

JULES VERNE'S TOMBSTONE AT AMIENS

## March, 1930 Vol. 4, No. 12

Experimenter Publications, Inc.
B. A. Mackinson, Pres. H. K. Fly, Vice Pres. and Tress.

#### In Our Next Issue:

REMOTE CONTROL, by Walter Kateley. Due to the decrease of our advertising, our extra 16 pages were discontinued, which in turn crowded this story out from this issue also.

THE GREEN GIRL (a serial in 2 parts), Part II, by Jack Williamson. In the concluding chapters of this classic the author continues the accelerating pace set in the first instalment. The only intelligence we know of now is that which is housed in the human body. But is it really necessary for intelligence to have only such a habitation? Why might it not just as easily send out its influence through some other force, about which we know nothing at the present time? It seems to us not only possible, but probable, that there is such a force somewhere and may even some day be discovered. "The Green Girl" will, we are sure, rank in your favor with a number of your favorites, among which we unhesitatingly mention "The Moon Pool" and "The Skylark of Space."

THE CONQUEST OF THE EARTH, by Isaac R. Nathanson. Although this story about an Andromedan invasion of the earth is by an author who is new to our readers, the story reads like an old favorite. Mr. Nathanson has not only made a careful check on his science, but he has the gift of fiction writing. And we know you will welcome the announcement that there will be more by him soon.

THE METAL HORDE, by John W. Campbell, Jr. Here is another interplanetary story by our young scientist author that is even better than his previous ones. We can leave it to Mr. Campbell to give us a unique tale, original in its conception and ingeniously worked out.

THE FEATHERED DETECTIVE, by A. Hyatt Verrill. Under this author's skilful handling this tale has an individuality that easily stands with the best scientific detective story. The green turacou and the change of color of its plumage when wet is a much debated subject among ornithologists. Mr. Verrill knows his subject. We feel no more need be said.

#### In Our March Issue:

The Green Girl  (A serial in 2 parts) Part I  By Jack Williamson
The Ship That Turned Aside  By G. Peyton Wertenbaker
The Gostak and the Doshes  By Miles J. Breuer, M.D
Callisto at War  By Harl Vincent
Lanterns of God  By Robt. A. Wait
The Mordant  By Merab Eberle
What Do You Know? (Science Questionnaire)
Discussions 1186
In the Realm of Books (Mostly Scientific Fiction)
0 0

#### Our Cover

this month depicts a scene from Part I of the story entitled, "The Green Girl," by Jack Williamson, in which the ship, built by the hero scientist to move through air, on the surface of the ground and through water, with equal adaptability, is shown breaking through the overlying water at the bottom of a certain point of the Pacific to a city under the ocean. The city is enabled to keep the ocean as a roof by virtue of a gas, which the intelligences inhabiting this sub-sea city have invented.

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## A Sequel to "The Explorers of Callisto"

# Callisto at War

#### By Harl Vincent

Author of "Microcosmic Buccaneers," "The Seventh Generation," etc.

HE Callistonian maiden, Lola, eagerly scanned the beautiful countryside over which the "Meteor" sped when reached the earth after its return voyage from the other side of the moon. thought wistfully of her own home where the foliage was as beautiful as that of the earth if of slightly different color and appearance; thought of the depredations of the blond giants, who had brought about the overthrow of her own people and the death of their king and queen, her parents. Shudderingly she recalled the obnoxious attentions of the light-haired leader of the last expedition from her own world to the satellite of the one she was now to visit. But she gave thanks as she remembered the brave actions of the three earth men who had rescued her from the malevolent chief in that fortress on the desolate globe that was the earth's moon. And when she turned her pretty from the window, head

through which she was looking, she cast affectionate glances at the chubby figure of Eddie Dowling, as he bent so intently over the chart upon which their course was plotted.

Eddie and his employer, Ray Parsons, were navigating the tiny vessel which had ventured outside of the earth's atmosphere and made the hitherto unaccomplished trip to the moon. Gary Walton, friend and coworker of Ray, lay asleep in one of the bunks, re-living in his dreams those strange adventures, in which they had become involved on the side of the moon not visible from the earth.

IN his first story, "The Explorers of Callisto," the author brings us to the other side of the moon, and then quite unceremoniously brings us back to earth without giving us much opportunity to learn about the conditions or the life on the invisible area of our satellite. But Mr. Vincent hastens to redeem himself. Lola, the moon woman, tells us much of what is (according to the author) hidden on the other side of our moon -the side which is an absolute and complete mystery, not even to be surmised about by the best scientists and astronomers. Still, there must be something there. We need say nothing to our old friends about this sequel, but we can recommend "Callisto at War" to our new readers.

### Illustrated by MOREY

exceed the standard speed of two hundred miles an hour as established for the lower levels. In a very few minutes now their journey would be over.

Soon they left the highway and crossed the state line, cutting due west into New York State. When the "Meteor" started circling for a landing in its own enclosure, Lola gurgled with delight. She

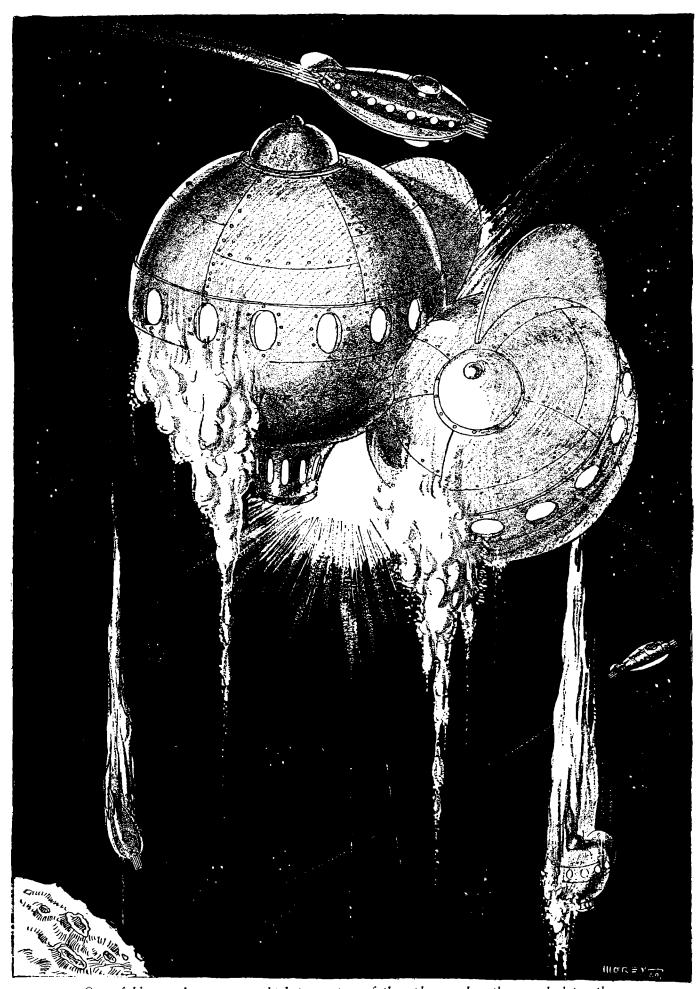
was to set foot on Tora, the world of peace and prosperity.

With the landing of the craft Gary awoke from his nap and was amazed to learn that he had slept for more than four hours.

Eddie hastened to the air lock and unbolted the outer door, as rapidly as his fingers could manipulate the clamping bolts. All three men were tired, though Gary had been somewhat refreshed by his short sleep. Lola was as fresh as a daisy and could scarcely restrain herself in her eagerness to set foot on the soil of the world of her rescuers.

The rocket tubes of the

"Meteor" were long since



One of his squadron was caught between two of the spheres when they crashed together.

"What on earth are we going to do with Lola?" asked Ray, as the door swung outward and Eddie prepared to assist her to the ground.

"You just leave that to me now, Chief," was the eager reply. "My house is just a couple of miles down the road as you know, and my mother and sister will welcome her with open arms."

Gary grinned as Lola jumped from the opening into the waiting arms of Eddie, who had preceded them. "And that is about the way you seem to be welcoming her too," he said.

The smiling mechanic flushed to the roots of his hair but was at no loss for a reply. "You bet your life," he averred, "and, believe me, I'm going to hang onto this little girl, if I have to call out the marines to help."

"I'm afraid she will be a very busy little person," countered Ray, who was the last to step from the shiny craft. "You know we are depending upon her to do a great deal in getting this stupendous story across to our people and convincing them that immediate action is necessary for defense against the blond Callistonians."

Lola stood at one side, gazing about expectantly but seeing nothing except the grassy field and the high fence surrounding it. She realized that the men were discussing her, but felt secure in the belief that whatever they decided would be for her good.

"Anyway," Eddie maintained stoutly, "you are all going to stay at my house tonight. It's too late to do anything more today and we all need a good night's rest. Lots of room at our house too."

"You win," laughed Ray, "The invitation is accepted. But I'm not so sure that your mother will be pleased."

"Sure she will!" And Eddie hastened to the door of the enclosure to get out one of the cars.

Ray and Gary exchanged amused glances as Lola followed, almost on the heels of the exuberant mechanic. But they had grave misgivings as they surveyed the scantily clothed figure of the dark haired maiden. She was entirely too pretty and the silver hued garment entirely too snug and sparse to meet with the approval of a matron of the caliber of Eddie's mother. But it seemed that there was nothing to do but to comply with Eddie's wishes, so they trailed in his wake and were soon ensconsed in the rear seat of his ancient gasoline motored car.

When they stepped from the car at the door of Eddie's modest home, Mrs. Dowling rushed across the porch to meet them.

"Sakes alive, Edward Dowling," she said, "where you been?"

Then she stopped aghast at the vision of the radiant girl, whose silver garment glistened in the light of the setting sun with a thousand shimmering hues.

"And bringin' one of them bathin' beauties home with you too!" she continued indignantly.

But when Lola advanced toward her, face wreathed in the sweetest of smiles, she extended her hands. Then, looking deep into the eyes of this girl from another world, she suddenly threw her arms about the slim figure and drew the dark head to her motherly bosom.

#### Each to His Own Task

THE following day was a bewildering one for Lola, and for Eddie a day of acute misery. For, with their minds alert to the extreme seriousness of the situation, Ray and Gary took things into their hands im-

mediately following the morning meal in the Dowling home. Lucky it was that Eddie's sister took an immediate liking to the girl from Callisto; lucky also that the two were of about the same build, thus making it possible for the earth-girl to provide suitable dress for the young lady who was about to set out on the mission of warning and assisting a world that was in grave danger.

At a hurry call from Gary, the president of the International Communications Corporation despatched his private airplane to carry Lola to the headquarters of the Company in New York City. It seemed to Eddie that no plane had ever traveled so swiftly as that one, and when Lola was hustled inside and whisked away from his sight, his usually smiling countenance took on such an expression of gloom that his mother identified the symptoms at once. But she was wise enough to say nothing, for she knew that her boy must be about his business. He it was who must superintend the overhauling of the "Meteor" for its next voyage. Besides, she was not overly anxious to lose him and certainly this little girl from somewhere out there in the sky seemed quite capable of taking him away.

Lola's impressions of the succeeding few hours were so confused that she could not well have described her experiences, had she been called upon to do so by one who spoke her language. The swift rush to the great city whose entire upper surface seemed to be one huge landing space for aircraft—the rapid descent into a great, magnificent room where a kindly faced earth-man patted her hand, while Ray and Gair-ree spoke rapidly to him in their own peculiar language—the subsequent facing of great blinding lights, where many earth men spoke rapidly before huge numbers of black boxes, and where she was paraded before a succession of mirrors that reflected her own image in the strange costume that was so encumbering—all was so unfamiliar that she did not understand any of it. But these earth people were so kind and so solicitous that she loved them all, and she sensed that the strange proceedings were entirely in the interest of the plan mentioned by Ray on the journey from the earth's satellite. And with every fiber of her tender being she was glad-glad that these people were taking measures in their own defense, and hopeful of the result of this action being beneficial to her own race as well. She could not help but observe the intense energy with which the earth folk attacked their problems and the efficiency of their labors.

With the completion of the ordeal of what she later learned was her official presentation over the world news-broadcast, she thought that her duties were completed for a time. But Lola was to be given very little rest, and she soon found herself in another fast airplane crossing a considerable body of water. At her side was the kindly earth man with the gray hair. This was Horace Greenfield, President of the International Communications Corporation. There were also in the plane two of the men who had rescued her, Ray and Gary. But Eddie had been left behind.

"Gary," said Greenfield, "the effect of the announcements has been tremendous. Before we left New York anxious communications were coming through from all over the world. It was fortunate indeed that the equipment of the "Meteor" included developing tanks and enlarging apparatus, so that you were able to show the pictures along with the verbal report. And the final showing of Miss Lola was a staggering climax."

"Yes, that is true, Mr. Greenfield. And we must thank Ray Parsons for his foresight in so thoroughly equipping his vessel. But I still fear very much for the success of our venture in attempting to get the nations of the world sufficiently interested in this thing to make the preparations we believe are necessary."

"I would not fear for that, Gary. President Cobham, as you know, is a personal friend of mine. We were boys together. And his influence in the present administration is such that Congress dares not oppose him on any important matters. Once the thing is put across in our own country the other nations are bound to follow suit."

"But, interrupted Ray, "there is much to be done. We must first arrange for Lola's session with the telepathists and linguists, so that she will be quickly able to assist in decoding the messages from the lunar base of the enemy. This is by far the surest and quickest means of assuring immediate action in preparation for the war that is bound to come very soon now. I say soon now on account of the recent developments up there on the moon."

"That too shall be taken care of," replied Greenfield. "In all departments of the government I have considered influence and no stone will remain unturned when we reach Washington. Lola shall be taken in hand immediately."

"Poor kid," mused Ray, stealing a glance at the girl who gazed interestedly from the window at her side. "She doesn't know what it is all about, but she trusts us as if she had known us all her life."

"Yes, but she is going to be far happier than she has been in several years when this is all over. And I tell you, young man, that the biggest share of the preparations are going to fall on your shoulders. Our world has forgotten the arts of warfare and it seems to me that even the weapons with which you armed the "Meteor" are insufficient to cope with this enemy if it comes to a conflict of great scope as this will undoubtedly be. As our foremost inventor, you will be confronted with the task of devising adequate armament for the vessels which we are to request the governments of the world to construct."

Ray looked grave. "Yes I suppose that is true, Mr. Greenfield," he admitted, "and it is a task that will require my immediate and whole-hearted attention. But we shall succeed, never fear."

"No doubt of that whatever," came the hearty response. He turned once more to Gary. "And, you my boy," he continued, "must carry on the work of keeping in touch with these code messages and must see to it that the world is kept advised of developments as quickly as we are able to decipher them with the aid of this girl from Callisto."

Gary seemed crestfallen. "But—but, Mr. Greenfield," he objected, "I had hoped to be able to collaborate with Ray here on the more important work."

"Tut, tut, Gary. Every man to his own line. And to my way of thinking the communications end of this problem is every bit as important as any other. Mark my words; that phase of the matter is going to provide the key to the entire situation."

They were approaching Washington and Lola exclaimed with delight at the beauty of the city that spread beneath them. Certainly, in the march of progress, it alone of all American cities had retained its beauty, cleanliness and charm. And, when they landed before

the Capitol, it seemed that the entire city had turned out to welcome them.

Lola breathed deeply with excitement when she observed the great throngs about the square and she could have thrown herself into the arms of the kindly little gray haired woman who greeted her at the side of President Cobham, though she knew not that this was the first lady of the land nor that her consort was its chief executive.

#### Preparing for Defense

HEN came many days of grueling activity for all members of the party which had so short a time ago returned from the moon. To Lola the succeeding events were of such intense interest that she promptly forgot all else; forgot the problems of her own people; forgot poor Eddie. But within six days, thanks to the ceaseless efforts of telepathists and linguists, she was able to converse in English and several of the students had mastered the two tongues of her own Callisto. All who came in contact with the Callistonian maiden were charmed, and it was rumored about official Washington that Eugene Cobham, only son of the president, was desperately in love with her.

Ray had returned to his own laboratory and was resolutely striving to contrive weapons of defense and offense that would be capable of decisively overwhelming the enemy with whom he knew they must deal. In this work he was assisted by his own staff of workmen, including the now changed and morose Eddie Dowling. Eddie had heard some of the rumors that were being circulated in Washington and his rotundity seemed to become less and less apparent as the days passed. More than that, his usual smile was seen no more, but that was not so noticeable, for all the Parsons workmen were working under extreme pressure and there was little time for jocoseness. Ray himself was in unusually bad humor, for the first experiments had come to naught.

Gary organized a special force to classify the tape messages received from the lunar transmitter of the Callistonians and when the Secret Service experts arrived at his office with complete data on the two languages of Callisto, he was ready for them. The labor of working out the code was commenced at once and within ten days this was completed, though it proved to be a stupendous task. Day by day the operatives became more expert and it was soon possible to have the messages decoded, translated and ready for the news broadcasts within one hour after their reception.

A conference of the nations was in progress in Washington and, with the passage of time an agreement was reached and work was begun. At this stage of the proceedings Ray Parsons was called to Washington and there he spent many days in conference with the foremost aviation experts of the world, drawing plans for the war vessels that were to be constructed. Of course, appropriations had been cut to the bone, so that by the time the diplomats were finished with the plans, the number of vessels to be built had dwindled to a mere thirty, ten of which were to be constructed in the United States. Ray shrugged his shoulders at this news but resolved that the thirty ships should be so well armed as to prove a match for any fleet the Blond Callistonians might be able to muster. But when he finished with the other designers and the plans of the new war ships were completed, he was no nearer the solution of the armament problem than he had been previously. True, the new ships were to be provided with the various energies used by the "Meteor" and the generators of the energies were to be of far greater power. But a real, invincible weapon was still to be discovered.

All over the world industry was drafted for the work of turning out the thirty vessels in the shortest possible time. In this influence of Horace -Greenfield pre dominated. He it was who organized the financiers of the world and laid down the law to them. It was his influence with President Cobham that brought about the various conferences in which international agreements were ratified, and it was he who kept the news broadcasts constantly filled with the right sort of propaganda. The messages from the moon played no small part, for each day revealed a new development in the plot of the enemies of the world. Excitement prevailed throughout the globe as it became apparent that a preliminary sortie was being planned by the enemy.

Before Ray left Washington to return to his own laboratory, he attempted to visit Lola but was extremely disappointed on learning that she was too busily engaged with social functions to grant him an audience. And the rumors concerning Eugene Cobham persisted. But at least he would not apprise Eddie of this fact, That would be entirely too much of a blow at the present time, he thought.

Upon his return to the laboratories in Monroe County he was surprised at finding Gary awaiting his arrival.

"Just took a couple of days off," was his friend's greeting. "Old Greenfield thinks I need a rest and I thought I'd come up here and pal around with you a bit. Heard you were leaving Washington today so I beat you to it in getting here."

"Glad to see you, old man," replied Ray wearily but carnestly, "but I'm afraid you won't get much rest. This question of armament must be settled pronto so I'll be working day and night. Of course that doesn't mean you have to be on the job but, knowing you as I do, I am darn sure you will be, whether I want you to or not."

"Right," grinned Gary, "and that's just what I want. I'm so sick of looking at the tapes and listening to the translators that I could fly. The change will be the rest I need. How's Lola?"

"Hush." Ray looked to see if Eddie was within hearing. "The darn kid's had her head turned with all the fuss they've been making over her and it's pretty sure she's running around with young Cobham quite steadily. Mustn't let Eddie know, but she wouldn't even see me."

"Fiddlesticks! That girl's head is never going to be turned. She's too smart. The only trouble is that they have been rushing her so that doesn't know what to do about it. Don't forget that all of this is entirely new to her. She'll get over it."

"Hope so. Anyhow, what do you say we quit gabbing and get to work on this armament business."

"Right."

So the two friends once more started work on a knotty problem and when Eddie Dowling offered his services in the particular work, Ray dismissed him rather curtly and ordered him to complete the overhauling of the "Meteor" and the restocking of the ship for a much longer voyage. He turned his head resolutely from the hurt look in Eddie's eyes.

"Whew! Glad that's over," he exclaimed, when the crestfallen mechanic left them, "Poor old Eddie is eat-

ing his heart out over Lola and I just can't stand it to watch him. Besides I think we are going to need the old 'Meteor' on this job."

"What? You think she can make the trip to Callisto?"
"Why not? We don't have to carry any more of the concentrate than we did on the trip to old Luna and as far as Parsonite goes, she carries enough to send her to the edge of the solar system and bring her back too. Of course there is the question of increased speed, but that is being taken care of now."

"The new ships will be faster?"

"Nearly a hundred times as speedy, Gary."

"A hundred times! Is that possible? Is it necessary?"

"It is easily possible. I have merely redesigned the rocket tubes to provide the proper expansion ratio on which I previously erred. There will be a greater number of tubes also—in fact, we are adding six to the 'Meteor.' And the increased speed is of vital importance, unless we want to spend a year or more in making the trip to Callisto."

"Great Caesar's ghost! Is it that far?"

"You bet. Jupiter is 483 million miles from the sun, and the satellite Callisto is one and one-sixth million miles from its parent body. The earth is but 93 million miles from the sun, and our own moon, which we recently visited, is a little less than a quarter of a million miles from us. So you can see the ratio of distances. Even with Earth and Jupiter in their present positions with relation to the sun, which is nearly as close as the two planets approach each other, the distance is well over 400 million miles and a speed of something like seventy thousands miles a minute for the entire trip average will be required to reach our destination in four days. That is the mark I am shooting at and I have calculated a maximum speed for the new vessels and the remodeled 'Meteor' of better than a hundred thousand miles a minute, with a practical cruising speed of eighty-five thousand."

"Wow! That's going some!"

"It is that. But we'll need all the speed we can get, to my way of thinking, when things start popping."

"Are the new ships to be constructed along the same lines as the 'Meteor'?"

"Pretty much, with the exception that their wings, landing gears and propellers, which are used only for flying under atmospheric conditions, will be so arranged that they may be folded out of sight and completely protected within the insulated hull. That will prevent these parts being destroyed during an engagement with the enemy. In addition the new ships will be much larger than the 'Meteor.' But here—this talk isn't getting us anywhere on the question of a super-weapon."

#### The Tellurians' Defence in Space

ARY'S so-called vacation stretched into ten days and their labors had produced less than nothing in the way of that invincible weapon for which they were searching. At the end of the ten-day period it was necessary for Gary to return to New York and Ray was at almost his wit's end. He was constantly besieged with urgent radiophone requests from the government for news regarding the results of his investigations. Annoying calls from antagonistic scientists, who sought only to renew some of the old quarrels they had with him, served further to irritate and exasperate him. He shut himself

up from all callers after a few experiences of this sort and worked harder than ever. They would not down Ray Parsons!

Meanwhile the thirty vessels were well under way in various parts of the world. Parsonite was being manufactured in huge quantities in order that the rocket tubes of the new ships might be well supplied. The concentrated fuel for the internal combustion engines was likewise being refined in large quantities, and was stored in great tanks that were erected at several ship yards. Oxygen generators, carbon dioxide absorption apparatus, generators of the paralyzing and fusing high frequency currents, and other required portions of the ships were being built with all possible speed and shipped to the yards for installation in the vessels. But still there was no superarmament.

Then came the day when the world was stunned by the news that a fleet of the Callistonian vessels was scheduled to make an experimental raid on the earth within the next forty-eight hours and Ray's radiophone was kept constantly busy. What are we to do? This was the cry from the four corners of the globe. And, despite the seriousness of the situation, Ray was constrained to make merry over some of the frantic communications from his erstwhile critical colleagues. and every inquiry he made the same reply. The fusing and paralyzing ray generators were to be installed in any sort of aircraft that would carry them, and the observatories were to keep constant watch of the heavens for the approach of the attacking ships, when a defense was to be made, with the improvised fleet after the enemy vessels entered the earth's atmosphere. Secretly he determined that the "Meteor" would be on hand when the time came.

Further messages, when decoded, revealed that the raid was to made by eight of the huge spheres from Callisto, and that these were already assembled at the lunar base. Fortunately the messages likewise revealed the points of intended attack, so it was a comparatively simple matter for the Tellurians to concentrate their meager armament at the expected localities. But the time was short and the panics that resulted in the various cities where attacks were anticipated resulted in serious privation and considerable loss of life. There was no doubt as to the objectives, for the messages indicated clearly that the largest cities of the several continents were chosen. New York, Chicago, Philadelphia, Paris, London, Berlin, Tokio and Osaka were undoubtedly the cities under fire, each to be attacked by a single sphere. The exodus from each of these centers was overwhelming and the authorities could not handle it. Engineers and mechanics labored day and night, transporting the sixteen generating equipments which had been completed, and installing them in the fastest commercial planes that could be requisitioned. There were three at New York, two at each of the other cities excepting Osaka, which was unfortunate in being able to obtain but one.

Early in the morning of the second day the news broadcasts reported that the fleet of eight vessels had been sighted by various observatories and that they were approaching the earth at a distance of less than one hundred thousand miles. Ray decided that it was time for action and he dropped his work and hurried to the "Meteor".

"Eddie," he said to the surprised mechanic, "is she ready for the air?"

"Never better Chief. Where to?"

"You heard about the fleet that is coming to attack?"
"Sure, on the broadcast last night. What of it?"
"They have been sighted, and we are going out to meet them."

"Hot stuff! Let's go!" Eddie was himself once more and he bounded through the air lock as if on springs.

Ray grinned delightedly as he clamped the outer door. Good old Eddie, he thought, he'd get over this foolish love affair.

Eddie started the motor and in less than a minute the "Meteor" was roaring out over the tree tops and climbing rapidly into the rare air regions, The ship operated without a hitch and seemed to sense that it was being called upon to make an extra effort. The earth fell away from them. The acceleration compensators were taxed to the limit and Ray felt himself pressed into his seat with painful force. He corrugated his brow in thought. This gravity thing might offer a solution of the armament problem—if he but knew how to adapt it. Then he promptly forgot the glimmering of an idea that had come to him, for he noted that they were traveling at the rate of two thousands miles a minute.

"Ease up there, Eddie," he ordered, "they're only a hundred thousand miles out. We'll overshoot the mark."

With the answering tattoo from the forward rockets and the resulting deceleration, he was lifted from his seat and found difficulty in maintaining his equilibrium. Once more came that hazy forming of an idea, only to be dashed from his mind by a shout from the excited Eddie.

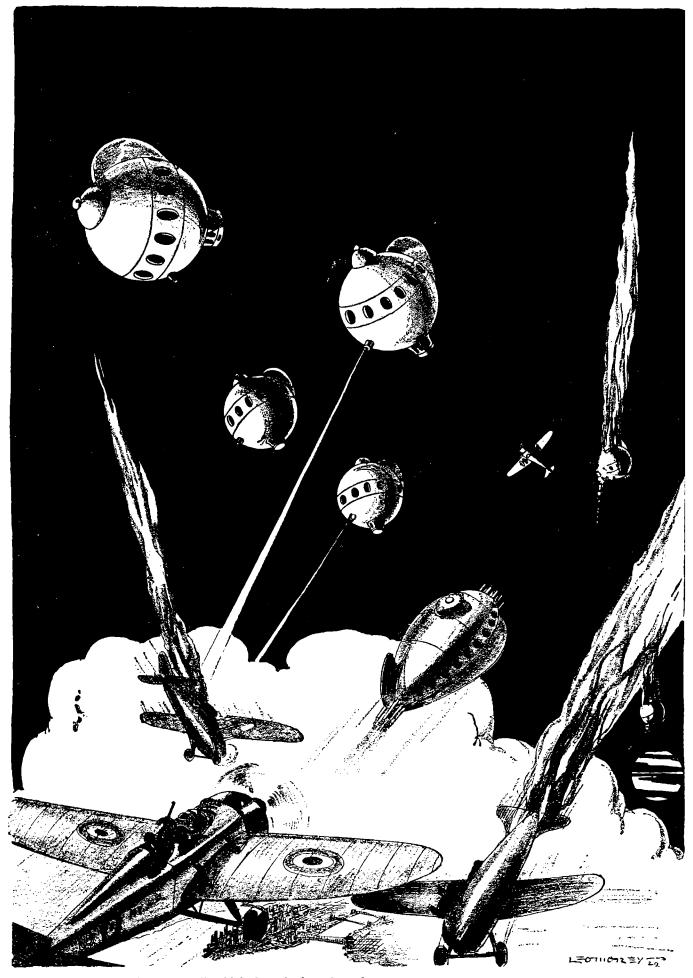
"There they are, Chief! Over to the right!"

It was true and they were rapidly passing the massed fleet of the Callistonians, but at a considerable distance. The "Meteor" had now slowed down considerably and Eddie manipulated the controls to swing the ship about in a wide arc. The stuttering of the explosions in the rocket tubes was almost continuous for a few seconds and then they were on the back trail with the eight spheres of the enemy in formation far ahead and barely visible in the periscope screen. The "Meteor" drew rapidly nearer and Ray started the generators of the fusing beam.

"Now Eddie," he said tensely, "just approach slowly until we are only a few miles to their rear. Then keep that position."

He chose the rearmost of the eight spheres and, when within range, searched its vitals with the destructive ray from the machine at which he stood. For a minute there was no result. Then he recalled the effect previously obtained on one of the protuberances of a similar vessel. He made out the bulge of such a protuberance and directed the ray at this point with immediate effect. The knob-like appendage flattened to the level of the surrounding metal and very quickly a large jagged opening appeared where the deadly beam contacted with the hull.

"One!" exulted Ray. But his triumph was short lived, for the formation of the enemy ships changed at once, two of them dropping out of formation and five increasing their speed in the direction of the earth, which now appeared as a great, spotted green ball that nearly filled the heavens. The damaged sphere wobbled uncertainly and went reeling off into space. But the two spheres which had fallen behind turned to attack the tiny "Meteor."



It was the "Meteor" which darted after the spheres at a speed double that of the spheres

"Now, we are in for it!" grunted Ray, "Keep a close watch on the controls, old man, and I'll tend to this beam."

Eddie needed no further instructions, for when he saw that the two spheres were separating and maneuvering to attack from opposite directions, he shot the "Meteor" to one side so swiftly that she came up under one of the big vessels and gave Ray an opportunity to get in an immediate shot at the lower prominence on the hull. The beam took effect very quickly, but not before that shimmering yellow ray had been released by the enemy vessel. It struck the "Meteor" amidships and, as had happened in the encounter over the surface of the moon, the temperature rose rapidly in their small cabin. Simultaneously the electrical system of the "Meteor" became completely paralyzed and Ray groaned in despair. Meanwhile the second sphere was swinging about to get within reach of the tiny vessel that had attacked its sister ship. Eddie worked frantically with the controls but to no avail. Then, as suddenly as it had appeared, the yellow beam vanished and soon the answering tattoo of the rockets told of the release from the energy it carried. The "Meteor" shot into space with tremendous velocity.

"Another close call, Eddie," shouted Ray as he wiped the perspiration from his face. "Now get the other."

But the second sphere was vanishing rapidly in the direction of the earth, which suddenly loomed very close. Ray glanced at the distance indicator.

"Good Lord, they've gotten away," he exclaimed. "Only ten thousand miles to go and we can't possibly overtake them in that short distance. Well, we accounted for two of them and the only thing we can do is return to New York and help out there."

So the little "Meteor" was hurled earthward to enter the battle which must surely have commenced by this time.

#### The World's Largest Cities in Danger

VER the great city of New York there circled three large steel monoplanes, each powered by six motors of tremendous size. These were the highest speed standard planes obtainable and were capable of traveling at five hundred miles an hour at twenty thousand feet altitude. Each was equipped with a fusing beam generator and was manned by ten picked members of the police force in addition to an expert pilot and two mechanicians. These planes were not insulated as was the "Meteor," so instructions had been issued to fight the battle at as long range as possible in order to keep away from the yellow beam of the invader and from the powerful magnetic energy, concerning which Ray and Gary had reported.

When the gigantic sphere of the Callistonians appeared over the lower portion of the city, its polished surface gleaming in the midday sun, the three defense planes circled faster and faster, climbing rapidly to a point where they were enabled to attack the monster. Seemingly unmindful of its small tormentors, the great sphere sank speedily to a point directly over the Municipal Building, where the yellow ray was put into operation. The tall building crumbled into the surrounding area like a mass of molten paraffine, the white-hot materials flowing along the surrounding streets like lava from a volcanic eruption. Above the spherical vessel

the three planes, darting like gnats, tried out their fusing beams on its upper surface. Two more of the yellow rays sprang into action from above and two of the steel ships of the defenders came crashing into the streets, their ignition systems paralyzed and the cabins heated to incandescence. The third, more fortunate than the others, banked sharply and circled the great sphere at so rapid a rate as to make it impossible for the attackers to keep their yellow rays in contact with its steel body. But, by reason of the great speed, it was likewise impossible for the defense plane to get results from its own fusing beam.

It was at this moment that the "Meteor" arrived on the scene and the hitherto hovering sphere rose rapidly to a greater altitude, evidently preferring to battle the new adversary where greater freedom of movement was permissible. The steel plane followed, but was unable to climb as rapidly as the "Meteor," which darted after the sphere at a speed double that of the Callistonian sphere. Ray struck for the vulnerable lower protuberance with his fusing beam, but was too late. The yellow ray had struck first and the engine of his vessel went dead. Simultaneously the generator of the fusing beam ceased operating and the "Meteor" was helpless under the fire of the energy vessel. But the insulating hull of the "Meteor" saved them for an instant and this was just sufficient time to permit of the steel plane coming to the rescue. Fortunately the inexperienced operator of the beam aboard the steel plane chanced to direct his energy into the very protuberance, where it was most effective, and the day was saved for New York City. Evidently the controls of the vessel were located in this lower bump, for the great ship immediately commenced its wobbling descent and was soon lost in a cloud of dust which arose upon its crashing into a great section of the east side of lower New York, where all beneath it was demolished.

Then Ray turned on the broadcast receiver of the "Meteor" and picked up the international news service. The world was aghast. The first word to greet them was to the effect that one of the spheres of the invaders had laid waste nearly half of the city of Chicago before departing. Berlin was in flames at a dozen points and its attacker had also left for regions unknown. Paris and London had shared like fates. Tokio and Osaka escaped entirely, thanks to the destruction of the two spheres outside the earth's atmosphere. But Philadelphia was still under fire so, with the "Meteor's" motor once more functioning normally, Ray directed Eddie to proceed there with all possible speed. Within fifteen minutes they were circling the smoking ruins of a great section of the third largest city in the United States. Glancing skyward they saw the vanishing bulk of the Callistonian vessel which had so seriously crippled the Quaker City and taken such widespread toll of its population.

"After them, Eddie!" growled Ray. And once more the "Meteor" shot skyward.

But the great sphere was fast and it was many minutes before they approached within range of the fusing beam. Then the most disheartening of all experiences occurred, for the yellow ray of the enemy struck them before their energy could be used and once more the "Meteor" went absolutely dead as far as operation of the electrical equipment was concerned. The enemy had learned how to combat them!

Fortunately for the "Meteor" and its occupants, the

enemy ship did not attack. Satisfied that the yellow ray had crippled the small attacking ship, the great sphere proceeded on its swift way toward the lunar base, leaving the "Meteor" to drift helplessly in space until the effects of the bombardment had worn off and the ignition system once more could be used. When the rocket tubes again fired, the spherical vessel had entirely vanished, and Ray ordered Eddie to head for home. Discouraged beyond measure, he closed his eyes and racked his brains for that clusive idea, that had been almost within his grasp in the morning. Finally he gave up what was obviously a futile attempt.

When they returned to the laboratory they found a delegation awaiting them, a committee from Washington. Long faces confronted them and Ray's spirits sank to the lowest level they had reached since the beginning of the trouble.

"Gentlemen," he addressed them wearily, "I am fully aware of the reason for your visit, though the details of the disaster to our world are still unknown to me. You have come to me to learn whether I have discovered a super-weapon, have you not?"

"Yes," replied the chairman of the committee, "and it is an extremely serious matter, Mr. Parsons. Perhaps you do not know that our defenses failed in all excepting the one instance, that is, over New York City. And, even here, the steel plane would have failed had it not been that your own ship was occupying all of the attention of the enemy. You witnessed the destruction in Philadelphia, but perhaps you do not know that five other great cities of the world have met a like fate. Our present weapons are inadequate, since even with the new vessels insulated as is the 'Meteor' we still have no assurance of victory over a superior force. Something must be done immediately."

"Yes I know. But I am no magician, you know. And I must remind you that I want to be left alone and must have absolute quiet if I am to work out our salvation. I shall do my best, but that is all I can promise you. No man can do more."

"We realize that," admitted the chairman," and we likewise realize that scientists throughout the entire world have been at the same problem, endeavoring to solve it themselves to your discredit. These scientists are still unsuccessful and we have come primarily to assure you that the governments of the world are placing their confidence in you as the one man who can get them out of this unexpected dilemma. We offer every assistance, financial or otherwise, that you may require for your success."

Ray brightened somewhat. "Thank you gentlemen," he said, "I appreciate the honor, as well as the offer of assistance. But my means are entirely sufficient to carry out the work and I have an extremely capable force of assistants. More would simply be in the way and would retard rather than hasten the work. Now, if it please you, will you kindly leave me to my work and carry back to the world the assurance that everything possible will be done. It is not necessary for me to say any more."

The chairman bowed and, after some desultory conversation, the committee left.

"Confound them all!" exclaimed Ray. "Can't they leave a man in peace?"

Then Ray Parsons did an unprecedented thing. He went to bed and, in sheer exhaustion, slept for more than twenty hours.

#### **Artificial Gravity**

ARY WALTON paced the floor of his office, listening apprehensively to the voice of the newsbroadcast announcer as the casualty lists were being read. The destruction and loss of life had been of vast extent and the world was in an uproar. Something must be done to speed up the work on the thirty space fliers and to provide adequate means of combating this enemy from out the skies. Worst of all there came widespread criticism of the seeming inactivity of Ray Parsons and of his failure to provide a suitable weapon of offense.

"Fools!" snorted Gary, "Don't they realize that everything that has been done is due to his efforts and that he really saved New York City from the worst disaster of all? Haven't they sense enough to know that except for Ray, we should have been entirely unprepared and that these eight ships would probably have remained here and continued the work of destruction until it was complete? Such ingratitude makes me sore!"

Then there came from the broadcast receiver a message that had been translated within the past half hour; one of the intercepted messages of the Callistonians. How the enemy gloated! It was true that they had lost two of the eight ships, but they reported that the world was a defenseless one, unprepared and ready for the slaughter. Just one tiny vessel they reported as able to cope with them at all and they bragged that successful means of fighting this lone ship, the "Meteor," had been discovered. How discouraged Ray must be if he listened to all this rot, thought Gary. And he stamped from his own office to that of Horace Greenfield in high dudgeon.

"I'm resigning, Mr. Greenfield," he stated bluntly, when he faced his superior.

The great executive looked at him with a twinkle in his eyes. "You are, eh?" he countered. "And suppose I refuse to accept your resignation?"

"You must accept it." Gary's tone was stubborn.
"I'm all fed up on this communications business at a time like this. I simply can't stand it. If I can't be out doing something worth while, I'll go crazy."

"How would you like a leave of absence instead?"

"Oh, that would be great. But I hesitated to ask for it."

"You may have it, my boy, for as long a time as may be necessary. And at full salary too. The work here is so well organized now, that it can go on uninterrupted, and I see no reason why you should not go up there in Monroe County and work with your friend Parsons. I know very well that such a procedure is what has been on your mind."

"That's it, Mr. Greenfield. It galls me to hear all this unwarranted criticism of Ray and I wish to be with him to help in any small way that I can."

"Very natural Gary. Can't say I blame you at all. And now go ahead and run along before I change my mind."

So it was that Gary reached his friend's laboratory within an hour of the time when he awakened from his long sleep. He was astonished beyond measure to find Ray in a great state of excitement, issuing orders right and left among his corps of engineers.

"Just the fellow I wanted to see," Ray greeted him, "You can dig right in and help too. I've solved the problem of a weapon—dreamed it, by George!"

"Dreamed it?"

"Well partly. I had a hazy idea in the formative state, when I fell asleep, but found it fully developed when I awoke. It's a cinch, but we must hurry in order to get the necessary equipment out in time."

"What on earth is this big idea?"

"Come in to my office and I'll tell you all about it. The gang is all primed up now and is going to get busy at once."

They repaired to the office and Ray sank into his chair with a contented sigh. Gary was pleased to see that his friend had recovered his usual poise and confidence.

"Artificial gravity," said Ray solemnly, when they had lighted their cigars, "That is the big idea. You know how simply I have been able to increase the force of gravity in the appliances on the 'Meteor?"

"Yes, but how are you to apply that in this case?"

"Listen. It's so simple, it's foolish. For years I have been trying to overcome gravity, as have many others of our scientists. But none of us has been successful. However I have learned how to increase it—how to produce an artificial gravity as is done on the 'Meteor.' The acceleration and deceleration compensators operate on the same principle. And the force by which these results are produced can be set up in metallic objects from a distance by means of a definite high frequency current sent over a ray of etheric vibrations. Come over here and I'll show you."

He led his friend to the adjoining room, where there was a huge Coolidge tube and its accompanying apparatus. "Watch this," he said gleefully.

The closing of a switch on a nearby panel lighted the heater element of the tube and Ray adjusted a small reflecting mechanism at the side of the apparatus until a faintly discernible ray of purplish light impinged upon a block of steel which reposed on a small empty packing case. Nothing happened for a moment and Gary looked questioningly at his friend.

"Wait!" said Ray.

They watched the steel cube in expectant silence. Then something did happen; something so astonishing to Gary that he gasped in amazement. The rough pine boards of which the packing case was constructed sagged lower and lower until, with a sharp crack, they gave way and allowed the steel block to fall to the floor beneath. There was another crash and a thud as of a tremendously heavy object striking the concrete floor of the basement. The cube had gone through and buried itself in the concrete, leaving a gaping opening in the floor boards!"

"Great Caesar!!" ejaculated Gary, "that is a stunt, old man!"

Ray grinned delightedly at his friend's expression. "Yes," he admitted, "and it is just the stunt that is going to put the Callistonian space fliers out of business."

"But how?"

"Don't you see? That piece of steel, weighing normally about thirty pounds, has been increased in weight by the action of this ray until something like ten or fifteen tons were concentrated on its narrow base and the supports failed. What I propose is that generators of this ray be installed on the 'Meteor' and on a few of the larger new ships for use against the enemy vessels. If we encounter them near the surface of the moon or of their own planet it will be possible to send them crashing to the ground. In case we encounter them in space

they will crash into each other, due to the greatly increased mutual attraction."

"But will not this increased attraction cause our own ships to crash into those of the enemy as well?"

"No, for the hulls of our vessels are constructed from materials which insulate them against this artificial gravity field. There is no question about it; we have them where we want them now, provided we are in time."

Gary grabbed him by the shoulders and executed an impromptu war dance about him. "Glory be!" he shouted. "You've done it again! And won't the old fossils be sore?—the ones who have been knocking you?"

Then there came a startling interruption, for with a pattering rush of tiny feet a slight feminine figure dashed across the room and soft, warm arms were flung around the necks of the two men. It was Lola!

"Oh Ray—oh Gair-ree," she sobbed, "Lola is so unhappy. She has missed her dear friends so much when in the great city you call Wash-ing-ton. Where is Ed-dee?"

Over the top of the girl's head Gary winked at his friend. "What did I tell you?" he said. "Lola is one little bit of all right."

Ray gazed blankly at his friend and at the flushed and panting girl. Where indeed was Eddie? He had not seen him since the last trip of the "Meteor;" since the battle. He rushed to the telephone and soon had Mrs. Dowling on the wire. There was a catch in her voice when she replied to his inquiries.

"My boy has packed his clothes and gone away, Mr. Parsons," she moaned. "Feelin' bad about that Miss Lola, I think he was, and he wouldn't tell me where he was goin' either. It's just sick at heart I am about it too."

Ray turned from the instrument and faced Lola with a sinking heart. He dared not tell her the truth, yet he knew that she must soon know. So he broke the news as gently as possible.

"Eddie has gone away," he said gravely.

"Gone away?" The girl's eyes were tragic with fear. "Where?"

"We do not know."

Lola dropped weakly into a chair and covered her face with her hands. "Oh, oh," she lamented. "It is that he thought Lola no longer cares. And Lola is to blame. Poor Ed-dee! Unhappy Lola!"

#### A Stowaway

URING the succeeding weeks the news broad-casts carried different tidings to the peoples of of the world. Ray Parsons was once more an international hero. The construction of the thirty vessels was being rapidly rushed to completion. Twelve of the fusing-beam generators intended for the new ships had been destroyed by the raiding party and these were not to be replaced. Instead, the twelve vessels not provided with this equipment were to be armed with the marvelous new weapon developed in the Parsons laboratories. And, by agreement between the governments, Ray Parsons was appointed as commander-in-chief of the fleet. The intercepted messages of the enemy were read nightly to the listening millions and the plans for a decisive blow and the subjugation and colonization of the

earth by the blond giants from Callisto were laid bare even as they developed. The great spherical war ships were assembling at the lunar base for the coming engagement. Fifty of them, there were to be, and fifty more waiting in Callisto to follow up the war vessels with a migration of many thousands of the blond horde to the earth. It soon became evident that the Tellurian fleet would be ready in ample time to anticipate the date set for the great battle. With this certainty, the world resumed its normal activities and the work of reconstruction started in the several devastated cities.

Ray did not at first take kindly to his appointment, and finally accepted only under the condition that the "Meteor" was to be flagship of the fleet and that his radio orders should issue therefrom. His laboratory and workshops were beelieves of activity and the G-ray generators, as the new apparatus was termed, were turned out in record time and shipped to the yards where the new vessels were nearing completion.

Mrs. Dowling took Lola into her home, though she fought a hard battle with herself before consenting to this move. But the girl was so sweet and so obviously fond of her son, that the motherly heart of the older woman could not resist the appeal of this child, whom her son loved. From Eddie there was no news for several weeks, and Lola berated herself incessantly as the cause of his disappearance. But Ray and Gary comforted her with the suggestion that he had, in his disappointment, enlisted amongst the volunteers called for to man the new war ships. Eventually, through a personal call injected into a news broadcast through the influence of Gary, they learned that this was the case. Much of the anxiety of those he had left behind was thus relieved, but due to strict governmental regulations, they were unable to learn the number of the ship to which he was assigned, nor were they permitted to communicate with him or he with them.

It was evident that the optical instruments of the Callistonians had not revealed to them the activities on earth in preparation for the coming war, for the messages gave no indication that resistance was expected. The enemy had already won the war in their own estimation.

The alterations to the "Meteor" were completed. Six new rocket tubes were added and the G-ray generator installed. Sufficient fuel and provisions were stowed away in her compartments to permit of a voyage of several weeks' duration. Her acceleration and deceleration compensators were modified to take care of the greatly increased speed. Then came the word that the entire fleet was in readiness and Ray was called to Washington for the final conference in which the plan of attack was to be agreed upon. There still remained eight days before the date set by the enemy for their expected offensive.

Three days later the twenty vessels from foreign shipyards had arrived in the United States and were assembled in various flying fields along the eastern seaboard. Ray returned to his laboratory for the "Meteor." Meanwhile one of his assistant engineers, Marshall Bostwick, had been instructed in the operation of the small vessel and had taken her up for a number of trials. She was pronounced perfect and Ray planned that her crew was to consist only of the new pilot, Gary, and himself. But he had reckoned without Lola.

The plan of attack was simplicity itself. At Gary's command, the thirty vessels were to take off from their

several locations and were to gather en masse at twenty thousand feet altitude over the city of Philadelphia, which was about central with reference to the various flying fields. From this point the voyage to the other side of the moon was to commence, the "Meteor" leading with five of the new vessels, two of which were to have the G-ray armament. The remaining twenty-five were to follow in groups of five, each group including two of the ships with G-ray generators. Upon reaching their destination an immediate assault on the enemy was to be made and no cessation of hostilities was to be permitted until the entire enemy fleet and the lunar base was destroyed. The fleet was next to proceed to Callisto and engage the fifty space fliers that were reported as awaiting news of the success of the first fleet.

At the hour set for the departure the "Meteor" was ready in her own enclosure. At the controls sat Marshall Bostwick and, watch in hand, Ray faced the microphone through which his orders were to be issued. Gary was engaged in clamping the outer door of the air lock.

"Attention, squadron commanders," spoke Ray. "Ali ready?"

There followed the assenting replies from the commanders of the five squadrons and from the temporary commander of his own group. Then came the order to take off and, as the "Meteor" taxied across its field and roared over the tree tops, they knew that the other thirty vessels of the fleet were likewise taking to the air. The "Meteor" climbed rapidly to twenty thousand feet and headed southward.

With all their attention focussed on the instrument board and the controls, the three men were astonished beyond measure at the silvery tinkle of feminine laughter that assailed their ears. Ray swung about as if on a pivot.

"Lola!" he gasped.

"Yes, it is Lola." The girl had crept from her hiding place amongst the blankets in one of the bunks. "You did not think that this so grand war could be fought without Lola, did you?"

"Why—why," Ray stammered. Then he was forced to laugh in spite of himself. "But I guess it's all right," he concluded lamely.

"Most certainly it is all right, Ray. Lola must be with you when you free her own country. Is it not true?"

"Yes it is true, my dear," he admitted readily, "and I am very sorry that I did not see it in that light before. You are welcome aboard the 'Meteor.'"

"Lola is glad," she stated simply.

And Ray and Gary were glad too, but Marshall Bostwick was not so sure. He was a matter-of-fact sort of chap and the idea of having a woman mixed up in this mess did not appeal to him. But then, he had not known Lola previously.

They were soon at the appointed meeting place and within a very few minutes the entire fleet had assembled, the key squadron of five of the larger ships taking its place behind the "Meteor." Without further delay Ray's orders were forthcoming and the fleet headed skyward with gradual acceleration to the velocity required in escaping the gravity attraction of the earth.

One by one the vessels of the fleet reported that all portions of their apparatus were functioning perfectly and by this time a speed of two thousand miles a minute

had been reached. Ray drew a breath of relief and ordered all ships to maintain this rate of speed. They would arrive at their destination, the moon, in about two hours.

As the earth receded rapidly astern and the moon's disc evolved into a clearly defined globe of ever increasing size and brilliancy, Marshall Bostwick could not restrain his exclamations of surprise and wonder. Ray and Gary exchanged smiles over the thought of how many expressions of similar wonder must at this moment be vented on board the other thirty vessels, none of whose occupants had ever seen the marvels of the universe under such conditions. The moon rushed toward them with terrifying rapidity and the great flaming orb of the sun seemed stationary in the blackness of the firmament, its most brilliant prominences partly hidden behind the earth which was now presented as a crescent with fully three quarters of the visible surface in semi-darkness.

The trip was uneventful and of unbelievably short duration. As they approached the brilliant near side of the satellite, Ray issued his orders and the fleet swung about to encircle the body at about three thousand miles distance. The speed was reduced gradually until they were traveling at no more than a tenth of the previous rate. At the reduced speed they drew closer to the surface and in about twenty minutes had reached the point where a sharply defined shadow told of the merging of the daylight of the moon into its long night. They crossed into the darkness of the other side and were headed toward the huge sea at whose precipitous shore the Callistonian village was located and at which point they expected to find the enemy fleet.

The first engagement of the war was about to begin.

#### A Surprise Attack

TITH the sun no longer visible, the blackness of the heavens became still deeper and the stars shone with magnificent splendor. At the horizon the great gleaming crescent of the earth sank from view with majestic grandeur. Venus shone brilliantly in the sky and the reddish point of light that was Mars took on an importance and beauty it had never presented before. The darkness on the surface was not complete, for the combined light from the naked stars provided sufficient visibility, so that the great craters and their central spires could be made out dimly when the eyes of the observers became accustomed to the comparative obscurity. But it was necessary that the automatic heating apparatus of the vessels come into operation to keep their interiors at normal temperature in the moon's shadow.

When they had proceeded another quarter of the way around the satellite, Ray called for a halt and for a drop to within two or three miles of the surface. With this accomplished, he searched the dim-lit landscape below with powerful night glasses and soon made out the locality of the village and the fleet of the enemy. As they drew nearer, all observers were able to make out the shapes of the fifty Callistonian vessels, for numerous round windows in the vessels were illuminated by lights from within. The village too showed lights, so there was no difficulty in reaching close range for a surprise attack. Three of the squadrons were directed to spread out and encircle the area including the village

and the open space where the huge enemy vessels reposed. These were to watch for surprise counter-attacks by the Callistonians and were to utilize fusing beam and G-ray generators where necessary, as well as the paralyzing energy, in cases where any of the enemy might venture forth in their air-tight suits. The "Metcor" and the other half of the fleet were to make the main attack, relying principally on the G-rays and the suddenness of their onslaught.

All lights on the Tellurian vessels had been extinguished and Ray gave orders that the searchlights were not to be used, unless it became absolutely necessary, when they were to be directed at the individual warships of the enemy to serve the double purpose of illuminating the hulls and of blinding the enemy observers. When the squadron commanders reported that fifteen Tellurian ships now encircled the foe, the order to attack was given.

"Marsh" said Ray to his pilot, "keep your eyes peeled now and your fingers on the rocket controls. I am going to handle the G-ray and Gary will use the fusing beam. All set now."

The last was spoken into the microphone and simultaneously with the words the "Meteor" swooped directly for the center of the huddled mass of spheres, followed in this maneuver by the fifteen vessels of their own fleet. Seven faintly visible purplish rays impinged upon seven of the great spheres and nine of the fusing beams searched for vulnerable spots in the hulls of the enemy ships.

"Holy Smoke!" shouted Gary, "Just look at that!"

He was watching the sphere at which Ray had directed his G-ray. It had flattened itself to a crushed mass of twisted metal and one of the nearby vessels crashed into the wreckage with such force as to split itself asunder and spew forth its machinery and occupants into the deep powder that carpeted the surface. To the left there shot forth from another of the spheres a blast of incandescent particles that resembled the discharge of a Bessemer converter. A fusing beam had contacted with the upper protuberance of this ship and the escaping air from the interior carried away the white hot metal in a shower of sparks that lighted the scene brilliantly. The attackers withdrew momentarily to observe the result of the first onslaught.

Fully ten of the huge spheres were crushed by their tremendous increase in weight caused by the action of the G-rays. Five more were flaming torches from successful operation of the fusing beams. But the remainder of the fleet had come to life and several of the vessels had already left their positions and were rising to the defense. From these there came the beams of searchlights that hunted the skies for the cause of the unexpected disaster. One of these beams lighted up the tapering hull of a Tellurian vessel and two of the yellow rays converged immediately to contact with the unwelcome visitor. Ray and Gary watched spellbound as this ship of their own fleet hovered helplessly for a moment and then plunged to the ground, entirely out of control.

Lola cried out, "Oh, what if Ed-dee is on that ship? He will be killed and it is all Lola's fault."

But she soon forgot her fear and became absorbed in the scene of action that quickly developed. The outer ring of Tellurian vessels had brought their searchlights into play and an arena of great brilliance was outlined beneath them. There was confusion in the village and confusion in the maneuvers of the spherical ships in the plain. Two of the caterpillar tractors lumbered forth from the village, their yellow rays searching the skies for the ships of the invaders. Numbers of ballooned helmeted figures could be seen rushing from the doors of the cylindrical buildings. Three of the gigantic spheres which had risen some distance from the surface came crashing down, welded into a solid mass of distorted metal by the terrific mutual attraction set up by one of the G-rays.

Another of the Tellurian vessels was down and the "Meteor" rose rapidly to attack a number of the spheres which had reached an advantageous position. The key squadron followed and they made short work of the Callistonians who had ventured aloft, the simultaneous action of three of the G-rays hurling five of the gigantic spheres into a death huddle that provided a vivid pyrotechnic display and a crash below, that half buried the wrecked machines in the lunar dust. Beneath them the scene was indescribable. Even the cylindrical habitations of the Callistonians had flattened into unrecognizable masses of metal under the influence of the G-rays. Not a living being was in sight, all having been either killed in the wreckage of their habitations or stretched lifeless in the dust by the action of the paralyzing energy of the Tellurians. As the "Meteor" approached the scene, one of the big spheres rose to meet the tiny vessel and the yellow ray spurted forth so suddenly that Lola screamed in alarm. But the Callistonian was too late, for already the G-ray had found its mark and the sphere rolled over on its side, thus sending the yellow ray wide of its mark. It poised for a second or two in this position and then, with inconceivable acceleration, hurtled to its destruction against the edge of the precipice.

The encircling squadrons of Ray's fleet had converged on the remaining scattered spheres and a dozen individual encounters were in progress. At one point Ray saw that three of the spheres had attacked a lone Tellurian vessel and he hurled his squadron to the assistance of the besieged ship. This was the most serious single encounter of the battle and two of Ray's squadron of five ships went crashing to destruction, one of these being caught between two of the spheres when they crashed together under the influence of the G-rays. But, with this engagement ended, there remained but six of the big spheres and these made a frantic effort to escape. At Ray's quick command, three squadrons of his fighting ships darted skyward with bright streams of burning gases from their rocket tubes marking their trail. The rest of his fleet landed amongst the ruins of the Callistonian vessels where five of the graceful ships from Earth also lay helpless in the thick dust.

Then came a triumphant report from the blackness of the heavens and Ray doffed the headphones of the radio with satisfaction.

"All six of the escaping vessels have been destroyed," he stated. "The commander of the A-7 advises that they crashed at a point some fifty miles from us. Now we'll see if any of our comrades are still alive in the ships that were brought down."

Lola was weeping as he pulled on his air-tight suit and she begged for permission to accompany them on the search. Her own trappings were still aboard the "Meteor" and Ray had not the heart to refuse her request. So, when all three were fully clothed in the flexible suits and with the bulky helmets locked in place, he

and Gary and the Callistonian maiden stepped from the outer door and into the scene of carnage.

Meanwhile the remainder of the fleet had landed and Ray was overjoyed to see that one of the vessels he had thought destroyed was rising from its position, apparently unharmed. The effects of the yellow ray had worn off and the commander, discovering that his apparatus was once more in order, was experimenting with a view of determining whether the ship could be navigated. But four Earth vessels lay where they had fallen and Ray's party immediately set forth to investigate their condition.

The victory had been a glorious one but Ray hated to lose even a single vessel. And Lola was hurrying with all possible speed to learn whether any of the four disabled ships were from America.

#### By Radio With A-4

SEVERAL hours were spent in searching the wreckage of the Earth vessels, all four of which were so seriously damaged that portions of the hulls had been torn open, thus allowing the oxygen to escape from within and causing the suffocation of the crews. The bodies were all recovered and a decent burial was accorded their comrades by numbers of enlisted men from the other vessels who had joined the searching party from the "Meteor." One of the destroyed vessels was the A-3, an American-made and American-manned ship, and when the bodies were taken from this one Lola examined each one carefully through the thick window of her oxygen helmet. But she was unable to recognize the features of Eddie Dowling among those horribly swelled and bloated corpses.

The Callistonian vessels were twisted and torn and smashed beyond belief. Those which had been brought down by the G-ray were literally smashed into the ground and had burst open from the impact which had crushed them flat. Those with openings burned through the hulls were not otherwise badly damaged, excepting in those cases where they had dropped from a considerable height, but it was clearly impossible that any living creatures remained within them on account of the loss of oxygen through the great holes created by the fusing beams. The village itself was a wreck and the numbers of those Callistonians who had ventured forth in their oxygen helmets and airtight clothing were still helpless from the effects of the paralyzing rays of the Tellurians. These were about forty in number and were carried to the various vessels of the Tellurian fleet where they were restored to consciousness after being securely bound. Ray had no intention of countenancing wanton slaughter of these helpless beings.

When the Tellurians had returned to their ships and all was in readiness for the take-off, Ray tuned his radio transmitter to the frequency of the International Communications headquarters and was soon conversing with the operator on duty. He reported the results of the lunar battle and was extremely surprised at learning that the news broadcasts had already announced most of the story to the world.

"How in Sam Hill did you know?" asked Ray.

The operator laughed. "Why there were miles of tape rolling out of the recorder here, Mr. Parsons," he said. "The enemy kept their radio going until the last minute—until the village itself was destroyed—and our

translations gave us a very good word picture of the whole thing right in the midst of the action. But a bad feature of it is that their home folks know all about it too, and will be prepared for you when you get there."

"Yes, that is true. They may even come out to meet us. But we have no alternative—we must proceed at once to Callisto and you can notify the news syndicate to that effect."

"Very well, Sir."

And, with a quick turn of the tuning dial, Ray was once more transmitting on the frequency to which all receivers of his fleet were tuned. The order to take off was given at once.

Within a very few minutes they were once more out of the moon's shadow and were headed for their destination on a carefully calculated path which was to measure close to 450 millions of miles. Steadily the speed was increased until they reached the unbelievable velocity of eighty thousand miles a minute. Earth and its tiny satellite were soon left far behind.

When they had settled down to a steady grind at this speed, Lola approached Ray timidly. "Will you not attempt to communicate with Ed-dee for Lola?" she asked.

"Why you poor kid," laughed Ray. "Of course I will. I should have thought of it long ago. As commander of the fleet I will now be able to get in touch with him."

No sooner were the words uttered than he turned once more to the microphone and requested the commander of the American vessel on which Eddie Dowling was carried as a member of the crew to report in. Lola stood expectantly at his side and soon there came the reply. For the first time Ray knew that Eddie was on the A-4.

"Get him on the radio, Thomas," he requested of the 'A-4's chief officer. And Lola clapped her little hands with joy as Ray awaited the voice of his erstwhile mechanic.

"Hello Chief," came the voice, "some fight back there on the moon, wasn't it?"

"Yes, but that's not the reason I called you. There is a little lady on board the 'Meteor' who would like to speak with you."

"For the luva Pete, Chief, is Lola along with you?"

"She is, although I didn't know it until we were well on our way. She came as a stowaway. But here—I know you must be anxious to speak with her."

"No, no, now—wait a minute. I've been doing some thinking since I packed up and joined this outfit. I've been bughouse for even thinking about her. Why, doggone it, she's a princess in her own land, and after we get things straightened out up there, what chance do I stand with her? No Chief, she's not for me. I won't talk to her."

"But Eddie, you don't understand. She had a fit when she found you were gone and has been upset ever since. She wants you, man. Don't be a fool now—come on and talk to her."

He turned the headphones over to Lola and she spoke rapidly into the microphone, begging for forgiveness and understanding. Ray winked solemnly at Gary, but Marsh Bostwick listened in disgust.

Lola waited patiently for a reply but there was none. Eddie had left the radio of the A-4. Once more the girl spoke and Ray frowned in annoyance as he realized that Eddie was actually refusing to converse with her. There

was silence for a moment and then Lola removed the phones and, without looking at the men, rushed to her bunk where she buried her head in the pillow.

"Why darn his hide!" commented Ray, under his breath. "What shall I do, Gary? Shall I have his captain command him to speak to her?"

"No, I wouldn't. He's just that stubborn he would be likely to refuse and would then be disciplined for insubordination. Let the thing straighten itself out—"

"I guess you're right. But Eddie is a fool just the same. A lot Lola will care whether she is a princess and he an ordinary mechanic. She proved herself when she came back from Washington."

"You've changed your mind about her I see," laughed Gary.

"Yes I have. She's a brick and I hate to see her unhappy."

They both cast affectionate glances in the direction of the girl's pathetic little figure, and somehow their eyes misted when they observed that it was shaken with soundless sobs.

Marsh Bostwick kept his fingers on the rocket control buttons and offered no comments.

N less than four days by Earth time the fleet swung into the orbit of Jupiter and approached the huge planet at a distance of three million miles, decelerating gradually until a second change in direction was ordered to make the approach to Callisto. When the orb of the satellite loomed large in the field of the telescope of the "Meteor" it was seen that a great portion of the surface presented to view was covered with a dense layer of clouds. The reflected light was far from intense on account of the great distance from the sun, whose flaming orb had now become of small size and importance in the blackness of the firmament. Lola, more sedate and solemn of mien than she had been since Ray and Gary first met her, clutched nervously at her throat when they drew near to the body that was her loved home. She had not spoken of Eddie since the attempt to communicate with him, but her two friends knew from her demeanor that she was suffering intensely, and as a consequence, they had made every effort to keep her entertained during the long voyage.

Their instruments soon registered the sensible gravity field of the satellite and it was not long until they approached so closely that the globe filled their entire field of vision. Still the dense cloud layer persisted and Ray had some doubts as to the advisability of diving through the rolling banks of billowy whiteness. The barometer showed a slight pressure of atmosphere outside the vessel and the speed of the fleet was reduced to less than a thousand miles an hour. They were in the atmosphere of Callisto.

Then came the Callistonian fleet, apparently the entire fifty vessels, and it rose through the clouds at a distance of not more than five miles from the Tellurian fleet. Evidently the enemy had learned of their approach by means of sound detectors or some similar means. The third great battle of the war was about to start.

#### "Vilyon, of the Anurdi"

HE spherical vessels, when they sighted the fleet from Earth, drew together in close formation and hovered expectantly. Ray did not know what to expect, for he knew they had been forewarned by the

lunar radio, and would probably have formulated some definite method of attack. He therefore ordered his own fleet to spread out in open formation, each squadron keeping at a distance of at least one half mile from its nearest neighboring squadron. He then proceeded slowly in the direction of the motionless enemy fleet to get within range for the use of the G-ray.

They had not long to wait for action on the part of the enemy. When the "Meteor" was still more than a mile distant, there came a sudden barrage of the yellow rays-three from each spherical ship-and these were concentrated on his own squadron. Helplessly Marsh Bostwick pressed the rocket control buttons; unsuccessfully he attempted to start the motor in the forward compartment. The atmospheric density was now sufficient for the use of wings and propellers, but the ignition system failed to function due to the influence of the deadly yellow ray. And their vision was completely obscured by the intense darkness that fell about them like a pall. Ray shouted frantic orders into the microphone of the radio, which had likewise gone dead. The "Meteor" and its accompanying squadron drifted toward the satellite with ever increasing speed. Then, just as the "Meteor" went into a tail spin from which all efforts of the pilot failed to recover, the impenetrable darkness melted into the brightness of an equally impenetrable mist and Ray knew that the effects of the yellow rays had worn off. Simultaneously with the passing of the darkness there came the startling roar of the motor and in a few seconds Marsh had pulled out of the spin and was heading the vessel into a steep climb. Then they were once more about the clouds in the pale light of the sun. Two miles ahead and several thousand feet above them was the Callistonian fleet, all of their yellow rays directed into a falling cloud of blackness that told of another of Ray's squadrons sent toward the surface. But two other squadrons had flanked the enemy fleet and he saw that they were close enough to use their G-rays and fusing beams. Then the remaining three vessels of his own squadron rose from the mists and joined the "Meteor," which led them rapidly toward the unsuspecting enemy fleet. The Callistonians had at first made the error of attacking at too great an elevation, thus permitting their intended victims to recover from the effects of the yellow rays before crashing on the surface of the satellite. Yet two of Ray's squadrons were down.

With no less than six of the powerful G-rays directed into the mass of the spherical vessels there were almost immediate results. Suddenly the mass huddled still closer and then, with a crash that came like a terrific explosion, the entire fleet had merged into a solid agglomeration of twisted and crushed metals. Bodies of the blond giants were thrown from the ships as they burst under the impact, bodies that went hurtling toward the great cloud banks and were swallowed up by the mists in their swift descent. Then, with a reeling lurch, the huge mass of crushed ships plunged downward so rapidly as to be swallowed by the same mists before the Tellurians fully realized what had occurred. Lola's hands were clenched so tightly together that her knuckles showed white between fingers that pressed deeply into the flesh. But her face shone with gladness, for she knew that her own people were to be forever freed from the oppression of the blond giants.

Ray issued orders with rapidity as the radiophone was restored to normal functioning, and the remnants of the fleet drew into formation and prepared for the dive through the clouds. He checked up at once and learned that six of his ships did not respond to his calls and among these six was the A-4. His heart sank when he discovered this but he did not tell Lola. Then they were in the clouds and he watched the periscope intently as Marsh maneuvered the tiny vessel to lower altitudes. He was not entirely certain of the accuracy of his altimeter on account of the peculiar gravity field of the satellite, which seemed to increase very rapidly in its effect, as they drew near its surface.

After what seemed like an endless glide, the "Meteor" emerged from beneath the clouds. It was fortunate they had proceeded so cautiously for the "ceiling" was no more than fifteen hundred feet above the surface. The fleet was directly over a city of considerable size, which city was surrounded by a broad wall of glistening metal. And a huge corner of this city lay a pulverized mass of ruins where the pile of Callistonian vessels had landed and half buried itself in the surface, carrying buildings, wall and living beings with it.

"Viljon!" exclaimed Lola, "the capital city of the Anurdi, the enemies of my own people. This is their great stronghold and much care must now be taken."

But the city was a bedlam of excitement and the inhabitants could be observed milling around in the narrow streets, apparently in a frenzy of fear. The buildings were not of the cylindrical type which had been erected by the Anurdi on the moon, but they seemed to be of the same kind of metal. It was a city of not more than five stories in height, with all buildings of monotonous similarity in size and shape. Each building filled a complete block between the narrow thoroughfares, which were laid out in absolute parallelism. At a number of points along the remaining sections of the wall there were towers, and Ray suspected that these were provided with penetrators of the yellow ray and possibly with the attracting force of the Anurdi as well. He therefore directed his vessels to concentrate the combined energy of their G-rays and fusing beams on these points. The results were immediate and complete, for each tower crumpled into a mass of crushed and semi-molten metal under the onslaught. The frenzy of the inhabitants increased to the proportions of an uncontrollable uprising. Then, in an open space in the center of the city, a mob of citizens could be seen unfurling a large banner of snowy whiteness. The Anurdi were suing for peace!

Ordering the remainder of his fleet to hover over the city, Ray directed his own pilot to land the "Meteor" in the open square where the white flag was displayed. As they descended it was observed that many small aircraft were on top of the flat-roofed buildings but that none were in the air. It was evident that the Anurdi were thoroughly cowed by the Tellurian armada. And indeed this was no wonder, for the flower of their young manhood had been wiped out of existence with the annihilation of their fleet by the Tellurians.

Lola was recognized by Ja-tal, ruler of the Anurdi, a giant among giants. He it was who greeted the little party from the "Meteor" when it landed and, scorning a bodyguard, made overtures for peace with Lola as interpreter. The treaty of Viljon, later signed, was based on these preliminary negotiations and its provisions are now so well known as to make it unnecessary to go into them in any detail. Of prime importance to Lola was the agreement that all Anurdi forces withdraw from Dassan, her own native land. But to the Tellurians the

assurance of lasting peace between Tora and Thares came as a complete triumph, and the garrisons of Earth, that later became permanent landmarks throughout Anurdi, did not lack for volunteers from all nations.

With the preliminary negotiations completed and the city of Viljon changed from a chaos of fear to a scene of jubilant celebration, the "Meteor" once more took to the air, and headed the search for the vessels which had been brought down by the yellow rays of the Anurdi. All of these were found outside the city walls and the first three that were located were seen to be complete wrecks with all occupants either killed or dying. Then they came to the A-4 and Lola's hands again fluttered to her throat, as they observed that the ship was scarcely damaged and that a number of its crew were busily engaged about the landing gear, endeavoring to restore the partly overturned vessel to an even keel. The other two slups of the Earth fleet were close by, and these too seemed to be but slightly damaged and with full crews clustered about them. The Tellurians had lost but three of their vessels.

Overjoyed, Lola was first to step from the "Meteor" when it landed beside the A-4 and she rushed to where Eddie, in grimy overalls and with a huge wrench in his hands, was at work on one of the landing gear struts. "Ed-dee," she addressed him timidly.

A broad black smear appeared on his forehead as he drew his hand across it in surprise. "Why, hello, Lola," he returned lamely.

Just then, with a roaring swoop, there landed a Callistonian airplane, a craft very similar to those in use on Earth. It was ship from Dassan, and when it landed a group of Lola's own people rushed to the A-4 and surrounded her before she could converse further with the much flustered mechanic. Protesting vainly, she was swept from Eddie's side. Then a handsome youth of Dassan, garbed in a magnificent purple costume of the skin-tight variety worn by all of his people, swept her into his arms and literally carried her into the newly-arrived plane. Eddie gazed after them with openmouthed astonishment and with a sinking heart. Lola already had a lover, and of her own kind!

#### Eddie Returns to the "Meteor"

WO of the Dassanese were left behind when their plane took off, one to accompany the "Metcor" and to direct its pilot in leading the main body of the Tellurian fleet to Sharan, the capital of Dassan, the other to remain with the three slightly damaged Tellurian ships and to direct them to the same location when repairs were completed. By arrangement with the commander of the A-4, Ray exchanged Marsh Bostwick for the disconsolate Eddie, whom he returned to the "Meteor" as its pilot.

"Hello Eddie," Gary greeted him, when they were about to board the 'Meteor,' "why so pensive?"

"Oh now, lay off the kidding," replied Dowling, "You know what is wrong with me. I'm a nut too for taking it this way, but I want no wise cracks about it."

"No offense, old man," said Gary, "And I want to tell you that you are all wrong about Lola too. Don't give up so easily."

"I know when I am licked, Gary. Didn't you see the guy who carried her into the plane? Swell chance I've got."

"That may not mean a thing. He may be a cousin or

something. At any rate, Lola's actions during the trip showed us what she thinks of you. Stick to it, and I'll bet you get her, Eddie."

"Cousin, my eye. You never saw any cousins as affectionate as those two were. Anyhow, I don't want to talk about it any more."

So Gary desisted and Eddie took the pilot's seat as Ray entered the cabin with Thard, the Dassanese navigator. Thard was a well-set man of medium height and had a pleasant and friendly manner. Of course he could speak no word of English, so it had been arranged that he would direct the Tellurian fleet by means of plotting the course on a chart of Thares, with which he had been provided. The Dassanese plane had taken off and had long since vanished in the distance, when Ray issued orders for the fleet to take to the air.

It was with keen interest that the occupants of the "Meteor" examined the chart which Thard spread before them. From it they saw that Callisto was mostly covered by water and that, with the exception of a few small islands, there were but two continents. These were Dassan and Anurdi, and Thard pointed out that Viljon, which they were just leaving, was close to the seacoast.

So it was that they soon headed over the great sea of Pasara, as it was designated by Thard, with the fleet stringing along behind its tiny flagship. The journey was one of about three thousand miles, as nearly as Ray could estimate from the supposed diameter of Callisto, so he set the speed at five hundred miles an hour in order to reach their destination in six hours.

The ocean, strangely, showed a muddy red-brown, instead of the deep greenish-blue of the oceans on earth. Of course the weather was extremely cloudy and that had some effect on the apparent color of the water, but he and Gary decided that it was mainly due to a high concentration of certain minerals in solution or in suspension, possibly iron oxides. The surface was troubled and choppy, though there was very little wind, but Thard did not seem to be concerned about the weather so the Tellurians presumed that conditions were more or less normal for the world they were visiting.

Ray made some tests of the outside atmosphere and found that it was of nearly the same density and composition as that of the earth. However he found certain peculiarities in the gravity of Callisto which could only be accounted for on the assumption that there was a gravity force separate and distinct from that due to the mass of the body alone. The altimeter depended on normal earth gravity and, while the surface gravity of Thares appeared to be about the same as that of Tora. its indications became widely erroneous when at any considerable altitude. The force did not vary inversely as the square of the distance from the body, but at a much higher rate, thus confirming Ray's previous supposition, that there was a supplementary force which accounted for the high surface gravity of so small a body and its retention of so considerable an atmosphere. This they learned later was due to an extremely high percentage of magnetic ores in the interior of the body; the peculiar properties of whose magnetic fields were quite similar to the artificial gravity set up by the G-rays.

When they approached the shores of Dassan the skies were clearing, and soon the sun shone forth weakly, as if it were some infinitely remote body, that seemed scarcely akin to the sun that shone on Earth. But the temperature of the air was nearly eighty degrees, and the two scientists from Tora were forced to the conclusion that

it was warmed by the internal heat of the satellite. They later learned that the assumption was nearly correct, although the warm climate of Thares was actually brought about by the presence of huge deposits of radioactive minerals near the surface, rather than by the high temperature of a molten interior. The waters brightened somewhat with the coming of the noon-day sun, though they still retained the red-brown color to a great degree. The sun itself was almost at the zenith, thus indicating that about half of the long Callistonian day had passed—half of a day which, in earth time, was the equivalent of more than sixteen and a half days. Darkness would not come for a long time.

Thard was busy with the charts but he looked up with a pleased smile at the delighted exclamations that came from the visitors at their first view of the land of Dassan. The "Meteor" was speeding inland and the landscape below was of infinite variety and great beauty. They were over a rolling countryside which gave every evidence of the bounties of nature and the handiwork of a highly intelligent and industrious people. Uncultivated portions were lush with brilliant vegetation—hues and tints there were that would have delighted an artist. Farm lands showed great fields of perfect symmetry and with fully developed crops of strange grains and vegetables; strange for their color as viewed from the air. Purples and browns were the predominating hues and the Earth visitors had no means of knowing whether these were the colors of ripe or unripe crops. But it was a beautiful and interesting country and the occasional towns and villages over which they passed proved equally interesting and inviting.

Now they were over a city of considerable size and it was seen that much more of artistic ability had been expended in its planning than was the case in Viljon. These people did not adhere to the mathematical precision of their enemies in laying out the streets. Here there were many beautiful parks, circular in shape and with broad radiating streets that curved and wound in all directions through attractive residence districts where no two dwellings were of the same size or architectural design. Then they were once more in the open country, and the cloud of small aircraft that had surrounded them when they passed over the city, drifted away and the individual planes returned to their normal activities. The welcome accorded the fleet by such craft was a feature of the journey inland that marked the approach to each city of any size near which they passed, and it was extremely gratifying to the Tellurians.

When eventually they reached Sharan they found it the largest and most beautiful city of all, and its streets were bright with gay banners and buntings. They were welcomed in the air by six planes that flew in formation with the dignity of an official flight. By their maneuvers the six planes indicated that the Tellurian fleet was to follow in their wake, and when this was done, they soon reached a great amphitheater where thousands of the Dassanese had assembled, and where a huge landing space had been roped off in the center of the field. Lightly the "Meteor" dropped to a landing, the larger vessels following closely behind.

Upon the debouchment of the Earth visitors from their ships, a great hubbub of cheering came up from the assembled multitude and a group of gaily adorned Dassanse approached the four men who stood at the door of the "Metcor." Among these was Lola and she was at the side of the handsome youth who had greeted her so enthusiastically outside of Viljon. In fact they were holding hands when they drew near the "Meteor's" party and their faces were alight with happiness.

"See?" whispered Eddie, "What did I tell you? Fat chance there is for the little fat mechanic!"

"Oh, hush up!" hissed Ray, for the group was now very close by.

#### A Happy Ending

T each Tellurian vessel its crew stood at attention, the men dazzled by the magnificence of the amphitheater and confused by the shouting of the crowds. Lola's party, with Ray at the girl's side and Gary and Eddie bringing up the rear, visited every vessel of the fleet, and at her request, the crews were ordered to proceed to the great dais, which was seen in the field that faced the crowded tiers of seats. When the Tellurians had assembled and marched toward the dais in splendid military form, the demonstrations of the crowd came to a climax of tremendous enthusiasm. And when the three Earthmen from the "Meteor" were seen to accompany her to the seats of honor on the platform, the entire assemblage rose to stand in grateful recognition. With her guests all seated close by, Lola mounted the steps of a secondary platform on which were two gorgeously upholstered seats over which appeared a fan-shaped, jeweled emblem that was evidently the insignia of royalty in this strange land. She was not alone, for the handsome youth in purple followed her and faced with her a battery of what were obviously the microphones of a public address system.

The huge assemblage became still as Lola raised her hand and started speaking in her own tongue. She was radiantly flushed and was once more attired in a silver costume such as she had worn when the Earth men first took her into the "Meteor" on the other side of the moon. So beautiful she seemed when she raised her sweet voice in addressing her people that Eddie whispered an "ah" of admiration. But this changed to a muffled growl of annoyance when he saw that the handsome youth at her side had once more captured her hand and now held it tightly as if in the assurance of possession.

Lola's speech was of considerable length and was delivered with great vigor. The Dassanese listened to her in deferential silence for the space of many minutes. Then she turned in Ray's direction and addressed him in his own tongue.

"If it please you, my dear Ray," she said, "kindly step to the platform at my side."

Somewhat flustered at the request, he acceded, and the ensuing roar from the multitude served only to increase his embarrassment. Then Lola raised her hand once more and the crowd became silent as she renewed her speech. From the few words he was able to catch and from her continued repetition of his name he knew she was telling of his part in the salvation of Dassan.

At the conclusion of this address and the renewal of the cheering, Ray bowed and returned to his own seat.

"Glad that's over," he whispered to his companions, wiping great beads of perspiration from his brow.

Then a group of three men of Dassan mounted the small platform and faced Lola and her male companion. These were older men and were attired in long robes of red that trailed the platform as they walked. The one in advance of the other two carried a golden scepter in his

hand and with this he touched Lola's forehead, the while he read in a steady monotone from a small volume he held in his other hand. A deathly silence reigned throughout the amphitheater and Eddie drew in his breath quickly as the significance of this ceremony became evident to him. Priests, these robed Dassanese were, and they were performing a marriage ceremony! Lola was forever lost to him!

The rite was simple but impressive and Gary and Ray assiduously refrained from ooking in Eddie's direction, knowing that his feelings would be pictured tragically on the chubby countenance. Now the priest had touched the forehead of the handsome youth with scepter—his voice still droned monotonously as he read from the ritual. Then it was over. The youth kissed Lola on the forehead and bedlam once more broke loose in the stands. Many of the nobles of Dassan crowded to the couple on the small platform, evidently to express their congratulations.

Not until then did Ray steal a glance at Eddie, and he was genuinely concerned at the sickly pallor that had spread over his friend's features.

"Eddie old man," he admonished him, "don't you care. It's tough luck I know, but don't let it get your goat."

Then a surprising thing happened for Lola struggled from the midst of the group on the platform and rushed to where the crew of the "Meteor" sat. The nobles still remained with the handsome youth she had left behind and showered him with adulation.

"Ray; Gair-ree; Ed-dee," panted the excited Lola, "Listen to Lola while she explains what has transpired. I told my people of the so great bravery of you three in rescuing Lola from the persecution of La-dar on the satellite of Tora. I told them of the kindness of your people to Lola when she was on Tora. I told them of all that has happened since, and of Ray's leadership of the so successful expedition to Thares. My people are now free—the Anurdi have surrendered their weapons and their positions of authority and are leaving Dassan. All is to be happiness once more. And to Lola comes the greatest happiness of all."

Eddie hung on her words, his heart in his eyes.

"Yes," she continued, "for Lola there is the greatest joy of all. Lola's people begged her to take the throne of her parents, since to her it belongs by right of succession. But Lola refused and only now has the scepter been transferred to Lola's younger brother. Only now is that brother, Boruth, accepting the felicitations of the members of his court. Lola is free to choose her mate."

"Ye gods!" gasped Eddie, "Her brother! Well—I'll be horn-swoggled!"

Lola was advancing directly to the suddenly flushed and smiling mechanic. She held out her arms and Ray and Gary turned quickly away, their eyes once more misty.

IVE years have passed since the war with Callisto and times have greatly changed. The devasted areas in the great cities of Earth have been completely rebuilt and are in every respect much improved by the rehabilitation. The scars left by the raid of the Anurdi have mostly healed.

Larger replicas of the vessels designed by Ray Parsons have made possible the establishment of regular traffic between Callisto and the earth. Great liners now make the journey in less than three days and much benefit has accrued to the inhabitants of both bodies. The Anurdi have accepted their lot stoically, and some say, have actually welcomed the change. Tellurians who man the many forts that were erected throughout Anurdi report that no troubles of any kind have been experienced and that conditions in all parts of the country are excellent. In Dassan there have settled many adventurers from all parts of the earth and these are in the habit of visiting their former homes occasionally and boasting of the many advantages of living on Thares. Conversely, there are hundred of Dassanese now on Earth and these are equally enthusiastic over their change in residence. Many people, like certain flowers. seem to thrive best when transplanted.

The radio used by the Anurdi in communicating with their lunar base was destroyed, so Gary Walton has perfected a most powerful apparatus of his own and is now installing a station in Sharan, by means of which it is hoped that reliable communication with Earth may be effected.

Ray Parsons is even more deeply immersed in his scientific work than before. After refusing all rewards offered him by the nations of the world, he set about exploring distant bodies of the solar system. Finding Mars and Venus hostile and undesirable fields for investigation, he determined to search further. Jupiter and Saturn were both visited and found uninhabitable, but he discovered a highly developed form of life inhabiting Titan, one of Saturn's moons. He spent more than a year on this satellite and returned with much valuable knowledge. His next venture will include visits to Uranus and Neptune. What may come of this great jump into space can but be conjectured.

Eddie still works in the Parsons laboratories, but has been promoted to the position of chief assistant and has complete charge in the absence of Ray. Eddie has lost much of his rotundity but is still the smiling-faced chap of the old days. And, not many miles from the laboratory, there is the modest dwelling that is home to him now—the happiest home in the universe, Lola claims.