



ESCAPE HATCH

Written by Roger Ebert
Illustrated by Tom Hermann

Billy peeked furtively across at the older man, then quickly looked back at the floor again. The professor was holding his head in his hands, weeping softly; he had seemed so unemotional during the trip. Opposite them in the steel and plastic compartment, the brawny one looked stolidly out through the fused-quartz window at the tropical rain forest of Venus. The professor's weeping was background for the only other noise in the cabin, the shallow whirr of a battery-operated electric clock over the control board that had continued to run even after the big atomic motors quieted.

The big one stirred away from the thick porthole and sat down heavily on a leather bench that ran against the wall underneath it. Snuffling once or twice, the professor looked up. "Did you check the toolbox carefully, Boris?"

"Yes!" The big one was on his feet again, pounding rapidly across to the chest set in the wall and throwing its cover open. "Nothing in here to do us any good, professor; nothing but screwdrivers and pliers and ball-peen hammers. What we need is a good big acetylene torch, that would do it."

The professor had already stopped listening; his question had been half-unconscious. He was weeping again, this time not attempting to hide his face. Boris looked at him and suddenly stuffed his hands in his pockets like a little boy caught in the pantry at Thanksgiving time.

"I would have told them to put a torch in, professor, if I had thought to. It's my fault . . ."

"No, no, no." The professor was on his feet again, walking quickly to the port to peer out. His voice had regained something of its normal academic calm. "Stupid of us all, I suppose, but there's no helping it now." He dabbed at an eye with his sleeve, trying very hard to forget that he had cried. "Come over here, Billy, and tell me what you think of this."

Billy moved over to the port, exper-

encing again the curious loss of body weight under Venus' lower gravity. Boris followed him.

"It seems to be a lost step in our evolutionary cycle, a sort of large bird with arms. Almost angelic, eh?"

Boris caught his breath and Billy moved closer to the window, watching the creature as it carefully peeled some sort of tropical fruit not twenty-five feet from their ship. It was three-quarters the size of a man, but an elf-like glossamer sheen from the wings reflected on its greenish skin to make the resemblance stop there.

"It may be the dominant species; in time, it may begin to develop a civilization here. With the wings, it certainly has an advantage over *Homo Sapiens* in the battle to survive."

As if to answer the professor's observation, the creature tucked the fruit into its mouth and flew away, aiming somewhere beyond the limited view of the port. Its departure reminded the three inside of their situation, and they turned from the window.

"How much food?" the professor asked no one in particular.

"Four days," Billy answered. "We've been here 19 days already; there was only about a three week supply."

"Water?"

Boris moved over to the gauge and said, "We'll starve before we run out."

The professor settled into the contoured seat before the control board and spun it about to look again at the dead power gauges, the lifeless needles pointing to zero on the big board. "It's really sort of humorous," he said unhumorously. "Marooned on Venus inside the best-equipped, most impregnable fortress ever designed to explore a planet. We're perfectly safe in here, of course. Oh yes, the native life couldn't get in if it wanted to . . ."

"And we can't get out," Boris finished the sentence.

"I wonder what the mother ship is thinking," Billy said. "No radio contact for 19 days . . . they'll probably wait until a day or two after we're due back, and then leave for Earth. They don't have the power supply to wait any longer."

"We have the power supply to wait forever," the professor said. "Namely: none." In response, the electric clock burped once and stopped. The emergency battery was dead. The ship seemed to settle around them like a helpless dead body. It wished them no harm, but without power it could not open its locks, release its air chambers, allow them to escape into the rain forest, or return to the mother-satellite circling above for their return. It might have been a little thing that went wrong with the atomic engines, a burnt-out coil or a frayed wire. It didn't really matter be-

cause the engines were sealed off from the rest of the ship by eighteen inches of lead. They could be reached from the outside, but the escape hatch couldn't be opened without atomic power to release its bolts. And so they sat inside.

"There's no question that we could survive in the forest, at least on a primitive level," the professor said. "The automatic tests indicate that the water is drinkable, the air breathable, and the food eatable . . ."

"If only the door were openable," Billy snapped. "You've told us that before, but what good does it do us? We're entombed in this damned ship, and we've got about a week to escape before we start playing cannibal. And you know and I know and Boris knows that there's no way out."

The professor looked up sharply and smiled. "Except one . . ."

The two men whirled in the cabin and turned on him.

"Way out? How? Where?"

"Oh, now don't get excited," he answered. "I would estimate that the odds against any of us using it would be about infinity to one."

"Don't play games, professor," Billy said. "Do you know a way or don't you?"

"Yeah," Boris said, standing over him, "Do you or don't you?"

The professor got up and moved across to the window again. Outside, it was getting darker in the rain forest, and a faint sunset could be seen through the miles of humid fog which made up the atmosphere. The professor carefully pushed against the quartz window, and got a thumbprinted smudge for his efforts.

"Rather hard, isn't it?" he asked them.

"If you're thinking we can bust open that window, you're crazy," Boris said. "That glass is made to bounce off meteorites."

"Very good, Boris!" The professor seemed almost to have adapted a classroom attitude. "But what makes it so hard?"

"Why . . ." Boris paused for a moment and Billy broke in, "Because they made it that way, that's why."

"Sorry, Billy, it's hard because the molecules that make it up are so close together. It's very dense, that quartz, but everything isn't that dense . . ."

"What are you getting at?" Billy cut him off.

"Just this, the molecules in that plate of quartz are spaced almost as far apart, relatively, as Venus and the Earth. They run in their own little orbits, but they run so fast that they appear to fill up all the space they run in."

Boris had lost interest and went back to his bunk. But Billy pressed for an explanation. "Then the walls of this spaceship aren't as solid as they look, right?"

"Oh, they're solid enough, all right."



But I would guess that the walls are very much less solid than the quartz. Their molecules might be two or three times more widely spaced: almost a void between particles at any given milli-second."

"I seem to remember that from high school chemistry," Billy said. "How is it going to get us out of here?"

The professor chuckled and turned away from the porthole. "I'm afraid it isn't, Billy. It might, of course, but . . ."

"How?" Billy snapped.

"Our bodies are made of molecules too, just like the window and the walls. Our bodies are actually much less solid than the walls, and the molecules are even farther apart, relatively."

Boris sat up in his bunk and began to listen again.

"Once—every billion years, this might happen somewhere in the universe—the molecules of one object are going to move 'in phase' with an adjacent object," he continued. "This means that the two sets of molecules slip in between each other, yet don't collide. If they collided, of course, it would be a meeting of two solids. It almost always is . . ."

The two men were listening to him intently.

"But if—just once in a billion years—the molecules moved 'in phase,' then one object could pass right through another. The chances, as I say, are almost nonexistent. Don't bet on it happening to you, in other words."

Boris sank back to his bunk, and Billy asked in a dispirited tone, "then maybe someday you're leaning against the side of the ship and fall right through to freedom, eh? Before you starve to death, of course."

"That's the idea, Billy. If my one chance in a billion happened. And if I got all the way through the wall while the molecules were all in phase. One or two small collisions might rob me of a hair or so, of course. But you don't think about things like that in something this theoretical."

Billy turned away, disheartened. "Then we turn into cannibals instead, maybe. Or shoot each other . . ."

He turned in time to see the Professor's body slip through the wall. With a scream, he hurtled himself at the wall of metal, slamming again and again against the unyielding steel alloy.

Boris got up from his bunk and looked down out of the quartz window. He froze as he saw the half of the professor's body that was lying outside on the ground.



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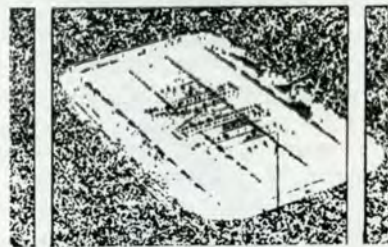
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