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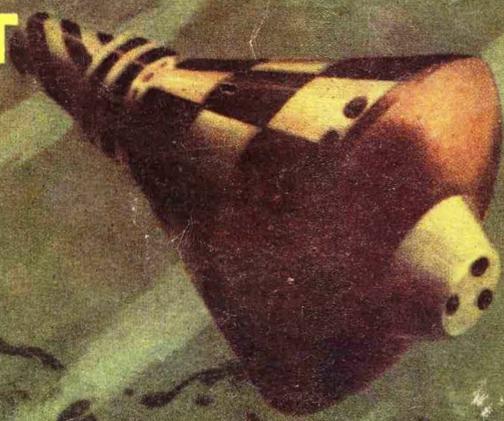
**FACT FEATURES**

**IVAN T. SANDERSON:**

**THERE IS  
AN ABOMINABLE  
SNOWMAN**

**SAM MOSKOWITZ:**

**TO MARS  
AND VENUS IN  
THE GAY  
NINETIES**



DAVID  
WIT

# TO MARS AND VENUS IN THE GAY NINETIES

by SAM MOSKOWITZ

DURING that colorful and nostalgic period, which Americans refer to as The Gay Nineties, the scientists and the imaginative writers of the world worked with increased vigor on the problems of space flight and the possibility of life on other worlds. Such colorful personalities as John L. Sullivan ("I can lick any man in the world"), the hefty beauty Lillian Russell and her portly admirer, Diamond Jim Brady promenading through the news diet of the American nation obscured the vast theoretical and literary progress on space flight being made, despite the fact that the first successful air flight was still a number of years away.

Actually it was scientific work that inspired a good deal of the fiction. Particularly astronomers of the calibre of Camille Flammarion, whose books were heavily translated from the French in the 'nineties and Percival Lowell whose famous projections concerning Mars suggested a pattern of conditions on that world which to a greater or lesser degree has pervaded the entire literature on the subject ever since.

As the century neared its end, the time had long passed when the nature of the planets and the stars was an unfathomable mystery. Electricity

had been tamed, experimental internal combustion engines had been built, and the telephone was a common device. The state of scientific knowledge was well advanced. A writer with an inquiring mind would have no difficulty learning the problems of space flight and the theoretical methods of overcoming them.

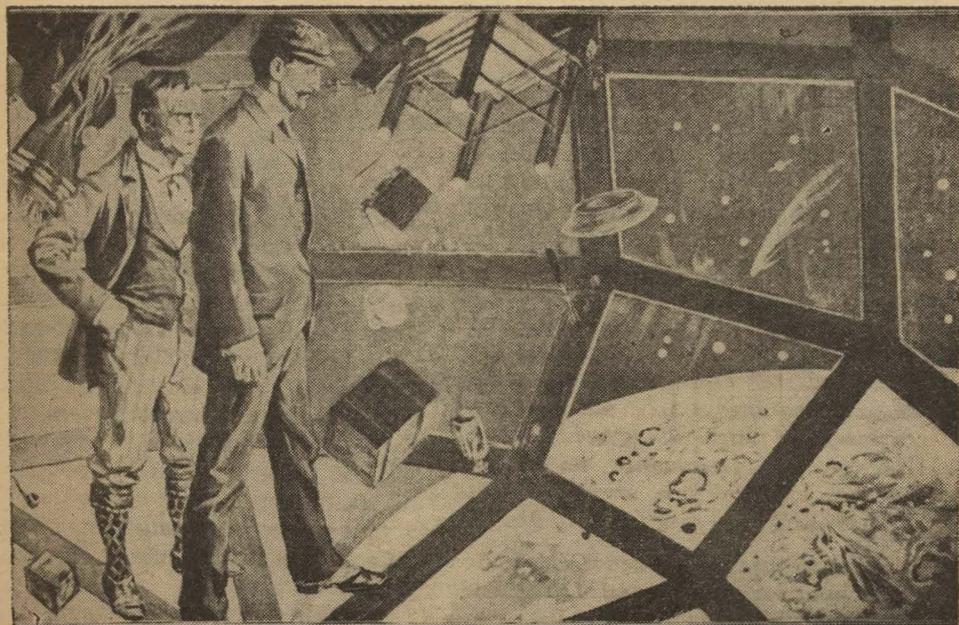
The improved state of scientific progress was to a degree reflected in the space sojourns of that period, rendering careless errors all the more inexcusable. The emphasis now began to shift from lauding a writer or scientist because he was occasionally right to deploring him because he was occasionally wrong.

A popular fiction writer of 1890, Robert Cromie, had published an interplanetary adventure entitled *A Plunge Into Space*. While the motive force of his space vessel was obtained by complete control of gravity through electrical means, several other unique elements were contributed to the methods and plotting of space fiction by this novel. Cromie helped introduce the notion of a completely globular spaceship which later became the vogue after the publication of Edward E. Smith's, *The Skylark of Space* in 1928.

Secondly, Cromie was an early pro-



That interplanetary spaceships would have to carry air flying vehicles for planetary atmospheres was anticipated by Gustavus W. Pope, M.D. in his thrilling 1895 romance *A Journey to Venus*.



The weightlessness of objects in space is illustrated in H. G. Wells' *First Men in the Moon* as the vessel, powered by the antigravity metal *Cavorite*, approaches the moon.

ponent of grim realism in science fiction, pioneering two plot devices which were effectively used by later writers. In the early part of his book he depicted Mars as a desolate, unfriendly world where the explorers are almost defeated by the elements. When, 42 years later, Laurence Manning did the same thing in his short novel *The Wreck of the Asteroid*, which began in the December, 1932 issue of *WONDER STORIES*, the editor, David Lasser was so struck by the originality of the approach that he said: "Mr. Manning brushes aside all nice fantasies of Mars peopled with golden creatures just ready to bestow blessings on earth explorers. Instead there is a naked world, heartless, relentless."

Another plot twist of Cromie's that anticipated Tom Godwin's, *The Cold Equations*, concerns a Martian girl who stows away on the earth ship because of her love for one of the explorers and then realizes that she must die if the remainder of the crew are to have enough air to make it back to earth.

The many aspects of high originality in *A Plunge Into Space* attracted the attention and admiration of the old master Jules Verne, who sent a letter of appreciation which was run as an introduction to a second edition of the book published in 1891. The second edition contained a number of full-page illustrations which indicate that the book was a commercial success. It was the publishing pattern in England to frequently make second editions far more attractive than the first on the reasonable assumption that good initial sale suggested that the property was worth promoting.

The proposal of a reaction device or rockets for space travel is relatively uncommon in scientific literature or in fiction until after World War II. In Germany, Hermann Ganswindt, an eccentric and combative inventor designed a space ship which was driv-

en by explosives, the blast passing right through a center well. Ganswindt also conceived of the idea of creating artificial gravity in space-flight by rotating the passenger-carrying portion of his ship. Willy Ley established that Ganswindt had presented the idea in a speech as early as 1891. Ganswindt claimed to have conceived it even earlier.

John Jacob Astor is a name that conjures the same association of wealth as Rockefeller or Morgan. His end was tragic as one of those who went down with the ill-fated "unsinkable" Titanic. However, he made a much more remarkable trip in imagination as author of *A Journey in Other Worlds*, published in 1894 and a minor best seller of the period. Astor's characters visited every known planet of the solar system utilizing anti-gravity as a means of propulsion. More honest than many of his contemporaries, Astor adopted the same name for anti-gravity as Percy Greg's *Across the Zodiac*, "Apergy," so little more need be said of the derivation of his ideas.

There was more than a bit of religion and preachment in Astor's book but Gustavus W. Pope, M.D., with *A Journey to Mars* in 1894 and its sequel, *A Journey to Venus* in 1895 concentrated on writing first-rate adventure stories. The anti-gravity "ethervolts" in his crudely drawn illustrations, resemble some of the teardrop shaped flying saucers that have been "photographed" in recent years. There was one element of novelty. Each of the ethervolts towed an airship (with multiple wings) along with it to be used in the atmosphere of the planets. Pope recognized that a true space ship might not be suitable for rambling about the atmosphere.

The British writer Thomas Dixon, in his 1895 volume *1500 Miles an Hour*, enjoys the distinction of being the earliest science fiction novelist to make arrangements to repair his



Moonmen make no move to stop visiting earthman as he radios his strange tale to receivers on his home planet, in H. G. Wells' *First Men in the Moon*.

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# FRANK READE'S LIBRARY



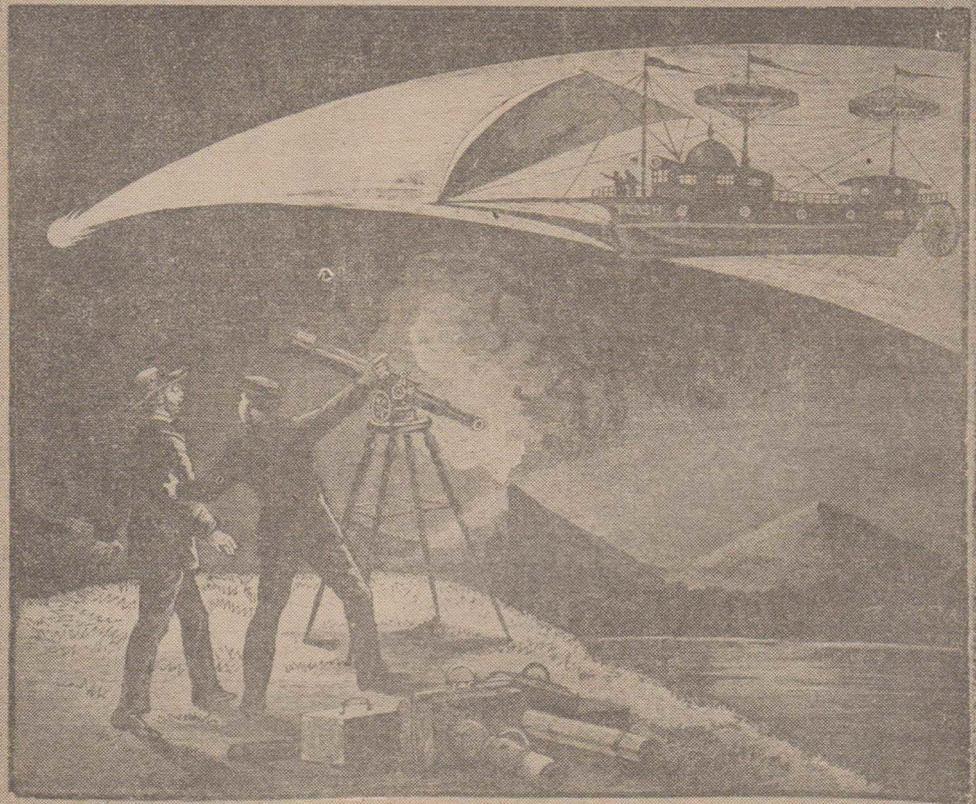
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## The Chase of a Comet; or, Frank Reade, Jr.'s Most Wonderful Aerial Trip With His New Air-Ship the "Flash."

By "NONAME."



From the cage they had removed their elbows, including the telescopes, and were already preparing to take a sight at the comet. Their astonishment at sight of the air-ship can hardly be expressed in words. "Mercy on us!" gasped Jack. "What is that, father?" "It looks like an air-ship."

The dauntless vessel darting into the tail of the comet is piloted by the brilliant young inventor Frank Reade, Jr.



The problem of repairing a space ship in the void was carefully considered by British writer Thomas Dixon in *1500 Miles an Hour* published in 1895. He forgot that there is no gravity in space to cause the man to hang down from the rope!

space ship from the outside while in space. He thoughtfully provided modified diver's suits and the artist illustrated the scene. He also condenses air from the "ether," brings along food concentrates and propels his ship with electricity produced from petroleum. It is never quite clear whether this is antigravity or not.

The greatest of all science fiction dime novelists was Luis Senarens, who, under the pen name of "No-name" wrote the novels in THE FRANK READE LIBRARY. His lead character, Frank Reade, Jr., each week created a new invention to go adventuring with. For the issue of May 31, 1895, Frank Reade, Jr. builds a super air ship, oxygen equipped, airtight and electrically heated, with which he attempts to get a close-up of Hopkin's Comet in *The Chase of The Comet*. He actually sees volcanoes and mountains on the comet before it crashes in the arctic.

Emboldened, he improves his ship further in *Lost In A Comet's Tail* in the Dec. 13, 1895 novel and gives chase to Verdi's comet. This time he is caught in the comet's tail and pulled beyond the earth's atmosphere. He breaks loose, but his ship is suspended motionless in space above the earth. He has foresightedly brought along suits so they can walk on the deck of the ship. A girl with them, who falls off the ship, merely floats alongside. Another small stray comet breaks the gravitational stalemate and brings them back to earth. With a little more thought, this could have been turned into an early earth-satellite story but Senarens misses the opportunity.

The generally-held concept that science fiction novels before the advent of regular periodicals of that type were isolated and unrelated happenstances is obviously untrue as one finds that through the centuries no author wrote space travel tales in an intellectual vacuum but built upon the ideas suggested by previous writ-

ers. No better example of this fact can be demonstrated than the work of Edwin Pallander in 1896 which borrowed its title, *Across the Zodiac*, from an earlier work by Percy Greg and its plot from *20,000 Leagues Under the Sea* by Jules Verne. The popular "antigravity" method is utilized by Pallander and we find the mental anguish of Captain Nemo of Verne's famous work duplicated in space. Where Verne discovers the lost city of Atlantis beneath the seas, Pallander manages to find an underground city on the moon.

The fidelity with which early science fiction writers copied their predecessors is also to be found in *Daybreak* by James Cowan, a novel published in 1896. Suffering from a too-close reading of *Conquest of the Moon* by Andre Laurie, Cowan saves the problem of building a space ship by having the lunar globe come crashing into the Pacific ocean. His characters then float up its surface in a balloon. Visiting Martians give them a further trip to the Red Planet and return.

By contrast, John Munro, in *A Trip to Venus*, published in 1897, is as scientific as Cowan is unscientific. Munro had a good knowledge of science and had written two previous popular scientific books on electricity titled *The Wire and the Wave*, and *The Story of Electricity*. The value of his scientific background is impressively displayed when he suggests in an early part of the story a prototype of the three-stage rocket, the earliest such mention on record. Deploping the scientific weakness of Verne's giant cannon as a means of shooting the ship into space, on the grounds that the initial velocity would be deadly to its occupants, Munro suggested that a large cannon shoot off a complete small cannon with a shell inside, the second cannon firing the shell when its velocity was exhausted, utilizing selenoids.

He further suggested the use of

rockets for propelling a space ship and correctly observed that they would need no atmosphere to push against. He noted that even a bullet shot from an ordinary gun could propel a weightless ship in outer space.

After this magnificent start, the author decides his proposed ideas are too complex and "invents" a nice, simple anti-gravity unit to do the job!

The year 1897 seemed to truly represent a "breakthrough" for imaginative scientific concepts among science fiction writers. In addition to Munro, the German writer Kurd Lasswitz had published that year the novel that established his fame, *On Two Planets*. This story suggested that advanced Martians might conceivably visit the Earth first. To accomplish this, he has them establish an artificial satellite over the Earth's North Pole. Their ships are powered by antigravity, but steered by reaction of a power called "repulsor."

For a period Lasswitz was credited with being the first man to conceive of the idea of an earth satellite until the science fiction world bothered to re-read and trace the origin of *The Brick Moon* by Edward Everett Hale. This short novel, which first appeared as a three-part serial in the *Atlantic Monthly* for Oct., Nov. and Dec. 1869, was so popular that the magazine solicited a sequel, *Life on The Brick Moon*, which ran complete in the Feb., 1870 number. In phenomenal detail, Hale, who had already established an enduring literary reputation as the author of the short story, *Man Without A Country*, describes the reasons for building an earth satellite, its method of construction, and launching, and life aboard it so thoroughly and convincingly as to establish *The Brick Moon* as a prophetic classic. Hale was also responsible for the authorship of several Utopian fantasies and for tracing the origin of the name of the state of California to the Spanish work of science fiction, *Deeds of Esplandian*, pub-

lished in Spain in 1510, portions of which were translated by Hale for publication in *The Atlantic Monthly* during the 1863 under the title of *The Queen of California*. Though nearly 100 years have passed since Hale's discovery, no one has yet come up with an earlier use of California in any book or manuscript.

*Loma, A Citizen of Venus*, which was issued in 1897 by William Windzor, LL.B., Ph.D., who was both author and publisher, is a strange volume. The author employs teleportation for interplanetary travel, though his Venusians have anti-gravity. The Venusians have colonized the earth centuries past through sending out spores. The Venusians have their telepathic supermen mingled with the human race. These supermen alter the genetics of women to bring into existence mutated children.

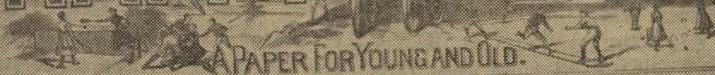
The ideas on sex are greatly advanced for the period, probably due to the fact that the author had written a number of books on that subject as well as on phrenology, which he considered a true science taken over by quacks. His ideas on religion are potent enough to work up a local ban even in this "enlightened" day and age.

While Charles Dixon was on his way to Mars at 1500 miles an hour, Edwin Pallander copying Verne, John Munro inventing the three-stage projectile and Kurd Lasswitz cementing his fame, a new figure had arisen in the world of science fiction writing who would infinitely outdistance them all, both in the quality of his writing and the acclaim of the literati. Already, *The Time Machine*, published in 1895, was admitted a classic and between shudders, both sides of the Atlantic acknowledged the merits of *The Island of Dr. Moreau*, published in 1896, which was followed by the appearance of the popular *Invisible Man* shortly afterward.

Now, this young literary giant, H. G. Wells, probably the greatest scien-

Next Week WORKING THE ROAD; Next Week  
Or, Beating His Way to Buffalo.

# HAPPY DAYS



A PAPER FOR YOUNG AND OLD.

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(No. 210 of 1891)

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## THREE BOYS FROM THE MOON:

Or, The Strange Story  
of Will White.

By CASSON GARNE.



Illustration of the three Lunarites in the foreground. The anti-gravity ship and donkey-eared Lunarites appearing in the novel *Three Boys from the Moon*.

Science fiction was still being tailored to suit the boys as evidenced by this strange anti-gravity ship and donkey-eared Lunarites appearing in the novel *Three Boys from the Moon*.



This 1901 illustration shows the interior of the *Astronef*, as the lead characters of Griffith's *A Honeymoon in Space* observe the earth and drink a toast to the planet after a honeymoon in space.

tific romancer who ever lived, decided to base his 1897 novel *The War of the Worlds* on an interplanetary theme.

The Martians come to the Earth in shells shot from a giant cannon on Mars in the manner of Jules Verne's early classic, *From the Earth to the Moon*. The method of propulsion is the only point of similarity between the two works. Wells suggests, apparently for the first time in the literature, that creatures from other planets might not only be a monstrous species of life, but that they also might be more intelligent than humans and bent on conquest.

The superb writing and characterization of *The War of the Worlds* had almost immediate impact. Two British humorists, C.L. Graves and E.V. Lucas, brought out *The War of the Wenuses* with a dedication page reading, "To H.G. Wells this outrage on a fascinating and convincing romance."

Women from Venus, tired of men on their planet who are all invisible, come to earth in a crinoline ship stiffened with hoops to sample what Earth has to offer. They kill a lot of men who are irresistibly drawn to them, but eventually, the same strait-laced wives who henpeck their husbands, successfully drive off the Wenuses. The author expresses the feeling of the Wenuses at the end: "Wrong? O of course It's heinous,

But we're going, girls, you just bet!  
Do they think that the Wars of  
Venus

Can be stopped by an epithet?  
When the henpecked Earth-men pray  
us

To join them at afternoon tea  
Not rhyme nor reason can stay us  
From Flying to set them free.

When the men on that hapless planet,  
Handsome and kind and true  
Cry out, "Hurry up!" O hang it!

What else can a Wenus do?  
I suppose it was rather bad form,  
girls,

But really we didn't care,  
For our planet was growing too  
warm, girls

And we wanted a change of air."

A more positive reaction to Wells' epic novel of interplanetary invasion took place in America, where, on Jan. 12, 1898, barely six weeks after *The War of the Worlds* had been serialized in COSMOPOLITAN, THE NEW YORK JOURNAL commenced a sequel written by Garrett P. Serviss and titled *Edison's Conquest of Mars*. Serviss was a lawyer and journalist who decided to devote his life to popularizing astronomy. *Edison's Conquest of Mars* was his first work of fiction, though he later was to establish himself as one of the top writers of science fiction of the earlier part of the century with such efforts as *The Moon Metal*, *A Columbus of Space* and *The Second Deluge*.

While a space fleet is part of *A Journey to Venus* by Gustavus W. Pope, M.D., which appeared in 1895, the classic tableau of a battle of opposing fleets in space seems to be the dramatic contribution of Serviss. Feeling that the Martians are building another fleet to invade earth, Serviss utilizes the aid of the great men of science of the nineties: Edison, Kelvin and Roentgen among them and comes up with a space ship which "short circuits" gravity, though electricity, which he equips with disintegrator rays and space suits to make repairs in space. The space suits contain telephones for communication.

There was no question that the Gay Nineties had been an epochal period for the development of interplanetary literature; a decade in which it had come into its own both as scientific prophecy and as literature.

From this transition was to grow the space tales of the 20th Century and one of the earliest practitioners of prominence was George Griffith, who had attained best-selling rank with his tales of warfare in the near

future, *The Angel of the Revolution* and *Olga Romanoff*. In the latter, which appeared in 1894, communication with Mars was established as an important premise of the story. The turn of the century found him visiting that planet and many others in a series of episodes titled *Stories of Other Worlds* which ran serially in PEARSON'S magazine for 1900. The following year they were collected into a single volume under the title of *A Honey Moon in Space*. The book is not distinguished for its "R" Force theory "that every positive force has a negative reaction and therefore we may negate gravity", but for the sophistication with which it treated a space tour, including a marriage and honeymoon in space. It is also realistic in its descriptions of weightlessness in space and the problems of adjustment to that condition. A great deal of the ideas contained are based on the writings of Camille Flammarion, but they are presented in a highly romanticized manner which accounts for the novel's initial appeal.

That the literature of space would retain its popularity among the nation's youth during the coming century was foreshadowed by the appearance of *Three Boys From the Moon*; *Or, the Strange Story of Will White*, which ran in three weekly installments in the boys' magazine HAPPY DAYS, beginning with the Aug. 17, 1901 number. This story, credited to Gaston Garne, may well be the work of Luis P. Senarens, author of the Frank Reade series. The circumstantial evidence pointing to this conclusion is as follows: Senarens' daughter claims that he wrote a moon story which was not in the Frank Reade series and which appeared after the turn of the century. She is sure of this, because as a little girl she helped him do research on the story.

Senarens did almost all of his work for Frank Tousey and HAPPY DAYS was a Frank Tousey publication. Several other stories of fantastic

adventure appear under the name of Gaston Garne in the same paper. The clincher is that practically no other Moon stories appear in other dime novels during this period.

For the above reason and as a link in the chain of teen-age interest in space travel, the work is noted though its "vit," a metal which draws and "kit," a metal which repels when powered by moon current, "stitt," is of too obvious and comfortable a genesis to deserve elaboration.

Now, already a literary great, H.G. Wells produced in 1901 his interplanetary triumph, *The First Men in the Moon*, containing some of the most brilliant descriptions of the lunar scene ever penned. An imaginative genius, Wells' excursion was founded in a long and fascinated reading of other works of science fiction which dated from Lucien's *Icaromenippus*, from which tale he quoted: "Three thousand stadia from the earth to the moon... Marvel not, my comrade, if I appear talking to you on the superterrestrial and aerial topics. The long and the short of the matter is that I am running over the order of a Journey I have lately made."

In discussing means of building his space sphere, one of Wells' characters refers to "Jules Verne's apparatus in *A Trip to the Moon*" confirming Wells' reading of that author. The idea for the motive power is obviously derived from *A Voyage to the Moon*, by Crysostum Trueman.

There would, therefore, be anti-gravity with elaborate screens to control their intensity, but beyond that there would be sound, logical reasoning for even the more far-fetched scientific concepts, colorful scientific romance enduring wonder, scouring social criticism and unsurpassed literary skill.

The Gay Nineties were over and a new era in fictional space travel had begun.