

an epic young-adult
science fiction adventure

J. Z. Colby

NEBADOR

Book Five

Back to the Stars

and the short stories *Buna's New World*
First Taste of Freedom



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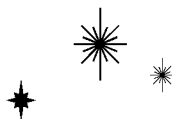
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NEBADOR
Book Five
Back to the Stars

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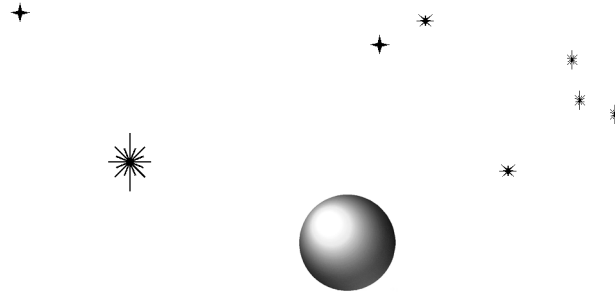
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Greetings, young people of planet Earth,

This grand, life-changing, soul-building adventure continues as the new crew of the deep-space response ship *Manessa Kwi* heads for interplanetary space. Will *Satamia Star Station* await them, just around the corner? Of course not. Those readers looking for *quick and easy* left the *Nebador* stories behind, probably several books ago. Those of you about to sink your minds into this book are made of sterner stuff.

Space separates the children from the grown-ups. Your age doesn't matter. If you are nine, and you are aiming your life toward standing on your own two feet and dealing with hard, cold reality, you are leaving childhood behind. One of the critiquers who helped make these stories possible started at age eight.

Interplanetary space is like the twenty feet of air that separates the bird nest, where the little birdies must first spread their wings, from the ground, where cats await their next meal. In interplanetary space, we will grow up or die.

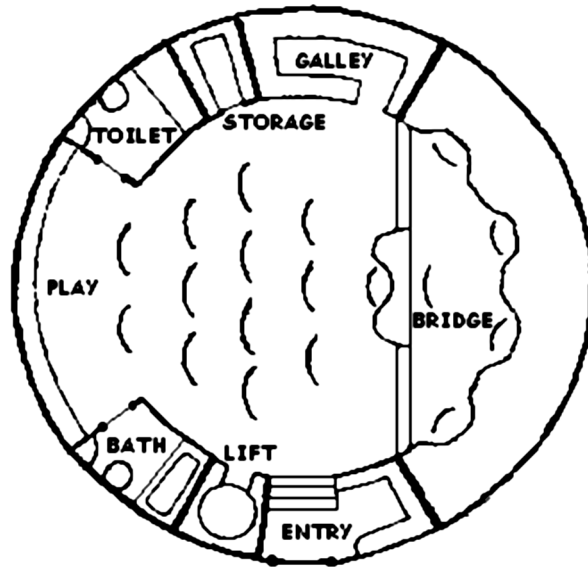
But beware the temptation to gaze at the stars and planets too much. The first step into space starts on the ground, on the good fertile soil of planet Earth. We visited our moon in 1969 and the early 1970s, but have not been back, and have not done much else in space, because our "house" is not yet in order. We knew, in the 1970s, that energy and other resources would soon run short, and we decided, as a whole people and a whole planet, to ignore the warnings and do nothing.

The crew of the *Manessa Kwi* will see and understand many things as they journey outward from their original home to the stars. If you, young readers, have your eyes open, you will learn much from their journey, perhaps more than many people learn in a lifetime.

J. Z. Colby

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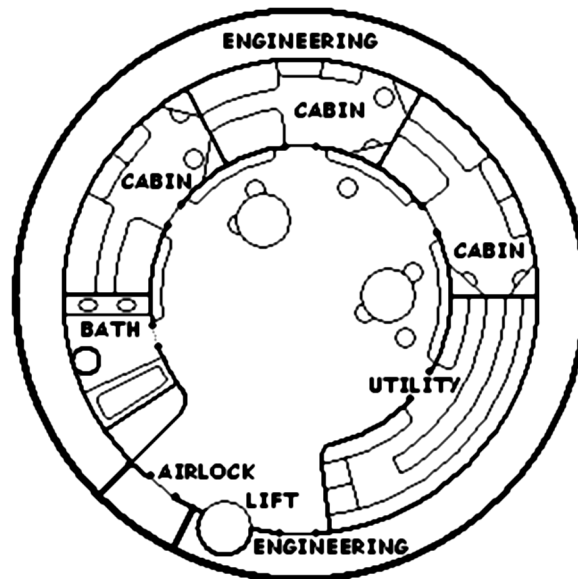
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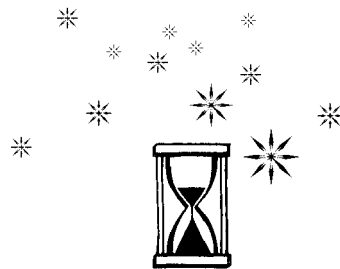


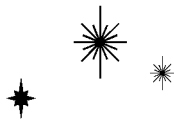


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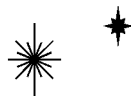
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“The most beautiful and most profound emotion we can experience is the sensation of the mystical. It is the sower of all true science. He to whom this emotion is a stranger, who can no longer stand rapt in awe, is as good as dead.”

— Albert Einstein



Chapter 1: Beauty Isn't Everything

Once again, Rini was embarrassed.

Earlier, during his low-orbit excursion, he was having so much fun playing with his suit thrusters, he accidentally induced a spin he couldn't correct. Mati smiled as she guided the Manessa Kwi into a matching spin so Rini could get into the airlock. Ilika gave him a mild lecture, but let it pass.

Rini's geo-stationary orbit excursion was worse. Since he wasn't paying attention to which way he was going, his suit thrusters quickly put him into a lower orbit, which rapidly began to decay. The Manessa Kwi came to his rescue, and Ilika made him do the excursion again.

But during his high-orbit excursion, Rini committed a crime he knew no one on the ship was going to easily forgive.

"Um . . . Sata? It's really beautiful out here with the world turning below and the stars above, but I just remembered something. A few minutes ago, my half-fuel alarm chimed and I forgot to start back."

"Oh, I see!" Sata said through the intercom with a taunting voice. "Actually, your half-fuel alarm was eleven minutes ago. Is that a problem, Rini?"

"Um . . . yeah. This is so embarrassing. I can't get back to the ship now. Manessa looks really small, and is getting smaller all the time."

Rini heard some giggling over the intercom, but didn't get an immediate response. He watched the ship continue to shrink with distance as he used his thrusters to slow his movement as much as possible.

Sata's voice came again. "Rini, we've discussed the situation, and since you've got enough air for about an hour, we're going to do a review of language lesson twenty-two. You don't mind, do you?"

Several voices in the background chuckled.

"Um . . . okay," Rini said with a sigh. "I guess I'll . . . be here."

The minutes passed slowly as Rini used the remainder of his thruster fuel. He knew it wouldn't help, but doing something about his mistake brought some comfort. Finally his thrusters sputtered and died.

The silence was profound. He looked at the blue and green world below, but it no longer gave him pleasure. He looked at the stars above, but they now seemed dim and lifeless.

Tapping a code into his mission bracelet, he was informed he would be out of air in about half an hour. Helpless to do anything else about his situation, he began to recall scenes from his life. Moments of both joy and sorrow came to him, memories that had somehow touched him deeply.

Somewhat later, he tapped the code again. Twelve minutes of life left. He could see Mati's face clearly in his mind, her hair tangled like it usually was during their journey around the kingdom. He felt an intense desire to wrap his arms around her once more before he died.

Three minutes of air, and perhaps another minute after that as he suffocated inside his space suit. Tears formed and began to roll down his cheeks. Blinking them away, he made one last effort to see the ship, but found only blurry stars.

Forty seconds. His mind raced, struggling to find something to do with his remaining moments of consciousness. Fear crept all throughout his body, making his skin cold and tingly. His stomach churned and tightened.

Eight seconds. Suddenly he knew. "Mati! Nothing else in my life has ever mattered! I love you!"

"I love you too, Rini. So get yourself into the airlock so Boro can do his high-orbit excursion."

The tears in Rini's eyes blurred the golden sphere in front of him, with a dark opening close at hand. After one final alarm sounded in his ears, the air in his suit rapidly became stale. A suited arm reached out and pulled him into the airlock. He blinked away the tears and glimpsed his teacher and captain

behind a face plate.



After gasping and crying in Ilika's arms for several minutes, Rini slowly extracted himself from the space suit, trembling all the while. No one else came to talk to him on the lower deck. He didn't blame them. After stumbling into the toilet room to wash his face, he kept one hand on the wall as he rose in the lift.

All his shipmates were seated at the big oval table in the passenger area, sipping cups of fragrant tea. Looking at the floor, Rini shuffled forward and slipped into the empty seat beside Mati. Ilika took another seat.

"I really do love you, Rini," Mati said, "but you screwed up again."

"I . . . I know."

"When he's surrounded by beautiful things," Kibi began, "Rini loses track of time. It's not that big a deal, seems to me."

"He also loses track of directions," Boro said.

"And warning alarms," Sata added.

"And people who love him and are waiting for him to come back," Mati said with a tender frown.

Rini took a deep breath and looked up. "I'm sorry. I'll do my excursions all over again. I'll do better, I promise."

Ilika had been sitting quietly, listening and wearing a subtle smile. "I think you finally heard us, Rini. There are several planets coming up. If you practice every chance you get, I think we can let Boro do his excursion, then move on."

Rini took several slow, thoughtful breaths. "I will."

"Fantastic!" Boro said, hopping up. "I'll be in a suit in eight minutes!"



Deep Learning Notes

There are three kinds of simple (equatorial) orbit. Stationary orbit is at that one exact altitude (different for every planet) at which the orbiting object moves at the same speed as the rotating surface of the planet, so it always stays above the same point on the planet. Lower orbits require the object to

move faster than the rotation of the planet, and higher orbits require the object to move slower.

There are many kinds of non-equatorial orbit, and orbit can also be in the opposite direction from the rotation of the planet, but none of these allow an object to remain above one point on the surface. On Earth, a stationary orbit has an altitude of about 35 786 km (22 240 miles).

Why did Ilika wait until the last possible moment to rescue Rini?

Why do you think no one came down to the lower deck to comfort Rini as he got out of his space suit?

What value is Rini learning that is necessary to be on any team?

Chapter 2: Leaving Home

With a tasty casserole of beans, rice, and vegetables on their trays, along with sticks of hard cheese and cups of sweet tea, the entire crew of the deep-space response ship *Manessa Kwi* gazed at the large display screen above the steward's station. For five of them, the world of their birth filled the screen and turned slowly as they watched.

After journeying the entire width and length of the small kingdom where he found his crew, Ilika was almost as attached to the place as they were. He recalled the many faces in the room full of slaves he had tested. He remembered Kodi and his sticky fingers, Miko's leap from boulder to boulder, and sweet Neti who was left to grieve and find a new partner. Toli had tried very hard toward the end of the journey, but was just not Transport Service material. Buna had chosen another path, and Ilika would always miss her.

"Our business here is done," he began. "This beautiful planet is the only place in the Sonmatia solar system with good air to breathe. The people who live here will not appreciate that fact for a thousand years or more, and will probably come close to destroying their atmosphere before they learn to take care of it."

"That's stupid," Kibi grumbled. "If anyone even *looks* funny at *Manessa's* air system, they'll have to get through me! I kind of like breathing."

Everyone around the table smiled or chuckled. They also knew their beloved steward wasn't joking.

Ilika grinned at his lover. "So . . . if everyone is ready to say good-bye to

this little planet for a while . . .” He stopped and looked around the table.

Rini smiled, but still carried a measure of guilt about his recent orbit excursions. Boro nodded slowly, trying to hide his nervousness about warming up the ship’s interplanetary engines for the first time. Mati sparkled with longing, knowing that only a few planets separated her from healers who could fix her knee. Sata, leaving parents and a brother behind at not quite twelve years of age, took a deep breath, planted her feet squarely on the floor, and grinned.

Ilika saw that Sata’s grin was a bit forced, but after a moment, he continued. “Interplanetary space is scattered with countless wandering molecules, bits of rock and ice, and occasionally bigger things that Rini can detect and we will avoid. The ship uses a very slender shape, a repulsion field, and high levels of ion drive. You have all studied the necessary engines, controls, and instruments. Now it’s time to use them.

“As you know, we measure interplanetary space in light-minutes. It’s about eight light-minutes from here to the sun — an hour at one-eighth the speed of light, Manessa’s cruising speed in space. I’ve started a new flight list. We’re at navigation point one, and I’ve entered a proposed flight plan. See what you think of it.”

Ilika collected empty trays and stepped into the galley.



As the captain of the Manessa Kwi did the dishes and started a pot of soup, he didn’t have to look to see what his crew-in-training was doing. He had been through the process himself, and from words he overheard now and then, could clearly imagine their thoughts.

For a while, they huddled around Sata’s navigation console. Then they moved to the engineer’s station, where Boro slowly and carefully expressed his concern. Back at the large table, no less than three knowledge pads were in use, with Kibi routing their displays to the big screen when one of them had something to share. Ilika kept his eyes on his galley work.

More than an hour after starting, they spent a few minutes at Rini’s watch station, then returned to the table.

Ilika could tell by the dead silence behind him that it was time to cover his soup pot. Rather unfriendly looks greeted him when he turned around, but he

had expected as much. “So . . . what do you think?”

The others looked at Kibi.

“We don’t like it one bit,” the steward said in a firm voice.

Ilika held in his smile. “What’s wrong with it?”

“There’s nothing wrong with the trip from here to the sun,” Mati explained.

“It’s the part about hovering over the surface of the huge thing,” Boro went on, his voice getting louder.

“At that distance, the gravity will be so great,” Sata declared with despair, “that we’ll need the anti-mass drive at level seven!”

“That will take all three anti-mass inducers,” Boro explained, almost gasping for breath, “and leave us nothing extra for an emergency.”

“What about orbit?” Ilika asked, trying to keep a straight face.

“Orbiting the sun at that distance would require one-quarter the speed of light!” Rini squeaked. “Manessa can’t go that fast.”

Ilika smiled. “You guys are good! We might take a risk like that in a dire emergency. We certainly won’t any time we can avoid it. A good flight plan includes at least two paths to a safe destination. After a break, you can rewrite it so everyone’s happy.”

All five crew members sighed with relief. Kibi shooed Ilika out of the galley so she could find snacks.



After a few calculations, Boro was happy with the new hover altitude, giving him anti-mass power to spare. Rini, however, reminded them that if the anti-mass drive failed, they’d have to use space thrusters.

Mati frowned and grabbed a knowledge pad. “Thrusters only give me a thousand meters per second,” she complained. “That’s not escape velocity anywhere near the sun.”

Ilika scrunched his face for a moment. “You’re confusing velocity and acceleration, Mati. Manessa’s thrusters can give you that much *change* in velocity, per second.”

“Oh . . . yeah . . .” Mati mumbled with embarrassment as she tapped at the knowledge pad again. “Okay, I’m happy.”

“But . . .” Sata began with a cringe, “wouldn’t that much acceleration kill

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