



# Sundiver

David Brin

A Bantam Spectra Book / February 1980  
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ISBN: 0553269828

**To my brothers Dan and Stan, to Arglebargle the IVth ...  
and to somebody else.**

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# **PART I**

... it *is* reasonable to hope that in the not too distant future we shall be competent to understand so simple a thing as a star.

A. S. Eddington, 1926

## **1. OUT OF THE WHALE-DREAM**

Makakai, are you ready?"

Jacob ignored the tiny whirrings of motors and valves in his metal cocoon. He lay still. The water lapped gently against the bulbous nose of his mechanical whale, as he waited for an answer.

One more time he checked the tiny indicators on his helmet display. Yes, the radio was working. The occupant of the other waldo whale, lying half submerged a few meters away, had heard every word.

The water was exceptionally clear today. Facing downward, he could see a small leopard shark swim lazily past, a bit out of place here in the deeper water offshore.

"Makakai... are you ready?"

He tried not to sound impatient, or betray the tension he felt building in the back of his neck as he waited. He closed his eyes and made the delinquent muscles relax, one by one. Still, he waited for his pupil to speak.

"Yesss ... let'sss do it!" came the warbling, squeaky voice, at last. The words sounded breathless, as if spoken grudgingly, in lieu of inhalation.

A nice long speech for Makakai. He could see the young dolphin's training machine next to his, its image reflected in the mirrors that rimmed his faceplate. Its gray metal flukes lifted and fell slightly with the swell. Feebly, without their power, her artificial fins moved, sluggishly under the transient, serrated surface of the water.

She's as ready as she'll ever be, he thought. If technology can wean a dolphin of the Whale-Dream, now's the time we'll find out.

He chinned the microphone switch again. "All right, Makakai. You know how the waldo works. It will amplify any action you make, but if you want the rockets to cut in, you'll have to give the command in English. Just to be fair, I have to whistle in trinary to make mine work."

"Yesss!" she hissed. Her waldo's gray flukes thrashed up once and down with a boom and a spray of saltwater.

With a half muttered prayer to the Dreamer, he touched a switch releasing the amplifiers on both Makakai's waldo and his own, then cautiously turned his arms to set the fins into motion. He flexed his legs, the massive flukes thrust back jerkily in response, and his machine immediately rolled over and sank.

Jacob tried to correct but overcompensated, making the waldo tumble even worse. The beating of his fins momentarily made the area around him a churning mass of bubbles, until patiently, by trial and error, he got himself righted.

He pushed off again, carefully, to get some headway, then arched his back and kicked out. The waldo responded with a great tail-slashing leap into the air.

The dolphin was almost a kilometer off. As he reached the top of his arc, Jacob saw her fall gracefully from a height of ten meters to slice smoothly into the swell below.

He pointed his helmet beak at the water and the sea came at him like a green wall. The impact made his helmet ring as he tore through tendrils of floating kelp, sending a golden Garibaldi darting away in panic as he drove downwards.

He was going in too steep. He swore and kicked twice to straighten out. The machine's massive metal flukes beat at the water to the rhythmic push of his feet, each beat sending a tremor up his spine, pressing him against the suit's heavy padding. When the time was right, he arched and kicked again. The machine ripped out of the water.

Sunlight flashed like a missile in his left window, its glare drowning the dim glow of his tiny instrument panel. The helmet computer chuckled softly as he twisted, beak down, to crash into the bright water once again.

As a school of tiny silver anchovies scattered before him, Jacob hooted out loud with exhilaration.

His hands slipped along the controls to the rocket verniers, and at the top of his next arc he whistled a code in trinary. Motors hummed, as the exoskeleton extended winglets along its sides. Then the boosters cut in with a savage burst, pressing the padded headpiece upward with the sudden acceleration, pinching the back of his skull as the waves swept past, just below his hurtling craft.

He came down near Makakai with a great splash. She whistled a shrill trinary welcome. Jacob let the rockets shut off automatically and resumed the purely mechanical leaping beside her.

For a time they moved in unison. With each leap Makakai grew more daring, performing twists and pirouettes during the long seconds before they struck the water. Once, in midair, she rattled off a dirty limerick in dolphin, a low piece of work, but Jacob hoped they'd recorded it back at the chase boat. He'd missed the punch line at the crashing end of the aerial cycle.

The rest of the training team followed behind them on the hovercraft. During each leap he caught sight of the large vessel, diminished, now, by distance, until his impact cut off everything but the sounds of splitting water, Makakai's sonar squeaking, and the rushing, phosphorescent blue-green past his windows.

Jacob's chronometer indicated that ten minutes had passed. He wouldn't be able to keep up with Makakai for more than a half hour, no matter how much amplification he used. A man's muscles and nervous system weren't designed for this leap-and-crash routine.

"Makakai, it's time to try the rockets. Let me know if you're ready and we'll use them on the following jump."

They both came down into the sea and he worked his flukes in the frothy water to prepare for the next leap. They jumped again.

"Makakai, I'm serious now. Are you ready?"

They sailed high together. He could see her tiny eye behind a plastic window as her Waldo-machine twisted before slicing into the water. He followed an instant later.

"Okay, Makakai. If you don't answer me, we'll just have to stop right now."

Blue water swept past, along with a cloud of bubbles, as he pushed along beside his pupil.

Makakai twisted around and dove down instead of rising for another leap. She chattered something almost too fast to follow in trinary ... about how he shouldn't be a spoilsport.

Jacob let his machine rise slowly to the surface. "Come dear, use the King's English. You'll need it if you ever want your children to go into space. And it's so expressive! Come on. Tell Jacob what you think of him."

There were a few seconds of silence. Then he saw something move very fast below him. It streaked upward and, just before it hit the surface, he heard Makakai's voice shrilly taunt:

"Ch-chase me, ch-chump! I fly-y-y!"

With the last word, her mechanical flukes snapped back and she leaped out of the water on a column of flame.

Laughing, he dove to give himself headway and then launched into the air after his pupil.

Gloria handed him the strip chart as soon as he finished his second cup of coffee. Jacob tried to make his eyes focus on the squiggly lines, but they swam back and forth like ocean swells. He handed the chart back.

"I'll look at the data later. Can you just give me a summary? And I'll take one of those sandwiches now, too, if you'll let me clean up."

She tossed him a tuna on rye and sat on the countertop, her hands on the edges to compensate for the swaying of the boat. As usual, she was wearing next to nothing. Pretty, well endowed, and with long black hair, the young biologist wore next to nothing very well.

"I think we have the brainwave information we need now, Jacob. I don't know how you did it, but Makakai's attention span in English was at least twice normal. Manfred thinks he's found enough associated synaptic clusters to give him a boost in his next set of experimental mutations. There are a couple of nodes that he wants to expand in the left cerebral lobe of Makakai's offspring.

"My group is happy enough with the present. Makakai's facility with the waldo-whale proves that the current generation can use machines."

Jacob sighed. "If you're hoping these results will persuade the Confederacy to cancel the next generation of mutations, don't count on it. They're running scared. They don't want to have to rely forever on poetry and music to prove that dolphins are intelligent. They want a race of analytical tool users, and giving codewords to activate a rocket waldo just won't qualify. Twenty to one Manfred gets to cut."

Gloria reddened. "Cutting! They're people, a people with a beautiful dream. We'll carve them into engineers and lose a race of poets!"

Jacob put down the crust of his sandwich. He brushed crumbs away from his chest. Already, he regretted having said anything.

"I know, I know. I wish things could go a little slower, too. But look at it this way. Maybe the fins'll be able to put the Whale-Dream into words someday. We won't need trinary to discuss the weather, or Aborigine-pidgin to talk philosophy. They'll be able to join the chimps, thumbing their metaphorical noses at the Galactics while we put on an act of being dignified adults."

"But..."

Jacob raised his hand to cut her off. "Can we discuss this later? I'd like to stretch out for a little while,

and then go down and visit with our girl.”

Gloria frowned for a moment, then smiled openly. “I’m sorry, Jacob. You must really be tired. But at least today, finally, everything worked.”

Jacob allowed himself to return her grin. On his broad face the toothy smile brought out lines around his mouth and eyes.

“Yes,” he said, rising to his feet. “Today everything worked.”

“Oh by the way, while you were down, there was a call for you. It was an Eatee! Johnny was so excited about it that he barely remembered to take a message. I think it’s around here somewhere.”

She pushed aside the lunch dishes and plucked up a slip of paper. She handed it to him.

Jacob’s bushy eyebrows knotted together as he looked down at the message. His skin was taut and dark from a mixture of ancestry and exposure to sun and saltwater. The brown eyes tended to narrow to fine slits when he concentrated. He brought a calloused hand to the side of his hooked, amerind nose and struggled with the radio operator’s handwriting.

“I guess we all knew that you worked with Eatees,” Gloria said. “But I sure didn’t expect to get one on the horn out here! Especially one that looks like a giant broccoli sprout and talks like a Minister of Protocol!”

Jacob’s head jerked up.

“A Kanten called? Here? Did he leave his name?”

“It should be down there. Is that what it was? A Kanten? I’m afraid I don’t know my aliens that well. I’d recognize a Cynthian or a Tymbrimi, but this one was new to me.”

“Um ... I’m going to have to call somebody. I’ll clean up the dishes later so don’t you touch them! Tell Manfred and Johnny I’ll be down in a little while to visit with Makakai. And thanks again.” He smiled and touched her shoulder lightly, but as he turned his expression quickly relapsed to one of worried preoccupation.

He passed on through the forward hatch, clutching the message. Gloria looked after him for a moment. She picked up the data charts and wished she knew what it would take to hold the man’s interest for more than an hour, or a night.

Jacob’s cabin was barely a closet with a narrow fold-down bunk, but it offered enough privacy. He pulled his portable teli out of a cabinet near the door and set it on the bunk.

There was no reason to assume that Fagin had called for any other purpose than to be sociable. He had, after all, a deep interest in the work with dolphins.

There had been a few times, though, when the alien’s messages had led to nothing but trouble. Jacob considered not returning the Kanten’s call.

After a moment’s hesitation, he punched out a code on the face of the teli and settled back to compose himself. When he came right down to it, he couldn’t resist an opportunity to talk with an E.T., anywhere, anytime.

A line of binary flashed on the screen, giving the location of the portable unit he was calling. The Baja E.T. Reserve. Makes sense, Jacob thought. That’s where the Library is. There was the standard warning against contact with aliens by Probationary Personalities. Jacob looked away with distaste. Bright points of static filled the space above the blankets and in front of the screen, and then Fagin stood, en-

replica, a few inches away.

The E.T. did look somewhat like a giant sprout of broccoli. Rounded blue and green shoots formed symmetrical, spherical balls of growth around a gnarled, striated trunk. Here and there tiny crystalline flakes tipped a few of the branches, forming a cluster near the top around an invisible blowhole.

The foliage swayed and the crystals near the top tinkled from the passage of air the creature exhaled.

“Hello, Jacob,” Fagin’s voice came tinnily out of midair. “I greet you with gladness and gratitude and with the austere lack of formality upon which you so frequently and forcefully insist.”

Jacob fought back a laugh. Fagin reminded him of an ancient Mandarin, as much for the fluting quality of his accent as for the convoluted protocol he used with even his closest human friends.

“I greet you, Friend-Fagin, and wish you well with all respect. And now that that’s over, and before you say even a word, the answer is no.”

The crystals tinkled softly. “Jacob! You are so young and yet so perspicacious! I admire your insight and ability to divine my purpose in calling you.”

Jacob shook his head.

“Neither flattery nor thickly veiled sarcasm, Fagin; I insist on speaking colloquial English with you because it’s the only way I have a chance of avoiding getting screwed whenever I deal with you. And you know very well what I’m talking about!”

The alien shook, giving a parody of a shrug.

“Ah, Jacob, I must bow to your will and use the highly esteemed honesty of which your species should be so proud. It is true that there is a slight favor for which I had the temerity to ask. But now that you have given me your answer ... based no doubt on certain past unpleasant occurrences, most of which nevertheless turned out for the best ... I shall simply drop the subject.

“Would it be possible to inquire how your work with the proud Client species ‘porpoise’ proceeds?”

“Uh, yes, the work is going very well. We had a breakthrough today.”

“That is excellent, I am certain that it could not have happened without your intervention. I heard that your work there was indispensable!”

Jacob shook his head to clear it. Somehow Fagin had taken the initiative again.

“Well, it’s true I was able to help out early on with the Water-Sphinx problem, but since then my part hasn’t been all that special. Hell, anyone could have done what I’ve been doing here lately.”

“Oh, that is something that I find very hard to believe!” Jacob frowned. Unfortunately it was true. And from now on the work here at the Center for Uplift would be even more routine.

A hundred experts, some more qualified in porp-psych than he, were waiting to step in. The Center would probably keep him on, partly out of gratitude, but did he really want to stay? Much as he loved dolphins and the sea, he’d found himself more and more restless lately.

“Fagin, I’m sorry I was so rude at first. I’d like to hear what you called me about ... provided you understand that the answer is still probably no.”

Fagin’s foliage rustled.

“I had the intention of inviting you to a small and amicable meeting with some worthy beings of diverse species, to discuss an important problem of a purely intellectual nature. The meeting will be held this Thursday, at the Visitors Center in Ensenada, at eleven o’clock. You will be committed to

nothing if you attend.”

Jacob chewed on the idea for a moment.

“E.T.’s, you say? Who are they? What’s this meeting about?”

“Alas, Jacob, I am not at liberty to say, at least not by teli. The details will have to wait until you come, if you come, on Thursday.”

Jacob immediately became suspicious. “Say, this ‘problem’ isn’t political, is it? You’re being awfully close.”

The image of the alien was very still. It’s verdant mass rippled slowly, as if in contemplation.

“I have never understood, Jacob,” the fluting voice finally resumed, “why a man of your background takes so little interest in the interplay of emotions and needs which you call ‘politics’. Were the metaphor appropriate, I would say that politics is ‘in my blood’. It certainly is in yours.”

“You leave my family out of this! I only want to know why it’s necessary to wait until Thursday to find out what all of this is about!”

Again, the Kanten hesitated.

“There are ... aspects of this matter which would best not be spoken over the ether. Several of the more thalamic of the contesting factions in your culture might misuse the knowledge if they ... overheard. However, let me assure you that your part would be purely technical. It is your knowledge we wish to tap, and the skills you have been using at the Center.”

Bull! Jacob thought. You want more than that.

He knew Fagin. If he attended this meeting the Kanten undoubtedly would try to use it as a wedge to get him involved in some ridiculously complicated and dangerous adventure. The alien had already done it to him on three occasions in the past.

The first two times Jacob hadn’t minded. But he’d been a different sort of person then, the kind who loved that sort of thing.

Then came the Needle. The trauma in Ecuador had changed his life completely. He had no desire to go through anything like it again.

And yet, Jacob felt a powerful reluctance to disappoint the old Kanten. Fagin had never actually lied to him, and he was the only E.T. he’d met who was unabashedly an admirer of human culture and history. Physically the most alien creature he knew, Fagin was also the one extraterrestrial who tried hardest to understand Earthmen.

I should be safe if I simply tell Fagin the truth, Jacob thought. If he starts applying too much pressure I’ll let him know about my mental state—the experiments with self-hypnosis and the weird results I’ve been getting. He won’t push too hard if I appeal to his sense of fair play.

“All right,” he sighed. “You win, Fagin. I’ll be there. Just don’t expect me to be the star of the show.”

Fagin’s laughter whistled with a flavor of woodwinds. “Do not be concerned about that, Friend-Jacob! In this particular show no one will mistake you for the star!”

The Sun was still above the horizon as he walked along the upper deck toward Makakai’s quarters. It loomed, dim and orange among the sparse clouds in the west—a benign, featureless orb. He stopped at the rail for a moment to appreciate the colors of the sunset and the smell of the sea.

He closed his eyes and allowed the sunlight to warm his face, the rays penetrating his skin with gentle,

browning insistence. Finally, he swung both legs over the rail and dropped to the lower deck. A taut, energized feeling had almost replaced the day's exhaustion. He began to hum a fragment of a tune—out of key, of course.

A tired dolphin drifted to the edge of the pool when he arrived. Makakai greeted him with a trinary poem too quick to catch, but it sounded amiably nasty. Something about his sex life. Dolphins had been telling humans dirty jokes for thousands of years before men finally started breeding them for brains and for speech, and began to understand. Makakai might be a lot smarter than her ancestors, Jacob thought, but her sense of humor was strictly dolphin.

“Well,” he said. “Guess who's had a busy day.”

She splashed at him, more weakly than usual, and said something that sounded a lot like “Br-r-a-a-p you!”

But she moved in closer when he hunkered down to put his hand into the water and say hello.

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## 2. **SHIRTS AND SKINS**

The old North American governments had razed the Border Strip years ago, to control movements to and from Mexico. A desert was made where two cities once touched.

Since the Overturn, and the destruction of the oppressive “Bureaucracy” of the old syndical governments, Confederacy authorities had maintained the area as parklands. The border zone between San Diego and Tijuana was now one of the largest forested areas south of Pendleton Park.

But that was changing. As he drove his rented car southward on the elevated highway, Jacob saw signs that the belt was returning to its old purpose. Crews worked on both sides of the road, cutting down trees and erecting slender, candy-striped poles at hundred-yard intervals to the west and east. The poles were shameful. He looked away.

A large green and white sign loomed where the line of poles crossed the highway.

**New Boundary: Baja Extraterrestrial Reserve**

**Tijuana Residents Who Are Non-Citizens**

**Report to City Hall for Your Generous**

**Resettlement Bonus!**

Jacob shook his head and grunted, “Oderint Dum Metuant.” Let them hate, so long as they fear. So what if a person has lived in a town his entire life. If he hasn't got the vote, he's got to move out of the way when progress comes along.

Tijuana, Honolulu, Oslo, and half a dozen other cities were to be included when the E.T. Reserves expanded again. Fifty or sixty thousand Probationers, both permanent and temporary, would have to move to make those cities “safe” for perhaps a thousand aliens. The actual hardship would be small, of course. Most of Earth was still barred to E.T.'s, and non-Citizens still had plenty of room. The government offered large reparations as well.

But once again there were refugees on Earth.

The city suddenly resumed at the southern edge of the Strip. Many of the structures followed a Spanish or Spanish-Revival style, but overall the city showed the architectural experimentation typical of a modern Mexican town. Here the buildings ran in whites and blues. Traffic on both sides of the highway filled the air with a faint electric whine.

All over the town, green and white metallic signs, like the one at the border, heralded the coming change. But one, near the highway, had been defaced with black spray paint. Before it passed out of sight, Jacob caught a glimpse of the raggedly written words “Occupation” and “Invasion.”

A Permanent Probationer did that, he thought. A Citizen wasn’t likely to do anything so kinky, with hundreds of legal ways to express his opinion. And a Temporary Probie, sentenced to probation for a crime, wouldn’t want his sentence lengthened. A Temporary would recognize the certainty of being caught.

No doubt some poor Permanent facing eviction, had vented his feelings, not caring about the consequences. Jacob sympathized. The P.P. was probably in custody by now.

Although he was not particularly interested in politics, Jacob came from a political family. Two of his grandparents had been heroes in the Overturn, when a small group of technocrats had succeeded in bringing the Bureaucracy tumbling down. The family policy toward the Probation Laws was one of vehement opposition.

Jacob had been of a habit, the last few years, of avoiding memories of the past. Now, though, an image came forcefully to mind.

Summer school in the Alvarez Clan compound in the hills above Caracas ... in the very house where Joseph Alvarez and his friends had made their plans thirty years before ... there was Uncle Jeremy lecturing while Jacob’s cousins and adopted cousins listened, all respectful expressions on the outside and seething summer boredom within. And Jacob fidgeted in the back corner, wishing he could get back to his room and the “secret equipment” he and his stepsister Alice had put together.

Suave and confident, Jeremy was then still in early middle age, a rising voice in the Confederacy Assembly. Soon he would be leader of the Alvarez clan, edging aside his older brother James.

Uncle Jeremy was telling about how the old Bureaucracy had decreed that everyone alive would be tested for “violent tendencies” and that all who failed would from then on be under constant surveillance—Probation.

Jacob could remember the exact words his uncle had spoken that afternoon, when Alice had come sneaking into the Library, excitement radiating from her twelve-year-old face like something about to go nova.

“... They went to great efforts to convince the populace,” Jeremy said in a low rumbling voice, “that the laws would cut down on crime. And they did have that effect. Individuals with radio transmitters in their rumps often think twice about causing trouble to their neighbors.

“Then, as now, the Citizens loved the Probation Laws. They had no trouble forgetting the fact that they cut through every traditional Constitutional guarantee of due process. Most of them lived in countries that had never had such niceties anyway.

“And when a fluke in those laws allowed Joseph Alvarez and his friends to turn the Bureaucrats themselves out on their ears—well, the jubilant Citizens just loved Probation testing even more. It did the leaders of the Overturn no good to push the issue at the time. They were having enough trouble setting lip the Confederacy...”

Jacob thought he would scream. Here was old Uncle Jeremy gabbing on and on about all that old