

STARTLING STORIES

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A Complete Novel



THE BLACK GALAXY

By MURRAY LEINSTER

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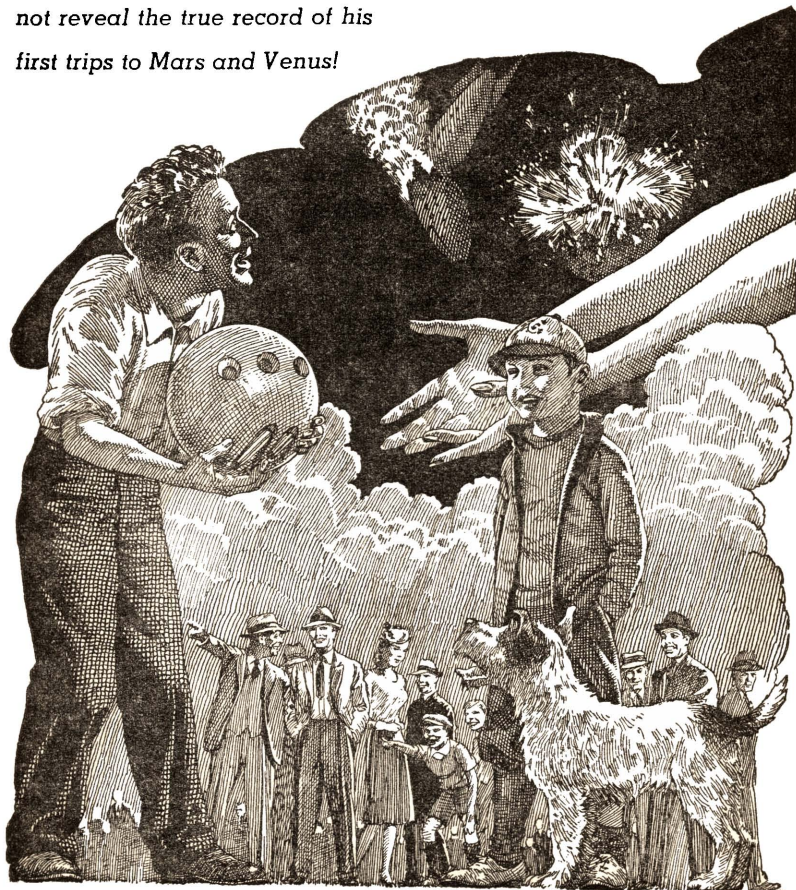
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the magnificent failure

*History calls Jonathan Bates
the Father of Exploration—but does
not reveal the true record of his
first trips to Mars and Venus!*





by **RENE LAFAYETTE**

NO HISTORY of the men who gave us the stars could help but begin with that heroic and colorful figure, Jonathan Bates. He has been variously termed, in our learned and ancient times, the "Father of Exploration," the "Giant of Space," and "that sum of all man's courage and daring (to quote), the magnificent Jonathan Bates."

To gaze back from this far distant time upon the massive individual in the very dawn of space navigation, is to achieve, at best, distortion. Records have been so perverted and historians have been so unusually dull, that practically nothing of Bates is known today except hackneyed adjectives. But in the archives of the Terra Record Society, unused and almost unknown data, preserved with all the cunning of a Vega embalmer, lies ready to hand if one wishes to dare those countless leagues of battered and forgotten files.

Sealed up by a now unlisted "commission" of a "Federal Government" and marked **TOP SECRET** (for reasons no one will ever know) is the complete and actual case file, the newspaper clippings, the texts and even the personal letters of Jonathan Bates.

That such an astonishing mine exists and has always existed since that time without being used or even ordered, is probably attributable to a five hundred year "prohibition of issue for use" on all records pertaining to atomic research.

This veil was drawn down in the mid-Twentieth Century and for reasons of state or personalities or graft or sheer bureaucracy, much vital data lay mouldering while men spent their lives for lack of it. When it was at last available, certain fables and stories had become too well established to be refuted.

It may come as blasphemy, then, that Jonathan Bates was, in his own generation,

**The second in a series on
the Conquest of Space**

considered a very ordinary and even insignificant mortal whose only claim to grandeur was a "crazy hallucination" that space flight was possible. And it is further of much interest to note that Jonathan Bates considered himself, at life's end, a total failure.

Far from a giant, Bates was about five feet three inches tall and twisted as well. The only giant thing about him was his head, and the size of this was exaggerated by his bushy black hair which was difficult for him to control. His eyes had the hot glare of the fanatic and as he lurched along the street, walking poorly because of a twisted spine and a lame foot. His glance would scorch his tormentors, the street urchins who cried "Crazy man, crazy man, fly to the Moon!" and threw chunks of dirt at him.

Jonathan Bates was a rebel and a visionary and such have very short shrift at the hands of mankind, no matter how desperately these be needed in the race.

INJURED at birth in a vehicle accident (oddly common in those barbaric times) he spent a most miserable and lonely childhood, parentless and penniless, and there was nothing in his early experience but to inform him that men's hands were against him and that this race can be bitterly caulked.

An inauspicious beginning for the "Father of Exploration," it is true. For here lay the cruelty of it: there was no one to tell him, toiling and struggling toward his goal, that he would be remembered for hundreds of milleniums as a great benefactor of Mankind.

Mankind never deserved less or was given more by any man. But he was long dead before they knew and Jonathan Bates never did know.

At school he was not considered bright or other than usual. The man who was to invent the fundamentals of space navigation failed three times in arithmetic and, to the end of his days was cursed by strange persuasions regarding multiplication and addition.

When they built the statue of him on Mars (building him very straight and tall, of visionary grandeur) the plaque was supposed to carry an exact facsimile of his original discovery document; but it was thought best to change first the spelling and then the wording, for it would never do for children

to think that the example of all virtue was actually an unlettered man in a most literal sense.

A strong and angry man was Jonathan Bates. Too violent and far too caustic for his mentors, his education was abbreviated in his second year at the university as "an unlikely student," and he was left to his own cherished conceptions of the character of matter and the aspect of living.

Handicapped and fettered by his physical deformity, never completely out of pain, he became a lone hunter who is a stranger to his village hearth.

He came, one day in late May before the Century's end, to the naval proving ground of the Federal Government of North America bearing under his arm a something wrapped in a dirty gunnysack and demanding from a guard to be admitted to the presence of the commanding officer.

Bristling, bushy hair, hot eyes and twisted body gave the sentry pause. But he said, "The C.O.'s busy, sir."

"Young man," cried Jonathan, "I have not walked through fifteen miles of heavy desert sand to be told a lie." And he stood so near, young Jonathan Bates, that the sentry fell back despite himself before those eyes.

"You can't pass this gate!"

"I'll pass it legally or otherwise. Tell your commanding officer that I must see him and instantly, on a matter of very great importance to the country."

The commanding officer was busy but the aide, skilled in handling the unwanted, saw Bates in the ante room. The aide was very smooth and quite accomplished and who knows but what he might have succeeded in changing history by ordering Bates away.

But Jonathan had an instinct which told him that the commanding officer was not occupied and he brushed on through before he could be stopped and came to a halt, leaning at a frightening angle, before the huge desk which was the rampart and *cheval-de-frise* of the admiral.

"I am Jonathan Bates," he said, shaking off the aide. "I have here," and he laid the package on the desk, "a jet motor which will burn chemical or atomic fuels and with which it will be possible successfully to navigate space."

The admiral hastily got the package off his desk before it could mar the mahogany. And then, benign, he said, "I am afraid this

will have to be taken up with the department. I have no authority—”

“You are here trying to make a motor which will not fail in space flight,” said Jonathan. “I have this motor in my hands.”

Dramatically he opened the package and they were amused to see what they took to be a collection of odds and ends left over from some plumbing job.

“You will have to talk with my engineers,” said the admiral, anxious about the grease getting on the rug. “Rutherford, see that this young man gets to talk with an engineer.”

With that Jonathan had to content himself and he lurched after the aide into the cellar full of drawing tables. This cellar served as a drafting room for the proving grounds.

WHAT Jonathan said to the disinterested engineers is of no importance. With increasing exasperation he told them he wanted them to build the full scale motor of his small model and he considered that it would be worth their while since he wanted nothing for his plans.

Tolerantly, they heard him out and took some notes which they later destroyed and were, in short, extremely unsatisfactory.

“Too imaginary, too visionary,” said one of the engineers. “But I will consider it and write you a letter.”

That was as far as Bates could get. He said nothing of two years' work all night and every night on this model, he said nothing of hitch-hiking half across the continent. He raised his proud head and trusted they would all dine with the Devil soon. He turned and lurched into an old man who had followed him down from the C.O.'s office.

The ancient one steadied Bates and offered an arm which was resentfully refused. But the man followed to the gate. There, Jonathan looked squarely at him, saw a soft, wistful face, delicate hands and clothing, plain but expensive. Riches were part of the phobias of Bates and he would have gone with no good-by if the old man had not spoken.

“Sir,” he said, “would it cost very much to build this motor?”

“Twenty thousand dollars more than I have, which is nothing,” said Bates. And he shook a massive fist at the sky overhead. “Won't I ever get to you?” he cried.

The mild old man said softly, “I am Lauson Conner, of Detroit Motors. It occurs

to me that we spend more than that on advertising every ten days.”

“I suppose you do,” said Jonathan bitterly, “and I've seen a millionaire's yacht, the cost of which would have given man the entire Solar System. But what has this to do with me?”

“It occurs to me,” said Conner, just a hint of slyness in his eyes, “that our motor company might be willing to finance you.”

Jonathan was raised in a rugged school. “Why?”

“Well, perhaps— Tell me. Why do you want to go into outer space?”

Jonathan bit down on his reply for he knew better than to expose his dreams. “Of what value would this motor be to you? I would not sell it for unscrupulous use.”

Lauson Conner smiled quietly. “Why, we've a company motto, ‘A Motor for Everything’ and we've not yet built a space motor. I am the advertising executive and I think that I may be able to provide you with the funds. You see, I came here today to get permission to use the Navy intallation of our equipment in a full page ad and—well, I failed because of security. Recently our company was scolded by the Government for being anti-trust. It could use some favorable publicity as a Benefactor of Mankind. If you are not unwilling to be talked about in the prints, I think I can place an excellent laboratory and our finest technicians at your service.”

Jonathan followed him but poorly until his final statement. He threw it all into the winds of chance and extended his hand.

They shook and climbed into Lauson Conner's car.

No more ill-starred approach to space travel could have been conceived. For, as summer began, Jonathan Bates had already learned that advertising men were sometimes as prone to exaggeration in advertising.

In a sweltering hot outhouse at the extreme rear of the Detroit Motors grounds, there was set up a photographic laboratory in the best motion picture, horror story tradition, complete with electrodes. And when the pictures were taken and Jonathan Bates could remove his white coat for real work, the carpenters and electricians came and took the equipment away.

Jonathan stormed and balled but mild Lauson Conner had fine answers for everything and took no action whatever. Wasn't

Bates on the payroll at \$500 a month? Didn't he have a workshop? What need was there for all sorts of equipment? And besides, why should Jonathan be so wild about it? There were plenty of men who would be glad to draw their pay and do no work.

"But confound it!" cried Jonathan, banging the desk until the inkwell geysered, "I tell you I've got to get to the Moon and Mars!"

This interested Conner. "Mars? Ah!" And he scribbled for a while and called in one of the nine vice-presidents he commanded to give him orders pertaining to a new display in a national weekly.

"And see to it," he added, "that they give us staff coverage on this as well. Mr. Bates, we'll need a few more photographs."

THROUGHOUT July Jonathan moped about the outhouse, turning over discarded engine parts with his toe, doing nothing but mourn. And then the first articles appeared.

Detroit Motors, who could make anything, were altruistically engaged in creating a rocket engine—in their own laboratories, under the direction of Dr. Jonathan Bates the eminent physicist and mechanical engineer.

Jonathan stormed at this misrepresentation. But he was too busy answering the phone and replying to letters to give Detroit Motors the full broadside of his mind.

Strangely, the Government did not object. In fact nobody objected. And the news story was built up and passed around and lost nothing in the reprinting across the land. It came to a final fact that any day now, Dr. Jonathan Bates would take off in a "rocket engine" for Mars. People began to stand outside the wire fence of Detroit Motors and stare hopefully at every motion within, explaining one to another that it was this or that function of the "rocket engine."

A millionaire in Oklahoma offered a \$50,000 prize for the first man to fly to Mars. A missionary society sent a thousand pounds of leaflets to be distributed amongst the heathen there. In the stores women's hats were displayed as "Martian" and it went into the language as a shade of red. And, as the Detroit Motors publicity campaign really began to roll, the staid post office department of the Federal Government began to accept "covers" for philatelists to the number of thousands.

Angry, violent Jonathan Bates tried to stem the stampede. But it was getting Detroit Motors on every tongue and people were learning that it should be coupled with "Benefactor to Humanity" and "forward advance of civilization" and the Supreme Court was soon to review the anti-trust charges in which the firm was involved. Stop the publicity? Never! And Bates cried out in vain.

The only thing which gave him hope was the infrequent use of his own name. It was all "Detroit Motors" and "Detroit Scientists" and almost never "Jonathan Bates."

He sat one day in his hut examining the strewn magazines and papers which publicity had sent down. There were paintings of Mars and fanciful suppositions about Mars and a rehash of everything that people had thought about Mars and a dozen learned men stating various contradictory things about Mars and through it all ran Detroit Motors, Detroit Motors, Detroit Motors. And then he found a statement by some learned gentleman to the effect that space flight was impossible. This angered Jonathan. And in another he was astonished to see a whole college of professors saying that life could not possibly exist on Mars. This exploded him. He leaped up to rush to Conner's office.

His chair overturned and tripped him and he went down into a heap of agony on the littered floor. A little later something moist and warm woke him and he looked up to find a very small yellow dog of no known descent standing on his chest and licking his face. The owner of this animal proved to be a boy of ten with freckles across his nose and an old baseball cap on his head.

"Tiger!" said the boy. "You come here!"

The tigerish beast got off and Jonathan rose. His leg hurt and his temper was bad. The small boy backed a step and then stood his ground.

Running it altogether, the boy said, "My name is Dicky Collins and you're Dr. Bates and I read all about it and I come under the fence to ask you if me and Tiger could be volunteers in your crew and I don't take up much room and Tiger would help us fight wild beasts if there were any and I could wash dishes or anything if you'd let me please mister, gosh! but I want to go to Mars!"

Jonathan's scowl darkened and all the perplexities of these last weeks flooded in. The

small boy in the baseball cap was still standing there. Jonathan's eyes softened. "So would I, Dicky." He put out his hand to acknowledge that they were introduced.

"Shake, Tiger," said Dicky. And Tiger's paw had to be shaken.

"Where do you live?" said Jonathan.

"In the county home." His face was carefully calm. "My folks left me."

Jonathan pressed that no further. Hastily he said, "Hand me my cigarettes, would you, Dicky?" He lighted one.

"Well?" said Dicky.

Jonathan smiled indulgently. "Dicky, this would be dangerous business even if it could be done, I am afraid."

SLOWLY the boy about-faced and walked out, very straight and firm except that the tears blinded him and he could not check them. He got out of Jonathan's range of vision and then stumbled against the fence and clung there, sobbing.

Jonathan came swiftly to his side and picked him gently up and brought him into the hut again. Clumsily he sought to dry the boy's tears.

"I'm sorry," sobbed Dicky. "But all week long I tried and tried and tried to get courage to come and ask and I've been within five feet of the door nine times but I just didn't have the nerve and today I tried and tried and then you fell and Tiger went in and I was scared you were hurt and I took my nerve up and asked and you said No!"

He went into paroxysms of weeping again. Through the tears came, "I did so want to go to Mars and get away from all these people that all they do is lick me and maybe some tribe would make me king and I'd, never, never, never have to come back here, never! But, but you said No!"

He went to pieces again, but not quite so bad and Jonathan was able to interest him in an orange. Then handkerchief in one hand to mop his trickling tears and the huge orange in the other he sat there dejected, all his dreams in fragments and life never again worth living.

"Well, now!" said Jonathan unsteadily. "Well, now!" And he could not get beyond that for before his gaze was marching his own young self, feeding on dreams, planning, searching, thinking, hoping and hoping again that someday he could get away to a place so far that no one would ever trouble him again.

He cleared his throat and started toward

the door. Suddenly he turned and put out his hand.

"It's a deal, Dicky. I don't know how, but it's a deal. And if you'll excuse me I have to see a man named Conner. Have a sandwich while I'm gone."

Dicky was too rattled to notice how long his benefactor was absent. He sat still saying over and over, "Gee! Gee!" And starting up every moment or so to shudder at the thought of Jonathan changing his mind.

Meanwhile in the office of the president of Detroit Motors, Jonathan was being very calm, for once.

"That's the way of it, Mr. Morton. Mr. Conner here has preyed on your credulity. He has blown a bubble which, when it breaks, may well demolish your company. People don't expect a rocket engine. They expect a trip to Mars."

"But good Heavens!" cried Morton, seriously alarmed. "I took it for granted that something was being done, that at least an attempt would be made. I never gave it a thought until this minute! Conner, you fool! your partnership here gave you no right to lead me on, to lie to me!"

"I only told you—" began Conner.

Morton cut him short. "It's not what you told me but what you told the entire country! Just yesterday you said you had announced a date to leave. You can't fake that! The expectation. What was the date?"

"September first," said Conner, cowed. "I thought it would be an easy matter to . . ."

"That Supreme Court will not sit on our case until December first! Conner, you're an idiot. This may cost us into the millions!"

"I only want the run of your plant and your technicians," said Jonathan gently. "A few thousand dollars' worth of materials."

"Bates," said Morton, "if you can swing this and really get away on a test run to the Moon, I'll give you the company check for half a million dollars. And as for your present project, you have a drawing account of whatever you'll need."

In the weeks that followed, Dicky ran errands all day and half the night through a special section of Detroit Motors which was now exclusively Jonathan's. And Jonathan Bates watched drawings grow into test models.

His "rocket engine" was basically very simple. For chemical fuel it might have been

built from the technology of the last two centuries. It gave positive feed control in any varying amounts and it would run from ten to a million foot pounds at the thrust of a hand. It had two barrels of enormous mass, two-foot orifices and eight-foot diameters, with a liquid cooling system within each barrel, force pumped.

The liners could be shifted at will. The barrels fired alternately and sucked in their own feed with the vacuum the explosion had just left. The cooling lines wandered through the ship in such a way that the side away from the sun would carry off the heat. As the cooling liquid left the barrel liner it ran through a heat converter which made auxiliary power. The atomic barrels fitted within these.

THE atomic barrels could be drawn into the ship for repairs and loading and depended on the fission of iron under an alpha booster impact. The iron required shock treatment before being used as fuel, of course, and this was done by supercharging the metal nearly to the point of instability with Cannister particles. The additional shock of the booster would begin an elementary chain reaction which could only be stopped by the exhaustion of fuel.

Chain reaction recharged the boosters, leaving the atomic chamber empty. The boosters shifted magnetism which opened a port and permitted a granule of fuel to fall into the chamber. The port in closing triggered the booster reservoir. The impact on the iron exploded it, which force blasted out and so drove the ship.

The innocent character of the resulting rays, the resistance of the liners, and the ability to regulate the fall of fuel granules from within the ship by simple mechanical means made this motor unique in its time for reliability and it was running, despite its unwieldy character for some two hundred years in all uses and could have been found on old tramps five hundred years after that date.

The only thing which gave trouble in the beginning solved itself. The atomic fuel at low speeds—slow explosions—tended to vibrate the ship badly. Only above a thousand miles per hour could a pilot work the ship in comfort. Jonathan Bates tried three fuels and one of these, zinc, was accidentally but half charged. It gave a slow, powerful thrust even though it wasted half its mass.

Starting magazines, then, were loaded with half-charged zinc. Running fuel was fully charged iron. Chemical auxiliary fuel, consisting of ordinary liquified oxygen and fuel oil, ran the odds and ends of equipment in the ship itself, provided emergency air supply and permitted booster take-off.

Under Jonathan's feverish eyes, the ship grew and prospered. But at best it was very crude for everything about it was guesswork. At this time, so far as anyone knew, no man had dared space and not one solitary fact about space voyaging could be advanced with confidence. But Jonathan's peculiar genius and magnificent courage persevered past all doubts and obstructions until he could say at last the thing was done.

It was on the First of September that he tried the motors with the ship entirely built but unfitted. And despite Morton's cries that he must be on his way, Jonathan knew he had to develop a better liner for the chambers.

By the third of October he was again ready for a test. The tube joinings and the hull braces vibrated themselves to ruin in five hours and twenty minutes running.

Jonathan gave no heed to importunings around him. He built and tested nine sets of fittings before he consented to trust the ship with one. This time he ran the motor for thirty hours, the ellipsoid craft shuddering against her huge cables and balances, the brick wall behind the nozzles growing thin from erosion of impact.

This was well but when she was hung in a cradle of giant size for the testing of her steering jets, it was so obvious that they would overcontrol that Jonathan, from raising power up to incredible heights, had to scale a new motor down to model size for the purpose of turning the vessel easily and stopping her when she arrived on course.

It took him a long time. He was ready on February first for the maiden voyage of the *Detroit Motors Meteor*. And even then he was not sure that it would fly. But he had stalled long enough, Morton said. Interest was cooling. People had begun to whisper that maybe it was a hoax and publicity stunt. And besides, the hearings still went on in the Supreme Court and the deed must be done before a decision was handed down.

Against his judgment and before a crowd he could have done without, at four-thirty P.M. on the first of February, Jonathan Bates waved to Dicky on the sidelines,

scowled at the crowd and withdrew from the blaze of flashbulbs into the pilot compartment of the ship. Police cleared an enormous space already marked out with flags and Jonathan blasted her from the cradle with a savage hand. . . .

Three and a half days later he stood at a lonely cairn and read the penciled note on the torn cheese-package while Tycho gaped beside him.

Reverently he replaced the notice and stood for a moment. He had felt terribly alone. He had been acutely sure that no one was on his side. And yet, there was not one space voyager, there were two.

He would never meet Carlyle for George Carlyle was dead on a worthless beach, massed in a grave with hundreds more, his genius lost forever. But Jonathan Bates would not know this for some days. He knew he was not alone. That his own strange band was already two and that it would grow.

HE HAD had a misfortune with his oxygen tanks the day before and he could not spend the time he wished. But he was far from short on fuel and so he had circumnavigated the Moon after his take-off.

And here it was that Bates should have been content to be still. No man had ever seen the back side of the Moon. By some mysteriously ordained power, the Moon's swing about Earth and about its own axis were the same so that in all her days she had presented but one side.

The Moon was not a perfect sphere! The Earth side bulged plainly so that gravity trapped her there, made her coordinate her turn and face Earth always.

He stood off in a low gravity zone and stared about him. The Moon filled the whole sky for him, filled for the instant his whole life.

Jonathan finally tore his gaze away and resolutely checked his drifting ship. He thumped his tanks and they rang nearly full. He checked his fuel and could see no indication of the minute amount that he had burned. He looked at his oxygen and though the central reservoir was now empty, he found the chemical auxiliary entirely full.

Suddenly he was shaking with excitement. Did he dare risk it? How would he charge that oxygen tank when he got there? If he did go, could he manage to get back?

Through the heavy filters on the ports

he stared about the sky until he found Mars. For it was a certain thing to him that if he returned there would be trouble, or at least delay. He wanted no more of their bickering, of the petty commercial grabbing which clung to this ship even in its name.

There, like a beacon leading him straight to harbor, glowed the orange eye of Mars.

In ten minutes he had reloaded the magazines and replaced the tubes in their slots. In fifteen minutes he had plotted a crude course which showed him how near—how terribly near—he would come to the Sun. At five-thirty-eight, though A.M. or P.M. he did not know for certain, he cut in the small gyro stabilizer, attached the steering control and headed out for Mars.

To us in this far time, the distance was puny, an ant's journey. Old ferry boats under drunken mates do it daily in every system inhabited by man. But recall! This was the first time!

How near came the Sun, how greedy its pull that veered the ship off course! How one listened to each miss in the tubes and held one's breath to the next slow ignition. One could tumble down into the greatest fission of all, the Sun, tumble down and be charred long before the quarter of a million mile high corona licked him hungrily at last.

CRAWLING masses of the Sun's surface, writhing with atomic fire, took distinctive shape, and sunspots gaped like pits in hell before the voyager's awed gaze. For who, even now, can look intimately on the face of a mighty, roaring star and not feel death in it?

Time after time Bates told himself that he had made a foolish plan. Why had he come away from Earth at a time when Mars was there beyond the Sun, so nearly conjoined? For to detour would be fatal without oxygen.

He was at the "top" then of his parabola. He could shut off all fuel for many hours and let the Sun crack the whip with him and hurl him into Mars.

He did not know how fast he was going. Distances were too great for him to calculate accurately enough, and he had nothing like a spherical space compass then—though he invented it in his log enroute—and no method of taking accurate azimuths on these countless billions of stars he saw so clearly all about the inky sky.

On the twenty-first day of his voyage he

found Mars before him, huge and multi-colored, filling up a quarter of the sky, waiting for him. Waiting with oxygen? His tank was almost empty.

He tried vainly to find "canals" for that was a superstition of those ancient days and found instead vast polar caps extending toward the planet's waist.

Like a great clock in the sky he could see it turn and then he was in close, no longer "out in space" but in the sky of Mars.

There were red-brown mountains, smooth with ages. There were river beds too wide for any river. Only in the equatorial belt were things green and only here did he find what he thought would be a suitable plateau on which to land.

He had already braked. He held off a distance now. He could not tell what was below him with any accuracy and he stared at the great polar caps.

Suddenly he guessed at the riddle of Mars. She was ice-bearded with age, thin-aired, chill. But she was not dying and she was not dead. Gravity drew him gently down to the chosen spot and he braked at last and settled upon the tripod.

He had no meter to tell him if he would live outside the ship. He had no canary to test the air. And he donned a stratosphere suit before he opened his airlock.

He needn't have done so. The tree which cast its shade beside the ship could only live on air.

A curious thing. He knew nothing about trees but it looked like one he had seen on Earth. The grass was thin and shaped into a square. How strangely normal all this struck him.

Gingerly he undid a helmet buckle, cautiously he lifted it. He breathed and did not die.

It was as though he stood on some great peak on Earth, such was the air in heaviness. And then he smelled the strong sweetness of flowers and a winged something flashed down on him and yelled hoarsely. He ducked. And then he laughed at himself.

He felt the soil, the grass, the leaves, and he yelled aloud in joy.

Water was in a brook at hand. The birds ate a fruit and so he tried. He refreshed himself and bathed, calming himself in this momentous instant by doing quite ordinary things, making himself do them. How strange it was that he felt so much at home, so little inclined to alarm.

He spent six days wandering and writing notes and all the wonders about him multiplied again and again until he was seized with impatience to see the whole of it.

He had to invent the means of compressing air for his flasks, but he did it. He had to repair odds and ends about his ship with no tools or torches, and he did them.

At last he could hurl his craft into the sky again and bounce there on one jet, looking down, studying, memorizing lakes and ocean beds and the odd streaks of vegetation which created lines as if in the wake of some unimaginably old cataclysm. He moved back and forth in his study for it seemed to him that somehow he must find out where sentient beings lived. Certainly they must live here. They must have cities. They had to have cities!

He could not know all at once he told himself, and made his sketches and pictures. And then a daring thought struck him. It was going to be too dangerous to cross the Sun again—at least for his nerves. But why should he try?

Venus stood in a triangle away from the Sun. The other two ends of the triangle were Earth and Mars.

NOW that he was up he did not care to land again. Horizon fever had taken him. He looked back at Mars. He would penetrate her riddles some day. He would find her people and ancient cities. He would come back!

And the *Meteor* began to jet, faster and faster, with Venus as the goal.

Considering the enormous number of space accidents which followed in the centuries after, it is a remarkable tribute to Jonathan Bates that no mishap befell him, either from ray burns or stray flosam, often so terrible and final in those times. It was either luck or skill, combined with foresight. But when Bates landed ninety-two days from departure time at the Detroit Motor Stadium, both Jonathan and ship could have taken off again within the day.

His pockets bulged with notes, his lockers were crammed with film and samples of the soil and growths of Mars and Venus. A proud serenity was in his smile, a poise in his mind which would never desert him.

He had gone away from Earth and the truth is that, as it is with every rover, he did not again come wholly home.

They yelled and shouted and applauded

and the papers spread his name. Men scrambled to talk to him, societies fought to award him prizes. Parades were held and bands played.

For nearly eighty days.

It alarmed him a little when the army commandeered his ship "for study." But he was being showered with favors and he thought he could have another, better ship whenever he chose to build it. And how much better it would be!

Gradually the hysteria wore off. There were reasons for it. In the first place, Jonathan never did consider himself a hero and could not learn to take applause. He avoided newsmen and refused to talk. He ducked out of luncheons to be found behind his lab talking with a beaming small boy and a dog. He would not do everything people thought he should. And reaction set in, whispers behind hands. He was too good for them now. That they had always been "too good for him" never entered their minds.

But people were happy enough that the thing had been done, and happy too to let it lie. For one after another discovered the question—"Well, what possible good is it, after all? We can't ever go there."

And so popularity and interest died down and left Jonathan with time to think and he glad that his appearance prevented him ever from becoming a professional hero.

Jonathan found few men ready to part with money for another ship, now. There was no commercial advantage that they could see to be gained. And besides, there were no less than twenty-seven space ships building in all various parts of the world.

Jonathan asked Morton of Detroit Motors, then, for the offered check and Jonathan was not particularly amazed that Morton distinctly did not recall having mentioned it. The Oklahoma oilman had made his boast too public to back down, however, and Jonathan had what the government taxes left of that.

He found that Detroit Motors could no longer spare the room but they gave him the old equipment for which they now had no use. He set it up in a barn nobody wanted and with little assistance from anyone except that of the small boy and the dog, began the *Voyager*.

It took him a long, long time for he had changed things so radically. But he plodded away, an object of occasional curiosity from

passers by, but severely left alone by the newspapers.

They did not remember him until that fatal morning of August 16th when the *Crusader I*, a patchwork miscreation privately and badly built, took off for Mars, shattered her rockets and came back down on a crowd of twenty-two thousand people, killing many and setting afire an area equal to eight city blocks.

This brought governments down like hounds upon all such structures, for the story had more space play in truth than Jonathan's successful voyage had brought forth. The pages of victims and photographs of loved ones left behind!

Within a month the *Loyola*, an explorational vessel supposed to survey the Moon for a future observatory, went out of control in its return and vanished into the Caribbean.

Two months afterwards to a day, the Government ship XI, a copy of Jonathan's first, radioed midway in her maiden attempt to reach the Moon that she had blown her tubes and was out of control. The XI was never heard from again and her fate is unknown.

SPACE flight stopped. By mass demand of the people, it was forbidden "until such time as equipment is sufficiently well developed to permit safety"—though just how this was to be done without actually voyaging was a thing Jonathan could not fathom.

They did not trouble him or his ship officially. But space flight had fallen into great disrepute and with it had fallen Jonathan. His moment of fame was gone. And worse than gone, for he was blamed for the disasters just as though he had been consulted about their construction.

Jonathan worked hard and he worked well. He knew what he could count upon, he knew his reserves of supplies could be huge. He knew the tools he would require. He worked long, too preoccupied to notice that coldness and suspicion that greeted him where he went, that children often crowded his ungainly steps and mocked him with shrill cries and pelted him for a monster.

He kept on working, his own aide the faithful child, long since run away from the "Home."

The ship had twice the motive power, three times the weight of the first. It could

make its own oxygen from various substances. It could feel out and automatically avoid "space dust." No ship would be as thorough as that for scores of years to come.

The Government did not bother Jonathan and Jonathan did not bother the Government.

And at last an insulated spheroid stood upon its tripod by the barn and the ceaseless loading was all done.

Jonathan came out and picked up the dog Tiger. The shiny-eyed little boy followed him into the ship.

There was no backward glance, no crowd, no fond farewells. The *Voyager* shuddered, trembled in a bath of flame and then shot skyward, faster and faster, growing smaller and smaller until it was gone.

It never returned.

* * * * *

Six years later when Pieter Sven set out for Mars in the *Marco Polo I*, a fine cruise vessel in the hands of a very capable man, he had some doubts as to the capability of his craft to bring him back. And it was with wonder that men received his tale on his return, of having found huge markings on

a mountain side and in their center a weatherproof cache of needful fuel and food.

With it there had been a careful map of Mars in six copies, a list of landing places, a description of edibles to be found, a detail of dangers and taboos and a very painfully printed booklet, protected from the weather, chained to a rock.

"What did it say?" cried Sven indignantly. "It said *Welcome*, how else? And it said it in a very fine way, let me tell you."

He showed them his photographs of it. The title page said:

A Description of the Atmospheres and Surface Characteristics of Five Planets with Certain Warnings and Dangers to Be Met in the Voyaging of Space, with Plans for Improvements of Space Craft and Equipment.

"Who wrote it?" they demanded. "Where is he?"

"That," said Sven, putting the photos reverently away, "is not too hard to answer."

He withdrew with that calm air men would soon associate with the voyagers of space and he stood for a long, long time in the night above the city's lights, his steady gaze communicating with the stars.