From this picture, used as the cover of the February 1930 issue of AIR WONDER STORIES (now merged into WONDER STORIES) the prize stories were to be written. We see the strange-looking men, encased in some metallic suits, rising in hordes from metal spheres in the ground. They have established some sort of communication with the strange-looking ship. In the distance float two heavenly bodies—suns, or moons or planets.

The Red Plague

by P. Schuyler Miller

1st place winner for Air Wonder Stories contest.

ALOW, circling range of crumbling red cliffs hem in a tiny valley in the heart of the desert—a pale green speck in a sea of red sand. At their base, a great cavity in the cliff-face gapes black, set about with little black and red cubicles of baked mud or sheet iron. The valley is a scant half mile in diameter, a dot lost in the red waste, but in its center rise tall slim domes of silvery white, two hundred feet or more in height and a fourth as much in diameter, reflecting the blinding rays of the setting sun. About their base clusters a little, restless smudge of black, ebbing and flowing about the three broad vanes and interset jets of each great machine, resting on the base of white concrete that fills the center of the valley. High above, in the cloudless sky, a scattered swarm of gnats drone dully through the flickering haze beneath the deep blue heavens, where already dozens of stars are rivaling the brilliance of the setting sun.

Darkness, spangled with silver and set with gems of blue and red and gold, falls suddenly, with no blaze of twilight, over the crimson desert. In the little cubicles near the cave, in many of the tiny black openings of the silver towers, lights blink into being. From the valley floor rise circling shafts of light, white or golden or red, that bathe the silver towers and stab up and up into the star-spangled night. From their bosom, the droning gnats are spiraling down to the valley floor, to spew forth lesser blots of black figures that join the silent throng in the center of the valley, now drawn back from the base of the three silent domes of white metal.

Far off on the horizon a single gem swims into view in the sea of black, a glowing ruby, blazing steadily against the velvet darkness. Somewhere, a gong strikes once, a low throbbing beat of golden sound. Silence falls over the restless throng of black mites. Again it rings, dull and muffled as from far below the surface of the ground. In answer comes a blinding blaze of golden flame, veined with crimson and shot with silver, and on its heels a shattering blast of sound that starts little trickles of boulders on the face of the cliffs. And after it comes a fine intermittent piping that is lost in the silence of the desert. Above, three dots of red flare into incandescent white and vanish. Below, three towering domes of silver are gone from the concrete center of the little valley, where the splotch of black is thinning, spreading out into the darkness, and the drone of gnats has risen once more.

So a wandering deity, roving carelessly through space in the neighborhood of an especially insignificant little sun, might have witnessed the going of Man’s three hopes out into the uncharted, untried sea of space, leaving their little planet Earth to seek charity and brotherhood from an alien race who must have solved the problem that was wasting away the life of the planet. As is the way of such minor deities, his interest might have been aroused by this puny onslaught of a race of mites, and he might hesitate in order to tamper mischievously with the wheel of Fate, balancing Success against Death in an eternal instant of indecision, then tossing down his choice and going his way, just a little bored, to

create a sun or crush a solar system.

Ten long years before, a nameless aviator, crossing one of the less dangerous deserts of western North America, woke to the fact of his imminent destruction with a rude start as a scorching mass of incandescent metal hurtled past him into the blank white sands, throwing aloft a geyser of powdered rock and sand, and bringing him fluttering to earth in flames. When, nearly a week later, rescuers found him gnawing his last sandwich and shying pebbles at the still hot meteorite, a few noticed that immediately around it the sand was red, and crumbled queerly into dust, while the moisture in their bodies seemed to be sucked out by the abnormally dry air. The meteor was small, and buried deeply, and nobody gave it a second thought until it forced the knowledge of its presence upon the entire world.

That year, prolonged drought made the crops in a rather isolated section of Arizona fail, but nobody cared, with the exception of a few half-breeds and an Indian or two, who depended upon them for a livelihood, and a queer old cuss with long whiskers who made millions from a mine a hundred miles or so to the north, and who raved for months because his prize roses shriveled in the sun.

Two years later, the crimson sand reached the nearest of the regular tourist stations, where another "queer cuss" with a yellow walrus moustache and a couple of degrees was hunting for a meteorite which nobody had ever heard of. Then the world woke up, and wondered why something wasn't done about it all.

It took "Swede" Hansen just two weeks from the time when he left his canteen of water unstoppered for ten minutes in the shade of a red rock to the time when he found his meteorite—and the source of the Plague. In another fortnight the place where the thing had fallen resembled a cross between an airdrome and a university. By the end of the third year, the entire understanding population of the planet knew what had happened, and what in all probability would happen in all too short a length of time.

To be brief, the meteorite, the same which had brought down the aviator, had also brought to Earth from some place far outside the limits of the solar system that dread scourge which man knows as the Red Plague. It had one new element in it, radioactive, placed by the chemists beyond Uranium, which must needs have been formed under conditions strange enough to warrant its properties. This element was the catalyst, the carrier, so to speak, of the Plague. There were also certain unknown compounds of the most inert of the known elements, which, in the presence of the new *Galactium*, constituted the Red Plague itself.

As Hansen very soon discovered, once given the clue of the empty canteen, the Red Plague meant the eventual and rapid withdrawal of water from the list of Man's resources and necessities. These new compounds, apparently as indestructible as their parent elements, attacked all silica and aluminum rocks. Activated by infinitesimal amounts of *Galactium*, which was readily soluble in them, they attacked rock and soil of almost any sort, reducing it to a crumbling crimson sand, which in turn pulverized to a fine red dust of nearly molecular dimensions and consequently of enormous surface. This either sand or dust, had practically infinite powers of adsorption for water.

WITH this huge available surface in even the smallest mass of dust, and with the additional properties which amounted to the unprecedented and inexplicable phenomenon of chemical magnetism for water, any moisture that came anywhere this red menace was immediately and completely adsorbed onto the surface of the dust. Valid physical and chemical tests proved that the water was

adsorbed rather than being absorbed into any pores or used as water of crystallization. The stuff spread like wildfire, the fine gold dust going its deadly way on every gust of hot dry wind, and in no time the leprous red scabs festered everywhere in the northern half of the western hemisphere. Water could not be used to lay the dust—indeed, it must not be so used, for to Man and to all the living creatures of Earth water is Life.

Scientists of every race and sort, led by the tireless Hansen, worked endlessly over the dust, searching for anti-catalysts, searching for solvents, searching for anything that might save America's water, or regain that which had already been lost. For no man could remove from the dust that water which it had taken to itself. Electrolysis, indeed, broke the water into its component hydrogen and oxygen, but in the vicinity of the radioactive catalyst they instantly recombined to form water, giving a beautiful and expensive explosion but nothing more. So electrolysis, and with it the entire field of electricity, was foolishly abandoned. And so the vain work went on.

Five years passed, years of toil and isolation and knowledge that death was not far off for America. In the face of the peril to the world, Europe and the rest of the nations of the planet kept a strict embargo upon immigration. Commerce was strictly one-sided: water poured from all the world into America—at a price. Everywhere were the blackened vegetation, the shriveled bodies, the empty river beds, and the dry red scabs of the Red Plague. And still Hansen labored tirelessly, with all the millions of old Ephraim Cutter, the mine-owner whose roses had withered and died, at his disposal.

Then, with the coming of the fifth year, panic broke over the world. For, whether from winds, from birds, or from other, smaller meteorites, or even, as many hinted, deliberately spread by inhuman fiends, the Red Plague burst over the planet from pole to pole, and Death stared Man in the face. Science had found that the Plague did not of itself sink far beneath the surface of the Earth, and, consequently, every day found more frantically digging men and women, striving to bury themselves blindly in the supposed safety of the Earth's heart. Soon this seemed the only refuge, and government by government, the world sought the isolation of great Man-made caverns deep in the earth. And then a young astronomer announced that it was the dust of the Plague that colored Mars!

Every eye was turned to the cloudless, blue-black skies, star-flecked even in the daytime, where Mars swam low. Madness came, frenzied curses, for many believed that it was from Mars that the meteorite bearing the Plague had come. But Science led through to sanity, showed that such a thought was ridiculous and impossible, asked why Mars should visit destruction upon a planet which might save it from a like fate. And Science showed hope, for Science knew that even as our own polar caps of ice were fast waning, and snows no longer came nor vegetation made green the river valleys, so the polar caps of Mars were *growing*, year by year, creeping in toward the red wastes of the equator, outlining the mysterious "canals" with deeper and broader green as time passed. *Mars was conquering the Red Plague!*

As the dust of the Plague spread over the Earth and outlawed traffic upon its surface for fear of carrying the dread red dust to some untouched spot, Man had taken entirely to the air. From the broad roof-fields of every towering city, from little farms and great factories, from ocean liner and man-made floating island rose numberless ships of the air, carrying Man about his business. In a short five years the few great continental air-lines had spread over all the world. Not long since, Man had feared the air, feared to leave

the surface of his planet and entrust his life and safety to Science. Now, Man feared the ground! Atomic energy became available in part, albeit at great expense, and now every man paid his government for the energy which kept him safe above the plague-infested surface of the Earth.

With the news of the young astronomer borne by the news service to every corner of the world, Man revived again the dreams of those days long before the Plague when scientist and layman alike struggled with the thought of leaving this little Earth and speeding, in great shining rockets, out into empty space, to other planets, other suns, other universes. And with the world at his back, old Ephraim Cutter turned his failing millions from the fruitless battling of the Plague to Man's last hope—a great, threefold leap into space, in an effort to enlist the peoples of Mars in the service of a helpless Earth. Three great rockets of strong, light *durium*, built by the master engineers of the world, driven by the energy of the broken atom, manned each by a crew of six experts, would drive up into the night from the still-green oval of Cutter's Hole, up and up until at last the red deserts of Mars should be beneath, and the solution to Man's problem should lie before the three ships of space, to be won or lost forever.

Rising at first slowly, then ever faster, until the broadening bowl of the Earth changed to a floating ball of bloody green, the three rockets sped upward and outward, glowing from cherry red to incandescent white with the friction of the atmosphere, then cooling in the absolute zero of space with a suddenness that set the sorely strained metal hull into a bedlam of creaking as it cooled. Only superb workmanship in the making of the great ships kept them from bursting under the enormous tension. In each, five men sweated and strained under the terrific heat and acceleration—men who had been trained for five long years to withstand these very burdens. Before the master control-board, sunk in the heart of the ship where no harm might come to it, sat the commander of each rocket, eyes strained to the televisor and the many dials of the board, beside him food capsules and the sleep drug, that he might work for three Earth-days without relief—in the first of the three, "Swede" Hansen. Five hundred miles of space separated the three great rockets, surrounded by the luminous golden haze of their exhaust gases, but in the televisor each commander stood side by side with his fellow, bristling Swede, burly spectacled Negro, and clean-cut athlete from Annapolis, guiding, by word and touch and gesture, their silvery ships of space. They were forgetful of the telescopes on mountain peak or desert plateau that searched the skies for three tiny fleeting shapes with the glory of the sun reflected from their shining metal sides.

AT the little barred windows of heavily-wired quartz, the men of the crew gazed wistfully at the green the blue globe, etched with familiar outlines and splotched with scabrous red, that grew ever smaller behind. Now and again the voice of their commander would ring from the speaker in the wall, his gestures on the great screen direct them, and they would sink panting to the floor or flounder helpless in their hammocks while the great after jets poured forth golden vapor and the starry heavens reeled and spun before the enormous acceleration that drove them ever nearer to their top speed of one hundred thousand miles an hour. For an instant, far behind in the black of space, two silver specks drove on and on along the unmarked trail that Man followed for the first time. Then the rolling thunder of a jet would shake the ship and the swinging heavens sweep them from sight. A strange and thrilling experience for these erstwhile masters of the air, now become navigators of empty

endlessness.

Ahead, the Moon loomed dead and bare, its pocked and pitted face swelling into a wilderness of crater and jagged crag and bottomless crevices, blanketed in the dense white volcanic dust that once spewed from the thousands of great volcanoes of a living world. Then, with the passing of the day on the chronometers, its pear-shaped bulk swung past barely a million miles below, and three little specks of silver light hurtled on into emptiness, half a million miles with each five hours,

"Swede" Hansen slept less than any man in that leap through space. On every ship were five men beside the master, each fully capable of handling the ship for a day or a week, gauging with trained accuracy the change for any slightest deflection of the course, holding to the thin silver line on the space chart, representing a leeway of many thousand miles (the line ran straight from green curve to red against the polished black) watching the pressure, the fuel, the air, the radiation rate and temperature, doing all the thousand and one things, great and small, that navigation by dead reckoning in open space must entail. On all but the flagship of the little fleet, each man took his turn of three days, so that with the last watch, at the end of the third week, each commander should take his post to maneuver his ship through the atmosphere of Mars to a safe landing. But in the leading ship the bristling yellow moustache would appear in the televisor, the blue eyes twinkle, and the jolly voice boom in the speaker.

"Hallo! How you takin' it, over there? Tell your lazy captain that the girls should be sunburned to suit his taste in color, on Mars!" Or else—

"Hallo! You there, on number three! Where's your commander—writin' love letters or playin' football? Tell him he's a thousand off the median, or else I am."

And they would come to the control room of their ships, the great bulky Negro with his perpetual grin and horn-rimmed spectacles, and the college man with a dream in his smiling eyes, and josh back at him, or send little meaningful messages from man to man of the crews.

"Hey, Swede!" the athlete would shout. "I dare you to come over and wrestle me, you big soft lump! Who called you a scientist, you blamed old walrus? If you don't chew off that fringe of bristles, right pronto, I'll send a little meteor over to clip 'em for you!"

"Never mind my whiskers, young fellow. An' don't sass your commander-in-chief, or he'll have you marooned on an asteroid to cool off. Say, kid, tell Frenchy there, your radio man, that Bill got a whale of a picture of Eros the other day when we passed it. He says he can make out water on it, but it takes pretty good eyes to make out the mountain ranges. Beat that if you can."

Or the Negro, Johnson. He talked rather slowly, but moved like lightning at the controls, and always spoke in a serious tone that belied his flashing grin and the way in which he ignored his spectacles.

"Oh, Cap'n Hansen, we're havin' a little mite of trouble over here, with the vision apparatus, and our radio man has the willies from stayin' awake too long watchin' the stars. I sort of thought you might know something about it. It's been a-flickerin' off an' on, sort of like a loose connection somewhere, but we don't seem to be able to find it. I'd appreciate it a lot if you would sort of think it over some time soon, an' let me know what your idea is."

"Say, Johnny, where d'you keep your brains when you're off the controls? Didn't you tell me not more than a week ago that you'd moved the blamed thing up near the generator? You've got a hole in your screenin' some place, an' the generator's just naturally raisin' Old Scratch with your field."

"Thanks, Cap'n, thanks a lot. You know that I'm not just dumb, but there's a heap of sunburn to weigh me down, like you have with that shoe-brush of yours. I'll see you later when we fix the vision up a bit better."

A pleasant trio, good friends, great men and great scientists, companions to their mixed crews. And then, two weeks out, a frantic call came from the control room of the steadily decelerating ship that sent "Swede" to the board on the run with every man on edge and at his post. There was no time for more than a nod and a brief "Hallo!" to his comrades, each in his place with a grim set expression on his face. Out of space, directly in the course of the onrushing ships, a huge, widespread swarm of meteors plunged directly toward the three tiny silver specks. They could not stop, or diverge widely, could not survive the sudden acceleration of the change. At the terrible speed with which they were approaching head on the scattered cluster of iron and stone giants, any collision must be fatal, and the only chance must be to plunge through the thinnest part of the swarm, deflecting where possible, and trusting to God for the rest.

On, on, into the maelstrom of hurtling star-fragments, the smallest of which could deal destruction to any of the ships, and hence to an entire planet, the first rocket sped. "Swede," every sense on edge, every muscle tense, hovered over the controls. Here, half a mile meant life or death. A rushing bulk in the screen, the whirl of a dial, the rattling thunder of a jet, a sickening lurch, and safety—repeated in terms of seconds, with miles of crowded space in every swerve!

Again and again, time after time, then a glancing blow from a mass of rock and iron the size of a basketball, that ripped the great armored plates off the side of the ship for half its length, destroying a vane entirely and driving a deep dent in the inner sheathing—then dart and dodge and through in safety! And within twenty seconds Johnson is in it, gripping his dials grimly, cold sweat on his shining face, strong white teeth clenched through a mangled lip! Swerve, leap swerve again, and then a blur of flame in the screen, a tearing of metal, and blackness! On the other screen a clean-shaven man grits his teeth and turns aside his straining eyes, then freezes to his work, his duty to Man. On, on, through flying masses the size of giant buildings, fragments of lost planets, swerving, darting, slowing, a master's hand at the keyboard and dials, thin lips set in a narrow line under the strain of the acceleration! Ten seconds, twenty, twenty-five, and the way is clear. He shudders, grins into the televisor at "Swede," then freezes in horror! His voice chokes in the speaker. "So long, you—damned—old—walrus—you!" In a flash he is gone, shattered by the great thing that hurtled in the wake of the swarm, or frozen instantly in the absolute cold of space. Perhaps neither was more than a hundred miles off "Swede's" course, the course of safety, a mere three seconds' distance, but in all likelihood ten miles would have been as fatal. It was four days before "Swede" Hansen took over the controls, to guide the slowing ship safely to its landing.

DOWN through the thin air of Mars, gliding in a long, flat spiral over the endless wastes of red sand through which jutted the Crumbling remains of ancient peaks, the battered space-ship sank toward the surface of the planet, rising, become flatter, then suddenly concave. The canals were plain in the clear air, broad lanes of matted moss running mile on mile across the decayed red wastes, blending at the edges into the desert of crimson dust that swirls in great clouds over the barren wilderness. Here and there they converged, came together in great circular areas many miles across, where the crumbling rock that jutted up through the rank moss had strange,

half familiar forms. Cities had been here, once. In some the moss was withering, the lanes of green velvet thinning before the onslaught of the Red Plague. Near the equator, especially, was this true, where the shattered ship must land. To the north and south, where broad ice caps glistened white, it might be otherwise. Time must tell, would tell.

"Swede" Hansen, worn, haggard, the memory of his comrades deep in his eyes, struggled through the crumpled metal port of the mighty ship that had plowed deep in the sand, its vanes twisted and scored, the edges of the gaping slash in its hull fused by the friction of the air. After him came three men. Two had been in that part of the ship which was struck, and died of the sudden shock and compression which had dented the insulating armor and burst in an inner bulkhead. A few hundred feet away the moss began, an unhealthy metallic green. Above, opposite the blazing sun, swung Phobos and Deimos, the two moons of Mars—Phobos a scant six thousand miles above the planet, and Deimos, jerked from its former distant orbit by the most massive comet in the records of astronomy, which now rotated very near its limit of disruption, and was daily drawing closer to it's mother planet. Neither showed any important markings, clouds of pumice and ash from long extinct volcanoes having buried all mountainous features of their surfaces, even as has been done on a less thorough scale on the Moon. Sunlight, reflected from the red surface of their parent planet, bathed them in an orange light.

Wearily the four men dragged forth the heavy cases which contained parts of the comfortable and roomy aero with which they were to explore this new planet. There would be more room, now, for food and instruments, with two men less, they thought bitterly. Then they withdrew into the ship, leaving an electrical alarm with the cases, for a much needed rest. Now that there was no longer danger of the storeroom collapsing on the aero, and leaving them stranded, the world and Man could wait for one more day.

When the sun set once more over the red Martian wastes, a new, lithe form lay beside the crumpled rocket, speed in every line of its marvelously designed frame. The engineers of Earth had striven long and hard to provide this most perfect of Man's aeros for the expedition. Of tough, shining metal and clear crystal, stream-lined with the utmost perfection, capable of circling the Earth in a day or less, no man of the remaining crew but was proud of the trim craft. And he who had designed her, young Jimmy Van Deusen, late of Boston, strutted grinning beside her, stroking the broad stubby wings and tail surfaces, testing the resilient landing gear, looking to the lubrication of the twin propellers and trio of helicopters, and at last, at a word from his chief, leaping to the pilot's cockpit for a test flight. The atomic motors purred sleepily, the helicopters began their crescendo whine, then with a flash of silver under the setting sun he was off, and up within fifty yards, the wind whistling over the clean cut body of the aero and setting up tiny whirlpools in the red dust. Up and up, until the vanished sun once more shone gloriously on the silver bird of Man, up until only a shining speck was visible, then down, mile on mile in a screaming dive that flattened out a bare thousand feet above the sands, and changed to a mad frenzy of loop and spin and roll, climbing, diving, whirling. Then, with propellers and helicopters reversed, dropping almost vertically to rest beside the great half buried hulk of the rocket. He tumbled out joyously.

"She's great, Swede!" he shouted. "With this atmosphere, and gravity like this—Wow! We're going to go places and do things with this little lady, all right, and don't you doubt it! Oh what a ship!"

"Good. We must not waste time. In the

morning, early, we should go. Can we?"

"Sure! We could go right now, if we were packed. Let's stow everything away now, and beat the sun up."

So, with the rising sun, the little ship with its cargo of four eager men roared up in a golden mist of disintegrated atoms and flashed through the brightening skies to the southward, toward the greatest ice cap of Mars. As mile after mile sped by beneath, affording brief glimpses of ruined, crumbling cities and rotting red peaks, they saw with hope and joy that the green lanes of giant moss became ranker and broader, seeming to press out from the line of their flight into the red desert on either side.

Then, far on the horizon, appeared a flashing, dazzling glory of light, the mighty Antarctic ice sheet of Mars. Here was the great area over which a triumphant Mars had conquered the Red Plague, had redeemed her precious water, was doing so day after day. Here would be the Martians, skilled, intelligent beings, wiser than Man, who must be persuaded to share their secret with a sister planet before it was too late. An hour, now, and they would be there!

And with the passing of that endless hour, the green path had broadened into a mighty emerald carpet, leading straight to the base of the towering walls of ice that crowded down from the south. Rimming about the rampart of ice, separating it from the green of the converging lanes, lay water, a lake of cool, pure water, lying open and unharmed under the rays of the sun!

Then Jimmy noticed *them*, queer oblong ships that floated motionless above the edge of the narrow lake. Three were in sight, perhaps fifty miles apart and two hundred feet above the line where water and moss merged. More than the thin air and lesser gravity, these men of Earth had found it hard to accustom their senses and motions to the judging of distance on this planet of greater curvature, but comparison with more familiar objects later gave the necessary clue to their size and distance. The strange machines were about forty feet in length and twenty-five in width at the middle. They seemed to be made of pure gold. In a fifteen foot ring at each end was set a polished mirror of green stone, while above the tubular central body, which separated the rings, was a bulbous tower some ten feet in height. Everywhere were little windows of the green crystal, indicating that creatures of some sort manned the machine, though it was little more than ten feet in thickness. No other sign of life or intelligence was visible. "Hey," said Jimmy hoarsely, "they must be pretty small, to man that. What is it, anyway, Harry? Got any ideas?"

"Certainly," replied the tall Englishman. "It seems to me to be plain enough that it is the thing that we are after, the apparatus that makes the moss grow and the Plague fail. But where are the Martians? They can't live in those."

"Hover for a while, Jimmy," put in Hansen. "If they're there, they ought to see us and make their presence known. We can't afford to wait, and it won't do to make them our enemies. We will have to handle them with kid gloves."

FOR nearly two hours they hovered, or circled the queer machine, trying to peer through the windows, but without result. Then "Scotty" MacRae, the third man of the crew, who had been roughly mapping the place, grabbed Harry by the arm and pointed below. The others, seeing the gesture, looked through the ports at the surface of the planet, a hundred feet or so below.

The thick carpet of moss was buckling upward in three widely separated spots, showing the red earth beneath, which was being pushed slowly upward and outward by some slow steady pressure from below. Then a polished dome of pink metal appeared,

followed by two others, and rose with a slow rotation some thirty feet into the air, revealing a ring of hooded openings leading onto a narrow ledge that ran around the entire dome. From a large opening in the flattened peak, little red figures were swiftly rising toward the aero and the queer machine, on which they began to play bright yellow rays of some sort—human figures, five feet in height.

They approached the aero fearlessly, appearing now as suits of red and white metal with crystal head-pieces above which protruded luminous green horns. As the little figures sped upward or came to rest, these correspondingly came together or diverged, showing that by interaction between them and a force field of some sort these individual flyers were propelled. Where hands would have been, on Earth, twin pivoted ray-tubes were fastened.

One of the little flyers rose barely ten feet in front of the hovering aero. Others joined it. The heads of the Martians were visible through the crystal, ugly little creatures, but evidently enormously advanced. The head and face were bare and shiny, with large ears pressed flat against the skull, adapted for hearing in the rare atmosphere. The chin was small, pointed, and protruding, the jaw small, the mouth thin and expressionless. Great nostrils in a nearly vertical nose made it possible to inhale great lungsful of thin air with comparative ease. The black eyes, round and goggling, and sunk deep in their sockets, regarded the men with an indifferent stare.

Suddenly the nearest Martian flashed his yellow ray full in the faces of the group.

"Who are you?" came the thought. "What do you want?"

Hansen replied verbally, pointing to his lips to indicate that he could talk.

"Do not speak. Think. I have the ray on you. Our languages are not the same."

Each mentally pictured the history of their expedition, its cause, the fate of their companions. Hansen asked to see someone in authority.

"You are from the Third Planet. We have noted the coming of the Plague. We expected you. You will be examined. If you prove worthy, your race will be aided. If not, it is wisest that you perish. Leave your machine for examination. It will be returned, if you need it. Land, and follow me."

At a sign from Hansen, Jimmy brought the aero to the ground beside the nearest dome, and the four men left it to follow the Martian. He led them into one of the openings on the ledge, which closed, leaving them in the dark. Suddenly the floor sank, bearing them down into the blackness, then stopping short many feet below the surface. They followed their little guide into a vast, dim cavern, crowded with the little red forms of flying Martians, entered a long low vehicle that shot like a bullet through the narrow streets, the while emitting a high pitched wail. They came finally to a halt before a great windowless building of grey metal, surrounded by a wide plaza. Inside, they were shoved into a small bare room and left alone. The door, when they turned, was invisible.

Then, through a crystal oval in the ceiling, the yellow ray flooded every corner of the room, Standing there, helpless, they felt the probing questions of their examiners, pelting them with queries of all sorts, dragging every thought from their bewildered brains. They knew the futility of any failure to reply, and hence settled down to search their memories for every scrap of information that they might contain which would better outline Man's knowledge of the Universe. Now and then, when memories conflicted, the questioning took on a sharper, impatient note until the point in question was fully cleared. Once or twice, as they spoke of the atomic release that provided Man with energy, the questions were eager with the knowledge of a

new, unsuspected truth. It was this power of Man to partially free the energy of the atom which proved his worth and his right to the air and brotherhood of the peoples of Mars, a race which, for all its greater age and triumphs in other fields, had failed utterly in this. At last the ray flashed out, and they sank on the hard cold floor in exhausted sleep.

Their former guide woke them, led them to an escalator, then left them. The moving metal belt rose steeply into the upper portion of the building, ran on through the dark and out into light, dim, but brighter than the outer caverns. The Martians, adapted by centuries of life to dimness, could not stand light such as they might easily have produced artificially, and when in their golden electrifying machines must needs use the green crystal to shield them from the sun.

Now, for the first time, they saw a Martian without his flying and protecting suit. They had slight, dwarfed forms, barely four feet tall, with huge chests and tiny legs. Their arms were short and thin, with large delicate hands and long, very slender fingers that seemed well on the way to the formation of tentacles. When they spoke, surprisingly enough, their voices were, deep and grave, showing that their dwarfed size was due to no disease or physical defect, but to direct evolution under the cramped conditioned of under ground life.

Now the thought-carrying ray was focused on them once more, and from the ten greatest scientists of all Mars they learned indelibly what the Martian government had decided to tell them.

Several thousand years before, when the Martians had not yet attained Man's station in life, a meteor bearing the Plague fell in the heart of the most densely populated portion of Mars, and spread red destruction over all the planet. Even as Man was doing now, they had buried their cities deep into the safety of the planet's heart, and there in the semi-darkness had developed the existing race, mental giants but physical dwarfs.

Always they had striven to combat the Red Plague, which had covered all the surface of Mars and was slowly eating its way toward their retreat. There, in their great natural and man-made caverns, they had discovered the motive force of the flying suits, and of all their flying apparatus. They had developed a crystalline substance so energized in a manner analogous to magnetism, that when like poles were brought together, they reversed the gravitational field over an area depending on their strength. When they lay in the same line, it was neutralized, and the flyer hung motionless, or drifted as the mechanism of the solar system willed. At any median angle, with reversed polarity, gravitation was amplified. The use of variations of this principle for nearly all extended motion led to the ultimate development of their atrophied legs and feet, and the formation of slender, flexible fingers for manipulation of the keyboard controls common to all their devices.

Then, accidentally, they found that a very strong electric field would effect the rapid disintegration of the catalyst, our *Galactium*, to familiar elements, leaving the other compounds harmless except for any natural adsorptive powers of a dust so, finely divided. Of course, if the soil were to be recontaminated by the catalyst, it would again become the former menace, but here it was discovered that certain mosses flourished in the newly reclaimed soil, and that they so altered the compounds as to make the catalyst impotent. Again, with the mosses removed, contact with the pure compounds would cause something like a change into the harmful forms, but this could be avoided, and moss-tracks were laid from most of the buried cities to the poles, where some water yet lingered, and reclamation began. Most important of all, the reclaimed soil was extremely fertile, and

could be used in the synthesis of the energized crystal. The long, thin machines of gold were energy converters, turning the radiation of the sun into electrical energy, and laying down the electric field that destroyed the catalyst. Already, the area of permanently reclaimed land had spread remarkably, and other plants were growing where the moss had cleared the way. These, with the frequency of the thought ray, were the secrets that Mars gave to her sister, Earth, and in turn the Martians learned the application of their devices to the liberation of atomic energy, somewhat more efficient than solar radiation as a source of power.

"That is all," concluded the spokesman of the Martian men of Science. "You will be given the moss. A space ship of our own type has been prepared for you. You may use the gravitors to repel meteors. You, of the Third Planet, Tellus or Earth, are better for physical strife than are we. Our minds are capable of greater comprehension. Let us henceforth share our knowledge, that together we may succeed where one race should soon fail. We will not leave Mars, for we are physically unfitted for the strain. It will take thousands of years to change us, for we are an old race. Meanwhile, come and go in peace and welcome. Tell us of the Universe, which we may not see for ourselves. Be our bodies and our senses, and we will aid your minds. Farewell!"

The manipulation of the new ship was easily learned, though quickness on the unfamiliar keyboard control came hard to men accustomed by long practice to switches, levers, and dials. Soon Mars was shrinking behind the spherical space ship with its great projecting rods of crystal at top and bottom. Then space once more opened before them, and closed once more behind as the white phantom of the Moon flashed past, and Earth at last spun below.

Everyone knows the result. The Martian moss flourished, and, crossed with plants of our own, proved more effective than ever. The unsuspected value of the red earth has been quickly taken advantage of in many fields, and the crimson wastes are taking on a new appearance. Within the year, a second expedition will set forth into space, carrying the new plants to Mars, solving the shrouded mysteries of Venus, reaching out beyond the asteroids to the major planets, whose larger satellites may harbor life. The thought ray breaks down the barriers of race between all thinking beings, and it seems certain that at last the dreams of the ancient writers are to be realized in a union of the planets in knowledge and peace.