

**DANA STABENOW**

WELCOME TO A NEW FRONTIER—AS WILD AS THE OLD WEST!

# SECOND STAR

The background of the cover features a woman with blonde hair in a braid, wearing a yellow quilted flight suit with red trim. She is holding a white clipboard in her left hand and a black device in her right. Behind her is a map of a landscape with a river and a red aircraft flying in the sky. The title 'SECOND STAR' is prominently displayed in large white letters, with a red star symbol in the center of the word 'SECOND'.

It's a dirty job, but  
someone has to clean up  
Earth's first space colony...

# **SECOND STAR**

**DANA STABENOW**



**ACE BOOKS, NEW YORK**

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## SECOND STAR

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## ***CONTACT!***

She laughed, a queer, wild little laugh. "You're not going to believe it. I think what we thought was a flare is some kind of a—I think it's a ship."

There must have been a glitch in transmission. "What did you say?"

"I said I think it's a ship. A spaceship." She paused. "Not one of ours."

## **SECOND STAR**

*For Tim and Esther Grosdidier  
and their world to come*



# — 1 —

## Homecoming and Housekeeping

There is no land uninhabitable or sea unnavigable.

—Robert Thorne

My full name is Esther Natasha Svensdotter but if you want to live you'll call me Star. Star is what Esther means, it was the first word I ever said, and when I'm feeling romantic I like to say that among the stars is where I live.

It was the first day of the new year and ten minutes out of LEO Base the gee forces on the *Ted Taylor* Express were discouraging to both my stomach and my disposition. I moaned a little. No one in the cockpit paid me any attention. I moaned a little more. Crip, the lean, graying captain of this happy ship, turned from his console to give me an unfeeling grin. "Happy New Year, Star."

I opened my eyes with an effort and gave him what I hoped

was a damning glare. "Yeah, right, you asshole. Welcome to the twenty-first century."

"Hang in there. It's time to give us another boot." I swore at him feebly. He gave a fiendish laugh in reply. His right hand gripped the lever rising up between his seat and the copilot's. "Ready to boost?"

"Ready, Captain," she replied crisply.

"Okay, kick it!"

I held on to my liver and followed the propulsion process in my mind. When Crip hit the glory button one of the bombs—pardon me, Colony Control prefers that we refer to them as ECFCPCs, or Express Class Freight Carrier Propellant Charges—anyway, at boost one of the bombs in the fuel bay was expelled by compressed nitrogen and ignited about a hundred feet below our ship's pressure plate. The controlled-velocity distribution of hydrogen pushed against the plate and we bounced farther away from Terra. I moaned again. The piston shock absorbers between the payload and the fuel bay took most of the blow, but it was still a bouncy ride.

I was riding the bare duralumin jumpseat against the cockpit aft bulkhead. Crip and his copilot and navigator were between me and the only port on the *Taylor*. There wasn't much of a view, black and more black. I didn't care. After two interminable weeks of kissing babies on Terra I didn't care what kind of infernal machine got me there, all I wanted was home. I closed my eyes and tried to forget how cold, how hard, and how small the jumpseat was.

My hair woke me up. I had forgotten to bind it that morning like I always do first time up and out after a spell downstairs. In the zerogee it was floating around my face in a tangled mass, and the ends were getting in my ears and up my nose and in my eyes. I sneezed, like I always did, and, silently cursing my own vanity in refusing to get it cut, fumbled in my pockets for a hair ribbon or a piece of string. When I finally had the blond mess braided back and the end secured with a length of the gray tape found on any self-respecting spaceship's flight deck, the view through the port had improved immeasurably. I gave a sigh of pure joy and I could hear the smile in Crip's voice when he spoke without looking around. "Not bad, huh, Star?"

Not bad? Home had never looked so good. At first it was only a smooth, slender twinkle in the far distance, to the right of Luna and dimmed by her radiance. As we approached it filled the port, no longer a smooth column but a hexagonal cylinder. Against the blackness of space the rotating sides reflected the sun's light in sharp, glittering bursts. The solar mirrors flared out from one end like the skirts of a girl at her first dance. Stabilizers, antennae dishes, handgrips, tool racks, and airlocks protruded from a surface already lumpy with an uneven layer of porous moon rock—LIMSH, courtesy of Colony Control, or Lunar Insulating Material for Space Habitats. Acronyms are Colony Control's life.

Home again, home again, jiggety jig. Home was Ellfive, and Ellfive was the first of two planned space colonies circling Lagrange Point Five, maintaining a stable orbit between the conflicting gravitational pulls of Terra, Luna, and Sol, traveling sixty degrees ahead of Luna as the third point of an equilateral triangle of which the other two points are Terra and Luna. I had to swallow hard. The sheer immensity of the mere idea of Ellfive, when I had time to think about it, made me feel the size of a gnat and about as significant. But home is where, when you have to go there, they have to take you in, gnats and all. I shifted in my seat, straining at the harness with my feet braced as if I could help push the ship in quicker.

Crip warped in closer to the North Cap, its six-and-a-half-kilometer diameter dwarfing the *Taylor*, and the transmitter erupted with the traffic-alert whistle that sounded like the combined efforts of a stall signal on a Super Cub, air squeaking out of a balloon, fingernails scraping a blackboard, and teeth biting down on aluminum foil. Cockpit crews hate the whistle and curse me en masse for requiring its installation on every ship doing business with Ellfive, but it is a clamor impossible to ignore and so admirably serves its purpose. "Ahoy the *Taylor*, ahoy the *Taylor*, this is Ellfive Traffic Control."

"Go ahead, Control," Ariadne responded from the navigator's console.

"Be advised, there is a hold on your docking, *Taylor*, I repeat, a hold on your docking. Proceed immediately to



Transient Parking Area Number Three. You are cleared for approach and orbit."

Ariadne swore roundly and fluently, the harsh words sounding worse in her musical contralto, and looked around at Crip. "Ellfive Control, this is Captain Young, commanding the *Taylor*. What's the problem, Bolly?" he said. Over his shoulder I watched him bring up the approach vectors for the Warehouse Ring on his screen and punch in the coordinates. The maneuvering thrusters kicked in, sounding like incoming mortar fire outside the hull. The old girl shuddered once in protest and began changing direction slowly. "I say again, Bolly," Crip repeated, "what's the problem? Are we early?"

"No, you're not early, Crip, the *Thunderbird* is late and the hangarlock won't be free for at least another hour."

I could see Crip's shoulders stiffen, but his voice remained calm. "Ellfive Control, are you aware that we have the boss on board?"

The traffic controller's voice was no less grim than his own. "We know, Crip. The *Thunderbird*'s captain insists she is unable to pull back from the lock for another hour."

In moments we were stationary, floating free in Park Three, still sixteen clicks from home. Crip hushed his mike and swiveled his seat to speak to me. His voice was polite and furious. "This is the third time in a month the Patrol has put me behind schedule, Star. Just what the hell is going on?"

"It's not your fault, Crip," I said, fighting back my own annoyance. Annoyance does not sit comfortably on top of a hangover in zero gravity. "It doesn't have anything to do with you."

He looked at me, frowning, but his crew was there so he said merely, "We could rustle up a solarscooter for you."

I shook my head and immediately regretted it. "I'll ride in with you." I sat back in that Iron Maiden of a jumpseat and tried to get comfortable.

Unfortunately, the *Taylor* had not been built with my comfort in mind. The entire vehicle was 125 meters long and looked like the bishop piece from a chess game, with an aft pusher plate that was 57 meters across. We rode up front, with the freight modules between us and the fuel storage, and the

freight modules and fuel storage and the pressure plate between us and ignition. It never felt like nearly enough of a safety margin. After Hiroshima and Pyongyang there wasn't enough room in the universe to put between me and fission. Once they work the kinks out of the Martin-Bond deuterium-helium fusion nuclear pulse rocket, or figure out a way to make solar propulsion push a spaceship along at speeds comparable to that of an Express, I'm jumping the fission ship.

Still, we were lucky to have the Express ships, and no one knew it better than I. When The War of the Worlds nonsense broke out in 1992 after *Odysseus II* intercepted the message from Betelgeuse, the absolute necessity of fielding some kind of force into space to act as a Terran reception committee became obvious to those of the most limited intelligence, and even to a few congressmen. Some bright soul remembered a plan by General Atomic in the late 1950s to build a ship powered by nuclear bombs that would put payloads larger by a factor of two or even three on Luna than would a chemical rocket of the same mass at launch. Congressional leaders in their infinite wisdom fell on Project Orion with loud hosannas and began to hurl funding at it in that odd but seemingly innate American conviction that enough money can cure anything. In the resulting rush to construction plans for padding crew seats were inexplicably lost.

Two interminable hours and seventeen minutes later the *Taylor* docked, its nose nuzzling comfortably into the North Cap hangarlock. The little man inside my head had set aside his piledriver in favor of a meat tenderizer but was still thumping away with unflagging energy. I couldn't unstrap fast enough. "Very nice trip, Crip, as always," I said, turning to pull myself through the hatch.

"Liar," he said, his usual good humor restored with our safe arrival. "You didn't think so."

"My stomach didn't think so," I protested. "Stop by for dinner next trip." I could see a polite refusal forming and added, "I'll get Charlie to whip up something."

He brightened perceptibly. "In that case I accept."

I slapped a bicep with one hand and jerked my forearm in his direction. He saluted smartly in return. I waved good-bye and

pulled myself down into the payload bay, an immense cavern stripped to the essential shell, stark and bare and filled with freight strapped into nets, most of it mining equipment bound for the Trojans on the next SeaLandSpace freight tender. I didn't mind the lack of passenger amenities; the *Taylor* was an Express-class cargo ship, not some posh TAVliner where flight attendants served saki nonstop from Tanegashima Spaceport to Tranquility Base, discounts available for frequent flyers. And the truth was that if necessary I would have ridden a mass capsule home today.

The polysteel diaphragm of the North Cap's transitional hatch enclosed the *Taylor*'s bow, the atmosphere pressured up, and the cargo door dropped down slowly to become a ramp. I could see the arm of a Clark hoist floating outside, surrounded by a dozen waiting longshoremen in heavily padded overalls. I pulled myself down via the handholds and the three other passengers followed me out. One of them was a big dark man in a scruffy gray flightsuit too short for his arms and legs and too tight in the butt. He had yet to learn that you don't use your legs in zerogee and he kept getting tangled up with himself and anything else that got in his way. It's always a surprise to me how much one human being can fill up an entire cargo bay, if the cargo bay is on Ellfive and the human being is an Ellfive cheechako. He looked like he was headed for Neptune when one of the longshoremen finally took pity on him and took him in tow with a boathook.

"Where the hell do they get these guys?" Jerry Green grumbled behind me. "I'll bet that jerk's never had on a p-suit in his life." He sighed a deep, sad sigh. "It's not like the old days, Star."

I agreed, hiding a grin. Jerry, an aerospace engineer at Daedalus Flight Service, had been on Ellfive for all of eighteen months and was returning from his first R&R downstairs. He'd been quarantined at LEO Base for ten days for displaying cold symptoms at transfer, and the food at LEO Base had never been anything more than edible. Jerry, whose nature and mass were normally Dionysian in character, was today looking lean, hungry, and definitely unhappy. "Who is he, Jerry, do you know?"



"New rent-a-cop, somebody said," Jerry replied.

"Oh, no," I said.

"What?"

"It couldn't be," I said to myself.

"Probably not," Jerry said. "It couldn't be what?"

The zerogee cheechako being towed briskly into the hangar at the end of a boathook couldn't possibly be the new security supervisor. Helen hadn't found a replacement yet or she would have notified me, I assured myself, and then the lead long-shoreman gave the all-clear. I forgot the cheechako and Jerry and grabbed handholds straight across the floor to the barrel lock. I pulled myself in one side and rolled out the other into the waiting arms of Simon and Charlie. Simon grabbed me by the nape of the neck, brought me right side up, and said deliberately in his basso profundo voice, "Good to see you again, Star." We shook hands in formal greeting. It was about as formal as he got, but Simon always shook hands. "How was the trip?"

"The usual."

Simon examined me closely. "You are not quite your usual bubbling and effervescent Valkyrie self, Star."

"Who is?" I said, annoyed.

"Too much welcome?" Charlie asked, regarding me with a sapient eye.

"Nine Rotary Club luncheons, twelve Chamber of Commerce dinners, fourteen pep rallies, and, so help me, a parade. With fireworks," I added when Charlie snickered. "But that should be the last of them. Helen promised me no more goodwill tours before commissioning. Please God, let's get down to where I can swallow."

"Did you go home?"

"Yes."

"And?" my sister demanded. "How's Mother?"

"Mother's fine. Thinner, and she looks tired, but otherwise okay. I wish—" I stopped.

"What?"

I shook my head. After forty-two years of unarmed sibling combat Charlie knew when to leave well enough alone, and this time actually managed to. What I wished was that there

were some way to get Mother more food. Her arm, lifted in farewell, had been almost frail outlined against the clear, pitiless light of an Alaskan winter morning, and I had been thinking of little else since Onizuka Spaceport.

We crossed to a pullbelt, each snatching at a handle as it passed by, and began moving rapidly down the inside of the endcap toward the north end of Valley One. The gravity slowly increased, until my braid lay heavily on the back of my neck. The moment I was able to put my feet down and ride the belt upright, I remembered, "Damn!",

"What?" Simon said behind me.

"I forgot my pack." I half turned to go back.

"No problem," Simon said. "It's Rex's shift. He'll give it to me."

I hesitated. It was my own rule that explicitly ordered that every incoming passenger identify his or her own luggage in person before it be allowed inside Ellfive proper.

"Rank does have its occasional privileges," Simon reminded me.

"Stop being so damn conscientious," Charlie said roughly. "You look like hell. Simon'll get it."

The little man with the sledgehammer switched into a lower gear and settled the matter. "All right. Go ahead."

Simon hopped nimbly across to the up pullbelt; Charlie and I continued down. "What have I missed while I was gone?"

"Not a lot," Charlie said cheerfully. "Impossible as it may seem, we managed to struggle on without you. Construction on Shepard Subdivision has fallen a little behind schedule but Roberta says they should be ready by February first."

"Good." We rode the escalator down to O'Neill Central, getting off on the corridor that ran by my office. The civilizing influence of full gee was mine once more. "Never let it be said that man wasn't meant to live in anything less than full gravity," I said, and stretched luxuriously. "At least never let it be said to me." I headed for my desk and thumped the viewer controls. "Archy?"

"Boss! It's about time you got home! Simon and Elizabeth are all wound up in plans for this mass transfer gadget they dreamed up. Bo-ring. I—"



"Archy, signal Orientale that I want to talk to Commodore Lodge. Now."

"Nice to see you, too, boss," Archy said with what sounded like real indignation, and Lodge's regal head and starred shoulders filled the viewer forthwith. His hair as usual was impeccably coiffed, and I wondered yet again how he kept it from floating around in the one-sixth lunar gravity. Most Loonies shaved their scalps or at the very least cropped their hair short to avoid the fuss. "Greetings, Star," he said primly. "Welcome home."

"Welcome home, my ass, Grays," I said. "Let's cut out the bullshit."

He grinned. It was a wide, white, attractive grin, warm and friendly and infectious. A funny thing about that grin, though, the longer I looked, the longer his canines got. "What can I do for you, Star?"

"You can make your Ellfive liberty shuttles shove off on time from the North Cap hangarlock, for starters," I snapped.

Lodge's grin seemed to freeze in place. He wasn't used to being reprimanded by anyone of less rank than the Secretary-General of the American Alliance. He didn't like it, not one little bit, and wasn't that just too bad. I said, "Crippen Young says the Patrol's shuttles are making a habit of being in the way. In the way of inbound Express ships, in the way of LIMSH tenders, in the way of solarscooters, in the way of mass capsules. In fact, Grays, the only way your people seem able to get out of is their own. It is not an inspiring sight, according to Crip. Makes him lose faith in the legendary competence of Patrol pilots. Says he's thinking about making a formal complaint to the Aerospace Pilots Association."

It may have been wishful thinking on my part but I thought the commodore flushed slightly. "That's Crip's opinion," he said with a contempt that somehow made him seem less handsome. "What can you expect from a civilian pilot?"

"I expect him to meet his scheduled departure times, and he does," I said. "Let me make myself clear, Grays. Your people screw up one more docking schedule in Hangar One, and I'll make it SOP for every in-bound Patrol vehicle from troop carrier to liberty shuttle to the admiral's gig to take on an

Ellfive-certified pilot at the Warehouse Ring. And I'll bill Orientale for the service." I shut down the circuit with my fist and put both hands up to massage my temples. "Oh, God. Is my head still on?"

Charlie regarded me with pursed lips and a disapproving expression. "Something tells me it was more than the Soldotna High School Marching Band that put that lovely chartreuse color into your cheeks." I growled something or other and she said firmly, "Take a light hit. That'll make a start at getting your body clock back on schedule."

"How many candles?"

She shoved me inside the booth that stood in one corner of my office. "I'll do it, I'm the doctor." Short people spend much of their lives with cricks in their necks from trying to look everyone else directly in the eye. This makes them domineering, cantankerous, and natural physicians. I muttered, but let her close the door and set the gauge while I fumbled with the goggles.

"All set?"

I adjusted the goggles. "Green light."

There was a click and a thud and a low whine. I closed my eyes as what felt like a billion candlepower irradiated my poor abused carcass and theoretically rearranged my biorhythms into something approaching normality. Much better than drugs for depression, ship lag, and fatigue, Charlie declared. Well, maybe. My head hurt about the same, before and after. "There should be a law against after-dinner toasts," I said, emerging and pulling off the goggles, "with the penalty for offenders death by drowning in a butt of malmsey." I looked toward the window and felt better at once.

Charlie looked from my face to the view and back again. "Why did you want a window that faced inside anyway, Star? You've always been such a stargazer."

"Outside whizzes by once every two minutes," I said. "Makes me seasick. Besides, when we put on spin there was more free-floating construction debris outside than there was stars. And besides that"—I waved a hand toward the window—"that view's why we're here, after all." I sat down behind my desk and accessed the screen. "Archy?"

"Yo."

"Bring up the Hewies, will you?"

"Can do."

A yellow circle with a dot in the middle of it appeared on my viewer, displayed on a black background. At equidistant points around this circle smaller circles blinked steadily, representing the monitoring satellites of the Helios Early Warning System. The display held for a few seconds, to show all twelve monitors up and running. I punched a button and it was replaced by a rolling readout of the current atmospheric conditions on Sol, monitor by monitor.

"We're only into the fourth year of Cycle 23," Charlie said at my shoulder.

"I never take Sol for granted," I replied. Not anymore, not ever again. Monitor Seven was showing some turbulence. "Archy? Put in a call to Mitchell Observatory." I waited, and Sam's face came on the viewer. "Sam? I'm looking at the Hewie display. What's this I see on Hewie Seven? Area—uh—378?"

A long-suffering sigh gusted down the commlink. "And hello to you, too, Star," Sam Holbrook said. "Welcome home."

"Never mind that, what about this reading?"

"What about it?" he said testily. "It's not a flare, it's not even big enough to qualify as a solar incident. We're keeping an eye on it. Why else did you shanghai me out of my nice comfortable chair at Stanford?"

"To keep both eyes on Sol and anything else that wanders into view," I said. "And I didn't shanghai you, you volunteered. Thanks, Sam. Keep in touch."

"Do I have a choice?" he snapped. My viewer went dark.

I looked at Charlie. "Do I need to access Blackwell?"

"Nah. I medivacked a couple of space-happys, is all. And I've been treating a Frisbee chemist who hasn't been keeping up on his full gee workouts. He's got a mild case of hypercalcemia but we caught it in time. He should be back to work in a couple of weeks."

"What about that rigger, Charlie?"

"Thanks, Arch, I forgot. I've got a rigger on the ward who



ripped his p-suit glove on the framework of Island Two. He's being fitted for a three-finger prosthesis."

"That it?"

Charlie smiled her Cheshire cat smile. "Well, I do have an electrical engineer new hire yelling about violation of his civil rights."

"He doesn't want to pee in a bottle," I guessed.

"I don't care what people say about you, Star, you are too average bright."

"You know the policy, Charlie. If he refuses a preemployment bodily fluids test, and won't agree to random sampling during his employment, kick his application out. And don't make a secret of it, either, downstairs or up."

"And his civil rights?"

Vacuum is unforgiving as hell. Working in it requires, above all else, a clear head and steady hands. "I don't give a damn about his civil rights."

"He will be made aware of that fact."

"Good. That it?"

Charlie regarded me thoughtfully. "Has anyone ever called you overly conscientious?"

"No," I said in genuine surprise. "I don't think so."

"How about a long-nosed, interfering bitch?"

I had to grin. "Only you. But a little learning is a dangerous thing." To prove my point I accessed Demeter, the agronomy program. Demeter informed me that the first batch of *Apis mellifera* had tested the subgee waters of an Express cargo bay with all six sets of toes and had died immediately thereafter of, as near as anyone could figure out, sheer indignation. "A honeybee in zerogee is an unhappy honeybee," I said, sighing.

"Why do we need the damn things, anyway?" Charlie said. She had a tendency to levitate, loudly, in the presence of any creature with six or more legs. When we were kids she swelled up to twice her normal size if a mosquito so much as sneezed in her direction. I sometimes suspect Charlie's main motivation for spacing was the lack of insect life in vacuum.

"The agronomics experts engineered a specific number of pollen plants into the farming toroids," I said, for the two or three hundredth time, "and hand pollination is a bitch—it's