

SAVING MARS

BOOK ONE IN THE SAVING MARS SERIES

Cidney Swanson

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NOT BIG ON PROTOCOL

She was the kind of girl who slept with books on her bed. Not merely collections of books stored on computer wafers, but actual paper-made books from Earth, one of which lay upon its belly, spine protesting. It was this unforgiving surface that woke Jessamyn early, having already imprinted a crease along one side of her face. She sat up rubbing her cheek, rolled over, and kicked off the bed, landing silently so as not to awaken her family.

The getting-out-of-bed-before-the-sun wasn't a preference for Jess; rather, being perennially out of funds forced her into resourceful behaviors where she spent time (which she had) instead of credits (which she lacked.) She wished she were the sort of daughter who purchased thoughtful gifts for the ones she loved,

but she couldn't hold on to credits very long. The cause for this littered her bed.

As she crept through the central room of the dwelling, Jess saw her walk-out boots, leaning upside down next to the heat exhaust. The sight made her smile; her older brother had placed them there, of course. Ethan had known his sister would be ice cutting today. He understood, as Jessamyn did, what would make their mother happy on her birthday. As long as you didn't blatantly hoard, Mars Colonial generally turned a blind eye to the mandate against water acquisition for personal consumption. Jessamyn was no water-grubber—she hadn't flown to the northern polar cap for lucky ice since her mother's last birthday, and birthdays only occurred twice annually.

Slipping into the airlock that kept Mars's frigid air from entering their home directly, Jess shivered. The thermometer told her it was well below freezing. Working fast, she shoved her legs through the walk-out suit designed to protect her from the harsh environment outside. A quick seal up the front, feet into warmed boots, helmet secured, and she was ready to go.

No one had questioned her when she put in the requisition for a planet-hopper yesterday. First Lieutenant LaFontaine, whom everyone called Lobster because of his red beard and hair, liked Jess and let her take a vehicle overnight when she asked.

It was just an old settler's superstition about polar ice being lucky, but a gift of ice would give her mother at least a week's reprieve from pain. A sufferer of dry-lung, Jessamyn's mother found relief from breathing humidified air—a practice abandoned a generation ago when the Mars Mandate had been adopted.

Closing the airlock behind her, Jess crossed the permafrozen ground and climbed aboard the tiny craft. Within seconds, she was airborne.

Lobster hadn't asked what Jess wanted a planet-hopper for, and Jess hadn't told. It was both illegal and dangerous to visit the polar caps. Martian ice only melted when some external heat was applied, such as the heat from a descending planet-hopper. No matter how carefully you flew, hoppers came down hot. And if you came in hot, the ice melted and refroze, holding your craft so that it tended to become a permanent feature of the icescape. A handful of abandoned vehicles littered the northern polar cap.

But Jessamyn was a good pilot. An exceptional pilot, like her mom had been before her accident. When Jess reached the northern pole, she teased the thrusters on and off a handful of times, bouncing the craft up and down until the surface cooled the landing gear to where Jess could sense the ice losing interest in seizing her craft. It was a method she'd invented before she'd turned ten. Her father had tried (unsuccessfully) to have the unusual landing introduced into the pilot

curriculum at the Academy. Jess had received a polite vid-mail from the academic dean thanking her for her inventive spirit, but explaining that her method taxed several parts of the landing gear beyond what they were designed to support.

“In other words, Mars Colonial doesn’t want citizens running to the poles whenever their refiltration system needs water,” Jessamyn’s mom had said. Jess’s father had scratched his head and agreed with the dean’s point that the landing method *was* likely to damage certain models of planet-hoppers. Jessamyn’s brother hadn’t said anything aloud, but by that afternoon, he’d sent a set of modified ship designs to the Academy which would allow for safer Jess-style landings. These, the Academy implemented in hopcraft design going forward; Ethan’s genius had been apparent to them from early on.

Jess hadn’t bothered requesting one of the newer modified ships, which required approval by Lobster’s commanding officer. Consequently, her borrowed planet-hopper objected to her several land-and-release bounces by groaning and emitting a series of red-flashing blips and beeps. She disregarded these; the hopper was fine. She knew this craft as well as she knew her own brother. Perhaps better, even. Ethan was the less predictable of the two in many ways.

After double-checking the systems that were essential for ignition, Jessamyn began to power down

the craft. Standard protocol required leaving a vehicle idling when stopping at a remote locale such as a polar cap. Standard protocol also specified that the correct number of persons in a craft visiting the poles was two and not one. Jess didn't think much of standard protocol. Besides, if she turned the engines off, she could imagine herself as an early settler, living when Mars hadn't held enough air pressure for sound to travel far on the surface.

Jess felt a quiver of happiness run through her as the small craft quieted. She heaved the seal-door open and stepped out onto the planet's frozen crust. There it was: the absolute silence of the red planet. Jess smiled and glanced briefly at the sky—still some stars out—before turning her attention to the land below. Before her lay Mars's true wealth. The discovery of tellurium deposits—rare on Earth—had created a frenzy of excitement once, but since the No Contact Accords had ended all *legal* trade with Earth fifty orbits ago, it had become clear that water, and not tellurium, provided Mars's true hope for a future. As such, water was highly regulated, and even the wealthiest citizens conserved to hurry the dream of a terraformed Mars into reality.

Overhead, the sky was shifting from inky darkness to a warm purple. Jess allowed herself a few minutes to gaze upward. Even the Terran satellites, circling in their deadly orbits, looked beautiful in the pre-dawn sky. She

identified her favorite spring constellations before they blinked out—the Apple Tree, the Three Tilapia, and the Horn of Plenty. In the pause before dawn, the stars seemed especially close, as if Jess could reach up and pluck one from the sky for her mother’s birthday gift. She smiled, imagining her mother’s response. *Oh, Jessamyn. Where am I going to keep this? There’s no room!* It was her mother’s favorite complaint in spite of the fact that their family had a larger dwelling to accommodate Ethan’s alter-abilities.

Low in the sky, Jess identified the warm glow of Earth. *Terra*, the home world of her human forebears, was about to set, dipping below the horizon line. A swelling rush filled her ears, made her fingertips tingle.

Earth.

Terran-Mars relations might be non-existent (dwellers on the red planet went so far as to refuse to be called by the Earth-name *Martian*, insisting upon *Marsian*), but Jessamyn still ached to see vast Terran oceans, to soar through clouds, to catch snow on her tongue. All these things—and many more—her pirate granddad had spoken of. Jess’s earliest memories were filled with his tales. She would never have traded her life on Mars for a life on Earth as a filthy *body-swapper*, but she ached to visit, to see the wonders of the blue-green planet with her own eyes. In fact, Jessamyn had enrolled in pilot training for one purpose: so that she

could qualify as a Mars Raider, piloting as her grandfather had done, as her mother might have done.

The thought of her mother brought Jess back to the task at hand, and sighing, she pulled her gaze from the heavens. Before her spread a wide expanse of late-spring ice. Today, it was covered in dull, gritty dirt, evidence of a recent storm. Her work was simple enough. It was only a matter of finding a section of cuttable ice, working quickly, and getting away without succumbing to the desire for the riches that a larger and then a larger cut of ice would yield in certain back streets of New Houston. But the acquiring of wealth wasn't a real temptation to Jess. The things she wanted most weren't things at all.

When Jess switched her headlamp on, a stunning transformation rendered the dull surface into a symphony of reds, tans, and dark browns struck through with glistening points of ice. She moved her headlamp from side to side, watching ice crystals wink on and off. She imagined this would be what fireflies (something she'd only read of) looked like. The gutter-and-spark so beguiled her that she forgot for several minutes the task that had brought her to the polar cap. But at last, *twinkling* made her think of *birthday candles* which reminded her of her purpose.

The sun, breaching the horizon, seemed to be telling her to hurry along, now, as well. Squatting, she sliced her heat knife through a layer of frozen dirt. As

she shifted the outer layer to one side, her breath caught anew. The ice hidden below the surface glittered, having formed a tiny, crystalline cavern into which her lamplight now flashed. She stared for a moment, awestruck, gazing until her eyes ached from brightness which gleamed like a small mine of diamonds.

Blinking, she bagged her frozen prize and turned back to the planet-hopper. Her mom's birthday had fallen on the same day as the Festival of Singing Ice this annum, and Jess would be hard pressed to finish her academy flight hours if she didn't hurry home *now*. And she couldn't wait to see her mother's lined face soften as she opened the gift. Lillian would scold her daughter for cutting ice, of course, but her eyes would also kindle with a delight that had grown rarer with each passing orbit.

From her mother, Jessamyn had inherited both her red hair and an uncanny ability to fly. Any craft, under any conditions. To some, it looked as if the ships simply acknowledged Jess's inherent right to pilot them. The truth was that Jess understood ships, which perhaps boiled down to the same thing.

"You're not happy this morning," Jess murmured to the planet-hopper as it lifted free of the planet's low gravity. As if in response, the ship shuddered. "We'll get Lobster to have a look at that port thruster as soon as we get you back to base." Her fingers skipped along

the control panel, making a series of adjustments to calm the complaining engine. Jess didn't mind the extra demands the hopper made of her this morning; in truth, she preferred flying manually.

She aimed her craft south and to the east, which would take her away from the jet-black sky. She wished she had time to fly west first, then turn to enjoy a second dawn, but what with her mom's birthday and the Ice Festival, it would be a busy day. She waved a goodbye to the night sky, smiling as she picked up speed.

A moment later, an explosion in the port thruster wiped the smile off her face. Orange sparks spun from her craft, bright against the night sky. Even as some part of her mind registered the beauty of the fiery trail on her aft view screen, another part was busy running through scenarios that would not end with her as a splat upon Mars's cold surface.

The ship's emergency systems came to life, and a message flashed across the screen before her: *Contact MCAB immediately!* From inside her helmet, the warnings were reproduced aloud: "Pilot, initiate emergency contact with Mars Colonial Academy Base."

Jess's heart rate jumped as she evaluated the damage to her craft. She'd lost a thrust engine, which was bad, but she hesitated to contact the base. Even though none of her attempts to stabilize the vehicle were working yet, she didn't want some grounded land-

lubber telling her what to do. She knew that in a few moments, if she failed to call in the incident, the ship's controls would cease responding to her commands and re-route to the Academy Base instead. Ethan had shown her a work-around to keep control of her ship in such a situation, and she quickly keyed in the coding for it. Her gut told her she was seconds away from having the command of the ship shifted to someone on base.

Her gut was not wrong.

“Pilot-in-training Jessamyn Jaarda, this is Academy Base. We've got a report of a thrust engine failure on Planetary Hopcraft Bravo-Tango-One-Three-Four. Please confirm. Over.”

Her mouth felt dry inside and she realized she'd left her dwelling without sipping her morning wet ration.

“MCAB, this is BT134. I'm on it,” she shouted back.

The ship pitched violently in response to an adjustment she made. “Okay, not that one,” she muttered. Her head spun, registering the nauseating effects of the failed fix. Attempting to regain her bearings, she called up a new set of readings on the navigation screen. She didn't like what she saw. The ship didn't like it either, and spewed forth a new series of warnings to eject forthwith.

Jessamyn did *not* need additional warnings clamoring for her attention now. Dancing her fingers along the control screen, she succeeded in disabling the ship's internal audio and visual warnings. Now she only had to deal with a craft careening out of control and a base flunky who probably wanted her to abandon ship.

“BT134, we're attempting to run additional tests to determine the degree of danger associated with your situation,” said the base official.

Jess knew what was wrong with her craft: her secondary port engine had blown to smithereens. Without responding to MCAB, Jess addressed the sharp yaw pulling her counter-clockwise. “Easy does it,” she murmured, engaging vertical stabilizers to counter the ship's desire to spin like a top.

“Trainee Jaarda? We're having difficulty communicating with your ship's navigational controls.”

They wanted to force her off of piloting her ship. *Oh, no you don't!* Jess thought. Aloud, she said, “Yeah, there might've been some damage to navigation.”

There was a pause in the MCAB chatter and then came the one order Jess knew she would not obey.

“BT134, we've decided it would be in your best interest to abandon your craft. We have a lock on your coordinates and will send someone to recover you within the hour. Over.”

Eject? The thought filled Jess with a hot flush of anger, causing her skin to match her fiery hair. She'd

corrected her yaw and roll and she still had one engine on her port side. She would *not* abandon her planet-hopper. They were a valuable class of ship. *Hades*, she had three out of four thrusters. Fueled by anger, she realized what she needed to do. *Forget vertical landing; there's more than one way to bring this baby down.*

“Trainee, you are ordered to eject from your damaged craft *now*. Do you copy?” said the tinny voice.

“I’m having trouble receiving you, MCAB. Please say again.” Jess hoped they’d buy that.

“Jess, this is Lobster.” A new voice registered in her helmet. “I know you can hear me. Get your skinny little hindquarters off that ship before it blows up.”

She shook her head—an answer no one at MCAB could see.

“Jess, that’s an order. I suggest you comply.”

She could imagine Lobster’s face, redder than usual as he tried to talk her out of the sky.

“It’s not going to blow. It was just the one engine,” she argued. “I can bring her in, Lobster.”

A new malfunction warning began flashing on her panel. The *primary* port thruster!

“*Holy Ares!*” she cried.

“Jess, *eject now!*”

“Kind of busy here,” she shouted, switching off power to communications.

If the primary port engine gave out, she’d be spinning in circles momentarily.

You are making it home. It was both statement and command, to herself and the ship—they were one creature now, with one shared fate. Jess settled into a cool and quiet place in her head where her mind seemed to meld with her craft. She raced through a power-down like she'd done at the pole. While she knew they couldn't glide all the way back to MCAB, she thought she could bring both of them down safely in the Great Sand Pit.

“You'd better appreciate the efforts I'm making here,” she said to her craft. “Cause we are *both* making it home!” She cut the oxygen supply to her ship's starboard engines and breathed a sigh of relief as the engines flamed out.

Everything went silent and the cabin dimmed, lit only by the rising sun. She felt a moment's panic: had she kept her speed high enough to land using only rudder, stabilizers, and ailerons? It wasn't like they taught this in class. She made an adjustment to the ship's yaw—it responded and she sighed in relief.

This is going to work! She reached out to pat her nav-panel.

For as long as Jess could remember, she'd wanted to try an old-school horizontal landing. MCAB covered the concept in stale texts, all designed to explain how vertical take-off and landing improved efficiency, saved fuel, and cured the common cold. Jessamyn didn't care. Today, a protracted horizontal landing would keep one

more hopper operational. She was honest enough to admit she couldn't wait to try it.

With her primary nav-panel powered down to cut off communication with MCAB, Jess would be relying on her memory of the location of the Great Sand Pit. It would have been a lot harder in the middle of the night, but dawn brought vivid color to life: the deep red of Bradbury Canyon, the pinky-browns of Mount Cha Su Bao. Jess knew right where she was and how to get to where she needed to go. She experimented with the spoilers, and her heart beat faster as she felt the ship respond, gliding up and then down in relation to the planet's surface. Once she could see the Haddad Hills, she began her descent.

The ship responded eagerly and Jess murmured to it, "Bet you've always wanted to try this too, huh?" The vast lake of silica opened before them. Using the spoilers to full effect, Jess felt herself descending and slowing. It was noisy as anything, but so easy—almost too easy. She grinned broadly, imagining how she would *demand* this form of landing to be included in the pilot curriculum just as soon as someone came out to get her. As the sand rose up to meet the ship, a memory or instinct told Jess to keep her nose up as long as possible.

Impact, when it came, felt as unlike the gentle descent as possible. Jessamyn hurled forward toward the front viewing window, her harness cutting into her

walk-out suit at the shoulders as it prevented her from striking the polycarb. Immediately after, she was flung to the left. She experienced a split second of weightlessness followed by a slamming sensation that made it feel like her skull was parting company from her brain. A final jolt forced her downward into her seat, and then the world tilted to one side as the ship spun clockwise, digging its way into the deep brown sand. Jess held her breath to see if she'd truly landed. Emergency lighting glowed pale blue, directing her to an exit hatch. She scrambled out, noting a sharp pain in her left shoulder where the harness had apparently been overzealous in protecting her. Quickly, she checked her suit's integrity. It was no use setting foot outside if her walk-out suit had torn. But no, her suit remained fully functional. She blinked in the sun, stepping round and round her craft. It was in one piece. The undercarriage would be scratched to *Hades*, but she could tell the hopper would fly again.

Jess began laughing and hugging herself. Shouting to the sand and sky, she cried out, "*Worst landing ever!*" She bounced up and down several times. "And I *loved* it!"

Unfortunately, the landing was easy compared with the news that awaited Jess when the rescue crew arrived thirty-two minutes later.

"Pilot-in-training Jessamyn Jaarda, you are hereby suspended from all flight until further notice."

Jess felt her temper flare at the words of the helmeted officer delivering this appalling news. “I just saved a planetary hopcraft from certain destruction. No way are they grounding me. I’ll appeal the decision to the Academy dean.”

She peered to make out the face behind the speaker’s reflective helmet. She’d been certain Lobster would come to find her or her charred remains, but the voice hadn’t sounded like Lobster’s. She felt a twinge of disappointment that her fate meant so little to him. And then, as she caught a clear glimpse of the face inside the pressurized suit, she felt sick. There would be no further appeal—she’d been sentenced by the dean of the Academy himself.