected in the force zone.

Alas that the same beam was not greater. But it had not been put there for defense, only for matter transference and whatever other peacetime methods we used. It was the means of proving just the same that it was also a very good defensive instrument, for just two *ous* later the hovering ships above let loose their powers of destruction, heavy explosives that entirely demolished all of Tola and its millions of people and only the palace royal of all that beauty was left standing!

Awakened from her nap by the terrific detonation, Geble came hurriedly to a window to view the ruin, and she was wild with grief at what she saw. Geble, however, saw that there was urgent need for action. She knew without my telling her what I had done to protect the palace. And though she showed no sign of appreciation, I knew that

I had won a greater place in her regard than any other of her many daughters and would henceforth be her favorite as well as her successor as the case turned out.

Now, with me behind her, she hurried to the beam station and in a twinkling we were both in Tubia, the second greatest city of that time. Nor were we to be caught napping again, for Geble ordered all beam stations to throw out their zone forces while she herself manipulated one of Tubia's greatest power beams, attuning it to the emanations of the two Detaxalan flyers. In less than a *ous* the two ships were seen through the mists heading for Tubia. For a moment I grew fearful, but on realizing that they were after all in our grip, and the attractors held every living thing powerless against movement, I grew calm and watched them come over the city and the beam pull them to the ground.

With the beam still upon them, they lay supine on the ground without motion. Descending to the square Geble called for Ray C, and when the machine arrived she herself directed the cutting of the hole in the side of the flyer and was the first to enter it with me immediately behind, as usual.

We were both astounded by what we saw of the great array of machinery within. But a glance told Geble all she wanted to know of their principles. She interested herself only in the men standing rigidly in whatever position our beam had caught them. Only the eyes of the creatures expressed their fright, poor things, unable to move so much as a hair while we moved among them untouched by the power of the beam because of the strength of our own minds.

They could have fought against it if they had known how, but their simple minds were too weak for such exercise.

Now glancing about among the stiff forms around us, of which there were one thousand, Geble picked out those of the males she desired for observation, choosing those she judged to be their finest specimens, those with much hair on their faces and having more girth than the others. These she ordered removed by several workers who followed us, and then we emerged again to the outdoors.

Using hand beam torches the picked specimens were kept immobile after they were out of reach of the greater beam and were borne into the laboratory of the building Geble had converted into her new palace. Geble and I followed, and she gave the order for the complete annihilation of the two powerless ships.

THUS ended the first foray of the people of Detaxal. And for the next two *tels* there was peace upon our globe again. In the laboratory the thirty who had been rescued from their ships were given thorough examinations both physically and mentally and we learned all there was to know about them. Hearing of the destruction of their ships, most of the creatures had become frightened and were quite docile in our hands. Those that were unruly were used in the dissecting room for the advancement of Golan knowledge.

After a complete study of them which yielded little we lost interest in them scientifically. Geble, however found some pleasure in having the poor creatures around her and kept three of them in her own chambers so she could delve into their brains as she pleased. The others she doled out to her favorites as she saw fit.

One she gave to me to act as a slave or in what capacity I desired him, but my interest in him soon waned, especially since I had now come of age and was allowed to have two consorts of my own, and go about the business of bringing my daughters into the world.

My slave I called Jon and gave him complete freedom of my house. If only we had foreseen what was coming we would have annihilated every one of them immediately! It did please me later to find that Jon was learning our language and finding a place in my household, making friends with my two shut-in consorts. But as I have said I paid little attention to him.

So life went on smoothly with scarcely a change after the destruction of the ships of Detaxal. But that did not mean we were unprepared for more. Geble reasoned that there would be more ships forthcoming when the Detaxalans found that their first two did

not return. So, although it was sometimes inconvenient, the zones of force were kept upon our cities.

And Geble was right, for the day came when dozens of flyers descended upon Gola from Detaxal. But this time the zones of force did not hold them since the zones were not in operation!

And we were unwarned, for when they descended upon us, our world was sleeping, confident that our zones were our protection. The first indication that I had of trouble brewing was when awakening I found the ugly form of Jon bending over me. Surprised, for it was not his habit to arouse me, I started up only to find his arms about me, embracing me. And how strong he was! For the moment a new emotion swept me, for the first time I knew the pleasure to be had in the arms of a strong man, but that emotion was short lived for I saw in the blue eyes of my slave that he had recognized the look in my eyes for what it was, and for the moment he was tender.

Later I was to grow angry when I thought of that expression of his, for his eyes filled with pity, pity for me! But pity did not stay, instead he grinned and the next instant he was binding me down to my couch with strong rope. Geble, I learned later, had been treated as I, as were the members of the council and every other woman in Gola!

THAT was what came of allowing our men to meet on common ground with the creatures from Detaxal, for a weak mind is open to seeds of rebellion and the Detaxalans had sown it well, promising dominance to the lesser creatures of Gola.

That, however, was only part of the plot on the part of the Detaxalans. They were determined not only to revenge those we had murdered, but also to gain mastery of our planet. Unnoticed by us they had constructed a machine which transmits sound as we transmit thought and by its means had communicated with their own world, advising them of the very hour to strike when all of Gola was slumbering. It was a masterful stroke, only they did not know the power of the mind of Gola—so much more ancient than theirs.

Lying there bound on my couch I was able to see out the window and trembling with terror I watched a half dozen Detaxalan flyers descend into Tubia, guessing that the same was happening in our other cities. I was truly frightened, for I did not have the brain of a Geble. I was young yet, and in fear I watched the hordes march out of their machines, saw the thousands of our men join them.

Free from restraint, the shut-ins were having their holiday and how they cavorted out in the open, most the time getting in the way of the freakish Detaxalans who were certainly taking over our city.

A half *ous* passed while I lay there watching, waiting in fear at what the Detaxalans planned to do with us. I remembered the pleasant, happy life we had led up to the present and trembled over what the future might be when the Detaxalans had infested us with commerce and trade, business propositions, tourists and all of their evil practices. It was then that I received the message from Geble, clear and definite, just as all the women of the globe received it, and hope returned to my heart.

There began that titanic struggle, the fight for supremacy, the fight that won us victory over the simple-minded weaklings below who had presumptuously dared to conquer us. The first indications that the power of our combined mental concentration at Geble's orders was taking effect was when we saw the first of our males halt in their wild dance of freedom. They tried to shake us off, but we knew we could bring them back to us.

At first the Detaxalans paid them no heed. They knew not what was happening until there came the wholesale retreat of the Golan men back to the buildings, back to the chambers from which they had escaped. Then grasping something of what was happening the already defeated invaders sought to retain their hold on our little people. Our erstwhile captives sought to hold them with oratorical gestures, but of course we won. We saw our creatures return to us and unbind us.

Only the Detaxalans did not guess the sig-

nificance of that, did not realize that inasmuch as we had conquered our own men, we could conquer them also. As they went about their work of making our city their own, establishing already their autocratic bureaus wherever they pleased, we began to concentrate upon them, hypnotizing them to the flyers that had disgorged them.

And soon they began to feel of our power, the weakest ones first, feeling the mental bewilderment creeping upon them. Their leaders, stronger in mind, knew nothing of this at first, but soon our terrible combined mental power was forced upon them also and they realized that their men were deserting them, crawling back to their ships! The leaders began to exhort them into new action, driving them physically. But our power gained on them and now we began to concentrate upon the leaders themselves. They were strong of will and they defied us, fought us, mind against mind, but of course it was useless. Their minds were not suited to the test they put themselves too, and after almost three *ous* of struggle, we of Gola were able to see victory ahead.

At last the leaders succumbed. Not a single Detaxalan was abroad in the avenues. They were within their flyers, held there by our combined wills, unable to act for themselves. It was then as easy for us to switch the zones of force upon them, subjugate them more securely and with the annihilator beam to disintegrate completely every ship and man into nothingness! Thousands upon thousands died that day and Gola was indeed revenged.

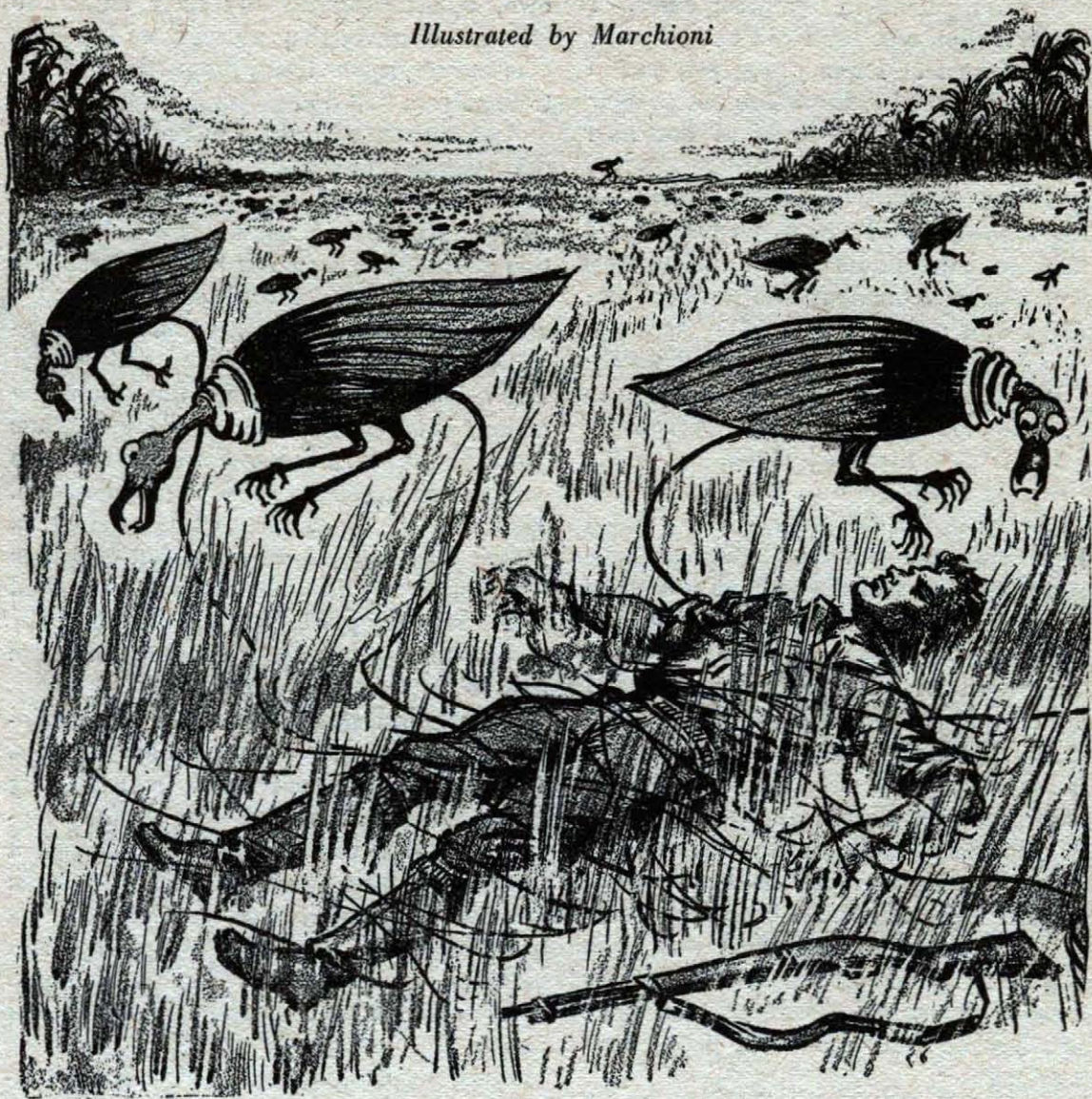
Thus, my daughters, ended the second invasion of Gola.

Oh yes, more came from their planet to discover what had happened to their ships and their men, but we of Gola no longer hesitated, and they no sooner appeared beneath the mists than they too were annihilated until at last Detaxal gave up the thought of conquering our cloud-laden world. Perhaps in the future they will attempt it again, but we are always in readiness for them now, and our men—well they are still the same ineffectual weaklings, my daughters . . .

Great Green Things

By Thomas H. Knight

Illustrated by Marchioni



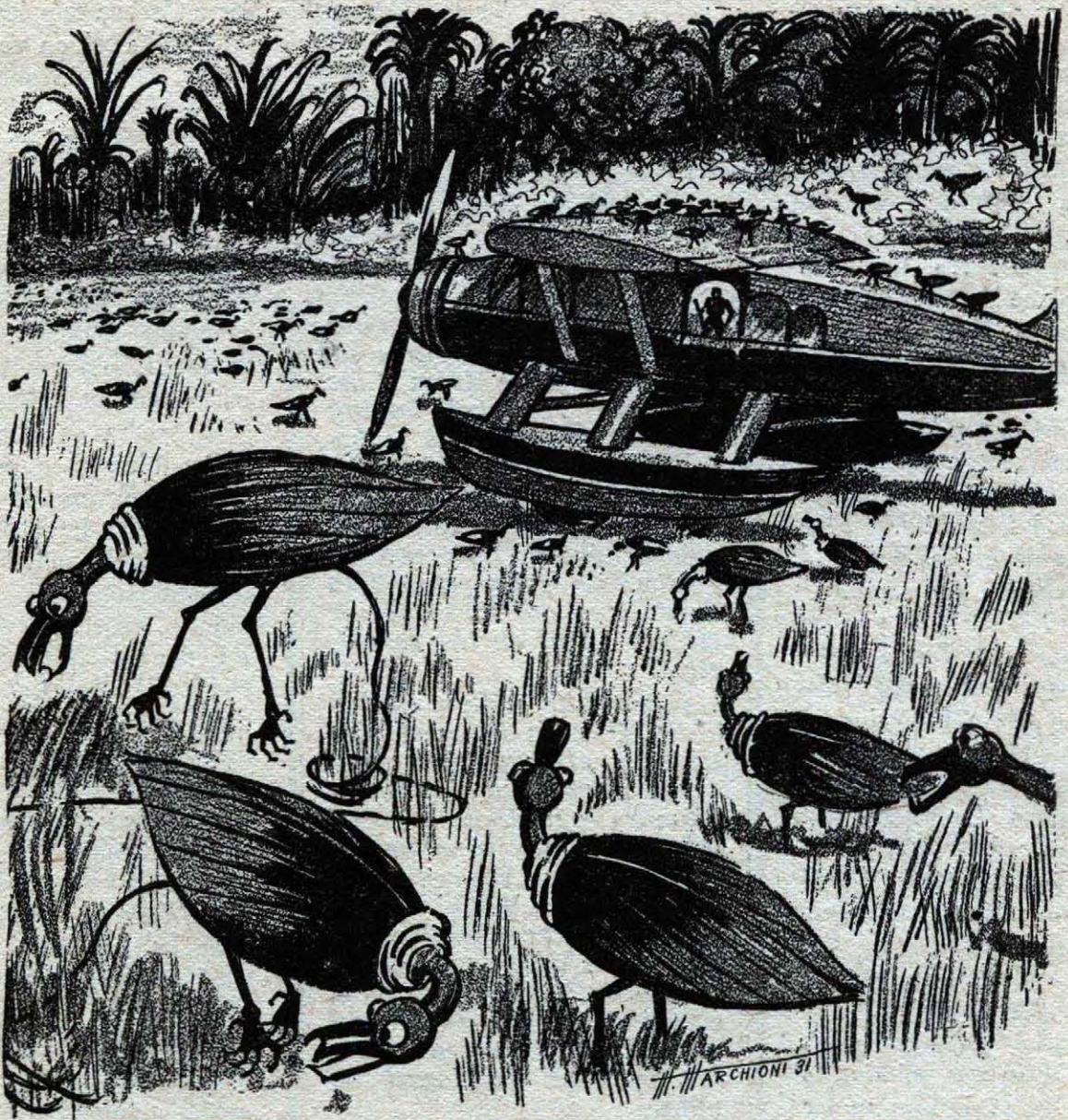
MAC RANDALL lounged in a chair in his room, his feet upon the table, his long slim pipe emitting vast clouds of smoke. Over in the window upon the wide sill sat his friend, Edwin Ray, idly and somewhat crossly tapping his fingers upon the window screen as he gazed out over San Francisco's bay.

"So you don't believe, Mac," challenged Edwin across the room, "that there are insects or bugs in the world as big as a small

man? That hese ugly, ferocious things run around on two legs and stand up the size of a pigmy?"

Mac hesitated a moment before he answered, then he said: "Ed, let's talk about something else. I hate to see you getting this way, old timer. You musn't let your love of entomology go to your head. Don't let it actually get you 'bugs' . . ."

"I wish I could show you," interrupted Edwin. "I wish—I wish . . ." He



Across his body, backward and forward a number of the things hopped. His body was becoming covered by a network of yellow strands.

paused and, looking from the window again, lapsed into silence, thinking.

The two men had been close friends ever since the war, and now Mac was worried about his pal. This was not the first time Edwin had spoken so foolishly of insects, enormous only in his own mind, and Mac did not like it. He arose from his chair and took a turn about the room.

Tall, straight and broad, Mac had, during those days of hate in 1940, piloted a fighting

Kling across the air lanes of Eurasia and had come home with a double handful of medals to his credit. And while he had been hearing the "zing!" of bullets through his wings above, Edwin had been doing his bit—a good, stout "bit"—down below in the mud.

Since the war Mac had indulged his love for aviation in one form or another, fortunately having the necessary means; while Edwin had gone in for science—chiefly

bugs. Bugs! Mac didn't like it. Edwin had bugs on the brain!

"Mac," began Edwin again, strategically taking up without his friend's realization the subject of bugs as large as little men, "tell me about your new plane."

Mac took the bait at once. If "bugs" were Edwin's weakness, certainly the air was Mac's.

"Ed, it's the best plane I've ever flown," he announced wholeheartedly. "I'm rather nutty about it. All metal, you know. Only one motor, but a beautiful thing of power and flexibility. Fine large cabin. Boy! I'd take her anywhere."

"What have you on your schedule for the next week or so?" asked Edwin, following up his strategy and clearing the way for the plans he had just formed.

"Not a thing. Would you like a trip somewhere?"

"Yes. Got a map?"

"Scads of 'em."

In a few moments Edwin was pointing to a spot in the upper portion of Brazil just a little above the Rio Negro. "I've got it plotted out to a dot on a big map I have at home, Mac," he explained, "but speaking roughly, how would you plan to fly from Frisco to right here where my finger rests?"

"Easy. Hop down along the coast and make our last filling at Panama Field," answered Mac, measuring with a practiced eye. "My plane is equipped with land gear and pontoon combination. I'd make the Rio Negro the next leg—it looks about eight

hundred miles)—and stay there overnight. Then I'd cross this Sierra Parima mountain range here next morning and land on your spot—that is if a guy *can* land—in about two hours."

"Mac, if you'll take me there I believe I can prove to you that there *are* insects as large as small men!"

EXPLORERS returning from remote parts of the globe have from time to time reported seeing strange and almost unbelievable forms of life. Usually the stories of these men are met with polite yawns from conservative authorities, who remark to themselves on the effect of tropical heat on the senses, etc.

It is quite within probability that in isolated sections, a struggle for existence might have gone on among the various forms of life, and one type might have emerged supreme and triumphant. With undisputed sway over its domain, that type may have developed intelligence and to a certain extent a control over its environment similar to that developed by man.

You are invited by our author to believe that this might occur, and in a manner such as he relates. He tells the story, it is thrilling. To believe it or not is your privilege.

MAC was silent. He was disappointed. He had not thought Edwin was still on the subject of bugs. "Ed, you're an idiot! This thing has got you," he exclaimed when at last he spoke. Then, with another thought appealing to him he went on, "but I'd like that flight all right, and it'll get your mind straight again maybe. Anyway, it would do us both good. Let's make our plans."

"You make your plans about the plane, Mac," agreed Edwin, "but let me tell you what you *must* take. Take along a good high-powered rifle, also a pistol on each hip; I'm going to. You don't know what we might find down there. Because I know of some of the things those jungles do hold, it makes me wonder what else lurks in the forests. You might say

these swamps and jungles are almost completely unexplored. No telling what we may run up on. Not just in insects but in animals. Mac, did you know that during the Coal Age dragon-flies had wings two feet across?"

"No. I didn't. And my ignorance makes no difference anyway. Your idea is all bosh.

But I'll take a rifle and a pair of gats simply because I like to have those things around. Would you also recommend a machine gun and a poison gas outfit—or a tank?"

Edwin paid no heed to Mac's friendly sarcasm, but in just a little while both young men would have given everything they possessed for those same impossible articles of war.

It was not many days before Mac's sturdy plane lightly lifted from the field at Panama and presented came over the dense jungles of South America where, beneath them, they saw Mother Earth spread out like a thick green carpet. Here and there a river, winding and treacherous, broke through the green blanket to be seen for a moment and then lost.

Tall, bare peaks reached for the skies, while deep chasms with sparkling falls of far tumbling water showed bright beneath them. Then they planed over the black Rio Negro, that thick-looking river of tar. Mac adjusted the pontoons into position now instead of his wheels and, aided in his judgment of distance by a ripple on the dark surface, put her smoothly down.

They rose with the sun next morning and, leaving the river, crossed the Sierra Parima range, flying east and north. Edwin had his map across his knees and in a little while he said, "Set her down anywhere you can now, Mac. These are the forests we were in when I came with Doc Winters and his party. Here's where they are."

"Put her down?" mocked Mac. "Where?" On which particular tree-top do you suggest we drape our . . . ? By Jimminy! there's a lake, though, at that. Let's swing around and see if we can get in on it."

He dipped for the lake, a circular green spot in the dense jungles. Then as they came in low again for the landing, Edwin

cried excitedly, "Take her away! That's not water. Holy smoke, Mac, that's grass!"

"Whew!" whistled Mac as he gave the engine the gun. "That was a close one! I had the wheels drawn up, the pontoons down. Wouldn't this particular part of South America have made a messy mess of us?"

They swung over the green circle below them the second time. Then, skilfully handling the big ship into the restricted space, Mac landed, his plane taxiing through the thick grass and coming to a stop on the edge of the circle almost against the trees of the forest.

"We're here, Ed," he announced. "We're in. Pretty good! I believe we can get off when it comes to it. That'll be good, too. If we can't, we'll have to walk out and leave the ship behind. You know what that'll be. Come on, hop out, and let's swing her tail around all ready for a getaway."

They jumped from the cabin and swung the plane around. Then for a little while they investigated the opening in the forest where they had settled. They went back into the plane, and after some food and thermos bottle refreshments—(for lack

of anything better to do)—fell to talking of their trip. It was still early morning.

"We'll stick around a bit," said Mac a little later, "but we'll pull out of here in plenty of time to make the river before nightfall. I don't like your jungle, Ed. It's creepy. I don't see a moving, living thing. But I bet that black tangle of trees holds everything from snakes to lizards."

"I don't know what family these bugs belong to," said Edwin in a low voice, enlarging upon Mac's train of thought. "That's why I should like to take a specimen back with us. I have an idea they are a species of giant *Pulchriphyllum bioculatum*, more commonly known as 'Walking Leaf'. You



THOMAS H. KNIGHT

know, naturalists claim that years ago some vertebrates kept growing larger and larger in their fight for existence and their protection from each other until they finally disappeared. Perhaps these insects down here are doing the same thing."

Besieged!

MAC said nothing. There were, of course, no such giant insects. On this one thing poor old Edwin was off and Mac, his friend, was sorry about it. They sat silent for a long while, Mac wondering how long before it would be safe to suggest pulling away. But they were not to go yet!

Everything was as silent as death. Not the faintest quiver of a breeze stirred the dark wall of foliage about them. Not a whisper or sign of any form of life, despite their silence, had they seen. The sun beamed upon them and their ship. It was hot with a close-pressing heat. And yet Mac experienced a chill of dislike, mixed with not a little fear, for the clammy, tomb-like spot.

Suddenly Mac felt Edwin's warning hand upon his knee. "Don't give a sign, Mac!" he whispered. "Turn your head slowly. Look! Over near the trees on the right!"

Mac looked. "Don't see a thing," he muttered from the corner of his mouth.

"That big leaf!"

"Yes. I see that. Looks like a big elephant-ear plant or whatever we call 'em back home," he agreed. "But that's nothing."

"You bet it is!" insisted Ed. "It wasn't there two minutes ago!"

Mac looked again. The plant, with its big leaf divided down the middle, looked to him a great deal like a large bird. Perhaps a heron. The two halves of the leaf looked like the two wings covering the body. The stalk of the plant, protruding below, even looked like legs. But there was no neck, no head. The plant was absolutely motionless. Certainly it was nothing to get excited about.

"Aw rats!" exploded Mac in disgust.

"Watch it!" commanded Edwin. "I've seen them before. I know!"

So Mac watched it for a while longer,

then his interest and his gaze wandered. It was time to be going. Edwin was apparently losing his mind. Mac was just about ready to say he was pulling out when again his pal's hand fell upon his knee.

"Look!" he whispered in a hiss. Mac obeyed. And as he did his blood ran cold; prickles of surprise and horror ran up his spine. The hair on his head tingled his scalp.

The leaf had moved! It was standing upright upon two squat legs. From somewhere in its hideous green, slimy body it had thrust out an even more hideous head. A head upon which a face was formed of great hanging beak and bulbous, staring eyes!

The creature stood gazing at the plane that had, like a still more enormous insect, invaded its domain. Then, while the two men watched spellbound, it slowly advanced toward them.

"Ed," whispered Mac quietly reaching for his sporting Army Springfield, "tell me something about 'em. I'm sorry I doubted you. I apologize absolutely. They're worse than you said they were. They're devilish! Ugh! Where should a fellow shoot? In the face or through the body? Have they a heart?"

"Yes. Insects have what passes for a heart," whispered Edwin, thrilled almost into inability to act at sight of this great specimen. "That one's heart most likely lies, as he now faces us, near the surface of his back. But a bullet from your rifle would go through fifty of them. Don't shoot, though. Let's look him over."

"You'll have your chance before *this* party's over," grimly answered Mac. "They're coming out the forest by the dozen now."

"My gosh, Mac, by the hundreds! Maybe we'd better start up and get away. Look! There's a horde of them. Suppose they should swarm all over us like ants overwhelm a beetle!"

Just at that moment a multi-colored parrot—perhaps alarmed by the movement of the green creatures—broke from the trees and flew toward the plane. Instantly one of the horde sprang a full twenty feet into the air. Its long arms and talon-like claws

clutched the bird with lightning-like voracity, and even as the green beast fell back to the grass it had thrust the parrot into its loose-hanging mouth. One gulp and it was gone, feathers and legs and tail!

Mac reached for his starter. But before he could turn the engine over, five or six of the things had hopped up onto the wing of the plane.

"Thank your stars, Ed," he said as he turned off his switch again, "that we're all metal. I'm afraid to start the propeller now. It's metal, of course, but I don't want to risk those devils flying into it. We'll just have to wait until they've looked us over and passed on."

They could hear the things up on their wing, could hear the clamping of those horrid mouths as they attempted to bite through the aluminum alloy metal.

"How about our tires?" reminded Ed.

"Gosh, yes!" agreed Mac, at once admitting his plane's weakness. "You lean out your door and shoot 'em away from your tire. I'll keep 'em off my . . ."

"Crack!" Mac's rifle cut short his words as his first bullet through the face of one of the things saved his tire for the moment.

EDWIN'S rifle was a highly prized thirty-eight Winchester, and his first bullet, clean through the body, proved as effective as Mac's head shot.

After that they fired as rapidly as they could operate their weapons. A moment or two ago they had had no warning of danger. Mac had even not believed that such creatures existed. But now, with the advent of their hideous numbers, they realized that swarming death assailed them. Almost every shot counted, but still the horde marched on. They swarmed upon the wing and upon the body of the plane until Mac became alarmed as to whether or not the wing could stand the strain. He opened a door in the roof of the cabin, and, firing rapidly, dropped a number of the green bodies from the wing. Then just in time he lowered his head and slammed shut the door. A dozen of the beasts had pounced at him!

"Ed," he said, openly admitting their plight, "we're in a bad way. They've got

brains—those slimy devils!—and they use 'em. They jumped at me."

Just as he spoke the disaster they feared overtook them, for there came from their landing gear two separate explosions. The men looked at each other, their faces pale.

"Gone! Now we're on our rims. Can't get out on flats through this thick grass," Mac said simply.

"Damn them!" cursed Edwin through clenched teeth, leaning far from his cabin door and pumping his Winchester at the great insects still gnawing at the tire on his side. His anger was his undoing. The giant things flung themselves upon his head and shoulders from above, and, as he toppled out the cabin, more of the beasts seized him from beneath the plane. In an instant Edwin was covered with them.

Mac shut his door, then sprang out after his friend. He drew the two pistols and, following Edwin closely, shot the things away from him so that he was able to regain his feet. Edwin fought bravely, swinging his rifle with telling effect. Mac felt them swarming upon his own shoulders until he was forced to shoot himself free of the devilish things.

Then Edwin was down again, driven to earth by the ferocious insects that pounced and hopped from every direction. Mac fought his way back to the plane, his empty pistols and his fists sinking into the soft faces before him.

In the cabin again he feverishly reloaded and fired, pouring shot after shot into the green bodies dragging Edwin away. But he could not check that mass of clinging, swarming devils that, before his horrified eyes, dragged off his friend. When his rifle stretched out a giant insect, three pounced in to take its place.

Mac waited then, his Springfield ready, to do for his pal if opportunity offered, the only thing left. He was determined, with a bullet, to save Edwin from the torture of their terrible mouths. But not until the great green things had their victim some fifty yards in front of the plane did Mac obtain a glimpse of him, and then, because of the movements of the things, Mac held that merciful bullet.

Edwin was flung flat on his back on the grass, and across his body, backward and forward, a number of the filthy things hopped and strode. At first Mac could not understand. Not until he saw that Edwin's body was becoming covered this way and that by a network of yellowish strands did he realize that the green things were weaving a net across their captive, securely tying him down to the long grass. Then they left him. Left him, decided Mac, until they were more ready for their horrible feast than they were just at present.

He groaned aloud in his plight. What could he do? He cursed his utter helplessness. What could he try? Even if he had box after box of ammunition for the Springfield he could not hope to shoot away the thousand brutes still surrounding him. But his ammunition was running short. There were still a lot of Edwin's cartridges, but the rifle Edwin so treasured was fifty feet from the plane. And fifty feet . . .

Strategy!

WHAT *could* he do? He racked his brain, looking around the cabin of the plane for inspiration. He had rope. How could he use that? He thought of the things he might be able to use—if he only had them! A machine gun. Hand grenades. Dynamite. Poison gas. Oh, what was the use! All he could do was save one bullet for Edwin and then, after he had proved his engine's inability to get him out, to starve to death in his cabin, or to fling himself—insane—into their waiting mouths.

"I wonder," he said aloud, "how tough that web is across Ed? I've got to find out if I can, 'cause I'm going to try to cut him loose if it's the last thing I do."

He took his rope and made a running noose in the end. Watching his chance he dropped it about one of the big insects and dragged it to him.

He lifted the enormous bug into the cabin, fighting down its clawing talons, avoiding its snapping mouth, and securely wrapping it in his rope. Trussed and bound he flung it on the floor of the cabin. And there the creature, helpless and fear-filled, exuded

from its body the ropish material with which Edwin was bound.

Mac watched it harden. Then he tested it. It was tough and strong to the pull, but when he took a long knife he found it severed like so much dough.

If he could reach Edwin he would soon cut him loose. But how could he get there? He would not get twenty feet toward him before they would drag him down; then both of them would be helpless, bound victims, lying waiting for the green things to come to the feast. To help Edwin, to out-guess the devils, seemed as far away as ever.

But after a while, desperate, Mac went into action. Part of their supplies had been carried in a good-sized box. Mac dumped these. Then he filled the box full of waste, stuffing his sweater in for good measure. Then with wire he encircled the box so that the contents could not fall out. He tied a light cord into the waste, coiling it on top of the sweater. From a gasoline supply tank he ran in perhaps three gallons of the fuel and then, working quickly, he put his plan into action.

He saw there were no green things dangerously close at the moment; so, stepping from his plane and holding the end of the light rope coiled in the box in his left hand, he ran quickly as far as he dared beyond his wing-tip and hurled his box toward the heavier mass of the creatures. Then he sprang to his plane again.

He heard the sharp buzz of their wings as they leaped at him; felt them alight upon him. The long knife from his belt sunk deeply and easily into the filthy, clinging beasts. He fought them off, regained his plane. Then at once he touched a match to the rope he held in his hand.

He saw the flame rush along the saturated rope like the spark follows a train of powder; saw his box break into swirling flame greater than even he expected.

Pandemonium broke loose then. Into that great flame the green things leaped to be burned to a crisp on the instant as though their oily bodies, too, were gasoline saturated. The air was full of a roar as of a thousand motors as the infuriated insects,

scorched and maddened, flung themselves to the flames like so many foolish moths.

Mac dropped from the cabin, raced under his wing to Edwin. Some of them barred his path but he shot and cut them down. They pounced upon him but his knife took its toll.

Reaching Edwin he slashed the soft rope woven about him in two long cuts, then with one movement flung him to his shoulders. The few green things that were not still flinging themselves to the flames challenged his path again, but they could not stop him. Their soft bodies offered no resistance to his knife.

Mac reached the plane and pushed Edwin in upon the cabin floor, then clambered in himself. At once Edwin sat up.

"By Jupiter, Mac!" he cried, "that was splendid. I thought I was gone. But I don't believe—I believe I'm not even hurt."

"Hurry up and find out, Ed, old boy," Mac insisted. "Let's see if there's a possible chance of getting away. Here, take my rifle. Don't lean out too far, but keep 'em from the propeller. I'm going to start the motor."

The flames from the box were dying down, but they still kept most of the devils interested. Mac started his motor, quickly giving her a generous throttle so as to speedily get her to her full power. Only an occasional shot from Edwin was necessary to keep a green thing from the whirling blade. Then as soon as he could, Mac gave full throttle. But the plane wouldn't move!

Mac clenched his teeth and cursed. "No good, Ed," he said. "We're trapped. Your damned devils will get us! Tires are flat; grass is heavy. Hell's Bells!"

"Can we get out and push?" asked Edwin.

"**Y**ES, we'll try it. Take a knife to fight 'em off. Keep your eyes open. I'll give her full gun. Push like blazes and don't get left if she starts to roll. We do have a bit of a down-grade in our favor."

They sprang out again, the engine roaring

wide open. They pushed and lifted at the plane until the veins in their foreheads stood out hard. They rocked the flat tires out of the hollows they had formed in the lush grass.

The plane rolled ahead an inch; then inches; then feet. The boys still pushed fiercely. She rolled faster, gathering speed. They pushed and strained and lifted, then sprang aboard.

Mac forced his engine to the limit, then the plane rolled smartly over the spot upon which Edwin had been so recently tied. It increased in speed until Mac, knowing he had to take the air or crash into the trees ahead of him, risked everything when he asked the ship to rise.

She bounced sluggishly once or twice, then she was riding smoothly in the free air, her roaring engine now bravely and rapidly increasing their speed.

Mac banked a bit and swung for a thinner and lower part of the forest. Only by inches they skimmed over. Then they were clear—gone—free!

They did not say much until once again the inky Rio Negro lay beneath them. As Mac adjusted his pontoons for a landing he said, "Close enough, Ed. We just got out. We've a story the world won't believe, though. I didn't until I saw 'em. Say, hold on! I forgot that we have one to take home with us to prove our story. The one I lassoed."

But next morning, before they left the river for the hop to Panama, they consigned the hideous green thing to the depths. Its condition made it everything but a desirable companion; it was rapidly getting worse.

"We're well rid of all of them," Edwin said. "There's just one thing I regret."

"What's that?"

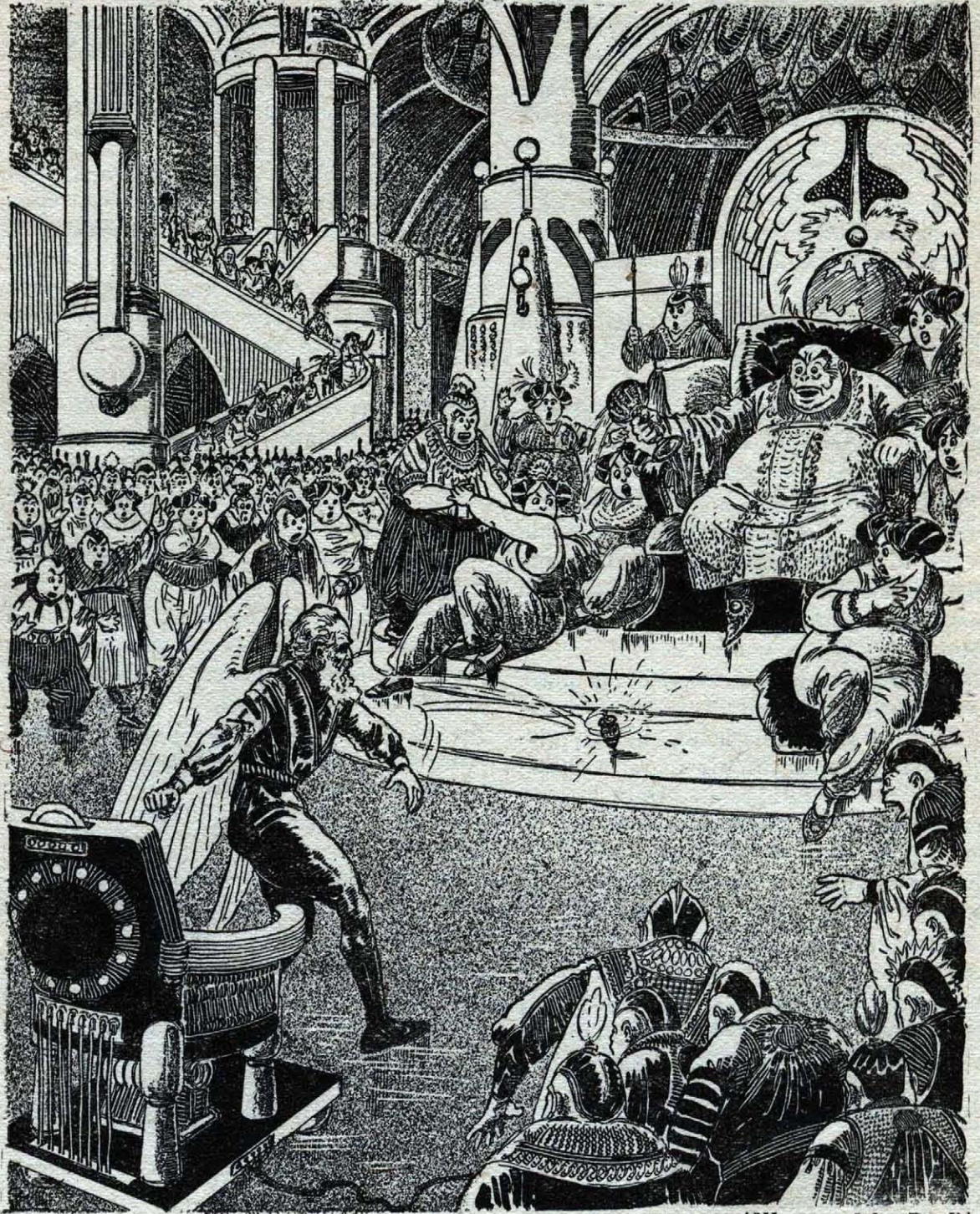
"My rifle. I'd had it a long while. I'm sorry I lost . . ."

"Edwin Ray, my boy," broke in Mac, "would you suggest we go back for it?"

"No, Mac, we won't go back. Panama, James, then home!"

The Return from Jupiter

By Gawain Edwards



(Illustrated by Paul)

"You shall learn better now," he cried and cast the amulet down on the hard floor. Fascinated by terror, they saw it spin there for a moment.

What Has Gone Before

Allus Marce, commander of the armed forces of Neina, (Ganymede) satellite of Pleida, (Jupiter) returns to Neina to tell his father, ruler of the satellite, that Dolmician, emperor of Pleida, intends to invade Neina and enslave the people. His allies in a war against Dolmician have deserted and Neina is left to battle alone.

He asks for immediate mobilization of Neina and states that there is one way to save Neina from the superior Pleidan forces. The old scientist whom Allus rescued from the earth and who is now a guest of Neina has the secret of an alloy which can destroy all the water on Pleida. But the scientist, remembering that the use of this alloy in warfare has destroyed all the water on the earth, and made it a desert, refuses

to give it up. Instead he tells the Neinian nobles that Neina is becoming cold and must be vacated soon. He has perfected a method of restoring the water to the earth and suggests that the Neinians emigrate to the earth.

The scientist is despatched to earth to make it habitable while Marce soars into space with his fleet to meet the Pleidan invasion. Nina, daughter of the earth scientist, mobilizes the people of Neina and when the Pleidan fleet, having overcome Marce, land on Neina, she blows up a number of the ships and leads the people against the soldiers. But she is captured and the people subdued.

Meanwhile old Allus, ruler of Neina, has mysteriously deserted his people and soared into space in a rocket-ship.

Now Go On With The Story

SHE felt rough hands take hold of her. Turning furiously with weapon upraised to meet her attackers, she discovered that she was already a prisoner, held in the vice-like grip of four Pleidans.

Behind them, leering at her from a distance beyond the possible reach of her weapon, was Salvarius Carde.

"You are one of the Tellurians," he said accusingly. "Because of you Neina has rebelled; because of you we have had trouble subduing her."

"Perhaps you have not succeeded even yet!"

The Pleidan leader swept his hand toward the middle of the field, but Nina did not turn to look. Instead she stared at this hideous figure, almost human in form, yet a great deal also like a frog. Her eyes were burning with hatred and contempt.

"Neina is now in my hands," he went on, "and I will teach you and all the others what it means to resist the authority of Dolmician!"

With a quick gesture one of her captors disarmed her. She was thrust closer to Salvarius Carde by two of the Pleidans, whose loathsome hands gripped her like vices. Carde gestured suddenly toward the launching tower, and pushing his face within a few inches of her, demanded: "Where went old Allus?"

Nina stood her ground, though her face was paler now. "I do not know—perhaps he is in the palace," she said evasively.

"He left in a space-ship; you know it. Where did he go?"

"I have no means of knowing that. He did not tell me."

Nina shrugged her shoulders. It was the Pleidan's time to show his anger. "You will tell in time," he prophesied. "You will also tell us where the other Tellurian is. We will have both of you—all three of you—yes and by Deiminos we will have Allus Marce too. And we will make public examples of you! Ptah—!" and he spat upon her as she stood helplessly before him, tensing her muscles to resist the fury that welled up within her.

"And as for the others," said Salvarius Carde, issuing a general order. "Round them up and get them to the mines!"

CHAPTER IX

"Prepare to Work in Space!"

NOW was the lone voyager in space, the bright rocket-ship that had borne the old man of Tellus and the Neinian scientists, approaching the earth that was the object of their journey.

Grouped around the observation windows of the craft the Neinians watched with eager, straining eyes, for to nearly all of them a close glimpse of this earth was new and exciting. Only three had ever seen it before. They had accompanied Allus Marce upon his epochal journey when he had rescued Nina and her father from death by thirst upon this planet. The others had only heard of that exploit, and were now feasting their own eyes upon the wonders and mys-

teries of Tellus.

Careful, accurate had been the aim of the rocket's engineers. The projectile, like a white speck of metal speeding in from vertiginous space, had slipped past Luna, earth's only satellite. They could see now with unaided eyes the slow rotation of the huge globe toward which they were being hurled by the mysterious forces of inertia and gravitation. The light of the sun was reflected from its surface with frightful intensity, as if they were looking down upon a polished crystal mirror. Some, alarmed by this phenomena, went to the aged Tellurian scientist.

"Your earth is boiling hot," they said. "You have brought us to a planet that consists of molten stone."

"Not molten stone," he corrected them, "but crystal salt and areas devoid of life and vegetation to absorb the rays. We shall find the earth no hotter than it always was, except that the weight of the atmosphere, dense with all the gases that were formerly the seas, holds in the heat and makes even the temperate zones tropical in temperature, while the poles, once icy-cold, are now gently warmed by the ceaseless currents of the air. It is near them that we shall find it most pleasant to begin our work."

He saw that already they had left the cold moon behind; that the earth's bare

surface was approaching at a frightful rate.

"What is our speed!" he asked the engineers.

"More than ten miles a second, measured by your Tellurian scale."

"We must slow down to five."

"We can do it with the rockets at the nose."

"And let us change our course. At present you are aiming directly at the center of the Tellurian disc. I want to set up an orbit outside the atmosphere, at about five hundred miles from the surface."

The engineers saluted. The fuel pumps, which for many hours had been unused, since the journey in its latter stages had required no power, were set going again.

Suddenly the fire flashed outward from the projectile's nose. The great craft shuddered; its speed slackened.

And now the occupants felt once more, the pull of gravity upon their persons; a tiresome pressure from which they had been blessedly free for many days and weeks. At first the sensation was not unpleasant. They felt strangely exhilarated as the pull of earth, apparent because

their free fall had been checked, influenced the circulation of their blood, restored the ancient and necessary sense of balance, caused their long rested muscles to take up the age-old burden of supporting their bod-

IN this installment, this masterful sequel to "The Rescue From Jupiter" comes to a tremendous conclusion.

Neina is all but conquered, the scientists on earth are attempting the herculean task of restoring water to that barren world, the ruler of Neina has apparently deserted his people. Great and stirring events are about to happen, as peoples and races are struggling for preservation across hundreds of millions of miles of space.

The science of Mr. Edwards' story is practically irreproachable. He limits himself to advances in science that he believes to be possible in future ages, but what he does use he makes the utmost of. The experiments of Rutherford in bombarding nuclei of nitrogen with electrons are quite new to us of the twentieth century. But the field opened by that distinguished scientist is indeed great. Carrying his work to its logical conclusion there is no reason why, for good or evil, we should not have ultimately as Mr. Edwards prophesies the transmutation of elements and when that time comes, the changes it will make in our world will indeed be wonderful.

ies, even when there was no movement to be made.

But they had little time to observe the innumerable subtle changes that were taking place in them and in the car, for now the old man was like a demon, striding up and down the crowded laboratory, searching out his men, hastening them to their posts.

"In a few minutes," he declared, "we shall be ready to do the work for which we have come so far!"

He ordered them to begin the laborious task of donning their space suits. Out of the storage spaces came these cumbrous objects, helmeted like weird objects from the depths of the sea, curiously sagging and empty, like the tenantless skins cast off by snakes.

The old man himself was the first man to enter one. While two aides helped him he thrust trembling limbs into the strong fabric tubes meant for arms and legs, and worked his hands into the metal gauntlets. Quickly they sealed him into the suit, and placed on his shoulders the huge metal helmet, with its tanks and radio. A pack containing additional supplies went on his back, but still the little window at the front remained open, so that he could talk directly with the others until the time came to go out into space.

HE went forward again to the control room, and strode nervously among the engineers.

"Where are we now?" he asked, noting that the features of Tellus were alarmingly close. He could make out the mountain chains and valleys of North America, the huge, glittering depressions that had been the seas, even the islands that had once thrust themselves up about the surface of the lapping waves, to give ground for palms, men and animals. The whole Western Hemisphere seemed spread out before him like

a convex map, clear except for the hazy atmosphere that seemed to swathe the globe like a bluish, smoky veil.

The engineers finished their computations.

"We are between five and six hundred miles out," they replied.

"Our speed?"

"We are reducing it rapidly."

"The course?"

"Around the earth, as you directed."

The old man turned abruptly back toward the laboratory, where the scientists from Neina, following his example, were in their space suits, waiting for further orders.

There was a strange, restrained hush among them; they were like men expecting to plunge themselves into battle.

"Every man knows his place and what he is to do," said the Tellurian. "If you obey my commands there will be no hitch in our plans. We must work quickly and accurately."

In the quiet of the laboratory a bell rang suddenly. The old man picked up a telephone that put him in communication with the control room. "We have reached your speed and altitude,"

declared an engineer.

"Are we in free flight?"

"Yes."

"The rocket holds its orbit around the earth without the application of power for steering or speed?"

"We have checked our course; the orbit holds."

The scientist put up the telephone, and turned as gravely as an oracle toward his listeners.

"Prepare to work in space," he commanded quietly.

* * * *

If there had been an observer on the surface of the earth he would have seen a



GAWAIN EDWARDS

curious phenomenon in the clear sky above him in the twenty-four hours that followed. At first there was only the glistening cart-ridge of metal from another world, taking its course around the earth from west to east, scarcely visible at five hundred miles, a tiny mite that flew with terrific speed but drew no closer.

Then not a little like tiny parasites emerging from a host there came out of it from an opening near the rear a swarm of tiny animalcules—objects more like balloons than men, grotesque creatures of fabric, rubber and metal, futuristic robots, each with a burden many times larger than himself, and each linked to the monster rocket-craft by a thin cord that kept him from being wafted away or losing his way in space.

For a long time they seemed to hover there around the flying space-car, gradually moving with their burdens in a kind of unreal dance, moving together, apart, readjusting their positions. Gradually, as the figures glided here and there by discharging bright flashes of rocket fuel from specially designed space locomotion guns, the objects they were carrying began to grow together, to take form in the abyss of the sky, four hundred miles above the cottony layers of air that swathed the whirling, misty globe.

And now, had an observer been gazing at them through some terrestrial telescope, he would have been astonished at the thing about which they swarmed. It was following after the space-car, fastened to it like the objects that has fashioned it, by a long tow-cord of flexible metal, perhaps a chain or cable. It was shaped not unlike a huge saucer, hundreds of yards in diameter, with its bottom toward the earth, and its upper, concave surface facing toward the sun.

Having completed so much, the pygmies afloat in space were still not content. Repeatedly, in a procession like that of ants making visits to a pool of syrup, they returned to the space-craft, and brought out of it new burdens—additional parts for the saucer they had constructed. On the under side there began to grow a bulbous excrescence, like the basket of a huge balloon, fastened close to the saucer's convex bottom by girders of metal. Into this cup en-

tered the workers, carrying instruments, generators, thermo-couples, reflectors, gyro-balances.

Meanwhile the rocket-car and its strange appendages kept up its incredibly swift journey around the earth, in a slightly eccentric natural orbit that required no energy to maintain. For the time being the Neinians and their craft had become satellites of the earth, traveling at such a speed and such a distance as would have kept them imprisoned forever in an orbit around Tellus had they been without power to steer or speed up their craft.

Four times they circled the earth, spending less than two hours in each revolution. Gradually the huge object they were building grew complete, each portion fitting its place as the Tellurian scientist had planned. The old man himself had been the first to step from the speeding space-flyer into nothingness at the beginning of the building operation, his space suit ballooning about him hideously, his old head sheathed in the heavy metal hood until he was unrecognizable, except for his energy, the continual waving of his arms, his close inspection of the machine as they put it together.

In Space

THE Neinian scientists, observing the old Tellurian's activity, marveled that anyone could have so much strength to expend upon such a project. They could not see the fierce zeal in his eyes or they might have marvelled even more. As his contrivance took shape in space above the earth the aged scientist was like a consecrated priest before the altar of his god. Each curve, rivet, bolt and seam of its design he knew from hours of poring over the plans in the laboratory of the space ship, from examining each piece as it had been fashioned by his aides.

Now that it was actually being constructed he let no detail escape him, nor did he permit any delay on the part of the Neinians, many of whom grew quickly tired of their labors, despite the matters of great moment they knew depended upon them.

At last the huge disc, with its carriage

underneath that housed innumerable intricate machines, was complete. Its upward, concave side was a glittering mirror, catching the rays of the blistering sun, reflecting them toward the center, where they fell upon the battery of thermocouples that transformed the heat instantly into electricity.

The old man entered the air-locked cabin underneath, started the machinery with a switch, and felt the generators hum through the heavy padding of his suit. He glanced at the indicators and checked the output of the couples and that of the ray generators. He tested the efficiency of the machinery he had caused to be created during the journey and hung here in space.

While he went over the apparatus once more, making sure that everything was in working order, others, under orders, minutely examined the seams between the underside of the saucer-reflector and the basket of metal that carried the machines. They were air-tight.

The old man heard them report their findings through the radio sets that held them all in communication. "Then start the air-generators," he directed. "Four men must stay here to watch our machines and to keep in touch with us. They have already been selected, and are now making ready."

He saw that his directions had been obeyed. The suits of those inside the basket began to wrinkle, as if being deflated, while the pressure of oxygen and nitrogen around them increased. Presently, when he judged that sufficient pressure had been generated to support life, the old man jerked open the little window in his helmet, and breathed deeply, testing the new-made air.

The others did likewise. For the first time in hours they conversed normally.

"This is the power-house in space that will supply us with the energy we need to bring water to the earth," the old man explained. "When we are ready we will run away from it in the space-car, leaving it to continue on its course around the earth. Gyroscopes continually in motion hold it with the concave mirror always toward the sun, unless it becomes necessary to shut off the power to get into the mirror to make

repairs, in which case by precession it can be tilted out of the direct rays and plunged into the darkness and chill of space.

"The energy we need will be supplied us by di-thurnian waves generated directly from electricity. They will be caught in reflectors placed on the surface of Tellus, and there will be transformed again into electricity, to feed my water-machine."

"But will there be sufficient power?"

The old man gazed questioningly at his interrogator.

"In my tests made just now," he returned, "I found that my preliminary estimates will be more than justified. In this reflector and its apparatus we have a power plant capable of generating more power than was ever available on the earth, before the invention of the water-motor. With it we shall be able to supply the needs of the earth for many years to come—and if more are necessary later it will be a simple matter to build them and let them send their energy down in waves to lift all burdens from the backs of men."

A ringing bell interrupted them. The old man paused. "That is the reflector's crew," he said. "We are ready to turn it over to them."

Pressing a button he answered the summons. One of the other stepped to the air-lock, pulled the lever that closed the outer door and opened the inner one. The four men who had been selected to remain above the earth filed in.

The Tellurian helped them out of their space-suits.

"You have been instructed," he said. "Are you ready?"

The four nodded briskly.

"You can remain in constant touch with us," he said, "but you must realize that should anything go wrong you can depend on no one but yourselves."

Again they nodded, more soberly. The old man's eyes swept over them, remembering how much depended upon his power-house in space. The foremost was a scientist whose work was well known throughout Neina. He had forsaken family and profession to join the Tellurian on the venture into space. The others were likewise trained

men, determined, resourceful. The old scientist looked at them and smiled. "I can depend upon you," he said.

The leader saluted gravely. "We shall follow your instruction," he replied, "and you may depend on us."

The others were already entering the airlock, preparing to return to the space-ship. The old scientist impulsively shook the hands of each member of the reflector crew, an ancient Tellurian custom which he had never been able to cause the Neinians to adopt, but which they nevertheless recognized as a sincere gesture of friendship and faith. Then, with a quick motion he adjusted his helmet and followed into the airlock. In a moment they were ejected into space.

THE space-car lay not far ahead of them, seemingly without motion. Beneath them the great earth spun rapidly, almost dizzily.

Quickly they reeled themselves to the craft that had brought them from Neina, and entering it through another air-lock, closed the metallic cartridge after them. The scientist surveyed the interior of his ship, noting its gloomy emptiness, now that the segments of the giant reflector had been removed. With rapid steps he made his way forward to the control room and consulted with the craft's chief engineer.

"Our speed is almost exactly five miles a second," the latter reported. "We are holding to the orbit."

"Everything is ready for the landing?"

The other nodded.

"Then cut loose from the reflector and speed away from it. We must not disturb its motion."

The engineer nodded. The old Tellurian suddenly felt a great weariness seize him; the day's task had been difficult and strenuous, but he could not rest now, when the most perilous hours of the whole flight were at hand; the actual landing upon the planet he had come to rescue from its untimely drying. Slowly he strode aft to join the Neinian scientists who were watching the power-house they had set adrift to swing forever around the earth.

CHAPTER X

The Landing

THE huge space-car, its folding wings outspread to their greatest extent to break its fall, spun rapidly about the earth in the last stages of its landing maneuvers.

The Tellurian, gazing eagerly at his world as it flashed beneath them in the glaring light of the sun, saw that everywhere it was dry and dead, glittering with salt, or crusted with dust, or creeping with drifting waves of wind-blown sand. The space-craft, gradually changing its course from that of the power-house still floating in space, at last was approaching the surface in a long loop that took them first over the South Pole and then over the North.

At the South Pole they could discern nothing but the crumpled mountain ranges that had long been known to have lain beneath the ice-cap which once rested there. But as they approached the North Pole the old man, suppressing an exclamation, pointed with excitement to a field of glaring brightness that suddenly appeared before them, passed beneath, and disappeared behind.

"What is it?" the Neinians asked.

"Ice!"

The old Tellurian's excitement was mystifying to them.

"But there is not very much. The moisture represented there could hardly be used to support life on the earth—"

"Of course not," he replied. "That is the residue, probably, of all the water that remained in the atmosphere when the last of the lakes and oceans disappeared. But don't you understand the significance of this cap of ice?"

They shook their heads.

"It means that some chemistry vital to our plans has been at work. When my daughter and I were rescued from this planet not many years ago, the air contained a minute, all-pervading ferment of the metallic alloy that caused water to dissolve in a boiling cloud of oxygen and nitrogen. That alloy, if it were still present in the atmosphere, would also have destroyed the water frozen in that patch of polar ice as soon as

it began to collect here, had it still been active.

"This discovery means that if we succeed in transmuting an element and manufacturing water we shall not need to worry about the substance that destroyed the water of the globe that preceded it. Some acid in the air—perhaps one of the rare nitric compounds produced in minute quantities by the combustion of water, has been slowly at work, and has destroyed the alloy."

The space-ship, its speed tremendously reduced by the resistance of the air encountered in its circular flight around the earth, was now going slowly enough to make landing possible.

"We must select a spot not too far from the North Polar regions," the Tellurian directed. The engineers signalled assent as they eagerly watched the surface ahead and below.

Not far away they spied a flat place, apparently suitable. A jangling bell warned everyone in the ship that a landing attempt was about to be made. The crew and scientists hastily sought their landing hammocks. The ship nosed perceptibly downward. The earth came rushing upward at them, fell away, came up again.

Then they felt the terrific crashing of the space-car's carriage on uneven ground. The huge machine groaned, side-slipped, came abruptly to a stop, amid a cloud of dust that spiraled upward in the thick, lazy air.

The old man was first on his feet, tugging and pulling at the others to see if any were hurt. One man had crashed his head against a stanchion and was lying still, either unconscious or dead. The Tellurian called physicians to attend to him while he marshalled the others, bidding them to get ready for their first walk on Tellus.

"I am going to open the door," he said.

The Neinians, many bruised and ill as a result of their strenuous efforts in building the reflector, their reactions to the long ride through space, and finally the roughness of the landing, were nevertheless eager to see the new world. They shouted their approval of his intention.

The Tellurian eagerly unfastened the

heavy door that led into the airlock, and in a moment the outer door also was open.

THEY had landed upon a slightly rolling plain, somewhere in what had been northwestern Canada in the days of the Tellurians. Toward the west the land mounted perceptibly in a series of long, low foothills, no doubt reaching in the hazy distance to the chains of the Canadian Rockies that were still high and rugged in these parts. On the east, not above a mile from the scored flat upon which the rocket-ship had made its landing, was a basin or flat valley in which, in olden days, a small lake had lain.

Around it there were still traces of the long-dead vegetation that had once hedged it in. Dessicated, half-buried stumps of trees, banks where matted wisps of dried grass still hung, whispering skeletons of weeds, and here and there the bleached bones of animals that had succumbed there.

The Neinians looked at each other in wonder that any remnant of earthly life could have survived so long, but the old Tellurian pointed out to them that since all life had been destroyed by the sudden disappearance of water, not even bacterial forms had remained to cause decay.

They all perceived that the space-flyer had selected what was almost an ideal spot for their experiment; an open area sufficiently large for setting up their power gathering device, a broad shelf upon which to carry on their experiments with the old scientist's mysterious machine, and finally, if success attended their efforts, a natural basin in which to catch and hold the first trickles of moisture from their laboratory.

The air of Tellus was heavy and acrid from the excess of oxygen and traces of malignant acid compounds that it contained. Nevertheless they found that they could accustom themselves to it, and the natural air, however strange, was a welcome relief from the artificial atmosphere they had been forced to breathe during so many weeks of flight from Neina.

The old man led them for a tour of inspection over the shelf upon which their rocket lay, permitting them to accustom

their bodies gradually to the conditions of Tellus; her greater gravity, the extreme pressure of the air, the dryness of the surface. He saw that the early Tellurian night, coming slowly in such high latitudes, was near, and decided that their first concern should be to make a camp in which they could live in comfort while the work was going on.

Accordingly they visited the small forest of dessicated trees at the edge of the empty lake, and from a few of them succeeded in building the skeleton of a shelter against the chill of the coming night and the heat of the next day's sun. By the time they had thrown together the beginnings of the structure, night had fallen.

The old man showed them how to gather shorter bits of the aged wood in small piles, and how to ignite them. And soon in the first darkness of the evening that was to mark a new era for the earth, camp-fires crackled once more beneath the ancient Tellurian sky as in the long-forgotten times.

The wood burned with uncommon brightness because of the plentiful oxygen, and turned all too suddenly to smoke and ashes. But as the sparks showered upward, the Neinians, glad as children for the relaxation and comparative safety of their camp, however strange it was to them, lay back on their robes with their faces to the heavens, and watched bright Jupiter in his course, unable to see, but knowing that Neina and the other satellites were close by, whirling in their endless courses around him.

Of the events that had transpired there since their departure they of course knew nothing, yet each stared upward at the bright planet and its satellites with silent foreboding, knowing well that Neina's downfall, if not already accomplished, was inevitable, and wondering what had become of wives, parents, children and other loved ones they had left behind to come on this queer quest through space for a better place to live.

As they lay there in the light of their crackling fires the moon arose, and they exclaimed in wonder at the beauty of the sight. The old man of Tellus lay looking at it long after the others had fallen to sleep, planning for the activities of the next

day, and wondering at the outcome of his voyage across nothingness to the planet of his birth.

"Tomorrow, We Shall Be Ready!"

TENDERLY they took the strange machine out of its packing in the metal projectile, and now, in the shelter of the hastily constructed laboratory, the old man and two assistants were assembling it.

On the flat toward the west nearly all the rest of the Neinians were concerned with the erection of a huge convex mirror, a little like that which they had left swinging around them in the sky, but smaller, and covered at its upper side with innumerable bare, bright wires, like spidery antennae.

It was the receiving reflector designed to collect and transform the energy sent by the power-house in space.

It was mounted upon a short, heavy tower of metal, which permitted it to be swung on a universal joint toward any quarter of the heavens. Somewhere far to the south of them they knew the power-collector was still circling Tellus, ready to supply them with energy when they had need. Through the heavy layers of atmosphere, and even through the rocky earth itself, the energy-bearing waves would come to this reflector from the invisible sky-mirror when the installation was complete.

The Tellurian had no doubts about the energy-supply. The observatory and power-house in space made use of no new principle. Similar reflectors had been in use on Jupiter for generations. But to the assembling of his water-maker he was devoting his full attention. With his assistants he went over every step in the projected conversion of Tellurian atmosphere into water. They examined the heavy tanks into which the gas would be compressed, to be released in relatively small quantities into the glass-lined chamber by the side of the exciter-tube.

It was this tube that was the heart of the machine, the very essence of the contrivance. It was more than twenty feet in length, made of heavy glass. Electrodes appeared in either end, and through a tiny

window at the side a smaller tube led directly into the chamber of compressed gas which it was expected to activate.

"With alpha rays Rutherford knocked protons out of the nuclei of nitrogen," the old man said. "This tube does not generate alpha rays, but discharges instead a torrent of electrons moving so rapidly that they will, on striking the nuclei of nitrogen, knock out not one proton but fourteen, thus reducing each atom of the heavier gas into fourteen prospective atoms of hydrogen. These protons, dancing in a veritable shower of swiftly-moving electrons, will drift to the edges of the torrent, where slower-moving electrons will readily unite with them. We will have on one side a steady stream of nitrogen going into our compression chamber, and on the other side a stream of new, hot hydrogen leaving it."

The assistants were enlightened by this simple explanation of the machine they saw before them.

"But water?" they asked.

"That is the simplest part. We will carefully ignite our hydrogen in oxygen, avoiding an explosion by blowing the gases together from separate jets and igniting them only at the point of mingling. The resulting stream we will catch in a worm, and cooling it, will reduce it to water before our eyes."

From time to time, pausing in their labors, the two assistants stared in astonishment at the vigor with which the old man applied himself to the work. Despite the high latitude in which they had pitched their camp, the sun was hot, and the slattern shed of rough and splintered logs little protection against it. Perspiration started from their pores, but hardly once did the old man pause to join them in their rest, except when there was an explanation to be made, or an intricate operation to be described.

Throughout the day they worked, reassembling the machine that had once been complete on Neina. The thing was a maze of wires, coils, pumps. In the compression chamber they installed the apparatus that separated the nitrogen from the oxygen and other gases of the atmosphere, so that it would flow into the activating chamber in a

pure state. They fastened the huge engine securely to its metal and concrete base, and in turn fastened the base to the earth with angular metal stakes that went down deep into the dry soil.

NIGHT came again and put a stop to their labors, but long after the others had gone to rest at the camp the old man puttered about by artificial light, making final adjustments, poring over his connections, examining every part and portion of the awesome, all-important contrivance.

Hours later, when at length he pulled himself away from the machine, he found the Neinians waiting for him. A hush fell upon them as he approached. He felt the power of their reverence as he joined the circle, for now they considered him a superman indeed, a mighty inventor of countless contrivances, master of air, earth, water, fire and all the elements, and in addition a man of iron, capable of putting into any project such furious zeal as to shame any Neinian.

"You must rest," they said to him, "for tomorrow . . ."

"Tomorrow . . ." the word echoed strangely as he pronounced it, "we shall be ready to try—the machine. If it is a success we shall not have made this trip in vain. But if it fails—Neina is doomed!"

CHAPTER XI

Water!

THE little band of Neinians, like nervous husbands awaiting word of the birth of their first-born, had drawn a little way off at the order of the old man of Tellus. Only his two assistants were privileged to be present with him in the shack of a laboratory when the great lever was thrown in, inaugurating the test of the water-maker.

Four Neinians stood at the base of the tower on which was perched the huge power-collector, moving it stealthily, their ears attuned to words which were coming to them from space. The crew of the power-house above the earth was signalling its position, making ready to deliver the first supply of

sun-power ever sent direct to earth by di-thurnian waves.

Slowly the collecting-mirror moved into position to catch the pencil of rays that would soon descend upon it from out of the dim and misty nothingness toward the south. A scientist, watching its motion, suddenly signalled for a halt. "Position!" he called.

Instantly the watchers stiffened. The first part of the intricate process of changing the earth's atmosphere into water had been accomplished. The collector had made contact with the space power-house. Energy was ready to be delivered in vast quantities to the engine the old man had hidden in his tumbledown laboratory near the shores of the extinct lake.

Toward the laboratory a huge, thick cable, like a black snake, ran from the collector. In a few minutes, if all went well, it would throb with such a charge of electricity as had never been confined in so small a line before on Tellus, and electricity that had never before been destined for so important a use anywhere in the universe.

They waited, half afraid to speak, for the signal that was to be given by the old man. The sun moved slowly toward the zenith of his course. The Tellurian summer, they observed, was already on the wane. The warm weather of these parts would be passing in a few weeks and if the experiment were not a success there would probably be no chance to build another machine and try again for many months. It was doubtful if they could hold out long enough; supplies were already getting low in the space-car. Scarcely enough remained to last out the return journey to Neina, should one be attempted.

Much depended, indeed, upon the outcome of the experiment.

Suddenly they saw the signal. The old man came to the door of his laboratory and waved a white cloth. Shouting his orders the scientist in charge of the power-collector caused an assistant to throw the huge switch. The black cable abruptly became a conductor of electricity, though the circuit at the laboratory had not yet been closed. They saw by the indicators and other signs that the collector was working, that enormous

currents of energy were pouring through the atmosphere to collect upon its concave surfaces, to pass through its transformers, its generators, to flow finally into the conduit that led down the gently sloping hillside to an unprepossessing shack at the shore of a dry and extinct lake.

And then it happened. There was a sudden rushing, clattering sound below. Despite the glaring light of the noonday sun they beheld an eerie illumination dart from the building's many cracks; green, golden, filled with dancing motes and spots. The dry air crackled, snarled. They heard innumerable rushing, whistling noises.

Still no one moved, remembering the old scientist's earnest warning not to approach the shack until he had given specific permission. For minutes that seemed hours no sign of human life was apparent below. The sputtering, the strange light—all the weird manifestations of energy continued, increased. Some began to grow alarmed. What if the first discharge of the huge electron-tube had killed the scientist and his aides? Perhaps they had received no signal because they were even now struggling in death agony; or worse, had been completely disintegrated by the torrents of electrons that had come rushing at them from the giant valve.

AT length one of the Neinians, the chief engineer of the rocket-ship, could stand the suspense no longer. Against the specific order of the old Tellurian he left the waiting group and made his way toward the shack. As if hypnotized by the green radiations emanating from the laboratory the others followed, not running, but walking slowly and cautiously toward the building. The engineer reached the door first, the others immediately behind. It was closed. He thrust it open with a quick blow.

A hideous burst of the green light came pouring out upon them, blinding them. After a moment they saw the aged scientist and his aides inside hurrying around their machine like madmen, adjusting here, inspecting there, making changes, measuring. Above their heads lay the huge tube, too brilliant to look at, hurling its electrons like cosmic

Javelins into the compressed nitrogen in the tank. In another place—marvelous to look at, but mysterious—burned a jet of yellow fire in a closed glass container.

The Neinians had got this far with their investigation when the old man spied them. With a shout he waved his arms at them—a shout of triumph, glee, unquenchable jubilation. With a long, skinny finger he pointed toward the end of the machine, where now one of the aides was bending, making tests. At that end there was a spout, and from the spout there came trickling a tiny stream—an almost invisible flow, but a flow that was unmistakably water!

"We have succeeded," declared the old man. "Water—water—!"

"But so little!" objected one of the Neinian scientists.

The old Tellurian smiled. "As for that," he said, "we are only making a test. If you want volume, here it is!"

He seized the handle of a rheostat that controlled the flow of current into the machine. The glaring colors of the tube's emanations suddenly became intense—a blaze of light that seemed to press upon them. It filled the room as if it had substance. Waves of heat swept upon them. The flame in the glass container spouted brighter, became a fiery blast.

And it was then that a cry of joy went up from the Neinians. For they saw the water increase from a trickle to a little torrent pouring from the spout. Still hot, it gushed into the vessel the old man had prepared for it, filling it, overflowing on the dry sand, soaking in, making a little puddle on the laboratory floor.

The Neinians, shouting and laughing like children, ran in and seized up samples of it in their drinking cups, putting it to their lips, hot as it was, eager to taste this water that had just been made by the transmutation of elements.

The old man of the Earth watched them with tears of pleasure in his eyes. In the distant past, the earth people had dreamed of transmuting the baser elements into rare ones for monetary gain. Now the trick had actually been done. Elements had been transmuted—to produce water, the elixir of

life, at one time so common that the ancient philosophers would have spurned the suggestion of changing the elements to manufacture it.

"But we cannot be content with the result of this experiment," he cautioned the Neinians. "We must build many more machines at once. We must fill our little lake with water, and many more besides. It will be generations before there is enough water to repopulate the earth, even at the fastest rate that we can manufacture it."

Friend or Foe?

THE four men that constituted the crew of the power house in space, flying perpetually around the earth but free of its dimming atmospheres, were able to see great distances with their telescopes. Continually they swept the heavens for amusement and for their scientific enlightenment, relieving the enforced monotony of their tasks by speculating on the enormity of space and the mysteries of astronomy.

Every two hours they made a complete circuit of the earth. By the time they had been suspended in space a week, they had examined minutely all the neighboring bodies that came within the range of their instruments, and now eagerly sought the skies for new worlds to observe, counting the innumerable comets that time and again swept in toward the mighty sun or hastened outward from it. They spied asteroids that had never been seen from Earth's surface because of the denseness of the atmosphere, they watched with amazement the continual fiery displays that accompanied the falling of swift-moving meteors into the blanket of air surrounding Tellus.

But in all this phenomena they beheld but one object that alarmed them. The natural bodies of space, moving in relation to each other in accordance with the inexorable laws of the universe, were calculable, explicable. But one object, which at first they thought to be an approaching comet, then an asteroid, and finally a heavenly body the like of which had never been sighted before, caused them to bend their energies full upon it whenever their tiny satellite

was upon the side of the earth that permitted them to view it.

The thing was at first only a speck of light—a spark moving in the darkness of space. As it approached they thought they detected a slight train, like that of a small comet. But soon this illusion gave way to the certainty that here was no ordinary body, but one that, by its actions, appeared to be controlled by intelligent beings.

Having reached this conclusion they were for a time at a loss how to proceed. If it were indeed an approaching space-car it might be bringing beings from another planet totally unknown to them, perhaps intelligent creatures from worlds beyond the ken of men inhabiting the solar system. But—and this was a possibility that appeared to them more rational—the approaching ship might bear friends with word of Neina. Or it might be bringing enemies from Pleida who had been apprised of the old man's project upon Tellus, and had come to destroy it and the scientists with it.

This last consideration was one to be reckoned with seriously, for the expedition, expecting no hostile life upon the planet they had come to visit, had brought virtually no arms or other means of defense. Bent on a mission of peace, they had chosen to utilize every precious inch of space and ounce of weight in their ship for transporting objects, chemicals, materials and instruments useful and necessary to that project.

The four members of the power-house crew waited until, gazing through their glasses, they were morally certain that they had made no mistake; that it was indeed a space-ship that approached through the inky heavens. They perceived that it was traveling at a furious rate, exceeding even that at which the ship of the scientists had come to Tellus.

They sent a message to the camp of the scientists upon the Earth, telling what they had seen. In a few minutes word had been taken to the old Tellurian, and he had come personally to the radiophone to question them.

"They are already within the orbit of Luna, the moon," the power-house crew reported. "Within a few hours, at this rate,

they will be close enough to make a landing."

The old man, alarmed to think what might happen to his water machine and its replica, now nearly finished, and to the whole project if it were now attacked by a determined foe, questioned them at length.

"Are there more than one?" he queried.

The observers replied in the negative. "We can see only one," the leader returned. "It is a ship that bears no colors or other distinguishing mark that we can perceive at this distance."

"Is it a Pleidan ship?"

"It does not appear so—but we cannot be sure."

"Then it might possibly be a Neinian ship?"

"It is possible."

A few minutes later the speed of the satellite power-house swept it out of sight of the approaching flyer, and its crew could report no further upon it.

THE whole camp on Tellus was suddenly in an uproar. When the old scientist turned from the radiophone he found that the news of approaching beings, perhaps enemies, had spread like a blaze through dry grass. The technicians and scientists were waiting for him, beseeching, demanding. The chief engineer of their own craft had suggested that they re-enter and speed away before the strangers arrived. He had pointed out that there was no means of defense and counselled flight as the only sane course.

One group was for digging entrenchments and throwing up a breastwork, behind which they would be safe from hostile rays that might be sprayed upon them from the unknown craft. Others were for scattering into the hills, bearing food with them, to await developments.

The old man gazed at them sadly while they brought these proposals successively to his attention, and when they were through he held up his hand for silence.

"It is growing late," he pointed out. "The sun is even now approaching the horizon, and soon it will be night here. If this craft is seeking us, be it loaded either with friends or enemies, it will not know where to find

us for many hours, until daylight again reveals our position.

"Meanwhile, unless it takes up an orbital course around the earth, as we did when building the power-house, its speed will force a landing long before that time. The chances are a million to one that it will strike the surface of Tellus miles from where we stand, perhaps on the other side of the globe. It is likely, in fact, that we shall sleep tonight and many nights undisturbed—that they will land at such a distance that we shall never hear of them except through the eyes of our revolving power-house."

When they heard these words the Neinians somewhat recovered from their alarm. The old man went on.

"There is another contingency which none of you appear to have thought of," he declared. "Perhaps these men now approaching Earth are friends instead of enemies, eager to give us news of Neina—perhaps news of vital importance to us. We therefore cannot take a chance on their missing us. We must take steps at once to attract their attention so that they will be sure to land nearby, whether it is dark or light."

At this the Neinians were filled with murmurings and uneasiness again. "That would be suicide!" one exclaimed. "Suppose they were Pleidans. We have absolutely no means of defense against them!"

The old man's lips parted, so that his lips flashed in the last rays of the yellow sunlight, but there was no smile upon his face. "Are you Neinians—or children?" he demanded. "Do you believe that I have not reckoned the dangers? It is my project, after all, that must fail if I have calculated wrongly about these strangers from space. I say, we must signal them!"

"But if they *are* enemies—?"

"Then we have such weapons as had the first men who battled with stones, sticks, fists and teeth upon this globe. And if all else fails—we can still reason with them. Why should it benefit any citizen of the universe to undo what we have begun to accomplish here? Whether they are Neinians or Pleidans, they can only rejoice to see the rehabilitation of a planet which may some

day yield their own kind a home, neighbors in space, commerce."

With such logic he swayed them. Presently even the most fearful of the Neinians joined him in the proposal to build a signal pyre.

They selected a spot more than five miles distant from the Neinian camp, where crude huts now surrounded the industrious water machine and its silent brother, not yet in operation. The old man led them through the rolling hills until, about dark, they came to a spot level and open enough for the landing of a space car, yet somewhat lower than the surrounding country, so that no matter how the strangers should arrive, the little garrison of Neinians would be above them, on the hillsides.

In the valley they heaped a huge pile of the dry, tinder-like ancient wood, while other members of the band piled up the loose stones of the hillsides to form temporary fortifications and vantage points from which huge boulders might be rolled upon unwary strangers, should they prove hostile. Such weapons as they had they distributed among themselves; knives, short, deadly Neinian gas-pistols, hammers and other blunt tools that might be used in hand-to-hand encounter, and finally sharpened sticks, such as shepherds might carry as protection against snakes or badgers.

CHAPTER XII

The Coming of the Stranger

IT was while they were thus engaged that they first saw, through their own telescopes, the approaching monster in space. At first they beheld only a blurred spark in the heavens, seemingly infinitely distant. But the space-car's approach was swift. Steadily it grew until they beheld the furious fire of the nose rockets that was checking its speed. Then it appeared like a meteorite; with cries of surprise and apprehension the Neinians saw it apparently burst into flame, but in a moment they recognized it as an illusion.

The approaching car had now begun to fall into the landing maneuvers necessary for

alighting on any planet with such dense atmosphere as that of Tellus. They saw it plunge toward the horizon like a setting star, and for more than two hours they saw nothing more of it. Some, to whom the sight of the ship actually hovering over them had brought back all their fear of an attack by hostile forces, breathed easier at this, believing that perhaps the old man's deductions had been correct; that the strange craft had indeed fallen to the surface on the other side, to trouble them no more.

But as quickly as it had disappeared it rose again, having made a complete circle of the earth. And now they saw that it was considerably closer, having lost much of its speed and at the same time lessened its altitude.

"Now is the time for our beacon fire," said the old Tellurian with a tense voice. "Light the pyre!"

In a minute the flames were eating hungrily at the time-dried wood, burning with such brilliance in the rich oxygen of the atmosphere that the whole glade was almost instantly lighted up, as if by a magnesium flare. The Neinians, who had not intended to expose themselves, scurried for cover, hastening to their rough piles of rocks, ready to meet the invader, whether friend or foe.

They had not long to wait. With whistling wings and a fountain of fire bursting from rockets at its head, the craft was upon them. It came toward the lighted spot like a comet, fire flying outward from it. There was a heavy impact; the plowed earth shook as if clutched in the grip of a distant temblor. The fire was scattered, mingling its sparks with the gigantic display from the rocket's head. Then, in an instant, everything was quiet, and nearly dark.

The Neinians waited, tense, for some sign of life about the craft. They heard the movements of the occupants. The huge doors of the air-lock were heard to grate open in the darkness. The scientists held to each other in paroxysms of dread. What grotesque figures might now be issuing forth into the Tellurian night? Neinians? Pleidans? Or perhaps creatures of a world beyond the system of the sun, of forms and

shapes unknown? Perhaps — horrible thought!—these creatures had a sense of sight not dependent upon light but upon some other radiation; that they were even now being observed though they could not see their observers.

There was a crunching upon the dry soil of the glade in which the space-ship had come to rest. Embers of the scattered fire, stepped upon by some heavy body, glowed suddenly in a brief moment of renewed life, and expired in a small shower of impotent sparks.

There had certainly been creatures not unlike Neinian, Pleidan or Tellurian men in the ship. Now they were outside it, groping in the darkness to survey the surface of the planet upon which they had found a resting place after so long a journey.

The waiting Neinians heard the old Tellurian shout his rallying cry. It was the signal they had been waiting for. In an instant they were all upon their feet, rushing toward the strange craft with their weapons, such as they were, ready for the fray if one were necessary, taking the strangers by surprise.

The old man's electric torch suddenly stabbed into the darkness before him. A dozen other strong beams likewise appeared. There was a confused babel of voices in the hollow around the belly of the giant craft, whose huge bulk now lay outlined against the stars.

"Who are you?" came a wavering cry. "We come as friends!"

STILL the Neinians made no answer, but closed in relentlessly, too long used to dealing with a crafty foe to fail to recognize this trap.

The first torch reached the strangers, who had withdrawn to their craft and were lined up against it, their retreat to the air-lock and safety cut off by the quick attack of the Neinians. Breathlessly the old man of Tellus ran his pencil of light from one face to another. Then he uttered a cry. The leader of this craft, of which they had all been afraid, was old Allus!

He stood in the torch-light with his en-

gineers, uncertain who was attacking him. His hands were empty. All the Neinians who had come in the second craft were unarmed.

Instantly the tenseness and apprehension of the last few hours dissolved in celebration and exclamations of welcome.

But the old Tellurian and old Allus looked at each other gravely.

"Your water machine?" asked the head of the house of Allus, in an eager whisper. "You have succeeded in—setting it up?"

"Yes. It works."

"Works? You have created water then?"

The old Tellurian nodded gravely. The erstwhile ruler of Neina held out a withered, trembling hand. "Deimos help us," he said in a tragic, beaten voice. "You have saved Tellus, but Neina—Neina is lost despite all we could do!"

"Neina lost? And what of Nina?" The Tellurian's grip tightened spasmodically. "Have you brought her with you to safety here?"

"I could not," said old Allus hollowly. "She loves Allus Marce, and when he would not listen, she remained against my will to try defending Neina alone. But as we swept up from that tragic earth to warn you of Neina's fate I saw that she—had failed for want of Allus Marce's help."

It was the turn of the old man facing him to grow hoarse, to whisper now. "What has become of her, Allus? Tell me—what did they do with her?"

"Deimos forgive me—forgive us all! I do not know!"

New Ancienda

THE two patriarchs walked together through the hills from the landing place of old Allus's space-craft to the new colony of the Neinians beside the ancient lake.

Morning had come. From the east streamed the first bright rays of the rising sun with such brilliance that old Allus, whose eyes had not become accustomed to the nearness of the mother of planets even through his long journey from Neina, was forced to blink and shade his face with a withered hand. As they topped the last rise the Nein-

ian saw below him a sight as strange and weird as any to be found in the solar system: the first colony founded upon a barren and deserted planet by men who sought to rehabilitate it.

Before them was a small cluster of gray shacks, made by matching together in crude fashion the aged dry logs with which the region abounded. Beyond them in the great hollow there now lay a small body of shimmering water, spread out thinly over the surface of the extinct lake, steaming a little at one edge where the stream from the water machine was pouring into it, cool and quiet elsewhere.

Already, though scarcely two weeks had passed since the Neinians had alighted there, the settlement was taking on the marks of human habitation. Unaccustomed feet had worn paths in the rude street between the houses. Not far away the reflector that caught energy mysteriously from the skies was moving in its diurnal gyrations in constant contact with the waves arriving from the power-house in space.

The Neinian scientists, their fears of invasion allayed, were going about their business with bustle and energy. Fires were glowing in the impromptu laboratory and shop they had set up for the manufacture of new water machines to aid the original in its gargantuan task. Hammers were ringing on metal; wire was being drawn by expert hands according to methods in use since time immemorial. Glass was being fused of materials found nearby on Tellus. Already the huge new tube of the second water machine, its electrodes in place, was being exhausted of air preparatory to being set in place upon the trestle waiting for it at the side of the growing lake.

This view old Allus took in with surprised, admiring eyes. When he saw the water he could hardly suppress an exclamation, for at the edges of the new lake, showing faintly in the morning light, there were unmistakable traces of green—the first sprouts of plants just thrusting their eager way through the long-barren earth.

"Where did you get them?" asked the old Neinian. "Have you brought seeds from Neina to plant on Tellus?"

The Tellurian smiled. "It was not necessary," he replied. "The plants sprung up spontaneously; I was as startled as any three days ago when I first discovered them there. Seeds lying in the soil—who knows how many years?—have already tasted of our new water and found it good. The earth was lying ready for this new machine of mine, and rewards us for bringing water back where it has so long been dry."

"It is a miracle!" declared the Neinian. "Perhaps all the earth is watching this small handful of men at work here, watching quietly and waiting, ready to spring into bloom when the time comes."

The old Tellurian spoke fervently. "I hope so—I know so! We can bring back many of the plants that carpeted old Tellus"—his voice saddened—"but as for the animals; we must repopulate the globe with animals from some other world. Aside from bacteria, I doubt if any living creatures have survived."

The two old men, who not many months before had been filled with bold plans and high hopes, suddenly fell silent at that, reflecting upon the innumerable implications of this proposed migration from earth to earth; especially upon the difficulties that now faced it, with Neina in the hands of her enemies and the peoples of the satellites leaderless and enslaved.

THEY walked down the short slope that separated them from the village. They passed the gleaming space-car that had brought the Tellurian and his crew. At length they entered the one crooked street of the settlement upon which was centered the hope of a world and a civilization.

"In honor of Neina and the house of Allus," said the old Tellurian, "we have named it—*New Ancienda*."

"New Ancienda!"

The Tellurian saw tears glistening in old Allus eyes, and hastened on, realizing how the old man must be wrung by memories of his satellite awakened by this name.

"It will be a prosperous city in due time," the man of Earth declared. "As our supply of water increases the main body of the people will have to migrate farther and

farther south to escape the cold climates of these latitudes. New Ancienda is the first city of the new world. In it all oppressed peoples in the universe will be forever welcome."

"But are you generating enough water to support a city here?"

"When new machines have been set up—larger and more efficient than the original, we will fill this lake in a fortnight."

"But you lose a great deal by evaporation."

"That will not be a serious trouble after the first year or so. In a sense it will be an aid to our speedy renewal of life on Earth, for what goes up into the atmosphere as vapor will come down to land again as rain." The old man grew thoughtful. "Already we have had a condensation of moisture here," he confided, as though discussing a miracle. "Yesterday morning there was a slight dew on the ground near the edges of the lake, and in the afternoon we beheld a small cloud—perhaps no bigger than a robe, but none the less a cloud—floating over our pool."

The Tellurian was animated, enthusiastic over these small manifestations that heralded the return of age-old earthly phenomena. "*We had a cloud, old Allus—the first seen here, it may be, in years!*"

"When we have sufficient water we will lay out a farm on the flat yonder," the Tellurian was saying a little later, when they had surveyed the town and examined the marvelous machines that were transforming the atmosphere into water, "next spring we will plant some of the seeds we have brought from Neina, and by mid-summer, a year from now, we will be able to care for a great many—"

He went on in a rambling fashion, talking to old Allus. But both of them knew that the big question was yet to be decided. With Neina under the domination of Pleida, how could any of her inhabitants be rescued?

He explained that another site in a neighboring valley, farther to the south, had already been selected for the next village. They would have a lake there, too, within a few months. Rough houses could be

quickly thrown together, pending the erection of more permanent dwellings when there were more hands to aid in the work.

"You have planned it well," old Allus commented dryly.

"It will take years," returned the Tellurian, "to make the earth support any considerable population at this rate. It will take generations, centuries—maybe to the end of time—to restore her to the condition in which she once rejoiced. But the people of Neina are few compared to the ancient population of Tellus. Wars, pestilences, the coming of the cold—many things have reduced them in numbers so that now in all Neina there are hardly more than once occupied a large city of the ancient Earth.

"The people of Neina can find refuge here within a year, and it will take that long to transport them. As the condition of the earth permits, they can increase and multiply until Tellus is re-peopled by the descendants of the great houses of your satellite.

"And Nina, daughter of the last of the Tellurians—if she still lives . . . ?"

At this mention the old man's voice, which had been filled throughout his discussion with a kind of forced gaiety and optimism, broke with the brief and apprehension he had felt since old Allus had brought him word of Neina's downfall. The Neinian patriarch caught him by the shoulders; they stood together beside the new, still lake, with the tiny green sprouts coming up from Earth about their feet.

"**WE** are old men," murmured old Allus softly. "We are men upon whom age wears heavily. Would Deimos/our work were done; but it is not. We must yet achieve that without which all your efforts and accomplishments here are worthless . . ."

For a long minute neither spoke. The aged Tellurian, with the aid of that inner strength which had given fire to his ancient joints and inspired the Neinians to prodigious labors in the flight through space, regained control of himself. Quietly he beat down the weakness that had made him momentarily betray himself before his friend.

He put out his hand firmly and seized that of old Allus, whose eyes were downcast, whose lips trembled, whose robes of state and pomp were stained with the dust of a strange planet.

"Neina's people can be saved," said the Tellurian. "But it will require a sacrifice, Allus. How much are you willing to give to see your son and my daughter and their subjects safe and happy on this globe?"

The patriarch spread impotent hands. "Alas," he replied dejectedly, "I have lived a long life and I am now near the end of it. A year ago I might have given much, but now I have nothing—not even the honor and respect of my former subjects. For I am an outcast, and in the very act of my coming to bring warning and news to you, I have branded myself as a coward and covered the ancient and honorable name of Allus with shame.

"I have, to be specific with you, a serviceable space-craft and its loyal crew, your friendship, and this frail remnant of my wretched life. If it is possible to help the people of Neina by the sacrifice of any—or all—of these, I stand ready at your suggestion."

The Tellurian considered briefly.

"Then we will leave as many men here to continue the work as we can spare, and proceed to Neina."

The man of Earth was himself again as he led the way to the workshop. He gave swift directions for the loading of the space-craft, the re-charging of its oxygen tanks, the replenishing of the water supply.

Before the sun had set the two great rockets were ready for the return journey to the satellite from which they had been launched. As soon as darkness made the taking of bearings by the stars more certain, they were off, two fountains of fire hurrying outward from the earth.

Looking back, they beheld the huge beacon which the crew remaining on earth had built for their farewell. Flying by them, far to the south, they examined through their telescopes the giant reflector whose faithful transmission of the sun's fierce heat made possible the generation of water at the camp below.

CHAPTER XIII

A Nation Enslaved

THE cool blue daylight of Neina filtered across the open spaces of the great plaza before the palace of Allus. Ancienda—once the most beautiful city of the satellite—lay beneath the summer sun, her streets no longer clean and bright, her people no longer free and happy. For more than the space of a Tellurian year the heavy yoke of Pleida had been upon the satellite, and in their squalid quarters her citizens cowered in horror, awaiting their turn to be beaten to the street and driven to the frightful platinum mines.

Every day at dawn long lines of them, fed scantily at filthy kitchens administered by the Pleidan authorities, marched dolefully like members of a chain gang through the square. The whippers of Dolmician went with them, walking on either side, their long lashes going like pistol shots over the heads of the captives. The road led through the city's main streets to the open country, and thence to the horrible mines in which the Neinians died by the score, scourged to their work until exhaustion overcame them.

The Neinians without exception were shabby, mostly clad in rags. Some wrapped around their chilled bodies torn pieces of cloth taken from ore-sacks. Others had sheets or blankets that also were the beds upon which they slept at night. All were miserable, hopeless.

Disease had repeatedly ravaged their ranks. The cruelties of Dolmician's men had covered them with scars and deformities. Many of the women during the frightful twelve months since Nina's and Allus Marce's failure to save the satellite had gone to unspeakable fates. Repeatedly the squat, frog-like Pleidan soldiers had seized the fairer ones out of the marching ranks, sometimes dishonoring them even in public while the poor wretches cried out for help from their impotent husbands or lovers in the enslaved ranks. Many such ended their sufferings voluntarily in the misery of the platinum pits after the Pleidans had cast them aside again.

So it was with fear and terror that the long line formed each morning to parade through the plaza toward the mines. But this morning, as they moved past, they beheld a sign that caused many to cry out in horror, despite the callousness their plight had cast upon them. Since the day of the capture, Nina and Allus Marce had been singled out by the Pleidans for torture and cruelty. They had been sent to work under heavy guard in the deepest levels of the mines. They had been beaten, starved, subjected to indignities and cruelty.

But today the leaders were no longer in the weaving line. Instead the enslaved Neinians beheld that in the center of the plaza a platform had been erected overnight. On the platform was a post, and upon this structure, their toes scarcely touching the floor beneath, their arms upraised and fastened with thongs, were the two persons all Neina revered. Today, after more than a year of slavery in the mines, the satellite's two leaders had been set up upon a torture-pedestal to be a spectacle!

Instantly, when they had seen it, a murmur of questioning and protest arose in the Neinian ranks. Disregarding the threats of their drivers they paused to see this new horror. What could be the meaning of it? What great occasion were the Pleidan soldiers now planning, that Nina and Allus Marce had been brought from their daily torture to be subjected to this indignity?

A whisper scurried through the smitten crowd. It could mean but one thing; the long-deferred visit of the great Dolmician, Emperor of Pleida and her satellites. Dolmician was coming to take up his summer quarters on Pleida, bringing with him new and stronger armies to garrison the satellite. He had ordered the public shaming of the leaders of Neina to add to the triumph of his arrival. Perhaps he would later order them to be publicly tortured, perhaps put to cruel death high on the gibbet in the plaza.

ALLUS Marce, they could see, was bearing the ordeal defiantly. A faint smile was on his pale face. His teeth were set.

Nina, the Tellurian, lacked his strength of body, but made up for it in fiery resentment toward her captors. Her deep black hair hung down her back as she stood there, her head forcibly turned away from Allus Marce. Her eyes were hollow with sadness, but behind them a light, not of Neina but of Tellus, looked out; a gleam of fury and self-reliance which the Pleidans had been unable to interpret.

Never, the Neinian throngs thought with pity, had this strange woman from another planet looked more beautiful; never had the metal of her soul been clearer to see, her fortitude and bravery more on display.

But they were not permitted to gaze long. The guards, themselves taken aback for a moment at the strangeness and brutality of the sight in the plaza, applied themselves anew to their bitter daily task. The whips cracked. Women screamed. The plaza rang with shouts, lamentations, curses. The line, a long, gray snake, moved on. It filed past the foot of the platform, upon which the sufferers were silent while the people went by.

The sun was rising, casting its pale radiance upon them lovingly. Beneath the platform stood two guards. Nina, tied with her back to Allus Marce in such a way that they could not see each other, spoke softly, murmuring words of fortitude and strength.

Allus Marce, who had been for a long time silent, sighed profoundly.

"It would have been better to have died," he said at length. "It would have been finer to have had my space-ship torn open, to have felt the icy kiss of space. It would have been better to die even in the cold, frightful mines. We have too much strength, Nina!"

She quieted him, speaking again softly. "Marce," she said, "do not lose heart yet."

"Nina—you are so brave! I was a proud fool the day you showed me how to save Neina."

Her voice when she replied to this confession was filled with compassion. "My Marce—" she paused momentarily, then went on again—"you have learned humility and wisdom since then. We shall think no more of it. Look to the future, Marce!"

"The future!" He smiled bitterly. "Everything is lost now, even my courage!"

Far off they heard the shouts of the drivers flailing the Neinians. Many had been set aside for punishment for real or fancied infractions, or as a warning to the miserable race that toiled in the mines. They heard the groans and screams of the victims, writhing in the torture. They heard the gleeful barking of the dog-like animals that always attended these daily *autos-da-fe*—Neina's scavengers, hoping for an opportunity to satisfy their appetites with the blood of the miserable souls who suffered there.

Again Nina started the conversation: "My father has never failed," she murmured. "If there is any way at all, he will rescue us."

He replied bitterly. "So, a little while ago, would I have spoken of my father. But in our nation's direst extremity he has forsaken us."

"Perhaps he went for help."

"From whom? In all the universe there is not one world willing to help Neina, who fought for the freedom of all."

The Coming of Dolmician

THERE had suddenly sounded from the streets below the song of unmuted trumpets, the thunder of great drums, the clash of brass cymbals. The garrison of the Pleidans was assembling hastily. Soldiers came running from their barracks, forsaking their gambling and drinking. Near and far throughout the city were heard the atrocious stridulations the Pleidans regarded as martial music. The troops, stung by the barbarous rhythms, began forming in long lines across the plaza.

Looking upward Nina and Allus Marce beheld the purpose of these preparations. Already in the blue distance of the daytime sky the approaching fleet of Dolmician could be seen; the wasp-like convoy craft flanking the huge space-barge which was the royal ship of the fat Emperor.

It was true then, after all; Dolmician was coming! Throughout the city and even into the deeps of the grisly mines, went a kind

of premonitory shiver. The Pleidan soldiers felt it—so did the Neinian wretches whom they had enslaved. Dolmician, whose cruelty was the talk of five worlds, whose sordid revelries outranked the tawdry displays even of the fat monarchs whose heir he was!

What changes would he make in this enslaved satellite, once he had taken up residence there for the warm season, as was the custom of kings since time immemorial?

The man and woman waiting for him on the wooden platform saw the approaching space-ships as a man might gaze upon an evil destiny. Whatever might befall the other Neinians, the arrival of Dolmician could mean nothing less than torture and probably death for them. How quickly or how slowly would depend on the mood of Dolmician. If he felt sportive they might be kept alive in torture for days, weeks; perhaps even months. If he came angry he might be more quick, therefore more merciful.

Once—twice the swift ships swooped over the waiting city. The soldiers were all in place now, guarding the path their emperor would take from the great public landing field to the palace of Allus. The processional cars were already drawn up, waiting for him. The musicians waited nervously, and Salvarius Carde, in whose hands the rule of the satellite had been placed pending Dolmician's arrival, strode up and down, trying to hide his feelings beneath a cloak of impatience.

A third time the fleet of the Emperor passed overhead in its landing maneuvers, much lower now. A fourth and fifth. The foremost ship swooped suddenly to the ground—struck with a grinding shock.

The others followed, settling in formation, with the huge craft that carried Dolmician safe in the middle. Instantly the bands struck up, blowing as if the fate of the empire depended upon the volume of their music. Slaves in bright green costumes unrolled a long strip of red carpet, of a material like plush, which reached from the largest of the golden street cars to the door of Dolmician's ship.

Doors opened with deafening clangs. Guards from the planet appeared, pouring

forth to assist and protect the Emperor. The soldiers, not to be restrained in their attempt to add further to the din, raised a shout of welcome and adulation.

Last of all, swinging outward on noiseless hinges, the door of the huge royal craft was opened. The courtiers came through it first, in their brilliant colored robes. Then came the court women and the concubines, the pages, the scientists of the court. There was a pause. At last out stepped Dolmician, walking with the aid of his staff of authority, assisted by two guards, one at either side.

The orgulous splendor of this arrival was such as to dazzle the eyes of all beholders. Through the now gaping door of the royal craft came a prodigious beam of golden light, playing on the back of the Emperor with such brilliance that even in the daylight he seemed to be the molten, misshapen embodiment of it. His hands, arms, face and belly seemed to drip golden motes of light; the radiance poured around him, fondling him.

SO overcome were the ignorant Pleidan spectators by this theatrical device that many of them who had never before seen the Emperor fell down upon their faces before the effulgence which they believed to pour from him.

Dolmician entered the car. The beam disappeared. But now he sat on a high dais surrounded by his courtiers and women, in robes of heavy gold and platinum. Upon his head rested the massive crown of the five-world empire, its jewels flashing in the sun.

Salvarius Carde gave a command, arising from his kneeling posture in the dust by the side of the rich carpet his Emperor had trod. The bands, which had momentarily faltered in their outpourings, began again. The procession started through the streets while the soldiers, trained for such ceremonies, cheered until their throats went hoarse and rent their bright uniforms to make flags to wave at Dolmician.

The first of the great cars moved into the plaza. The second came close after it. Straight across the open space they went,

toward the great entrance to the palace of Allus. The course, passing through the double lines of soldiers marking it out, led them directly past the wooden platform upon which stood Nina and Allus Marce.

Dolmician perceived them from a distance. He saw how cruelly they had been trussed up in his honor, how the thongs cut their flesh; how the post made them companions in misery, yet prevented them the comfort of seeing each other in their torture.

"Who are these?" he demanded jovially of Salvarius Carde, who rose alongside.

"Allus Marce—the princeling of Neina who dared to stand against you—and the Tellurian girl, Nina, who conspired with him."

"But what of old Allus and the old Tellurian? I had thought also to have a spectacle of them in honor of my visit."

"Alas, great Emperor, we have not yet captured the old fox and his Tellurian adviser. They have escaped into space, where both may be flying even now into the hot face of the sun, for aught we know."

"Hah!" The Emperor frowned. "I had planned to have a spectacle of them!" His face experienced his sudden displeasure.

Salvarius Carde bowed as deeply as his mount would permit. "I am sorry," he said. "They escaped before we took the satellite, else you should have had them!"

Dolmician's anger for a moment twisted his features.

"You will search for them," he commanded darkly, "if you have to ransack all space. I will have a spectacle of those two old men."

Salvarius Carde bowed deeply again without answering, reflecting bitterly but silently upon the unreasonableness of monarchs.

But Dolmician was in too fine a mood to be long downcast. A second glance at the torture-post of Nina and Allus Marce restored his good spirits. "When we get abreast of them," he ordered, "the procession must come to a halt. I will question these two. I will decide here and now what shall be done with them!"

CHAPTER XIV

The Return to Neina

THE birds of Neina circled over a small, deserted isle in the sea not many miles from Ancienda, uttering wild cries of alarm. Fortunately there were no Pleidans or Neinians in the neighborhood to hear them, for the party from Tellus had alighted secretly there.

It was a barren and secluded part of the satellite, one of a number of rocky islands that gave no ground for inhabitants because of the nature of the soil and the character of the vegetation.

A little back from the coast, the two huge rocket-ships that had borne them lay in a narrow valley, one behind the other. The walls of the vale were sufficiently high to hide the craft from chance voyagers on the surface of the turbulent, chilly sea. Their upper surfaces had been camouflaged by the occupants, who had cut and spread over them piles of bushes. Navigators in the air above the island would have flown past without an inkling that below them rested two such space-ships, so cleverly had they been concealed amid the scrubby growths of the surrounding hillsides and valleys.

Seven days had passed since their arrival there. Now inside the foremost rocket two old men sat in the control cabin and talked of space and science and philosophy, touching on everything except that which was uppermost in their minds. A week earlier an exploration party had been dispatched to the mainland, to learn what had transpired since the coming of the Pleidans. Now the party was coming back again. Watches stationed on the hills had seen the boat pull out from the mainland shore, had seen it laboring in the waves of the ocean that surrounded their retreat. Most of the occupants of the two space-ships were already congregating on the beach, ready to receive the news and hurry it to the leaders in the craft.

But the two old men were holding aloof, as if for them no problems existed except philosophical ones. They were talking of the behavior of kings and princes, of history and deeds of heroism.

"It was the custom of the generals and rulers of Earth to avoid danger; they followed their armies rather than led them, or stayed in pompous palaces and received messages from the battle by relay and electricity," said the old Tellurian, taking up again a topic that had afforded them many hours of discussion already during the weary days.

"And by what curious Tellurian sophistry did they justify that?" asked the Neinian.

"It was believed—and this they often put forth in their own defense—that the ruler of a nation or the leader of an army is more important by far than any or all the members of the body over which he had command; therefore it was more wise for him to remain out of danger while his subjects died than for him to plunge into the battle himself, or to otherwise risk his skin."

"A quaint idea," answered old Allus, tasting the words slowly. "I can half grant its truth in the case of a general, who must remain where he can direct. But as for your kings, princes, presidents—the men who declared the wars, or by whose awkwardness or ineptness the danger came? Did they not go out to the battle line and show the way by example? Or greater still, expose themselves to extreme danger, such as no common soldier among their armies would dare, in order to assure victory?"

The old man of Earth smiled. "Not at all," he admitted. "I am afraid our kings and presidents were made of no such mettle. They took the position, rather, that *they* were the country, being the figurehead and symbol of its government; that the soldiers were fighting to protect *them*. As it was in the ancient game of chess, all places on the board must be ready for supreme sacrifice to save the king."

"Ahh—"

THE Neinian was silent for a long time. The door of the room stood open. Beyond it, through the airlock, they could see the ground outside, covered with bushes, sloping toward the hillside. In the distance there was a burst of shouting as if the frail boat from the mainland had at length come ashore. Neither of the old men moved at

the sound, but old Allus resumed his talking, picking up the conversation abruptly, as if its lagging had just occurred to him.

"Have you ever heard," he asked, leaning toward his companion across the table that separated them, "the story of Allus Svegus, my grandfather eight times removed, who was disgraced before his people through no fault of his own, but who redeemed himself by an act of such stupendous bravery that, though it cost his life, it won back a world and made his people free?"

The Tellurian was silent. Allus went on without an answer. "There was another Allus, too, more recently, who— But I need not tell you specific instances. Kings, princes, heads of great houses among us have always been ready—willing to sacrifice themselves when danger threatened their people—"

The Tellurian nodded solemnly. A babel of voices was drawing nearer to the spacecraft. The watchers on the beach were returning with the members of the reconnoitering expedition. Their voices were high with excitement. Still the old men ignored their approach. They were looking into each other's eyes, and seeing understanding there.

Suddenly the Tellurian rose and took old Allus firmly by the hand.

"There was an old story among us," he said softly, "of a great leader, taking his people from wilderness into life, who climbed a high mountain and saw the promised land, but was destined never to enter into it—"

His voice came suddenly to a pause. The messengers were already at the door, clamoring to tell what they had learned.

Allus was first to question them. His voice, steady enough a moment before, now began to tremble. His face was filled with eagerness. "Tell me," he asked, "what is the state of my beloved Ancienda? What did you see when first you made your way into the city that was foremost on the satellite?"

"We saw people beaten, shamed, publicly tortured in the streets; women degraded before their men, the city a shambles, the swine of Pleida occupying the fine apartments once reserved only for the nobles of

Neina." Their leader spoke for them; the others nodding silently.

"And—what of Allus Marce?"

It was the Tellurian who had asked the second question. Those who had just returned noted that his voice trembled also. This question, they knew, lay next to the one he had so far refrained from asking, though it was on his heart.

"We saw him—standing upon a kind of gibbet in the great plaza, to be mocked by the Pleidans and shamed before his people."

"And Nina?" For a moment the answer did not come. The leader of the expedition, the old man saw, was loath to speak.

"Where is she?"

"Master—she is a public example with Allus Marce. "This day they took her out with him to stand, strung up by the hands, before the groaning slaves of Neina. The Pleidans spat upon them and defiled them with words and shouting . . ."

The Message

AT this the other Neinians put their heads down and murmured, fearing for the old Tellurian's reason, for they saw a strange expression come into his face.

"A prisoner?"

"Yes."

"Then she is still alive! She is at least alive!" the Tellurian cried it out. "I have still something to fight for and to live for in this universe!"

He was like a man suddenly released from a dungeon in which he had been long imprisoned. The Neinians stared at him amazed, for to a Neinian nothing, even death, could be worse than public disgrace. Yet here was this Tellurian in transports of relief and gladness!

"Now it is time for us to strike," he exclaimed. "Now we must liberate Ancien-da!"

"But you do not understand," the scout leader exclaimed in return. "Dolmician is here—on Neina. His soldiers are as the leaves of grass. He has taken up residence here; it was for his triumphal coming that Allus Marce and the Tellurian girl were placed in the plaza. It was that he might

see them there and judge them, and mete out punishment upon them as he saw fit."

"Dolmician? Dolmician here!" The old Tellurian puckered up his lips, as though he were about to whistle. But no sound came forth. "So!" he went on, "and what was his judgment upon the two when he beheld them in the plaza?"

"At first he mocked them, calling out questions while the crowd roared with laughter. 'I hear,' he said, 'that the father of one of you was a cowardly jackal-dog, of the other a nanny-goat that ran of fright. Now tell me, which is which?'"

"They would not answer, so he tried again: 'I hear that one of you is a great space-soaring eagle, who loses battles in the air; and the other is a blind-mole who tunnels in the earth, and loses nevertheless on the ground. Now tell me again, which one of you is which? Which is the woman, and which is the suckling pig?'"

"With that they did not answer again, and the Emperor pretended great anger at their incivility. 'Where are the whippers?' he cried. 'Are they to stand by and see my most civil questions go unheeded?'"

"And then—"

"The whippers came running from the ranks, and curled their long lashes against the bodies of the two tied to the post."

"Then did they answer?"

"Master, neither would cry out or answer or beg mercy, as Dolmician expected. I saw blood run from the torn skin of Nina, but she did not flinch from the lash. Instead she stared impassively at the Emperor, as if she were stone and he an object of no importance. But Allus Marce smiled until his white teeth showed between his lips, but he made no sound.

"Then Dolmician held up his hand to stop it. 'They shall not be whipped to death,' he commanded. 'It is too easy for them. Instead, let them be brought out into the plaza tomorrow, and lashed to the pole as they are now, so that all Neina may see how merciful is Dolmician to his enemies!' The crowd roared again at this, but Dolmician commanded silence. 'And when the time is two hours past the middle of the day,' he finished, 'Neina shall also see how

Dolmician kills his enemies, for I shall come then to this same spot and show you new tortures I have brought with me from Pleida!"

THE Tellurian was flushed with emotion at the end of this recital. "Proceed!" he commanded tersely.

The leader of the scouting party went on. "There is little more. When Dolmician had finished speaking the caravan drove on into the portal of the palace of Allus. For it is there, Masters, that Dolmician will make his home. Meanwhile, Salvarius Carde has started search for both of you. He has been ordered to produce you before the Emperor, even if it is necessary to fly through space as far as the sun to catch you and bring you back."

But neither of the old men had heard the leader's last remarks. Both were busy with their thoughts.

"What do you say, old Allus," the Tellurian demanded. "Does Dolmician's presence here defeat our plans? Is there no hope now to save Neina?"

The head of the house of Allus straightened his shoulders, threw his proud old head back. He spoke to the Neinians:

"We will send a message to Nina and Allus Marce, and to all the people of Neina today," he commanded. "To my son and the Tellurian girl you will transmit it wrapped around this stone, which is a piece of red granite from the Earth. To the enslaved Neinians you will transmit it by word of mouth, going into the mines and hovels all through the night, until all have received it. For the rest you must depend on me!"

He placed a gaunt hand upon the shoulder of the silent Tellurian.

"The message is this: *When the great palace of Allus shall fly on the wind like thisledown, then you shall know that Neina is free, that Tellus awaits, that help is at hand.*"

The Neinian members of the expedition, hearing this, looked at one another helplessly, but took the message nevertheless and transmitted it.

CHAPTER XV

In His Enemy's Hands

THE great Dolmician, emperor of Pleida and her nine satellites, sat amid his courtiers and hangers-on in the palace of Allus at Anciendia and reflected with lusty Pleidan distaste on the graceful, almost Gothic beauty of the palaces and houses of the leaders of Neina.

His own palace at Nealoma, capital city of the planet, was an enormous, squat, rambling structure, built throughout of gleaming stone, richly and vulgarly ornamented with patterns of gold, silver and platinum. It was pretentious, grotesque in its costly ugliness; a hideous squat monument to the cruelty, lust and garish bad taste of a long line of Pleidan rulers. It was such a palace that Dolmician preferred, but there was nothing like it anywhere on the little satellite, and for the time being he had to be content.

He rested among cushions in the great inner chamber, his short, ugly body decked with raiment of many colors, each signifying some rank, power or dominion usurped either by himself or his ancestors. His head sat close upon his shoulders, connected by a thick neck as wide as his jowls. His haunches were heavy, and his belly round and bloated with too much easy living. But his face was the most unpleasant of all.

His mouth was wide and thin-lipped, paralleling the line of a pointed chin that contrived to twist his features into a continual crafty grin, even when it was in repose. His nose was short, almost invisible. The nostrils opened outward instead of downward, showing two breathing holes above his lips like those of a horse. It was his eyes that betrayed his unending malice. They were small and piggish. At the outer corners innumerable tiny wrinkles spread out fanwise toward his temples.

Close beside him sat the court women on their cushions. The ones on either side of him were his favorites. They were fondling him as he returned their caresses openly, caring nothing for the eyes of at least half

a hundred courtiers and attendants who sat farther back.

All were drinking the heavy, greasy wine of the Pleidan court, repugnant and over-rich to other palates, but considered a great delicacy to all true Pleidans. Dolmician drank freely from a huge platinum bowl which he held in one jeweled, pudgy hand. The others had smaller cups.

"The platinum of Neina!" he shouted, holding up his cup to be refilled. The nobles and the women laughed, responding to his remark as to a toast. "Here is a cup that cost a good many worthless Neinian lives!"

Again they laughed. It was a huge joke among them, the enslavement of the peoples of the satellite.

"Salvarius Carde reports that he will double their production by placing whippers at every level in the mines," shouted a courtier.

"The shipments are already being sent to fill the royal metal houses," another called. "We shall have to transport a few thousand slaves to Nealoma to build new bins for this Neinian platinum!"

At these sallies the great Dolmician, half drunk, lay back upon his cushions and roared with heavy laughter. "We have caught them all except the old Tellurian and old Allus. They put their tails between their legs and ran away into space. It would be a good thing for them if the sun has got them!"

A courtier laughed. "Aye, for if he hasn't, Dolmician will in good time!"

ANOTHER took up this line of boasting, which so pleased the Emperor. "The son of old Allus is already strung up again today in public, for our men to spit upon until time for the tortures!"

"And the daughter of the old Tellurian, whom he left behind. Is she out there too?"

"She is, Master."

Dolmician half rose, as if to go and see them for himself, but settled back again, chuckling.

"It yet lacks two hours of the appointed time," he observed. "I would not spoil the soldiers' fun by beginning before they had

assembled to watch Dolmician's skill!"

At this the whole assemblage shouted with laughter and appreciation, but Dolmician waved them down, his eyes sparkling and shrewd. "I promise you," he said, "that if we catch the two old men it will not be the soldiers that shall have all the fun. We'll have the cowardly old fools before us here—and you shall observe in private how Dolmician treats his special ancient enemies!"

Outside the palace, in the broad plaza, a great throng of Pleidan soldiers had gathered, drawn together by some object of curiosity, anger or contempt; some nucleus that was moving slowly and steadily toward the entrance of the great hall of the palace. As the object of its emotion advanced, the crowd also moved, still surrounding the attraction like phagocytes.

That object was an old man, a Neinian. He had been beaten and robbed, and he was now suffering silently under the contemptuous cries, the epithets and the more physical insults of the Pleidan crowd. But like a machine without emotions either of hatred or shame, with only a dogged knowledge of a thing that must be done and endless determination to do it, he was moving toward the palace and Dolmician.

It was old Allus.

On either side of him marched a member of the Pleidan civilian-police, a kind of home-guard soldier, brought over for his own protection by Dolmician. They were holding the old man roughly, yet with a certain respect, despite the threatening attitude of the crowd. It was they who made it possible for him to proceed toward the palace, for they were opening the way ahead by the continual threat of their weapons.

Old Allus' right hand was empty, but in the left he held a glistening black object engraved with a fine pattern of white metal and embossed with the insignia of his house. It was a kind of amulet, a symbol of authority. To hold it so, in the palm of the left hand, lightly gripped, was a token of truce or surrender, assuring the wearer protection and some position of respect while he sought an official among his enemies with whom he might parley or surrender himself as a prisoner.

The noisy crowd with its silent kernel progressed along the street toward the palace. When they reached the huge open portal, through which a sloping stone hallway swept toward the audience chamber, old Allus called a halt. "Send in word," he commanded calmly, in a low voice. "Tell Dolmician that old Allus is here to seek sanctuary with him. He will be glad to hear from me!"

A messenger was dispatched. The old man waited patiently, his head bowed, apparently oblivious to the curiosity and insolence of the Pleidan soldiery. By lifting his head he might have gazed upon Nina and Allus Marce, trussed at the center of the plaza. But they, he was aware, had not watched his shameful progress across the plaza, had not recognized him, so sunk were they in misery already. With a shrug of his shoulders he forbore to call their attention now to him, or to say a word of farewell.

It was with similar feelings that he looked at the proud arched door before him, remembering how many times he had trod that hallway in happier times, amid the shouts of subjects instead of the jeers of captors. That Dolmician was now using his own house filled old Allus with disgust and loathing, but he steeled himself to bear it, as he was bearing the indignities now being offered him.

One of the Pleidans called: "Can this be the proud ruler of Neina?"

Another shouted: "The old lion of Anciende is now a supplicant at the feet of Dolmician. It would serve him right if we tortured him publicly and sent him in to the Emperor in pieces!"

The Chair of Torture

AT this suggestion, the first concrete offer of violence, there was an angry surging in the crowd. Hands plucked at the frayed robe of the deposed ruler. His two guards beat them down.

"Allus," murmured one of the guards, "there is no reason why we should not turn you over to your enemies here on the spot, but you have come bearing your insignia of surrender, and we shall obtain for you an

interview with the Emperor, if it is possible. Look sharply—there is a break in the crowd in front of you. Dash through it and into the palace. The soldiery will not dare to follow you there. You will be safe until the messenger returns with instructions."

The old man saw that an opening had indeed been made toward the front. But he looked steadfastly into the eyes of his guards and refused to follow their suggestion.

"I have come this time to Anciende as a supplicant, it is true," he said, "but the ruler of Neina does not run from a rabble. Your arms are sufficient to protect me; I shall remain here until the messenger comes."

He said it so proudly that for a moment even the noisier members of the crowd were silent, observing the regal bearing of this despised and dishonored old man. His words did more to quiet them than the efforts of his guards.

Before the men on the outer fringe of the rabble could renew their demands for his blood, ample evidence came to them that the Emperor had heard of old Allus' presence.

It came in the form of a squad of soldiers, part of the inner palace guards, preceded by three trumpeters blowing loud blasts upon their horns. With them returned the messenger, who eagerly pointed out the former ruler of Neina, as if there might be some doubt as to which one of the crowd he was.

The captain of the palace guards immediately took charge.

"Are you armed?" he demanded.

Old Allus made no answer except to raise his hands. The guards and the people saw through his torn and soiled raiment. There were obviously no weapons upon him. His left hand clutched the pathetic bauble that had been an indication of his rank and was now a token of surrender. His right was empty—a withered old hand that had once gestured with authority, but which was now not sufficient even to hold a staff to aid his faltering steps.

The guard nodded curtly, his heavy, frog-like head moving awkwardly on his neck. The two members of the planetary police stepped back; the squad of palace guards formed a small hollow square, with old Al-

lus in the middle. With the trumpeters again ahead of them, they marched into the edifice that yawned before them, toward the inner room where Dolmician sat surrounded by his women and his nobles, ready to receive this deposed and despised former ruler of a satellite.

Slaves were pouring more wine into the platinum goblets. Old Allus held one in his right hand, smelled the stuff and calmly poured it out upon the burnished floor with a wry smile.

"I appreciate your hospitality," he said in mock apology, "but I am no barbarian. I cannot drink this stuff."

Dolmician was livid with rage. A captive had dared to insult him in the public hall, before his nobles!

"You come here as a supplicant, asking mercy of your rightful master," he shouted. "Then you insult me when I offer you wine—the royal wine of Pleida, which is good enough—too good, in fact—for any Neinian swine!"

He roused himself from his cushions, sat upright. He continued his tirade, shaking a pudgy hand toward old Allus, who stood silently among the guards.

"You were a coward—you ran away from Neina when you saw that we had conquered her. Now you come here before me, sniveling, dissembling, begging mercy for your withered old bones. Mercy—for you, when your people have been enslaved to pay for your own and your son's stubbornness—"

HE paused to blow for breath, his face apoplectic. Old Allus still stood before him without any visible display of emotion. Dolmician saw that the old man with his quiet fortitude was the more powerful figure; that he was only making a spectacle of himself before the others in the room. He smiled, grew crafty. His eyes gleamed maliciously as he continued in a subdued, honeyed tone, speaking this time to the nobles and the women:

"But after all, he is an old man, is he not?" he questioned, mockingly. "Why then we shall forget our just resentment of his conduct, and he shall amuse us with his

antics. Guards, bring for this gentleman the special chair—the guest chair—"

He waved indolently toward an alcove. There, as the curtain was raised, the assemblage saw the hideous Chair of Dolmician—the chair renowned throughout the empire, from whose seat no one bidden to rest there ever got up alive. It was the chair of refined and subtle cruelties that had been the end of many a state prisoner, the chair that went everywhere with Dolmician, as much a symbol of his power as his crown.

"There!" Dolmician laughed with satisfaction as they dragged it out, wheeling it upon rollers to a spot near old Allus. "It is my choicest honor—to sit there. It is the chair I reserve for my most select friends—"

He paused, his lips parted expectantly. Old Allus glanced at the implement before him, and smiled in return.

"Very well," he said quietly, "since it is your desire, I shall sit in it. The chair looks innocent enough."

There was a suppressed murmur in the chamber as he stood before the engine that would surely mean his death by torture. None dared to warn him; yet several would have, since he seemed so innocent of Dolmician's real intent. Calmly he turned his face toward the emperor, reached back and grasped the arms of the hideous trap, and lowered himself into it.

"There," he said. "I am seated—" His eyes swept the room, scanning the faces of those present, and coming back at length to the laughing countenance of Dolmician. "But—" he continued abruptly, in an even tone, though with such steely assurance that the whole room was swept into a shocked silence by his words—"I warn you, Dolmician, not to give the signal that I see is even now on your lips. This chair, so long as you do not direct otherwise, is only a chair, and I advise you to allow it to remain so until you have heard me out."

He held up his right hand to enforce a continuance of the silence his words had wrought. The gesture was so imperious that even the emperor's face sobered and his tongue was still. The members of the palace guard hovered over the prisoner, but he dis-

regarded them, leaning forward casually to continue his remarks as calmly as if they were only part of the conversation of a mid-summer's day. His manner deceived no one, least of all the Emperor who detected in this man's tone a dangerous timbre, a note as metallic and confident as the sound of a saw.

"I came here," said old Allus, "because I had a favor to ask of you, Dolmician. In doing so I dedicated myself to death, for I well knew that I should not escape from your palace alive." He shrugged his shoulders ever so slightly, as if to signify that it was of great moment what became of him.

"But in order to make sure that you should not accomplish my demise before you had granted the favor I am about to ask of you, I brought along something that should be of interest to all present."

SLOWLY he extended both his hands, palms upward. In the right there is nothing, but in the left they saw his amulet glistening, a black bobbin half the size of an egg. And as he showed it they perceived that he held fast to it at one spot with his thumb, never for an instant relaxing his pressure at that point.

He smiled a little as they gazed at it. "The amulet is hollow," he explained, "and contains about an ounce of a most powerful explosive. The old Tellurian prepared it for me, supplying likewise a detonating mechanism that works instantly. All I need do is lift the pressure of that thumb and we should all be blown to atoms, together with this palace and its guards and a portion of the city around us. But stay—do not move.

"If I see any man stirring before I give him leave I shall be tempted to lift my thumb. As for you, Emperor, I charge you do not order the current to be turned into this chair, for I shall never die by torture, and you will not live to triumph over me."

When he had finished there was a hush so intense in the hall that the cries of the rabble outside the palace gathering before the two sufferers on the dais, were clearly audible.

Dolmician was trembling like a man with ague. He could scarcely gain command of himself.

"Speak," he commanded hoarsely, "what have you come here to ask of me?"

The voice of the old man was terrible in its quiet intensity as he replied.

"Let my people go!"

"Don't be a fool! I shall not do that."

"Very well then, it shall be done for you."

Old Allus raised his steady left hand. "Already my thumb is tired. I have held this weapon for a long while. But before I go, and before you go with me, Dolmician, let me tell you that I had arranged also for this contingency. Plans are already afoot upon the satellite for revolt. Backed up by support from the planet your soldiers would probably win and the revolution could not succeed. But with you blown to bits, your palace and the capital city in ruins, your empire shaken and disorganized, we can sweep them out of our cities and hunt them down like rats. And that is what will happen, if you do not give the word!"

Dolmician stared at his prisoner with crafty eyes.

"And if I do yield," he said, "what then?"

"I shall hold to my amulet until I have assured myself that your promise has been made good. Then, since I cannot release it without death to myself, I shall go to some waste desert place outside the city—and raise my thumb."

"Well, then—" The Emperor paused a fraction of a second, while he turned over in his mind his entire bag of tricks, seeking the best one to employ in this predicament. "In that case I shall have to accede—"

But old Allus had perceived his hesitation, had seen the shifty eyes of the frog-visaged man before him, and was not fooled.

"Hold on—do not move," he warned. "If you are sincere send for a messenger, who shall write down an order to your commander, Salvarius Carde, as I dictate it. That order you shall sign with your imperial seal, and we shall sit here locked in this chamber together until we have had word that the order is being obeyed."

The Emperor stirred angrily, seeing that his opportunity for a trick had been snatched away.

"This has gone too far!" he exclaimed.

"Then you will not accept my terms? I am sorry."

The ruler of Pleida and her satellites was half rising from his position on the silken cushions. His face was livid. "Turn on the current in the chair!" he commanded. "This old fool has no explosive in his hand. He is only making sport of us!"

Instantly the guards sprang to do Dolmician's bidding. In the same instant, as if he had been waiting for it, old Allus leaped out of the deadly chair's embrace and raised his left hand high above his head.

From the throats of the nobles and the soft-bodied ladies of the court there burst a scream of terror. They saw the ancient ruler of Neina changed suddenly from a bearded and quiet patriarch into a wind-blown prophet of doom.

"If you think I am lying," he cried, "you shall learn better now!" and cast the amulet down upon the hard floor at Dolmician's feet.

Fascinated by terror the others saw it spin for a moment there. The Emperor's eyes were glued upon it; his flabby body was fixed in the crouching position he had assumed when he gave his order.

The earth seemed to open at his feet. Where there had been solid stone there was nothing, neither up nor down nor at the side. A thunderous roar traveled over the city like a cloud of heavy smoke, accompanied by the ominous cracking of walls and the rumble of caving masonry.

CHAPTER XVI

The Great Migration

IT was a roar that seemed to echo 'round the whole satellite of Neina. It was a signal that thousands, forewarned, had been waiting for.

Out of their holes rushed the Neinians, armed, determined, attacking the city of Anciendia. The palace of the house of Allus came down in a tremendous cloud of dust

and flying debris, which flew out over the plaza, obscuring the pathetic figures of Nina and Allus Marce, hanging upon their platform of shame. But they did not long remain in the choking fog that closed down over them. Eager, gentle hands untied the hateful thongs, cried out words of love and encouragement to them both.

At the foot of the platform the old man from Tellus was standing, waiting for his daughter, oblivious to the frightful battle going on about him. The din came faintly through the strangling dust, now faint, now clashing loudly, mingled with the cries of the enraged Neinians and the guttural, throaty shouts of terror-stricken and disorganized Pleidans.

Faltering, almost unable to walk, Nina descended first. The old man seized her to him, kissing her.

"Nina, Nina—" He seemed for the moment to be so overcome with joy that he was unable to go on. "Nina—we have prepared a place for you. Go with these guides—!"

Allus Marce he greeted as tenderly. "The greatest patriot the house of Allus has ever produced has given his life and saved his people," he said. "Now you are head of the house of Allus!"

Allus Marce looked at him quizzically. "You have word of my father?"

The dust had begun to settle around them. Now they could see the horrible carnage of the plaza, where the frenzied Neinians were massacring the troops of the late Dolmician. It seemed they were everywhere; Neina had risen en masse for this revolt. In the mines, at the signal, they had turned savagely upon their guards and whippers, had conquered them, had come pouring up out of the ground to fall upon the bewildered and leaderless Pleidans.

The soldiers from the planet, unable to direct themselves, were screaming for their officers, particularly for Salvarius Carde, the tyrant. But he would never again command them. He was buried under many tons of masonry, and his staff with him.

"Your father has killed Dolmician, blown up half of Anciendia and made this rebellion possible," murmured the Tellurian.

"My father!" Allus Marce's voice rang with a strange mixture of sorrow and joy. "He was no coward after all?"

"Old Allus was the bravest man of the Neinians—" The Tellurian turned away impulsively as he spoke, brushing tears of emotion from his eyes. "We have lost a great man to gain Neina's freedom."

BUT the significance of his words was partly lost on Allus Marce, who had, in the course of a few seconds, become a new man. Gone was the shame of his crucifixion in the plaza; gone the despair and dejection that had stared from his proud eyes. Gone also was the false pride that had marred him before the great battle with the Pleidans. He seemed to rise in stature, firm, sure—a true commander.

"*The new head of the house of Allus will try to be worthy of the old!*" he exclaimed. "That is a formula that members of our house have exclaimed time out of memory upon their coronation. But never before was it said with more meaning!"

The Tellurian clasped his hand. "I believe you are fit to be king of the new world," he murmured. "And Nina—"

"She shall be queen!" cried Allus Marce.

* * *

Who shall say what were the feelings of the Neinians when they embarked upon that last journey away from their native earth, abandoning it to the elements?

There were many who refused to go, preferring death upon their cold satellite's familiar lands than life on a world strange to them.

There were others who entered the great space-cars trembling with terror at the dangerous passage ahead of them, the uncertainties of the new life. Neinians who had once been proud came humbly before the old Tellurian and Allus Marce, and took their places in the terrifying space-cars like peasants, abject, unresisting.

But there were also many, particularly the young, who came joyfully, scorning the weakness and sentimentality of their elders, eager for new sights and new experiences. They came with their necessary household appliances strapped to their backs, with pet

animals, seeds, birds—all manner of things for the new world, like the peoples of old who crossed the trackless Tellurian prairies of North America surrounded by trinkets and mementos of the lands they were forsaking.

The old Tellurian and Allus Marce had seized many of the great transport ships of the Pleidans, and had made them over into suitable craft for the journey to Tellus. In all, more than nine hundred were filled with inhabitants of Neina. Additional craft were loaded with foodstuffs, seeds, building materials, tools, apparatus—all of the things the Neinians might need before they had learned to extract such substances from the wrinkled skin of Tellus.

There were also animals—the domestic *buljars* of Neina, which yield both milk and labor, the bright-hued birds of the Neinian forests, insects such as were deemed necessary for the fertilization of growing things. Some space-ships were like Arks, providing room for at least a pair of every common living thing to transplant upon Tellus; the useful, the ornamental and even creatures that had been considered nuisances. Who shall see what is a nuisance and what necessary? It might well be that what on Neina was a detriment would become on Tellus the virtue of virtues.

As fast as the ships were loaded the old man gave the sign that sent them on their way, each managed by a skillful and experienced navigator. On Pleida, he knew, an expedition was already being formed by Dolmician's successor to reconquer the satellite. There was no time to be lost in debarkation.

The ship containing the Tellurian, Allus Marce and Nina was the last to go. In the plaza the bareheaded throng of those who had pleaded to be allowed to remain with their dying world until the end, watching silently while the last of the space-ships was loaded and prepared.

"People of Neina," cried Allus Marce at length, "are there any more who wish to go? There is a little room."

But the throng remained silent. The old man gave the signal. Allus Marce entered. The heavy doors clanged shut.

Back came the huge lever in the control room that started the huge rockets in the tail. Nina and Allus Marce stood in their cabin near the nose, staring out of the round windows through which they were to view the disappearance of a world, the procession of the firmament, the growing of the sun. They were clasped in each other's arms.

"I love you, I love you," whispered Allus Marce as the huge rocket ran along the launching-way, fire shooting from its hundreds of combustion tubes. Nina did not reply, but rested her head against his breast. They felt the great craft tear into the atmosphere; they experienced the tremendous sensations of acceleration; the crushing speed of the ascent. Their ears throbbed; their hearts pounded.

In a moment they could look out again. Behind them slowly turned the forsaken

satellite. Allus Marce looked back at it. His eyes were filled with tears.

But Nina motioned for him to stand beside her at a window near the space-craft's nose. Even without the telescope they could now see the cloud of vessels that had preceded them, speeding off through inky space toward Tellus.

"Neinians shall people the universe," she declared earnestly. "Today I am a prophetess, and I foretell it.

"From Tellus they will draw strength to spread out among the solar earths, from whence, in eons to come, they shall speed as bright envoys of the sun and its peoples to planetary systems of which we have no knowledge. It is their destiny—and ours!"

Allus Marce held her at arms length, looking at her. "My people have much indeed to learn," he exclaimed, "from Tellus!"

THE END

What Is Your Knowledge Of Science?

Test Yourself By This Questionnaire

-
1. What are two well known theories to account for man's evolution? (Page 1267)
 2. What is known about the cosmic rays? (Page 1269)
 3. What is the "walking leaf"? (Page 1291)
 4. What speed is necessary to circle the earth at a height of 500 miles, as a free satellite? (Page 1298)
 5. What important atomic experiment did Rutherford perform? (Page 1305)
 6. What is the Einstein belief as to the shape of our universe? (Page 1213)
 7. Name some of the larger asteroids? Page 1236)
 8. What is polyandry? (Page 1245)

An Adventure In Futurity

(Continued from Page 1251)

For me, the hour was full of infinite sorrow and a strange excitement, in the realization that man was abandoning his immemorial home and would henceforward be an exile among the worlds. But the face of Kronous was a marble mask; and I could not surmise his thoughts and feelings.

At last he turned to me and smiled with an odd wistfulness. "It is time for me to go—and time for you also," he said. "Good-by, Hugh—we shall not meet again. Remember me sometimes, and remember the

final fate of the human race, when you are back in your own epoch."

He pressed my hand briefly and then climbed aboard the space-liner; and he and Altus waved to me through the thick crystal of a sealed port as the huge vessel rose in air for its flight upon the interplanetary void. Sadly, regretting almost that I had not insisted upon accompanying them, I locked myself in the time-vessel and pulled the lever which would begin my own flight across the ages.

THE END.

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Science Questions and Answers



THIS department is conducted for the benefit of readers who have pertinent queries on modern scientific facts. As space is limited we cannot undertake to answer more than three questions for each letter. The flood of correspondence received makes its impractical, also, to print answers as soon as we receive questions. However, questions of general interest will receive careful attention.

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These nationally-known educators pass upon the scientific principles of all stories.

Motion in Space

Editor Science Questions and Answers:

If an object were dropped from outer space and did not strike a planet, star or some other heavenly body, would it ever reach a destination, or is space limitless?

Daniel Schwartz,
842 Saratoga Street,
Newport, Ky.

(We believe our correspondent is under a misapprehension with regard to the nature of outer space. In outer space there is no "up" or "down" such as we know it. We think of "up" as the direction away from the earth and "down" as the direction toward the earth. Now if one were far away from any heavenly body, there would be no sense whatever of "up" or "down".

Furthermore there could be no such thing as "dropping" a body. That term again is purely terrestrial. We drop a body when we hold it above the earth and then release it so that the earth's attraction can pull it toward her.

Now if we were in empty space far from any heavenly body, and were to release our object, then for all practical purposes, it would remain right where it was placed. In reality it would move, extremely slowly, attracted by some other body, such as a star or planet and it would move toward that star or planet and hit it. Therefore by the definition of terms such a thing as our correspondent pictures could not occur. To understand such phenomena as occur in outer space one must leave behind all of his purely terrestrial notions, and get back to fundamental realities.

If there were only two heavenly bodies in the uni-

verse, the earth and one other, no matter how far away they were, they would eventually be drawn to each other by the power of universal gravitation and finally either hit each other or form some sort of a dual heavenly system, rotating about each other. There can be no state of rest in a universe filled with matter.—Editor)

New York to San Francisco

Editor, Science Questions and Answers:

I have an argument on my hands which I would like you and the readers of *WONDER STORIES* to back me up on, if I am correct. Otherwise, pull me all to pieces!

Let us consider San Francisco as being 3000 miles west of New York for convenient reckoning. Now let us assume that a plane leaves New York at 12 noon on Jan. 1st, headed for San Francisco at a speed of 500 miles per hour, as registered on its dials. It is claimed that the plane travels West in space, and that flying from San Francisco to New York under the same conditions, travels East in space (3000 miles).

I contend that the following applies—The earth revolving on its axis presents (roughly) 3000 miles of its surface to the sun in 6 hours and that the plane in flying from New York to San Francisco (West) actually merely suspends itself above the earth and the earth presents a point 3000 miles West on its surface for the plane to land on, and that the plane instead of flying West is actually moved East in space to the extent of (roughly) 400,000 miles, (1/365 of 1/365 of the earth's orbit around the sun which is taken as being 578,000,000 miles).

(Continued on Page 1330)

In traveling from San Francisco to New York I maintain that the opposite of the above is not applicable. The plane flies supposedly at 500 miles per hour East, the earth rotates at the same speed, therefore it would seem that the plane would land on the point it started from. However, the plane would have to travel twice the speed, and which I claim it does, to arrive in New York in 6 hours, although its tachometer, etc. would read 500 miles per hour.

In the plane's trip to New York (East) its record would be the same, except that it actually moved West—zero, but backwards, East, 400,000 miles.

E. A. Darmer,
18 Central Ave.,
Hasbrouck Heights,
New Jersey.

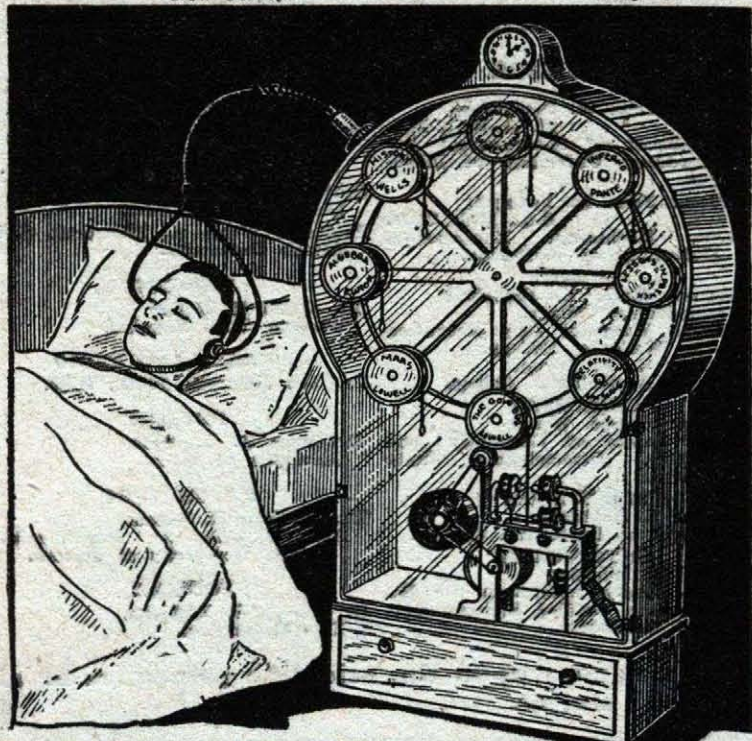
Learning While Sleeping

Editor, *Science Questions and Answers*:

On looking into "Who's Who", I found under the biography of Hugo Gernsback, editor of *WONDER STORIES*, that he has invented a machine to teach people while they are sleeping. Will you please explain how this is done?

Charles M. Waff, Jr.,
College Station,
Maryville, Tenn.

(Many years ago Mr. Gernsback planned a device for enabling one to learn while he sleeps in order to overcome the terrific loss of time incurred by sleeping. He figured that for 1/3 of our lives we



(In the above discussion, one vital point must be kept in mind. An airplane travels through the air, it moves by the traction of its propeller through the air, just as a boat moves by the traction of its screws through the water. Now the air above the earth is just as much a part of the earth as the water is. The earth rotates about its axis once in twenty-four hours carrying both air and water with it, and for the purpose of this discussion the air above the earth may be considered as rigidly fixed to the earth.

Now when the airplane is on the ground it is being carried through space with the earth, by the earth's rotation, for as we have said the air is rigidly fixed to the earth. Therefore, for the purposes of this discussion the motion of the earth on its axis may be disregarded. So in order for the plane to go from one point on the earth's surface to another it must cut its way through the air, just as a boat must.

However, if a vehicle of some kind were to rise above the earth's atmosphere, then it might be freed of the rotation of the earth. If it rose above New York and remained suspended in space, the earth would move under it and in a few hours it could descend, theoretically to San Francisco. If it were at San Francisco, and wished to move to New York it must acquire a speed greater than the earth's rotational speed at that point. In other words in order to remain above the same point, above San Francisco it must move eastward in space at the rate of some 700 miles per hour. To catch up to New York it must move faster than 700 miles per hour.

Meanwhile the earth is moving in its orbit around the sun at the rate of some 1,500,000 miles a day. Inasmuch as the plane when it rises from the earth has already the earth's orbital velocity, it will keep that velocity which may be disregarded.—Editor.)

The operation of the Hypnobioscope invented by Hugo Gernsback.

Each reel on the machine contains an educational lecture or a subject of entertainment. The wire on the reel being used passes between electromagnets (seen in the lower part of the set) where the magnetic fluctuations of the wire are induced into the magnetic circuit. The current produced is amplified and changed into sound vibrations which pass to the sleeper through headphones.

are almost entirely unconscious, practically speaking, dead; therefore the man of 70 has lived but 45 years.

The device utilizes the telegraph principle. The speech is passed through an amplifier and through a microphone and through electromagnets by which process it is transformed into a series of magnetic fluctuations. A steel wire passed between the magnets is polarized with these fluctuations.

To transmit the speech from the wire, the wire is unreel between electromagnets and induces in the magnetic circuit a fluctuating current which is passed through amplifiers and through a microphone into speech. To transmit the speech to the sleeper, headphones may be used, as shown in the illustration. The telegraphone is an established instrument, used extensively by the telephone companies for recording telephone conversations. Its utilization is new.

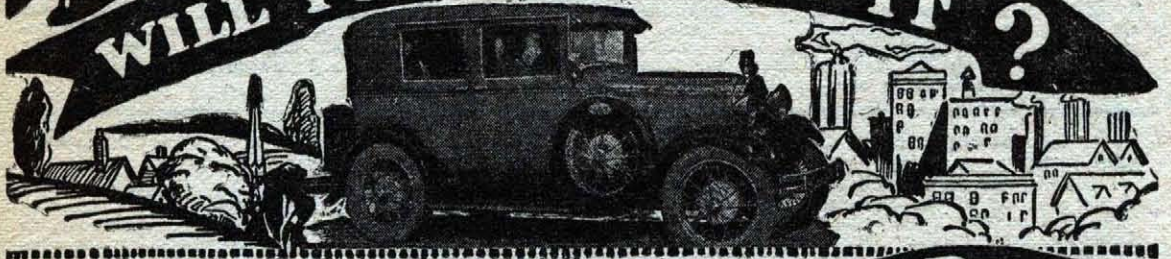
Thus a man sets the dials on his machine to begin playing a reel for, say, a lecture in history at midnight. Each lecture is to last one hour, and at the end of an hour the reel is automatically changed. Thus during a night, from midnight to six a. m., six hours of instruction may be received.

This device, called by Mr. Gernsback, the "Hypnobioscope" was tried out successfully by J. A. Phinney, chief radioman, U. S. Navy and utilized at the Pensacola, Florida Naval Training School. Here one may see naval students stretched out on long benches asleep with casket-like coverings over their heads. The caskets contain two telephone receivers through which radio code is sent to the sleeper. It has been demonstrated that the sleeping student can be taught code faster than by any other means, for the subconscious mind never sleeps. Students who have failed in their studies have passed examinations after being taught by this method.—Editor)

(Continued on Page 1342)

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The Reader Speaks



IN this department we shall publish every month your opinions. After all, this is your magazine and it is edited for you. If we fall down on the choice of our stories, or if the editorial board slips up occasionally, it is up to you to voice your opinion. It makes no difference whether your letter is complimentary, critical, or whether it contains a good

old-fashioned brick bat. All are equally welcome. All of your letters, as much as space will allow, will be published here for the benefit of all. Due to the large influx of mail, no communications to this department are answered individually unless 25c in stamps to cover time and postage is remitted.

Interplanetary Progress

Editor, WONDER STORIES:

I believe your readers would be interested to know of the showing of the German U. F. A. moon film, "The Girl in the Moon" under the auspices of the American Interplanetary Society at the Museum of Natural History in New York on January 27.

By the courtesy of Hugo Gernsback, editor of *WONDER STORIES*, we invited to the showing five hundred subscribers of *WONDER STORIES* who lived in the metropolitan neighborhood. The showing of the film and a lecture by Robert Esnault-Pelterie (he was unfortunately ill and his lecture was read from the rostrum) featured the evening, and an attendance of about 2500 persons indicated the growing and intense interest in interplanetary travel.

The film (the scientific portions only being used at the meeting of the 27th) is a magnificent thing and shows with thrilling accuracy what a moon flight will be like. The making of the film was supervised by Hermann Oberth the noted German rocket experimenter, and not only scientific accuracy but film artistry went into the making of it. Now the film is to have a run in the movie houses of the country titled "By Rocket to the Moon."

Editorials in the New York *Herald-Tribune* and the New York *Times* following the showing indicating a new and respectful attitude by newspapers toward the interplanetary problem. Allow me to quote from the *Tribune* editorial of January 31. "The American Interplanetary Society is an attractive organization with a romantic name. Merely flying through the air is already getting to be a somewhat dull business and who can fail to applaud this first mobilization of interest in the far more breath-taking projects of astronautics—the navigation of the solar system..."

The American Interplanetary Society believes that it is truly mobilizing public opinion and focussing its interest on interplanetary travel and so helping to bring closer the day of an interplanetary journey. will be undertaken.

Memberships both active and associate, the former at \$10 and the latter at \$3 a year, are offered to men and women, boys and girls who want to help us to make the nation "interplanetary conscious" and stimulate scientific development in the art. The active membership is confined to those over 21 years of age with adequate scientific training who wish to take an active part in our program. The associate membership admits all others who wish to receive our monthly bulletin giving the latest news of the world in rocket and interplanetary development and have the pride of assisting us to carry our work to a successful completion. Among our members are Dr. Robert H. Goddard, Robert Esnault-Pelterie, Captain Sir Hubert Wilkins, Dr. Clyde Fisher, of the Museum of Natural History, Hugo Gernsback, etc.

Candidates for active membership are invited to write to the secretary for an application form. Those who wish to be associate members may write to the secretary or enclose a check or money order for three dollars when a membership card and copies of the Bulletin will be forwarded.

C. P. Mason, Secretary,
AMERICAN INTERPLANETARY SOCIETY,
302 West 22nd Street, New York.

(The work that the American Interplanetary Society is doing is truly making the nation aware that a moon flight had departed from the category of dreams and is on the way to becoming an actuality. The tenseness of the audience at the Museum of Natural History (admission was free, by the way), indicated how the picture gripped those thousands who were there. The Society and its requests for members has our heartiest support.—*Editor*)

Prophetic Dreams are a Form of Travel

Editor, WONDER STORIES:

About that time travel theme commented on in the February issue: Mr. Jim H. Nicholson presents four objections which are irrefutable from the angle he looks at it, but the point is it is like the farmer who, upon his first sight of a giraffe, insisted that "there wasn't no such animal." Time travel is just plain silly, but unfortunately it is with us whether we deny it or not.

What do I mean? Simply that prophetic dreams are a form of time travel. Out of every hundred of cultured, sensitive people, you will almost infallibly find four or five who have dreamed of things which afterwards took place. And out of these, two or three can prove it. I am prepared to present the evidence—only not for publication. Even though only one in all the world had a single such dream, it would establish the potential reality of time travel and disprove all the nightmares of materialism. But when the recorded cases run into hundreds, as you can ascertain from psychic research records—and other cases unpublished are about us every day—certainly we have a phenomenon of nature which cannot be waved aside.

Now coming down to cases, Mr. Nicholson presents the instance of a man traveling into the future, seeing himself killed in an unpleasant way, returning to his correct time, and committing suicide, thus altering the future. Well, has it ever occurred to him that events are all stationary and that the human consciousness is capable of altering its time direction through the field of events? Now, I had almost said a great deal more, but just stopped in time upon the reflection that I had been cogitating a story along the line of time travel as it exists in nature. The fact is that time travel and time travelers exist at this hour, even though preventing themselves from being born by going back and killing a grandfather—another of Mr. Nicholson's illustrations—is a little outside of their regular line of activities. That is only a part that might be said. The rest can wait until I can get around to doing some more writing—if someone doesn't beat me to it.

I cannot wholly agree with the Editor's remark that past-time traveling stories are not permissible "because of the past being fixed". There is a tendency among scientific men at the present time to accept reversible time, expressed in the phrase: "the present is pulled into existence by the future as much as it is pushed into existence by the past." If that is the case, then the past is also alterable—but let's not go into that now.

Victor A. Endersby,
1942 Canon Drive,
Montrose, Calif.

(Mr. Endersby's statement that hundreds of cases of prophetic dreams are known, might come to some of our readers with a shock of disbelief. Yet no less a person than Camille Flammarion, the late noted French astronomer, spent a number of years of his life in gathering case data on such event. He presents case after case in which people have seen in dream or vision not only events to come but places they were to visit but had not yet seen.

Fraud? Illusions? Who knows? We can only take the evidence and the reliability of M. Flammarion for what it is worth. Perhaps at those moments the subjects did get a mental vision of the time curve; that it was bent at that instant so that the future met the present for a moment.

The whole subject is one of the most intriguing presented by all science.—*Editor*)

THE READER SPEAKS

Helped to Light the Fire

Editor, *WONDER STORIES*:

I feel that I must write and congratulate Mr. Beattie on his wonderful story, "The Murders on the Moonship." It was great but the picture spoiled it as I knew how it would end. It would have been more interesting had the picture not shown the real murderer. "The Outpost on the Moon" was good but it requires a sequel to finish it off. "The World Without" was good but rather far-fetched.

I am glad to see that a sequel to "A Rescue From Jupiter" is coming next month, also more about the Interplanetary Police, I find their exploits very interesting. Forevven's sake, don't print another story like "A Subterranean Adventure", it was the most morbid and disgusting story I have ever read and nearly cost me my magazine as the matter happened to pick it up and read about the frightful tortures that could easily have been left out. The next day, several *WONDER STORIES* helped to light the fire, but as you haven't printed any more like it, I have been allowed to keep it. Please don't.

I am sorry that you dropped the "Science" in your title, you are catering to the common class of people who aren't educated enough to be interested in science but just read the stories to get a thrill that they can get in any magazine. Please bring back the "Science News" department, it was the best feature in the magazine. I am pleased that you got control of yourself and reduced the size of the magazine. It is much handier.

Try and get stories that are uncommon. I have read so many time traveling and transformation stories that I am sick of them. I tried to write one myself about a scientist who could change cellular growth and make animals grow boils or mastoids that sent out destructive rays; one escaped and got the better of him, but the story was the bunk. I can (!) only write air stories.

Returning to the old controversy, is time traveling possible? Personally, I don't think it is, there are too many complications as Mr. Nicholson points out. Anyway, if it were possible, you would not be able to take any part in the doings; you would be invisible and only able to watch, being helpless to do anything.

Is it true that Einstein has a theory stating that 2 plus 2 equals 3.9999 instead of 4? Could it be explained in words capable of being understood by a high school student? Also, is it true that a frog has been discovered in suspended animation, or is it some more of Mr. Beattie's fiction?

James Rigby,
Dryden, Ont.

(We know that Mr. Einstein has upset a great many things, but we doubt if he can be accused of upsetting the multiplication table. That, at least, still stands.)

Cases of what might be called suspended animation are met with frequently in the fish family. Fish have been frozen solid and then thawed out only to cause them to revive and be just as lively as ever. Suspended animation is not at all contrary to nature, and given the proper circumstances a being might be able to remain in such a state for a considerable period.—*Editor*)

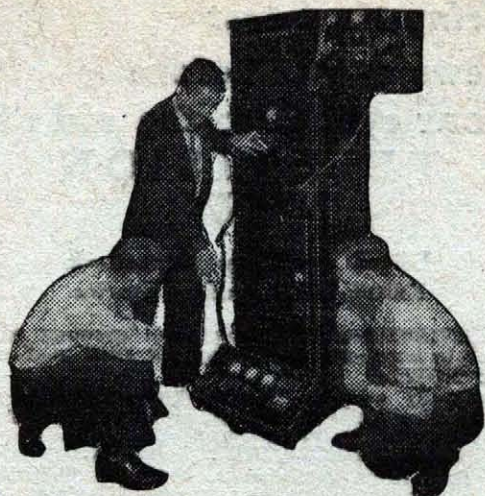
The Plot of Murdering Millions

Editor, *WONDER STORIES*:

"The Sleeping War", by D. H. Keller, represents one of the most unreasonable, and pernicious pieces of anti-Soviet propaganda released to date by your publication. Just why your magazine, which claims to devote its pages to science, could stoop to such a level of cheap literature in distorting scientific facts is beyond comprehension.

Disregarding personal opinions of the temporary benefits of the Soviet program, one must admit the ideals and aims of such a system of government are above that of the nefarious plot of murdering millions of innocent people, as depicted in the story mentioned above. To conclusively prove the Russians capable of such insane acts, one would naturally have to believe all the silly propaganda published by all the opposing factions of the world, and last but not least, prove precedent parallel acts to substantiate the case—which by the way, is out of the question.

(Continued on Page 1334)



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Television News

97D PARK PLACE

NEW YORK, N. Y.

THE READER SPEAKS

(Continued from Page 1333)

The revolution that placed them in power was brought about by preliminary education of the masses, and was therefore practically bloodless. From that time until the present date they have demonstrated their peace desiring attitude by proposing that each, and every nation completely destroy their war machinery, only to be met with refusal, and by invading military forces of other nations. After such treatment no honest and justice-loving person, can find cause to object to their vast military preparations for defense.

The Russian Soviet government stands as the world's greatest social experiment, in which truth and justice are struggling to overcome the combined militant forces of the exploitive capitalist nations of the world. That their efforts are succeeding, are too self evident for the peace of mind of the powers that be.

Let us leave the slaughter of countless millions of innocent people to some of the more proficient capitalist nations of the world, and not endeavor to criminally convict a new social order, until there is at least enough circumstantial evidence, or motive upon which to convict.

The American people have been led to hate, by the powers in control, various races of people, such as the British, Spanish, German, Austrians, Hungarians, Chinese, Japanese, Mexicans, etc., including milder hatreds of the Jews, Italians, Negroes, etc., and now it is our duty (?) to hate the Russians. When one understands the economic reasons back of such silly rot, one cannot help but be thoroughly disgusted with this new hate. Are we to hate the Eskimos after we finish vesting our hate on the Russians? There seem to be but few races left on this old earth to hate.

**Harry R. Earnhart,
607 Hubbard Ave.,
Elkhart, Ind.**

(We have been accused, as probably every magazine has, of every imaginable crime. Perhaps our protests of innocence may become boring after awhile. Naturally we deny any imputation of enmity against the Soviets. We feel, as our correspondent does, that "The Russian Soviet government stands as the world's greatest social experiments" and we wish it luck. For if their ideals succeed it means that the innermost dreams of man, that he can live in harmony with his fellowman and share equitably and happily the wealth of their joint labors, is possible.

We do not attempt to dictate what our writers shall say. If what they have to say is within reason, if it is interesting, if it is in accordance with the editorial policy, writers are free.—*Editor.*)

His Severest Critic

Editor, WONDER STORIES:

It was with the hope of stirring up some lively discussion that I submitted my letter on "The Humorous aspects of time-traveling" which appeared in the February issue of "itty bitty *WONDER STORIES* and the editor so kindly published.

In the hope of continuing this discussion I am now going to do the most unusual thing ever attempted by any of your "Reader Speakineer." Namely contradict myself by criticizing my letter! If the editor will be so kind as to try and ooze this letter into the "Reader Speaks" the reader will find I am as willing to admit my faults as the editor— if he had any!

Just watch my smoke as I pull my "Humorous Aspects On Time-Traveling" apart and lay it out in its pure absurdity!

I will criticize my four statements in the order in which they come. *Here goes! Just watch my smoke!*

(1) If a fellow had a time-machine why would he want to send it back to himself? He'd never be able to get it again and therefore would be stranded in his wrong time. And why would he want to give it to himself if he already had it?

Zzzzz! Goes No. 1!

(2) & (3) If a person went into the future and then came into the past any thoughts or intentions he had at the time that would form a paradox and be forgotten. You see what I mean! His mind

THE READER SPEAKS

would be *censored!* Thus no man would ever remember how he was killed if he had the intention of killing himself to avoid his death; nor would he remember how an invention worked upon returning from the future. You may ask why he wouldn't bring one of the things, which he wished to rebuild, back with himself. The answer is simple: he wouldn't know he had forgotten and if he went back to the future he would not remember that he had forgotten it and therefore would not see any use in taking any risk in traveling through time with another object which might do serious or fatal damage to his little meanderings.

Weeeyuuuu! There goes No. 2 & 3.

(4) If a man went back in time and married his mother it would be *bigamy!* And what would Pa say if he found out?—!!!!

I closed my silly letter by saying: "I guess I've put enough cotton into the inkwell of H. F. Kirkham, F. Flagg, M. J. Breuer and H. G. Wells." Whooooops my dear! Doesn't our young Mr. Nicholson know that all authors use typewriters?

Now that I've squared myself if anyone wants to carry the discussion any further my address is below. And if the Editor wants me too I will be glad to send in more paradoxes and then unravel them.

I firmly believe time-traveling is possible but whether anyone will ever accomplish the feat remains to be seen.

Before closing I want to tell the Editor if he doesn't get some more of Paul's illustrations he will receive a box of eight hand-grenades in the next mail! 'Til either *WONDER STORIES* or I no longer exist, I am, a faithful reader.

Jim H. Nicholson,
(Asst. Sec. Boys' Scientifiction Club)
40 Lunado Way,
San Francisco, Calif.

(We cannot, of course, be responsible for the effect on our readers of Mr. Nicholson's abstruse mental gymnastics. The Editors found themselves wandering dazedly in a terrible mental fog, and therefore warn our readers accordingly.)

Naturally it is interesting to find a young man so open minded that he can be his own critic. It is a refreshing sign in fact. But *which* of the young Mr. Nicholsons is correct. The first one or the second one. We invite your opinion.—*Editor*)

Contracted to Nothing

Editor, WONDER STORIES:

This letter may be a little late in reaching you but I would like you to publish it if possible because I think that other readers have questions about this subject too.

I read the story in your magazine called "The Satellite of Doom", and allow me to say right here that I think that it was very poorly put together and was in general "rather bum". But that is the only brickbat that I want to throw.

In the story, the author said that space was practically an absolute vacuum. He also said that space contained no heat whatever and therefore was at absolute zero. He may not have used just exactly those words but that was the thing implied. He said that as soon as Briggs got into the vacuum, his chest blew open and he was immediately frozen solid. Now listen here. The fellow's chest might have blown open but if the temperature was "absolute zero", his frozen body would have been contracted by the absence of heat until there was practically nothing left. Because you know that when a thing is cooled off, it contracts. And if there was no heat at all, the action of the molecules is "zero", and therefore the substance contracts until there is nothing left.

Now just imagine what would happen to a space ship which went up into the ether. No matter how well the ship was insulated the absolute cold would contract the outer shell until it crushed the inner shell. Now what do you think about this? I am not going very such in detail about this but you ought to see what I mean.

Now taking this problem from another angle, if a body is hot and you want to cool it, you must conduct the heat from it by using some other material. In other words the material to be cooled must be surrounded by or be in contact with some other material

(Continued on Page 1336)

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THE READER SPEAKS

(Continued from Page 1335)

thing. If the so-called ether is an absolute vacuum, no heat would be conducted from the space ship because there would be no material thing to conduct the heat away from the space ship. Evidently the author of the story above referred to must not have reckoned with this condition in his story.

Now I understand that a space ship would have to be built to withstand a heavy pressure from within but what I would like to know is—whether the heat would be conducted away from a space ship after it has left the atmosphere or not. If not the author of the story "The Satellite of Doom", has made a big error, and if so the space ship would be contracted into nothing. How about it—eh—

Bill Simpson,
213 North Wash.,
Elk City, Okla.

(Our correspondent is slightly in error when he assumes that a temperature of absolute zero means a contraction of the body to zero dimensions. Gases have been solidified at near the temperature of absolute zero and they still retain the greater part of their bulk.

A body would contract appreciably if the electrons in its atoms were to cease their motion and fall into the proton. Then a body would have only about 1/1000 of its original volume. But in a condition of absolute zero a body would not by any means contract so appreciably.

With regard to the second point, our correspondent forgets that heat is transmitted in three ways, by radiation and convection besides by conduction. Thus the sun transmits its heat across 92,000,000 miles of vacuum by radiation. So a space ship would radiate its heat into emptiness, but the heat would remain in the radiated waves until they struck some material body to which it could be transferred. Radiation is a phenomena entirely different from conduction, which as Mr. Simpson rightly says, needs a material body.—Editor.

Would Be Superior

Editor, WONDER STORIES:

Mr. Endersby's masterful editorial on "Sex and Life" is too wonderful for words, and I read it over several times with the keenest interest and delight. If this world would have more such men, life would be really worth while. There would be less people, of course, but they would be mentally and physically superior to a certain class that is continually howling religion, and the "laws of God".

Ten to one Mr. Endersby will be condemned to the infernal regions for his open honesty. He may be even called abnormal, but mind you, this gentleman does not uphold complete sexual restraint, but moderation, and moderation in all things. Of course, the clergy will claim that the mating instinct is always present in man, and that God ordained it so. As long as the church harbors this silly belief, religion will continue to crumble.

The majority of the people of today are more intelligent, more broad-minded than their forbears. They see further. They realize that the health of the race depends on sane living, and moderation. It is this set of *intelligentia* that will eventually create the longed-for UTOPIA. I admit a certain class is fighting it, fighting with teeth, nails, and cut bullets, rotten politics, but WAIT—the *intelligentia* is spreading, becoming stronger through its living ideal of strength through moderation and truth. Three cheers for Brother Endersby! Come, folks, with a will!

Now concerning Time Traveler's "Vision of the Future". The whole thing sounds very much like a slight case of Dementia Praecox to me, or did he indulge in too many chasers! Now, I have no objection to one taking a jolly nip occasionally, in fact, I see no harm in it, but one CAN go too far, and land into the Fourth Dimension. Personally, I haven't been there, yet, and naturally I get rather out of sorts with one who has foolishly taken the trip. Somehow, he never quite recovers from the shock. You know, folks, I've often wondered if our Senators and government officials have taken the trip, and believe me, I'm not the only one who has "suspicious". Another angle, Time Traveler mentioned a "deep sleep". Hmm, sounds hopheadishly queer. I'll bet he's raving by this time, but one has to be careful what one writes to a magazine that caters to the *intelligentia*. Well,

THE READER SPEAKS

I hope you folks will be sweet enough to send me flowers and crepe, in case anything happens. I expect to be shot some day.

Like all the issues of *WONDER STORIES*, the March edition came up to expectations. Not a dull story in the lot. Although, I liked friend Starzl's "The Terrors of Aryl" best. Gorgeously thrilling, and yet full of human pathos. Starzl is a genius. Give us more of his masterpieces. And how about some verses occasionally? You could use them as fillers, and at the same time afford we "poem bugs" an extra treat. Even the hardboiled writer enjoys a poem now and then. It gives that sense of variety, beneficial exclusiveness to a magazine, which, I think, would mean profit to you as well as pleasure to us.

A GREAT ISSUE

you will say after you have read the

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And before I close, let us give Mr. Gillings of London, Eng. congratulations and best wishes for his remarkable "Circle of Science". It's a great idea, and I'm all for it. Anything to bring America in closer harmony and good will to the rest of the world will be more beneficial than all the churches put together.

Pearl Hamilton Elliott,
Hempstead, L. I., N. Y.

(There is no doubt as to where Mrs. Elliott stands on the question raised by Mr. Endersby. The question is one of such universal interest and so widely discussed today both in the pulpit, the press and in scientific books that we feel it deserved consideration. We invite therefore other opinions for and against the Endersby-Elliott view.

We are inclined to think that Mrs. Elliot, however, is somewhat harsh on Time Traveler. His vision was no more rash than those in the stories we publish.—Editor)

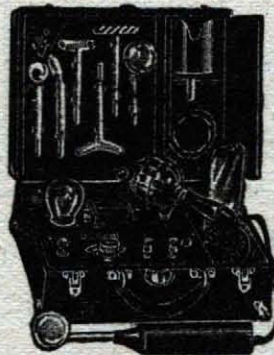
(Continued on Page 1338)



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THE READER SPEAKS

(Continued from Page 1337)

New Social Outlooks

Editor, *WONDER STORIES*:

In your list of noted Associated Editors you have neglected to include one or more badly needed political economists. The reason for such neglect may be due to the impression political economy is, as a science, unrelated to the other fields of scientific endeavor; or in case an author should make an error in a story the average reader would not notice it. Such an error on your part is not justified by facts.

The average reader, I believe, likes to feel enough confidence in the editorial staff of *WONDER STORIES* to have the satisfaction of reading stories that are basically scientific even though of a phantastic nature.

It nevertheless seems to be more or less the popular conception that it is the proper thing to endeavor to belittle or deride any economic move of the working class to wrest control from the exploiting class, with the everlasting contention it would be impractical, visionary, and unsatisfactory. (Page 1023 of the W. S., Feb. issue in "The Outpost of the Moon" illustrates this point to a certain degree.) In fact future races are even depicted as living under a social system like ours, as though it were the last word in human achievement.

They seem to want to disregard the scientific fact that a worker or laborer, is a producer of the social wealth, whether he pushes a pen or a wheel-barrow, and that a capitalist is one who appropriates this social wealth for personal selfish manipulations. The capitalist class utilizes both skilled, and unskilled workers to exploit the natural resources, and in return for such services, give those who are lucky enough to have such employment, on the average, one-sixth of the amount of social wealth produced. The balance is economically known as surplus value—or capital—or unpaid labor.

The capitalist class employs scientific workers to manage or supervise the industries, and protect this exploitive control, by employing other workers to promulgate unscientific economic theories, so that the worker is incapable of doing the very thing they are virtually doing—operating and managing the means of production and distribution.

The writer like others are of the opinion *WONDER STORIES* could better serve mankind by publishing stories with a more liberal and scientific outlook on economic questions rather than to publish stereotyped propaganda. It would at least appear more in line with scientific endeavor, for the entire world is more seriously contemplating making a social change. You certainly would not lose subscribers, but would gain attention and respect from the class which constitutes your readers.

P. M. Vancren,
1011 Strong Ave.,
Elkhart, Ind.

(We believe that Mr. Vancren has missed the point of Mr. Maxwell's picture of the Ganymedian civilization. What Mr. Maxwell stated and what all interested people will admit is that people in a mass do not always have the final wisdom in managing the affair of a complicated civilization—that "the voice of the people is the voice of God" is not always true.

The Ganymedian populace, Mr. Maxwell showed as being impatient with the efforts of scientists to make discoveries in pure science—they wanted them to turn their efforts directly into things of immediate use.

Now we must admit that the man on the street may not always have the knowledge necessary to judge the value of the work of a scientist. Very often, too, scientists are prone to become academic on their work, and to spend the money of a nation for their own private speculations, when the money is urgently needed to alleviate human misery.

But the conflict Mr. Maxwell paints is not at all one between capital and labor.

We deny any attempt at all to foster propaganda, or to suppress any social or political views whatsoever. The charge has been made before, and we deny it as emphatically now as we did then. We do not dictate what point of view our authors shall take, and we would just as cheerfully print one type of story as another so long as they are interesting.

If our memory serves us correctly practically all

THE READER SPEAKS

the stories of the future picture worlds in which business for profit has vanished, and all people are ensured comfort and happiness. These stories all presume that a competitive civilization such as ours is a childish or antiquated device and that when man really grew up he got rid of it. We cannot see Mr. Vancuren's contention that future states are pictured as unfair to the workers.—*Editor.*

The Manufacture of Imitation Men

Editor, WONDER STORIES:

I must first thank you for "Between Worlds" which I found most interesting. The manner in which the author explains the "Angels of Mons" was most original and effective.

I think the new size of *WONDER STORIES* is a great improvement, and in spite of what Mr. Pancoast says in the January issue, I think most readers will agree that it is more convenient than the original size.

The covers are usually much too lurid as Mr. Phillip Waite says, and in public attract attention (though this may be a good thing from your point of view) with its bright yellow—or otherwise—color.

Now as to the stories:

"The Time Annihilator,"—very good.

"The Invulnerable Scourge,"—good.

"Lords of the Deep,"—fair—although this is not quite the type for *WONDER STORIES*.

"The Outpost on the Moon,"—promises to be good.

"The End of Time,"—good.

"The Struggle for Venus,"—fair—sequel wanted.

"The Satellite of Doom,"—fair.

"The Flaming Cloud,"—good.

"Death From the Seas,"—quite good but not very original.

"The Gland Men of the Island,"—good.

This was also unoriginal. There are many stories dealing with a crack-brained Oriental (it is usually a Chinaman) plotting to overrun the world with supermen, stupid but possessed of great physical strength.

I don't care for the stories that deal with the manufacture of imitation men either in the form of robots or actually of flesh and blood, such as "The Soulless Entity," and "The Synthetic Men".

"The House in the Clouds," "Hornets of Space" and "The Air Plant Men" I catalog as only fairly good.

Give us more stories of the fourth dimension, or why not occasionally one of the fifth—traveling in time either backwards or forwards—and of course, interplanetary and inter-universal travel.

As regards "The Reader Speaks," by all means keep this up. I always read these letters and am very interested in other people's views. Mr. Editor, you must get black and blue from the "brick bats" that get slung at you by some people! How can you please everybody, though I think you do all you can to do so. I should not think editing a monthly magazine is exactly a bed of roses, (unless you include the thorns!).

I wish *WONDER STORIES* was published over here, then we would probably see it on every book-stall. As it is I have to place a special order with Librarie Hachette and I always have to wait ages between numbers. Science and Air Wonder Stories used to be sold at the stalls but were for some reason withdrawn.

I am with Mr. Haggard in wanting the author's pictures removed. They only take up space and don't really interest the reader. Who cares for the author's face? The story is the point that counts—not his physical beauty—or otherwise!

As to more illustrations. Although they would certainly give one a much better idea of what the author writes about, it would take a lot out of the printing space and could only be counteracted by enlarging the magazine.

Now—as to the old question—a love interest. Yes, but for heaven's sake keep it down. Don't let a good story of a scientific nature deteriorate into mere slush that can be bought by the ream at any stall.

I think that the removal of "Science News of the Month" an improvement. Although interesting, one does not expect it in a science-fiction magazine, but I

(Continued on Page 1340)

Radio Bargains!

This month we are offering three very fine battery sets at such ridiculously low prices that they cannot fail to astonish you.

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THE READER SPEAKS

(Continued from Page 1339)

like Mr. Gernsback's editorials very much and hope they will be continued.

I wish you every success in 1931.

B. Murton,
14 A Longridge Road,
Earl's Court,
London, S. W. 5, Eng.

(From England we get this excellent resumé of the stories, illustrations, and in fact everything. We wish to call Mr. Murton's attention to the new science fiction circle in England, mentioned in the March issue. The club promises well, and science fiction in the home of H. G. Wells is beginning to take its rightful place among other literature.—Editor)

Let Heroes Be Machines

Editor **WONDER STORIES:**

In Mr. Gernsback's editorial, in the January issue I find the following:

"It is my opinion that if you eject a human being without protection from a space flyer, he will not have time to explode because he will probably be frozen solid instantaneously."

Very well.

Now in "The Outpost on the Moon" (in the same issue) I find this thought expressed: "As soon as the machine left the atmosphere all the air between the outer and inner walls escaped leaving a perfect vacuum which prevented loss of heat by convection."

Now my knowledge of vacuums is about confined to the one in my head, but in my opinion Joslyn Maxwell is right and Mr. Gernsback, for once, is wrong.

Mr. Gernsback assumes that the unfortunate man radiated all his heat into space which he describes as a vacuum. One wonders about the efficiency of a thermos bottle and similar "fireless cookers."

Mr. Maxwell assumes that the vacuum will not absorb heat. Hence his ship is warm. I have noticed in other interplanetary tales where the author has used double hull construction—with a vacuum between—to avoid radiation of heat into space—another vacuum. Why?

Then there is the idea, familiar to readers, of the man in space being cooked on the sunward side and frozen on the other. From the foregoing it would appear to me that the poor fellow would be well cooked—all through.

Any arguments?

As to the mag. Sometimes I think that the field of science fiction has been worked out like a rich pocket of gold. Like the western thrillers, they all seem to be copies of one original good story. Then some one comes along with fireworks in the form of a new idea, and I get all enthused again. So I'm not kicking at all.

Still I have noticed a tendency toward cheap sensationalism in the last year in science fiction. Not only "our" mag but others have developed a taste for shrieking damsels always helplessly in the power of a sneering villain—and super-heroic tireless heroes who can make all sorts of blunders and live and never do much of anything until fifty minutes past the eleventh hour when they suddenly become masters of all sorts of science, language, etc. Too melodramatic by far.

Will you please tell Paul to stick to the machines? His machine drawings would be a source of inspiration to your best authors—and may have been often enough. But when it comes to humans—well, I may as well confess that it's the last cover that got my goat. I gathered from the story that the woman was frowsy. Well Paul (was it Paul?) tried to overcome that.

That stiff bold outline drawing! That blood-colored dress against a yellow back. The man—being a machine man—looks almost human. The woman looks like a frozen war figure in a melodramatic and unnatural pose.

In conclusion, I read somewhere that the Naval observatory claims that mother earth has a tail. Is this true?

When you find an author who can treat romance as he can cold science, embrace him. He's rare. But for cat's sake keep your purely science-minded writers to pure science! Let your heroes be machines in science but let them be simply human in love!

W. E. Wilson,
Naches, Wash.

THE READER SPEAKS

(Mr. Wilson lists a full bill of complaints. We agree that science fiction is not perfect—it is too young too struggling, too new. It is now cutting its teeth so to speak, learning by experience, and getting the wisdom of the world to grow up into the strong, healthy being it is sure to become.

As to science fiction exhausting itself, we are in complete disagreement with Mr. Wilson. Science fiction is just as inexhaustible as the possible future of the race. The number of possible futures, both in time and place are infinite. The possibilities of science and their effect on the race are infinite.

It happens to all of us that we reach a period of days perhaps when everything palls on us. We feel sour, disappointed, tired and bored. Then everything we see and touch is unimportant and worthless. In those dark periods, we must have faith and be patient.

The necessity of the vacuum between the walls of the space ship, is not to prevent radiation but to prevent conduction of heat. Conduction is a phenomena that operates much differently than radiation. Thus the sun radiates heat to us across the vacuum of space, but it could not conduct heat—for conduction needs a material body for its transference. So the vacuum between the ship's walls prevents conduction. The acquiring of a tail (!) by the earth is news to us. We would like to hear more about it.—*Editor.*)

Was Honored to Attend

Editor WONDER STORIES:

I have been getting your magazine since the first issue. But this is the first time I have taken the trouble to give you my opinion about it.

However, before I do so, I wish to thank Mr. Hugo Gernsback, through whom I received an invitation from the American Interplanetary Society to attend an address by Robert Esnault-Pelterie on "By Rocket to the Moon."

Unfortunately Mr. Pelterie was ill and could not attend. But the motion picture was shown and I wish to state that it was great. I would also like to say that I consider it an honor to receive a personal invitation to attend. And would state that if any other time something of this sort is featured I would like to know about it so that I might attend.

And now for my opinion about your magazine. (Yours too—*Editor.*)

I think that it has every other scientific magazine on the market beat, so keep up the good work. I would like to have you publish more stories by Dr. David H. Keller, Charles R. Tanner and Ray Cummings.

The first part of the "Return From Jupiter" written by Gawain Edward was very good. "From Out of the Earth" by Ed Earl Repp was excellent. And I wish Mr. Repp would write a sequel to this story so that I could learn what became of the monster.

Harry R. Baker
2823 Avenue D,
Brooklyn, N. Y.

(For Mr. Baker's information and that of other interested readers, we understand that the American Interplanetary Society holds meetings at the American Museum of Natural History, 77th St. and Central Park West, New York, every two weeks, at which times the various phases of interplanetary travel are discussed.

The last meeting was on the evening of February 20 when Nathan Schachner, well known to readers of WONDER STORIES (half of Zagat and Schachner team) discussed the problems of "Rocket Construction." The next meeting will be on March 6 and the one after that on March 20, all at the same place and time.—*Editor.*)

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THE READER SPEAKS

(Continued from Page 1341)

Nothing as Gripping

Editor, *WONDER STORIES*:

I have just finished reading the March issue of your magazine and hasten to write you to tell you how good it is. Two stories stand out head and shoulders from the rest. I refer to "Back to 20,000 A.D." and "The Return from Jupiter," with the first named story in the lead.

It is a long time since I have read anything as gripping as that last scene in "Back to 20,000 A.D." when the earth race from Neptune go out one by one to fight Jed. What a conception that Jed is too. It held me tense in my seat to the very last word. The whole tale showed us a picture of a far off future that is exceptionally imaginative and yet quite probable. I read Schachner & Zagat's first story, and this is even better, wonderful as that was. More power to these two authors. Give us more of their stuff.

And Edwards too. "The Return from Jupiter" is not quite as good as his "Rescue from Jupiter" which I remember as a very fine story, but toward the end it got into full swing. The next installment should be a humdinger.

The other stories in the issue were pretty good with the exception of the "Synthetic Monster" which is old stuff. I have read lots of stories just like it, and "From Out the Earth" which is terrible. This fellow Repp never did strike me as being much of a writer, and this one proves it. Don't print any more like it.

Now that I have gotten all my likes and dislikes off my chest I'll say that *WONDER STORIES* is the best magazine in the field, and I read all of them.

Byron Massel,
c/o Frank & Seder,
11th St. & Market St.,
Philadelphia, Pa.

(For Mr. Massel's information, as a devotee of Schachner and Zagat, we call his attention to "The Emperor of the Stars" in this issue. We think our readers will find it a worthy successor to "Back to 20,000 A.D." We expect to have some interesting news soon about a new work from the pen of Gawain Edwards.—Editor.)

SCIENCE QUESTIONS AND ANSWERS

(Continued from Page 1330)

Aurora Borealis

Editor *Science Questions and Answers*:

Would you please answer for me the following questions:

1. What is the Aurora Borealis?
2. What causes it?

Sam Appelbaum,
1200 So. Market St.,
Canton, Ohio.

(1. The Aurora Borealis or northern lights is a brilliant display of colored light seen rising above the earth consisting of irregular patches and dancing columns of light rapidly changing forms. Its beams, often of various hues, are found to be virtually parallel to the free magnetic needle which points toward the magnetic north pole.

2. The exact cause of them is not known. The assumption is that they are caused by electrical discharges between the earth (which is really a magnet) and the sun's magnetic influence. Hence during extensive displays of the aurora, there is a great disturbance caused to telegraphy and radio indicating an effect of electrical nature.

The frequency of the aurora, that is the period between the time of maximum display has been calculated as 11 years. Since sun spots also appear in 11 year periods, a close connection between the two is believed to exist.

There is a similar display near the south pole called aurora australis or southern lights, while the term aurora polaris or polar lights is used to indicate both displays.—Editor)

BOOK REVIEW

EXPERIMENTS IN ATOMIC SCIENCE FOR THE AMATEUR by James L. Clifford, 120 pages, illustrated, stiff cloth covers. Size 5½ x 8. Published by Richard G. Badger, Boston. Price \$1.50.

New developments in atomic science are not confined exclusively to highly trained scientists. Our knowledge about the atom and some of its energy manifestations have advanced far enough to permit of experiments in a simple laboratory to delight the amateur. Some of these possible experiments our author outlines in this volume.

There are experiments with radioactive substances; the gold leaf electroscope, osmosis, ultra violet and photo-electric effects and many others. The point of the author is that young experimenters can do much to keep alive an interest in this comparatively new field of scientific exploration, and perhaps make discoveries of value.

Such experiments, Mr. Clifford states, are not expensive. For example, enough of a radium compound can be obtained for ten dollars, to carry out the experiments he outlines. This radium however is merely a small part of a crude ore, unrefined.

Experiments with radium, even the little tests that give visual indication of the presence and activity of radium, should prove fascinating to the experimenter and open up a new world of intriguing interest.

FLIGHTS FROM CHAOS by Harlow Shapley. 170 pages illustrated. Stiff cloth covers. Size 5¾ x 8¾. Published by Whittlesley House, McGraw-Hill Company, New York. Price \$2.50.

Dr. Shapley, who is director of the Harvard Observatory, takes us out of our calm vision of the universe by doing two contradictory things. First, he indicates the unlimited diversity of material systems in the universe, from the microcosmic, the ultra-small, to the macrocosmic, that part of the universe open to man's senses. He then proceeds to show that it is not all as bad as it sounds, that in this welter and confusion of material systems, order can be established. Once creating chaos, he shows how we can escape from it.

His purpose is to organize the material world into definite groups, and thence to find the relationship between these groups, and perhaps the meaning of them. Beginning with a classification of the ultra-microscopic which he leaves unnamed, for any possible contingency, his groups are: corpuscles (which include electrons, protons and light quanta), atoms, molecules, molecular systems, colloidal or crystalline aggregates (which includes biologic entities such as man), meteoritic associations, satellite systems, planetary structures, double and multiple stars, galactic clusters, globular clusters and on up to the Universe (the space-time complex).

And even here at the furthest reach of man's vision, he must leave the door open for a still higher entity, which Dr. Shapley prefers not to define. Curiously enough he places man midway between the small and the great. But these classifications he gives us with a great deal of humility. "A few decades ago," he says, "not even the atoms would have been admitted to the society of systems. Atoms were little hard chunks of matter, indivisible by grace of name and experience and scientific dogma. Experience certainly recommends caution in asserting any lower limit in the organization of the microcosmos."

In our common elements, too, he leaves the door open. With Jeans he agrees that uranium need not be the heaviest of metals. Jeans surmises that these heavy elements, "may be highly radioactive, like the known atoms from radium to uranium, and that the ultimate source of stellar energy can be sought successfully in the spontaneous decay of heavy unstable elements in the stellar interiors."

The book serves admirably the purpose of organizing our chaotic notions about the infinitely diversified universe. It parallels the attempt of Jeans, who in his "Mysterious Universe" seeks ever and ever an explanation.

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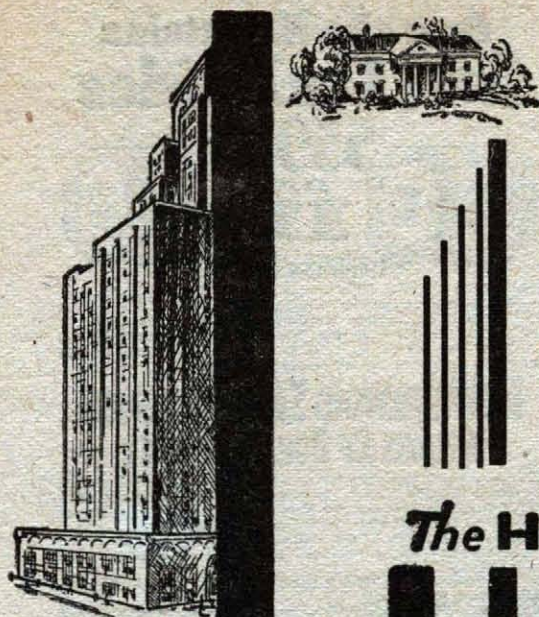
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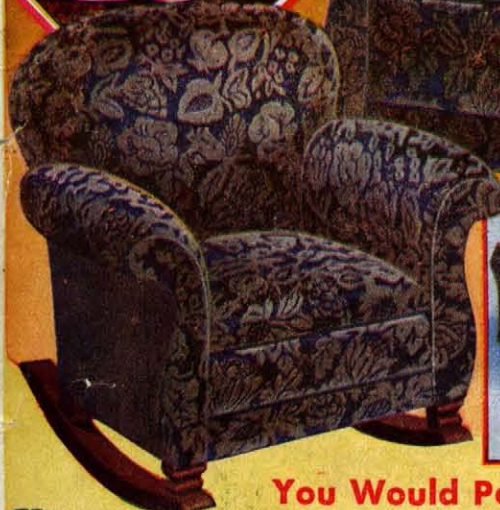
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