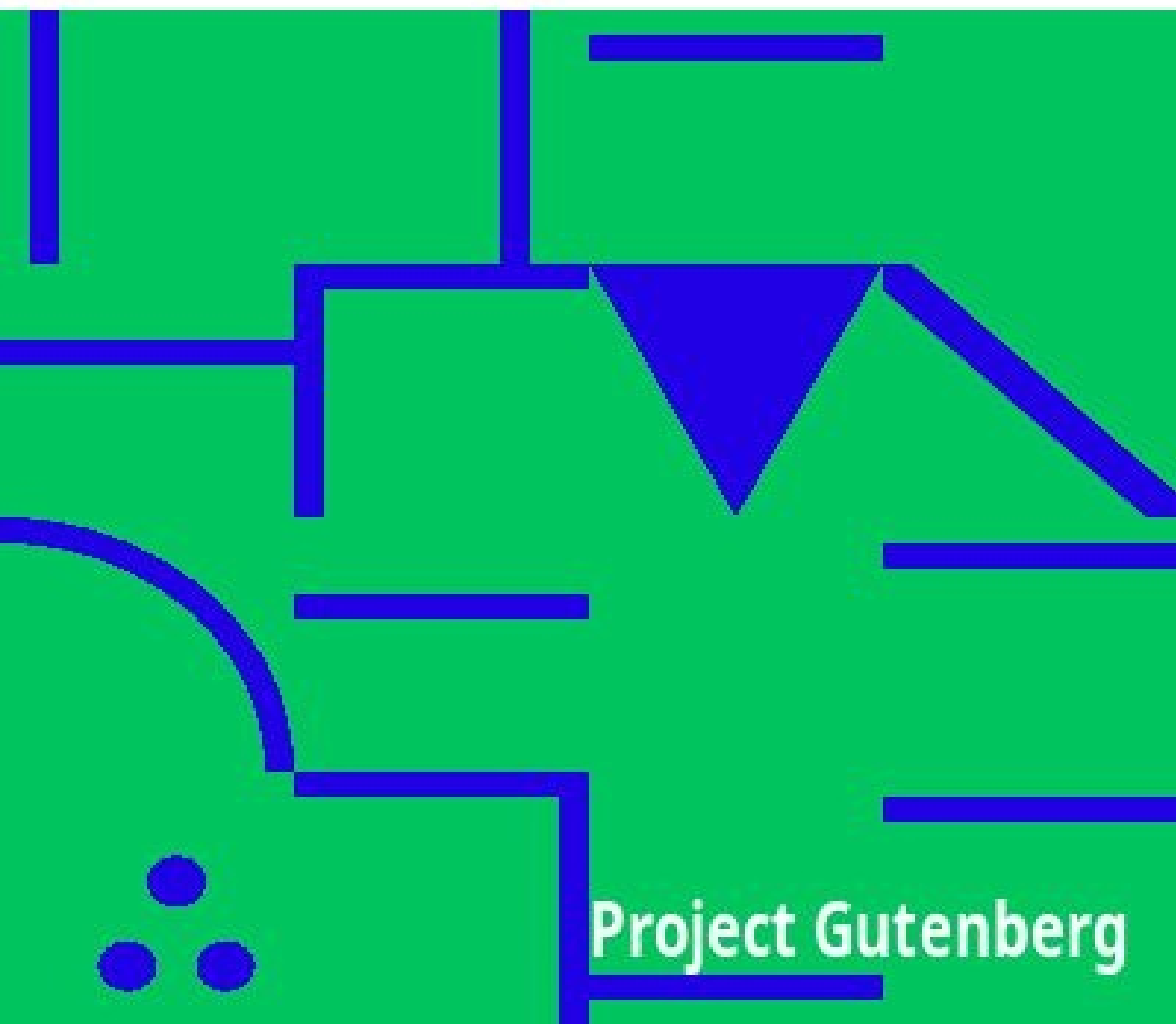


# The Cosmic Express

Jack Williamson



Project Gutenberg

The Project Gutenberg eBook of The Cosmic Express, by John Stewart Williamson

This eBook is for the use of anyone anywhere at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this eBook or online at [www.gutenberg.net](http://www.gutenberg.net)

Title: The Cosmic Express

Author: John Stewart Williamson

Release Date: July 15, 2008 [EBook #26066]

Language: English

\*\*\* START OF THIS PROJECT GUTENBERG EBOOK THE COSMIC EXPRESS \*\*\*

Produced by Greg Weeks, Stephen Blundell and the Online Distributed Proofreading Team at <http://www.pgdp.net>

**Transcriber's Note:** This etext was produced from *Amazing Stories* December 1961 and was first published in *Amazing Stories* November 1930. Extensive research did not uncover any evidence that the U.S. copyright on this publication was renewed. Minor spelling and typographical errors have been corrected without note.

**A Classic Reprint from AMAZING STORIES, November, 1930**

*Copyright 1931, by Experimenter Publications Inc.*

# *The Cosmic Express*

**By JACK WILLIAMSON**

## Introduction by Sam Moskowitz

***T**HE year 1928 was a great year of discovery for AMAZING STORIES. They were uncovering new talent at such a great rate, (Harl Vincent, David H. Keller, E. E. Smith, Philip Francis Nowlan, Fletcher Pratt and Miles J. Breuer), that Jack Williamson barely managed to become one of a distinguished group of discoveries by stealing the cover of the December issue for his first story The Metal Man.*

*A disciple of A. Merritt, he attempted to imitate in style, mood and subject the magic of that late lamented master of fantasy. The imitation found great favor from the readership and almost instantly Jack Williamson became an important name on the contents page of AMAZING STORIES. He followed his initial success with two short novels, The Green Girl in AMAZING STORIES and The Alien Intelligence in SCIENCE WONDER STORIES, another Gernsback publication. Both of these stories were close copies of A. Merritt, whose style and method Jack Williamson parlayed into popularity for eight years.*

*Yet the strange thing about it was that Jack Williamson was one of the most versatile science fiction authors ever to sit down at the typewriter. When the vogue for science-fantasy altered to super science, he created the memorable super lock-picker Giles Habilula as the major attraction in a rousing trio of space operas, The Legion of Space, The Cometeers and One Against the Legion. When grim realism was the order of the day, he produced Crucible of Power and when they wanted extrapolated theory in present tense, he assumed the disguise of Will Stewart and popularized the concept of contra terrene matter in science fiction with Seetee Ship and Seetee Shock. Finally, when only psychological studies of the future would do, he produced "With Folded Hands ..." "... And Searching Mind."*

*The Cosmic Express is of special interest because it was written during Williamson's A. Merritt "kick," when he was writing little else but, and it gave the earliest indication of a more general capability. The lightness of the handling is especially modern, barely avoiding the farcical by the validity of the notion*

*that wireless transmission of matter is the next big transportation frontier to be conquered. It is especially important because it stylistically forecast a later trend to accept the background for granted, regardless of the quantity of wonders, and proceed with the story. With only a few thousand scanning-disk television sets in existence at the time of the writing, the surmise that this media would be a natural for westerns was particularly astute.*

*Jack Williamson was born in 1908 in the Arizona territory when covered wagons were the primary form of transportation and apaches still raided the settlers. His father was a cattle man, but for young Jack, the ranch was anything but glamorous. "My days were filled," he remembers, "with monotonous rounds of what seemed an endless, heart-breaking war with drought and frost and dust-storms, poison-weeds and hail, for the sake of survival on the Llano Estacado." The discovery of AMAZING STORIES was the escape he sought and his goal was to be a science fiction writer. He labored to this end and the first he knew that a story of his had been accepted was when he bought the December, 1929 issue of AMAZING STORIES. Since then, he has written millions of words of science fiction and has gone on record as follows: "I feel that science-fiction is the folklore of the new world of science, and the expression of man's reaction to a technological environment. By which I mean that it is the most interesting and stimulating form of literature today."*

---

**M**R. ERIC STOKES-HARDING tumbled out of the rumpled bed-clothing, a striking slender figure in purple-striped pajamas. He smiled fondly across to the other of the twin beds, where Nada, his pretty bride, lay quiet beneath light silk covers. With a groan, he stood up and began a series of fantastic bending exercises. But after a few half-hearted movements, he gave it up, and walked through an open door into a small bright room, its walls covered with bookcases and also with scientific appliances that would have been strange to the man of four or five centuries before, when the Age of Aviation was beginning.

**Suddenly there was a sharp tingling sensation where they touched the polished surface.**

Yawning, Mr. Eric Stokes-Harding stood before the great open window, staring out. Below him was a wide, park-like space, green with emerald lawns, and bright with flowering plants. Two hundred yards across it rose an immense pyramidal building—an artistic structure, gleaming with white marble and bright

metal, striped with the verdure of terraced roof-gardens, its slender peak rising to help support the gray, steel-ribbed glass roof above. Beyond, the park stretched away in illimitable vistas, broken with the graceful columned buildings that held up the great glass roof.

Above the glass, over this New York of 2432 A. D., a freezing blizzard was sweeping. But small concern was that to the lightly clad man at the window, who was inhaling deeply the fragrant air from the plants below—air kept, winter and summer, exactly at 20° C.

With another yawn, Mr. Eric Stokes-Harding turned back to the room, which was bright with the rich golden light that poured in from the suspended globes of the cold ato-light that illuminated the snow-covered city. With a distasteful grimace, he seated himself before a broad, paper-littered desk, sat a few minutes leaning back, with his hands clasped behind his head. At last he straightened reluctantly, slid a small typewriter out of its drawer, and began pecking at it impatiently.

For Mr. Eric Stokes-Harding was an author. There was a whole shelf of his books on the wall, in bright jackets, red and blue and green, that brought a thrill of pleasure to the young novelist's heart when he looked up from his clattering machine.

He wrote "thrilling action romances," as his enthusiastic publishers and television directors said, "of ages past, when men were men. Red-blooded heroes responding vigorously to the stirring passions of primordial life!"

**H**E was impartial as to the source of his thrills—provided they were distant enough from modern civilization. His hero was likely to be an ape-man roaring through the jungle, with a bloody rock in one hand and a beautiful girl in the other. Or a cowboy, "hard-riding, hard-shooting," the vanishing hero of the ancient ranches. Or a man marooned with a lovely woman on a desert South Sea island. His heroes were invariably strong, fearless, resourceful fellows, who could handle a club on equal terms with a cave-man, or call science to aid them in defending a beautiful mate from the terrors of a desolate wilderness.

And a hundred million read Eric's novels, and watched the dramatization of them on the television screens. They thrilled at the simple, romantic lives his

heroes led, paid him handsome royalties, and subconsciously shared his opinion that civilization had taken all the best from the life of man.

Eric had settled down to the artistic satisfaction of describing the sensuous delight of his hero in the roasted marrow-bones of a dead mammoth, when the pretty woman in the other room stirred, and presently came tripping into the study, gay and vivacious, and—as her husband of a few months most justly thought—altogether beautiful in a bright silk dressing gown.

Recklessly, he slammed the machine back into its place, and resolved to forget that his next "red-blooded action thriller" was due in the publisher's office at the end of the month. He sprang up to kiss his wife, held her embraced for a long happy moment. And then they went hand in hand, to the side of the room and punched a series of buttons on a panel—a simple way of ordering breakfast sent up the automatic shaft from the kitchens below.

Nada Stokes-Harding was also an author. She wrote poems—"back to nature stuff"—simple lyrics of the sea, of sunsets, of bird songs, of bright flowers and warm winds, of thrilling communion with Nature, and growing things. Men read her poems and called her a genius. Even though the whole world had grown up into a city, the birds were extinct, there were no wild flowers, and no one had time to bother about sunsets.

"Eric, darling," she said, "isn't it terrible to be cooped up here in this little flat, away from the things we both love?"

"Yes, dear. Civilization has ruined the world. If we could only have lived a thousand years ago, when life was simple and natural, when men hunted and killed their meat, instead of drinking synthetic stuff, when men still had the joys of conflict, instead of living under glass, like hot-house flowers."

"If we could only go somewhere—"

"There isn't anywhere to go. I write about the West, Africa, South Sea Islands. But they were all filled up two hundred years ago. Pleasure resorts, sanatoriums, cities, factories."

"If only we lived on Venus! I was listening to a lecture on the television, last night. The speaker said that the Planet Venus is younger than the Earth, that it has not cooled so much. It has a thick, cloudy atmosphere, and low, rainy forests. There's simple, elemental life there—like Earth had before civilization ruined it."



"Yes, Kinsley, with his new infra-red ray telescope, that penetrates the cloud layers of the planet, proved that Venus rotates in about the same period as Earth; and it must be much like Earth was a million years ago."

"Eric, I wonder if we could go there! It would be so thrilling to begin life like the characters in your stories, to get away from this hateful civilization, and live natural lives. Maybe a rocket—"

**T**HE young author's eyes were glowing. He skipped across the floor, seized Nada, kissed her ecstatically. "Splendid! Think of hunting in the virgin forest, and bringing the game home to you! But I'm afraid there is no way.—Wait! The Cosmic Express."

"The Cosmic Express?"

"A new invention. Just perfected a few weeks ago, I understand. By Ludwig Von der Valls, the German physicist."

"I've quit bothering about science. It has ruined nature, filled the world with silly, artificial people, doing silly, artificial things."

"But this is quite remarkable, dear. A new way to travel—by ether!"

"By ether!"

"Yes. You know of course that energy and matter are interchangeable terms; both are simply etheric vibration, of different sorts."

"Of course. That's elementary." She smiled proudly. "I can give you examples, even of the change. The disintegration of the radium atom, making helium and lead and *energy*. And Millikan's old proof that his Cosmic Ray is generated when particles of electricity are united to form an atom."

"Fine! I thought you said you weren't a scientist." He glowed with pride. "But the method, in the new Cosmic Express, is simply to convert the matter to be carried into power, send it out as a radiant beam and focus the beam to convert it back into atoms at the destination."

"But the amount of energy must be terrific—"

"It is. You know short waves carry more energy than long ones. The Express Ray is an electromagnetic vibration of frequency far higher than that of even the Cosmic Ray, and correspondingly more powerful and more penetrating."

The girl frowned, running slim fingers through golden-brown hair. "But I don't see how they get any recognizable object, not even how they get the radiation turned back into matter."

"The beam is focused, just like the light that passes through a camera lens. The photographic lens, using light rays, picks up a picture and reproduces it again on the plate—just the same as the Express Ray picks up an object and sets it down on the other side of the world.

"An analogy from television might help. You know that by means of the scanning disc, the picture is transformed into mere rapid fluctuations in the brightness of a beam of light. In a parallel manner, the focal plane of the Express Ray moves slowly through the object, progressively, dissolving layers of the thickness of a single atom, which are accurately reproduced at the other focus of the instrument—which might be in Venus!

"But the analogy of the lens is the better of the two. For no receiving instrument is required, as in television. The object is built up of an infinite series of plane layers, at the focus of the ray, no matter where that may be. Such a thing would be impossible with radio apparatus because even with the best beam transmission, all but a tiny fraction of the power is lost, and power is required to rebuild the atoms. Do you understand, dear?"

"Not altogether. But I should worry! Here comes breakfast. Let me butter your toast."

A bell had rung at the shaft. She ran to it, and returned with a great silver tray, laden with dainty dishes, which she set on a little side table. They sat down opposite each other, and ate, getting as much satisfaction from contemplation of each other's faces as from the excellent food. When they had finished, she carried the tray to the shaft, slid it in a slot, and touched a button—thus disposing of the culinary cares of the morning.

She ran back to Eric, who was once more staring distastefully at his typewriter.

"Oh, darling! I'm thrilled to death about the Cosmic Express! If we could go to

Venus, to a new life on a new world, and get away from all this hateful conventional society—"

"We can go to their office—it's only five minutes. The chap that operates the machine for the company is a pal of mine. He's not supposed to take passengers except between the offices they have scattered about the world. But I know his weak point—"

Eric laughed, fumbled with a hidden spring under his desk. A small polished object, gleaming silvery, slid down into his hand.

"Old friendship, *plus* this, would make him—like spinach."

**F**IVE minutes later Mr. Eric Stokes-Harding and his pretty wife were in street clothes, light silk tunics of loose, flowing lines—little clothing being required in the artificially warmed city. They entered an elevator and dropped thirty stories to the ground floor of the great building.

There they entered a cylindrical car, with rows of seats down the sides. Not greatly different from an ancient subway car, except that it was air-tight, and was hurled by magnetic attraction and repulsion through a tube exhausted of air, at a speed that would have made an old subway rider gasp with amazement.

In five more minutes their car had whipped up to the base of another building, in the business section, where there was no room for parks between the mighty structures that held the unbroken glass roofs two hundred stories above the concrete pavement.

An elevator brought them up a hundred and fifty stories. Eric led Nada down a long, carpeted corridor to a wide glass door, which bore the words:

### **COSMIC EXPRESS**

stenciled in gold capitals across it.

As they approached, a lean man, carrying a black bag, darted out of an elevator shaft opposite the door, ran across the corridor, and entered. They pushed in after him.

They were in a little room, cut in two by a high brass grill. In front of it was a

long bench against the wall, that reminded one of the waiting room in an old railroad depot. In the grill was a little window, with a lazy, brown-eyed youth leaning on the shelf behind it. Beyond him was a great, glittering piece of mechanism, half hidden by the brass. A little door gave access to the machine from the space before the grill.

The thin man in black, whom Eric now recognized as a prominent French heart-specialist, was dancing before the window, waving his bag frantically, raving at the sleepy boy.

"Queek! I have tell you zee truth! I have zee most urgent necessity to go queekly. A patient I have in Paree, zat ees in zee most creetical condition!"

"Hold your horses just a minute, Mister. We got a client in the machine now. Russian diplomat from Moscow to Rio de Janeiro.... Two hundred seventy dollars and eighty cents, please.... Your turn next. Remember this is just an experimental service. Regular installations all over the world in a year.... Ready now. Come on in."

The youth took the money, pressed a button. The door sprang open in the grill, and the frantic physician leaped through it.

"Lie down on the crystal, face up," the young man ordered. "Hands at your sides, don't breathe. Ready!"

He manipulated his dials and switches, and pressed another button.

"Why, hello, Eric, old man!" he cried. "That's the lady you were telling me about? Congratulations!" A bell jangled before him on the panel. "Just a minute. I've got a call."

He punched the board again. Little bulbs lit and glowed for a second. The youth turned toward the half-hidden machine, spoke courteously.

"All right, madam. Walk out. Hope you found the transit pleasant."

"But my Violet! My precious Violet!" a shrill female voice came from the machine. "Sir, what have you done with my darling Violet?"

"I'm sure I don't know, madam. You lost it off your hat?"

"None of your impertinence, sir! I want my dog."

"Ah, a dog. Must have jumped off the crystal. You can have him sent on for three hundred and—"

"Young man, if any harm comes to my Violet—I'll—I'll—I'll appeal to the Society for the Prevention of Cruelty to Animals!"

"Very good, madam. We appreciate your patronage."

**T**HE door flew open again. A very fat woman, puffing angrily, face highly colored, clothing shimmering with artificial gems, waddled pompously out of the door through which the frantic French doctor had so recently vanished. She rolled heavily across the room, and out into the corridor. Shrill words floated back:

"I'm going to see my lawyer! My precious Violet—"

The sallow youth winked. "And now what can I do for you, Eric?"

"We want to go to Venus, if that ray of yours can put us there."

"To Venus? Impossible. My orders are to use the Express merely between the sixteen designated stations, at New York, San Francisco, Tokyo, London, Paris —"

"See here, Charley," with a cautious glance toward the door, Eric held up the silver flask. "For old time's sake, and for this—"

The boy seemed dazed at sight of the bright flask. Then, with a single swift motion, he snatched it out of Eric's hand, and bent to conceal it below his instrument panel.

"Sure, old boy. I'd send you to heaven for that, if you'd give me the micrometer readings to set the ray with. But I tell you, this is dangerous. I've got a sort of television attachment, for focusing the ray. I can turn that on Venus—I've been amusing myself, watching the life there, already. Terrible place. Savage. I can pick a place on high land to set you down. But I can't be responsible for what happens afterward."

"Simple, primitive life is what we're looking for. And now what do I owe you —"

"Oh, that's all right. Between friends. Provided that stuff's genuine! Walk in and lie down on the crystal block. Hands at your sides. Don't move."

The little door had swung open again, and Eric led Nada through. They stepped into a little cell, completely surrounded with mirrors and vast prisms and lenses and electron tubes. In the center was a slab of transparent crystal, eight feet square and two inches thick, with an intricate mass of machinery below it.

Eric helped Nada to a place on the crystal, lay down at her side.

"I think the Express Ray is focused just at the surface of the crystal, from below," he said. "It dissolves our substance, to be transmitted by the beam. It would look as if we were melting into the crystal."

"Ready," called the youth. "Think I've got it for you. Sort of a high island in the jungle. Nothing bad in sight now. But, I say—how're you coming back? I haven't got time to watch you."

"Go ahead. We aren't coming back."

"Gee! What is it? Elopement? I thought you were married already. Or is it business difficulties? The Bears did make an awful raid last night. But you better let me set you down in Hong Kong."

A bell jangled. "So long," the youth called.

Nada and Eric felt themselves enveloped in fire. Sheets of white flame seemed to lap up about them from the crystal block. Suddenly there was a sharp tingling sensation where they touched the polished surface. Then blackness, blankness.

**T**HE next thing they knew, the fires were gone from about them. They were lying in something extremely soft and fluid; and warm rain was beating in their faces. Eric sat up, found himself in a mud-puddle. Beside him was Nada, opening her eyes and struggling up, her bright garments stained with black mud.

All about rose a thick jungle, dark and gloomy—and very wet. Palm-like, the gigantic trees were, or fern-like, flinging clouds of feathery green foliage high against a somber sky of unbroken gloom.

They stood up, triumphant.

"At last!" Nada cried. "We're free! Free of that hateful old civilization! We're back to Nature!"

"Yes, we're on our feet now, not parasites on the machines."

"It's wonderful to have a fine, strong man like you to trust in, Eric. You're just like one of the heroes in your books!"

"You're the perfect companion, Nada.... But now we must be practical. We must build a fire, find weapons, set up a shelter of some kind. I guess it will be night, pretty soon. And Charley said something about savage animals he had seen in the television.

"We'll find a nice dry cave, and have a fire in front of the door. And skins of animals to sleep on. And pottery vessels to cook in. And you will find seeds and grown grain."

"But first we must find a flint-bed. We need flint for tools, and to strike sparks to make a fire with. We will probably come across a chunk of virgin copper, too—it's found native."

Presently they set off through the jungle. The mud seemed to be very abundant, and of a most sticky consistence. They sank into it ankle deep at every step, and vast masses of it clung to their feet. A mile they struggled on, without finding where a provident nature had left them even a single fragment of quartz, to say nothing of a mass of pure copper.

"A darned shame," Eric grumbled, "to come forty million miles, and meet such a reception as this!"

Nada stopped. "Eric," she said, "I'm tired. And I don't believe there's any rock here, anyway. You'll have to use wooden tools, sharpened in the fire."

"Probably you're right. This soil seemed to be of alluvial origin. Shouldn't be surprised if the native rock is some hundreds of feet underground. Your idea is better."

"You can make a fire by rubbing sticks together, can't you?"

"It can be done, I'm sure. I've never tried it, myself. We need some dry sticks, first."

They resumed the weary march, with a good fraction of the new planet

adhering to their feet. Rain was still falling from the dark heavens in a steady, warm downpour. Dry wood seemed scarce as the proverbial hen's teeth.

"You didn't bring any matches, dear?"

"Matches! Of course not! We're going back to Nature."

"I hope we get a fire pretty soon."

"If dry wood were gold dust, we couldn't buy a hot dog."

"Eric, that reminds me that I'm hungry."

He confessed to a few pangs of his own. They turned their attention to looking for banana trees, and coconut palms, but they did not seem to abound in the Venerian jungle. Even small animals that might have been slain with a broken branch had contrary ideas about the matter.

At last, from sheer weariness, they stopped, and gathered branches to make a sloping shelter by a vast fallen tree-trunk.

"This will keep out the rain—maybe—" Eric said hopefully. "And tomorrow, when it has quit raining—I'm sure we'll do better."

They crept in, as gloomy night fell without. They lay in each other's arms, the body warmth oddly comforting. Nada cried a little.

"Buck up," Eric advised her. "We're back to nature—where we've always wanted to be."

**W**ITH the darkness, the temperature fell somewhat, and a high wind rose, whipping cold rain into the little shelter, and threatening to demolish it. Swarms of mosquito-like insects, seemingly not inconvenienced in the least by the inclement elements, swarmed about them in clouds.

Then came a sound from the dismal stormy night, a hoarse, bellowing roar, raucous, terrifying.

Nada clung against Eric. "What is it, dear?" she chattered.

"Must be a reptile. Dinosaur, or something of the sort. This world seems to be



in about the same state as the Earth when they flourished there.... But maybe it won't find us."

The roar was repeated, nearer. The earth trembled beneath a mighty tread.

"Eric," a thin voice trembled. "Don't you think—it might have been better—You know the old life was not so bad, after all."

"I was just thinking of our rooms, nice and warm and bright, with hot foods coming up the shaft whenever we pushed the button, and the gay crowds in the park, and my old typewriter."

"Eric?" she called softly.

"Yes, dear."

"Don't you wish—we had known better?"

"I do." If he winced at the "we" the girl did not notice.

The roaring outside was closer. And suddenly it was answered by another raucous bellow, at considerable distance, that echoed strangely through the forest. The fearful sounds were repeated, alternately. And always the more distant seemed nearer, until the two sounds were together.

And then an infernal din broke out in the darkness. Bellows. Screams. Deafening shrieks. Mighty splashes, as if struggling Titans had upset oceans. Thunderous crashes, as if they were demolishing forests.

Eric and Nada clung to each other, in doubt whether to stay or to fly through the storm. Gradually the sound of the conflict came nearer, until the earth shook beneath them, and they were afraid to move.

Suddenly the great fallen tree against which they had erected the flimsy shelter was rolled back, evidently by a chance blow from the invisible monsters. The pitiful roof collapsed on the bedraggled humans. Nada burst into tears.

"Oh, if only—if only—"

**S**UDDENLY flame lapped up about them, the same white fire they had seen as they lay on the crystal block. Dizziness, insensibility overcame them. A few

moments later, they were lying on the transparent table in the Cosmic Express office, with all those great mirrors and prisms and lenses about them.

A bustling, red-faced official appeared through the door in the grill, fairly bubbling apologies.

"So sorry—an accident—inconceivable. I can't see how he got it! We got you back as soon as we could find a focus. I sincerely hope you haven't been injured."

"Why—what—what—"

"Why I happened in, found our operator drunk. I've no idea where he got the stuff. He muttered something about Venus. I consulted the auto-register, and found two more passengers registered here than had been recorded at our other stations. I looked up the duplicate beam coordinates, and found that it had been set on Venus. I got men on the television at once, and we happened to find you.

"I can't imagine how it happened. I've had the fellow locked up, and the 'dry-laws' are on the job. I hope you won't hold us for excessive damages."

"No, I ask nothing except that you don't press charges against the boy. I don't want him to suffer for it in any way. My wife and I will be perfectly satisfied to get back to our apartment."

"I don't wonder. You look like you've been through—I don't know what. But I'll have you there in five minutes. My private car—"



Mr. Eric Stokes-Harding, noted author of primitive life and love, ate a hearty meal with his pretty spouse, after they had washed off the grime of another planet. He spent the next twelve hours in bed.

At the end of the month he delivered his promised story to his publishers, a thrilling tale of a man marooned on Venus, with a beautiful girl. The hero made stone tools, erected a dwelling for himself and his mate, hunted food for her, defended her from the mammoth saurian monsters of the Venerian jungles.

The book was a huge success.

# THE END

End of Project Gutenberg's The Cosmic Express, by John Stewart Williamson

\*\*\* END OF THIS PROJECT GUTENBERG EBOOK THE COSMIC EXPRESS \*\*\*

\*\*\*\*\* This file should be named 26066-h.htm or 26066-h.zip \*\*\*\*\*  
This and all associated files of various formats will be found in:  
<http://www.gutenberg.org/2/6/0/6/26066/>

Produced by Greg Weeks, Stephen Blundell and the Online  
Distributed Proofreading Team at <http://www.pgdp.net>

Updated editions will replace the previous one--the old editions  
will be renamed.

Creating the works from public domain print editions means that no  
one owns a United States copyright in these works, so the Foundation  
(and you!) can copy and distribute it in the United States without  
permission and without paying copyright royalties. Special rules,  
set forth in the General Terms of Use part of this license, apply to  
copying and distributing Project Gutenberg-tm electronic works to  
protect the PROJECT GUTENBERG-tm concept and trademark. Project  
Gutenberg is a registered trademark, and may not be used if you  
charge for the eBooks, unless you receive specific permission. If you  
do not charge anything for copies of this eBook, complying with the  
rules is very easy. You may use this eBook for nearly any purpose  
such as creation of derivative works, reports, performances and  
research. They may be modified and printed and given away--you may do  
practically ANYTHING with public domain eBooks. Redistribution is  
subject to the trademark license, especially commercial  
redistribution.

\*\*\* START: FULL LICENSE \*\*\*

THE FULL PROJECT GUTENBERG LICENSE  
PLEASE READ THIS BEFORE YOU DISTRIBUTE OR USE THIS WORK

To protect the Project Gutenberg-tm mission of promoting the free  
distribution of electronic works, by using or distributing this work  
(or any other work associated in any way with the phrase "Project  
Gutenberg"), you agree to comply with all the terms of the Full Project  
Gutenberg-tm License (available with this file or online at  
<http://gutenberg.net/license>).

Section 1. General Terms of Use and Redistributing Project Gutenberg-tm  
electronic works

1.A. By reading or using any part of this Project Gutenberg-tm  
electronic work, you indicate that you have read, understand, agree to  
and accept all the terms of this license and intellectual property  
(trademark/copyright) agreement. If you do not agree to abide by all  
the terms of this agreement, you must cease using and return or destroy  
all copies of Project Gutenberg-tm electronic works in your possession.  
If you paid a fee for obtaining a copy of or access to a Project

Gutenberg-tm electronic work and you do not agree to be bound by the terms of this agreement, you may obtain a refund from the person or entity to whom you paid the fee as set forth in paragraph 1.E.8.

1.B. "Project Gutenberg" is a registered trademark. It may only be used on or associated in any way with an electronic work by people who agree to be bound by the terms of this agreement. There are a few things that you can do with most Project Gutenberg-tm electronic works even without complying with the full terms of this agreement. See paragraph 1.C below. There are a lot of things you can do with Project Gutenberg-tm electronic works if you follow the terms of this agreement and help preserve free future access to Project Gutenberg-tm electronic works. See paragraph 1.E below.

1.C. The Project Gutenberg Literary Archive Foundation ("the Foundation" or PGLAF), owns a compilation copyright in the collection of Project Gutenberg-tm electronic works. Nearly all the individual works in the collection are in the public domain in the United States. If an individual work is in the public domain in the United States and you are located in the United States, we do not claim a right to prevent you from copying, distributing, performing, displaying or creating derivative works based on the work as long as all references to Project Gutenberg are removed. Of course, we hope that you will support the Project Gutenberg-tm mission of promoting free access to electronic works by freely sharing Project Gutenberg-tm works in compliance with the terms of this agreement for keeping the Project Gutenberg-tm name associated with the work. You can easily comply with the terms of this agreement by keeping this work in the same format with its attached full Project Gutenberg-tm License when you share it without charge with others.

1.D. The copyright laws of the place where you are located also govern what you can do with this work. Copyright laws in most countries are in a constant state of change. If you are outside the United States, check the laws of your country in addition to the terms of this agreement before downloading, copying, displaying, performing, distributing or creating derivative works based on this work or any other Project Gutenberg-tm work. The Foundation makes no representations concerning the copyright status of any work in any country outside the United States.

1.E. Unless you have removed all references to Project Gutenberg:

1.E.1. The following sentence, with active links to, or other immediate access to, the full Project Gutenberg-tm License must appear prominently whenever any copy of a Project Gutenberg-tm work (any work on which the phrase "Project Gutenberg" appears, or with which the phrase "Project Gutenberg" is associated) is accessed, displayed, performed, viewed, copied or distributed:

This eBook is for the use of anyone anywhere at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this eBook or online at [www.gutenberg.net](http://www.gutenberg.net)

1.E.2. If an individual Project Gutenberg-tm electronic work is derived from the public domain (does not contain a notice indicating that it is posted with permission of the copyright holder), the work can be copied and distributed to anyone in the United States without paying any fees or charges. If you are redistributing or providing access to a work with the phrase "Project Gutenberg" associated with or appearing on the work, you must comply either with the requirements of paragraphs 1.E.1 through 1.E.7 or obtain permission for the use of the work and the Project Gutenberg-tm trademark as set forth in paragraphs 1.E.8 or 1.E.9.

1.E.3. If an individual Project Gutenberg-tm electronic work is posted with the permission of the copyright holder, your use and distribution must comply with both paragraphs 1.E.1 through 1.E.7 and any additional terms imposed by the copyright holder. Additional terms will be linked to the Project Gutenberg-tm License for all works posted with the permission of the copyright holder found at the beginning of this work.

1.E.4. Do not unlink or detach or remove the full Project Gutenberg-tm License terms from this work, or any files containing a part of this work or any other work associated with Project Gutenberg-tm.

1.E.5. Do not copy, display, perform, distribute or redistribute this electronic work, or any part of this electronic work, without prominently displaying the sentence set forth in paragraph 1.E.1 with active links or immediate access to the full terms of the Project Gutenberg-tm License.

1.E.6. You may convert to and distribute this work in any binary, compressed, marked up, nonproprietary or proprietary form, including any word processing or hypertext form. However, if you provide access to or distribute copies of a Project Gutenberg-tm work in a format other than "Plain Vanilla ASCII" or other format used in the official version posted on the official Project Gutenberg-tm web site ([www.gutenberg.net](http://www.gutenberg.net)), you must, at no additional cost, fee or expense to the user, provide a copy, a means of exporting a copy, or a means of obtaining a copy upon request, of the work in its original "Plain Vanilla ASCII" or other form. Any alternate format must include the full Project Gutenberg-tm License as specified in paragraph 1.E.1.

1.E.7. Do not charge a fee for access to, viewing, displaying, performing, copying or distributing any Project Gutenberg-tm works unless you comply with paragraph 1.E.8 or 1.E.9.

1.E.8. You may charge a reasonable fee for copies of or providing access to or distributing Project Gutenberg-tm electronic works provided that

- You pay a royalty fee of 20% of the gross profits you derive from the use of Project Gutenberg-tm works calculated using the method you already use to calculate your applicable taxes. The fee is owed to the owner of the Project Gutenberg-tm trademark, but he has agreed to donate royalties under this paragraph to the Project Gutenberg Literary Archive Foundation. Royalty payments must be paid within 60 days following each date on which you prepare (or are legally required to prepare) your periodic tax returns. Royalty payments should be clearly marked as such and sent to the Project Gutenberg Literary Archive Foundation at the address specified in Section 4, "Information about donations to the Project Gutenberg Literary Archive Foundation."
- You provide a full refund of any money paid by a user who notifies you in writing (or by e-mail) within 30 days of receipt that s/he does not agree to the terms of the full Project Gutenberg-tm License. You must require such a user to return or destroy all copies of the works possessed in a physical medium and discontinue all use of and all access to other copies of Project Gutenberg-tm works.
- You provide, in accordance with paragraph 1.F.3, a full refund of any money paid for a work or a replacement copy, if a defect in the electronic work is discovered and reported to you within 90 days of receipt of the work.

- You comply with all other terms of this agreement for free distribution of Project Gutenberg-tm works.

1.E.9. If you wish to charge a fee or distribute a Project Gutenberg-tm electronic work or group of works on different terms than are set forth in this agreement, you must obtain permission in writing from both the Project Gutenberg Literary Archive Foundation and Michael Hart, the owner of the Project Gutenberg-tm trademark. Contact the Foundation as set forth in Section 3 below.

1.F.

1.F.1. Project Gutenberg volunteers and employees expend considerable effort to identify, do copyright research on, transcribe and proofread public domain works in creating the Project Gutenberg-tm collection. Despite these efforts, Project Gutenberg-tm electronic works, and the medium on which they may be stored, may contain "Defects," such as, but not limited to, incomplete, inaccurate or corrupt data, transcription errors, a copyright or other intellectual property infringement, a defective or damaged disk or other medium, a computer virus, or computer codes that damage or cannot be read by your equipment.

1.F.2. LIMITED WARRANTY, DISCLAIMER OF DAMAGES - Except for the "Right of Replacement or Refund" described in paragraph 1.F.3, the Project Gutenberg Literary Archive Foundation, the owner of the Project Gutenberg-tm trademark, and any other party distributing a Project Gutenberg-tm electronic work under this agreement, disclaim all liability to you for damages, costs and expenses, including legal fees. YOU AGREE THAT YOU HAVE NO REMEDIES FOR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTY OR BREACH OF CONTRACT EXCEPT THOSE PROVIDED IN PARAGRAPH F3. YOU AGREE THAT THE FOUNDATION, THE TRADEMARK OWNER, AND ANY DISTRIBUTOR UNDER THIS AGREEMENT WILL NOT BE LIABLE TO YOU FOR ACTUAL, DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE OR INCIDENTAL DAMAGES EVEN IF YOU GIVE NOTICE OF THE POSSIBILITY OF SUCH DAMAGE.

1.F.3. LIMITED RIGHT OF REPLACEMENT OR REFUND - If you discover a defect in this electronic work within 90 days of receiving it, you can receive a refund of the money (if any) you paid for it by sending a written explanation to the person you received the work from. If you received the work on a physical medium, you must return the medium with your written explanation. The person or entity that provided you with the defective work may elect to provide a replacement copy in lieu of a refund. If you received the work electronically, the person or entity providing it to you may choose to give you a second opportunity to receive the work electronically in lieu of a refund. If the second copy is also defective, you may demand a refund in writing without further opportunities to fix the problem.

1.F.4. Except for the limited right of replacement or refund set forth in paragraph 1.F.3, this work is provided to you 'AS-IS' WITH NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.

1.F.5. Some states do not allow disclaimers of certain implied warranties or the exclusion or limitation of certain types of damages. If any disclaimer or limitation set forth in this agreement violates the law of the state applicable to this agreement, the agreement shall be interpreted to make the maximum disclaimer or limitation permitted by the applicable state law. The invalidity or unenforceability of any provision of this agreement shall not void the remaining provisions.

1.F.6. INDEMNITY - You agree to indemnify and hold the Foundation, the

trademark owner, any agent or employee of the Foundation, anyone providing copies of Project Gutenberg-tm electronic works in accordance with this agreement, and any volunteers associated with the production, promotion and distribution of Project Gutenberg-tm electronic works, harmless from all liability, costs and expenses, including legal fees, that arise directly or indirectly from any of the following which you do or cause to occur: (a) distribution of this or any Project Gutenberg-tm work, (b) alteration, modification, or additions or deletions to any Project Gutenberg-tm work, and (c) any Defect you cause.

## Section 2. Information about the Mission of Project Gutenberg-tm

Project Gutenberg-tm is synonymous with the free distribution of electronic works in formats readable by the widest variety of computers including obsolete, old, middle-aged and new computers. It exists because of the efforts of hundreds of volunteers and donations from people in all walks of life.

Volunteers and financial support to provide volunteers with the assistance they need, is critical to reaching Project Gutenberg-tm's goals and ensuring that the Project Gutenberg-tm collection will remain freely available for generations to come. In 2001, the Project Gutenberg Literary Archive Foundation was created to provide a secure and permanent future for Project Gutenberg-tm and future generations. To learn more about the Project Gutenberg Literary Archive Foundation and how your efforts and donations can help, see Sections 3 and 4 and the Foundation web page at <http://www.pglaaf.org>.

## Section 3. Information about the Project Gutenberg Literary Archive Foundation

The Project Gutenberg Literary Archive Foundation is a non profit 501(c)(3) educational corporation organized under the laws of the state of Mississippi and granted tax exempt status by the Internal Revenue Service. The Foundation's EIN or federal tax identification number is 64-6221541. Its 501(c)(3) letter is posted at <http://pglaaf.org/fundraising>. Contributions to the Project Gutenberg Literary Archive Foundation are tax deductible to the full extent permitted by U.S. federal laws and your state's laws.

The Foundation's principal office is located at 4557 Melan Dr. S. Fairbanks, AK, 99712., but its volunteers and employees are scattered throughout numerous locations. Its business office is located at 809 North 1500 West, Salt Lake City, UT 84116, (801) 596-1887, email [business@pglaaf.org](mailto:business@pglaaf.org). Email contact links and up to date contact information can be found at the Foundation's web site and official page at <http://pglaaf.org>

For additional contact information:

Dr. Gregory B. Newby  
Chief Executive and Director  
[gbnewby@pglaaf.org](mailto:gbnewby@pglaaf.org)

## Section 4. Information about Donations to the Project Gutenberg Literary Archive Foundation

Project Gutenberg-tm depends upon and cannot survive without wide spread public support and donations to carry out its mission of increasing the number of public domain and licensed works that can be freely distributed in machine readable form accessible by the widest array of equipment including outdated equipment. Many small donations

(\$1 to \$5,000) are particularly important to maintaining tax exempt status with the IRS.

The Foundation is committed to complying with the laws regulating charities and charitable donations in all 50 states of the United States. Compliance requirements are not uniform and it takes a considerable effort, much paperwork and many fees to meet and keep up with these requirements. We do not solicit donations in locations where we have not received written confirmation of compliance. To SEND DONATIONS or determine the status of compliance for any particular state visit <http://pglaf.org>

While we cannot and do not solicit contributions from states where we have not met the solicitation requirements, we know of no prohibition against accepting unsolicited donations from donors in such states who approach us with offers to donate.

International donations are gratefully accepted, but we cannot make any statements concerning tax treatment of donations received from outside the United States. U.S. laws alone swamp our small staff.

Please check the Project Gutenberg Web pages for current donation methods and addresses. Donations are accepted in a number of other ways including including checks, online payments and credit card donations. To donate, please visit: <http://pglaf.org/donate>

Section 5. General Information About Project Gutenberg-tm electronic works.

Professor Michael S. Hart is the originator of the Project Gutenberg-tm concept of a library of electronic works that could be freely shared with anyone. For thirty years, he produced and distributed Project Gutenberg-tm eBooks with only a loose network of volunteer support.

Project Gutenberg-tm eBooks are often created from several printed editions, all of which are confirmed as Public Domain in the U.S. unless a copyright notice is included. Thus, we do not necessarily keep eBooks in compliance with any particular paper edition.

Most people start at our Web site which has the main PG search facility:

<http://www.gutenberg.net>

This Web site includes information about Project Gutenberg-tm, including how to make donations to the Project Gutenberg Literary Archive Foundation, how to help produce our new eBooks, and how to subscribe to our email newsletter to hear about new eBooks.