

STARTLING STORIES

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A Complete Novel



FLIGHT INTO YESTERDAY

By CHARLES L. HARNESS

From space to the Moon, from the Moon to the Sun, Alar the Thief pursues a strange destiny, seeking the self that he must find to free civilization! 9

Two Complete Novelets

- CONQUEST OF LIFE.....Eando Binder 80
Anton York inherits the secret of eternal life, and with it the seeds of destruction! A Hall of Fame classic reprinted by popular demand
- FORGOTTEN ENVOY.....Sam Merwin, Jr. 122
Carden Layne, the man who hails from another world, begins his new career as an Earthian—as a pugilist in the boxing ring!

Short Stories

- THE INCREDIBLE DESTINATION.....Rene LaFayette 96
For centuries, men could not follow James Dolan's star route
- DIMENSION: PRAECOX.....Blair Reed 107
Folks were in for a rude awakening when they saw a disembodied hand
- IMMORTALITY.....John D. MacDonald 113
There are more universes than man has dreamt of in his philosophy
- HISTORY LESSON.....Arthur C. Clarke 137
Shann and his people fight to escape the white terror

Features

- THE ETHER VIBRATES (Announcements and Letters).....The Editor 6
- ROCKET TARGET NO. 2.....R. L. Farnsworth 93
- THE ROAD TO SPACE TRAVEL (Part II).....Willy Ley 116
- SCIENCE FICTION BOOKSHELF.....A Department 155
- SCIENCE FICTION FAN PUBLICATIONS.....A Review 157

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*The president
of the
United States
Rocket Society
predicts that
once we have
bases on Luna,
we will probe
the secrets
of Mars!*

ROCKET TARGET

No. 2

BY NOW it is certainly obvious to everyone that the possibility of men reaching the Moon, in our lifetime, is very good. Not only does atomic power give us the long sought for fuel, but the thinking of those who control the nation's purse strings is now very evidently scanning beyond our horizon toward inter-planetary space. Recent recruiting posters of both our Army and Navy have pictured rockets leaving the earth and blazing toward outer space.

The Moon is, of course, Rocket Target #1, the first goal of the rocketeer, and, incidentally, the prime goal towards which all nations race. But this is a strange race. It is different from any other race in which the nations of the world have engaged.

In the development, for example, of the steam propelled ship, progress could go for

by R. L. FARNSWORTH

ward step by step, year after year, until technology could create naval monsters like the Battleship *Missouri* or the liner *Queen Mary*. But during all of this time there was no urgency to build a *Queen Mary*. The oceans could be crossed in 3 weeks, in 18 days, in 15 days and so on to five. Fulton perhaps visualized the great ships of the future but he did not have to build them.

Initial Velocity Important

But reaching the Moon is different. There is only one way to do it and that is by giving your "ship" an initial velocity of 7 miles per second. It is as if one had said to Robert Fulton, "You can not build a ship until you can build one that can cross the ocean in five days!" Fulton, and the world, would have to have waited until all the myriad sciences that go in to the building of a great liner had developed to the point at which such a ship could be built. But that is the position in which the nations of the world find themselves on the eve of the greatest race in history. And that is why the race to conquer space does not seem of such urgency, nor does it have much publicity.

Scientists Wrestle With Problems

But nonetheless, in laboratories the world over, the race goes on! The metallurgists and ceramics experts constantly delve further afield for materials to stand the terrific heat of rocket exhausts or atomic combustion. And the puzzle of how to land a rocket safely with human cargo; and the puzzle of gradual acceleration; and the puzzle of stable flight; and the puzzle of radiations in space—and a myriad of others, all, each and everyone, must be solved before man can step upon the surface of his satellite, his vantage point from which to explore infinity. But these problems will be solved, and soon!

Upon reaching our Lunar space base we will then be able to proceed to Rocket Target #2. At an average distance of around 64 million miles beyond us there accompanies us around the Sun a companion planet with a peculiarly reddish hue, mysterious Mars. Lost as we are in an abyss of space whose magnitude is beyond conception, the eyes of men have turned for untold thousands of years toward the red star which we now know to be a sister planet. We know that Mars has a diameter of about 4,200 miles and

weight on its surface is roughly 2/5 of that under which we labor here on earth.

From what we now know about Mars, which is not a great deal, we are sure that it would still be much more hospitable than the Moon.

While the atmospheric density is probably quite low, like that on a 20,000 foot mountain peak on earth, and the climate is no doubt drier than that of Tibet, there is very definitely vegetation upon Mars. This can be observed through the changes in coloration with the changing of the seasons.

Mars Is Arid

Seasons on Mars are approximately twice as long as those on earth, due to its greater distance from the Sun which makes the year twice as long as ours. The changes in coloration on Mars are exceedingly interesting from another point. This is that whereas on earth green would follow white from the equator UP, as spring brought new greenery and melted snows; on Mars the reverse is observed. On this strange world green is seen to go DOWN from the pole as spring and summer come into their own.

Thus it would seem that Mars is so dry that vegetation can not grow until the snows melt and release precious moisture to a parched soil. Whether this is accomplished through the workings of nature or by stupendous engineering works of intelligent beings we are not likely to know until we get there.

It is probable that the low atmospheric pressure on Mars might pose quite a problem for beings from earth. No doubt the pressure there is so low that we might explode like fish brought up from the depths of our seas, or suffer horribly from the "bends" as our internal gases "boiled" out from our body. However a form of space suit could be worn which would not be as cumbersome as one required on the Moon and which would resemble those now used for high altitude aircraft.

The fascinating thing about Mars is that here, before our eyes, revolves an entire world which may be adapted for the exploitation and colonization of men. The undoubted presence of vegetation supposes other forms of life. The constituency of the air of Mars may be strange but life will prove to have even more varied forms than the myriad guises under which it is found here on earth.

Here on earth there is life in the depths of the sea, under enormous pressures, where light does not penetrate. There is life on storm swept mountain peaks, 20,000 feet high. Life teems in the cold of the arctic, in the heat of the dreariest deserts and even in that most inhospitable of earthly abodes, the dread antarctic, the Emperor Penguin struts his stuff.

The many prevailing arguments about life on Mars revolve around the question of the water supply. The controversy about the "canals" of Mars is largely a controversy about whether or not they are of intelligent origin; for, artificial or natural, they change color with the melting of the polar caps, which make it very likely that they are connected with the distribution of the planet's water.

For some inexplicable reason many scientific minds seem bent on denying the possibility of life elsewhere in the universe. Yet, if in the farthest stars, in the most remote galaxies, and in great inter-galactic clouds, we find calcium, carbon and hydrogen, to mention only three elements essential to life, why can not we likewise assume the all pervadingness of life? If you found a world covered with bricks you would expect buildings.

The universe is composed of the elements essential to all life.

Consult the Dipo

The desert character of much of Mars is always brought up as being a negation of intelligent life. But instead of mentioning the fact that both the African and the Arabian deserts support sizeable populations of nomads, we will bring in as a character witness for life without water the "dipo." Step forward Mr. Dipodomys Deserti! This little

mammal resembles a gopher, a rat, a rabbit and a miniature kangaroo!

Go at night into any of the desert areas of the Southwest, with a little grain in your hand, and the "dipos" will scurry about you in great glee. Now the significant thing about this little mammal is that it does not drink water! Neither does he obtain it thru moisture in the food he eats. His water is created internally by oxidation of the bone-dry food he finds in the desert. His Saturday night bath is his constant contact with the sand, which scours him as clean as the proverbial hound's tooth.

Now here is a mammal who drinks no water, lives in the desert, and his numbers are legion. So if there is vegetation on Mars, there is no reason why there could not be animal life. As to the oxygen content in the atmosphere, our Martian "dipo," over the milleniums during which the oxygen of Mars has been absorbed by the rocks (giving Mars its reddish tinge) could no doubt have developed a bodily mechanism for producing oxygen as well as water. The only argument against life on Mars, or anywhere else, is purely a cynical one, that life might become so advanced as to be capable of killing itself off in warfare!

A Future Challenge

In any event it can be seen that Mars is easily Rocket Target #2 and that as soon as Man is based on our Moon it will not be long before the gleaming snouts of monster rockets will point out from Luna to embark on the solving of an age-old mystery, is there life on Mars?

And it will be merely the solving of the first of an infinite number of mysteries which will offer a challenge to our sons and daughters of the future.
