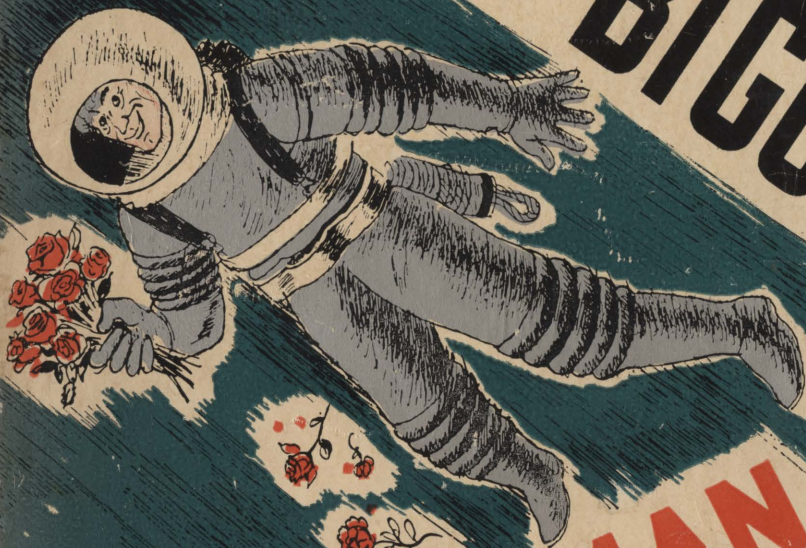


LANCELOT BIGGS:



NELSON
BOND

SPACEMAN

by NELSON BOND



DOUGLASS
SCIENCE

LANCELOT BIGGS:

Spaceman

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Lancelot Biggs—"lean and lanky and gangling and awkward . . . with an oversized Adam's apple, ears like a loving cup's handles, and a grin like a Saint Bernard puppy"—was mate of the space-lugger *Saturn*.

Lancelot's motto for solving problems was: "First find the theory." In this rollicking, humorous adventure he theorizes the old space-freighter, its skipper, Captain Hanson, lovely Diane Hanson, and himself into amazing predicaments, all the way from Earth to Venus and beyond—in and out of a space-pirate's clutches and various similar catastrophes and triumphs, including turning the wallowing freighter into the fastest ship in space (and nearly destroying them all). The many more exploits of the remarkable Mister Biggs—amorous, martial, diplomatic, and mechanical—culminated in what seemed to be a complete fiasco, but out of which Biggs emerges as a man of heart as well as of brain.

Lancelot has appeared at various times and in various situations which have delighted the readers of *Amazing Stories*, *Weird Tales*, and *Fantastic Adventures*. Now, recreated as a book character, Biggs is more humorous than ever and participates in some of the most delightfully ingenious situations that have ever appeared in a science-fiction story.

Lancelot Biggs: Spaceman

BY NELSON BOND

**LANCELOT BIGGS: SPACEMAN
EXILES OF TIME
THE THIRTY-FIRST OF FEBRUARY
MR. MERCENTHWIRKER'S LOBBLIES**

**The Remarkable Exploits of
LANCELOT BIGGS:**



SPACEMAN

NELSON BOND

Doubleday & Company, Inc.
Garden City, N.Y., 1951

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*Printed in the United States at the
Country Life Press, Garden City, N.Y.*

TO
CHRISTOPHER KENT BOND

*"Eo modestior est,
quo doctior."*

Lancelot Biggs: Spaceman

Forever alive, forever forward,
Stately, solemn, sad, withdrawn, baffled, mad, turbulent, feeble,
dissatisfied,
Desperate, proud, fond, sick, accepted by men, rejected by men,
They go! they go! I know that they go, but I know not where
they go,
But I know that they go toward the best—toward something great.

WALT WHITMAN: *Song of the Open Road*

I

I had just finished treating the egg-sized knot on my noggin to an arnica rinse when the door of my radio cabin opened and Cap Hanson—he's skipper of the freight-lugger *Saturn*—shambled in, pawing his gray thatch feebly, and collapsed with a sigh into my most comfortable chair.

"Sparks," he said, "take a good look, then tell me—what am I?"

I stared at him in dismay. Even the best spacemen slip their gravs once in a while, but I never thought I'd live to see the day when Captain Hanson went void-whacky. He'd been with the Corporation, man and boy, for more than thirty years now, and had never spent a day in dry dock.

I reached behind me cautiously and said in a soothing voice, "Why, you're a very nice man, Captain. Now, just sit quiet for a minute. I've got to——"

"Stop bein' a damn fool, Donovan," said the skipper wearily, "an' lay down that monkey wrench. I ain't a candidate for the paper-doll brigade . . . yet. I'm askin' you a simple question. What do you see?"

I said, "You want facts, Skipper, or flattery? If it's facts, I see a heavy-set, gray-haired guy in his middle fifties who's been through the mill, knows space like a book, and——"

"Wrong!" sighed Hanson. "What you see before you is a broken reed. A creature sadly buffeted by fate an' the fell clutch of circumstance . . . not to mention meddlesome vice-presidents."

This time I got it.

"Biggs?" I asked.

"Yes, Sparks. Biggs. Now tell me, man to man—what did I ever do to deserve Biggs?"

He had me there. Being the skipper of our space-wallowing old tub is not what I'd call a snap job under the best of conditions. The *Saturn* is an ancient crate, built 'way back in 2084 or '85. Ten or twelve years ago, by order of the Space Safety Control Board, it had been removed from the passenger service and relegated to a freight run. The mere task of keeping it spaceworthy was a king-sized headache for any commander. But to make matters worse, while we were taking on cargo at Long Island spaceport, the skipper had been called into the company offices. When he came out again, he had Biggs in tow.

Biggs was tall. Biggs was lean and lanky and gangling and awkward, and he walked with the lissom grace of a stork on stilts. His chief topographical features were an oversized Adam's apple, ears like a loving cup's handles, and a grin like a Saint Bernard puppy.

But Biggs had his mate's papers and was entitled to be known as Mister Biggs—the title being an alias for his real name, Lancelot. What's more, Biggs was the nephew of old Prendergast Biggs, first vice-president of the Interplanetary Corporation. So when they assigned Biggs to the *Saturn* as fourth officer, there was nothing the skipper could do but gulp and say, "Very good!"—and try to sound as if he meant it.

I asked sympathetically, "What's he up to now, Captain?"

"What isn't he up to?" groaned the skipper. "First he said he could handle the controls when we lifted graves from Earth. So——"

"Oh!" I glowered. "*He* did that, did he?"

"Stop feelin' sorry for yourself," said Hanson. "You got off lucky. Everybody on the ship went floatin' off to the ceilin', same as you did.

Chief MacDougal is nursin' two black eyes. One of the wipers has a busted arm."

"Anything else?" I asked.

"*Everything* else!" growled Hanson. "While we was all scramblin' around in mid-air, Biggs made a grab for the manual controls. He got the trajectory deflector by mistake. Martin has just finished shapin' the flight revision. We're seven degrees off our course; almost a hundred thousand miles. Now we got to waste fuel an' up revs to get back or we'll make Sun City spaceport a day late. An' you know what *that* means."

I knew what that meant. Cap on the carpet before the directors; the rest of us sitting around with our fingers crossed, wondering whether they'd yank the *Saturn* off the Venus run.

"Well, what are you going to do about him?" I asked.

"What *can* I do?"

"There's always the airlock," I suggested.

"This ain't no time to be funny," complained the skipper. "This is a serious problem. We're carryin' a valuable cargo of produce to Venus. But if that guy messes up our flight any more . . ."

He shook his head mournfully. I scratched mine. Then I got a brilliant idea.

"Cargo!" I said. "There's your answer, Captain."

"I'm listenin'," said Hanson.

"Put Biggs in charge of the cargo. That way he won't be in the control turret to get in your hair; he'll be down in the hold throughout the shuttle. There's nothing he can do down there to bother anybody."

"But that's the supercargo's job," frowned the skipper. "Even Biggs knows that."

"Give Harkness a vacation for this shuttle. Tell him to let on he's sick. Then it'll be logical to put Biggs on special duty below."

The skipper nodded thoughtfully.

"It might work. It just possibly might work."

"Then you'll try it?"

"Immediately," said Hanson, rising. "Or maybe sooner."

So that was that. At three bells, when my relief came on duty, I went down to the mess hall to ruin my digestion with some of Slops's slumgullion. The first person I met was Lancelot Biggs himself.

"Hello," I said. "What are you doing here? I thought you ate at the skipper's mess?"

"I've been shifted," he grinned shyly. "Harkness was taken ill a few hours ago and the skipper put me on emergency duty in his place."

"Is that so?" I said, making like surprised. "Well, that's quite a responsibility. We're carrying a mighty valuable cargo."

The way his lean face sobered was almost embarrassing.

"I realize that, Sparks. And I'm devoting a lot of thought to the assignment. You know, I'm a bit of an experimenter, and it seems to me——"

One of the mess boys brought our chow then, and I didn't get to hear Biggs expound his theory. Which was a sad mistake. If I had listened, I might have been able to warn Cap Hanson that trouble was on the way.

It was about the third day out that I began to smell the smells. I thought it was odd, but said nothing. I figured they'd go away. But they didn't. They got worse. On the fifth day the Old Man busted into my cabin wearing a look that would have curdled vinegar.

"Sparks," he demanded, "have you been messin' around with some of them chemical experiments of yours again?"

I shook my head. "Not guilty, your honor," I told him. "I thought those smells were coming up out of the galley."

The skipper moaned softly.

"Trouble. Nothin' but trouble. It ain't enough I'm supposed to wet-nurse this leaky old barge between Earth an' Venus; now I got smells to worry about too. Well, come on. Let's have a look."

We went down to the galley. Slops was frying something on the range. I took one look and shuddered. Tapioca again. And don't tell me you're not supposed to fry tapioca. I know it. Tell Slops.

The skipper surveyed our alleged culinary expert with a jaundiced eye.

"O.Q. Slops," he conceded, "we give up. Where did you hide it?"

"Hide what? What is this, a game?"

"That's right," I chimed in. "It's a little pastime called Sniff-the-Atmosphere. You play it by pressing your thumb and forefinger to your nostrils. Then you try to guess what died."

Slops shrugged a surly disclaimer.

"I ain't done nothin'," he protested. "I ain't hid nothin', an' I ain't smelled nothin'. Now, I got a meal on the stove. Go 'way an' leave me alone."

The skipper looked at me, and I shrugged back at him. Both of us realized the same thing at the same time. Slops wasn't lying. The smell *wasn't* as bad here as it had been updeck. Hanson scratched his head. He said suspiciously, "Sparks, do you *swear* you ain't been mixin' chemicals?"

"On a stack of code books," I told him. "That smell came from—— Hey! What else beside the galley lies beneath my cabin and the control turret?"

"Let's see," pondered Hanson. "There's the storage closet, the reservoir, the refrigeration tanks, an' the——"

His eyes widened suddenly, fearfully.

"Sparks!" he choked.

"Yes?"

"The storage hold!"

That was it. The minute he said it, I knew. Operation Victuals . . . with Biggs in command!

We hightailed it for the nearest ramp. As we approached the storage hold the smell got worse. Hanson blasted down the corridor like a rogue asteroid, with me trailing along behind. We hit the door, shouldered it open . . .

Biggs was there. The damned fool was standing in there dressed in a bulger, calmly spraying the bins of fresh vegetables with a hose!

He turned as we entered, and behind the spacesuit's quartzite visor his eyes lighted. His headset audiophone clacked cheerily.

"Hello," he greeted. "Is anything wrong?"

"Anything wrong!" bellowed Captain Hanson. "He asks if there's anything wrong. That suit! An' that hose——" The skipper's face was a dangerous shade of fuchsia. "An' this *heat!*"

"I turned off the refrigerating unit," nodded Biggs pleasantly. "You see, I have a theory that since hothouses are always warm and moist, we should simulate those conditions aboard ship. So——"

"And the spacesuit?" I asked him. "Why the bulger?"

Biggs moved his hands deprecatingly.

"Why, to guard against possible infection, of course. I didn't want to expose the cargo to any parasitic organisms."

"Infection! Moisture! Heat!" Hanson buried his face in his hands. "Tell him, Sparks. Tell him what he's done."

I said, "Biggs, your theory is no good. Vegetables have to be kept in a cool, dry atmosphere or they rot. As a matter of fact, they *are* rotten. That's why the skipper and I came down here—to investigate the smell. If you weren't wearing a bulger you'd have noticed it yourself."

"Smell?" repeated Biggs. "Why, come to think of it, I *have* noticed a curious odor about the ship from time to time. But I thought it was rats."

That was the last straw for Hanson.

"Biggs," he roared, "you've ruined this cargo, not to mention my blood pressure. You're relieved from your command. But before you report to your quarters, I want this mess cleaned up. An' I mean every last bit, understand? Junk it! Clear it out!"

Biggs faltered, "But, Captain, I was just trying to——"

"You heard me!"

The skipper wheeled, fiery with wrath, and strode to the doorway. I hurried after him. I whispered in his ear, "Remember, Skipper, he's the vice-president's nephew. Maybe you ought to take it easy."

"Easy?" groaned the skipper. "A cargo worth fifty thousand

credits ruined, an' you tell me to take it easy? I'll see that knob-jointed son of a space-wrangler blasted out of space if I'm black-listed for it!"

I said nothing more. What was there to say? Fifty thousand credits' worth of cargo rotting in the hold. The Corporation would *love* that.

The next morning I was on the bridge when Cap Hanson had a visitor. MacDougal, the chief engineer. MacDougal practically never came to the bridge, so I knew, the minute I saw him, that something was vitally wrong.

It was. MacDougal glared at the skipper accusingly.

"Captain Hanson," he demanded, "would ye be so kind as to tell me where I can find my Forenzi jars?"

Hanson frowned. "Forenzi jars? What are you talking about, Chief?"

"Ye'll be knowin' wha' a Forenzi jar is, na doot?" asked MacDougal caustically. "'Tis a lead container for battery solution. Yesterday there were thirty of 'em in the storeroom. Today there are only a half dozen left."

Hanson said pettishly, "Now, Chief, I don't know nothin' about your jars. If you can't watch your own equipment, don't complain to *me* about it."

"I'm complaining to *you*, sir," said the chief, "for the verra simple reason that 'twas one of *your* men who removed them from the locker. Your fourth mate, Mister Biggs."

"Biggs," said Hanson. "Biggs!" His jaw tightened. He walked to the ship's intercommunicating unit, jabbed the button that connected with Biggs's cabin. "Mr. Biggs?" he bawled. "Chief MacDougal is up here in the turret asking about twenty-four lead containers that disappeared from his equipment locker. Do you know anything about them?"

The diaphragm clacked an answer. Hanson started. His eyes bulged. He yelled, "*What?*"

Again some metallic buzzing. This time Hanson didn't try to answer. He tottered away from the phone.

"Chief," he faltered, "will you be needin' the Forenzis before we make port?"

"Well, 'tisna exactly *vital*," admitted MacDougal. "But why do ye ask?"

Hanson made a feeble gesture.

"Because they're . . . out there."

"What?" I exclaimed. "Outside the ship? How come?"

Hanson's eyes were haunted.

"Biggs," he said in a hollow voice, "thought they were garbage cans. He used them to dispose of the rotten cargo!"

2

Well, some hours later I got a personal solargram for Biggs and took it down to his cabin. Being confined to quarters, he was lonely. He looked so miserable that I felt sorry for him and lingered to talk awhile.

"I guess you think I'm a frightful dummy, Sparks," he said ruefully. "I know Captain Hanson thinks so. But this is my first berth, you know. And no one ever told me what to use for garbage pails."

"Look, Biggs," I told him, "there's no *need* for garbage pails in space. You can't just dump things out the airlock and get rid of them."

"But Captain Hanson *said* to junk the spoiled vegetables."

"*Junk*. Not *dump*! They should have been thrown into the incinerator. You see, anything tossed out of the *Saturn* in free space just follows along with the ship." I grinned. "I'd hate to be one of the spaceport attendants on Venus when the *Saturn* drops gravs surrounded by twenty-four lead satellites full of garbage."

He picked me up swiftly on that one.

"But they won't be with us when we land, Sparks. As soon as we hit the planet's Heaviside layer, atmospheric friction will destroy the Forenzis and their contents."

I whistled softly.

"By golly, you're right. I clean forgot about that. And Hanson was so sore *he* forgot it too. That means we must get those containers back into the ship before we hit the tropo or we're going to lose a couple hundred credits' worth of equipment."

Biggs said meekly, "I'll be glad to go out and reclaim them, Sparks. Can you fix it with the skipper?"

"I'll try," I told him.

So the next day I told Hanson about it. The captain tugged his lower lip thoughtfully and agreed.

"O.Q., let him do it. Maybe he'll slip into the rocket blasts."

I passed the order on to Biggs, then went back to my radio cabin. Joe Marlowe was calling me from Lunar III. What he had to say drove all other thoughts from my mind. His message came direct from I.P.C. headquarters.

"Please report," it said, "exact amount and probable value of cargo. Must have immediate reply."

I relayed the message to the bridge. Then, my curiosity aroused, I contacted Joe on our private conversation band and asked him how come and why. He answered cautiously.

"The New York stock market's taking a nose dive, Bert. Stocks are slipping like a loose garter. The corporation big shots are gibbering. They need a good profit on this cargo—and they need it bad."

Boy, there was nasty news! It was a private message, but I figured the Old Man ought to know it. So when he came in I passed it along. He stared at me, stricken.

"Hell's bells, Sparks! In that case, I can't send *this!*"

"This" was the reply he had intended to send. It said succinctly, *"Cargo ruined. Value zero."*

"If you do," I told him, "we'll all be scanning the want ads as soon as we hit port. Stock markets are screwy. This can't be a real panic, or a fifty-thousand-credit cargo wouldn't be that important. But if the Corporation's under pressure, and the bears learn the *Saturn's* cargo is worthless . . ."

"What will we do?"

"Stall," I suggested. "Maybe the situation will have cleared up by the time we get in."

So we framed a new message that wouldn't upset the applecart. It said, "*Value of cargo estimated Long Island spaceport at 50,000 credits.*" And *that* was true enough. . . .

Biggs, with his unerring faculty for selecting the wrong moment, chose this one to come bouncing into my radio room. He had taken off his headpiece but was still wearing his bulger. Its deflated folds hung about him in wrinkles, like the hide of an anemic rhinoceros.

"Sparks," he asked, "do you have a book on energy and radiation?"

"Help yourself," I nodded, pointing to my bookcase. "But why the sudden lust for learning?"

"I have a theory," he began. "I think——"

Captain Hanson let loose a roar like an angry lion.

"Mister Biggs! I thought you was reclaimin' those Forenzi jars?"

"Yes, sir. I was. I mean . . . I am. But——"

"But me no buts. Get back to work!"

"Yes, sir!" Biggs saluted meekly, tossed me a grateful glance.

"Thanks, Sparks. I've got an idea, and if I'm right——"

"Get out, Biggs!" roared the skipper.

"Yes, sir." Biggs backed out hastily, thumbing the pages of my textbook as he disappeared. Hanson scowled after him.

"The Corporation goes bust. The *Saturn* goes under the hammer. We're all out of jobs. An' that insane young whippersnapper wants to play school!"

"He seemed mighty excited about something," I said thoughtfully.

"He'll be worse than that," promised the skipper, "if he don't get those jars back on board. Sparks . . . would you happen to have an aspirin tablet around here? An' about a fifth of scotch for a chaser?"

All this, to wax biblical, took place on the seventh day. The *Saturn* is a ten-day freighter, so we had three more days to run before we

slipped into Sun City spaceport. They were three days of headaches, too. The skipper and I spent most of our time huddled over the radio, listening for reports on the stock-market slump in New York. We hoped the situation would ease up so that our making port with a zero-valued cargo wouldn't make any difference. But no such luck. Somehow the rumor had trickled out that the *Saturn's* cargo would not be of sufficient value to keep the Corporation in the blue, and the Wall Street wolves were closing in, ready to snap if the rumor were true.

Which was tough enough on me, needing my job as I did, but it was even rougher on Cap Hanson. He was an old spacehound, just barely hanging on. If the *Saturn* were removed from its run, he'd never get another command. He'd be assigned to a watchman's job on a Lunar outpost, or perhaps be made a lightship keeper on one of the planetoids. And what kind of windup is that for a man who's spent a lifetime pushing gravs?

Meanwhile our lumpy-larynxed fourth mate was taking a hell of a long time reclaiming those Forenzi jars. It wasn't really a hard job, you know. All he had to do was slip out through the airlock, throw a grapple around each jar and haul it in. But he seemed to be as inept at this as at every other job he had ever attempted. On an off period I went down to watch him. I found he had not yet brought a single one into the ship.

I told him, "You'd better get a wiggle on, Biggs. We make port tomorrow. If those things hit the atmosphere, you'll be able to *pour* them into the airlock."

"I know," he said abstractedly, "but I'm not quite ready yet. Sparks, according to that book you lent me, cosmic rays go down to 1/100,000 Ångstrom units."

"That's right," I nodded.

"That means they're more than ten times as intense as gamma rays?"

"Right again. Why? What's the pay-off?"

"That's what I'm trying to find out," said Biggs strangely. He fin-

ished throwing a hitch around one of the jars, pushed himself toward the airlock.

"Want me to help you drag 'em in now?" I asked.

"No, thanks, Sparks. I think I'll leave them out till tomorrow," he said.

"But Captain Hanson——" I began.

"Tomorrow."

After all, I'm just a radioman. I shrugged. "It's your funeral," I said.

He pulled them inside the next day. I saw them lying in the corridor beside the airlock, covered with a strip of tarpaulin. He got them in just in time, too, for about an hour later we hit the Heaviside layer of Venus. From there on it was an easy glide to the second planet. We threw out our lugsails and applied the power brakes. In a couple of hours we were warping into our cradle at Sun City spaceport.

I closed out my key and locked the radio room. There was nothing more for me to do on this shuttle, so I went up to the control turret and found Captain Hanson gnawing his fingernails down to the second joint.

"Any late news, Sparks?" he demanded anxiously.

I shook my head.

"No news but bad news. The Corporation's sending over its appraisers immediately."

He said wearily, "Well, we done our best. If it hadn't been for that madman Biggs, we'd still have our cargo. But as it is——"

"I wonder if International Stratoplanes needs any radio operators?" I wondered gloomily.

We were grounded now. As we walked down the corridor the hypos went off, and I heard the hiss of the airlock opening. We reached the entrance just as the appraisal committee came aboard. Doc Challenger, general manager of the Venus office, was with them, and old Prendergast Biggs himself, our junior officer's big-shot uncle. Challenger stepped forward, beaming.

"Happy landing, Captain!" he chortled. "I need not tell you how glad we are you came in safely. The Corporation has been experiencing bad times in New York, sir; bad times!"

Hanson said dully, "Yes, sir. I got somethin' to tell you, sir——"

"Later, Captain; later. First we must settle this question of your cargo's value. Approximately fifty thousand credits' worth of fresh vegetables—is that right? If your estimate is correct, the Corporation will weather this storm handsomely."

Hanson coughed nervously. He hedged, "Well, now, sir . . . about this here cargo . . ."

You never saw two smiles fade so abruptly. There was dead silence for a minute. Then Challenger asked grimly, "Captain Hanson, there's no *error* in your estimate, is there?"

"No, sir. I mean the *estimate* was right, but——"

It was here that young Lancelot Biggs interrupted.

"Excuse me, gentlemen," he said. "I don't quite understand. Is it important that we land a cargo of *vegetables*?"

Captain Hanson whirled on him.

"That will do, Mister!" he snapped. He turned to old Prendergast Biggs. "Sir," he said, "I've delayed this as long as possible. But now I got to tell you. This here precious nephew of yours——"

The veep smiled fatuously.

"Yes, Captain Hanson. A fine lad, isn't he? What were you going to say, Lancelot?"

I grabbed Hanson's arm. I was afraid he was going to blow his tubes and hit somebody right then and there. But before he got a chance, Lancelot Biggs was talking again.

"Captain Hanson," he said seriously, "I wish you'd told me this before. I didn't realize our cargo was so important."

Then he turned to the committee.

"I hope you will not be surprised to learn, gentlemen, that our cargo is *not* fresh vegetables. At the last minute Captain Hanson decided to make a substitution——"

Hanson's face turned assorted shades of lavender—all of them un-

attractive. He bellowed, "What! Are you tryin' to shift the blame to me? Why, you——"

Biggs's voice drowned out his protest.

"—and so, gentlemen, we have placed the cargo right here for your inspection. Look!"

With a swift motion he tore the tarpaulin from the Forenzi jars. I looked . . . and gulped! They were the same jars. But with a difference. And *what* a difference! They were no longer the dull grayish color of lead; they had a ruddy, glinting, coppery hue. Biggs patted one of them affectionately.

"Ask your appraisers to estimate the value of these, gentlemen. I think they'll find them to be worth approximately a quarter of a million credits. They are . . . *pure gold!*"

It's a good thing I was holding onto Captain Hanson's arm. For just as the committee was exclaiming, "Excellent! Excellent trading, Captain Hanson!" the skipper's nerves gave out. He collapsed like a punctured bulger. I remember shouting, "Water! Water, somebody!" Then I passed out too. . . .

Afterward, when the three of us were alone in the turret, Hanson asked, "But *how*, Biggs? I don't get it. How in blazes did it happen?"

Biggs blushed and looked uncomfortable.

"Why, it's obvious when you analyze it, Captain. I can't understand how in all these years of spaceflight no one ever discovered it before. Perhaps because ships and bulgers are made of permalloy instead of lead. Or it may be that some enzyme secreted by the rotten vegetables acted as a catalyst. Chemists will have to decide that."

"You're *still* not tellin' us what happened."

"Don't you know? It was transmutation induced in the lead Forenzi jars by the action of cosmic rays."

Captain Hanson said in an awed tone, "Exposure to cosmic rays changed lead to gold?"

"That's right. It's always been a theoretical possibility. Artificial transmutations were brought about 'way back in the early twentieth

century through bombardment with gamma rays. And cosmic rays are more than ten times as short as gammas.

"I began to suspect something strange was happening to the Forenzi jars when first I went out to gather them in. Their color had changed slightly, and their exterior was rather more granular. That's why I came in to borrow Donovan's book on radiation. What I saw convinced me that the lead was being transmuted; was then in the mesolead stage, approximating an isotope of thallium.

"So," smiled Biggs, "I decided to wait and see if the transmutation would continue. And it did."

Hanson wiped his hand across his forehead.

"Suppose the trip had taken more time? Suppose the transmutation had gone a step farther? What then?"

Biggs pursed his lips thoughtfully. "Well, now, that's an interesting question. The next element down the periodic ladder is platinum. It's quite possible that——"

"Wait a minute," interrupted the skipper. "Did you say *platinum*?"

"Yes. Why?"

"Nothin'. That is, nothin' much——" The skipper rose and strode to the intercommunicating phone. "MacDougal?" he yelled. "Listen, Chief . . . get this crate ready to roll again. We're liftin' graves again first thing in the mornin'.

"Where to? Nowhere in particular; we're just cruisin'. Who cares where? An' hey, Chief! Send to the commissary for about five—no, make it six dozen Forenzi jars. Yeah, Forenzi jars, I said. An' get the biggest ones they got. The Corporation ain't found it out yet, but we're goin' into the transmutin' business. An' Mister Biggs ships with us as our new third mate."

3

I guess the less said about that transmutation trip, the better. In the first place, our experiment didn't work. In the second place, we wasted six weeks and six dozen Forenzi jars that, lacking whatever mysterious combination of enzymes the garbage had supplied, failed utterly to respond to the cosmic-ray treatment. And in the third place, Cap Hanson caught merry blue hell from the Corporation officials, who said he shouldn't have gone in the first place.

So we were all in pretty foul humor by the time we gave it up as a bad job and limped back into Sun City spaceport, empty of pocket and full of bicarbonate of soda.

This last because of Slops. Slops wasn't a *bad* cook, you understand. He just wasn't a cook at all, rightly speaking. He had what you might call a tapioca complex. It was tapioca for breakfast, tapioca for lunch, tapioca for dinner. Every day. Boiled tapioca, stewed tapioca, even fricasseed tapioca. . . .

It finally got to be too much for even an iron-bellied old spacedog like Cap Hanson. So when we warped into Sun City spaceport, Cap said firmly, "You're through, Slops. An' I do mean threw!" And he kicked our so-called chef off the *Saturn*, along with his clothing, his back pay, his harmonica, and his ta—you know what.

Which left us out on the end of a limb, for it turned out that there

wasn't a single spaceriding cook dry-docked in Sun City. While the *Saturn* was taking on a cargo for Earth—trade goods, mostly, with one or two bins of medical supplies—the skipper did his damndest to scare up a grub-wrangler. But no luck.

An hour before we were scheduled to blast off, he ambled up to my radio cabin, scratching his grizzled pate nervously.

"Damn it, Sparks," he complained, "I thought I was doin' the right thing when I fired Slops."

"You were," I told him. "By chucking that greaseball off the ship, you saved somebody's life. The crew was planning either mutiny or murder—they didn't care which—if they had to eat one more dish of that goo."

"But," he continued fretfully, "in another hour we lift gravs for Earth, an' we ain't got no cook. What the blue space are we goin' to do?"

Our third mate, Lancelot Biggs, had entered as the skipper was talking. Now he suggested helpfully, "I saw Slops at the Palace Bar a few minutes ago, Captain. I'll ask him to come back if you want me to."

"No!" said the skipper and I in the same breath.

Biggs looked hurt. He defended, "Well, after all, tapioca's good for you. It contains valuable food elements——"

"Shut up!" howled Cap Hanson. He was in no mood to take advice from anybody, especially Biggs. "I'll kill the next guy who even mentions that—that unmentionable stuff."

Biggs said apologetically, "I was only trying to be helpful."

"You're as much help," the skipper told him, "as fins on a dicky-bird's chest. Now, get out of here. G'wan, beat it."

Our lanky third mate turned and started to leave the cabin. Then suddenly . . .

"Wait a minute," yelped Hanson. "I got an idea. Mr. Biggs, do you by any chance happen to know anything about the art of cookin'?"

"Who?" asked Biggs. "Me? Why, no, Captain. But I don't imagine

it would be very difficult. After all, cooking is simply the practical application of certain elementary chemical processes. By exposing designated organic substances to the action of hydrogen dioxide under suitable thermostatic conditions——”

Cap Hanson’s jaw dropped. He goggled at me. “What’s he sayin’, Sparks?”

“He means,” I translated, “that cooking is easy. All you need is victuals, water, and heat.”

“Oh?” The skipper grinned ghoulishly. “In that case, our problem’s solved. Mr. Biggs, you’ve just earned a new private office an’ a new unyform. You’ll find both of ’em below decks, third door to your right.”

It was Biggs’s turn to look dismayed. His Adam’s apple bobbed in his throat like an unswallowed golf ball. “What? But I’m not a cook, Captain. I’m your third mate.”

“You *was* my third mate,” corrected the Old Man coolly. “The Space Manual gives a ship’s commander the right to draft any member of crew or command for any duty in times of emergency. This is an emergency. An’ besides, you just got done sayin’ that cookin’ is simply a matter of exposin’ dessicated hoochamacallits to the action of thingamajiggers. So”—he brushed his hairy paws with a gesture of finality—“that’s that. To the galley, Mr. Slops!”

So that, as he said, was that. But the funny part of it is that, forced to a showdown, Lancelot Biggs came through.

The first meal out, which was lunch, I went down to the mess hall thinking anything might happen and fearing the worst. I got the shock of my life . . . and shocks are a not inconsiderable part of the life of a freight-lugger radioman.

We had fried chicken with cream gravy, hot biscuits, candied yams, a side dish of stewed okra, creole style, raisin pie, and the best damn coffee ever served on the wallowing old *Saturn*. After I’d bulged my belt to the outermost notch with fried pullet, I waddled into the galley and confronted the composer of this gastronomic symphony.

"Biggs," I accused, "you've been holding out. Why didn't you tell us you could cook a meal like that?"

He shuffled his feet sheepishly. He asked, "Was it all right, Sparks?"

"All right? It was terrific!"

"I'm glad. Because, you see, that was the first meal I ever cooked."

"What?"

"Mmm-hmm. But there are lots of cookbooks here in the galley. And I figured so long as I had to do it, I might as well do it right."

He grinned at me shyly. Every once in a while I wondered, briefly, whether any of us understood this strange, lanky genius, Lancelot Biggs. This was one of the times.

"To tell the truth, Sparks, I found the experiment rather interesting. Cooking is, as I told Captain Hanson, just a practical application of elementary chemistry, with the pots and pans serving as test tubes, the stove as a huge Bunsen burner."

I said admiringly, "I'll hand you one thing, Mr. Biggs. You believe in sticking to theories, don't you?"

"But of course. 'Get the theory first'—that's the secret of success in any undertaking." He looked pleased and a little excited too. "We're going to have a good trip home, Sparks. There's plenty of food here in the galley to experiment with. And in the holds——"

Just then I caught my number being buzzed on the intercommunicating audio. I cut through and called, "Sparks speaking. What's up?"

"Donovan?" It was my relief man calling from the radio room. "You'd better come up here on the double. A message from Sun City, and I think it's bad news."

"Right with you," I acknowledged. I snapped a brief so long to Biggs and hurried to my buzz-bin. My relief man was there, also Cap Hanson and the first mate, Lieutenant Martin. All three of them looked a bit grim and a bit glum and quite a bit apprehensive. My relief shoved a flimsy into my hand. It was a warning from Sun City spaceport.

"Hanson Commander Saturn en route Venus-Earth. Turn back im-

mediately for convoy. Pirate Hake reported on co-ordinates three fifteen plus nine oh nine your trajectory." It was signed, "Allonby, Comm. Solar Space Patrol."

I stared at Cap Hanson. I said, "Hake? Runt Hake?"

Hanson said, "Yes. But that's not the worst of it, Sparks. Tell him, Mr. Martin."

Martin wet his lips. "We're in a serious spot, Sparks. We accelerated to max twenty minutes ago and cut hypos for the free run. And since we had—or thought we had—almost nine days of idleness, I told MacDougal he could take down the Number Three hypatomic that's been misfiring."

I said, "So he took it down. So what? He can put it together again, can't he?"

"No. He found the casing worn and melted it down for a recast. We can't reassemble it for at least two days!"

For the sake of you Earthlubbers who don't savvy space lingo, let me say it in words of one syllable. We were in one hell of a jam. The hypatomics are the motors that operate spacecraft. One of them had shown signs of wear. With the ship freewheeling, so to speak, in space, the engineers had taken down the faulty motor, discovered it needed remolding, and had melted down the casing. As Martin said, it would take at least two days—probably more—to recast the molding and put the hypo together again so we could blast.

But the worst of it was . . . Hake. Runt Hake. There are pirates and pirates in the void between the planets. Some of them are good guys—that is, if an outlaw can ever be considered a "good guy." Like, for instance, Lark O'Day, that debonair bandit who always gives lugger captains a signed receipt for the cargoes he highjacks, and who had once let a tramp freighter go through untouched because the skipper pleaded that his life savings were wrapped up in the cargo. Who had once stopped a luxury liner for the sole purpose of stealing a kiss from its charming passenger, the newly crowned "Miss Universe."

But Hake was something different. Think of the nastiest things you've ever heard of, multiply by ten, add infinity, and you have the square root of Runt Hake.

Hake was a sadist. His idea of good clean fun was to board a freighter like the *Saturn*, unload the cargo, then blast a slow leak through the hull. After, I should mention, first having removed all lifeskiifs and bulgers from the victimized ship. Once in the asteroid Sargossa I saw a ship that had been scuttled by Runt Hake's cut-throats. Its crew still remained with the ship. But not as recognizable human beings.

Oh, a swell guy, this Runt Hake. And now, disabled and helpless, we were drifting right into that sector of space where he awaited us.

Cap Hanson said grimly, "We've got a .20 millimeter rotor-gun. We'll give him a taste of that."

"And get ourselves blown to atoms," interjected Martin, "with his pierce-guns? No, Skipper, there's only one thing to do. Send word for the convoy to come on the double . . . and hope it reaches us before we run into Hake."

That was my cue. I shoved the relief man off the bench and got the wobble-bug going. I filled the ether with SOSs, and added a couple of PDQs for good measure. I picked up an acknowledgment from Sun City and threw them a hasty explanation. They wired back that the convoy cruiser would make all haste and not to be frightened . . .

But can I help it if my knees chatter?

There is one thing you can absolutely depend on Lancelot Biggs to do, and that is stick his nose in at the wrong minute. As we three were giving the sob towel a good soaking, the door popped open and in gangled our pro tem Slops. He had a grin on his dial that stretched from ear to there. He chuckled, "Captain——"

"Go 'way," growled Cap Hanson. "I'm thinkin'."

"But look." Biggs opened a clenched fist and displayed a wee gray ship mouse. He placed it on the floor before him. "Look what I found in the aft storage bins. He acts so funny——"

"Go 'way," repeated the skipper gloomily. "I got no interest in mice at a time like this."

Biggs said, "But he *does* act funny." And as a matter of fact, the mouse did. Usually, you know, a mouse is the scarest thing alive. Put him down in a place like this, surrounded by giant humans, and he'll run like mad to the darkest corner.

But this little twerp didn't run. He deliberately moved to the man nearest him—Martin, that was—and began to nuzzle himself against Martin's shoe as if the first mate were an old and loved acquaintance. Biggs chuckled again.

"See that? Do you know what makes him act that way, Skipper? It's the prol——"

"*Mister Biggs!*" The Old Man's face was fiery. "This is no time for nonsense. Within hours, perhaps minutes, we may all be dead. For the last time, get out o' here!"

Biggs, sort of stunned, said, "Yes, sir." He retrieved his curiously acting little pet from where it rubbed its soft muzzle against Martin's shoelaces, put it in his pocket, and backed out the doorway. As he left he tossed me a beseeching wigwag. I joined him in the runway outside.

"What's the trouble, Sparks?" he demanded.

I gave it to him, both barrels. He had a right to know. Every man has a right to know when it's bye-bye time.

Biggs's eyes were huge and round. "Runt Hake? No wonder the skipper was cross." He plunged into one of his characteristic silences. Then, suddenly, "Sparks!"

"Yeah?"

"They say Hake is a show-off. Likes to crack the whip on a captured ship, ordering up big meals and so on before he scuttles it."

"You think you're going to poison him, maybe? Don't be a dope. He'll make you swallow a sample of everything you serve him."

"Never mind. I'm not sure my idea is any good . . . yet. But do you happen to have a book on physiochemistry?"

"I think so. Yes, I know I have."

"Get it for me, will you? I'll explain later."

I got him the book. He jammed it into his pocket and disappeared toward the galley, jogging along like a crane on high heels. But I had no time, just now, to be amused by Biggs's peculiarities, physical or mental. My ears had caught a sound they did not want to hear. The grate of metal on metal near the starboard airlock. The banging of a mailed fist on permalloy, the asthmatic wheeze of the airlock, a crewman's shout ending in a choked gurgle . . .

I plunged back into the radio room. "Cap," I yelled. "Somebody at the airlock. It must be——"

It was. Runt Hake and his pirates.

4

To look at Hake, you wouldn't think he was a killer. True, he held a hand ray-gun on us as he approached, moving smoothly, lightly, up the runway. A half-dozen men behind him also held their side arms poised, ready for action, while another half-dozen deployed down the corridors toward the engine rooms and control turret. But as Hake came nearer he tossed back the quartzite headpiece of his bulger, and I saw that his hair was wheat-gold; his cheeks smooth, soft, boyish; his lips curved into something like a tender smile.

His voice was gentle, too. He said, "You offer no resistance, Captain? That is wise."

Hanson said, "Hake, I surrender my ship to you freely. But don't harm my men. That is all I ask."

"But, Captain"—the slender little pirate's eyebrows lifted archly—"surely you are premature with your pleas? We have just arrived. There are so many, many things to be done before we enjoy our . . . little pleasures."

And then, as he said that, I saw why men feared Runt Hake. His golden hair, his pink cheeks, his soft mouth—all these were but window dressing, misleading and meaningless. The character of the true Hake was in his eyes, heavy-lidded and ophidian; eyes that glinted in swift-flaming delight as he hinted at that which was to come.

I knew, now, that the stories were all true. We could expect no mercy of this man. He would amuse himself with us for a while, toying with us in slow, reptilian fashion. Then he would leave. And we, like the broken things I had seen in the space Sargossa, would remain behind.

He was speaking again. Softly, almost melodiously. "The cargo, of course, is mine, Captain. Even now my men are transferring it to my ship. But there are a few other things we will do while aboard yours. It is lonely, cruising space for months on end. And we do not dine luxuriously. You have, I hope, well-stocked storage bins? A larder provisioned with fine foods? Wines, perhaps, to tempt the jaded palate?"

Hanson tried again.

"We have, Hake. An' they're all yours if you'll assure me my men will be unharmed." He hesitated. "Take me as hostage, if you want to. But——"

"But no, Captain. That would never do. I think you had best remain . . . with your crew." Again there danced that tiny light in Hake's fanatic eyes. "You see, many know my name, Captain, but none have ever seen my face . . . and lived. It would be unfortunate if ever I were to be identified, would it not?"

He turned to his followers.

"Disarm them." He designated us negligently. "And when the cargo has been transferred, have our men come back to this ship. We will dine aboard the *Saturn*."

You think it strange, perhaps, that we showed no sturdier resistance to Hake's invasion? Well, think it over. The *Saturn* was a lumbering old scow compared to Hake's streamlined man-o'-war. Hanson had adopted the only sane policy. Our best bet was to stall the pirate, try to placate him until the Space Patrol cruiser reached us.

So for more than two hours, unarmed and disconsolate, we sat and twiddled our fingers while Hake's men, using our crewmen and black gang as porters, transferred the more valuable portions of our cargo to their ship. They didn't take the bulk stuff. Just small merchandise

that could be fenced from their hide-out on an uncharted rogue asteroid.

Meanwhile, Runt Hake made a special trip to the galley. He took Martin and Cap and me along so he could keep an eye on us. Down there we found Lancelot Biggs quietly reading the book I had loaned him. He glanced up as we entered, rose slowly to his feet as Hake gestured with his ray-gun.

Hake asked in that soft purr of his, "You're the cook on this ship?"

Biggs nodded. "Mmm-hmm."

"You will address me," suggested the little outlaw, "as 'sir.' Very well, Slops. I want you to prepare a meal for us. A *good* meal. Fresh meats and vegetables. You have no idea"—he drawled this last to Hanson—"how one wearies of canned concentrates."

Hanson just glowered. Biggs looked confused. He said, "I—I'll have to get produce from the storage bins if you want a *big* meal. This galley's small." He glanced about him helplessly.

Hake nodded. "Permission is granted. But let me suggest that you attempt no . . . ah . . . medieval toxicological exploits. The chef of the *Spica* tried something of the sort. Poor chap. He screamed horribly at the end. I shall never forget it."

I'll bet he wouldn't, the louse. But I hoped, now, that Biggs would realize I had been right. He couldn't pull any funny business on Hake and get away with it.

Biggs seemed to understand, all right. He said meekly, "I'll do the best I can, sir. It will take a little time, of course."

"We are in no hurry," agreed Hake. "A good meal is worth waiting for. And now, gentlemen . . ."

He motioned us toward the turret. We started to leave the galley. I was the last to pass through the door. As I did so, I felt a fumbling at my side. Lancelot Biggs shoved something into my jacket. He whispered in my ear, "Sparks, give each of our men a piece. Tell them to chew it."

For a moment my hopes flamed high. I didn't know what Biggs had up his sleeve, but I dared dream he had devised some means of

thwarting Hake. But when, a few minutes later, I learned what he had thrust into my pocket, my hopes died as swiftly as they had been born. The stuff was nothing but pepsin. Plain, ordinary pepsin. Good for hang-overs and headaches, maybe, but hardly a deadly weapon against a lethal foe.

I was half minded to chuck the damn stuff away. I suspected that fear, worry, desperation, had made Biggs slip his gravs. Then I thought better of it. After all, he must have had *some* reason for his strange request. And in a spot like this any gamble was worth taking.

So, slowly, cautiously, I started circulating the stuff. I managed to slip half the package to Doug Enderby, the steward, with instructions to get it to the crewman. I met Chief MacDougal 'tween decks and gave him some for his engine-room gang, the blasters and the wipers. Martin took a piece, wonderingly, and slipped it into his mouth when I signaled him to do so. Me? Sure, I had some too. After all, it tasted good. And a man might as well check out with a clean taste on his lips.

The only man I couldn't relay a piece to at any time was Cap Hanson. Runt Hake kept an eagle eye on the skipper. As a matter of fact, Hake didn't miss many tricks, the murderous little squirt. Just before dinner was served he made my heart skip a beat when he asked, "What are you chewing, Sparks?"

"Gum," I said. Then, fearful not to ask, "You want a stick . . . sir?"

He shuddered delicately. "Barbarian custom. I do *not* want a stick."

Boy, was that a break for our side!

Well, some time later Biggs donged the dinner bell and we all tramped into the mess hall. Talk about irony; here we were, a score of honest, hard-working spacemen and an equal number of pirates, sitting down to the same table, eating the same meal. Screwy? Sure. But that was Hake for you. As Biggs had said, he was a show-off.

But don't think he took any chances. We were unarmed; his men were walking hardware stores. As for the conviviality of that banquet,

that was strictly on the surface. To outward appearances we were all one big happy family at the banquet table; actually we of the *Saturn* were being fattened for the slaughter to follow.

Still, you know the old gag: "The condemned man ate a hearty meal." That's what I did. And that's what most of the others did too, because Lancelot Biggs had come up with another Q.E.D. that cooking is, after all, nothing but applied chemistry.

We had, just to make you drool a little, chilled consommé with a light sherry. Then a tempting wisp of baked whiting, served with Moselle Erdener Treppchen—and did the Old Man fume to watch *that* sliding down the hatches of an unkempt pirate crew! He'd been saving it for his golden anniversary. Then Biggs served a chicken *sauté Florentine*. These were the prelude courses. The main dish was a saddle of lamb accompanied by peas in mint and potatoes Parisienne served with Pommard, 2094. The salad was a salad Alma; the dessert was something which Biggs told me later was *plombière à l'Havane friandises*, a concoction of pineapples, bananas, frozen custard—and not a damn bit of tapioca in it.

This came along with the Piper Heidsieck '85. A demitasse came next, then liqueurs . . .

It was here that Runt Hake called a halt. "We'll transfer the rest of the beverages," he said, "to our own ship. We want no drunkenness aboard while we . . . ah . . . do that which is necessary. Captain Hanson?"

He nodded significantly toward the control turret. I rose; so did Martin. Surprisingly, Biggs joined our group as we moved updeck. When we reached the bridge, Hake said, with a malevolent pseudo regret I shall never forget, "We have enjoyed our banquet exceedingly, Captain. But you understand I can allow nothing to stand in the way of my next . . . ah . . . duty. So . . ."

Hanson said stonily, "You'll give us a lifeskiff before scuttlin' the *Saturn*, Hake?"

Hake sighed. "Captain, I had planned to do that very thing. But it seems that my men were so careless as to blast holes in each of the

skiffs. Of course, if you'd care to take your chances in the damaged craft . . ."

Oh, he was a devil, that Hake! I glanced at Martin and saw my own thoughts mirrored in his eyes. This was our last chance. If we could capture the pirate chieftain, maybe his men would not dare do anything for fear of hurting him. And Hake, quick as he was on the trigger, might not get us both before . . .

Then Lancelot Biggs intervened. To me he barked, "No! No, Sparks!" And to Hake, quietly, almost tenderly, "Why, Mr. Hake . . . it's all a big mistake, isn't it? These nasty men think you're planning to harm them. Aren't they silly? You don't want to hurt them at all . . . do you?"

And then . . . Runt Hake's soft mouth began to twitch. Yes, twitch! It pursed up like the mouth of a scolded child; his eyes wrinkled, and he began to blubber.

"Hurt them?" he sniffled. "*Me hurt them?* Why, I wouldn't do a thing like that. I love them. They're my friends." And he tossed his ray-gun away, reached out—and gently patted Biggs's cheek!

Beside me Lieutenant Martin whispered hoarsely, "Great gods of Ganymede, what is this?" I was stunned for a moment myself. But I had sense enough to stoop and retrieve Hake's gun before his insane interlude passed.

"He's blown his fuses!" I squalled. "Grab him, Martin! Biggs, come with me. You and I will round up his crew——"

But Biggs said quietly, "Take your time, Sparks. There's no hurry. See?"

He stepped to the wall, flicked on the visiplat that showed the interior of the mess hall. There, where a moment before a grim-faced score of space pirates had maintained watch over our crew, now our lads were staring with blank, uncomprehending faces at twenty men who looked and acted for all the world like affectionate puppies.

They were hugging each other, patting each other's arms and faces, murmuring soft words of endearment. It was stupefying. More than that, it was embarrassing! Off in one corner a bearded, one-eyed out-

law dandled a companion on his knee. Another burly bruiser, big enough to tear a man in half with his bare hands, was playing piggy-back with a buddy.

I choked, "But what——"

Biggs said suddenly, "Sparks! You forgot to give the skipper a piece of that pepsin!"

"I didn't get a chance. But how did *you* know?"

Then I saw. The skipper and Runt Hake were sitting in the same chair, murmuring sweet nothings to each other, stroking each other's hair fondly. Just as I looked, the Old Man leaned forward and gave the pirate a great big juicy kiss!

Then came a welcome interruption. The audio throbbed to electric life; a crisp voice called, "Ahoy, the *Saturn!* *Saturn*, ahoy! Space Patrol Cruiser *Iris* calling. Stand by. We'll come alongside you in twenty minutes . . ."

Later, when Runt Hake and his pirates, still babbling incoherent attestations of affection, had been removed to the patrol ship and were on their way to the Venusian prison that awaited them, we held a confab in my radio room. Martin was there, and MacDougal, and Lancelot Biggs and myself. Also a very foggy-eyed, befuddled Captain Hanson.

I asked bluntly, "What happened, Mr. Biggs? We know you put something in the food. Something from which the pepsin saved us. But what? Surely no drug would make a man act like that."

Biggs grinned, his Adam's apple cavorting amiably.

"Not a drug. A chemical called prolactin. If you'll remember, I started to tell you we were carrying a load of it to Earth."

"Prolactin?" said Martin. "What's that?"

"An extract of the pituitary glands. The hormone that governs human affections. Prolactin is the ingredient responsible for all acts of parental love. It causes roosters to brood and set on eggs, tomcats to give milk, and milk-deficient females to become normal. It is sometimes called the 'mother-love crystal.'"

"And we," I said, "were carrying a cargo of it. I still don't understand, though, why chewing pepsin kept us from turning into a gang of bunny-huggers like——"

I glanced at the Old Man, then glanced away again, embarrassed. He beamed upon me fondly.

"Well, you see," explained Biggs, "prolactin happens to be a pure protein. And pure proteins are insoluble in most things: alcohol, water, the liquids we normally take in our diet.

"I cooked Hake's banquet with liberal sprinklings of prolactin. But I had to find some way of keeping *our* men from being affected by the hormone that disrupted the pirates' morale. Pepsin was the answer. Pepsin breaks down pure proteins into soluble peptones. That is why it is commonly used as a digestive agent."

"Suiboise," mumbled the skipper, "naluvythalmuhot."

"Eh?" I started. "What's that?"

Biggs looked sheepish. "I'm not sure," he said, "but I *think* he's saying, 'You're sweet boys, and I love you with all my heart.' Sparks, maybe we'd better put him to bed until it wears off. And it might be well, gentlemen, never to—er—remind him of this episode."

So we did. And we won't. There's not much mother-love in the Old Man's right cross.

5

Well, after that you'd think the skipper might have developed a tolerance for Biggs, or at least an immunity to the more virulent of his eccentricities—and the chances are that he would have, except for the gangling one's downright genius for dipping his paddies in the potage.

Take, for instance, our first shuttle after the Hake fracas. We were Venus-bound, as usual. We had just cleared Luna, and I was taking final instructions from Joe Marlowe, when my plates blanked out and I was staring at a dull expanse of metal. So I said, "*Merdejo!*" which is Universal space lingo for a naughty word, and started looking for the trouble. I was on my hands and knees under the audio bank when the Old Man came into my cabin.

He asked, "You lose somethin', Sparks?"

"Two minutes ago," I told him. "If you see anything bright red and covered with hairy spikes, don't step on it. It's my temper."

Hanson sighed. "If my troubles," he declaimed, "was as mild as yours, I'd turn cartwheels from here to Venus. Sparks, you got a copy of the Space Manual here, ain't you?"

I nodded toward my bookcase. He found the reg book and leafed through it carefully. Finally he shook his head.

"It ain't here," he said glumly. "Are you sure this is the latest edition?"

"What are you looking for?" I asked.

"I was hopin'," he grumbled, "there might be a paragraph givin a space commander permission to boil his third mate in oil, or cut him into cube steaks an' feed him to the ship mice. But the waffle-fannies what wrote this book——"

I knew, then. It was the same old complaint. My lanky and incredibly omniscient friend, Lancelot Biggs, was back in the soup.

I said, "But, sweet comets, Cap, what's he done now? He hasn't had *time* to do much. We've just pulled out of Earth's H-layer."

"Which," rasped the skipper, "took thirty minutes. Or time enough for Mister Biggs to render hisself liable to homicide. I've taken plenty from that long-legged scarecrow. I got carpeted for platinum-chasin' on his say-so. I caressed pirates—which, by the way, if you ever tell anybody, Sparks, I'll massacre you for—an' I——"

"You also," I reminded him, "got your stripes saved on two occasions. Not to mention your bank roll and your life. Remember?"

"Nevertheless," said the skipper stiffly, "this time he's gone too far. He's been makin' eyes at my daughter."

"Your," I repeated slowly, "daughter?"

"You seen her. She come aboard at Long Island spaceport for the Venus shuttle." His space-gnarled, leathery face cracked into a grin that would have melted a glacier. "Pretty as a picture, don't you think? Some say she resembles me."

"Some people," I told him dazedly, "will say anything for a laugh." I was thinking about that girl. What a girl! Five and a half feet of cream and velvet, surmounted by hair the color of a Martian sunset. Eyes like blue haze over Venus, only alive with crinkly laughter. Sure, she resembled the skipper. They had the same number of arms and legs; they each had one nose and two eyes and two ears. But there the similarity ended. Their difference was that between a lumbering old freight-lugger like the *Saturn* and a modern, streamlined luxury liner. And I *do* mean streamlined.

The skipper said sourly, "Well, get the foolish look off your pan, Sparks, an' take a message from me to Mr. Biggs, on account of if I try to tell him in person, I'm liable to forget myself an' tear him into confetti. Tell him the next time I catch him tossin' goo-goo eyes at Diane, I'll give him a one-way ticket through the airlock. That's all."

And he left the cabin, fuming. I stared after him dreamily. I found myself doing something I haven't done since I was a kid: counting off my name with that of Diane Hanson. "Friendship, courtship, love, hate, marriage——"

It came out "friendship." I have my troubles.

After a while came a sound like a three-legged pelican doing the Martian fling on a tin roof, and Lancelot Biggs ambled into my cabin, eyes aglow, his unbelievable Adam's apple revolving like a photon in a cyclotron. I could see he was busting with the urge to spill the contents of his overflowing heart to me, but when he saw me sprawled beneath the audio bank he asked, "Something wrong, Sparks?"

I told him glumly, "This radio. I can't find what the hell ails it."

He came over beside me and looked. He jiggled a few wires, snapped switches, and succeeded in shunting a button off the feed-line cable. At last he said, "The trouble's in the audio plate, isn't it?"

"Looks as if. It's gone cold and I can't raise an image on it."

"These plates you use," he frowned, "are made of a seleno-aluminum alloy, aren't they?"

"Right," I told him. "And they're as dependable as a spacecomber's promissory note. Always going on the blink just when you need 'em most."

"That's what I thought." Biggs shifted his gawky length from one foot to the other, a sign of deep cogitation. Then, suddenly, "Listen, Sparks," he blurted, "I've been studying that very problem, and I think I see a way to put an end to space radio-transmission difficulties. They're using the wrong metal in the audio plates; that's the trouble. The seleno-aluminum alloy is all right for simple Earth-to-Luna transmission, but interplanetary distances demand a sturdier and at the same time more sensitive receptor."

"Like," I sniffed, "what? Comet tails?"

"Uranium," declared Biggs. "I've been experimenting, and I've discovered that uranium, no longer as rare and expensive as it was when audio plates were first invented, is the ideal metal."

"It's been nice," I said sarcastically, "seeing you, Mr. Biggs. Every schoolboy knows that mobile electrons account for the electrical conducting ability of metals. As the number of electrons per atom increases, metallic properties decrease; the metals become harder, more brittle, less ductile, and poorer conductors. A uranium audio plate, my friend, would be what we electronics experts call, in our highly technical patois, a first-class stinkeroo."

Biggs flushed. There was a hurt look in his eyes.

"Would you be convinced if I showed you?"

"St. Louis," I said.

"I beg your pardon?"

"I'm from there. It's in the state of Missouri." But I gave my somnolent set a glance of despair. "Still, this thing's not working. If you'd care to try out your new theory . . ."

"I've got some equipment in my quarters," he said delightedly. "I'll go get it." And he started toward the door.

"Wait a minute," I said. "I just remembered. Our beloved skipper left you a billet-doux. He told me to tell you to ipskay the assespay at the aughtertday."

Biggs frowned. "Latin?" he hazarded.

"Pig Latin," I told him, "and horse sense. Hanson says you've been wearing it on the sleeve for his gal, Diane. And if he sees it pounding in the open once more, he's going to chop it into mince-meat."

Biggs's face looked like a national holiday on the calendar. He spluttered fretfully, "But—but I *like* her, Sparks. And I believe she likes me."

"She'll revere your memory," I told him, "if you don't obey the Old Man's orders. When he delivered his manifesto he had granite in his iaw and mayhem in his eyes."

"But that's not fair!" protested Biggs. "After all, I'm an officer and——"

"And a gentleman," I finished wearily, "by courtesy of the U.S.S.A. Yeah, I know. But that's just strike two against you. The skipper doesn't have a lot of use for us Wranglers, you know. He graduated from the N.R.I. before there *was* such a thing as an Academy."

Perhaps I should explain that the rivalry between Earth's two great schools of astronavigation is something paralleled only by that which existed centuries ago between the United States' two military schools, the U.S.M.A. and the U.S.N.A.

The National Rocket Institute is the older college for spacemen. Originally designed for merchant-marine training, it became a natural "friendly foe" of the United States Spaceways Academy when that institution was founded fourteen years later.

Today there is a continuous companionable rivalry between graduates of the two schools; one subordinate, of course, to the routine of daily work, but still a feeling that flares strongly when each Earth autumn the football teams of the academies meet in their traditional grid battle.

They tell me that in the good old days of the twentieth century, American soldiers and sailors the world over used to gather about short-wave radios to hear the broadcast of their annual Army-Navy game. Well, it's that way—only more so—nowadays in space. Graduates of the N.R.I.—Rocketeers, we call 'em—listen cheek-to-jowl with Wranglers from the Spaceways Academy. There's a lot of groaning and a lot of cheering and a lot of drinking, and sometimes there's a sizable chunk of fisticuffing. It usually ends up with the representatives of the winning team standing treat and the grads of the losing academy weeping alcoholic threats about "next year."

Take our ship, for instance: the *Saturn*. I won my brevet at the Academy. So did Jim Henderson, the second mate, and Dick Todd, our new fourth, while Lancelot Biggs graduated just last year. Chief Engineer MacDougal, on the other hand, took his sheepskin from the

Rocketeers' school, as did Cap Hanson and Bob Martin, the first officer.

Which made another important reason why I should do something—and do it mighty fast—to get the *Saturn's* radio humming again. The annual Rocketeer-Wrangler grid fracas was to be broadcast just two days from now, and if the old grads from both schools couldn't hear the game, my scalp wouldn't be worth the price of a secondhand toupee.

Biggs wailed, "I have no objection to proper discipline, Sparks. But when Hanson tries to come between Diane and me——"

"So?" I said. "Mister Biggs, accept my apology. I underrated you. It's reached the 'Diane' stage already, has it?"

"It—it——" Biggs stammered into silence. Then, meekly, "Sparks, can you keep a secret?"

"Clam Donovan's the name," I told him.

"Then I'll tell you. This isn't the first time Diane and I have met. We knew each other before I came aboard the *Saturn*. As a matter of fact, I asked for this berth deliberately, hoping to gain her father's favor so we can get married."

Well, that explained a lot of things. I had often wondered why Lancelot Biggs, whose uncle is first vice-president of the Interplanetary Corporation, should have chosen to serve his junior officership on a wallowing, old-fashioned freighter like the *Saturn*. Now it all became clear.

I said, "So to put it poetically, Biggs, you're a little bit off your gravs for the gal, eh?"

"Little bit?" he repeated miserably. "Sparks, you'll never know."

"That's what *you* think," I told him, remembering how it came out "friendship."

"What?" Then he forgot his curiosity in a burst of—for him—uncommon petulance. "I'll not take this lying down, Sparks. I'll show the skipper I have a right to marry his daughter. I don't care if he is a graduate of the N.R.I. I'll show the leather-pussed old space cow——"

"Are you, by any chance," demanded an all-too-familiar voice, "referrin' to *me*, Mister Biggs?"

We both started. The skipper was standing in the doorway.

I said, "Pardon me, folks; I've got to see a guy about a shroud," and tried to slide past Cap Hanson to safety, but the Old Man froze me with a roar.

"Come back here, Sparks! I want you as witness." He turned to Biggs, whose face looked like a prism revolving in sunlight. "So I'm a leather-pussed old space cow, Mister Biggs?"

Biggs stammered, "I—I——"

"*What?*" Hanson's bellow raised a dozen decibels. "You impertinent young jackanapes! Did you hear him, Sparks? He said, 'Aye, aye!' Well, I'll show *you*——"

He extended a horny palm. "Your rocket, sir!"

Lancelot Biggs's lips paled. He reached up mechanically and unpinned from its place over his left breast the tiny gold replica of a rocket which is the insigne of a space officer. Hanson snatched it. In a decisive voice he said, "I'm markin' you down, Biggs, for insubordination, slander of a superior, conduct unbecomin' an officer, intent to malign an' injure, an' . . . Well, that'll do for now. Maybe I'll think of a few more things later on.

"To your quarters, Mister Biggs. An' consider yourself under arrest until further notice."

Biggs saluted, turned on his heel, and marched from the room. And it struck me, suddenly, that for once there was nothing laughable in the youngster's gangling exit. Oh, he stalked, yes. I've often kidded him about how much like a crab on stilts he looks. But now I felt sort of choky when I saw the pathetic dignity in the set of his shoulders, the proud way he strode away without a backward glance.

I guess I blew my own jets for a minute. My voice was more harsh than reproachful as I turned to the skipper. "Well, you certainly threw the book at him that time!"

But to my surprise, Cap Hanson was grinning like a cat in a cream

factory. He said, "Oh, come now, Sparks. You don't think I'm such an ogre as all that, do you?"

"You busted him," I accused. "You lifted his rocket and placed him under arrest. When the Corporation learns about it——"

"The Corporation," said the skipper, "ain't never goin' to hear about it. I ain't goin' to put this on the log. This is between you an' me and Lancelot Biggs. Don't you see, Sparks? I had to do somethin' to separate him an' Diane."

I did see. And suddenly I realized how completely I was caught in the middle by my liking for two swell guys, each of whom thought he was doing the right thing.

I said slowly, "I get it, Cap. But are you sure you're not making a mistake? Maybe Biggs and your daughter really do love each other."

Cap Hanson said soberly, "That's just what I'm afraid of. Put yourself in my place, Sparks. How would *you* like to have a grandson that looked like Lancelot Biggs?"

I don't know. He had a point there. . . .

Well, that happened the first day out of Long Island spaceport. I spent the working hours of the next two days trying to get that confounded instrument of mine operating; I spent my off hours shuttling back and forth between the bridge and Biggs's cabin.

I had the pleasure—and I *do* mean pleasure—of meeting Diane Hanson. She was a rag, a bone of contention, and a hunk of heredity, but if she'd snapped her fingers, I would have leaped out the space-lock and brought her back a fistful of galaxies. She had a voice that made me feel like my backbone was made of sponge rubber, and when my eyes met hers, my knees went all wobbly.

But her heart was in durance vile with Biggs, and she didn't care who knew it—except the Old Man. She asked me, "He's all right, Sparks? He's comfortable?"

"Oh, he's comfortable enough," I told her. "But he's as fretful as a squirrel in a petrified forest. He's been pacing his room so much that his shadow's worn a groove in the bulkhead."

She said wistfully, "If Dad would only be reasonable. Sparks, do you think if I told him how I feel about Lancelot——"

I shuddered.

"Don't mention it! Don't even *think* of it! If your old man ever guessed this affair was serious, Biggs's life wouldn't be worth two hoots in a hurricane." I forced a grin I didn't believe in myself. "But cheer up, Diane. Lancelot will find a way out of this trouble."

"You really think so, Sparks?" she said hopefully.

"Sure," I told her. And her smile was worth the black mark the celestial recorder entered against my name for that little white whopper. . . .

6

So finally there we were, seven of us, in my radio cabin on the fateful day. Six of us were scowling, and me—I was the far from lucky seventh—I was sweating buckets half water and half blood. Because it was the day, and darn near the hour, of the big game back on Earth—and my radio *still* was as voluble as a deaf-mute in a vacuum.

Martin was there, and Chief MacDougal, and Todd and Flannigan and—oh shucks!—every one of us who had studied at either of the two academies. And Cap Hanson was there. He was very much there. He was howling ghastly threats in my ears, the mildest of which was that if I didn't have the radio repaired within the next minute, or preferably sooner, he'd personally tattoo his initials on my forehead with a drill press.

I squawked, "Good golly, I'm doing the best I can! Don't you think *I* want to hear this game as much as you do? Maybe more. Because the Wranglers are going to beat the bejesus out of you Rocketeers today, anyhow."

Cap raged, "What's that? Nonsense!" But it took some of the blast out of his tubes, because he knew it was true. The Spaceways Academy team was strongly favored over the eleven from the N.R.I., having so far breezed through the season undefeated, while the Rocketeers had

lost to Army and Notre Dame and had been tied by Yale. "Beat the Rocketeers? Why, last year——"

"That," Lieutenant Dick Todd taunted him, "was last year, Skipper. You beat us then, yes. But this year the shoe's on the other foot."

"Well, anyhow," howled the Old Man, "my shoe's goin' to be you-know-where, Sparks, if you don't get that damn radio talkin'."

I stood up and stripped off my rubber gloves. I said, "I've done everything I know how. I've had the thing apart twice and put it together again. It won't work—and for one simple reason. The seleno-aluminum plate is shot."

Chief MacDougal said, "Then get ye a new one, lad."

"Sure. As soon," I told him, "as we cradle in Sun City spaceport."

The skipper looked like he'd bitten into an apple and found a worm. "You mean we ain't goin' to hear the game?"

"That's exactly what I . . ." Then I paused. "Wait a minute. There's a faint possibility we might. If his invention really works. He has a new type of unit in his quarters. But he'll have to install it. I don't know how."

"He?" yelled the Old Man. "Who? The man in the moon?"

"The man in the doghouse," I corrected. "Biggs."

"Biggs!" The skipper's look changed. Now he looked like a man who'd bitten into an apple and found *half* a worm. But he turned to Dick Todd. "Go get him, Mister Todd," he ordered.

The fourth mate scampered away. We all watched the clock. Todd returned, bringing Biggs with him. The skipper glared daggers at his junior officer.

"I hear you've a brain child, Mister Biggs," he said caustically. "I distrust it. It may turn out to be a monster, like its father. But this ain't no time to be choosy. Attach it. An' while you're doin' so, be kind enough to look at what you're doin' instead of what you're wooin'."

Lancelot Biggs stood very, very still.

"Well," roared the Old Man, "get goin'."

Lancelot Biggs smiled a faint, thin smile.

"For," he said, "a price, Captain."

"A price!" Hanson's roar raised the ceiling an inch. "Lieutenant, you're not tryin' to dicker with me?"

"I'm not trying," corrected Biggs. "I'm dickering. For a price, I'll attach my new plate to the radio. Further, I will absolutely guarantee its operation."

"You—you insolent young pup!" spluttered the skipper. "Todd, Martin—throw him in irons! No, leave him be, you damn fools! What's your price, Biggs? You can't have her!"

"Her?" said Biggs innocently. "I don't know what you're talking about, Captain. My price is—my rocket."

Cap Hanson looked at the faces of the fretful audience around him. He knew when he was stalemated. He said, "Well . . ." and reached into his pocket.

Biggs pinned the tiny golden emblem where it belonged. I never saw a man look happier. Then he said quietly, "Very well, gentlemen. Now, Sparks, if you'll lend me a hand . . ."

The uranium plate worked. Two minutes later, as I tied in the positive cable, dancing light began to play over the tubes, the galvanometer skipped gaily, and current began to hum once again. I yelled, "Biggs, you're terrific!" and reached for the dials. But Biggs's hand stayed mine.

"Not there, Sparks. Higher. The ultra-short-wave band, I believe. About one over fifty thousand on the Ångstrom vernier."

Cap Hanson rasped, "Sparks knows how to operate a radio without your help, Mr. Biggs."

"Not *this* radio," shrugged the lanky lieutenant. "This plate is different from the old type. *Considerably* different."

I thought I detected a faint note of amusement in his voice. But the thought vanished as swiftly as it came, for at that instant my fingers found the proper spot. There was a moment of whining superhet, then:

"—a great day and a great crowd, folks!" came an excited voice.

"And now they're out of the huddle. The Wranglers have the ball on their own eighteen-yard line, second and ten to go——"

"That's it!" roared Cap Hanson exuberantly. "By golly, that's it! Biggs, maybe you ain't the dope I think you are!"

But the surprises weren't over yet. You remember I told you the Wranglers were strongly favored to take the Rocketeers down the ramps? Well, this was just another proof that in a traditional battle anything can happen—and usually does.

The radio had been on barely three minutes when the Rocketeers blocked a Wrangler kick, fell on it, and took possession on the Wrangler nine-yard line. In two power plays the eleven from Cap Hanson's academy had plunged over for a touchdown. Seconds later they made the conversion, and the score was 7-0 for the supposed underdogs.

The faces around that room were a sight. Hanson and Martin and MacDougal looked like bunnies in a carrot patch; those of us who acknowledge the Academy as our Alma Mammy could have preserved cucumbers with our smiles. The expression on Lancelot Biggs's face defied description. He looked faintly startled, faintly pleased, like a little boy shouting echoes against a mountainside.

Cap Hanson groped in his hip pocket, hauled forth a crumpled wad of planetary union credits.

"Well, you broken-down Wranglers? Any of you like to lay a few creds on your team making a comeback?"

He got plenty of takers. After all, one touchdown isn't a football game, and the Wranglers *were* favored to win. I shelled out to the extent of thirty credits; Todd staked a few. Chief MacDougal unbuttoned his ancient wallet, shooed away the moths, and backed the Rocketeers with some of his own hoardings, after demanding three-to-one odds.

And the game went on.

The first quarter ended, amazingly, with the Rocketeers still leading by a score of 7-0. In the second quarter Cap Hanson, overflowing

with the milk of human I-told-you-so, turned to Lancelot Biggs and crowed, "Well, Mister Biggs, I notice *you're* careful not to lay any bets on that team of yours."

Biggs, whose eyes had been fastened hungrily on a girl in that room—guess which one?—looked embarrassed.

"I—I don't know whether I should, Captain."

Hanson snorted. "Just what I might have expected of a Wrangler. No guts!"

MacDougal shushed him suddenly. "Quiet, Skipper! Somethin's goin' on!"

Something was, indeed. The radio announcer was in a dither. "—and it looks bad for the Wranglers, folks. The Rocketeers' quick kick has them on their own one-yard line. Now they're lining up to punt out of trouble, and—— Wait a minute! Here comes a substitute from the Wrangler bench. We don't have time to get you his name, but he's number 36. He's going in at quarterback for O'Toole——"

Hanson gibed, "Well, Biggs?"

The announcer continued, "Number 36 is in at quarterback, folks. Now he's calling signals. There's the snapback. The new man is going to kick. No, he's going to pass. No, he's going to run. No, he's fumbled!

"There's a pile-up behind the goal posts. They're unscrambling the players. And . . . it's a touchdown for the Rocketeers, folks! The score is 13-0!"

Hanson let loose a roar of delight. "Again! I knew it! Good thing you *didn't* bet, Biggs."

Then, astonishingly, Lancelot Biggs spoke up.

"How much would you like to wager, Captain?"

"How much?" Hanson looked stunned. "Every cred in my poke, Lieutenant. Two hundred and fifty."

And: "I'll take that bet," said Biggs.

I moseyed to his side and gave him a swift elbow in the ribs. I hissed, "Don't be a sap, Biggs. If you must bet, make him give you odds."

But I spoke too late. The bet had already been placed in the hands of a neutral party, assistant engineer Mike Flannigan. Now, a new tense-ness gripping all of us, we listened to the remainder of the broadcast.

In the third quarter Henderson got out the crying towel. "Gosh, Sparks," he mourned to me, "what's the matter with our boys? This is a slaughter, just like last year."

Because the N.R.I. had scored again, this time on a smooth sixty-yard forward. The three Rocketeers, literally swooning with delight, were by this time offering fantastic odds to any Wrangler who would bet. But we had all pulled in our horns. All, that is, but one man. Third Mate Lancelot Biggs. In a moment of lull he turned to the skipper.

"Skipper," he said, "I have no more credits, but I'd like to wager for another stake."

Hanson chuckled. "Your shirt won't fit me, Biggs."

"I'll bet you," said Biggs thoughtfully, "my space claim against the privilege of navigating the next three shuttles that the Wranglers beat the Rocketeers this year."

We all gasped. They were *real* stakes. Every space officer is granted by the Spaceways Commission a claim consisting of property rights in and to all unexplored areas of a designated sector. He may explore this sector himself, after he has served his trick, or he may delegate the search to professional prospectors. In either case a substantial percentage of all ores, precious stones, and what not found in his claim belong to him. Many a space officer has found himself fabulously rich overnight when his sector turned out to contain rock diamond detritus, or granules of meteoric ore.

On the other hand, Biggs was asking a great privilege. Before a space officer can win his master's ticket he must make five complete planet-to-planet astrogations, including take-offs and landings. Skip-pers are chary of granting permission on these, often making junior officers wait years to earn their master's rating.

So Biggs was really gunning for big stakes. But the odds were greatly against him. I tried to cool him down. I said, "Biggs, don't be an idiot. This game is in the bag for the Rocketeers."

But only half the words had left my lips when Cap Hanson yelled stridently, "*Done!* Gentlemen, I call on you to witness that wager!" And he rubbed his paws together like a raccoon eyeing a bowl of honey.

Twenty to nothing. That was the score then, and it was the score fifteen minutes later when, with but seven more minutes remaining in the annual fracas, Lancelot Biggs went stark, raving mad.

Now, the Old Man contributed to that madness. I must confess his glee annoyed me. I can take a licking as well as the next man, but I hate like hell to have someone rub it in. And that's what the skipper was doing. As the minutes ticked by and the Rocketeers' margin loomed increasingly more insurmountable, he first taunted us Wranglers, then insulted us by offering ridiculous odds against our winning, and finally accused us all of lacking sportsmanship.

Biggs, standing carefully aloof from Diane in order not to rouse the skipper's wrath, had a strange pallor on his cheeks. Or not so strange, maybe. It's hard to stand by and watch everything you possess slipping down the skids.

Cap didn't make things any easier for him. Every so often the Old Man would bend over, slap his thigh, and howl, "Anything more you'd like to bet, Mister Biggs? Whoops! I'm a space-bitten son of Ceres if this ain't the most fun I ever had!"

And then Lancelot Biggs jolted out of his curious stupor. He said, "Yes, Captain. I *do* have something else to bet. If"—there was a dreamy look in his eyes—"if you'd be kind enough to step into the corridor with me? You and Sparks, please?"

Good old Sparks; witness extraordinary. But don't think it gave me any pleasure to witness this example of sheer insanity. As we moved through the doorway I pleaded with Biggs, "Lance, for gosh sakes, take it easy. Haven't you lost enough already?"

The glance he turned to me was mildly amused. He whispered swiftly, "It's all right, Sparks. I know what I'm doing." Then, outside, to the skipper, "Captain Hanson, I have only one more thing of potential value left in the world. The patent rights to my new inven-

tion, the practicability of which you have witnessed today: the uranium audio plate. That will be my share of the wager."

Hanson said dubiously, "I don't know . . ." To me, "Sparks, is it worth anything?"

I nodded somberly.

"In my estimation," I told him, "it's worth at least a quarter of a million credits. It's the first deep-space receptor plate I've ever seen that really works. Didn't you notice we're not even picking up static?"

The Old Man nodded. "Very well. An' my stake?"

Biggs said boldly, "Your permission to continue seeing your daughter. And—if she'll have me—to marry her."

Something popped. For a minute I thought it was the Old Man's fuses, but it was only the top of his head rising two feet.

"*What!* I thought you understood——" Then a cagey grin touched his lips. "Just a minute," he said craftily. "That ought to work both ways. Do you mean that if you lose you'll never try to see Diane again?"

I wanted to shout "No!" so bad I could taste it. But I was just the party of the third part. Biggs's reply was the opposite.

"Yes," he said.

I groaned. Love's young dream was twenty tremendous points away from a rude awakening.

Let's get the agony over with. We returned to a radio room full of madmen. For in our absence the Rocketeers had intercepted a desperate Wrangler pass, and the score was now 26-0, just one point different from the licking they had given the U.S.S.A. boys last year. As we listened glumly they kicked the extra point.

And that was about all. Three plays after the next kickoff a gun boomed, the crowd screamed, and the announcer howled "—and there's the end of the game, folks! The Rocketeers win a great ball game, 27-0. This broadcast came to you through the courtesy of the American Robot Corporation, makers of the world-famous 'Silent

Servants.' Why be lonely? A robot in the home is a constant companion——"

Chief MacDougal squealed tightfisted glee. His palm waved simultaneously beneath the noses of three sorrowful Wranglers—including me. "Pay up!" he demanded. "Pay up, ye benighted rascals!"

And Cap Hanson was one huge smirk on legs. To Biggs he said, triumphantly, "Well, Lieutenant, I hope you've learned a lesson today. Two hundred and fifty credits, if you please. I'm minded to be easy on you. I'll not accept your space claim, my lad. But that third bet"—he beamed on Diane—"that one I'll hold you to. And now——"

Biggs moved to the radio bank. And as he moved, he spoke.

"Yes. And now," he said, "I think you should all hear this."

He twisted the dial. There was a moment of howling static, then came a voice—clear, crisp, enthusiastic: "—four minutes of playing time remaining, folks, and the Rocketeers have the ball. But it won't do them any good. Even if they *do* score, the result will be the same. They can't overcome that tremendous Wrangler lead, 33-6——"

Consternation and chaos! The room became as noisy as a well-populated tomb. And out of the stricken silence came the faint, thin voice of the skipper demanding, "What—what does this mean?"

Biggs boomed triumphantly, "It means, Captain, that you've lost your bets. You'll remember that all our wagers were based on the result of *this* year's game—the game to which you are now listening.

"It's too bad human memories are so brief. Otherwise some of you gentlemen might have recognized the astonishing similarity of the broadcast we've just listened to with that of *last* year's game. Which it was!"

Cap Hanson bellowed, "*Last* year's game? But that's impossible! You can't tune in old sound waves!"

"I can't," agreed Biggs pleasantly, "but my new invention can. You see, in the course of my experiments I discovered that uranium has a most peculiar property. Being highly radioactive, it has the strange ability to delay, almost indefinitely, the passage of electrical impulses traveling through it.

"Thus, under certain circumstances—in this case, Sparks, the fact that it was activated in the ultra-short-wave field—it can be used as a 'time-speech trap' to recapture sound waves released into the ether long ago.

"When Earth's scientists have further investigated this phenomenon, I predict some amazing results. In the near future we may be able to 'listen' once again to the voices of our ancestors 'way back in the Elizabethan Age, the Machine Age, or the era of the Social Revolution. But meanwhile"—he grinned amiably—"meanwhile you have just heard a broadcast of last year's Rocketeer-Wrangler football game. *This* year's is just concluding!"

And so it was. With the Wranglers out in front by a score of 33-6. The outraged screams of Chief Engineer MacDougal will haunt me the rest of my days. . . .

Some time later there were just four of us in the cabin: Biggs, Diane, the skipper, and me. The Old Man looked like a Saint Bernard who has lost his brandy cask. He said, "Dadblast you, Biggs, you ain't goin' to hold me to them bets, are you? When you knew all the time——"

Biggs grinned.

"You were magnanimous with me, Skipper. I'll be the same with you. Keep your money. And I'll settle for two landings. But the third bet—well, you know the old saying."

"I know," mourned the captain, "plenty of 'em. Which one do you mean?"

"'All's fair,'" quoted Biggs softly, "'in love and . . .' We'll skip the other part. Diane, honey——"

One thing about the skipper, he knows when he's licked. He forced a grin to his lips. And, do you know, when he'd had a look at the light in Diane's eyes as she moved into the circle of Biggs's arms, that grin began to look almost natural. He gave me the high sign, and we started to leave.

But I had one more question. In the doorway I turned and asked,

"Biggs, come clean. You didn't know that thing was going to work that way, did you?"

He frowned gently. "I didn't *know*. I suspected."

"But when," I insisted, "did you find out for sure? Your memory's no better than mine. Did you remember the events of last year's game?"

"Some of them," he said. "I caught on when I heard that episode about the awkward quarterback. The substitute, number 36. Remember?"

"The clumsy galoot who fumbled in the end zone and gave the Rocketeers a touchdown? Damn right I do. That dope should have been drawn and quartered. But how did you remember *him*?"

Biggs smiled wanly.

"I left the Academy only last year, Sparks," he said. "And the football team. *I* was number 36!"

Then he turned to Diane, and she turned to him, and . . . Oh hell! I know when I'm not wanted.

7

I'll give the Old Man credit for one thing—he's a good sport. Having promised not to interfere again between Diane and Biggs, he kept his word. What's more, when we got to Sun City and learned that Bob Martin had successfully passed his master's exam and was to take immediate command of a skipperless tanker cradled there, Hanson popped through with a pre-engagement present that pleased the lovebirds more than all the sterling pickle forks and crocheted tea cozies they were fated to receive afterward. He stifled his personal feelings—with how great an effort I'll never know—and recommended Biggs to fill the berth left vacant by Henderson's promotion.

So Henderson went to first, Biggs to second, Todd to third—and of course I was left at home, as usual, not being eligible for any of this pussy-wants-a-corner advancement. Nor wanting it. Ohm, sweet ohm is my theme song, and I'll leave the management of spaceships to others.

But even a bug-pounder has his problems. We finished taking on cargo at Sun City, and I went to my cabin to take firing orders from the spaceport clearance officer. I plugged in the audio and stared into the familiar face of Sam Warriner.

I said, "Freight-lugger *Saturn* preparing to lift gravs, Sam. Standing by for the O.Q."

His jaw dropped like a barometer in a cyclone. He gasped, "You, Donovan? And the *Saturn*? What in blue space are *you* doing in port?"

"Don't look now," I advised him, "but we've been here since day before yesterday. You and me lifted elbows together last night at the Cosmic Bar, remember?"

"Are you crazy?" he howled. "The last I heard of you, Cap Hanson was running the *Saturn* through the asteroid belt on some sort of cockeyed transmutation experiment. When did you get back? And how did you make out?"

"Damn," I groaned, "and double-damn!" I knew what had happened. It was that confounded new invention of Lancelot Biggs's, the uranium audio plate which, when activated in low wave lengths, became what you might call a "time-speech trap." I was talking to Warriner not as he was *now*, but as he had been three months ago.

I said a naughty word, twisted the dials, picked up Warriner in the current time level, got a take-off order and relayed it to the bridge. Pretty soon a bell dinged, another one donged, and a slow, humming vibration tingled through the ship as our hypatomics went into action. I steadied myself for the lift . . .

And *whammo!* The stars exploded and seven mules let me have it in the synonym, and there I was on the ceiling, squawking like a stuck pig and scrambling to get down to my control banks. I didn't scramble long. For suddenly the artificial gravs took hold and I made a perfect three-point landing—nose, knees, and navel—on the floor.

I got up gingerly. No arms or legs fell off when I shook myself, so I started for the bridge to ask Cap Hanson whyfor. But just as I reached the door it swung open and in came the skipper himself. He was swearing with the dull, unemotional fluency of a man who has abandoned hope.

I knew then. I asked, "Biggs, Skipper?"

He moaned. "Talk to me, Sparks. Talk quick, an' make it interestin'. I promised Diane I wouldn't commit no mayhems on him, but I'm weakenin'. I keep thinkin' how I'd like to——"

"Easy, Cap," I soothed. "Someday he'll choke to death on his own Adam's apple. But how come Biggs made the take-off? I know he's been promoted to second mate on this barge, but——"

Hanson snapped, "Don't call this crate a barge!" Then grudgingly he added, "Well, Sparks, I lost that bet with Biggs on the last trip, an' he won the right to navigate the next three Venus-to-Earth shuttles. So"—he shrugged—"he's handlin' the controls."

"Maltreating," I corrected, "is the word. I like Lancelot Biggs, Skipper. But I'd as soon ride a Martian firebird bareback as hop graves with him in the turret."

Just then the door opened again, and this time in came Diane, followed by our gawky genius, Lancelot Biggs. With a prideful sidelong glance at her fiancé, the skipper's gal demanded, "Wasn't it wonderful, Dad? Lancelot made that take-off all by himself. Wasn't it something?"

Hanson couldn't answer. I said thoughtfully, "Well, it was *something*. I haven't figured out *what* yet. When I get the curdles out of my brain——"

Biggs said apologetically, "I'm sorry if I caused you any inconvenience, Sparks. I was trying out a new theory. Instead of using full blasts to lift us clear of Sun City spaceport, I used a single jet and reversed the ship's gravity. That gave us automatic repulsion from the planet and——"

"*What?*" roared the skipper. "Look here, Mr. Biggs—one more insane stunt like that an' I'll have you cashiered, bet or no bet! I been hoppin' graves for more than thirty years, an' you can take my word for it, them nonsensical notions don't work. They only waste fuel an'——"

"But," interjected Biggs, "I just checked with the engine room, sir. They complained about the moment of weightlessness, but admitted we'd saved approximately sixty per cent of our normal escape fuel."

"The hell you say!" Cap Hanson's jaw played tag with his wishbone. Then he gathered the tatters of his self-respect about him. "Nevertheless an' howsoever," he proclaimed, "the stunt's no good."

You'll probably discover we're a couple degrees off course an' behind schedule——"

Just at that moment the audio buzzed. I plugged in and connected Dick Todd, calling from the bridge. Our new third said genially, "Sparks, tell Biggs I just finished checking the course revision, will you? And tell him that little trick of his was a whiz. The tape shows we've gained two running hours on normal escape, and we're point oh-oh-oh on course."

The violent sound was Cap Hanson and his dignity slamming the door behind them. . . .

After he left, I cleared my throat a couple of times in the general direction of Diane and Biggs, who apparently thought my cabin was a pet shop. Then I got a break. The bug started chattering. I moved to the control board and said, "So solly, folks. You go now? Me makee talk-talk on tellumfoam. Goom-by!"

So they left, clinging to each other like a pair of toasted marshmallows, and I cut in to hear the finger of Joe Marlowe buzzing from Lunar III. Marlowe greeted me with a "*Buno, nupaso!*" which is Universal for "Hi, picklepuSS!"

I called him something unprintable, and then, the amenities disposed of, we got down to business. "How's that dilapidated old crate of yours perking along, pal?" he asked.

"Fine," I told him. "We've got genius at the helm, romance on the bridge, and a cargo of Venusian pineapples in the hold. Which reminds me, how's *your* girl?"

"Comets to you, ducky," he snapped back. "This is serious. I wanted to warn you that you'd better make a fast shuttle. There's a prize dangling on it."

"Come again?"

"Word just leaked through from the home office. The government has decided to allot its freight-express transport to the company whose next normal Venus-to-Earth run is made in the shortest time. It's a blind test, and nobody is supposed to know anything about it. The

Saturn was clocked when it pulled out of Sun City, and its running time will be checked against that of other competing liners."

I squawked, "Great fires of Fomalhaut, Joe, that's not fair! The *Saturn's* the slowest can the Corporation owns. Why don't they let us run the *Ceres* or the *Antigone* on a test flight?"

"A wee matter of politics, bright-eyes," returned Marlowe wearily. "Politics—spelled g-r-a-f-t. Someone with a pinkie in the pastry wants the Cosmos Company to get the contract. Their crack liner, the *Slipstream*, is leaving Sun City tonight. All you have to do is beat her into Long Island by about ten hours."

"Is that all?" I lamented. "They don't expect us to stop on the way and take on a cargo of comet dust? Hell's bells, Joe——"

He interrupted my etheric sobs with a hasty, "Somebody breaking in on our band, guy. Got to go now. Best of luck!" His sign-off dropped the needle, and I was staring at a killed connection.

So there we were, out on a limb, competing against the fastest freighter in space for the fattest prize since the government lotteried off the Fort Knox hoardings. I worried two new wrinkles into my brow, then went below to find Cap Hanson. He heard my complaint with ominous calm. When I had finished he said, almost cheerfully, "Tough, ain't it?"

I stared at him. "Skipper, we've got to figure out a way to hobble home first. That government contract carries a profit of at least three million credits a year. If we lose it for the Corporation, they'll lash the whole kit and caboodle of us to our stern firing jets."

He grinned ghoulishly and held out two hairy paws for my inspection. "You see them hands, Sparks?"

"What do you want me to do?" I asked. "Read your palm?"

"Them hands," he persisted, "is as clean as a pipe line on Pallas. Take a look at the log. Mister Lancelot Biggs is writ down as the navigatin' officer for this trip. Which relieves me of all an' sundry obligations."

I said, "But, Skipper, *you've* had the years of experience. In an emergency like this——"

He shook his head. "Sparks, listen to common sense. We ain't got the chance of a snowman on Mercury of beatin' the *Slipstream* to Earth. I'm perfectly satisfied to let Mr. Biggs do the worryin'. An' if the Corporation's thickheaded enough to want to blame anybody for our failure, I'm content to let him have *that* honor too."

He grinned again.

"Maybe after this," he said, "Biggs won't be quite so cocky. An' maybe Diane won't think he's the hot-shot he lets on to be."

Which was absolutely all the skipper would say. I wasted words for five more minutes, then went to find Lancelot Biggs.

He wasn't on the bridge. He wasn't in the stand-by control cabin or in the mess hall or in the holds. Nor was he in the engine room. I found him, finally, in the ship's library, sprawled at full length on a divan, holding a book in one hand and waving the other in the air, keeping time to the poem he was reading aloud.

When I entered he looked up and said, "Hello, Sparks. You're just in time to hear something lovely: this space epic of the Venusian poet laureate, Hjor Kandri. It's called *Alas, Infinity!* Listen——"

He read:

*"Comes then the quietude of endless void;
The heart seeks out and breathless listens to
Magnificent monotonies of space . . ."*

Monotonies, your eye! There are times when I'd trade all my flight hours for a nice quiet padded cell out somewhere beyond Pluto. I said, "Listen, Mr. Biggs——"

"You know, Sparks," he said dreamily, "sometimes I wonder if the artist has not more true discernment than the scientist. Since I met Diane and she introduced me to the symphonic beauties of poetry, I've begun to see things in an entirely new light. The never-ending wonder of the Saturnian rings, for instance. The thrilling mystery of space vacuoles——"

"Speaking of vacuoles," I interrupted, "me and you and about twenty other mariners from the good ship *Saturn* are going to be in one pretty soon—if by vacuole you mean a hole. Because——"

And I told him. Misery being a gregarious soul, it did my heart good to see the way he jolted upright from his horizontal position.

"But, Sparks," he quavered, "that's unfair!"

"So," I told him, "is fox hunting. The fox always gets it in the end. The point is, what are we going to do about it?"

"Do?" he piped. "We're going to do plenty. Come on!"

We went to the engine room. There Chief Engineer MacDougal heard Biggs's plea with granite aplomb, then slowly shook his head from side to side.

"Ye're no suggestin', Mr. Biggs," he said, "that I try to dooble the *Saturn's* speed?"

"You must!"

MacDougal grinned mirthlessly, nodding his grizzled head to designate the laboring, old-fashioned hypatomics in the firing room. "Yon motors," he said, "is calculated to carry us from Venus to Earth in ten days. By babyin' 'em, we can make it in nine. By strainin' 'em, we can maybe make it in eight. But if we force 'em beyond that limit"—he shook his head—"we'll arrive at Long Island spaceport as a bonny conglomeration of assorted bolts, plates, an' rivets.

"Ye wouldna like that, Mr. Biggs," he appended speculatively.

We went to the bridge, then, and discussed the problem with our new first officer, Jim Henderson. The mate had plenty of ideas, none of them good. Finally I said, "Well, Mr. Biggs, I'm afraid it's over *my* head. I'd better get back to my cabin in case any messages come through."

He didn't even hear me. He was pacing the floor, moaning softly from time to time and scraping his scalp with frenzied fingers.

All of which took place our first day out of Sun City. It was a bad beginning, and the situation rapidly got worse. At 24:00 on the dot, S.C.T., I got a flash from a ham operator on Venus advising me that

the *Slipstream* had just lifted gravs. Which meant the race was on. Race! Am I kidding?

Eight hours later our perilens picked up the *Slipstream*. She was shearing a swath through space like a silver arrow. And you can bet your bottom buck that her skipper knew how important this trip was. I was asleep when she whizzed by us, but my relief man woke me up to show me the message her C.O. had sent us. It said, "Greetings, goats. Want a tow?"

It wouldn't have been a bad idea at that. . . .

Well, MacDougal and his black gang were working themselves blue, and to give the *Saturn* her due, I'll concede that the old scow was wallowing along in handsome style. We logged a trifle over three million miles in the next twenty-four hours—which is about five hundred thousand over par for our crate.

We did it with music, too. The plates were clinking and straining, the jets were hissing like a nestful of outraged rattlers, and once or twice, when our deflectors shunted off fragments of meteoric matter, I thought we were going to move out to make room for some interstellar cold storage.

So what? The *Slipstream*, traveling at double our speed, knocked off a cool six million miles that same day. Oh, if ever a "race" was in the bag, that one was.

The second day was another dose of the same medicine. Biggs insisted that we maintain our forced speed, although MacDougal warned him bluntly it was dangerous.

"I been twenty years in space, Mr. Biggs," the chief advised him sternly. "I look forward to another score. But I ha' no desire whatsoever to spend that time whiskin' along the spaceways as a cinder."

Lancelot Biggs said desperately, "But we've got to stay in there and fight, Chief. Anything can happen. They may have a breakdown——"

There was a pathetic intensity in his voice. I found myself thinking that Lancelot Biggs, screwy as he seemed at times, had plenty of abdomen stuffings. MacDougal must have felt the same way, for he said grudgingly, "Verra well, then. But——"

So for the third day in succession our motors churned like a bevy of Martian canal-kitties taking their morning dunk. And for the third day in succession the Cosmos Company's superfreighter proceeded to show us the winking red dot of her rapidly disappearing jets.

And then it happened. . . .

8

I was in my cabin, thoughtfully scanning the want ads in *Spaceways Weekly*, when all of a sudden my bug started chattering. I plugged in and caught a frantic warning from the radioman on the *Slipstream*.

"Calling IPS *Saturn*! Calling IPS *Saturn*! *Saturn*, stand clear for back-drag. Stand clear for back-drag."

I jammed a "stand clear" warning to the bridge, then shot a hasty query back at the *Slipstream* operator.

"*Saturn* standing clear, pal. What makes?"

"Trouble on declension line sixteen-oh-four. Stay off our trajectory. We're running into a vac——"

Then abruptly the needle zeroed and I was hammering a futile key at an operator who could no longer communicate with me. But I knew what had happened. Our streamlined rival had nosed into a space vacuole.

By this time the *Saturn* was creaking and groaning like an insomniac on a coil-spring mattress, bells were raising bedlam through the runways, and the forward blast jets were rousing an unholy din as they bounced us off trajectory. Footsteps pounded up the gangway, the door opened, and I had visitors. Cap Hanson, Diane, and our acting skipper, Lancelot Biggs. They all hollered at once.

"What is it, Sparks?"

"Vacuole," I snapped. "The *Slipstream* broke into one. They're preparing for the back-drag."

"Vacuole?" Diane repeated. "What's that, Lancelot?"

Biggs said, "A hole in space, Diane. The exact nature has never been accurately determined. All we know is that space, being subject to material warp, sometimes develops empty spots of hyperspace within itself. These areas correspond roughly to the air pockets encountered by planetary aviators; they are even more similar to the curious 'sacs' found in protoplasmic substances like amoebae."

Diane faltered, "Holes in space? Are they dangerous?"

"Apparently not," I told her. "Lots of spaceships have tumbled into them, and in every case the ships have eventually worked their way out. But sometimes they're carried far off course. That's why the *Slipstream* has to back-drag, and do it fast." I grinned. "Sometime I'll draw you a picture of a vacuole. It looks pretty. A hole full of emptiness in nothing."

Cap Hanson had been peering through the perilems in my cabin. Now he let loose a cry.

"I seen her! I seen her stern jets flickerin' for a moment. Here she—— Nope! She's in again."

Biggs explained to the girl, "She's trying to back out. The trouble is, she has to reverse engines and build up an acceleration to match that at which she entered. Which means——"

"Which means," I interjected hopefully, "we haven't lost this race yet. When the *Slipstream* busts clear of that vacuole she's going to be tearing hell-for-leather back toward Venus. Mr. Biggs, if we can by-pass that vacuole and keep going, we might beat them yet!"

Still at the perilems, Cap Hanson now yelled, "By golly, I just seen her again. But you ought to see where she is. That vacuole's a rip-snorter. Tearin' like a fool."

"Which way?" asked Biggs.

"Starboard declension. You never seen *nothin'* as fast as that there gallopin' hole. Hey, here comes the old *Slipstream*! Whee! Nice job, Skipper!"

We all saw the *Slipstream* then. It came blasting back toward us like a ray from a pierce-gun. I couldn't help admiring the good sportsmanship in Cap Hanson which, even though he had seen his competitor's ship break free of the bondage that might have cost it the race, caused him to commend the navigator's skill.

Now the skipper turned to Lancelot Biggs, and there was battle light in his eyes. "Mr. Biggs, this gives us a fightin' chance to win this race. The *Slipstream* will be a full day makin' up for lost time. I'll relieve you of your command now——"

But there was a strange, thoughtful look on Biggs's face. He asked slowly, "Did you say *starboard*, Skipper?"

"What's that? Yes, I said *starboard*. Well, did you hear me, Mr. Biggs? I've decided not to be hard on you. I'll relieve you of your command now, an' take the *Saturn* into port——"

"No!" said Lancelot Biggs.

Before Cap Hanson had stopped gasping—I decided afterward it was a gasp, though at first I thought it was apoplexy—Biggs stepped to the intercom and buzzed the bridge. To the first he snapped, "Mister Mate, please plot new co-ordinates to intersect with the vacuole as soon as possible."

Henderson gasped and I gasped and Diane gasped and the skipper was still gasping, and Lancelot Biggs turned to face us, breathing a little hard, but with a look of curious determination on his face.

"I know you all think I'm crazy," he said. "Well, maybe I am. But I'm *not* going to surrender my command, and I *am* going to see this race through in the way that seems most fitting to me."

Then he gulped, turned, and gangled from the room. Hanson came out of his stupor with a roar that blew ripples in our eyebrows.

"What in blue space does he think he's goin' to do? 'Intersect the vacuole'? The crazy idiot! Does he mean to throw away the advantage we've gained?"

"Don't ask me," I said dourly. "I'm no swami." My instrument was clacking again; it was the operator of the *Slipstream* calling.

"We're clear, *Saturn*," he wired. "Thanks for getting off course."

Better watch out, though. You're headed smack into the vacuole."

I tapped back, "We like it that way," and refused to pay any attention to his continued queries. A dismal silence had fallen over my cabin. The hypatomics had picked up now. I could tell by the vibration that we were on our way, full steam ahead, toward—what?

I found out. Not then, and not for several hours, but at dinnertime. I had just taken my seat at the table, and Slops was leaning over my shoulder, ladling soup into my bowl, when there came a high, shrieking whine from the engine room. The lights flickered, something went *swoosh!*—and the bottom fell out of the universe.

My stomach gave a sickening lurch. So did the mess hall, so did Slops, and so did the soup. The floor came up, and I went down. When I came up again I had puree of vegetables all over me, and my hair had so many alphabet noodles in it you could have rented me out at a lending library.

"Wotinell's the matter?" screamed the badly frightened Slops.

I said wearily, "Sue me if I'm wrong, but I believe our screwball navigator, Mr. Biggs, has finally piloted us into the vacuole."

The funny part is, Biggs wasn't even dismayed about it. I made a halfhearted pretense at eating, then skipped up to the bridge to find out what Biggs was doing about this new disaster.

The answer was—absolutely nothing. Pale of face, but still determined of mien, he was sitting in the control pilot's bucket seat shaking his head stubbornly as Hanson, Todd, MacDougal, and every other brevetman aboard the ship bombarded him with pleas to do something.

"Gentlemen," he said, "I ask you to remember that Captain Hanson assigned me the privilege of navigating this trip. As navigator, it is my right to do what I consider best."

Todd said nervously, "But, Lance, we're right in the middle of the vacuole. Aren't you going to give orders for a back-drag?"

Cap Hanson was purple with impotent rage. "Wait!" he squalled. "Just wait till we get to Earth! I'm goin' to have you busted out of the

service as soon as——” A strange look came over his face. “Golly! When we get to Earth? We ain’t *never* goin’ to get there less’n we do somethin’ quick!”

Lancelot Biggs said, “Be patient, gentlemen.”

MacDougal said cajolingly, “Look, lad—mayhap ye dinna understand the difficulties we’re in? Be a gude chap an’ let the skipper take the controls.”

Lancelot Biggs said, “Please be patient. I’d like to explain, but I can’t. Not yet, at any rate.”

Cap looked at me. I chipped in my two cents’ worth.

“Mr. Biggs,” I said, “read those charts on the wall. We’re being carried hundreds of thousands of miles off course. This vacuole is traveling at an abnormal rate of speed, and we’re imbedded in it like a fly in amber. We’ve already lost the race. Pretty soon we’ll lose our——”

I stopped, suddenly remembering Diane was present. Biggs looked at me somberly.

“I should have thought, Sparks,” he told me, “you would understand. With your education and training——” But he seemed uncertain. He stared at Diane. “Diane—you believe in me, don’t you?”

A long moment passed, during which Diane looked searchingly into his eyes. Then, “Yes, Lancelot,” she said, “I trust you.”

A faint smile gathered at the corners of his lips. He said, “That’s all I wanted to hear. Very well, gentlemen, be patient for just ten more hours . . .”

The worst feature of being caught in a vacuole is the fact that you’re completely isolated from the rest of the universe. There’s no radio transmission through a vacuole. Those supraspatial areas, those dead spots of hyper-emptiness, do not obey the common laws of space mechanics. Apparently the only laws that apply within them are the laws of motion and relativity.

This time even the relativist principles seemed to have gone haywire. Lancelot Biggs had demanded we be patient for ten hours, but to

me those ten hours seemed like ten centuries. Or millennia, maybe. Seconds crawled. Minutes dragged. Hours were fabulous aeons of time. You could almost feel your hair graying on your scalp.

I tried to read a book and gave it up as a bad job when I discovered I'd read the same page six times. Then I fiddled with my dials, but all I could get out of them was a strange, unearthly hum. I had a feeling of brooding suspense, as though I were a helplessly bound beast caged in an elevator that was rising through darkness to an unguessed destination.

What puzzled me most was that I'd come to look upon Lancelot Biggs as something of a genius; the kind of guy who could pull rabbits out of a hat. But now he seemed to have gone into a complete funk. He wouldn't listen to reason, he wouldn't argue, he wouldn't even talk. He maintained a grim and stubborn silence as to his reasons for having given up the battle.

Well, I thought, it was his business; not mine. He'd buttered his bread, now let him lie in it. I looked at the clock once more. A little more than nine hours had elapsed. So I wandered back to the bridge.

Everyone up there was in a fine state of frenzy—except Lancelot Biggs and Diane. With complete disregard for those about them, they were seated side by side on a plot table, reading poetry. Cap Hanson had tugged his ear lobes halfway down to his epaulets. Dick Todd was pacing the floor like a turpentine wildcat. I suggested, not too hopefully, "Mr. Biggs, the ten hours is almost up."

"Mmm," said Lancelot Biggs.

Cap Hanson turned on him savagely. "Well, *do* something! An' you, Diane; you oughta be ashamed of yourself! Sittin' there with that nincompoop's head draped all over your shoulder!"

Diane rose, smiling pertly. "All right, so I'm not tidy. Well—show them, Lancelot."

Biggs rose. He looked carefully at the clock, then at the statometer. He moved to the intercom, called to the engine room below, "Mr. MacDougal, would you be kind enough to revolve the ship?"

Hanson yelled, "Revolve the—— Hey! Grab him, somebody! He's slipped his gravs. He's gone completely space-batty!"

From below came the sound of the rotors going into operation. We couldn't feel anything, of course. Since there is no such thing as top or bottom in space, the ship's artificial gravs hold you to the floor no matter which end of the vessel points which way. After a minute Biggs said, "Thank you, Chief. Now, if you'll be kind enough to reverse gravs and throw out the top-deck repulsion beams?"

MacDougal obeyed. There came a sudden shock; everything movable in the room moved. Including me. I fell to the middle of the room, dangled there gasping, weightless, the same as everyone else. The *Saturn* lurched and shuddered; for a brief instant it felt as if something trembled along her beams. Then suddenly we were literally scorching through space again! *Real* space—not that phony hyper-stuff of the vacuole. Biggs yelled, "Normal gravs, Chief. Alter course to point six-one for three minutes, then prepare to cradle."

Cap Hanson screamed, "Cradle! What's going on here? What do you mean, *cradle*?"

Lancelot Biggs said, "If you'll be kind enough to look through the perilens, Captain . . ."

It was Earth. Big as life and three times as natural. Long Island spaceport was a hop, skip, and jump beneath us. We had made the Venus-to-Earth shuttle in four days, eight hours!

When the government committee had left after congratulating us upon having won the contract, and the I.P.C. officials had departed like a covey of bipedal sunbeams, Hanson, Diane, Biggs, and I were alone in the control turret of the *Saturn*.

To his smiling second mate the skipper said, "Biggs, this business of apologizin' to you after every crackpot adventure is gettin' monotonous. But I do it again—with the provision that you tell us how an' what the hell happened."

Biggs flushed uncomfortably.

"Well, to begin with, I knew we were licked if we tried to race the *Slipstream* in any normal fashion——"

"The proper word," I interjected, "is skunked."

"Yes. So when I saw what happened to the *Slipstream* after it fell into the vacuole, I saw a way in which we might possibly come out on top. I didn't want to explain, though, for if the method failed, Captain Hanson might have been reprimanded for permitting the attempt."

"Method?" demanded Hanson. "What method?"

"Piggyback," grinned Biggs. "You'll remember that we commented on the amazing speed with which the vacuole was traveling through space? A speed greater than our own; even greater than that of the *Slipstream*."

"I purposely plunged the *Saturn* into the vacuole. The *Slipstream*, caught in that same sphere of hyperspace, made the mistake of back-dragging free. I let the vacuole carry us to Earth. It was as simple as that."

Hanson said dazedly, "Simple? Which? Me or the method? You done so many funny things—for instance, you got us out of the vacuole without back-draggin'. How?"

"Oh, that? Well, that was just a little thing I figured out while we were waiting. It seemed stupid to waste fuel back-dragging from a pocket in space. After all, the easiest way out of a pocket is to let yourself be *dumped* out. I just reversed the grav plates and let Earth, which I had reckoned mathematically to be 'above' us, attract us. Since there is neither 'up' nor 'down' in space, we simply fell out of the vacuole pocket."

"It penetrates," said Cap Hanson admiringly. "Yep, it finally penetrates. Well, Sparks?"

He glanced at me significantly. Diane and Biggs were showing unmistakable signs of wanting to be alone. But there was one more thing . . .

"Mr. Biggs," I said, "your explanation is all right, but it doesn't clear up the matter of *direction*. The vacuole wasn't traveling on the line of our Venus-Earth trajectory at all. It was shifting to starboard

by fifteen points, which is why we were able to intersect it. How come?"

Lancelot Biggs looked faintly surprised.

"Why, Sparks, didn't you guess? That was what made our amazing speed possible. To us, traveling our ten-day route, it *looked* as if the vacuole were moving to the right of Earth. Actually it was moving directly toward the spot where Earth would be in ten more hours. It was, in a way of speaking, an express train racing along a short cut. We hopped the train and—here we are."

There was a tiny cough from somewhere under the shelter of his arm. A soft voice said, "Sparks . . ."

"Yes, Miss Diane?"

"Sparks . . . would you mind closing the door on the way out, please?" asked Diane Hanson.

So I did. I can take a hint as well as the next guy.

9

That happened in February. February 2115, in case you're date-minded. And perhaps you'd better be, because you need a calendar with fast-flipping pages to keep a record of the things that happened in the next three months.

In March, Biggs completed the last of his required astrogations, took his exam, and qualified for his first mate's ticket. Which seemed a little premature, in view of the fact that he'd only been second for a handful of weeks. But the Biggs luck is a bottomless barrel. In April, Jim Henderson fell head over heels for a Sun City gal, quit the spaceways cold, and took a job with the Venus Monorailways Corporation—and Biggs moved his duffel to the mate's cabin.

And in May, Diane set a June date for the wedding—which brings us up to date. But at this stage all believers in the “so they got married and lived happily ever after” school of literature can salvage their chewing gum from under the seat and go home. If they stick around, they're due for a disappointment. Because——

But I'm getting ahead of my story.

It was decided that the wedding would take place when we had finished our next Earth-Venus shuttle, but when we got to Sun City

spaceport the bug-pounder there gave me a solargram from Earth. It said, "*Proceed Uranus immediately. Pick up cargo gallium.*"

So I took the message to the Old Man, who turned nine shades of mauve when he read it.

"Uranus!" he bellowed. "This crate make that trip? They must be stark, starin' mad!" Then a sudden thought struck him, and he scowled. "This is all his fault, blast his jets! I'd like to wring his scrawny neck!"

The description pointed the finger. I said, "Biggs? Why blame him, Skipper? Can he help it if the home office has gone squirrely?"

"I never should have agreed to let Diane marry him," growled Hanson savagely. "He started this mess at my house. Prendergast Biggs an' him was havin' dinner with us, an' Biggs told his uncle all about some newfangled gadget he's invented, a 'velocity intensifier'——"

"Velocity intensifier? What's that?"

"How should I know? Another one of them brain storms he's always hatchin'. Anyhow, he bragged that it would make the *Saturn* the fastest ship in the ether. An' now," groaned Hanson, "just because he shot off his big face, we've got to push this leaky old tin can to Uranus!"

I said consolingly, "Well, maybe everything will work out all right, Skipper. I'll admit Biggs is a bit of a whacky-pot, but he's pulled us out of plenty of tough spots before."

Hanson stared at me somberly.

"Nope, I guess you ain't. You couldn't have."

I said, "Which? Couldn't have what?"

"You mustn't have seen Mr. Biggs on this shuttle."

"Come to think of it, I haven't. Where's he been, Skipper? Is he spending all his time laying plans for the wedding?"

Hanson made sounds like a man being garroted.

"Wedding! Don't talk to me about marriage! Lancelot ain't been worth a tinker's damn on this trip. He can't do a single thing right."

Remember our take-off from Long Island spaceport? The one where we——”

“—lifted gravs two minutes before schedule?” I finished. “You bet I do. I almost did a swan dive through the aft bulkhead. Why? Did he——”

“Mmm-hmm. An’ he also plotted the course that took us nine degrees off trajectory. An’ he heaved the ship into a Van Maeden spiral by signalin’ for a double-jet port blast in midspace. An’ he . . .” Hanson paused, seething. “But why go on? The point is, the love bug’s ruined him. We can’t depend on him to help us with this assignment. An’ Uranus is a long way from here. A *mighty* long way!”

I winced. I said, “Skipper, *must* you say it that way? With italics in your voice, I mean?”

But orders is orders. We lifted gravs at 11.20 S.C.T. and pointed our prow toward the spot in space where, some billion and a half odd miles away, Uranus was lounging like a gigantic snowball about a wan and distant sun. That is, we attempted to point our prow in that direction. Cap Hanson’s astrogration came a cropper on this problem. He called me on the intercom.

“Sparks,” he said, “find Biggs an’ drag him up here. None of us except him knows how to operate that crazy velocity intensifier of his.”

So I made a tour of the ship, and found Biggs where I should have looked first. In his own cabin, raptly fondling a photograph of Diane Hanson. I said, “Don’t look now, Mr. Biggs, but that cheery little din you’ve been ignoring is the audio buzzer beside your elbow. The skipper wants you topside.”

Biggs looked startled.

“Me? There must be some mistake. I’m off duty.”

“Guess again,” I told him. “It so happens that you’re the only person aboard who knows how to hook up that velocity intensifier of yours. So you’re elected. After all, if we’re going to Uranus——”

That got him. He popped off his hip pockets like a jack rabbit from a cactus patch.

"What? Uranus?"

"O.Q.," I acceded, "and you watch yours." I stared at him curiously. "What's the matter? Didn't you know?"

"Know! Of course not!" His unbelievable Adam's apple turned cartwheels. "They're going to give me a chance to try it? This is wonderful!"

I said, "One of us is crazy, or my name's not Napoleon. What's so wonderful about it? As near as I can figure, it will take us about ten months to get to Uranus, and another twelve to get back."

Biggs grinned. "Oh no, Sparks! Don't you understand the operation of my velocity intensifier?"

"I'm a radioman," I told him. "I understand the space code, dots and dashes, and I know four languages. That's par for the course."

"It's really quite simple. My velocity intensifier is exactly what the name implies—a device attached to the hypatomic motors for the purpose of stepping up normal velocity. It's based on the principle of energy conservation. A series of parallax condensers absorb all waste energy, pass it through multiple amplifiers and——"

"—and all points west," I finished. "It's no go, Lieutenant. That's one of the languages I don't talk. Give it to me in words of one syllable. How long will it take us to get to Uranus and back?"

"Accepting the mean distance of Uranus," answered Biggs, "as approximately 1,560,000,000 miles, if we traveled at our hitherto normal rate of speed, 200,000 m.p.h., it should take us 7,800 hours, or 325 days, to reach there. And slightly longer to return to Earth."

"Ten months!" I wailed. "I knew it!"

"But," continued Biggs proudly, "with my velocity-intensifier attachment, our potential speed is restrained by only one factor: the limiting velocity of light, or 186,000 miles per second.

"In other words, the *Saturn* is now capable of a top speed of almost 670,000,000 miles per hour!"

I gasped. "You mean the trip to Uranus will take only a little more than two hours?"

"Theoretically, yes. Actually it will take a bit longer. We must allow time for normal take-off and acceleration, for a condensation charge to build up in our superchargers before setting the V-I unit in operation, and for deceleration upon reaching our objective. Also, we are forced to remain below the limiting velocity as a safety measure.

"But we'll make excellent time. Ninety-six hours should see us landing at New Oslo. And"—his pale eyes lighted—"that's why I said it was wonderful! Diane will be so surprised. If they let me use the V-I unit, we'll make the round trip from Earth to Uranus in less time than it ordinarily takes us to make the Earth-Venus shuttle!"

"But only," I pointed out, "if, when, and as you go make that gadget gadge. While we're gnawing the avoirdupois, Cap Hanson is topside having a small litter of kittens. So shall we join the laddies?"

He patted Diane's picture good-by, and we went.

Hanson was practically meat for the loony-bin by the time we reached the bridge. He manhandled Biggs avidly and propelled him to the plot table.

"Where've you been, Biggs?" he demanded. "No, don't tell me now; get goin' on these figgers. They don't make sense to me, nohow. An' when do we turn on that thingamajigger of yours? Sparks, where'd you find him? Shut up, you blabbermouth! Don't you know better than to talk when a space officer is cogitatin'? Can I help, Biggs?"

The one-man wordstorm was deafening. But it didn't seem to faze Biggs. He plunked himself down at the plot table, scribbled for a while, and came up with trajectory diagram for Second Mate Dick Todd, seated at the control board. Then he heaved a volley of orders over the audio to Chief Engineer MacDougal, and that was that. He relaxed. The skipper said nervously, "Is—is that all?"

"That's all, sir," said Biggs.

The Old Man looked dubious.

"I don't hear nothin' unusual," he said.

"You will in a minute," said Biggs. "Ah! There it goes now!"

And darned if it didn't. One minute my ears hummed with the familiar drone of the hypatomics; the next, a weird and piercing whine rose in high, shrill crescendo, torturing our eardrums for a brief instant until it lost itself in the oblivion of supersonic inaudibility.

That was all. No moment of oppressive weight as if we were lifting graves at extra gees, no thunderous bellow of rockets, no nothing. The ship rode easily, freely. I must have looked disappointed. To Biggs I said, "Too bad, Lance."

"Eh, Sparks?"

"Too bad it didn't work," I said.

Biggs chuckled.

"But it did work, Bert. We are now traveling at a speed in excess of five hundred million miles per hour!"

Cap Hanson gulped and looked green. "F-five——"

"That's right, sir. If you don't believe me, take a peek through the viewpane."

I moved to the forward bulkhead of the turret, slid back the metal shield that covered the quartzite viewpane. Space lay before us. But *what* space! Not the dark, velvety pall, brightly agleam with an infinitude of starry jewels, that all spacemen know. This was a blotched, striped crazy quilt of color: crimson, ocher, emerald—all the hues of the rainbow, of the aurora. It was beautiful in a mad, fantastic way; there was to that swift-streaming space a faery, magic loveliness that fascinated and at the same time chilled me with a curious, cold awe.

Hanson's eyes bulged and his voice was fearful.

"What's happened, son? Have we busted clean out of our universe into something else?"

"No, sir. This is our universe. But we are seeing it as no man has ever seen it before. Our speed is so great that we are seeing the landmarks of space from a distorted viewpoint. Our relationship—or I should say relativity—is no longer to Earth and its sister planets, but

to a greater constant: the fundamental motion of the universe itself.

"Thus, at one and the same time, we see the planets as they *are* and as they *were*; they are no longer mere points in space—they are streaks of color." He grinned. "And the stars, too. Pretty, aren't they?"

Cap Hanson made weak motions at the viewpane.

"Close it, Sparks. It's givin' me the meemies. So if you're right, Biggs—then what? If Uranus is just a streak of color, how do we know when we get there?"

"You must get used to an entirely new system of astrogation. Up to now, pilots have simply jetted along till they reached their goal, then set studs for a landing. With the V-I unit in operation, we 'fly blind' and set our course by strict mathematical figuring. I've given Mr. Todd a plot chart. Four days hence, when I cut the V-I unit and return the hypos to normal operation, we will find Uranus immediately beneath us. And now, if you'll excuse me . . ."

"Wait a minute!" said the skipper. "Suppose we meet up with somethin' like a rogue asteroid?"

Biggs shrugged.

"That hazard is neither heightened nor decreased. Our monitor beams will still shunt off the smaller bodies. As for the larger—well, you know as well as I that we have never yet found a method of overcoming that danger. It's one of the chances we take when we don space blues. So far as I'm concerned, I'd just as soon not see it coming as watch it grow larger and larger in the perilsens."

Well, then was my sentiments likewise. So since Hanson was fresh out of questions, Biggs hauled hips back to his quarters. My guess is that he went back to mooning over Diane's picture. What's yours?

10

I could give you a blow-by-blow account of what happened in the next quartet of days, but why bother? The simple truth is—nothing did. The V-I unit continued to work like a dream, our erstwhile lumbering old crate went flashing through space like a quantum with a hot date, and me—I was in seventh heaven. This was the easiest shuttle I had ever made. We were traveling so fast, and the V-I unit surrounded the *Saturn* with such a force field, that my radio was utterly useless. So I got a vacation with pay, doing nothing but eating and sleeping with what some dullards might call monotonous regularity.

At the end of four days Mr. Biggs disconnected his V-I unit, and, just as he had said, there was Uranus gleaming beneath us. So we landed and spent a night swapping yarns and drinks with the Space Patrol officers garrisoned at New Oslo, then we took on a holdful of gallium, and as the infrared rays of a pea-sized sun sank softly into a mist of methyl cloudlets, we waved a fond farewell to the refrigerated seventh planet.

Then we accelerated for an hour and a half, Biggs plotted a course, pushed a stud, and once again we were freewheeling through colorful, star-spangled space.

Life was swell, life was wonderful, and if there was any fly in my

celestial ointment, it was the fact that Lieutenant Biggs had developed the habit of strolling up to my cabin to tell me (a) what a wonderful girl Diane was, (b) how much he missed her, and (c) how he was simply going to *die* if he didn't see her again soon.

Which boring details I had (a) known for some time, once having had a heartthrob for her myself, (b) figured from his conversation, and (c) high hopes that he would. Quietly, by preference.

Thus it was that on the second day of the return shuttle Biggs was in my cabin, not to mention my hair, and I was hearing for the thousandth time about how he wasn't worthy of an angel like Diane, when all of a sudden bells jangled through the ship, lights flashed, and my audio broke into frantic voice, said voice being that of the officer on duty, our new third mate, Bud Wilson.

"Sparks, is Biggs there? Get him up here *quick!* And find the Old Man! Hurry, for God's sake!"

Biggs and I were out of there like a flash—make that *two* flashes—and pounding through the corridors up the ramp to the bridge. We met Cap Hanson on the way. The three of us burst into the control turret to find Wilson tearing his hair and Dick Todd, sweating, white-faced, poring over diagrams on the chart board.

Hanson yelled, "What's the matter?" Todd's eyes were haggard as he answered.

"*Jupiter!*" he said.

"What about it?" yelled the skipper. "Talk, man!"

Todd shoved the chart at Biggs, pointed with a finger that wobbled.

"It's on our trajectory! Right before us *now!* Look!"

He threw back the shield, and my heart gave an awful lurch. For no longer was the scene before us one of changing, iridescent beauty. The entire pane was covered by a gigantic, menacing platter: the planet Jupiter—dead on our course!

Lancelot Biggs's face was suddenly a blank mask of horror. Strangled words fought their way from his throat.

"I—I didn't realize! I forgot all about Jupiter when I plotted the return course!"

"Forgot!" roared the skipper. "Great comets—forgot!" Then his wrath died in anxiety. "Well, do something, Lancelot. Turn off that blasted unit of yours so we can loft over her."

Todd shook his head.

"No good, Skipper. We're too close. Even if we were to turn off Biggs's device, there wouldn't be time to get the hypos hot."

"Lance——" began the skipper. Then, "Where did he go?"

Because Biggs had turned suddenly and raced from the room. Fled, still clutching the plot chart. Fled without a word of advice, regret, or hope. And with him went our last dwindling hope of salvation.

Dick Todd's voice was thin.

"Maybe he has an idea, sir?"

Hanson grasped at the thought as a drowning man clutches at flotsam.

"That's it, Todd. He'll pull us out of this. He's never failed us in the past——"

But even this wishful expression was doomed to swift contradiction. For at that moment the audio flashed, and the voice of a crewman clacked from somewhere below.

"Captain Hanson? There's trouble down here, sir. Lieutenant Biggs has violated regulations. He knocked down two men and forced his way into the auxiliary lifeskiff. He—he's locked the door, sir. What shall we do?"

In the moment of silence that followed, I saw something I hope I shall never have to look upon again. I saw a strong man age ten years in as many seconds. The man was Captain Hanson. The strength sloughed from his shoulders, pain burned deep furrows in his eyes, and I could barely hear the whisper that crept from his lips.

"A coward!" he husked. "The man my daughter loves—a coward!"

And there was nothing I could say to refute the accusation. Lancelot Biggs's action had branded him more damningly than any mere words. A crisis had come, and it had found him wanting. He had

deserted his comrades, his ship, and had fled to a lifeskiff. Perhaps even now he was preparing to cast off.

In a swift burst of comprehension, I thought I could understand the reason for this last, unreasonable defection. Lancelot Biggs had met difficulties before, and without flinching. But that was an old, a different, Biggs. A carefree bachelor Biggs. Now love had come into his life. Romantic dreams had weakened his moral fiber. Weakened it to the point where, in the face of danger, nothing was important save that he live to return to the arms of his loved one.

I could understand this. But I could not forgive it. Because, love or no love, fear or no fear, a spaceman has certain traditions to uphold. And Lancelot Biggs had tossed into the discard the gallantry now displayed by Dick Todd as he asked quietly, "Shall I tell the crew, sir?"

And by Captain Hanson, who answered, "Yes, Todd. An' order MacDougal to cut off Mr. Biggs's velocity intensifier. We may die, but we can die trying to escape. A slower speed may give us more time."

"Yes, sir," said Todd, and moved toward the audio. But he had barely reached out his hand when curt words in a familiar voice rasped from its grilled throat.

"Stop, Todd! Don't give that order, Skipper!"

It was the voice of Lancelot Biggs.

Captain Hanson had once, with a great effort, subdued his rage. But now his face crimsoned, his great hands clenched, and fury was thick in his voice.

"*You!* Where are you, sir?"

"In the lifeskiff," replied Biggs imperturbably. Almost insolently, I thought. As if he knew he were speaking from the only place of possible security in a doomed ship. "Todd, do as I say and do it fast. Tell MacDougal to turn the verniers of my V-I unit all the way to the red line on the extreme right. Understand?"

Once again Hanson's roar interrupted him.

"You coward! What do you mean by skulking in a hideaway, giving orders aboard *my* ship?"

"Shut up!" bellowed Biggs. And it was not just his audacity in speaking thus to a space commander that shocked me, it was the razor-edged intensity of his voice. "Todd, issue that order immediately. There's no time to lose."

Todd's eyes sought mine. He knew as well as I that the skipper was too angry to think, much less issue an intelligent command.

"That—that's the limiting velocity, Sparks," Todd choked. "Biggs must be insane. We'll be translated into the negative universe. And no way to get back—*ever!*"

I didn't have to answer. Biggs answered.

"I've taken care of that, Todd. Now, do as I say. And hurry. Hurry!"

And—well, am I a fool? After all, Lancelot Biggs and I are old friends. There flooded back in me a measure of the confidence I had once had in him. I nodded to Todd.

"Try it, Dick. We've got nothing to lose and everything to gain. Give the order."

He did. MacDougal must have been startled, but he was too good a spaceman to dispute an order from the bridge. He said succinctly, "Aye, sir!" And then——

I felt the rocking plunge, the moment of brief, incredible dizziness, of speed already great being intensified toward the limiting velocity of light. My head whirled, but somehow I managed to turn, stare at that ominous viewpane. And what I saw there brought a shocked cry from my lips.

White . . . white . . . dazzling white . . . then grayness. No other scene than dim and vacant void; gray, infinite, impenetrable. A glimpse of the lost universe—the matrix negative whereinto are flung such mad things as attain a speed beyond that of the limiting velocity of light.

Then crackling through the room came the voice of Biggs. "We're clear, Todd? We're through?"

Todd replied dazedly, "I—I don't know what you mean."

"The chronometer, man! Has it touched 9.14?"

"Yes, sir. But—but we've slipped into the negative universe, Lance. We've escaped one death to find another."

There was infinite sadness to Lancelot Biggs's denial.

"No you haven't, Todd. You're going back to your own universe . . . now. When you feel the ship lurch, snap the V-I unit dial back to where it was before. Ready? *Now!*"

There came, inexplicably, a brief unsteadiness, a lurching halt of the ship. At that instant Todd spoke to MacDougal. MacDougal obeyed, and——

And we were once again traveling smoothly on our proper course. But Jupiter—monstrous missile of death incarnate—was no longer before us. *It was behind us!*

Cap Hanson laughed aloud. Vast was the joy of that laughter. Relief, happiness, sheer triumph, were in it. And apology.

"You've done it, son!" he cried. "Forgive me for doubtin' you. We're safe! I don't know how or why, but—— Come on in, boy, and tell us all about it!"

But there came no answer. The only sounds were the echo of our own harsh breathing, the dry scrape of our feet shuffling restlessly. A new fear dawned abruptly in the Old Man's eyes.

"Biggs!" he cried. "Lance, my boy! Lance!"

And then——

It was like the faintest, winnowed chaff of sound, breathing from far away. A voice calling to us. A voice that said:

"—can't come back . . . Skipper. Sparks will understand. Tell him . . . mass-energy . . . relationships. And tell . . . Diane . . . I love . . ."

That was all. And my brain reeled beneath the import of those fading words. Suddenly I *knew!* I didn't need to hear Cap Hanson screaming wild queries to the crewmen on the deck below, nor to hear their answer.

"He's not here, sir. He launched the lifeskiff a moment or so ago."

I knew!

Later, I told them. My explanation was short, for the solution was simple. Simple, once you grant that in one lean and gangling frame a man can possess infinite loyalty, infinite courage.

"Biggs saw," I said, "that there was only one way to save us all from death. He had blundered, yes. We all blunder sometimes. But not all of us pay the penalty as willingly, as bravely, as he did.

"Jupiter was upon us. Within minutes we would have crashed into the greatest of the solar planets. Only Biggs saw a way out. Which was to make the speed of our ship *exactly* approximate the speed of light at the moment of impact."

Todd said, "But how——"

"He told us the answer. Mass-energy relationships. You know the fundamental theory of the Lorentz-Fitzgerald contraction. Objects moving in space are contracted along their major axis in direct proportion to their speed, with the velocity of light as their ultimate limit. In other words, at the precise speed of light, this ship existed in only a *unilateral* dimension!"

Hanson said, "You mean we—hurtled over Jupiter?"

"No, sir. *We went right through it!* At that tremendous speed, our dimensional extension was zero. Hence it did not affect, nor was it in any way affected by, the matter and mass of Jupiter.

"It's as though an exceedingly fine wire, moving at lightning speed, were propelled through a cake of ice. Only in our case the 'wire' was of zero dimension, and the cake of ice—Jupiter—did not even recognize that it had been penetrated.

"But"—I shook my head—"but Mr. Biggs realized what this daring scheme meant. It meant that in addition to our size being reduced to the infinitesimal, our mass would be raised to the infinite—for that is the corollary of the contraction theory.

"There had to be found some way of getting us back to our normal shape and size. The only possible method was by the forcible alteration of our mass. Biggs adopted this method. He placed himself in the lifeskiff, gave the necessary orders from there. Then, after the danger had been averted, he deliberately cast off from the *Saturn*, tossed him-

self away from us, a living sacrifice to the mathematical gods, that we might be safe."

Todd said, "Our mass, for a moment, was infinite. But when he, however briefly, broke clear, it became *less* than infinite, giving us a chance to cut the motors?"

"That's right."

Hanson's eyes were round and wild and fearful.

"But then—where is he? We got to turn around right away. We got to find him. We can't go back without him."

I shook my head.

"It's no use, Skipper. He may be in this universe, infinitely small, traveling at infinite speed; he may be in some other universe undreamed by man. He may be living, he may be dead. But wherever he is, he is gone forever from the ken of man. Lancelot Biggs is dead. So far as man is concerned, he is dead."

Dick Todd said something then. His words were not clear. His voice was choked, and he didn't finish the quotation. But I caught the first part.

"'Greater love hath no man——'" he said.

And the skipper coughed, and his eyes were red, and he turned away like a broken, aged man.

"Amen," he said. "Amen."

11

Folks say I'm hard-boiled. Well, maybe so. My mama told me a long, long time ago, when I was a brat in three-cornered britches, that if you keep your upper lip rigid and a steely glint in the old optics and a wisecrack dripping from your tongue, not many people will be shoving chips off your shoulder and daring you to take off your glasses.

And Mama was right. So I'm commonly known as "that smart-aleck Bert Donovan," and folks think I'm hard-boiled. But I didn't feel like any ten-minute egg the afternoon Diane, Cap Hanson, and I came home from Lancelot Biggs's funeral.

Lancelot Biggs was dead. Or missing for more than seven weeks in the gray nothingness of negative space—which is the same thing. Since the lifeskiif in which he had entombed himself was tiny, poorly provisioned, and inadequately supplied with water, there was no longer the faintest glimmer of hope that somehow and miraculously he might have survived, even had he found some way of escaping the minus boundaries of the weird nega-universe into which he had fled. Therefore, today he had been formally "buried." In spirit, so to speak, the way the old boys in the nineteenth century used to bury lost mariners. With a long cortege and a tall stone engraven with the words: *Here lies So-and-So—Lost at Sea.*

Only this being the enlightened twenty-second century, and we being a bit more reasonable, Biggs's marker read: *In Memory of Lieutenant Lancelot Biggs—Lost in Space.*

So we were a sad-looking trio when we came back to the apartment which Lance Biggs and I had shared near Long Island spaceport. Cap Hanson had lost the finest first mate ever to tread the bridge of a spaceship. I had lost the best friend a man ever had. And Diane—well, her loss was the greatest. She had lost the man she loved, the lean, gangling man to whom, had not Fate's grim hand intervened, she would now be married.

And, like I said, folks call me hard-boiled. But I'm only gently poached compared to the men who operate under the banner of Big Business. Because when we entered the apartment the telephone was jangling like an opium addict's nerves, and when I picked it up I was talking to Cheeverly, the assignment clerk of the Corporation from which we draw our weekly credit checks.

"Donovan," he snapped, "is Captain Hanson there?"

I glanced at the skipper, whose arms were about his quietly sobbing daughter. He's a gruff old walrus, Hanson; a more irascible space-tyrant never lifted grays. But he has a heart buried somewhere beneath that crusty exterior, a heart that was now as hurt and grieved as my own.

"Why?" I asked.

"Never mind why!" snapped Cheeverly. "Put him on."

I said grimly, "O.Q., Buster. I'll *put* him on now and *take* you on the next time I see you. Skipper——" And I handed Hanson the phone.

Whatever Cheeverly said threw a jolt into the Old Man. I saw Hanson stiffen like a rheumatic neck, and he roared, "What? Impossible! Why, you damned young jackanapes, don't you know the staff and crew of the *Saturn* are in mourning? We won't——"

There was clacking from the earpiece, metallic and ominous, and the Old Man's face turned from crimson to an outraged mauve. But anxious lines corrugated his brow and he forced a modulated acquiescence to his voice.

"I see," he said thoughtfully. "So that's the way it is. Well"—grudgingly—"all right, then. But I don't like it. And you may tell your superiors——"

The A.C. must have hung up on him. He turned to us slowly. "Sparks——" he said.

Diane Hanson stared at her father. "Daddy, what is it? Is it . . . some news about Lancelot?"

"Now, honey," said the Old Man gravely, "don't keep that hope burnin'. You're just tormentin' yourself. This is somethin' entirely different." His stifled anger burst out afresh. "Somethin' outrageous! They ought to be boiled in oil, the whole kit an' caboodle of 'em! But what can I do? Orders is orders. Sparks, contact the command an' crew immediately. Tell 'em to pack their duffel an' be aboard the *Saturn* by midnight."

I said, "What! But, Skipper, we were granted leave to mourn Biggs."

"I know it. But the Corporation has countermanded our leaves. We're to lift graves at twelve sharp for Europa. Polarium has just been discovered there, an' the whole solar system's gone crazy. Prospectors from every corner of the universe are blazin' for Europa as fast as their jets will shove 'em. An' since the *Saturn* is the fastest lugger in the I.P.C. fleet, we've got to get there an' stake claims for the Corporation.

"I—I'm sorry, Diane. I don't want to leave you. But the clerk said if I refused to take command, they'd . . . appoint someone else."

"I know, Dad," said Diane. She forced a ghost of a smile to her lips. She understood as well as I did what he was trying to tell us. The Old Man is one of the greatest skippers who ever warped into a cradle. But he's an old man in fact as well as in title. To refuse this emergency command would be to risk losing his command. And so, "I understand, Daddy," said Diane Hanson. "But you won't have to leave me."

"An', Sparks, tell Todd he'll serve as first mate," the skipper told me. "Wilson will be second—— Eh? What did you say, Diane?"

Diane's voice was gentle, but there was a firmness about her eyes and lips I recognized. I'd seen it before—on her father's face. I knew what it meant. Stubbornness mixed with a dash of determination.

"You won't have to leave me," she repeated calmly, "because I'm going with you."

"You're goin'—— Oh, no you ain't! This ain't no shuttle for a girl. There's danger out there near Jupiter, honey. I won't let you——"

"You can't stop me, Dad. Can't you see I've *got* to go? Please! I'll go mad sitting home here by myself. And besides, it was out there near Jupiter that *he*——"

She faltered into silence. I cleared my throat. I didn't much blame her for feeling she had a right to make one farewell trip to the part of space wherefrom her loved one had disappeared. The Old Man growled softly. Then he wiped his glasses with a sort of savage vehemence. He said, "Well, then, get your duds packed. An', Sparks—call Chief MacDougal. Tell him to get the hypos warmed an' ready for immediate flight."

Thus at twelve midnight sharp, Earth time, the *Saturn* lifted gravs for Europa, second satellite of monstrous Jupiter.

There's no use boring you with routine details. We blasted from a Long Island cradle, set course for Europa, waited till we were about six hours away from Earth's gravitational field, then cut over to Biggs's velocity intensifier, using which we could look forward to setting foot on Europa within two days at the most. Which gave us a big jump over the rest of those who were highballing it for the wealth-laden satellite.

Dick Todd, looking uncomfortable and a trifle sheepish in his new braid, came to my cabin at the end of our first day's flight. Things had happened so suddenly that no one had found time to tell him the score.

"What's this all about, Sparks?" he demanded. "First we're on leave, then they dump us in the *Saturn* and shove us off for Europa. Why?"

I said, "Simple, ditto. What do you get from the bank?"

"Loans," said Todd promptly, "at five per cent. But what's that got to do with——"

"The correct answer," I sighed, "is *shekels*. The sinews of war. Cash. Filthy lucre. Credits. The root of all evil. There's a polarium rush on Europa that makes the 2078 radium rush on Venus look like bargain day in a department-store basement. The Corporation that supplies our bread and butter wants in on the ground floor, and we've been elected official claim stakers."

"Polarium?" echoed Dick. "That's the new element, isn't it? Number 106? The impossible one?"

I stared at his first officer's braid sourly.

"When I think of the genius who *used* to wear those stripes," I sighed, "and then look at *you*—— Oh well. Listen to papa, whackypot. Polarium is element number 106; yes. But it ain't impossible; no. Because they found it. And I have yet to hear of anybody finding anything which doesn't exist. It's a brand-new discovery, as rare as ideas in that burned-out bulb you hopefully call your brain, and it's so new that nobody knows, yet, exactly what its properties are.

"Nevertheless, it's got cash value. So we're on our way to collect some of the aforesaid same."

Todd said aggrievedly, "That's a hell of a way to talk to a superior officer, Sparks. Damned if I wouldn't report you—if I had any idea who to report you to. But—Europa, you said? That's sort of dangerous, isn't it? Our attempting to land there, I mean."

"No more dangerous," I reassured him, "than playing post office with a saber-toothed tiger. Any time a ship gets within umpteen miles of Jupiter, pal, it's grab your hat and hold your breath and give the prayer book a quick thumb-through. That hunk of red goo has gravitational power, with accent on the 'Ow!' More spaceships than you have gray cells have fallen within old Jupe's drag, crashed on the planet. And no man has ever yet managed to escape to tell us what it's like.

"From all we know, the planet is neither inhabited nor habitable.

But that's guesswork. Until we explore it as we've explored its satellites, we'll never be sure. And we'll never be able to explore Jupiter until some mastermind invents an antigravitational shield."

"Say," enthused Todd. "Now, *there's* an idea, Sparks. I think I'll work on that."

I looked at him and groaned.

"You? What are you going to use for brains? I've never known but one man in my life with the genius to pull that miracle—and he's dead. Lance Biggs. I hope that wherever he is he can't hear you. He'll be turning over in his grave so fast they'll call him 'Revolving Biggs.' Either that or he'll come back and haunt you for daring to——"

And then it happened. Todd, who had been listening to me petulantly, suddenly stiffened. His jaw dropped, his eyes popped out like marbles on stalks, and his hair climbed two full, quivering inches off his scalp.

"S-S-Sparks!" he wailed. "D-d-don't say that! Behind you!"

Then he keeled over in a dead faint. I turned. My heart took a running leap for my lips, and I think I screamed. Because I was staring at a thin, wavering nebulosity—a form gray and ghastly—a transparent simulacrum of——

Lancelot Biggs!

12

What happened next I wouldn't rightly know. For the first time in my life I realized how helpless a tree must feel when a hound comes sniffing at it with malice aforethought. My brain said, "Get going, babies! On the double!" But my legs were as limp as a leaf of left-over lettuce.

But there was nothing wrong with my senses. And suddenly I realized that the old stories you hear about ghosts are on the up-and-up. For this shimmering wraith of Biggs carried with it all the visual, audible, and olfactory impedimenta with which the ghosts of legend are usually endowed.

My ears hummed with a high, thin, singing sound; a sort of weird, unearthly, harmonic vibration. There was a biting odor in my nostrils, a scent so subtle I could not tell whether it were charnelly repugnant or just plain annoying. The phantom itself was gray, drab, colorless. Immobile, tense, strained of visage. For a moment its white lips seemed to move——

Then it was gone! As quickly as it had come, it was gone. The paralysis left my limbs, and I was on my knees beside Todd, shaking him.

He came out of his blackout bleating, "Did you see it, Sparks? It was Biggs's ghost! He——"

"What the hell's goin' on here?" interrupted the irate voice of Cap Hanson. He stood in the doorway, with Diane a few feet behind him. "What's all this, Mr. Todd? The two of you grovelin' on the floor . . . drunk, eh? Well, my two fine sirs——"

Todd pulled himself to his feet uncertainly. His voice was cracked, incoherent.

"N-no, sir! S-something horrible. This ship is *haunted*, sir! I saw—— Unnh!"

My elbow caught his breadbasket just in time. His next words represented my own private opinion, but I didn't want Diane to hear them. After all, it's no solace to a heartbroken gal to learn that her lover has turned into a noisy, malodorous, spaceship spook.

"Haunted?" roared Hanson. "Are you insane, Lieutenant? What do you mean, haunted?"

I tried to catch the skipper's eye, but my finger-flagging came to nought. Diane shouldered past her father into the room. Her voice was intense and eager.

"Sparks," she demanded, "tell me! It was *he*, wasn't it? Lancelot?"

Too late, Dick understood why I'd jabbed him. He turned red and began gobbling like a block-bound turkey.

"Oh no, Miss Diane. Nothing like that. Bert and I were just having a little horseplay. We'd had a drink or two——"

"Don't lie to me, Dick. It *was* Lancelot. I know it was. I saw him myself!"

Well, that was one for the books. It was our turn to gape. Cap Hanson stared from one to another of us wildly.

"What's all this? You saw Lancelot, Diane? Where?"

"In my cabin. An hour or so ago. I was taking a little nap. Something wakened me—I don't know what—and I saw him standing in the middle of the room. He was so pale. So thin and so sad. Oh, Daddy——"

She buried her face on his shoulder. Hanson said, "Now, there, honey!" Then, questioningly, to us, "Is that the truth, boys? Is that what you seen?"

We nodded. I said, "I'm not superstitious, Skipper, but I know what I know. It was his ghost, all right."

Todd wailed miserably, "It was all my fault. I brought the haunt on us by bragging——"

"Nonsense!" snapped the Old Man. He released Diane, took a few swift paces across the room, spun, came back to us. "Sheer nonsense!" he repeated angrily. "It ain't reasonable!"

I said, "That's what folks have been saying for centuries, Skipper. Maybe ghosts *aren't* reasonable. But the fact remains, people see them."

"That ain't what I mean. I don't give a hoot about the possibility or impossibility of a ghostly afterworld, I'm just sayin' it ain't reasonable we should see a ghost of *Biggs*! Lance wasn't that kind of boy. He wouldn't come back from the—from Beyond for no better purpose than to frighten the daylights out of his old friends an' the woman he loved. He was a logical man. Here's what *I* think. If you saw Biggs——"

"We did."

"Very well! Then it wasn't his *ghost* you saw. It was some sort of projection of him. Don't ask me what kind, or how he done it, or where he is. But I'll bet my last cent—Lancelot Biggs is not dead!"

The pronouncement galvanized Diane. Her eyes shone with new hope. She cried, "Daddy, do you mean that?" I groaned inwardly. It was cruel of the Old Man to reawaken false hopes in her like that. As I said before, I know what I know. And that vision of Biggs didn't look like the projection of a living man's image. It wasn't flat. It was transparent and tridimensional and filmy.

I opened my mouth to protest. But I never got a chirp out, for at that moment the audio rasped to life and MacDougal's thick burr accosted us.

"Captain Hanson, sir!"

"Yes, Chief?"

"Ye will be so kind as to accept my resignation, sir, effective

immeejutly! I willna ha' fairther dealin' wi' sooch scandalous nonsense as is now goin' on doon here."

Hanson snarled, "Chief, I've got troubles of my own. Don't come bellyachin' to me because you can't handle your men."

"'Tisna *my* men are a-blatherin'!" declared the chief in high dudgeon. "'Tis one o' yer erstwhile mates, who by all rights should be dead an' planted these past seven weeks! 'Tis the ghost o' the late Mister Biggs—doon here tryin' to gie my men orders fer the construction o' some fantastical machine!"

I think we all must have said something, but what I said I can't remember. I was conscious only of Hanson's exuberant roar, "I told you so!" and of Diane's glad little cry, "Daddy! Let's go down!"—then we were all racing down the ramps to the engine room.

What we found there was bedlam. Bedlam in greasy overalls. The hypos, hooked to the V-I unit, were perking along in their usual smooth fashion. The rotor piston was chugging back and forth in its channel with the calm precision of a five-year-old sucking a lollipop. But in one corner of the room the members of MacDougal's corps were huddled wide-eyed, white-faced; in another stood Chief MacDougal, staring with speechless wrath at a figure in the middle of the floor.

The figure was that which we had seen topside. The wavering specter of Lancelot Biggs.

It's funny how the mind works. Even in that moment I found myself thinking that the afterworld had not done much to improve Biggs's appearance. He didn't look much like the chubby cherubs or benign angels you see painted on church walls. He was the same old Biggs I'd known and loved. Tall, gangling, lean to the point of ludicrousness, dressed in space blues rather the worse, I thought, for wear, tousle-haired, grave-eyed, with that old familiar Adam's apple jouncing up and down in his throat like a captive balloon in a cyclone.

There was one difference, though. He was not motionless, as he had been when I had seen him in my cabin. There was a look of fretful

anxiety in his eyes. He was gesturing impatiently to his awe-struck watchers, motioning them to approach him. His lips were moving, but no sound issued from them. There was in the air that same high, thin whining I had noted before, that same sharp, rather ammoniac odor.

Diane cried, "Lance! Oh, Lance darling——" and rushed forward. Straight toward, up to, into, and *through* the specter of her lost lover. Then she stopped, dazed. Her arms waved wildly. "B-but he's gone! He's not here. Where did he go?"

I choked weakly, "Don't look now, Diane, but you sort of—busted him up. Little chunks of him are floating all around you."

Which was the uncanny truth. When she burst into that phantom, it popped apart like the pieces of a jigsaw puzzle; shattered into a thousand little shimmering, quivering bits, as an image will disperse when you chuck a rock into a quiet pool.

Diane stepped back. The hunks of Biggs came drifting together again. I saw that now he wore a happy smile. His lips moved, and we read the name he spoke. "*Diane!*"

Hanson whirled on the scowling chief engineer.

"How long has he been here, Chief? What's he want?"

MacDougal's reply was indignant.

"An' how, Captain Hanson, should I be capable of knowin' the desires of a disembodied spirit? I'm a mon o' broad experience, sir, but I dinna pretend to comprehend ecclesiastical mysteries. *Shoo!*" He waved his arms at the ghostly Biggs. "Go 'way, ye bodiless demon! 'From ghoulies an' ghosties an' long-legged beasties an' things that go "Boomp!" in the nicht, O Laird, deliver us!' "

Hanson turned to me in desperation.

"He's tryin' to tell us somethin', Sparks. You an' him was buddies. Can't you understand him?"

I was already pondering that problem. It was plain that Biggs's motions were not purposeless, that he was trying to communicate some message. I stepped forward, facing the wraith, formed short words clearly on my lips.

"Lance, can you hear me?"

He shook his head.

"But you can read writing?" I had some crazy idea of scribbling messages for his perusal. Of course it meant a one-way ticket to the Observation Ward if anybody ever found out I'd been holding a chalk-talk confab with a ghost, but . . .

He didn't like that idea either. He raised both arms. Then he did a funny thing. He started waving his hands in the air. Left paw—right—right again—left—left——

Todd groaned and looked for a soft spot to faint on. "Not only a spook," he wailed, "but a *dancing* spook."

"Shut up!" I yelled. "Cap, shove that cheap imitation of a first mate through the airlock. This ain't cuckoo—it's *code*! Go on, chum! I'm getting it!"

For:

"S—p—a—r—k—s," Lancelot Biggs was left-righting to me, "g—o—t t—o b—e b—r—i—e—f. Power limited. Tell chief line inner hull posi-charge steel lining, throw nega-circuit through outer. Have Todd revise course to following trajectory . . ."

I'll spare you the rest. It was all technical. So technical, in fact, that there wasn't a man aboard the *Saturn* who could make head or tail of it. Which was absolute proof that we were dealing with no spook, but with Lancelot Biggs himself. For this was typical Biggsian mathematics.

He was right in saying his time was short. He was beginning to fade before he had completed the algebraic and mechanical formulae he wigwagged to me. Toward the end I had to strain my eyes to see which hand he was wiggling. But I caught the last waves.

"Follow instructions blindly," he signaled, "and we'll soon be together again. Luck! My love—Diane——"

Then he was gone.

13

The following hours were hectic. Our normal complement is a twenty-man crew, of which only six men are engine-room staff, and the job Biggs had set for us was weighty enough to stagger the resources of a Patrol repairship.

But Hanson turned on the heat, and when the Old Man shoots the juice, things hop. We drafted everyone aboard. Command, crew, wipers, blasters—even Slops and the mess boy burned blisters on their pinkies performing the task Biggs had assigned us.

We bent to our labors eagerly. I didn't know what Biggs had in mind, but I knew damned well he never gave purposeless orders. Some good would come of the fantastic webwork of plates, wires, and coils we were weaving in, through, and about the *Saturn*.

Diane, despite the fact that her hands soon became raw and sore, insisted on doing a share of the manual labor.

"I must, Sparks," she declared. "I'd never respect myself again if I didn't help in some small way. Besides, he promised this would bring us together again. Where, I don't know——" She straightened, staring at me speculatively. "I don't know!" she whispered. "Sparks—he never told us where he is."

"He didn't have time," I reassured her. "His power was limited, he said. But everything's going to be O.Q."

But later, when I spoke to him in the control turret, Dick Todd raised the same point. He had been checking the course Biggs had designated. Now, frowning, he laid his computations before me.

"You see what this means, Bert? This course sets a direct trajectory to—*Jupiter!*"

I said, "O.Q., so it sets a direct traj—— What did you say?"

"Jupiter," repeated Todd miserably. "I've checked and rechecked it. I can't be wrong." He stared at me, small dancing lights of fear in his eyes. "Sparks," he whispered, "that *was* Biggs we saw, wasn't it?"

"If it wasn't," I told him, "I'm a ring-tailed baboon. And no cracks."

"Everyone seems to be taking it for granted he is still alive," Todd husked nervously. "But, Sparks—suppose our first hunch was right, after all? That Biggs is really dead? And that it *was* his ghost we saw?"

I wet my suddenly dry lips. "Go on," I said.

"They say the dead are lonely," mused Todd. "And Biggs, who died in the loneliness of negative space, may be doubly so. Suppose he wants company? After all, he didn't promise us success. He only said, 'We'll soon be together.' But where, Sparks? Where? In this world or——"

I shook myself savagely. I couldn't deny that his words gave me a bad case of icicles on the vertebrae. But I knew something else, too. Lancelot Biggs, alive or dead, had never yet given me a bum steer. And I, for one, meant to see this thing through or bust.

Bust! I didn't like that word either. Not when I thought of our new course, and of us blasting hell-for-leather toward massive, crushing Jupiter.

Then somehow twenty-four Earth hours passed, and by labors verging on the miraculous we had completed the task assigned us. Now we were standing in the control turret of the weirdly altered *Saturn*, watching the small hand of the chronometer creep toward the thin black mark that represented our deadline.

Cap Hanson, who had been a stanchion of strength when there was work to do, was as squirmy as a hen on a hobnailed egg now that all we had to do was wait. He paced anxiously back and forth between the control banks and the visiplat. Once he squinted through the perilens and turned to me nervously.

"You're *sure* you got that message right, Sparks?" he demanded. "You couldn't have made a mistake?"

"I've been pushing keys too long not to get my dit-da-dits straight, Skipper," I reassured him.

"We're awfully close to Jupiter," scowled the Old Man. "*Awfully* close. I don't like it. Not only that, but we're runnin' away from Europa as fast as we can. If the Corporation ever finds out about this——"

"They can't miss," I said. "They know how long it should have taken us to get to Europa. As a matter of fact, we should be landing there right now. We're going to lose a little time in establishing those claims. But if we can find Lance Biggs again——"

"*Awfully* close!" complained the skipper. He turned to Todd suddenly. "Todd, we can't risk it! There must be a mistake somewhere. Jupiter fills all space before us. If we get caught in its gravitational power, we'll all be killed. We've got to turn back. Send the message down to the engine room. Reverse motors an' back-drag."

Diane cried, "Daddy! But Lance——"

"I'm sorry, honey. But we can't risk all our lives an' a quarter million credits' worth of Corporation property on the chance of findin' one man. Give the order, Mr. Todd!"

Todd said willingly, "Aye, sir!" and reached out to push the audio stud. My heart sank. The needle was almost upon the split second that should have seen us putting Biggs's mysterious plan into operation. I yelled, "Skipper, *please!*"

"Give the order, Todd," repeated Hanson regretfully.

But Todd's hand never reached the button. For just then the ship gave a terrific, straining lunge. The floor seemed to slip beneath my feet; I toppled headlong to my knees. Plates groaned and creaked in

metal agony. I felt a sensation of wild acceleration, a dizzying sense of speed intensified, plunging us forward—downward——

And Todd cried, "Too late! Too late, Skipper! God help us—we're falling onto Jupiter!"

I told you, folks say I'm hard-boiled. People also claim I'm a screw-ball. They say lots of things about me—few of them nice. But I'll say this one thing in self-defense: once in a million times I show a solid streak of common sense.

This was one of those times. While everyone else was wailing and hollering and going off their buds, I got smart and carried on.

I roared, "Damn it all, Lance *knew* this was going to happen. He planned for it. Depress that number 3 lever, Todd. Shoot the juice through those coils we've been building."

And Todd was so rattled that he obeyed me. As I told you before, we'd constructed a wild-looking network of wires all over the framework of the *Saturn*. We had even built a whole new secondary inner hull lining, juicing it according to some diagram that didn't make sense to any of us.

Now rheostats rheostated and condensers condensed and the air got so charged with electricity that my teeth began humming like bees in a bathtub. And it got hot in the control turret. But——

But our frightful plunging motion ceased! Not just like *that*, you know. I don't mean we stopped stock-still and hung motionless in space. But we drifted into an easy glide. A gentle, leaf-in-the-breeze sort of motion.

Cap Hanson's jaw dropped to his vest button. A gasp worked its way up out of his lumbar region. "Impossible!" he gulped. "I don't believe it!"

I didn't either. For what we saw mirrored on the visiplat was something no man in the universe had ever seen before—and returned to talk about. We were viewing the troposphere, the stratosphere, the surface atmosphere of the massive planet Jupiter at close visual range. And we were drifting gently to solid ground, in no more danger than a parachutist approaching a field full of sofa cushions!

It didn't even occur to me, then, to notice how far astray had been the scientists in attributing fantastic characteristics to unstudied Jupiter. Because its density was so much less than Earth's, they had envisioned it as a gaseous or semi-liquid planet. Which was so much hogwash. Only in appearance was Jupiter gigantic. The planet was a normal-sized core surrounded by a blanket, thousands of miles deep, of atmosphere. Jupiter was lush, luxuriant, green, steamy with vapors, riotous with vegetable life. Protected by its swaddling blanket of ozone, it was the most likely abode of life man had yet found outside his native Earth!

But, as I say, I scarcely noticed this at first. I was conscious only of my own pulse-numbing astonishment, of the casual, lazy motion of our ship, of Captain Hanson gasping beside me in a cracked, incredulous voice, "Anti-gravitation! *He's found it!*"

Our task was not yet done. Biggs's instructions called for the lifting and depressing of a dozen more studs. But by now Dick Todd—who is a good navigator if not a mental giant—was hunched over the controls playing the intricate keys like a master organist.

In three hours that sped by like as many minutes, we gained the surface of Jupiter. We sought the declension points Biggs's ghost had set forth to us. We spotted a glistening mote of silver beneath us, lowered on our amazing anti-gravitational beam, and settled to a perfect landing less than an eighth of a mile from the lean, gangling, radiant, unspacesuited figure who came racing across the field toward us. . . .

When everyone had stopped trying to talk at once, and a modicum of coherence had worked its way into our glad reunion, I pressed Biggs for explanations. He grinned in that amiable, deprecating way of his.

"Why, it wasn't really much, Sparks," he protested. "I never was lost in negative space at all. You see, when I cut myself loose in the lifeskip from the infinite mass of the *Saturn*, in order to re-establish the ship's finiteness, I also made my *own* craft finite again."

"And I like to think I've got brains!" I groaned. "But go on."

"Well, by sheer luck, the spot in space where I became finite again happened to be here, on the surface of Jupiter. I was pretty much surprised to learn that this is a habitable planet. Good air, plenty of food and water—no handicaps but its tremendous bulk." He sobered momentarily. "None of the others who crashed here survived, I'm afraid. I've found three or four spaceships all broken to bits . . .

"At any rate, I realized that the only way for me to escape was to find some method of counteracting the planet's terrific gravity. And it suddenly occurred to me that the answer lay in a laboratory curiosity created 'way back in the twentieth century: a piece of magnetized steel that floated within upright supports above a countermagnetized plate.

"I adapted this principle and gave it a few refinements of my own. The instructions I gave you created a dual magnetic hull for the *Saturn*. Inner hull positively charged; outer hull negative. Counterbalance, you see. The outside of the ship repelled the gravitational attraction of Jupiter so strongly that it never could have landed. The inner hull tempered the effect of the outer so that an easy, drifting motion was obtained. You could vary the speed of this simply by altering the amount of electromotive force running through the coils."

"We discovered that," nodded the Old Man. "But you still ain't told us, son, about your 'ghost.' You like to scared the almighty hell out of all of us. How did you pull that trick?"

Lance grinned shyly.

"Well, I can't take full credit for that, Skipper. It was pure accident. I found here on Jupiter a deposit of some strange new substance with peculiar properties. The stuff seems to polarize light at its source and reassemble it into a tridimensional image at a distance which can be controlled by electric power.

"When I discovered that my own lifeskiff couldn't make the long trip to Europa or Io, I decided to project my image out into space, in the hope I'd find someone. The telekaleidoscopic rays—I guess we can call them that until we find a better name—have a natural

affinity for metals. This cut down the chanceability of the experiment.

"But it was sheer chance that you should be my rescuers. Although I might have known you wouldn't abandon me without a long search. I—I'm mighty grateful to you, sir."

His words struck Hanson like a thunderclap. The Old Man groaned, "*Omigawd!*"

"What's wrong, Skipper?"

"I just remembered—we was supposed to be on Europa twenty-four hours ago! By this time all the available claims will be gobbled up. When the Corporation learns about this, we're sunk!"

Diane said indignantly, "Ridiculous! You've made the first landing on Jupiter, Dad. Surely that should be enough glory for them."

"There ain't no such thing," said Hanson dolefully, "as enough glory for the I.P.C. I know this outfit, honey. Their motto is get all you can an' then some. It ain't goin' to matter to them that we found Biggs, discovered anti-grav, an' made the first landin' on a new planet. They sent us out to find polarium deposits, an' if we don't come home with the best claim——"

"Polarium?" interrupted Biggs. "Did you say polarium, Captain?"

"That's what I said," groaned the skipper. "Now be a good boy, Lance. Go 'way an' leave me suffer in silence."

"Why," grinned Biggs, "I don't believe there's any reason to suffer, Captain. Because, you see, that strange new substance I mentioned—the one out of which I constructed my telekaleidoscope—is polarium! There are tremendous deposits of it here on Jupiter. Which is only natural. This is the mother planet of Euro——"

His sentence ended on a note of sudden alarm.

"Why, Skipper! Whatever is the matter? Sparks—catch him. Catch him!"

I shook my head wearily.

"Let him topple," I said. "I was just looking for a nice soft spot to faint on myself. He'll do for a cushion."

14

I remember the preacher saying, "I now pronounce you man and wife," and I remember the sweet smile on Diane's face and the dazed smirk on Lancelot Biggs's, and the clank of sabers as we walked up the aisle through an arch of gleaming steel. I remember asking to kiss the bride. Then I remember something about a reception, with somebody passing out drinks, and I remember demanding to kiss the bride again.

Then there was another bottle or three, and it must have been powerful juice, because I remember Lancelot Biggs frowning when I insisted on kissing the bride. Then I felt sorry for myself and started to cry, and Captain Hanson roared something about, "Take that boiled son of a spacehawk home and pour him into bed," and I looked around, wondering who was tanked, and by golly, they all were but me! Which I tried to explain, standing on a table so I could get their attention, but somebody pulled the table out from under me.

And that's all I remember until I woke up the next morning with my mouth tasting like the bottom of a bird cage and Dick Todd standing at my bedside grinning at me. Sunbeams were bouncing up and down on my counterpane like kangaroos. I moaned and said, "Get 'em out of here, Dick!"

He said, "Them? Who?"

"Those little green men. They're making faces at me."

He said, "Shoo! Go away, little green men!" and they disappeared. "You," he said, "sure collected yourself a snootful last night."

"Who?" I demanded, holding the top of my head on. "Me? I don't know what you're talking about. Can I help it if I was suddenly taken sick?"

"You were suddenly taken," he chortled, "drunk! I thought I'd die when you picked MacDougal up piggyback and started sliding down banisters with him. You said you were a space vacuole looking for someplace to happen. And when you told the crowd about the time you swiped the skipper's winter drawers and ran 'em up the flagpole——"

"Did I," I shuddered, "tell them that?"

"You sure did. You also had a lot to say about some girl at Sun City. You said you called her Ginger because she was a snap——"

"Go 'way!" I moaned. "Go 'way and let me die in peace."

Todd grinned. "No can do, Sparks. Hanson sent me down to get you. All brevetmen are to report to the control turret immediately. So grab some breakfast and——"

"Don't!" I howled.

But I had some breakfast while I dressed: an aspirin, a cup of coffee, and two more aspirins. And I finally reached the control turret of our space-going scow, there to find my shipmates standing around looking very morning-afterish.

The skipper scowled at me as I wobbled in.

"Well! So you made it? Donovan, there's limits to everything, an' you exceeded 'em last night."

"Look, Skipper," I said, "I can explain everything. As Biggs's best man——"

"Best man!" he snorted. "If you was the best man at that weddin', I'm a lobster's tonsils. You was a disgrace to yourself, the *Saturn*, an' mankind in general—— Ah! The top of the mornin' to you, son."

Enter the bridegroom, Lancelot Biggs, preceded by a sheepish grin. He said, "Good morning, folks. Lovely day, isn't it?" Then, to the

Old Man, curiously, "I thought they were Earthdocking us for three weeks, Skipper. Why the conference?"

"Your guess is as good as mine. I got a call from the home office first thing this mornin'. All leaves canceled, they said. We're to have a visitor in a few—— There! That must be him now."

It was. Colonel Ira Brophy, one of the brass hats of the Corporation. He hustled in all grins, grunts, and glamour, pumphandled the skipper and beamed on us like a nova.

"A fine-looking body of men, Captain Hanson. And believe me, sir, the I.P.C. is justly proud of this ship and its officers. Yes indeed!"

At my side Lancelot Biggs muttered something that ended in "*—donae ferentes.*" But Hanson fell for it, hook, line, and sinker. He said, "Thank you, Colonel. An' we, in turn, are proud to be privileged to do our little part for the Corporation. Any thing, any time; that's the way we feel about it."

Brophy pounced gleefully.

"Wonderful, Captain! I told my associates that would be your attitude. 'The men of the *Saturn*,' I told them, 'will be delighted to undertake this mission, even though it means the curtailment of a certain amount of personal liberty——' "

Hanson's jowls sagged. "M-mission?" he stammered.

"Yes, Captain. It is my pleasure to inform you that to the *Saturn* has been allotted the honor of investigating our recent cosmic visitor, Caltech VI. You will lift gravs at 19:03 Solar Constant Time tomorrow. I need not say that with you on this vitally important assignment go the best wishes of our great organization . . ."

I didn't hear the rest. I was too busy stifling an impulse to caress Brophy's conk with a blunt instrument. I glimpsed the dials of Biggs, Todd, Wilson, and the rest of the boys, and knew I wasn't alone in my reaction.

This was a hellbuster of an assignment! Caltech VI was the latest addition to Sol's family, a space-wandering planet from God-knows-where that had recently swum within the gravitational attraction of our sun and taken up residence between Mars and the asteroids.

From the beginning it had been a troublemaker. The solar system is weighed on such a hair-trigger balance that any considerable outside influence will throw it haywire. Caltech VI—named after the old but still serviceable 200-inch platter that had spotted it—had raised a terrific rumpus settling into an orbit. It had caused howling sandstorms on Mars, ionic disturbances on mighty Jupiter, and blasted a half hundred planetoids clear out of existence.

Astronomers agreed the newcomer could not last very long. A couple hundred years at the most. Inevitably it would be torn to pieces by the titanic tug of war eternally waged by Jupiter and the Sun. But in the meantime, according to Fraunhofer analysis, there were valuable ores on the interloper. Which meant that the first person or group to set claim stakes on Caltech's soil would clean up big.

Fine, huh? We should have been joyful at the prospect of dipping into this celestial gravy, no? But maybe I forgot to mention that already three expeditions had gone out from Earth and one from Venus. All of them had reported successful landings on the planet. Then—silence!

Cap Hanson, having finally gathered up his scattered wits, began volleying protests.

"But, Colonel," he howled, "the *Saturn* ain't good enough for that sort of job. We're only a freighter. Our plates are worn, our hypatomics old-fashioned——"

"True," said Brophy agreeably. "But your space record is enviable. You have served the Corporation faithfully and well——"

What he meant was, we were expendable. Lancelot Biggs said wryly, "I should think those would be arguments for *not* sending the *Saturn*."

Brophy glowered at him from behind glinting pince-nez. "And who might this young man be?"

The skipper said nervously, "Lieutenant Biggs, sir. My first mate." He added proudly, "Him an' my daughter had a military weddin' last night."

"That's too bad, Captain," sympathized Brophy. "But to return to the subject——"

"Military," bellowed the skipper, "not shotgun!" Then a sudden idea struck him. He adopted a wheedling tone. "Look, Colonel—if we got to go, we got to go. But I can excuse Lieutenant Biggs from duty, can't I? After all, he's on his honeymoon."

Brophy shook his head decisively.

"I'm sorry, Captain. All furloughs are canceled. All men must report for duty on this special assignment. I might add, though, that if your venture is successful, the Corporation will fittingly reward all participants."

"An' if it ain't?" asked the Old Man.

"They'll bury us," I piped up, "with honors. Well, I'll see you boys later. I've got to see a carpenter about a coffin." And I left.

So that was that. You don't argue with the guys who govern the purse strings. The next day found the *Saturn* loaded to the gunwales with cameras, spectrometers, interferometers, and assorted gizmos, the very names of most of which were Sanskrit to me. That's where Lancelot Biggs came in. He's not only our first mate; he's our technological expert.

The Corporation also had the almighty viscera to fill one hold with cargo. "Concentrate of zymase," said the field superintendent, "for discharge at Mars Central on the return shuttle. Get a receipt from the port officer, Captain."

"What's his name?" demanded the skipper gloomily. "St. Peter? Oh, hello, son. Sorry I couldn't get you out o' this mess. Where's Diane?"

"That's all right," said Biggs. "Maybe everything will work out. She's home. She wanted to come along, but I wouldn't let her."

Hanson growled, "This is a hell of a honeymoon for you kids. Romance by remote control! Well, we might as well lift gravs. Sparks, get clearance from the port."

I said, "Aye, sir!" and did. At 19.03 S.C.T. we blasted out of Long Island spaceport, forward tubes pointed at a mysterious new planet that had already killed more men than a Central American revolution.

At 22.00 sharp Slops boomed the gong for officers' mess. And at 22.07 the door of the mess hall opened and in walked Diane Biggs.

Cap Hanson had a mouthful of tomato juice when he laid eyes on her. Two seconds later his mouth was open in a roar and the tablecloth had a central design of tomato juice.

"Diane! What in the name of the seven sacred satellites are *you* doin' aboard?"

"Now, Dad——" She smiled. "Now, Dad, remember your high blood pressure."

"Blood pressure be damned!" frothed Hanson. "You get off this barge an' back to Earth where you belong!"

"It's cold outside," said Diane. "Remember? And besides, this *is* where I belong. Isn't it, honey?"

She looked at Lancelot Biggs, who was suddenly having trouble with his epi-brothers: dermis and glottis. The first was scarlet, the second was charging up and down in his throat like a berserk elevator. He managed to eke out a few words, somehow.

"You," he gulped, "shouldn't be here."

"And where else should a girl be on her honeymoon," demanded Diane coolly, "than at her husband's side?" She plunked herself down beside him. "Put on another plate, Slops. There's company for dinner."

The skipper rose.

"Enough," he declared, "is too much. I wasn't hot on this trip from the start. Now I'm an Eskimo. Sparks, take a message to Long Island spaceport. Tell 'em——"

"Tell them," interrupted Diane Biggs, "that the captain and crew of the *Saturn* are on their way to find out what happened to those other poor fellows who tried to land on Caltech VI. And tell them we *will* find out, because we're the toughest, smartest, space-lickingest gang of etherhounds who ever lifted gravs, and there's nothing between here and Procyon that can scare us. Mmm, what delicious soup!"

That stopped them. That stopped them cold. Hanson looked thoughtful, one gnarled hand caressing his jowls. Biggs stopped trying to talk; a curious look came into his eyes. Dick Todd's shoulders stiffened. Chief MacDougal dragged out a filthy, oil-smeared handkerchief, blew his nose viciously, and said, "Grrmph!"

Me, I was stunned speechless too. Oh, not because she had reminded me we had a moral obligation to find out what had happened to the previous explorers. Nor because she had roused in me any latent spark of pride in the *Saturn*. What got me was her calling the soup "delicious." Good golly! That stuff?

So we went on, and Diane Biggs went with us. The outstanding feature of the shuttle was the scandalous way our newlyweds conducted themselves. Honest, their billing-and-cooing was enough to make a Martian canal-pussy blush green. The worst part is, they didn't seem to have a bit of shame. They didn't care whether anybody saw them or not. And their baby talk! He called her "Lovums." She called him "Cutie," which was all wrong, "Bugsie," which was one hundred per cent right, and a host of other names too nauseating to repeat.

But finally came the time when the skipper came busting into my cabin and bawled, "Get up off your brains, Sparks, an' take a message. Caltech——"

"I know," I told him. "I've already sent it. Caltech VI is oh-oh under the nose, and the *Saturn* is preparing to land."

"Ain't you the smart little numskull?" snorted the skipper. "Remind me to use your cerebellum for a paperweight. No, dimwit, I ain't goin' to set down on this here outlaw planet till I learn what I'm landin' on. The *Saturn* ain't goin' to be number four on the missin' list."

I asked, "Well, if we're not going to drop gravs, what's that big thing looming in the visiplat? Green cheese?"

Hanson took one squint through the perilens and let loose a howl

that frightened its own echoes. "He's landin'! The damn fool's settin' us down!"

He made a dive for the door. I grabbed his flying coattails long enough to squawk, "Who?" and the answer came Dopplering back, "Biggs, the lovesick idiot!"

I moved too. Sheer suction pulled me along as we hit the ramp, charged through the corridors, scrambled up the Jacob's ladder, and bore down on the bridge. At the door I managed to pant, "Who—who's in there with him?"

"Who do you think?"

"That's what I thought. What is this? A control turret or a mushroom?"

Then we were inside, and it was just like I thought it would be. Biggs was seated in the pilot's chair, pushing the studs that eased the *Saturn* to a landing, and hovering over him like a halo around a saint's occipital was his ever-loving bride.

Hanson screamed, "Biggs! Wait!" and Diane turned, smiling.

"Isn't he clever, Daddy? He's the best pilot in the whole wide universe—aren't you, honey-bun?"

"Now, sweet——" protested Lance modestly.

"Wait!" squalled the skipper. "Wait!"

"Weight, sir?" said Lance, rousing briefly out of his daze. "Aye, sir. If you think best——" And he punched the grav plugs. My knees buckled suddenly as the plates took hold. Hanson stumbled; Diane gasped. Over the intercom audio came a dozen irate queries from various parts of the ship. Hanson spoke with an effort.

"Not *weight*, you double-blasted lunatic. *Wait!* Till we see what we're gettin' into——"

But he spoke too late. The grip of the grav plates had done it. Our nose jets spluttered, the ship lurched and slithered, there came a sharp bump, surprisingly yielding and bouncy, considering the speed at which we had grounded—and we were on Caltech. Motionless, after days of travel.

No, not motionless. For then we felt it. A squidgy sort of sinking

sensation, a sort of wobbling insecurity, as though the ground were opening to let us drop through. The skipper roared, "Lift 'er up, Lance! We're gettin' into somethin'."

Biggs made desperate passes at the control panel. The rockets flared and hissed, the hypos howled. But nothing happened.

I yelled, "We're not getting; we've *got*! Look!"

They all stared, like me, at the quartzite forward viewpanes. Blue sky should have been visible through them; warm sunlight should have been flooding the turret. The terrain of Caltech should have stretched before our gaze. But all we could see was a gooey splatter of gunk oozing up the sides of the *Saturn*. A strange, viscous, colorless matter that surged up and about our ship with weird, tentacular writhings, covering the viewpane, engulfing the ship. We continued to experience that sinking feeling . . .

"Sweet whispering stars!" gasped the skipper. "Am I off my gravs? Do you see what I see? The ground melted an' come up an' et us!"

And I knew, suddenly, what had happened to those who had landed before us on mysterious Caltech. Like us, they had been swallowed beneath the soggy, flypaper crust of the alien planet.

I guess I'm just a bug-pounder at heart. My first thought was composed of dots and dashes. I made a beeline for the radio room, powered the tubes, and began CQ-ing up and down the wave lengths like a longhair at the Steinway.

Which was so much wasted time. I couldn't draw a hum out of the audio. Even the more delicate earphones failed to bring in the powerful Mars-Ceres beam. And if I couldn't get a message *in*, it's a damn sure thing I couldn't get one *out*. My transmission was completely blanketed.

So I hung an *Out to Lunch* sign on my door and went back to the control turret. As I entered, Lancelot Biggs was turning off the hypatomic motors, swiveling around to face the skipper.

"No go, Captain. I've tried anti-grav, neg potential, and reverse

rockets. We can't get loose. We seem to be in something akin to quicksand. Every move we make shoves us in that much deeper."

Hanson growled fretfully, "Is this here planet somethin' like Saturn? Low specific, so we keep fallin' toward the center?"

Biggs said, "I don't believe so. The material about us is peculiar. It seems to be organic. And it has a certain degree of inherent energy——"

"Energy?" I yelled. "Hey, then maybe we could use our H-layer force shields to work our way out of this mess. Reverse their polarity and set up a counter-EMF. A couple of men in bulgers, working from the hull——"

Biggs glanced up sharply. "And just how do you plan to get out of the ship, Sparks?"

"Why, through the airlock, of course."

"No. Don't try that. I have a feeling——"

He stopped. He didn't say what his feeling was. To tell the truth, the curtness of his tone made me a little bit sore. After all, I'm not the dumbest guy afloat in space. I said stiffly, "Then how *do* we get out of here? Or are we number five on the flit parade?"

Lance swallowed hard. He said, "I'm the tech man on this freighter. All of you clear out. I'll find some way . . ."

His words dwindled into silence. Diane looked at him proudly, fondled his cheek. She said, "That's right, Cuddlums. You'll get us out, won't you?"

The skipper said, "Gug!" Lance started fussing with instruments, while Diane soothed his brow by tying strands of his hair into lover's knots. I got sick at the stomach looking at them after a while, so I left. Cap Hanson beat me to the bar by three drinks. . . .

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It must have been an hour later that we felt a jarring *whoomp!* beneath our keel. The tickly tummy-in-an-elevator sensation stopped. Hanson looked at me and said, "Biggs? He done somethin', maybe?" and we went back to the bridge.

Biggs had not caused the settling. But he was beaming triumphantly anyway. As we charged in, demanding information, he said, "Why, it's very simple. We have finally come to rest on the surface of Caltech."

"Sue me if I'm wrong," said the skipper, "but I got the impression we landed on this overgrown cup custard an hour an' a half ago."

"No, Skipper. We didn't land on the *surface* before. We landed on a peculiar kind of matter which is, so far as I have been able to figure out, allied with the strange life form inhabiting this planet."

"Life form? You mean that stuff's *alive*?"

"Not exactly. That's the problem I haven't been able to solve yet. I've made a careful analysis of the substance encysting us. It seems to be a highly complex carbohydrate. Its formula is C_6 ——"

"This is no time," I broke in, "to discuss *mal de mer*. What I want to know is, do we or don't we try my idea?"

"No," said Biggs.

"Why not? What have we got to lose?"

"No!" he said again. I know he was preoccupied. But his tone rekindled my anger. And I didn't feel any better when Diane said, "Please, Sparks, don't bother Lancelot when he's thinking. Go ahead, sugarplum."

So sugarplum went ahead, and I stalked out of the turret. I went to my cabin and tried to read a magazine, but I couldn't get interested in someone else's fictional adventures when I was buried alive in cosmic goo myself. I fiddled with the dials again for a while. Net result: zero. So pretty soon I got up and put on my bulger. I collected an armload of equipment and went down to the starboard airlock.

Biggs had said the gelatinous mass engulfing us was at least partially composed of energy. Which made what I did seem, to me, quite logical. I pressed the stud that opens the airlock, heard the machinery creak into motion, then——

Things happened. But not quite the sort of things I had expected. Instead of my forcing my way out to the hull, I found myself being forced backward by a solid wall of gray gunk that welled into the ship in a sticky mass. There was no way to push my way through it. I growled, cursed, and started to close the airlock . . .

But it wouldn't close! The writhing stickiness was surging into the ship with incredible, fluid swiftness. Gray streamers fingered toward me. I yelped and raced for the bridge, shedding my bulger as I fled.

In the center of the control turret I waited for my breath to catch up with me. Biggs spoke subconsciously from the depths of a weighty ponder. "Shh!" he said.

"Shh!" repeated Diane. "He's thinking."

"Then tell him to think about pancakes," I howled, "because there's a shipful of gray molasses following me up the corridor!"

Biggs started. "What's that?"

I told him. "It looked like a good idea," I finished, "only it wasn't. Now the stuff's in, and I can't close the lock again. It'll fill the whole damned ship in another hour."

Cap Hanson is no dope. He had already leaped to the audio, was barking orders to other parts of the *Saturn*.

"Seal starboard an' loft sections of the ship immediately. Lock emergency doors! Move all men into safe sectors!"

Diane looked at me anxiously.

"What—what does it mean, Sparks?"

"Nothing much," I told her dolefully, "except that I've just killed us all. That stuff will ooze through every crack and crevice in the ship, swallow everything aboard just like it swallowed the *Saturn*. That's probably what happened to those other explorers. There must have been one idiot like me aboard each ship. I'm sorry, Mrs. Biggs. I've sure put the final touch on your happy honeymoon."

She was Cap Hanson's daughter and the bride of Lancelot Biggs. A gal doesn't get to be both of those without having more innard stuffings than a sofa cushion. If my words hurled her back on her heels, it was only for a fraction of a second. Then, smiling, she turned to Lance.

"We're not afraid, are we, lambie-pie? But you'll have to hurry now."

Biggs pawed his hair frantically.

"I'm doing my best. I've got all the facts. But I still can't quite understand——"

Voices rasped in over the audio. Enderby reported from the crew quarters, "All men evacuated, sir. Standing by for further orders." MacDougal snarled defiance from the engine room, "We've plugged all doors, sir. We'll hold this position to the last posseeble minute!"

"It's a form of carbohydrate," mused Biggs aloud. "Plastic. Semi-fluid. But why? *Why?*"

"Think hard, sugar!" pleaded Diane. Biggs said mechanically, "Yes, honey——" Then he stiffened.

"Honey!" he said.

I groaned. "This is no time for sweet talk, Lance," I cried. "Keep scratching at those gray cells."

Over the audio came the voice of supercargo Freddy Harkness. "Am abandoning holds, Captain. The invading substance has already covered the aft bins and is moving forward rapidly."

"Seal the safety door, Harkness——" began Hanson.

Then Biggs was at his side, suddenly frantic, eager.

"No, Skipper! Tell him to keep them open a minute! I'll be right there. I need three men!"

He lit out for the door. Hanson cried, "Son, come back! You'll be killed. Come——"

But he was talking to empty air. Biggs was pounding down the runway. Diane sniffled once. Then her jaw tightened. She said, "I'm going after him."

Hanson pushed her into a chair—but hard. He said, "You're waitin' here with us. You'll only be in his way. Lance is the tech man on this ship. If anybody can save us, he's the one." But as her head lowered, his eyes met mine. And the words were written there, "Not this time. . . ."

Still, we had to do something. We couldn't just sit there and take it blind. We had to know what was going on. So we cut in the visiplate to the corridor outside the storage bins.

It was a dismal scene that appeared before us. The long corridor was deserted save for a thin sliver of something oozing out of an adjacent chamber. As we watched, this sliver turned to a bulky, rolling mass, became the doughy body of the mysterious matter in which the *Saturn* was enmeshed. Like a ponderous wave it surged up the corridor, straining into every crack and crevice, engulfing everything it met.

We saw a tiny gray ship mouse scurry from under a doorway, hesitate as one pink foot slipped into the sluggish excrescence. It tugged, trying to get free. But it was like a fly snared on flypaper. In a few seconds it disappeared. Diane began crying softly. I turned away, sickened and hating myself for having loosed this horror among us.

Then there were bright gleams in the visiplate, and Lancelot Biggs, accompanied by three far from eager crewmen, entered the corridor. As he passed the visiplate he glanced up and smiled at us, nodded encouragingly. Then he ducked into one of the storage bins.

He came out staggering under the burden of a heavy wooden crate. Ripping the top off this, he motioned his assistants to haul other similar boxes from the bin and open them. They did so. But one look at their faces told us they didn't like this business nohow.

Finally he had the box open. He tore out a portion of the contents. And . . .

"Has he gone nuts?" raged Hanson. "That's only that medical junk for Mars! That zy-somethin' extract."

Biggs wrenched the cap off one bottle and deliberately poured the contents into the nearest pseudopod of the matter now sprawling within scant feet of him. Then another bottle—tossed into the mass this time. And another. And another.

Diane screamed suddenly, "Daddy, look! Behind him. He's trapped!"

She was right. From a cross corridor had billowed more of the Caltechian effluvium. It formed a solid barrier through which Lance and his co-workers could not now escape. They could move neither forward nor backward. In a few minutes the two sluggish tentacles of the syrupy mass would meet. And then . . .

I said, "You'd better turn off the plate, Skipper."

Hanson nodded. He reached toward the button. Closer and closer, now. In seconds the two walls of matter would coalesce. The crewmen had seen their peril. We couldn't hear their voices, but obviously they were pleading with Lance to let them take refuge in the one storage vault so far untouched; seal that door. And he was forcing them to hold their ground. All four of them were desperately ripping corks from bottles, pouring the medical export into the substance closing in on them.

Then one man slipped. A foot flew from under him, was avidly gripped by a tentacle of that slimy mass. His eyes and mouth opened wide; I knew he was screaming.

Biggs stepped forward to grasp his shoulders. The skipper hoarsed, "Look out, son! Behind you!"

It happened all at once. One minute there were two towering walls

of fleshy matter surging inexorably forward upon the trapped quartet, and the next instant——

The walls collapsed! Just like that! Collapsed into running streams of blotchy liquid scum. The crewman's leg slipped free. Lance toppled over backward into the slimy puddle. A foolish look overspread his face, a look that was duplicated in the expressions of his associates. His eyes rolled. He goggled up into the visiplat, kissed his fingers to us . . . and hiccoughed! His lips formed a syllable. That syllable was, "*Wheeee!*"

Hanson's shaking fingers sought his jowls. He cried, "My God, he's——"

"He's what, Daddy? What?"

"Boiled!" roared Hanson. "He's as drunk as a hoot owl!"

Some time later—about two hours, to be exact—I dragged Biggs back to the control turret. He was still a little blue from the cold shower under which I'd forcibly sobered him. But the fog was out of his brain, and that was what we wanted. For all of us were dying of curiosity.

Hanson said, "Well, your plan worked, son. We got the ship cleaned out, an' like you said we would, we pulled out o' the goo we was in. Now we're on our way back to tell the world the facts about Caltech, and"—he added proudly—"collect that bonus. 'Cause under that scum is a fortune in ores.

"But what *was* the scum? An' how did you know you could bust it up with that there zy——"

"—mase," grinned Biggs. "Zymase, Skipper. Why, it wasn't difficult, once Diane supplied the key. I guess I was slow in figuring it out mainly because the disaccharose existed on such a gigantic scale that I could not comprehend it."

"The di—which?" I asked.

"Sugar to you," said Lance. "Or, more accurately, a form of treacle. Honey-gum.

"Here's what I figure. Subsequent investigation may prove me

wrong, of course, but my theory must be basically sound or we wouldn't have escaped.

"Caltech VI is inhabited by some sort of gigantic insect, which may be of the bee, the spider, or the ant family. Each of these insects, you know, secretes fluids which it adapts to its private needs. The ant seals nests and wraps larvae in his, the bee builds hives and makes honey, the spider spins threads wherewith to capture its prey.

"We were caught in a gigantic trap built by one of these insects; that's all. From what we saw, I judge that most of Caltech's surface must be covered by their gigantic webs, miles in extent, hundreds of feet deep. Webs of doom for the unwary. Being highly tensile, gummy, irradiated with a rather unusual form of inherent energy, these traps cannot be damaged by rocket blasts."

He shook his head soberly. "I can't help thinking of those poor devils who died there. Like human flies in a monster's viscous web——"

I prodded, "The zymase, Lieutenant?"

"Oh yes. Well, zymase is a nitrogenous substance, a freshly expressed concentrate of yeast juice. Its action on sugar is to speed up, terrifically, the ordinary process that transpires when sugar and yeast are brought together. In short—*fermentation*.

"When we emptied the zymase concentrate into the flood of honey—for it was that, though I might never have guessed it in time had it not been for you, dear"—here he beamed at Diane—"the natural sugar was broken down into carbon dioxide, glycerin, succinic acid, and—er——"

"Urr?" repeated Hanson curiously. "What's that? Never heard of it."

"And—er," said Lance sheepishly, "alcohol! You see, that's why the crewmen and I were a trifle—er—confused by the atmosphere surrounding us——"

"Confused, your hat!" I told him. "You were stewed. But it all makes sense now. The fermentation loosened the sticky goo; our blasts dragged us out of the trap. But say! That alky odor is still reek-

ing through the ship. We can't air the *Saturn* while we're traveling through space. Do you think——"

But he didn't hear me. For this, after all, was the honeymoon journey of Lancelot Biggs. And now, the danger over, he had reverted to type. He and Diane looked like a brace of intertwined pretzels.

The skipper coughed. He said, "Sparks? Maybe we better——"

I gasped, "Gosh, yes! This red on my face ain't sunburn!"

So that, folks, was that. Except for one small thing. I was right about that alky odor. It *didn't* leave the ship. Don't ask me how we ever got home. They told me later we zigzagged in by way of Mercury and Phobos. I wouldn't know. It was just one long, delirious dream to me. I was two weeks coming out of it.

What a holiday! What a honeymoon! What a hang-over!

16

I wouldn't go so far as to say that marriage made a new man out of Biggs. That feat would require a major operation—or at least an act of the Interplanetary Congress. But for a while it seemed to settle him down. For the next couple of months we succeeded in making our routine runs without undue incident.

Which, now that I look back upon it, was the scribbling on the bulkhead. I should have realized the situation was too good to last. It was. It didn't.

We had just finished a trip to the fourth planet. When we warped the *Saturn* into its cradle at Mars Central spaceport, the Corporation's local representative came loping over to our jalopy like a hound in a hamburger orchard and closeted himself with Cap Hanson. For about a half hour they held privy council, and when they appeared again the hush-hush was so loud it almost deafened you.

A while later, stevedores started loading into the *Saturn's* cargo bins an accumulation of airtight lead containers. These workmen, too, were furtive as clergymen at a crap game, and all I could get out of them by way of explanation was the one-word sentence, "Idunno-nothinaboutit."

So I hunted up Lancelot Biggs, who knows practically everything

about ditto, and of course I found him standing with one arm draped about the shoulders of his brand-new bride, staring at a perfectly commonplace Martian sunset as if it were a gala première presented especially for his enjoyment.

"Hey, Biggs," I demanded, "what's going on?"

Biggs said, "Hello, Bert. Gorgeous evening, isn't it? This magnificent sunset makes me think of that beautiful old Martian poem, '*In seas of flame the sparkling stars are hiding . . .*'"

"Speaking of which," I said, "who's hiding what from who? If we're taking on a cargo of high explosives, why doesn't the Old Man tell me, so I can quit *now*?"

He snapped out of his trance and stared at me bewilderedly.

"What's that, Sparks? High explosives?"

Diane scoffed. "That's absurd, Lancelot dear. You *know* Daddy would have told us if——"

That's as far as she got with her iffing. At that moment the skipper himself came waddling across the field and rasped, "Awright, let's get goin'. Everybody aboard! Sparks, audio all hands to posts an' get your clearance orders. Lancelot, set trajectory for Iapetus, an' make it snappy. We're liftin' graves immediately."

"*Iapetus!*" gasped Diane. "But, Daddy, I thought we were shuttling a cargo to Earth?"

"Was," snapped the Old Man, "not *is*. Orders've been changed. Get goin', everybody!"

There are limits. I planted my tootsies firmly and declared, "Not me, Skipper. I'm not stirring a step till I know what this is all about. Why this sudden shift of destination? And what are those lead containers the cradle monks have been storing in our bin?"

"I ain't got time to explain now," said the Old Man. "Every minute counts. Now run along an'——"

"Ah-hah!" I declaimed. "So it *is* explosives! Skipper, consider me an ex-member of the *Saturn's* crew, as of two minutes ago. I want to sail the spaceways in peace, not in pieces."

Cap Hanson's beefy face mottled dangerously.

"Sparks," he choked, "if there was another bug-pounder available, I'd accept your resignation with whoops of glee. But as it is . . . Well, I'll tell you this much. We ain't carryin' explosives. Our cargo's somethin' perfectly harmless but very valuable, which it's important we get to Iapetus before the Cosmic Corporation beats us there."

"Oh, goody!" squealed Diane. "A race, Dad?"

"That's right," growled Hanson. "An' a mighty important one, too, with about umpteen billion credits hangin' on the result. Now, get goin', everybody, before I——"

So we went.

Within a half hour we'd lifted gravs from Mars Central, and in three shakes of a rocket's tail Biggs had twisted our crate's nose about and pointed it at Saturn's eighth satellite, approximately eight hundred million miles away.

Which left me with nothing to do till Slops gonged the dinner bell, so I was sitting there reading the latest issue of *Spaceways Weekly* when the door of my cabin opened and in walked Biggs. He closed the door behind him and grinned at me triumphantly.

"Well, Sparks," he said, "I found out what we're carrying to Iapetus."

"You did!" I exclaimed. "Well—what is it?"

"Seeds," said Biggs.

"Huh?"

"Seeds."

I said, "There seems to be something wrong with my ears. It sounds like you keep saying 'seeds.'"

"That's exactly," said Biggs patiently, "what I *am* saying. We're carrying *seeds* to Iapetus. You know, little round——"

"Doogummies," I finished for him, "with unfledged thingamajiggers in 'em. I know what seeds are. But I'll be damned if I know why we're carrying seeds almost a billion miles across space to a hunk of rock so cold you have to thaw the air before you can breathe it."

"That's just it," explained Biggs. "You see, until recently it was thought that the climatic conditions on Iapetus made that world uninhabitable. But recently an exploration party discovered that after you melt your way through a quarter-mile sheathing of ice, the entire planet is honeycombed with a vast, connected, spongelike series of caverns. Good, warm, habitable caverns with earth to grow things in and——"

"Ice to quick-freeze 'em in," I concluded, "after you've grown 'em. It sounds enticing—in a repulsive sort of way. So who wants to live there? Snowmen?"

Biggs said soberly, "Practically everybody who's heard about the discovery. You see, Sparks, they also found that the entire planet is one huge storehouse of precious mineral ores.

"Miners, adventurers, homesteaders from all over the solar system are flocking there as fast as they can drive their spacecraft. Iapetus is a boom planet, the focal point of a gold rush that makes Sutter's Mill look like a polite game of musical chairs."

"What you're saying," I complained, "begins not to make sense faster than ever. Thousands of people flocking to Iapetus with picks and shovels and dreams of wealth—and *we* join the party with a cargo of seeds. Why?"

"Don't you see?" explained Biggs. "Where there are mines there are humans. Where there are humans there are communities. Where there are communities——"

"People get hungry!" I burst in. "Of course! Now I get it. We're bringing them the seeds to sow vegetables with. And if we get there first, it'll be worth millions."

Because I had remembered the "most favored company" clause in the General Space Regulations; the paragraph which grants an eleven-year commercial monopoly to that company which first introduces any product to a newly developed outpost of civilization.

These rights are the prizes for which outfits like ours and the Cosmic Corporation vie eagerly, because when you gain such a

monopoly it's like finding a free pass to an eleven-year ride on the gravy train.

One of the fanciest feathers in our Corporation's cap is the control of electric refrigerators on the Mercurian outpost, just as the deepest lines were graven on the faces of our Board of Directors when the Cosmic Corporation grabbed the air-conditioner rights on methane-atmosphered Uranus.

But Biggs shook his head.

"They—er—they're not vegetable seeds, Sparks," he said.

"No?" I frowned. "Then what *are* they? What other kind——"

"Well," said Lance, "the fact is—they're flower seeds."

I said, "Flower seeds! Well, curl my hair and call me a chrysanthemum! Has the I.P.C. gone nuts? Why in the name of——"

Biggs pleaded, "Don't get upset, Sparks. It's not as silly as it sounds. As a matter of fact, it's one of the most intelligent moves I've ever known the officials of our company to make. Flower seeds are *much* more valuable than vegetable seeds."

"Oh, sure! That's easy to prove. Just give a starving man his choice between a loaf of bread and an orchid corsage."

"You see, Sparks, the problem is not one of *feeding* the Iapetan colonists. The satellite is so near its mother planet that edible supplies can be imported in great quantities. But to borrow an expression from a wise old book, 'Man does not live by bread alone.' There is such a thing as maintaining morale. One of the best ways of doing this is to offer people something beautiful. Something to delight the eye with color, sweeten the air with fragrance. In short—flowers."

"Nevertheless——" I interjected.

"So," pursued Biggs, "our company is very wise to hurry this shipment of flower seeds to Iapetus. Not only because the people will love them, buy them, plant them eagerly for the pure sensual pleasure of watching something grow, but also because there's big money in it."

"Out of which," I conceded grudgingly, "we might even collect a half day's pay as bonus. Well, if you sponsor it, Lance, I'll buy it. But I never thought I'd end up as a space-hopping flower boy."

This last crack brought an unexpected result. Biggs stiffened like the feature attraction at an inquest. A look of frenzy glazed his eyes. "Flower boy!" he gulped. "Gosh, thanks a million, Sparks. I had almost forgotten."

"Forgotten what?" I demanded.

"Why, my anniversary."

"Anniversary? Are you off your beam? Why, you've only been married——"

"Three months," nodded Lancelot Biggs. "Day after tomorrow is our third anniversary." He smiled shyly. "Diane and I celebrate our wedding every month on the anniversary of the day we were married."

"No quicker road to the poorhouse," I snorted, "was ever macadamized. What are you going to do by way of celebration? Take her to the observation deck and treat her to a view of the starry firmament in all its glory? That's about all the excitement there is available on this crate."

Biggs had been thinking furiously. Now he snapped his fingers.

"No . . . I've got it, Sparks. Something unusual. A real surprise. Something that will amaze and delight her. I'm going to give Diane"—he paused dramatically—"flowers. Fresh flowers!"

I stared at him in bewilderment.

"Flowers?" I repeated. "Where are you going to get fresh flowers out here in the middle of space?"

Biggs jerked a thumb in the general direction of the ship's hold. "Why, down there, of course. From our cargo bins."

I stared at him in disgust. "Oh, sure," I drawled. "Pardon me all to hell. I plumb forgot about them. But look, pal, aren't you overlooking one tiny detail? Those blossoms are in what is technically known as the 'papoose' stage. Which means they're only about six weeks shy of blooming. Not to mention the fact that at present they're planted in airtight lead containers."

Biggs shrugged easily. "Oh, *that!*" he scoffed. "A mere nothing. Haven't you ever heard of hydroponic culture, Sparks?"

"Hydro-whichic-whature?"

"Hydroponic culture," he repeated. "Growing plants artificially in tanks of water chemically treated with the nutriments necessary to growth. It's a very old method. It's been used for two hundred years."

"Maybe so," I granted. "But those seeds are very young. And you've only got seventy-two hours to work in. Even with artificial culture, how are you going to bring them to full bloom in three days?"

Biggs said happily, "That's the wonderful part of it, Sparks. Recently I've been conducting a series of experiments on plant culture, and I've discovered a way to speed up the growth of living vegetation tremendously. Of course my ideas are still in the experimental stage. But I'm certain they'll work. Well . . . almost certain, anyway.

"Now, be a good fellow, will you? Help me carry one of those lead containers up to that spare cabin on Deck A? And let's see . . . I'll need a tank, a quart of vitamin-B extract, an ultraviolet-ray lamp——"

So, you know me. Lollipop Donovan, the world's biggest sucker. I helped him.

17

By way of alibi, I might as well confess here and now that I didn't think anything would come of Biggs's experiment. According to my papa's pimple-period parley about the bees and birds and the flowers, that biological phenomenon known as "life" requires a certain amount of time to manifest itself.

But small obstructions like natural impossibilities don't faze Mr. Biggs. He's the kind of a guy who never says die until he finds himself reporting for duty to the white-winged watchman at the pearly gates. So for several hours he fiddled around with the complex array of gadgets he had accumulated, and finally he turned to me and smiled. "Well, Sparks, there it is. How does it look?"

"Like a bathtub on stilts," I told him. "Do you really expect to grow flowers in that overgrown fish bowl?"

"That's the idea."

"And the ultraviolet-ray lamp? What's *that* for?"

"That," said Biggs proudly, "is the important part of my new invention. It isn't an ultraviolet lamp any more. I made a few adjustments on it. It now emits rays in the hertzian range, between one meter and one tenth centimeters in length. Electrical waves for which—up till the present time—no use has ever been found. But if my theory is correct, they should irradiate the growing seed pods with——"

"Never mind," I interrupted him. "You're just wasting your breath and my time. Let's turn on the juice and see what happens."

"All right," said Biggs. "Let's have that container. What have we here, anyhow? Ah—*Rosa rugosa*!"

"Oh hell," I said. "Did we get the wrong container? Wait a minute. I'll go get one with flower seeds in it."

"No, Sparks. *Rosa rugosa* is a type of beautiful red rose. These should be exquisite. Here, I've got the seals open. Help me scatter some of these seeds carefully on the surface of the water. There . . . that's it. Now, the radiation . . ."

He clicked a switch and the lamp turned on. That is, I suppose it turned on. I couldn't say for certain, because no light showed. But it must have been emitting *something*, for funny things happened to the light already in the room. Everything went all topsy-turvy.

You know how you look when you stand in front of a photographer's shop where they use violet incandescents? Your flesh turns a lovely shade of bilious green and your lips look like something the cat dragged out of the well. Well, that's what happened now. I looked at Biggs in alarm, and he looked at me and split lavender lips in a blue-fanged, terrifying smile.

"Well," he said, "there we are. By the time we reach Iapetus seventy-two hours from now, Diane will have a magnificent bouquet of fresh roses, the first ever to be worn on that outpost."

"And in seventy-two *seconds* from now," I told him, "I'm going to have the screaming willies from looking at that grass-colored pan of yours. Let's get out of here."

Well, for the next couple of days nothing much happened. The *Saturn* had been cut over to the V-I unit, of course, and we were jogging along at a very tidy and comfortable rate of 185,000 m.p.s. toward our destination. The only time I saw Biggs was on the second day after noon mess, when he came wandering up to my cabin mumbling to himself like a cow in a clover patch.

"Sparks," he demanded, "what rhymes with void?"

"Boid," I told him promptly, "which I ain't, and annoyed, which I am. Can't a hard-working radioman even catch up back sleep around here without you getting in his hair? Why? When did you develop the poet complex?"

He flushed. "Well, I was just trying to write a little poem to say to Diane when I give her the roses. You know, a sort of a love song."

"Some people," I sniffed, "are born for trouble, and some have trouble thrust upon them, but you're the first guy I ever knew who went out of his way looking for it. Now it's love songs to go with the roses. By the way, how are they coming along?"

"All right, I suppose," said Biggs. "I haven't been in to look at them since yesterday. You see, I have the thermo turned up to max in that room, and it's pretty hot in there."

"Not half as hot," I told him, "as the Old Man's going to be when he finds out you're the one who swiped that container from the cargo bin."

Biggs looked startled. "Oh, gracious! Has he discovered one of them's gone?"

"You're darn tootin' he has! He came busting up here and asked me if I knew anything about it. I suggested maybe it was mice, but that didn't go over so big, on account of mice don't generally build lead-covered bungalows. So if he happens to ask you, you'd better——"

"Better," interrupted an irate voice from the doorway, "what?"

The two of us spun like drunks in a revolving door. It was Cap Hanson himself, big as life and twice as furious.

"So, Lancelot!" blazed the skipper. "It was *you* taken that container of seeds out of the cargo!"

Biggs said, "Why, yes, Captain, but——"

The Old Man suddenly remembered he was Lancelot Biggs's father-in-law as well as his chief. He said in a melancholy voice, "Now, son, you shouldn't ought to have done that. Don't you know them seeds was valuable?"

"I know," replied Biggs. "But I just took a few seeds out of one of

the containers. Nobody will ever notice. And it's for our anniversary, you know."

The Old Man shook his head sadly.

"Lancelot, I'm su'prised at you. Why do you think they sealed them things in lead?"

Oh-oh! Suddenly, but belatedly, I knew what he meant. So did Biggs. The two of us stared at Hanson, then at each other haggardly.

Lancelot whispered, "Cosmic rays! Oh, my gracious, I forgot all about them!"

"Sure," groaned the Old Man. "Cosmic rays. You know they create mutants in dormant germinatin' cells. Now that them seeds has been exposed they ain't worth a tinker's damn to anybody. They won't breed true. Lord only knows what kind o' freaks an' fiddle-di-diddles'll come up—if anything comes up at all." He shook his head. "Lancelot, son, I'm sorry. But I'm goin' to have to enter this on the log. An' I'm afraid them seeds may cost you your job."

It was at that moment my set began chattering. The interruption suited me fine. I leaped to the board. But whatever pleasure I had felt dissipated instantly when I learned who my caller was and what he wanted. It was Tommy Jenkins, the bug-pounder at Ganymede IV, space-calling in Company code.

He asked, "That you, Donovan?"

"A reasonable facsimile," I retorted. "Why the code, Tommy? What's up?"

"Taxes," said Jenkins, "skirt lengths, and the Big Chief's blood pressure. Bert, how far are you from Iapetus?"

I checked traj swiftly on my flight chart. "About twelve hours," I answered. "Why?"

"You'd better make it ten. We just got word that the Cosmic Corporation freighter *Gemini* is closing in on Yappy with exactly the same thing you're carrying—a cargo of flower seeds. Orders are to beat them there at all costs. That is all. *Salujo!*" And he signed off.

I turned and translated to the Old Man. His face turned the color of a dove hut. "Trouble. Nothin' but trouble." He stared at Biggs with

doleful eyes. "Lance, is there anything we can do to speed up a little?"

Biggs shook his head. "No, sir. We're spinning the V-I unit almost at maximum acceleration now—185,000 plus. If we boost it any higher we risk exceeding the limiting velocity of light and losing ourselves in the negative universe." A sudden anger disturbed his usual calm. "If we lose this race," he stormed, "the company has no one to blame but itself! *They* merchandised the V-I unit and made it available to every ship in space. Still, we must beat the *Gemini* to Iapetus, even if we have to take chances."

He turned to me suddenly. "Sparks, call Jenkins back. See if you can get an exact locus on the *Gemini*."

I did so. A few minutes later Biggs was seated at my plot table, anxiously scanning the course trajectories of both their ship and ours, reeling off involved and typically Biggsian mathematics that would have warped the gears of a calculating machine. The creases on his brow etched deeper as his columns of figures grew longer. Finally he stopped scribbling, lifted his head.

"Well?" asked the Old Man with bated breath.

"It's close," Biggs told us. "Perilously close. A nip-and-tuck race. They started later than we did, but their point of departure was nearer our mutual goal. From the standpoint of distance alone, they should drop gravas on Iapetus one hour before we do."

Hanson groaned. "Licked again!"

"No," said Biggs, "not quite. There's one thing which may save us. Iapetus' diurnal revolution. It's not simply a matter of *reaching* the satellite; they must actually beat us to the mining town. This is risky, sir, but——"

"Go on!" said the Old Man with rising excitement. Risks don't scare him. Danger is his bread and butter. "Go on!"

"If we can hold the velocity intensifier in operation until just before we effect landing, we'll drop to normal acceleration smack over that sector of Iapetus where the mines are, thus canceling the sixty-odd minutes of stratosphere cruise the *Gemini* will have to make, and dropping us into the cradles at practically the same moment."

"If that happens," I broke in, "who gets the contract, Skipper? Is there any provision in the Space Regulations for a deadlocked race?"

The skipper fumbled through the loose-leaf pages of his memory.

"Yeah," he finally decided, "there is. The interplanetary code rules that whenever two companies effect a simultaneous landin', their product shall be offered the governin' board of the newly opened territory in direct competition."

I snorted loudly. "A hell of a lot of good *that* does us! It'll be a matter of choosing seeds against seeds. And if I know those Cosmic Corporation crooks, they'll bribe the Iapetus governing board blue in the face."

"Wait!" cried Biggs. "It may not be seeds against seeds. It may be seeds against—flowers!"

"Huh?" gasped the Old Man. "What's that, boy?"

"My horticultural experiment," said Lancelot excitedly. "By the time we arrive there—perhaps by *now*—we may have actual flowers to show them. Tangible evidence of the sort of thing our seeds will produce. It should provide a clinching argument."

Hanson stared at him incredulously. "You mean them seeds you swiped are growin' flowers in three days?"

"That's what I hope," nodded Biggs. "Let's go down to my growth chamber and find out."

We needed no second invitation. In minus zero seconds the three of us were galloping down the ramp to the room in which Lancelot Biggs had installed his hydroponic tank. We waited breathlessly as he fumbled with the lock, gasped and choked as the door opened and a steamy mist gushed out to smack us in the pans with an almost ponderable force. Then, regardless of the heat, the three of us were crowding into the narrow cubicle, and——

"Great snakes!" I gasped.

"Good goddlemitey!" croaked Cap Hanson.

"Oh, my gracious!" bleated Biggs.

For we had stepped not into the metal chamber of a spacecraft cabin—but into what seemed the fetid fen of some steaming swamp-land jungle!

It's hard to describe that room. Imagine a tropical hothouse gone berserk, a Gauguin painting come to life . . . that gives you some idea.

The tank wherein Biggs had sprinkled the rose seeds was completely invisible, submerged beneath a crawling octopus of greenery. Writhing fronds spewed from the container to twist in tumultuous entanglement beneath our feet, up the walls, across the ceiling, twining and spiraling around every piece of furniture, every bracket, any support to which suckered tendrils could cling. A heady perfume thickened the air, perfume from monstrous growths that no more resembled roses than I look like a Martian.

Cap Hanson had been right. The action of cosmic rays had done weird things to those original germ cells. *Rosa rugosa* had gone crazy—figuratively and literally—with the heat waves. Here triple-headed roses with spiny petals reared themselves awkwardly out of thick, spongy, palmate foliage . . . there a pinkish cactuslike simulacrum of a rose clung tenaciously to a table leg . . . elsewhere gossamer-fine lavender petals, propelled by wisps of stirring air, drifted lazily across the room toward us, dangling epiphytic roots.

It was a shocking exhibition of Mama Nature gone nuts. Only in two respects did these fantastic creations resemble the roses from which they were mutant. Each variation had thorns—as we discovered painfully when we tried to walk among them—and all had some shade or tint or hue of the fundamental red rose whence they had sprung.

Cap Hanson groaned. "My golly, what a mess! Of all the—Hey, let me out o' here! Whatever's goin' on, it's gettin' us too! Your faces!"

Biggs cracked indigo lips in what was supposed to be a placating grin but looked more like a hungry pitcher plant licking its chops. He said, "The color means nothing, Captain. It's just a matter of light reflection."

"Which doesn't alter the fact," I reminded him, "that the experiment's a flop, Lance. I guess we might as well call it quits. Clean up

this mess and throw it away. We can't show this stuff to the Iapetus board. They'd toss us out on our necks."

Biggs nodded dolefully. "I guess you're right, Sparks. This is a bitter disappointment. I did so want to surprise her."

"Her?" grunted Hanson. "The Board's made up of hims."

"I mean," wailed Biggs plaintively, "Diane. Now she won't get her anniversary corsage."

So that was that. The skipper went back to the bridge to give Dick Todd the necessary trajectory instructions, and I stuck around, sweating and swearing, to help Biggs clean up the aboriginal morass he had created with his experiment. It was tough going, too. As I said before, those roses had thorns. By the time we got done, our fingers looked like blue-ribbon winners in a needlework exhibit.

It was just as we were finishing our task and Biggs was draining the final drops of fluid from his tank that he loosed a little yelp of excitement.

"Sparks, look! This one bred true in spite of the cosmic rays!"

And with quivering fingers he held up for my inspection one tiny bud which had been nestling coyly in a corner of the tank. A small but perfectly formed, brilliantly scarlet rosebud!

I guess it was the irony of it that got me. I stared at the poor, pathetic, bedraggled little thing for a minute, then chuckled.

"Well, there's the love song you were looking for, Biggs."

"Eh? What's that?"

"When you give her that bud," I told him, "you can say to her, '*Roses are red, violets are blue; the rest went whacky, but this one grew.*'"

Biggs said defensively, "Well, anyhow, this proves my theory about growth stimulation was right. It may not work in open space, but it will work on a planet where there are atmospheric blankets against cosmic-ray penetration. Diane *will* get one rose, anyway."

And with painstaking care he transferred the bud to a glass of water. Pitiful little symbol of a noble experiment which had flopped. . . .

18

That was all until ten hours later. Lancelot Biggs may be a bum botanist, but as an astrogator he's in a class by himself. His computations proved correct to four decimal places. We held the *Saturn* on the V-I unit until we were so close to Iapetus that the permalloy walls of our freighter started humming with tropospheric pressure. Then we released to normal acceleration, and—*bingo!*—there we were, smack-dab over the new and as yet unnamed mining town, just as Biggs had predicted.

Our appearance out of seemingly thin air—you know what I mean if you understand how the velocity intensifier works—not only created a sensation on Iapetus, it darned near created an accident in our little segment of atmosphere. For when we switched over we found ourselves not more than a quarter mile from the Cosmic Corporation's cargo ship *Gemini*, which had been easing into Iapetus complacently unaware that we were within several thousand miles.

Instantly there was hectic excitement aboard both ships. Landing jets flared, grav clamps growled, and the two of us hurtled groundward like brickbats.

It was a photo finish. We nosed into one cradle just as they stern-jetted into a second. And just as Cap Hanson leaped from our airlock, the *Gemini's* skipper burst from theirs.

Hanson bellowed, "ICP-freighter-*Saturn*-landin'-with-a-cargo-of-flower-seeds——"

His competitor screamed, "CC-freighter-*Gemini*-claiming-priority-on——"

But neither of them got to first base. A representative of the *Iapetus* governing board came to each ship, and the messages he delivered were identical.

"The Board has decreed that your landings were effected simultaneously. Consequently, you will present all wares for decision in open competition. Please report immediately to the provincial offices."

So there we were, a few minutes later, standing in the council room of the *Iapetus* governing board—Cap Hanson, Lancelot Biggs, Diane, and myself—glaring angrily across the room at representatives from our competitor spacecraft, the *Gemini*. *Gemini* means "twins," which in this case was appropriate, because the glares Cap Hanson and Cap Murgatroyd were hurling at each other were Siamese.

The *Iapetus* governor, an Earthman named Larrabee, said quietly, "Gentlemen, welcome to our new colony. I believe you each carry a cargo on which you wish to claim commercial priority for your respective companies. Will you be so kind as to declare the nature of these cargoes?"

"Mine," said Cap Hanson loudly, "is flower seeds." And he scowled at Murgatroyd.

"Mine," said Murgatroyd loudly, "is flower seeds." And he scowled at Cap Hanson.

The *Iapetus* governor stroked his jaw thoughtfully.

"This is a delicate situation, gentlemen. You both carry a cargo our colonists will receive eagerly. It may be difficult to decide which of you . . . But I must let you present your own cases. What types of flowers are you carrying?"

"Roses," declared Cap Hanson defiantly. "Eighteen varieties of roses, includin' the rare, perennial Venusian swamp rose."

"I see. And you, Captain Murgatroyd?"

"Thirty-four separate and distinct varieties of flowering plants," declared our opponent triumphantly, "including roses, geraniums, nasturtiums, pinks . . . practically everything, sir!"

"Ah, yes. That seems to be a point in your favor, Captain Murgatroyd. Now, the size of your cargoes?"

"Five hundred lead-sealed ten-bushel containers," gloated Captain Murgatroyd.

"Very good. And you, Captain Hanson?"

"The I.P.C.," snarled the Old Man, "don't go in for samples. When we carry a cargo, we carry a cargo. Twelve hundred lead-sealed ten-bushel containers, your honor—I mean, sir!"

"Excellent! Excellent, Captain! That seems to be a point in *your* favor. This is most difficult. Captain Murgatroyd, perhaps you could give us some idea as to the growth potentialities of your flowers?"

Murgatroyd grinned and dug into an inner pocket, brought forth a folder which he placed in the governor's hands.

"Yes, sir. Here is a four-color brochure issued by our company, describing each and every type of plant we have brought to Iapetus and reproducing pictures of those flowers in full natural color."

The governor shook out the papers, and my heart played tag with my shoestrings. The CC's publicity department had done a magnificent job. Those natural-color photographs were luscious enough to make the mouth of the rankest amateur gardener water. Gay yellows and soft blues . . . brilliant splotches of crimson . . . dainty, sunny marigolds . . . shy, nodding violets . . . that pamphlet was a tempting hunk of stuff.

Larrabee nodded thoughtful approbation, then turned to Cap Hanson.

"And you, Captain? Have you a similar brochure?"

The Old Man scrubbed his jaw feebly. "Why—er—the truth is, sir——" he began.

It was then that Lancelot Biggs stepped forward, interrupting the skipper.

"The truth is, Governor," he said blandly, "our company does not

depend on printed booklets to sell its products. There is, you surely realize, a certain amount of—well, may I call it ‘artistic license’?—employed in reproducing facsimiles of living objects. Therefore, in order to sell *our* goods, we always attempt to offer a living example of our products.

“I have here”—he dug into his jacket pocket and brought forth a bulging opaque envelope—“the bud of one of our most gorgeous blooms, the famous *Rosa rugosa*. You can see for yourself . . .”

With the look of a proud papa, he opened the flap of the envelope, started to withdraw his single rosebud, and . . . stopped abruptly. A look of stunned dismay drained his face of all color. He whispered, “But—but this——”

“Go on, son,” prodded the Old Man. “Show ’em. You got the bud there, ain’t you? Well, show ’em.”

But Biggs didn’t show them. Instead he closed the envelope again, slipped it back into his pocket, and his liquescent larynx bobbled frantically as he said, “I—I’m sorry, gentlemen. I have nothing to show you.”

“Why?” I demanded. “Lance, for gosh sakes, *why*? What happened?”

He turned to me haggardly. “The bud”—he choked—“the bud *died!*”

Well, I’ll hand it to that governor. He was so upright you could have used him for a plumb bob. He said sympathetically, “That’s too bad, Mr. Biggs. But accidents will happen. Is there anything further you’d like to say on behalf of your product?”

“I got plenty to say!” stormed the skipper. “Just on account of one bud died don’t mean we ain’t got——”

“Excuse me, Skipper,” interrupted Lancelot Biggs mildly. “I—I think the time for deceit has passed.”

“*What!* What’s that?”

“I think the governor should be told the truth,” said Biggs. “We

should confess that our seeds are not a first-class product. Might not, indeed, even flourish in the soil of Iapetus."

"*Lance!*" I cried. "Do you know what you're saying? Don't talk like that!"

"Yes, Governor," nodded Lancelot Biggs sorrowfully, "I'm afraid that's true. Your colony wouldn't want our seeds. For one thing, they're all roses. The Cosmic Corporation offers you many different kinds of flowers. What's more, our seeds are not particularly hardy. I'm afraid a number of them were spoiled in transit when the leaden containers were broken, allowing cosmic rays to seep in——"

"*Biggs!*" howled Cap Hanson. "What do you mean, tellin' lies like that? A *number* of our containers? It was only *one* container."

The governor silenced him with a lift of the hand.

"Never mind, Captain Hanson. We understand. Thank you, Mr. Biggs, for your frank statement. Gentlemen of the Council, have you reached a decision? Yes, I thought so.

"Captain Murgatroyd, on behalf of the Iapetus governing board it gives me great pleasure to award you full priority rights to the flower-seed concession on our new colony, as set forth in Article 14, paragraph——"

"*Ruined!*" wailed Cap Hanson. "Sabotaged by a wolf in cheap clothing! Diane, why did you ever marry that falsifying, good-for-nothin'——"

He broke down. We led him, babbling incoherently, back to the ship.

But there Diane, who had remained silent throughout the proceedings, turned curiously to her husband.

"Lance dear, you know I've always backed you up in everything you've done, but—why did you do this? Don't you know the loss of this monopoly will cost the company millions, and may cost Daddy his job?"

Lance nodded. "Yes, I know that would be true, dear—if there were not other factors involved."

Cap Hanson lifted his head drearily.

"Other factors?"

"Yes, Skipper. Something amazing has happened. Something so incredible that even yet I can scarcely believe it. It all turns on something Sparks said——"

"Who, me?" I gulped. "Don't drag *me* into this!"

"You remember that—er—love song you suggested to me?" queried Biggs.

I nodded glumly. "Sure. '*Roses are red, violets are blue; the rest went whacky——*'"

"But this one," finished Lancelot Biggs triumphantly, "is *blue*!"

Dramatically he drew from its opaque envelope and tossed on the table before us the rosebud he had refused to show the Iapetus council. We all stared at it in bewilderment. For he was right. That tiny rosebud was a brilliant, penetrating, heavenly *cobalt blue*!

Cap Hanson choked, "A blue rose! I never seen such a thing before!"

"Neither," crowed Biggs, "has anyone else. But flower lovers have dreamed of them for centuries. Hundreds of thousands of credits—perhaps millions—have been spent by botanists in an effort to create that rare, often-wished-for but never accomplished, example of beauty: the blue rose. A fortune awaits the first man to put such a thing on the market. And by sheer luck we have done it!"

"You mean people will *buy* this thing?"

"From now," declared Biggs, "until the end of time. This single mutant will parent a whole new breed of blue roses, and botanists throughout the entire solar system will mortgage their hothouses to buy slips from this plant.

"Now you see why I couldn't show it to the governor. I couldn't risk letting the secret get out until we had taken the bud back to Earth, registered it in the name of the I.P.C.

"Incidentally"—he coughed delicately—"our company should be very pleased. I think we may anticipate a substantial bonus for our part in creating this new species."

I said, "But hey—wait a minute! There's something wrong somewhere. I saw that bud before. But it wasn't blue. It was as red as an old maid's face at a strip tease!"

"It *looked* red, you mean," corrected Biggs. "That was a matter of color reflection, caused by the hertzian-ray lamp I had installed in the laboratory. You remember our faces were green, our lips purplish? Color is a tricky thing. For instance, when you see a green leaf, what color is the leaf?"

"Why, you just said. Green, of course."

"Ah, no," said Biggs. "*It is every color but green!* Colors by which we designate objects are *not* their true colors. Just the reverse. They are the colors those objects reflect. Under the hertzian-ray lamp this precious bud"—he caressed it fondly—"reflected all colors save red. We therefore thought it a normal red rose. But now that we see it under ordinary light, we realize that *actually* it reflects all colors save blue."

He smiled and turned to Diane. "And now, darling, I'd like to give you a little anniversary present. The first blue rose ever grown."

But Cap Hanson snatched the bud from his hand feverishly.

"Oh, no, you don't! That there thing goes back into your fishpond an' keeps growin' till we get back to Earth. If you two got to have an anniversary treat, I'll see to it that Slops whips up a special banquet tonight, complete with champagne-water an' everything. How's that?"

And from the look in Diane's and Lancelot's eyes as they moved toward each other, I guessed it would probably be all right. For when a man and a woman feel that way about each other, they don't really need special dates or special gifts or special treats to celebrate.

Roses are red. Or sometimes blue. Sugar is sweet. But that pair—*whew!*

19

It takes a little time for merit to be recognized, and when it is rewarded, sometimes you're not sure, for a while, whether you're on the receiving end of a pat on the head or a poke in the snoot.

About three months after we had galloped triumphantly home with Biggs's new horticultural discovery, we were squatting in a cradle at Long Island spaceport, awaiting flight orders, when the control-turret door swung open and in marched two owl-eyed zombies dressed in dark looks and white jackets. One of these looked at us, then at a slip of paper. He said, "Donovan, Herbert J.?"

"Present," I said, "but not accountable for. Who says I did what? I've got an alibi. When did it happen?"

"Come," ordered the stranger curtly, "with me." And he jerked a thumb in the general direction of the doorway.

Cap Hanson bridled. If there's one thing he cannot tolerate, it is having anyone else issue orders on his bridge.

"An' what," he demanded, "is the meanin' of this, if I may ask, gentlemen?"

The other whiteclad studied him briefly.

"Hanson?" he queried. "Captain Waldemar V.?"

"That is my name, sir. And who——"

"Come with me," said the second specter, and diddled his digit like my accoster.

I said, "Not so fast, kiddies. The last time I followed a flickering phalange I ended up in an alley behind a Martian joy-joint with a headful of ache and a walletful of nothing. What's this all about?"

My answer came not from the pair before us, but from the entrance behind them. Through this came two figures. The foremost was that of Lancelot Biggs; behind him was his uncle Prendergast. It was the vice-president of our Corporation who spoke.

"It's all right, Sparks. These men are acting under company orders. They are medical officers assigned to give a physical examination to every man aboard the *Saturn*."

"Every man?" choked Cap Hanson. "Did you say *every* man, sir?"

There was a note of panic in his voice. I felt a swift pang of compassion for the old boy. Hanson is one of the finest skippers who ever pushed a stud, but he isn't as young as he used to be; not by about fifty-odd years. Although he looks hale and hearty, Cap's joints are beginning to stiffen like a mud pie on Mercury, and sometimes if you stand beside him in a quiet room you can hear the dim clank and clatter of his arteries hardening.

But old P.B. just smiled.

"That's right, Captain. Every member of the command and crew is being examined. You see, the Corporation is removing the *Saturn* from the freighter service——"

Removing! That was jolt number two. Words got as far as my tonsils and clogged there. But Biggs's uncle continued blandly:

"—and because of its magnificent service record is assigning your ship to new duties. Henceforth the *Saturn* will lift graves only on special tasks, problems which have proven too difficult for ordinary vessels of the fleet."

Well, that was something like! At last our efforts—or should I say the whacky genius of Lancelot Biggs?—had earned us recognition. My shirt buttons tugged at their moorings, and glancing at my comrades, I saw they shared my pride. Cap Hanson's grin threatened to slice off

the top of his head, while Lancelot Biggs's sensitive Adam's apple was galloping up and down in his throat like a runaway yo-yo.

"Well, now!" said Hanson, gratified. "That bein' the case, I can understand why physical exams are necessary, sir. But do you feel that *everyone*——"

"Everyone," nodded the veep, "from the highest to the lowest. Everyone aboard this ship, without exception."

Biggs gurgled happily, "Tell them our first assignment, Uncle Prenny."

"Very well, Lancelot. Captain Hanson, you are doubtless cognizant of the delicate situation on the planetoid Iris?"

"Delicate!" I snorted. Of course Cap knew about it. Everyone did. It was the top-ranking scandal of the decade. A group of privateers, seeking a base from which to pursue their nefarious exploits, had established their headquarters on helpless little Iris. There, though it was clear to everyone that the diminutive, rodentlike Irisians actually were being held in peonage, the corsairs had set up a puppet government and taken over the reins of management.

"Delicate!" I snorted. "That situation smells worse than pole-pussy perfume in a telephone booth! The Space Patrol ought to go in there and boot those rascals——"

"Sparks!" shushed the Old Man. "That will do!" But he turned questioning eyes to his superior. "Why *doesn't* the Space Patrol do something about it, sir?"

"Because," pointed out the elder Biggs, "the privateers are—speaking from a purely legal standpoint—quite within their rights. The Patrol cannot take action against them without violating the principles of freedom and autonomy upon which the Interplanetary Union is founded."

"But everybody *knows* they're pirates."

"True. But by glancing back over the pages of history you will learn that it is frequently the malefactors who distort the letter of the law to serve their own evil purposes.

"These privateers moved to Iris, became naturalized citizens of that

planetoid. Then by brute force they seized control of the political machine, voted themselves into governing power. With such control, it was an easy matter to pass laws forbidding the Space Patrol rights of search and apprehension—refusing extradition—prohibiting further immigration of peoples from civilized planets——”

I said, “Wait a minute! There’s one thing they *can’t* do. According to interplanetary law, no government can forbid the right of free trade, barter and exchange.”

Lancelot’s uncle smiled.

“Absolutely right, Sparks,” he agreed. “And that is where *we* come in!”

A dead silence followed his pronouncement. Then the air began sizzling with a hot, frying sound. That was Hanson preparing to blow a verbal fuse.

“You mean,” he roared, “we’re goin’ to do business with them scoundrels?”

“On the contrary,” said Prendergast Biggs, “we are going to do our utmost to break their grip on the suffering populace of Iris.

“As Sparks pointed out, one thing the usurpers of Iris cannot do legally is forbid free trade and commerce between Iris and other planets. On the other hand, they *can* forbid the establishment of any community, outpost, or permanent trading station upon their planetoid. They can prevent unwanted outsiders from becoming citizens of their base. In short, strangers may *visit* Iris, but they cannot stay there.”

“Then why——” began the Old Man.

“However,” continued the vice-president, “there is a loophole they have overlooked. That is the clause in interplanetary law which reads: *‘Any person or group of persons discovering, creating, or otherwise developing a previously undeveloped industry based upon the natural resources of any planet in the system is granted the privilege of establishing settlement upon that body for a period not to exceed thirty-five Solar years.’*”

He smiled at us. "That, gentlemen, is the entering wedge by which we plan to crack the defenses of the tyrants who hold Iris in their grip."

I stared at him, perplexed.

"I don't get it, sir. You mean we're going into some kind of business on Iris?"

"Precisely, Sparks."

"But *what*? Iris is just a bleak little hunk of rock swinging in the asteroid belt. It has no soil to grow things in, no bodies of water to fish in. It doesn't *have* any natural resources we can develop. What excuse are we going to offer for barging into Iris?"

"We need no excuse, Sparks," pointed out Lancelot Biggs soberly. "It is our right and privilege to do so. All we need do is claim we plan to develop a new natural industry, and by interplanetary law they are forced to admit us for a ten-day investigatory period. If by the end of that time we have proven our right to remain, they must let us do so. Being legally on Iris, we can then call on the Space Patrol to protect our property; the Patrol can move in and wipe out the pirates."

"That all sounds swell," snorted Cap Hanson. "But if they ain't no natural resources, what new industry are we goin' to develop on Iris in ten measly days?"

"That," smiled Biggs's uncle, "has already been arranged. We are going to make soap."

"Soap!" gasped Cap Hanson.

"Soap!" I bleated. "Soap isn't a natural resource. It doesn't grow on trees or come out of mines. You make it out of oil and fats and——"

"We're not thinking of that kind of soap, Sparks. I mean the form of hard soap used by miners, grease monkeys, and other manual laborers. Soap made out of pumice stone.

"Our geological reports indicate that Iris, being composed mainly of igneous rock formations, should contain pumice. All we have to

do is locate an area rich in this material, start mining operations, and"—he smiled—"we have Steichner and his crew of rascals right where we want them."

And that was jolt number three. I knew about the Iris situation, but this was the first time I had ever heard the name of its kingpin and instigator. Hearing it, I winced. Steichner! Otto Steichner! The cunningest, meanest, toughest, unhangd scoundrel who ever shoved a baby through an airlock—he was our antagonist!

I moaned feebly and turned to the waiting medico.

"Examine me quick, buddy," I begged, "while my blood pressure is zero minus. Something tells me I don't *want* to go along on this expedition. Steichner!"

Lance Biggs stared at me curiously.

"Don't tell me you're afraid, Sparks?"

"It's not that. It's just that I'm allergic to soap."

"Nonsense!" sniffed his uncle. "Cleanliness is next to godliness."

"That's what the maxim books say," I conceded. "But in this case, cleanliness is next to insanity! Lead on, Sawbones. And here's hoping my veins are positively acrawl with some foul disease."

But as it turned out, we didn't wait for the results of the medical examination to be tabulated before we lifted graves. We took off that night for Iris. If you ask me, that was Cap Hanson's doings. I think he was afraid he might not pass the physical, and wanted to be sure of being on the bridge of the *Saturn* for at least one more trip.

So we lifted graves and, with Lance Biggs at the studs, set course and traj for little Iris, a mere hop, skip, and jump from Earth, since we were using the V-I unit. For the first time in a long while, Diane Biggs didn't make the shuttle with us. She wasn't feeling up to par. Neither was *I*, but they didn't give *me* any rain check.

Anyhow, in just a little longer time than it takes to digest a day's victuals we were hovering in the strato a mile or so above the capital city of Iris, identifying ourselves to the port authorities on the ground below.

"Who are you," demanded the Iris dispatcher, "and what do you want?"

"I.P.C. freighter *Saturn*," I tapped back, "requesting privilege to land. May we drop gravs?"

"Stand by," advised my contact. He cleared and we waited breathlessly. When he came back, it was via telaudio rather than bug. The visor screen brightened, and we were looking into the scowling mug of none other than the big boss himself, Otto Steichner.

"Well?" he demanded.

Cap Hanson took over. He asked boldly, "What seems to be the trouble, sir? We made a simple request for permission to land. We are an explorin' expedition attemptin' to set up a new industry under space regulation Article 69, paragraph——"

"I know all about that," growled Steichner. "You're wasting your time, Captain. Iris has no natural resources and wants no colonists. You'd better try somewhere else."

Cap said stolidly, "My company's instructions——"

"Your company be damned!" roared Steichner. "I control Iris, and I want no interlopers here."

Biggs moved to the visor plate. He said, "This is most distressing, Governor Steichner. Of course you realize that if we are not permitted to land we will be compelled to report the matter to our employers? And they, in turn, will naturally report it to the Space Patrol."

That did it. Steichner was playing a cautious, tricky game, trying to get by within the barest shadow of the law. In order to bar the Space Patrol from his domain he had to conform to certain interplanetary regulations, whether he liked them or not. His eyes flashed dangerously, but he gave in.

"Very well, gentlemen. You may land. But remember, you have only ten days in which to prove there are natural resources upon Iris which you can develop commercially. If in that length of time you have not succeeded, you must leave."

"We understand that," said Biggs. "Thank you, sir."

And so, unwanted guests of a most unwilling host, we set the

Saturn down in the lair of an acknowledged band of space pirates. It was a piece of daring which, had I taken time to consider it, would have given me more goose-pimples than a Siberian fan dancer. But as it happened, I was too busy to think about it. For as Biggs was maneuvering the *Saturn* to its cradle my bug started chattering, and it was Joe Marlowe calling from Lunar III. What he had to say was a hang-over without the joy of the night before.

"That you, Donovan?" he tapped. "Greetings, pal! They ache today?"

"What," I shot back, "are you talking about?"

"Your feet, of course. We just got the report from the medical examiners. They say your tootsies are as flat as a pair of lovesick flounders. That makes you match at both ends, doesn't it?"

"Stop wasting juice," I advised him, "and my time. You got the report? What does it say? Is the Old Man——"

"Sturdy," rattled Marlowe, "is the word for Hanson. Your skipper's as chipper as a kipper. You're O.Q., Todd is O.Q., Wilson and MacDougal and Flannigan are O.Q. The crew checks one hundred per cent. Enderby needs two teeth filled; otherwise O.Q. Blaster Jacobs needs sun-lamp vitamin C; otherwise O.Q. As a matter of fact——"

One name was conspicuous by its absence. My gizzard turned over slowly. I interrupted, "Marlowe, look back over your list. Didn't you forget somebody? How about——"

The answer came back slowly, almost sympathetically. Even over the dit-da-dits you can read expression in talented fingers. Marlowe tapped:

"I'm sorry, Donovan. I'm very sorry to have to tell you this, but there is one unfavorable report. The examiners have declared one man aboard the *Saturn* to be absolutely unfit for space travel. His heart is so bad that it may give out at any minute. That man is—First Officer Biggs!"

Well, there you are. Somehow I managed to take down the conclusion of the memo and sign off. But all the time I was doing so my brain was churning with the doleful tidings I had received; the thought kept repeating over and over again, "*Biggs—grounded. Lancelot Biggs—unfit for space travel!*"

Steeped in gloom, I didn't even notice the *Saturn* easing into its cradle. My first intimation that we were on Iris was the arrival of Cap Hanson. He came bubbling into my cubby, happy as a bee in a honeysuckle vine.

"O.Q., Sparks—we made it! We're on Iris. Shoot a message to Earth that we—— Hey! What's the matter?"

Without a word I handed him my transcript of the report. He scanned it swiftly.

"Ah, the medical report, eh? Glory be, Sparks, this is wonderful! I passed! Ain't that swell? An' you passed—an' Todd—an'——"

He stopped abruptly. A cloud swept across his forehead, leaving his eyes darkened and somber. In a whisper he said, "Lancelot!"

I said, "End of the chapter, Skipper. For the last year or so the *Saturn* has been the finest ship in the fleet. We've done more tough jobs and had more fun than any bunch of spacemen who ever lifted

graves together. But it ends now. When Lance Biggs leaves this ship, nothing will be the same ever again."

"His heart," faltered the Old Man. "Who would have believed there was anything wrong with his heart? I know he's skinny, an' all that, but he always seemed healthy enough."

"Where is he now?"

"What? Oh—outside. He's tryin' to buy us some real estate. It don't matter much *where* he buys, as long as he buys. The whole asteroid's honeycombed with pumice pockets, you see. All we got to do is buy up some land, start diggin', produce hard soap, an' earn the right to remain here. But—his heart! Sparks, I can't believe——"

"Hush!" I warned him. "If that sound I hear isn't a herd of antelopes on pogo sticks, that's him coming now."

Cap Hanson crumpled the flimsy, jammed it deep into his pocket.

"Not a word about this, Sparks! Not yet. We—we've got to break it gently."

I nodded just as Biggs, grinning from ear to ear, lurched into the cabin. On his right arm he was carrying a queer-looking little something. At first I thought it was a teddy bear. Then it moved, and I realized I was in the presence of a native Irisian. He—or it—was a curious little squirrel-like creature with big, goggling eyes, a huge bushy tail, and enormous whiskers.

Biggs chirruped cheerfully, "Here's one of the local boys, folks. Sparks, you speak Irisian, don't you? Well . . ." He paused, glancing at each of us questioningly. "What's the matter? You two look as if you'd lost your best friend."

Cap Hanson essayed a laugh. It sounded like an echo from a torture chamber.

"Nothin' at all, son. We was just discussin' the difficulties of the problem ahead of us, that's all. So that's an Irisian, huh? Can you really talk to it, Sparks?"

He looked at me with new respect. I smiled. "If my Academy prof wasn't fooling the authorities," I told him, "I can." I turned to the little rodent, twisting my lips into a series of purring whistles which meant, "Greetings!"

"*Phwee-twurdle-twurdle-pwwht!*" replied the Irisian.

Cap Hanson looked at the Asterite disconsolately.

"What's the matter, Sparks? Is it sick?"

"That," I said, "is his native tongue. He said how do you do."

"*I'm* all right. But how about him? He sounds like he needs oilin'."

Biggs suggested, "Sparks, ask him where we can buy or lease some property on Iris."

So I did. The answer was encouraging. It seemed the little feller himself *chwee-fweeple-twee*—meaning he owned a half-acre lot a few miles outside the capital city—and he'd be glad to sell us this patch of ground for *chirp-furdle-foo*.

I translated. Cap Hanson turned crimson with rage.

"Four thousand credits! For a hunk of ground you could cover with a handkerchief? Ridiculous! We won't pay no such price."

"It's no skin off our noses, Skipper," I reminded him. "The Corporation's paying for it."

Hanson nodded slowly.

"Maybe you got something there. An' we can't dig for soap without we got something to dig in. O.Q. Go ahead an' make the deal, Sparks."

"And I," chimed in Biggs, "will organize the men and get to work on the digging."

"No!" said Hanson hastily. "You mustn't exert yourself like that, boy. Remember your——"

He stopped abruptly. Lancelot lifted eyebrows at him.

"Remember my what, Dad?"

"Nothin'. You stay here an' equip the men; I'll get 'em on the job."

So we became possessors of a bit of Iris terrain and set forth on the adventure which—we hoped—was to bring an end to Otto Steichner's rule over the tiny planetoid.

Of course you know that Iris is only a little hunk of cosmic debris, about three hundred miles in diameter, busting along in the asteroid belt; just one of a myriad specks which are all that remain of what was once a planet in the space sector between Mars and Jupiter. It has practically no atmosphere, so when you leave the domed cities and

villages you have to wear your bulger, and since its gravitational attraction is about as strong as a two-day-old kitten, you have to wear clinch plates in your sandals.

But our boys are a tough crew, accustomed to working under even worse conditions than these, and practically before the ink had dried on our bill of sale we had staked out our property and buckled down to our task.

Which task was, of course, just plain digging. From that grayish-looking topsoil we had to peel away the crumbling layers which would lead us to the basaltic depths beneath. From this substratum we must extract a quantity of the pumice which was to justify our presence here.

A simple project, we thought. Only it didn't turn out that way. It took us three days to scrape off the detritus layer. Then we reached rock. But it wasn't the sort of rock we had expected to find: obsidian or basalt, lava flow. It was sandstone. Gray shale.

Lancelot Biggs looked at samples of this rock and shook his head. He said, "Hmm, funny! Sandstone is not an igneous formation. You know——"

"I don't know nothin'," said the Old Man, "except we ain't got much time to spare. Let's get on with the job."

So we kept on digging. We had to use atomotors. The rock layer was tougher than a joy-joint hostess. But slowly our blaster chunked its way through . . . to a layer of slate!

Cap Hanson said fretfully, "You reckon they made a mistake back on Earth, Lance? This here roofin' material don't look like what we was supposed to find. Maybe there's pumice underneath, but——"

"Frankly," I said, "I doubt it. Pumice is the result of air bubbles mixing with an uncooled lava mixture. Slate is a sedimentary deposit. I think we've bought a punk piece of ground, myself. We'd better go get another slice of property. Eh, Biggs?"

Lancelot Biggs said soberly, "If we want pumice, I'm afraid so. I've been reading up on geological structure, and all the evidence indicates that——"

"See what you can do, Sparks," ordered the Old Man. "You're the only one of us which can talk Irisian. Go buy us a nice soap mine somewhere."

So I went. But I got nowhere—rast. The Irisian from whom we had bought this piece of property had disappeared. No other native of the tiny planet would even listen to my pleas. The moment I started talking shop they covered their fuzzy ears with furry claws and scuttled away.

In this maze of mystery I detected the fine touch of Otto Steichner. So I sought him in the armed citadel he called his gubernatorial mansion. I put the question to him bluntly.

"Land?" repeated Steichner. "Land, Mr. Donovan? I'm afraid there is no property for sale on Iris. You see, everything here is owned by the government. Private individuals cannot buy or sell land."

I said, "Only five days ago we bought a piece of property from an Irisian named Tswrrrl. At the time, he mentioned that he had other properties for sale. But now I can't seem to find him."

"Tswrrrl? Tswrrrl? Ah, yes," said the governor thoughtfully, "I remember now. An unfortunate affair. So careless of Tswrrrl. He was killed in an—er—accident a few days ago. The day before the Irisian Senate passed the new law forbidding the further sale of private properties, you know."

"In other words," I said, "your bunch of cutthroats did him in? Is that it?"

Steichner said silkily, "You do us an injustice, Mr. Donovan. We who control the government of Iris operate *within the law* at all times. That is why we find no need of allowing the Space Patrol within our domain. Now, if you will excuse me? I am very busy."

"In short," I said, "you don't intend to let us buy any more land. Is that it?"

"In short," replied Steichner, dropping his pretenses, "yes! You have been given every legal opportunity. You have been on Iris exactly five and one half Solar Constant days. If, within ten days

after your arrival, you have not produced a commercial commodity heretofore undeveloped on this planet, you will be ordered to leave."

I rose. "O.Q., Steichner," I told him grimly. "You're holding all the blue chips now. But let me tell you something. If we *do* find what we're looking for, and gain the right to remain on Iris, our first move will be to call in the Space Patrol to protect our property. And you know what *that* means."

Steichner's face mottled unhealthily. He said in a lethal voice, "You are talking dangerously, Donovan. Be careful no 'accident' stops *your* wagging tongue."

"If anything happens to me," I promised him, "you'll receive a visit from the Space Patrol before you can say 'nebular hypothesis.' That's been arranged."

His lips were a white slit through which he grated, "I quite understand, Donovan. But don't underestimate Otto Steichner. Even for *that* eventuality I am prepared. Now—get out!"

"Moreover——" I began.

"I said—*get out!*"

"So," I concluded my story to the skipper and Lance Biggs, "I scrambled across the bridge and over the lake and back to camp. And thus endeth my little attempt to buy more land. It just can't be done."

The Old Man frowned. He said, "There's no use kiddin' ourselves; Steichner holds the whip hand. The worst of it is, he'll probably be able to kick us off Iris without doin' a thing to bring in the Patrol. I mean, we'll get the gate strictly legal. Because we're pretty deep now an' we still ain't found no sign of pumice. Well, Lancelot?"

Biggs had been thinking. Now he asked, "Across the *what* and over the *what*, Sparks?"

"In the order named," I told him, "bridge and lake. What's that got to do with the present situation? The problem before the board is——"

"I was just wondering," commented Biggs, "how there should be a *lake* on the planetoid Iris—and why? There are no natural

bodies of water on this tiny orb. Therefore the lake must be artificial."

"All right," growled the skipper, "so it's phony. Maybe Steichner's got a sense of beauty."

"Sure," I agreed. "What he likes best is a lovely dagger, attractively decorated with nice fresh blood. Biggs, we're not here to marvel at the scenic wonders of Iris. We've got a job to do, and we're getting nowhere fast."

"You mean," said Biggs, "our excavations? I've been thinking about that too, and it's beginning to make sense to me. You know my motto, Sparks: 'Get the theory first.' I think I've got the theory now. The only thing remaining is to put it into practice. But that lake——"

"You've solved it, son?" broke in the Old Man eagerly. "Fine! Fine! I knew you wouldn't let us down. So what do we do?"

"Well, first we must ask MacDougal to rig up a hydraulic drill. Then——"

"Drill! To dig pumice? Lancelot, you must be crazy!"

Biggs shuffled embarrassedly.

"Well, it was only an idea, sir. Of course, if you'd rather, we can delve into the matter of that lake——"

"Never mind," said the Old Man hastily. "The drill it is. Anything to get your mind off that damn lagoon. O.Q., issue the orders, Sparks."

So that's how come we started boring instead of digging into the soil of Iris. Of course the shift of operations consumed still more of our ever-dwindling margin of time. It took MacDougal and his corps a full day to rig up the hydraulic drill, another day to set the cast so it would bore true. We spent the next day watching the diamondhead romp up and down in its casing, interrupting the operation every once in a while so Lancelot Biggs, who was watching with the feverish attention of a mama duck, could study the bore facing.

He took a test wipe of the friction-heated facing and studied the granules. I craned over his shoulder and moaned.

"No go, Lance. That *still* isn't pumice. I'm afraid Steichner wins.

We've got only a little over one day to go, and it's no soap—hard *or* soft."

But there was no discouragement in the eyes of Biggs. Instead he was muttering, with a sort of satisfaction, "Just as I thought. First shale, then slate, then this diatomaceous conglomerate. It's incredible, but it must be so. Sparks"—he turned to me suddenly—"call Earth. Tell the authorities to dispatch fighting units of the Space Patrol immediately—to protect our property."

"Our what?"

"Hurry! There's no time to waste. And warn them to be very careful in approaching this planetoid. They must make no attempt to land until we signal them the way is clear. Understand?"

"Of course," I stammered. "You think Steichner will put up a scrap rather than let them in. But are you sure you know what you're doing, Lance? After all, a handful of grit——"

Biggs laughed triumphantly.

"But what grit, Sparks! What grit! See those bits of whitish-colored substance?"

I looked again more closely at the powdery stuff in the palm of his hand. I said, "Rock dandruff?"

"Fossils, Sparks!"

"Fossils? But what have fossils got to do with——"

"I can't tell you now. There's too much to be done. For one thing, I've got to go down and have a look at that artificial lake beside the governor's mansion."

Cap Hanson came up just in time to overhear these final words. He asked, "Still talkin' about that lake, Lancelot? What for? Why do you have to go down there and snoop around?"

"Because," explained Biggs, "I've been thinking about it, and I've just decided why it was built."

"Well?"

Biggs said slowly, "Steichner is a pirate; right?"

"Doubled and redoubled," I conceded, "in spades. So what?"

"He has a fleet of swift space-cruisers, no?"

"Yes."

"Well, then—*where are those cruisers?*"

I gulped and stared at him. So did Hanson. The two of us shook our heads and said together, "I don't know."

"Neither do I," admitted Biggs grimly, "for certain. But logic tells me they can be in only one place. Beneath the water of that artificial lake. Concealed there, poised for deadly attack upon any unwary foe."

Well, there's an example of typical Biggsian reasoning. It had never occurred to either of us to wonder at the absence of a spacefleet we should have known must be somewhere around. But the moment Biggs hurled his bombshell we knew he must be right. It was the only explanation satisfying the mystery of a lake on waterless Iris. Steichner moored his spacecraft under water to hide them from the view of potentially hostile visitors. From their aqueous vantage point they could emerge in the split of a second, guns spewing lethal flames, if and when the Patrol ever moved in to capture Steichner's stronghold.

I yelped, "Great swooning serpents, let me at my bug!" and leaped for the radio. But Biggs grabbed my shoulder.

"Not so fast, Sparks! Don't say anything about the lake in your message. Not even in code. Steichner is a clever man. If he discovers we know his secret, it will be just too bad—for us. We'd upset his applecart, yes; but we wouldn't live to enjoy the fruits of our victory. And"—he grinned wryly—"strangely enough, I have an ardent desire to keep on living."

The unexpectedness of his words caught the Old Man off guard. He nodded and said reassuringly, "Of course, my boy. An' you will. Why, these days a bum ticker don't mean a thing. Lots of men have 'em an' perk right along——"

Then he stopped, crimsoning, as he realized what he had said. Biggs stared at him openmouthed, then turned to me. I avoided his eyes. Biggs said, "Bum ticker, Dad?"

Hanson said miserably, "I'm sorry, son. I meant to break it gentler than that, but it sort o' slipped out."

"You mean"—Biggs spoke dazedly—"I didn't pass the physical examination? It—it showed my heart was bad?"

I nodded. "That's right, Lance."

"But—but it can't be! I feel perfect. I——" His eyes darkened with a new fear. "I'll be grounded!" he cried.

Hanson said, "I'm sorry, Lancelot. But you'll still work for the Corporation, of course. An' you'll have lots of time at home with Diane. It—it's even better than battin' around in space——"

But he wasn't kidding a soul. Least of all Lancelot Biggs, who, for a moment, turned his back to us. When he again faced us there was a curious moisture in his eyes. He said in low voice, "Well—get that message off, Sparks. I'll run on along about my errand. For if I'm not very much mistaken, we'll have visitors as soon as Steichner's experts break your code."

And he disappeared toward the city, a lean and lanky, somehow strangely forlorn-looking Biggs. . . .

21

Well, I sent the message. It cleared through Joe Marlowe at Lunar III, and Joe was so excited he almost busted a finger on the key as he chattered back at me, "No fooling, Donovan? You've succeeded in locating pumice?"

"We've succeeded in locating," I told him, "something. Don't ask me what. I'm only the hired help around here. But Biggs says it's O.Q., and whatever he says is all right with me. So get the Patrol on its way here as soon as possible."

"Right!" snapped Marlowe. "Consider them started!"

So that was that. I wandered back to the digs, and there waited for the second part of Biggs's prophecy to be fulfilled. It didn't take long. About four hours later—Earth Standard, of course; you can't figure hours on a tiny planetoid which has no axial revolution—a monocar came blistering from the capital city to our encampment. It was packed to the gunwales with armed guards and Steichner. Steichner was packed to the gunwales too, mostly with fury. He hurled himself from the speedster and strode to Hanson's side.

"Captain Hanson, may I ask the meaning of this?"

He jammed a sheet of paper under the Old Man's nose. On it was typed a complete, interpreted transcription of the message I had recently sent to Earth.

The skipper studied it slowly, coolly. He said, "Same to you, Governor Steichner. May I ask how you got a copy of a message which was sent in private code?"

"That," blustered the pirate-politician, "is neither here nor there. What I want to know is, by what right have you summoned a force of Space Patrolmen to *my* planet?"

The Old Man didn't know. He was as much in the dark as a blind-folded mole in a blackout. But he bluffed it through.

"Why," he said calmly, "under section forty-one, paragraph sixteen, of the space regulations, of course. To protect our property."

"Property?" roared Steichner. "*What* property? Don't try to pretend to me, sir, that you have succeeded in finding pumice on this terrain!"

I broke in, "So you even knew what we were searching for, Steichner?"

"Naturally. I leave nothing to chance, gentlemen. Before your ship left Earth, I had been advised as to the ruse by which you hoped to gain a foothold on this asteroid. Precaution was taken that the property you were allowed to 'purchase'—at a handsome price, for which I thank you, gentlemen—held no basaltic deposits.

"Well, Captain—answer me! Have you or have you not unearthed any pumice deposits?"

The answer came from a few rods away. Biggs had returned from his exploring trip. Now he took over.

"The answer, Governor Steichner, is—no. We have not."

"No? Then by what right, Lieutenant, did you summon the Patrol to Iris? By your own admission, you have failed to find that for which you came."

"True," admitted Biggs easily. "Quite true, Steichner. But though we failed to find pumice, we *have* found something else. Another commodity never before exploited on Iris. We thereby earn the right to stay here for thirty-five years . . . and to call in the Patrol to protect our property."

Steichner's fingers worked convulsively.

"*Another* product, sir? Out of this bleak, worthless soil? Impossible!"

Biggs shook his head.

"Incredible, sir. But not impossible. At any minute now our drill should strike a pocket of that substance which was created when Iris was still a part of a mighty planet swinging in an orbit between Mars and Jupiter. A commodity of great value. An essential fuel."

"What," roared Steichner, "are you talking about, you blithering idiot?"

Biggs didn't answer him. He didn't have to. For at that moment rose a sudden warning shout from our workers tending the diamond-head drill. Voices raised in swift alarm; from the ground beneath our feet came a strange, roaring, rushing, gushing sound. Even as the workmen fled, the superstructure of our drill shattered and flew high into the thin air of Iris—borne aloft on a pillar of thick black goo. And:

"*Oil!*" cried Lancelot Biggs triumphantly. "*Oil*, Steichner! *That* is the new industry which gives us the right to remain here."

Well, it was a victory, all right. But for a minute I thought it was going to be a victory with flowers. Otto Steichner's face turned livid with rage as he realized he had lost his tight grip on the planetoid Iris. His hand leaped to his belt, and for the space of a held breath I felt certain he would ray us all down in our tracks.

It was the oil that saved us. Pluming skyward, its jet hit a half-mile ceiling. Then, because Iris is not *entirely* airless and has a *slight* gravitation, the column mushroomed and splashed groundward. A viscous rain began splattering all around and over us, a greasy black torrent that turned us all into tar babies before we could duck for shelter.

Steichner gasped, choked, and raced toward his monocar. But as he tumbled into it he roared back, "This isn't good-by, gentlemen! I have other and more important things to take care of right now. But when I have disposed of the Space Patrol fleet, I will return to take care of *you!*"

Out of range of the oily deluge, Cap Hanson turned a serious face to Biggs.

"Disposed of the Space Patrol? What does he mean?"

Biggs replied soberly, "I'm afraid he means just what he says, sir. My guess about the lake was right. It is the hiding place of his fleet. Steichner will go there now, man his ships, and lie in wait for the Patrol."

I said, "Well, golly, let's lift the *Saturn* out of here. Beat it out into space, and warn the Fleet!"

Biggs shook his head.

"No, I have a better plan than that. Oh, Chief"—he called to Chief Engineer MacDougal, who, dripping with crude oil and pride, was hobbling back toward the ship for a change of clothing—"nice work on that drill. Tell the men to cap the well for the time being. Did you get those metal poles I asked you for?"

"Aye, sir!"

"Good! And the silver?"

"About three tons of it, sir!"

"Silver?" broke in Hanson. "Are you talkin' about that specie shipment in the storage vault? You can't touch that, Lancelot. It ain't ours. It belongs to——"

"It belongs to humanity," declared Biggs. "No price is too high to pay for the overthrow of Steichner's crew."

He glanced at his wrist chrono.

"What time did you wire the Patrol, Sparks?"

"Eleven three Earth Constant."

"Mmm-hmm! They should arrive in less than six hours. We must get to work. All right, Chief. You know where I want those materials. And don't forget the salt!"

"No, sir!"

"Salt!" cried Hanson. "Migawd, what now? You ain't goin' to cook and eat Steichner?"

Lancelot Biggs smiled tightly.

"No, not exactly. All I'm going to cook is his goose."

What happened in those next few hours makes sense to me now, but it didn't while it was going on. All I knew was that by the time our gang got from the camp down to the capital city, Steichner and his crowd had disappeared. The city was empty save for a few thousand fuzzy Irisians scampering around, whimpering dolefully because they didn't know what was up.

Otto and his mobile units had taken a run-out powder. But, as Biggs hunched it, they hadn't gone far. Just into their spaceships, which lay a few yards beneath the placid surface of the artificial lake beside the governor's mansion.

Under Biggs's directions, MacDougal's men got going. Their first move was to dump a holdful of ordinary table salt, residue of a cargo we had never completely discharged, into the lake. That was screwy enough to draw a murmur from the Old Man. His murmur changed to a moan when they followed this move by dumping into the lake those ingots of silver specie Biggs had mentioned.

Then came the whackiest part of all. In the southernmost extremity of the lake Biggs implanted one of the two metal uprights MacDougal had forged for him. Then—with the help of a tractor crew, of course; the things were twenty feet long—he set its mate at the other end of the lake and connected wires from the posts to the hypatomic motors of our ship.

All this took time, of course. A lot of time. Maybe too much time. Because scarcely had Biggs finished these preparations when there came a message from the commandant of the Space Patrol flagship:

"Ahoy, Iris! S. P. Cruiser *Pollux* approaching. Clear cradles for official landing."

Our physical labor completed, we were back in my radio cabin. As we picked up this omniwave call, Biggs spun to me excitedly.

"Sparks, contact Steichner immediately."

I twisted the dials, finally succeeded in picking up the wave length of the submerged Irisian governor's set. Biggs spoke into the audio.

"Governor Steichner, this is Lieutenant Lancelot Biggs aboard the *Saturn*. Can you hear me?"

Steichner's reply shot back savagely.

"I can, Lieutenant. Have patience. I will take care of you when this other little matter has been attended to."

"I called to warn you," said Biggs expressionlessly, "that you are in gravest peril. I offer you a chance to surrender peaceably. Will you do so?"

Steichner's answer was a blunt refusal. Biggs sighed.

"Very well, Governor. Then let me issue this final warning: Do not attempt to lift graves from your present location. And do not attempt to use your ordnance. To do so will be to court instant and terrible death."

This time Steichner's reply wasn't even printable. It had reference to alleged indiscretions in Biggs's personal habits, ancestry, and probable destination upon demise. But Biggs had turned from the audio, pressed the stud activating the hypos of our ship. A dull growl surged about us as the powerful motors stirred into action.

I stared at him questioningly.

"What are you trying to do, Lance? Scare Steichner into surrendering?"

"No, Sparks. I meant every word I said. Look at the lake."

I cut on the perils, swung it to scan outside. What I saw brought a gasp to my lips. The surface of the lake was alive with tiny, frothing bubbles. The whole lake was seething with motion.

Cap Hanson cried, "Sweet saints, *now* I understand! You've turned the lake into a stew kettle. You're boilin' 'em alive!"

"No," I contradicted. "It can't be that. The ships are insulated against the absolute zero of space. Heat and cold mean nothing to them. But what *are* you doing, Biggs? Electrocuting them?"

"You're *half* right," acknowledged my lanky friend. "Not electrocuting, though——"

He never finished his sentence. For at that moment there came to us over the audio the voice of Governor Otto Steichner issuing a command to his men.

"Fleet, clear decks for action! Set studs. Battle formation. Prepare to lift gravs——"

"No!" cried Biggs. "Don't, Steichner! It means death to you all!"

"Ready!" rasped the stern voice. "Follow me! *Lift!*"

There sounded the rising tumult of mighty motors thundering into action. Then:

"The fools!" cried Lancelot Biggs pityingly. "The poor damned fools! Why wouldn't they believe me?"

My eyes swiveled to the visiplat just in time to see the last act of the little drama. It came with terrible suddenness, devastating finality. The waters of the churning lake boiled fiercely for a fraction of an instant as a half-dozen spaceships jetted simultaneously. Then from the inwards of the lake, as from a gigantic steam bomb, burst a violent sheet of flame, a coruscating, eye-blinding moment of brilliance. Then another. And another. Six, all told.

Then—silence. And the regretful voice of Mr. Biggs saying, "Cut the connection, Chief. Our task is ended."

I got it then. I stared at Biggs with a sort of horrible fascination. I said, "So that's it. You didn't try to harm them. You simply *electroplated their ships!*"

"That's it, Sparks," acknowledged Biggs sadly. "When they attempted to jet from the lake, their blasts backfired against the silver barricade deposited over their ports. Their ships exploded like live bombs."

Later, as our men reversed the polarity of Biggs's gigantic electroplating apparatus to reclaim as much as possible of the silver used in the operation, the commander of the Space Patrol fleet stopped by to offer his congratulations.

"It was a magnificent job, gentlemen," said he. "We commend you on having rid the System of one of its few remaining pestholes. Henceforth the Irisians will govern themselves in freedom. Meanwhile, if your Corporation wishes to maintain its property rights on Iris, we shall, of course, honor your discovery of crude oil."

He paused, staring at Biggs.

"But how did you know there was oil on Iris, Mr. Biggs? Other geologists had never detected its presence."

Biggs flushed.

"I didn't know," he confessed. "As a matter of fact, I suspect that little oil well will run dry in less than two days. It can be but a tiny pocket, at best. The asteroid is mostly composed of igneous-rock formations. My guess is that it comprised part of a volcanic mountain on the planet of which, ages ago, it was once a part. When the planet exploded, a portion of the mountain valley was torn away with this fragment. It was from this ancient peat bog the oil derived.

"I began to guess there might be a vestige of oil when we dug up black submersion. When we found the fossiliferous rock I knew we were on the right track. It—it was just luck."

"Well, luck or not," said the Patrol officer heartily, "you certainly grasped every advantage that came your way. We need more spacemen like you, Biggs!"

And—there it was again. Another reminder of the fate overhanging Biggs. Space needed men like Biggs—but by verdict of a medical examination he had been declared unfit for space travel.

The Old Man's face clouded. He said slowly, "There's another problem. If Lance can't stand space travel, what are we goin' to do? Leave him here on Iris?"

Biggs said resignedly, "You'd better call Earth and find out, Sparks."

So I contacted Marlowe again. When I had asked my question, there was a moment of silence. Then Joe tapped querulously, "Do with Biggs? What do you *want* to do with him, Donovan? Bring him home, of course."

I said, "But if his heart won't stand the trip——"

"Heart? What's the matter with Biggs's heart?"

"Why, the medical report——"

"Oh, that!" sniffed Marlowe. "That was a mistake—didn't I tell you? The medicos got mixed up. Their orders were to examine every

man aboard the *Saturn*, without exception. And since there were *two* Biggses aboard that day——”

Biggs, who had been listening to the message, jerked like a spit-balled schoolmarm.

“Uncle Prenny!” he yelled. “They got him confused with me. I’m the first mate, and he’s the first vice-president. They must have simply reported that the ‘first officer’ was unfit for space travel. Uncle Prenny has had a heart murmur for thirty years.”

I grinned happily and cut the connection. “Then all’s well,” I said, “that ends swell. Congratulations, Lance. You’ve done it again.”

“Eh?” He looked puzzled. “Done what, Sparks?”

“Established a new precedent,” I told him. “You’re the first medical mistake in history who won’t have to be buried.”

When the Corporation yanked the *Saturn* off the freight shuttle and turned it into a trouble shooter for special assignments, we thought we were getting a break. We forgot, however, that "break" is a synonym for "bust." The net result of our alleged promotion was that for a fractional increase in salary we worked twice as hard at jobs ten times nastier than any we had ever tackled before.

There was that matter of the mailship robberies, for instance, and the ugly tangle with the Deimos claim jumpers. The case of the Rhea sand traps was a real puzzler, and I still wake in a cold sweat at nights thinking about the trouble we had with that rogue asteroid off Hidalgo.

And all these were hair-raising adventures—you can spell that verb two ways—but none compared in tenseness to the job that began the night I had dinner at the home of Lieutenant and Mrs. Lancelot Biggs, in the far from merry month of June, 2116.

The three of us were lingering over our coffee, chatting about this and that other inconsequential trifle, trying to look calmer than we actually felt, when the Old Man stalked in, sore as a nudist in a nettle patch.

I think we all guessed what he was going to say before he opened

his mouth. Diane cried, "Oh *no*, Daddy! Not *now*!" And Biggs asked, "What is it, sir? I hope they don't want us to——"

Hanson fumed, "They do, dingbust 'em to Hades! It's an emergency mission. We're to lift gravs immediately."

"Lift gravs!" repeated Biggs bleakly. "But, Dad, I can't go now! Not *now*, of all times."

Cap shook his head regretfully.

"It ain't a case of can or can't, Lancelot. It's a case of got to. There's trouble on Themis again."

I said, "Themis . . . again? You mean another ship——"

"That's right," nodded the skipper. "Attacked an' smashed to smithereens. Not a man left alive."

"But only last month," cried Diane, "the Space Patrol announced that a peace pact had been signed with the Thagwar of Themis. The natives of that satellite agreed to join the Interplanetary Union."

"Them Themisites," growled the Old Man, "keep their promises like I'm keepin' my hair. This makes the sixth time the Thagwar has signed a peace pact. An' it's the sixth time he's broke it. So——"

"So," I said, "we're elected, eh?"

"Unanimously."

Lance Biggs's jaw tightened. He said stiffly, "I'm afraid this is one time I shall not be able to obey orders, sir. I can't go with you."

My heart did a flip-flop. I understood and heartily sympathized with Biggs. He wanted to be on Earth right now. But I also knew what an outright refusal meant. The I.P.C. is a hard-boiled outfit. If Lance failed to make this expedition, he would not only lose his rating and a chance to go up for his master's papers—an examination he was hoping to take in the very near future—he might also lose his job.

Furthermore, I hated to think of making a truly dangerous trip without Biggs on the bridge. That brilliant wildcat had pulled so many bunnies out of the derby, saving our individual and collective necks with such monotonous regularity, that we'd be utterly lost without him. But I said nothing. After all, this was a question Biggs must decide for himself.

As it turned out, though, it was neither I nor the Old Man nor Lancelot who solved the problem. It was Mrs. Biggs. In a calm, decisive voice she said, "But, Lance dear, of *course* you will go."

"And leave you?" blurted Lance. "Never!"

"Stuff," sniffed Diane, "and nonsense! What earthly good are you doing here? But out *there* men have died, betrayed by a race of aborigines. Brave men. Spacemen like yourself. You have no choice. Your duty is plain. You *must* go."

"But——" protested Lance.

"But," interrupted Diane, "nothing. Now, I'm tired. You boys run along and clean up this little job. I'll be here at home, waiting for you."

Biggs asked apprehensively, "And—and you'll be all right while we're gone? You're sure——"

"Of course I'll be all right," declared Diane. "Now lift gravs, spacemen. And—good luck!"

So several hours later the *Saturn* blasted from its cradle at Long Island spaceport, and we were off to Themis, tenth satellite of the planet after which our ship was named.

The planet Saturn is approximately nine hundred million miles from the Sun and, since it was currently on our side of that central beacon, about eight hundred million from Earth. In the old days that would have meant a voyage of weeks, but, using Biggs's V-I unit, we could expect to reach our destination in a trifle more than ten hours. So as the *Saturn* jogged outward into space at the gentle rate of some 185,000 m.p.s., I sat back and tried to remember everything I'd ever heard about Themis.

Which wasn't much. I knew that in 1905, Pickering, the discoverer of Phoebe, had first spotted Saturn's outermost satellite. He had named this tiny body Themis, after the goddess of Law and Order. Which, in view of later events, was a Percheron-proportioned guffaw.

Then something queer happened. Themis disappeared! Yeah, that's right, it got lost! Can you imagine "losing" a cosmic body about

three hundred miles in diameter? Well, that's exactly what the astronomers of the twentieth century did. According to the archives, they hunted for it time and again, but never relocated it. Finally they decided stargazer Pickering must have been sopping up too much *spiritus frumenti* the night he discovered the satellite, and they expunged its name from the records.

Which was, of course, a terrific boner—because it was there all the time. It was rediscovered in 1983 by staff observers of the Goddard Memorial Observatory in Copernicus Crater on Luna. And in 2031 it was visited, charted, and claimed in the name of the Interplanetary Union by the Space Patrol cruiser *Orestes*.

Only nobody went to live there. For one thing, it was too picayune to bother with. During the Space Rush of 2030–80, everyone who could beg, borrow, or steal a ride on a ship was hightailing it to the more important planets: Venus, Mars, Mercury, the Asteroids. Later, the Jovian satellites became popular. Slowly the frontiers pushed farther and farther out from Sol, until nowadays adventurers are willing to take a squint at any body in space which boasts soil, air, and a modicum of gravity.

So at last, after about a century of ignoring them, Earthmen were trying to become palsy-walsy with the Themisites, a curious race of critters, half human and half equine.

But our side was getting nowhere in a hurry. As the Old Man had said, six times a Patrol corps had landed on Themis, and six times signed a peace pact with the ruler, or Thagwar, of that globe. But each time, the pact had been ignored by the Themisites as soon as a party of colonists attempted to land. Defenseless ships had been set upon, destroyed, their cargoes stolen and their passengers brutally slaughtered.

So now here we were, blithely barging in where rational angels might justifiably hesitate to tread. It didn't make sense. I asked the skipper about it.

"Cap," I conceded, "maybe I'm slow on the uptake, but how come we draw this assignment? Since the Themisites seem to want trouble,

why doesn't the Space Patrol take a couple of battalions and go busting in there to occupy the joint with primed rotors?"

"Because," explained Hanson, "Themis is populated by a race with an intelligence quotient of more than point seven on the psychogradient scale, Sparks. Accordin' to interplanetary law, colonization of civilized bodies can only be carried out with the permission of the native inhabitants, an' aggressive occupation is forbid when them inhabitants possess humanoid intelligence."

"Meaning," I asked, "what? We aren't allowed to grab Themis unless the Themisites let us?"

"Meanin'," snorted the Old Man, "that if you was the only inhabitant of Themis, the Patrol wouldn't have nothin' to worry about. But I didn't come here to bandy words with you. I come to ask if you happened to notice the funny way Lance is actin'?"

I had. I shrugged.

"You can't expect anything different, Skipper. After all, he didn't want to leave Diane at a time like this."

"Of course not. Neither did I. But since we had to, we might as well buckle down an' get the job taken care of as quick as possible. Anyway, you're keepin' in touch with home, ain't you?"

"Absolutely. Holding an open circuit every minute. But don't worry about Biggs, Skipper. He'll be all right as soon as we actually get to work."

That's as far as I got with my glad talk. At that moment the intercom rasped into life, and in the visiplate appeared the image of our second mate. Todd was so nervous he had to lick his lips three times before he could grease out a word.

"S-S-Skipper!" he managed at last.

"Yeah? What is it?"

"Th-Th-Themis! We're pulling into Themis."

The Old Man glanced at his chrono and nodded.

"O.Q. So we're dropping gravs on schedule. So?"

"N-n-nothing," gulped Todd, "except that Themis has disappeared! The automatic alarm system is going crazy. According to it, there's a

large cosmic body right in front of us—but *we can't see a thing!*"

I said, "Oh-oh!" and groped for my transmitter key. But before I could start beating the bug, Hanson grabbed my wrist.

"And just what do you think *you're* doin', Sparks?"

"I don't *think*," I told him. "I *know*. When people see things that aren't there, I hide the bottle. But when they start *not* seeing things that *are* there, that's all, folks! I'm calling the Space Patrol base on Mars and asking them to rush a hospital ship out this way, G.D.Q. A large, lovely hospital ship equipped with nice hemstitched strait jackets."

"Don't be a dope," roared the Old Man. "Todd don't talk nonsense for no good reason. There's somethin' screwy goin' on around here. I want to know what it is. Come on!"

I followed him from my cabin to the bridge. There we found Todd hunched over the plot table, frantically scribbling calculations. Biggs was in the pilot's bucket seat, punching away at the studs as unconcerned as if this were a routine test flight in Earth atmo.

He glanced around as we came in, and his eyes popped out on pistons. He half rose from his seat.

"A—a message for me, Sparks?" he quavered.

I shook my head.

"No word yet," I reassured him. "I'll let you know. Meanwhile, what's the trouble around here?"

"Trouble?" repeated Lancelot wonderingly.

"Themis," rasped the Old Man. "Didn't Todd call me a couple of minutes ago with some wild-an'-woolly tale about its disappearin'?"

"Oh, *that!*" smiled Biggs gently. "I thought for a second you meant there was something wrong. Why, yes, Dad. Themis *has* disappeared temporarily. Oddest thing——"

"Talk sense!" I moaned. "Todd said something about there being a large body on our course, too. Did it"—I took a look at the central perilens, which showed nothing between us and the far stars—"did it go away?"

"No," drawled Biggs nonchalantly. "It's still there."

"Still there!" I looked again, more closely, at the vision plate. It was as bare as a bathing belle's backbone. "Are my optics myopic, or have you gone off your gravs? What's still where?"

"The large body," said Biggs blandly. "Themis's moon. It's three points to starboard, one degree to loft."

"Themis's *moon*!" croaked the Old Man. "What the hell are you talkin' about? Themis is a moon!"

"I know," agreed Biggs. His larynx bobbed pleasantly. "Unusual, isn't it? This is the first time any satellite in the solar system has ever been found to have a satellite of its own. But we've located it, charted its orbit, and cross-checked our calculations—haven't we, Dick?"

Todd looked up from the plot table.

"That's right," he said hollowly. "Themis *has* a moon of its own. An invisible moon."

"*Invisible moon*!" The skipper and I did a twin act on that one.

"Yes," nodded Biggs. "That's why Themis disappears periodically. It is circled by a large satellite with the peculiar property of being able to warp light waves around itself. Every time the moon, revolving around its primary, comes between Themis and observers, Themis is occulted—and disappears."

He clucked thoughtfully. "Strange, isn't it, that after these many years we should be the first to find it out? But that's chance for you. Every other time a ship visited Themis the invisible moon must have been on the far side."

Hanson was fidgeting like he had wasps in his weskit. Now he broke in, "This is all very interestin'. But how about the chances of our crackin' up on this aforesaid son-of-a-moon?"

"Oh," replied Biggs negligently, "that's taken care of. We've plotted a new trajectory around it. We should see Themis again in—Aaaah!" He breathed a sigh of satisfaction. "There she is now!"

And, true enough, Themis was beginning to appear on the vision plate before us. A weird-looking sight it was. A thin sliver of terrain at

first—then widening, growing into a full-sized cosmic body as it ceased to be occulted by its invisible companion.

Biggs punched the intercom stud and spoke to the engine room. "All right, Chief," he called. "Cut the V-I and prepare to drop gravs in about fifty minutes." He turned to us again. "Remarkable, eh? Someday we'll have to visit that invisible moon. Should be an interesting place."

The skipper groaned feebly.

"Interestin'! He finds an invisible moon, figures a trajectory around it, then says it's—— Oooh! Let me out o' here! I'm havin' a heat wave!"

"Cheer up," I told him. "I know just how you feel. Only it's not the heat; it's the humility."

The next hour was taken up with normal landing routine. Decelerating to atmo velocity, cruising over Themis until we located the capital city of Kraalbur, where the Thagwar maintained his royal residence, dropping to a stern-jet landing—this was all child's play for a spaceman like Lancelot Biggs.

Thus it was that a short while later, armed to the teeth and ready for any eventuality, our foray party of ten men stood in the airlock of the *Saturn* listening to Hanson's final instructions.

"Be quiet," he advised us, "be calm—an' above all, be careful. These Themisites is tricky. But our orders is to improve interplanetary relations, not make 'em worse. So act accordin'ly. We'll treat them exactly like they meet us. If they greet us friendly, we'll be nice. But if they get tough——"

"Well?" asked one of the crew.

"Give 'em the works!" said the Old Man succinctly, and nodded to his son-in-law. "O.Q., Lance. Open up."

The airlock wheezed asthmatically, and we stepped out upon the soil of the satellite Themis.

A tremendous horde of natives had gathered to greet us. They were a strange-looking outfit. Sort of like men on horses, you might say. Or like those centaurs you read about in mythology books. Maybe that's where the legend of centaurs originated; I don't know. The

more man travels the spaceways, the more he discovers races of beings similar to the freaks and oddities recorded in ancient myths. Lance Biggs believes that once upon a time, thousands of years ago, before Earth's old moon crashed, destroying the civilization then existent, men knew the secret of spacetravel, and that mythology is merely a distorted record of things once seen and known. But I wouldn't know about that. I'm just a radioman.

Anyhow, these Themisites were sort of like us down to the tummy. But from there on they branched out into the equine family, being appended with strong, muscular, quadrupedal bodies and postscripted with long, bushy tails.

But they were intelligent. No doubt about that. And, surprisingly enough, they seemed friendly. Their ruler trotted forward and raised an arm in the cosmoswide gesture of greeting. He addressed us in Universal, the common language of space.

"*Salujo, amigi,*" he said. "Welcome to Themis, land of peace and brotherly love."

Hanson gasped, "Get a load o' that! Three days ago the four-legged punks murdered a whole crew of Earthmen. Now they got the nerve to yap about brotherly love."

"Maybe he's right," I suggested thoughtfully. "You ever have a brother, Skipper?"

"Shhh!" whispered Biggs. He stepped forward, serving as spokesman for our team. "Greetings, O Thagwar of Themis! We come as emissaries from the Blue World, seeking to forge a bond of friendship between your people and ours."

"Friendship and peace," said the Thagwar grandiloquently, "are ever the desire of my race."

Lance said, "We hear and believe, noble Thagwar. But evil tidings have lately reached our ears. It is told that a few days ago you led your people in mortal combat against a party from our planet."

The Thagwar drew himself stiffly erect and shook his mane in firm denial.

"That," he said in a tone of outraged dignity, "is not so. It was the *old* Thagwar who led that brutal assault."

"Old Thagwar? Then you have since overthrown his government?"

"The former Thagwar," informed the Themisite leader, "has been removed from power. *I* am now Thagwar of Themis. I wish only friendship and peace between our peoples. And now"—his eyes rolled hopefully—"have you brought the usual tributes?"

"Tributes," of course, meant graft. Humanoid forms change with the planets, but human nature doesn't. Knowing the mentality of our opponents, we had come prepared. Lance beckoned to a pair of our crewmen, who lugged forward a crate packed with an assortment of the doolallies and thingamajiggers loved by abos like the Themisites. Mirrors, gaudy bits of costume jewelry, brightly colored trinkets, yards of richly hued cloth, horn-rimmed spectacles, cheap cameras—that sort of thing.

Crooked? Sure. Taking advantage of ignorant savages? Definitely. But, hell, you can't interest uncultured aborigines in Haemholtz atomoconverters and pre-Rooseveltian art treasures. Of course they'd be glad to get their paws on a few ray-pistols or a case of three-star joy-juice, but the authorities frown on the practice of supplying inferior races with fire-arms, -works, or -water.

So Lance distributed the gadgets to the Thagwar, who beamed with delight. And after that the negotiations were a snapperoo. We told what we wanted: permission for Earth's colonists to settle on Themis, the right to construct spaceports, and so on and so forth, and the ruler said, "Yes, yes, yes," till he sounded like a phonograph needle caught in a worn groove.

There remained but one thing to be done: the formal signing of the treaty. Lance drew from his pocket the previously prepared sheets and was just getting ready to help the Thagwar scrawl a legal "X" on the dotted line when a stir passed through the assemblage.

It was a nervousness, a jitteriness you could *feel*. Heads craned upward to look at the sky; hoofs pawed restlessly at the turf. And one by one the centaurlike denizens of Themis began drifting away, cantering back toward the cluster of hovels which was their capital city.

Even the Thagwar seemed hesitant, uncertain. For a few minutes he tried to carry on like a bold, brave monarch. Then, with a little whinny that sounded almost like a whimper, he picked up his bundle of loot and he, too, galloped away.

Cap Hanson's jaw dropped like a wildcat stock in a bear market. "Well I'll be damned!" he choked. "Now what?"

Biggs had been studying the sky. He frowned.

"Night," he said.

"Eh?"

"Night," repeated Lance, "or what passes for night on this peculiar little satellite. You see, Themis doesn't revolve on its axis, therefore it has no night or day as we know those periods on Earth. And, of course, since it travels about its primary so swiftly, and since Saturn itself emits so strong a *gegenschein*, occultation by the mother planet doesn't cause absolute darkness.

"But Themis's invisible little companion swings about Themis. And whenever it comes between this world and the Sun, a dark period ensues. I should judge we are about to experience one. Yes—see? It is beginning to get dark right now."

"You mean," stormed Hanson, "everything's called on account o' darkness? The pact ain't goin' to be signed?"

"Apparently not," admitted Lance ruefully. "Almost all aboriginal races have a deep dread of darkness, you know. Well"—he shrugged—"there's no sense in our waiting out here until the night period ends. We might as well go back to the ship and be comfortable."

Fortunately the phony "night" didn't last long. Fortunately for me, I mean. Because as soon as we got to the ship, Lance pranced along with me up to the radio cabin and there pestered the life out of me to try to get some word from Earth. But that was strictly no go. There was static galore. My audio was humming like a tenor in a shower.

But at last the invisible barrier cutting us off from Sol's light slipped away, and once again we marched out onto the soil of Themis.

Marched out? This time we sauntered out. We were feeling very carefree and sanguine, you see, that everything was hunky-dory. Why not? We had been on the verge of signing the new peace pact when darkness interrupted us.

That blind, trusting confidence almost cost us our lives. The Themisites were again gathered around our ship. But when we stepped from the airlock—we stepped out into a hail of lethal fury!

It was a lucky break for us that the Themisites had no modern weapons. A couple of ray-pistols in the paws of capable users, or even one .20 millimeter rotor, and yours truly wouldn't be here to chronicle the ensuing events. But fortunately the four-legged scoundrels' armaments were as barbaric as themselves. Stones and cudgels, crudely forged spears, incompetently constructed bows and arrows that were as inaccurate as a real-estate agent's descriptions—these were the weapons with which we were assailed.

Cap Hanson caught a nice-sized chunk of rock amidships, and one of the crewmen had his shoulder laid open by a wobbling spear. But those were our only casualties. Above the hubbub and furore—the Themisites were howling like a mob of unleashed demons—Lance cried, "*Back into the ship. Quickly!*"

Which was a command requiring no repetition. For the next three seconds the airlock looked like bargain day at the girdle counter. Then we were all inside once more, safe at home, but sore as a bare-back rider's coccyx.

The Old Man bellowed, "Unlatch the rotors! The treacherous rascals! I'll learn 'em to attack Earthmen! I'll blast 'em clean off the face of their ugly little globe, the good-for-nothin'——"

But Lance said, "No, Dad—please! Wait awhile!"

"Wait? What for?"

"There's something most peculiar about this," pondered Biggs gravely. "A few hours ago they were friendly; now they're screaming for our blood. I don't understand it. But you know my motto: '*Get the theory first.*' If I can learn *why* they changed so abruptly——"

"What difference does it make *why* they changed? They did, didn't they? That's all that counts."

"No, Dad. The important thing is not to beat the Themisites into submission; it is to settle our differences for all time, establish an enduring peace." He turned to me. "Sparks, buzz Earth, will you? I want a complete report on the previous peace treaties signed with Themis. Who signed them—when—under what circumstances—everything we can learn." He hesitated. "And while you're at it, see if there's any news from Diane, will you?"

He was a very worried-looking gent. And no wonder.

Well, after the static had cleared, I established contact with Joe Marlowe at Lunar III. He said he'd try to scare up the info I wanted, but it might take time. I told him to go ahead; I had as much time on my hands as a chronometer repairman. So we dillied and dallied, and after a while he came back loaded with more facts than Mr. Britannica put in his encyclopedia.

The Themis situation, it seemed, was plenty complex. The first peace pact had been signed eight months ago between the Thagwar of Themis and the Space Cruiser *Ajax*, Colonel A. R. Prentiss commanding. Less than two weeks later the Themisites had murdered in cold blood an agent sent there by the Cosmic Corporation to set up a trading post.

The Space Patrol had sent a second expedition. This party reported hostile reception. Then, after a whole day wasted in attempting to get in touch with the Thagwar, the Themisites had suddenly turned friendly and signed a second treaty. This pact had lasted exactly four days. It was busted when the quadrupeds dittoed the craniums of a party of miners who dropped gravs for fresh water.

Why go on? Expeditions three, four, five, and six had all followed the same pattern: an agreeable understanding followed by a swift *savate* to the stomach. Our experience was no novelty; we were just number seven on the Themisite hit-and-run parade.

"In view of the circumstances," Joe Marlowe wound up his report, "the authorities here suggest that Captain Hanson get the situation in hand and get the situation in hand and get the situation in hand and get the situation——"

I cut in on him.

"O.Q.," I acknowledged. "Let's play like he now has the situation in hand. What next?"

"Let him contact the Thagwar of Themis," bugged Marlowe, "and contact the Thagwar of Themis and contact the Thagwar of Themis and contact——"

Biggs was in the cabin with me. He stared at me curiously.

"What's the matter, Sparks?"

"Don't ask me," I retorted. "It sounds like Marlowe's developed a bad case of digital hiccoughs. Oh well, we've got the information we wanted. I'll sign off." So I did.

Biggs asked, "And—and Diane?"

"No word yet. Joe will let us know. The circuit's still open. Well, you've heard the report. What do you make of it?"

Biggs said slowly, "I don't know, Sparks. It's very strange. I'll have to think it over . . . Yes? What is it?"

He spoke this last to the intercom audio, which had come to life. Cap Hanson was calling from the control turret.

"Lance, are you there? Listen, son, come up to the bridge right away, will you?"

Swift apprehension tightened Biggs's features.

"What's the matter? The Themisites aren't attacking the ship again?"

"Just the opposite. Another o' them phony 'nights' has passed outside since you been fiddlin' around down there. Now it's daylight again, an' there's a mob of Themisites gathered around outside—*wavin' banners and peltin' the Saturn with flowers!* The Thagwar has just sent a messenger biddin' us friendly welcome to Themis!"

"Great ghouls of Ganymede," I spluttered. "What's this all about? One minute they want to kill and boo; the next they want to bill and coo! Why don't they make up their minds?"

"Probably," decided the skipper, "because they ain't got none. Well, Lance?"

"We can't learn anything," said Biggs quietly, "in here. Let's go outside."

24

So for the third time in as many Themisian "days" out we pranced, to be greeted by such hooraw and ballyhoo as ever you saw. Those same centaurs who a few short Earthly hours ago had been aiming lethal presents at our kissers were now aiming kisses at our presence. Their leader cantered forward gracefully and made a low bow before Cap Hanson.

"Greetings, O son of the Blue World," he intoned. "As Thagwar of Themis, I bid you welcome to our peace-loving little planet."

"Th-thanks!" said the Old Man, and looked bewildered. "Lance, son, suppose you——"

Lance was staring curiously at the speaker. He nudged me and whispered, "Sparks, look at the Thagwar. Do you notice anything—well—*strange* about him?"

I shook my head. "They all look the same to me. Human heads and horses'——"

"Remember how proud he was of those ornaments we gave him before the 'night' period set in?" whispered Biggs. "He had himself all decked out like a Christmas tree. But now look at him. Not a single decoration!"

"Maybe," I suggested, "he's allergic to brass?"

"On the other hand," mused Biggs, "*that* Themisite over there is wearing a bead bracelet. And a curtain rod in his nose."

He was perfectly right. The big boss of Themis was as barren of trinkets as a Pilgrim father, but standing in the background was one of his henchmen glittering like gilt on a joy-joint bar.

The Thagwar spoke again, impatiently.

"Peace," he said, "between your people and mine. And now—did you bring the usual tribute?"

"Tribute?" repeated the Old Man starkly. "We gave it to you yesterday, you old reprobate. What's the big idea?"

The Thagwar's eyes darkened. He pawed the ground fretfully.

"You are mistaken, Earthman. You gave me nothing."

"What? I gave you a whole darn caseful of——"

"You gave me," repeated the Thagwar with increasing petulance, "nothing. You offered a few baubles to the *old* Thagwar, possibly——"

Cap Hanson groaned and turned agonized eyes to his son-in-law. "Ain't that somethin'? There's been another revolution. Now we got to pay off twice!"

Lance nodded soberly.

"I suspected something like that. Yes, Dad, I'm afraid we must. Tomkins—Splicer——"

He called to two of the crew. So we had to go through the same old rigamarole again. We donated, the Thagwar accepted; then we started talking peace terms. The pact was presented. This time the Thagwar succeeded in stamping it with his official hoofprint before Themis's invisible moon brought night again.

So at last our job was accomplished. As we entered the ship, Cap Hanson was jubilant.

"Thank goodness *that's* done!" he sighed happily. "An' now back to Earth an' Diane."

Biggs's Adam's apple lurched convulsively in his lean throat. "I—er—I think we'd better wait just a little while longer, Dad," he said mildly.

“Wait? What for? We got the peace pact signed.”

“I know. But don’t forget, this is the seventh in a series of such treaties. We’d better stick around a little while and see if they live up to it.”

“Stick around awhile? How long?”

Lance glanced through the quartzite viewpane and said, “Not long. Because—see? It’s night again.”

“Night! What’s night got to do with it?”

“That,” said Lance seriously, “is what *I* want to know. If only I could get the theory straight, I might find the answer. Sparks”—he turned to me—“contact Marlowe, will you? Let’s see if we can’t get some word from Diane.”

So I tried, but there was nothing cooking. The circuit was as cold as a mother-in-law’s kiss. And that was bad, because Biggs was growing nervouser and nervouser by the minute. He wanted to get back to Earth so bad he could taste it. But when Biggs undertakes a thing he’s thorough. He wasn’t going to leave Themis until he knew this situation was completely cleared up.

At last the darkness outside began to lift, and Cap Hanson sighed his relief.

“Well, here’s what you was waitin’ for, son. Now what?”

“Now,” said Biggs, “we see what happens. Are they coming back from their city?”

They were. The Themisites were galloping across the plain toward the *Saturn* again. “Mmm-hmm,” I said.

“And . . . their attitude?”

“Friendly, o’ course!” snorted the skipper. “Why shouldn’t it be? Didn’t we just sign a peace treaty with them? Lance, I don’t know what’s ailin’ you. You——”

He never finished his denunciation of Biggs. For at that moment the oncoming Themisites hove within hurling distance—and started hurling! Only this time it was not, as it had been a short while before, flowers. This time their expression of everlasting peace and affection was offered with stones, arrows, and spears!

Hanson's roar of rage threatened to lift the top clean off the *Saturn*.

"Dastards!" he screamed. "Vandals, murderers, an' things that rhyme with what I first called 'em! This is all I'm goin' to take from them four-legged scoundrels. Pipe up the crew, Sparks! Tell 'em to man the guns! We're goin' to blast them murderin' skunks from here to kingdom come!"

"Wait, Dad!" pleaded Biggs feverishly. "I think I'm beginning to understand—dimly. If you'll give me just a little more time——"

"Time, your aunt Nellie! I've done all the delayin' I'm goin' to. I——"

It was at that moment that the telaudio, which I had set to vocode any message which came in on the Luna circuit, began squawking. It was faint at first, and sort of garbled, with lots of static, but it cleared as it went along.

"Lieutenant Lancelot Biggs," it called, "aboard the *Saturn*—congratulations! You are the father of a fine baby boy!"

"B-b-boy!" gasped Biggs. His face turned every color in the spectrum, and a couple that haven't been invented yet. "A—boy!"

"Yippee!" howled the Old Man, his thoughts of vengeance on the Themisites temporarily forgotten. "I'm a grampaw! Yippee!"

"Congratulations, Lance!" I said. "A boy, eh? Swell! Another Biggs in space one of these days——"

"S-s-see if you can get Earth, Sparks," chattered Biggs. "F-f-find out how Diane is."

"Right!" I snapped. "I'll get at it immediately."

I started for the wobble bug. But before I had taken two steps the audio began talking again.

"Lieutenant Lancelot Biggs," it called, "aboard the *Saturn*—congratulations! You are the father of a fine baby boy!"

My face sort of blanched. I turned to Biggs. "Congratulations," I offered, "again, Lance. Golly—*two* boys!"

Hanson demanded, "Whaddya mean, two boys? That's a repeat message, you dope!"

Lance smiled feebly.

"I—I'm afraid not, Dad," he said. "If it were, Marlowe would have said, 'Repeat.' Sparks is right. I—I'm the father of twins!"

"Well I'll be darned!" ejaculated the Old Man. Then, rallying, "Twins, eh? Good! That makes me *two* grampaws, eh? Fine! I'm twice as hap——"

He stopped, his jaw dropping. For again Joe Marlowe's voice was rolling through the room.

"Lieutenant Lancelot Biggs," it called, "aboard the *Saturn*—congratulations! You are the father of a fine baby boy!"

"G-g-gracious!" gasped Biggs, and fell into a chair. "*Triplets!*"

This time I addressed myself to Hanson. "Congratulations, Skipper," I said. "Now you're *three* grampaws. If Diane keeps *this* up, you'll be able to man a cruiser."

The Old Man's face was fiery.

"This," he stormed, "is gettin' ridiculous! Just because we ain't there, Diane don't have to overdo it. *Triplets?* I won't allow it!"

But even *I* didn't think it was funny when Joe Marlowe's familiar tones rolled through the room for the fourth time.

"Lieutenant Lancelot Biggs," he called, "aboard the *Saturn*—congratulations! You are the father of a fine baby boy!"

Cap Hanson's face was a study in technicolor. Words had temporarily deserted him; he sounded like a leaking radiator. But, oddly enough, Lancelot Biggs did not even wince at this fourth pronouncement. Instead, his eyes brightened; he rose from the chair into which he had tumbled a moment before.

"At last!" he yelled. "I've got it!"

"Got what?" I demanded feebly. "The solution to the man-power shortage?"

"No, Sparks; all our troubles! Quadruplets? No! Triplets? No! Twins? Not even that! Just one baby!"

"Y-you mean," I asked him, "that is a repeat message? But, Lance, you know as well as I do Joe would have announced it——"

"Certainly. If it were a repeat. But what we're hearing is the same message over and over again!"

"Huh?" Hanson gulped the query, hope in every wrinkle of his brow.

"Yes. Remember how Marlowe's orders got grooved before, Sparks? Well, this is some more of the same thing. I know *why*, too. And I *also* know why we've been having so much trouble with the Themisites!"

"You do! Why?"

"The moon! The invisible moon—that's the answer. Tell me, Sparks—what sort of things are invisible?"

"Why," I stammered, "dark things seen against a dark background. Light things seen against a light background. Objects marked with protective coloration——"

"And *transparent* things!" chortled Biggs. "Transparent things with just enough mass to cause refraction of light! Themis's moon is made of pure, unadulterated galena, a colorless, transparent substance, sufficiently large to occult Themis, but also with enough mass to refract normal light rays! And galena is——"

"I get it!" I hollered. "A natural wave trap for radio transmission. Back in the early days of the twentieth century, galena was the substance used in the manufacture of experimental radio 'crystal sets'!"

"By golly, you're right, Lance! That satellite is large enough to capture and retain a record of Joe Marlowe's voice. And as it rotates it keeps retransmitting it to us over and over again——"

"Lieutenant Lancelot Biggs," repeated the voice of Marlowe, "aboard the *Saturn*—congratulations! You are the father of a fine baby boy!"

"—like that!" said Biggs. "Yes. Notice how Joe's voice always catches a little just before he says 'congratulations'? The same hesitation every time."

"O.Q.," broke in the Old Man. "Maybe you're right. I hope so. But what's that got to do with the way the Themisites keep changin' their attitude toward us? Don't tell me they got galena in their veins?"

Biggs shook his head.

"No, that's another question entirely. But it can be solved by the same theory."

"Huh?"

"Duplication," said Biggs. "Multiple rulers. Sparks, you said you couldn't tell the difference between one Themisite and another."

"That's right."

"Neither can I. Nor any Earthman. That's why we've been unable to understand their psychology and—more important still—their form of government."

"Government!" burst in the Old Man. "Now he talks about government. What's that got to do with——"

"Everything," explained Lancelot. "The Themisites have one of the rarest forms of self-rule known, but one which early in the Greek civilization had its counterpart on earth. You see, they are an *omnigarchy*."

"A who-ni-whichy?" I frowned.

"Omnigarchy. On this world everyone takes his turn at being Thagwar. Every day a new Themisite becomes ruler over his brethren until the next 'night' period. That is why the Thagwar we signed our pact with today denied having received any gifts. He told the truth. We had given our tributes to the Thagwar of the preceding day.

"That's why so many peace pacts have been broken. Each succeeding Thagwar feels that he, now being ruler, is entitled to a share of the spoils that go with the signing of a treaty and, not being obligated to honor the signature of a deposed Thagwar, leads a movement against colonists in an effort to win his rights. The individual personalities of these Thagwars dictate the nature of their efforts. Peace-loving Thagwars come with soft words and flowers. More aggressive types attempt to exact tribute by force."

"But how," I demanded, "are we ever going to form a permanent treaty with a race that changes rulers once a day? Especially when a Themisian day is only a couple of Earth hours?"

Biggs shrugged. "That is the problem of the Interplanetary Union;

not ours. My *private* opinion is that since Themis has a small population, the simplest way to assure peace would be to pay tribute to every single Themisite. Of course that means a terrific initial expenditure, but——”

“But,” said the Old Man, “we’ve done what we was sent here for. We signed a peace pact—which by no fault of ours ain’t worth the paper it’s printed on—an’ we found out why all former treaties was failures. So the best thing we can do is get out o’ here before one of them periodic Thagwars, smarter than the rest, discovers a way to wreck our ship. What say, son?”

“That,” nodded Biggs, “would be my idea too. Our task is finished. We’ll leave it to the Space Patrol to figure out the rest. Come on, Dad—let’s lift gravs for home and Lancelot, Junior.”

“For Lance——” The Old Man frowned. “Oh no! No more nonsensical names like that in *our* family. That young man’s goin’ to be named Waldemar—after me!”

“Lancelot,” said Lancelot stubbornly.

“Waldemar,” said Waldemar Hanson the same way.

“Lancelot!”

“Waldemar!”

So we all went home and met Christopher Biggs. The only trouble with those two shipmates of mine is that they forgot that Diane, daughter of Waldemar and wife of Lancelot, has a mind of her own.

Kit Biggs weighed seven pounds, eight ounces. He and his mother both did fine; Biggs recovered eventually. He earned a new title in the succeeding months. He became first mate in charge of the three-cornered pants department.

Well—as it says in the adage books, life is just one damp thing after another. . . .

25

To say Hanson was proud of his grandson would be like saying winters on Pluto are chilly. He was just plain daft about the kid. And I don't mean mildly off his beam; I mean wild-eyed, blubber-lipped whonky. To him, young Biggs's first beated "ma-ma" was a poetical achievement exceeding in importance the collected verse of Homer, Keats, and Rhysling, and Kit's chance discovery of his toes he rated a scientific achievement just one degree under Einstein's exposition of the unified field theory, and a long step above Newton's laws of motion.

Nevertheless, it was good to see the Old Man excited about something again. It had seemed to me, of late, that in many small ways he lacked his erstwhile zip and sparkle. With the passing years he appeared to have lost some of his zest for living, for adventure, even for the spaceways which, until so recently, had been the number one love of his life.

However, he had *beaucoup* bees in his britches the afternoon we took off for Venus on what the Corporation had designated as a routine test flight. We were about three hours out of Long Island spaceport, and I had just finished swapping farewell insults with Joe Marlowe, when the door of my cabin inched open and in he crept, his

eyes wide as a lady wrestler's beam as he jammed a pudgy forefinger to his lips.

"Shh!" he whispered.

He squeezed in and closed the door behind him, shot a nervous glance about the room, then husked furtively, "Is there anybody here, Sparks?"

"Nobody but us amperes," I told him. "Why, Skipper? Got an old corpus delicti you want hid? You might try the airlock."

"Don't be a damn fool, Donovan," he snapped. "I ain't murdered any members of my crew—yet. Though, if I ever do, I got a good idea who to start with. I got reason to be cautious. I just learned somethin'. Listen!" He hunched forward and shoved his lips so close to my ear that I could hear his whiskers sprouting. "You know that Captain Cooper which come aboard at Long Island?"

"The quarantine officer, you mean?"

"Quarantine officer, your eye!" The skipper's voice was triumphant. "He's an inspector from the S.S.C.B."

"Space Safety Control Board?" I gasped. "Why, that means——"

"Exactly!" Hanson rubbed his hands gleefully. "It means Lance is bein' examined for a commander's brevet. What do you think of that? My son-in-law captain of his own ship. An' him with only two years' active service!"

I said, "That's swell! But why tell *me* about it? Biggs is the man who should know."

Hanson gnawed savagely at a grubby fingernail.

"That's just it, Sparks. I can't tell him. It wouldn't be ethical. When a man's bein' examined for his commander's stripes he ain't supposed to know about it. That's why Cooper come aboard under an alias. He wants to watch Lance perform his duties in routine fashion. Then, at the end of the trip, he'll tell Lance who he is, give him a verbal exam on the Space Safety Code, astrogration practices, et cetera an' so forth, an'—there you are."

"There," I agreed, "I am. So where am I? Still in the dark, Skipper. Why tell *me* about it?"

Hanson glared at me witheringly.

"Look, stupid; Lance ought to know he's bein' watched by an examiner, shouldn't he? Not that he don't know how to do things right, but because—well, because every so often the boy gets whacky ideas an' starts tryin' experiments.

"We don't want him doin' nothin' like that on this shuttle, do we? So, bein' as how you're his chum, an' since it would be unethical for *me* to spill the beans, *you've* got to warn him to lay off the nonsense. Get it?"

I got it. I nodded.

"O.Q., Skipper. You're right and I'm wrong, as you usually are. I'll warn him. Only . . ."

I hesitated. The Old Man halted with one hand on the doorknob.

"Only what?"

"Only if it's supposed to be such a deep, dark secret, wouldn't it be unethical for *me* to tell him, too?"

"Don't," snorted Hanson, "be a jackass, Sparks! Who ever heard of a radioman with a sense of honor? Get word to him. An' make it snappy. He comes on duty in half an hour, an' I don't want he should pull any boners in front o' Cooper. See you later."

The door slammed behind him.

So pretty soon there was a commotion in the rampway that sounded like a trained seal stumbling around on hobnailed skis; there came a rap on my door, and I said, "Come in, Mr. Biggs!" And sure enough, it was he.

He ambled in, grinned lazily, and said, "Hello, Sparks. What's new?"

"That's just what I was going to ask you," I told him. "You don't happen to have any bright new inventions hatching under your skull, do you? Like transmuting lead to platinum, for instance, or growing hydroponic posies?"

He said, "Now, Sparks, can I help it if neither of those ventures worked out exactly as I expected? After all——"

"Answer yes or no," I insisted. "Do you?"

He flushed self-consciously.

"Well, as a matter of fact, I *did* have one little idea I wanted to try out. An improvement on anti-grav lifting gear. It occurred to me that——"

"Well, junk it," I said. "Hasten, don't hobble, to the nearest incinerator, and give your diagrams the heaveroo."

He looked faintly startled. "But why, Sparks?"

I said, "Those stripes on your sleeve, Lieutenant. They're pretty, aren't they?"

He glanced down, fingered his braid proudly.

"Why, yes. Of course. I'm very proud of them."

"And the more there are," I pointed out, "the prouder you'd be. Isn't that right?"

"I suppose so. But what has that to do with—— *Sparks!*" His voice raised to a shout and his pale eyes brightened. "Do you mean——"

"Nothing else but. That alleged quarantine officer, Cooper, is really an S.S.C.B. inspector. And since he's not riding the *Saturn* for his health, I'll give you one guess who he's watching."

It's funny what emotion will do to a guy. I've seen Biggs face danger, disgrace, and death, not once but many times. Each time he confronted the situation calmly, coolly, with nary a quake or quiver. But here, handed good news on a silver platter, I thought for a minute he was going to pass out.

His eyes blinked and his knees began to rattle like castanets. The confused burble emanating from his lips resembled the efforts of a tongue-tied hippo trying to sing in Sanskrit. His Adam's apple—— But why mention that monstrosity? Even *I* don't believe the things it did, and I saw it.

Words finally emerged from the mélange of gutturals, sibilants, and expectorants. Biggs's eyes receded into their sockets; his voice was hushed and awed.

"My own ship!" he breathed. "My own command!"

"Don't tread your bridges," I reminded him, "until they're hatched. You've still got to *win* your letter, pal. Two letters, in fact. I-F. You become Skipper Biggs *if* you pass the exam.

"Now, get to work. And remember—don't let on you know who Cooper is."

I gave him a shove toward the door. He disappeared, treading a cushion of pretty pink clouds, and I flopped into a seat, feeling so bad I could have bawled like a kid, but despising myself for feeling that way.

My memory rolled back to the day, almost two years ago, when that rawboned youngster had first gangled aboard the *Saturn*, fresh out of the Academy and not yet dry behind the ears. The Old Man had hated his innards then, partly because he was eccentric, partly because he was smart enough to make the rest of us look like one-candle-power bulbs, and mostly because he had avowed his intention of placing a gold band on the third finger, left hand, of the charmer whose name at that time was Diane Hanson.

But somehow Lance Biggs had overcome all handicaps of appearance and personality, and by sheer persistence had risen from an awkward, derided fourth mate to first officer, by wit and guile and intelligence had come through every obstacle set before him, by determination had proven to the skipper that he would make a good son-in-law.

True, his reasoning processes were often fantastically involved, and his motto, "Get the theory first," sometimes led him down dark passageways of logic. But his inventive genius had given mankind the V-I unit, the uranium time-speech trap, anti-gravitation and—Oh, why go on? Biggs's discoveries are as outstanding as the Adam's apple in his throat.

So it was selfish of me, I suppose. Biggs deserved a ship of his own. But somehow I hated to see him leave the *Saturn*—and hated myself for feeling as I did about it.

Well, we weren't using the V-I unit, without which the *Saturn* is a ten-day ship. Which meant Cooper would have ample opportunity to

judge Biggs's capabilities. So *tempus* fidgeted, and I fidgeted, and the Old Man came within two spasms of a nervous breakdown, and Biggs—as might have been expected—got his nerves on ice after that first shock and performed his routine duties in extraspectacular fashion.

My duties were far from exacting. Four times a day I had to contact a Space Station to check our course, speed, and declination against Solar Constant. Which was meaningless routine, because with Biggs plotting trajectory, we had about as much chance of getting off the line as a rural subscriber when a juicy scandal is being discussed.

It was also my job to keep in touch with Lunar III. Which daily interlude—Joe Marlowe being the low character he is—was the only disturbing influence in an otherwise languid existence. Understand, I don't believe for a minute that Maisie Belle *was* out with him. She's true to me. But it was a dirty trick for him to say she was, and if she wasn't, how did he know about those lace——

Oh, the hell with it! The point is that time passed, and pretty soon it was the sixth day, and in just a few more days we'd cradle at Sun City and Lieutenant Biggs would be Captain Biggs.

For if I had been idle on this shuttle, my rawboned friend had not. Cooper had been putting him through a series of strenuous paces to test his knowledge and ability. The trajectory computations had mysteriously disappeared, for instance, and Biggs had to compile a new set. When he went to use the calculometer, he discovered it to be accidentally-on-purpose "out of order." So he had to evolve the figures from his own cranium.

Then there was the false-alarm fire in the storage compartments while Biggs was on the bridge. And the hypos went on the blink—with Biggs on duty. And when one of the aft jets clogged, guess who was standing watch at the time?

That sort of thing. But Biggs came through each test with flying colors. And with each success, another of the grim, suspicious lines melted from around the corners of Inspector Cooper's mouth, until he was beginning to look almost like a human being.

Meanwhile, Cap Hanson's face got daily ruddier, happier, and grinnier as he saw his son-in-law coming closer and closer to the coveted stripes.

"Just four more days, Sparks," he chortled happily to me. Then, "Just *three* more days!" And, "Just *two* more——" He rubbed his hairy paws together gleefully. "Two captains in the same family; ain't that somethin'? Boy, did you see the way he come through on that test yesterday? Cooper got MacDougal to cross the heat control an' grav plates. The ship was hot an' weightless at the same time——"

"So that's what it was?" I grumbled. "Who's taking this test—Biggs or us guinea pigs? I went soaring to the ceiling, boiling like a kettle—and with the gravs off, I couldn't even drip sweat!"

"But Lance fixed it," gloried Hanson. "Spotted the trouble in three minutes flat, an' had the circuits straight before you could say 'hypertensile dynamics'! What a lad!"

"Two more days," I muttered. "I hope I can live through them. If Cooper gets any more whacky ideas——"

"Hrrumph!" came a voice from the doorway. I spun, startled. What did my mama tell me about talking in front of a person's back? It was Cooper!

I said, "Look, Inspector—the acoustics are lousy in this cabin. Anything you heard which might have sounded like your name was strictly coincidental."

He glared at me. Then at Cap Hanson. Then back at me.

"So!" he said. "*Inspector*, eh?"

Oh-oh! It dawned on me all of a sudden—but too late—that in my hasty attempt at apology I'd upset the limas with a vengeance. Calling him "Inspector" when, so far as I was supposed to know, he was an officer in the Quarantine Service.

"Inspector, eh?" he repeated, and crisped Hanson's burning cheeks with a glance. "Well, Captain, it is just as I suspected. Too many years of service have taken their toll of your discretion. When you start taking common radiomen into your confidence——"

Now was the time for all good men to come to the aid of their skipper.

"Wait a minute, Inspector," I said. "Captain Hanson didn't tell me who you are. I guessed it the first time I saw you. It's my psychic——"

"It will be your neck," he snarled, "if you don't pipe down. Well, since you know who I am, I might as well tell you why I'm here. I need your co-operation in giving Lieutenant Biggs his final test."

Some of the chagrin left Hanson's eyes. His voice was hopeful.

"Final test?"

"Yes. I confess to a very great respect for your first officer, Captain Hanson. He has proven himself thoroughly capable in each of the tests offered so far. His theoretical knowledge is matched by his mechanical ingenuity. I have awarded him the highest possible grades in Astrogation, Analytical Judgment, and General Knowledge.

"If he passes this final test, Resourcefulness, and of course the verbal quiz on Safety Code practices, I shall take great pleasure in approving his application for advancement.

"This test"—he turned to me—"will be made in your department, Sparks. You have suddenly been taken sick."

"Who, me?"

"Yes. You have—mmm, let me see—erysipelas!"

"It's a lie!" I said indignantly. "I haven't been near one of them Venusian joy-joints for a year!"

"You have," repeated Cooper coldly, "an acute case of erysipelas—which is a fevered inflammation of the skin, young man! You will develop this ailment immediately. And since the commander of a space-going vessel is supposed to be able to step into any post in an emergency, Lieutenant Biggs will be assigned the task of relieving you at your duties."

Was that a break for our side! I darned near split a lip trying to hide my grin. If there was any man aboard the *Saturn* whose knowledge of radio was equal to my own, that man was Lancelot Biggs. If this were to be his final test, he would breeze home, win, place, *and* show!

But Cooper didn't notice the elation in my eyes, or the equal joy in the skipper's optics. He was finishing his instructions.

"Furthermore, because you have learned who I am, Sparks, I suggest that you make no attempt to get in touch with, or speak to, Lieutenant Biggs. You will consider yourself confined to quarters for the duration of the trip."

"Very good, sir," I said.

"And now"—Cooper turned to my instruments—"we will set the stage for Mr. Biggs's final test." He picked up a hammer. The biggest one in my tool kit. He lifted it, weighed it briefly in his paw, and then——

Wham!

Things clanked and clattered. Glass tinkled. Wires leaped from the innards of my set and wriggled out onto the floor like tiny metal snakes.

"*Omigawd!*" I screamed. "Stop it! Are you off your jets?"

"Stand back, Sparks!" warned Cooper. He raised the hammer and brought it down again and again ferociously into the entrails of my beautiful equipment. Something shorted; blue fire spat; there was a loud *pop!* and I clutched my breast to make sure it wasn't my heart. "Stand back!" he panted. "We've . . . got to . . . make this . . . a tough test."

"We?" I howled.

Then he was done. He stepped back and studied his work with the satisfied smirk of a ghoul in a well-stocked graveyard.

"I think that should do the trick," he said. "If he can repair this set and get it in working order, I'll give him top grade in Resourcefulness."

"Very well, Captain. You may return to the bridge and tell Biggs that Sparks has been suddenly taken ill. Sparks, go to your quarters. And don't forget—you're supposed to be sick."

I stared miserably at my once-perfect apparatus. I passed a trembling hand across my brow and tottered to the doorway.

"Maybe you think I'm not?" I moaned feebly.

Well, along about lunch time I began to feel well enough to sit up and take nourishment. Doug Enderby, the steward of our void-cavorting madhouse, brought me my grub. He tiptoed in and set a tray on the desk before me. He whispered, "Are you feeling better, Bert?"

"Never worse," I told him gloomily. "Why the crape on the victuals? Are they *that* bad?"

I whipped off the napkin, took one gander at my alleged lunch, and bleated like a branded sheep.

"Great monsoons of Mars, what's *this*?"

"Shh!" soothed Enderby. "They're poached eggs, Sparks."

"I can see them!" I hollered, staring at the pair of baleful, golden horrors-on-toast. "And, what's more, they can see *me*, too. Take 'em away!"

Enderby said petulantly, "But you're sick! That's what Captain Cooper said."

"Cooper, eh?" I grated. Then I remembered why I was confined to durance vile. "Have you seen Biggs?" I asked.

"No. He hasn't been down to lunch. He had to take over for you when you were taken ill." Doug looked anxious. "There's something wrong in your cabin, Sparks. The intercom system is out, and the radio won't work."

I glanced at my watch. Two hours had passed since Cooper's coup. Hardly time for Lance to unscramble the mess of pottery.

"Well, cheer up," I said. "Everything will be under control in a little while. Ugh!" I pushed my toast and tea toward him. "Look, pal, how's the cow situation in the galley? You got a nice three-inch steak? Rare? With onions?"

"Sirloins," said Doug, "for dinner."

"In that case," I sighed, "I'll give this hen-fruit a miss. See you at dinnertime."

Doug nodded sagely and sidled toward the doorway.

"Steaks," he said, "for the crew. But *you* get milk toast. You're a sick ma—— *Hey!*"

Well, I *almost* nailed him with that second poached egg, anyway.

After he had gone, I opened the door and peeked out, and sure enough, one of the crew was standing guard at the end of the passage-

way. Cooper was a canny character. He was going to make certain I didn't get loose to help Biggs.

But Cooper isn't the only guy with smart ideas. I haven't been radio operator on the *Saturn* three years for nothing. There are a couple of wrinkles in the intercom wiring system that even the ship's builders know nothing about. I ducked back into my cabin, locked the door carefully, hung my coat over the keyhole, and pulled back my mattress.

Underneath, nestling coily amid the box springs of my bunk, was a tiny but complete sender-receiver. I'm no dummy. Midnight watches are a bore, and many is the time I've turned in with a pair of phones on, rather than sit nodding in the cabin for dreary hours awaiting messages that might never come in.

Of course this auxiliary unit was useless so long as the master set was out of order. But by listening in I could tell how Lance was coming along with his repair job, and perhaps, should he need it, give him a little assistance by remote control.

So I donned the phones. And just as I thought, the circuit was as cold as an Eskimo stockbroker's assets. For a few seconds. Then all of a sudden something squawked, "*Krrrwowowoooo! Brgrlp! Gleep!*"—and a familiar voice came from far, far away. The voice of Lancelot Biggs.

"*That* should do it! Now, let me see . . ."

I hugged myself gleefully. The old mastermind had done it again! In just two hours and sixteen minutes. Tell *me* Lancelot Biggs isn't a genius!

I shoved my puss to the mike. I hissed, "Lance!"

There was a brief silence. Then Biggs's voice, querulous. "Is that you, Sparks?"

"In person," I told him, "and not a video. How are you coming along, pal?"

"All right, I guess." He clucked, and I could envision the rueful shake of his head. "It was a frightful mess, Sparks. How did you ever let it get in such condition?"

"I let it get in that condition," I told him, "like I got sick. By orders of Madman Cooper. That guy's a maestro with the mace, ain't he? Where did you get the replacement parts?"

"Out of the supply locker, mostly. I had to rewind the L-49 armature, though. We had no spares."

"You'd better throw a shunt across the Number 4 rheo," I suggested. "You're hetrodyning on vocal freke. Otherwise you seem to have matters under control. Nice going, chum. I suppose you know this is your final exam?"

"I suspected it. Well, I'm going to test now and see if I can contact Lunar III. Stand by, Sparks. I'll cut you into the circuit so you can hear."

Current hummed and squealed; dots and dashes ripped the ether as Biggs pulsed a signal to Mother Earth's satellite. Slow seconds dragged. We were very close to Venus, and it takes a message a few minutes to make the hurdle from the white planet to the blue one.

I waited tensely. Then, faint and far, but quite clear, came the reply. "Answering IPS *Saturn*. Come in, *Saturn*." It was Joe Marlowe's hand on the bug. "Come in, *Saturn*." Then, "Are you sober, Donovan?"

I gritted my teeth. But Biggs put an end to Joe's cracks with his next transmission.

"Donovan ill. Relief man at key. *Saturn* reporting for orders. Any orders, Luna?"

Marlowe flashed back, "Sorry about Donovan. Nothing trivial, I hope? Yes, have an order, *Saturn*. From S.S.C.B. headquarters to Inspector-Commander Cooper. 'If Lieutenant Biggs passes examination, assign him immediately to command of——'"

Thump-thump-thump!

Damn! Of all times to be interrupted. Just at the happy, crucial moment when I was about to learn the ship to which Biggs was going to be assigned, some idiot had to come banging at my door.

Thump-thump-thump!

"Just a minute!" I howled. I switched off the unit and shoved the mattress back into place, rumbled the sheets, tousled my hair, and pulled my shirt off. I stumbled to the door, unlocked it, and stood back yawning and rubbing my eyes as if I had just hopped out of the arms of Morpheus. "C'mon in!" I said. "Whuzza big idea—— Oh! How do you do, sir?"

My visitor was Inspector Cooper, accompanied by the skipper. Cooper elbowed past me into the room, glared around suspiciously, turned and heaved me an extraordinarily malevolent glare.

"What were you doing in here, Sparks? Don't lie to me! What were you doing at the exact moment I knocked?"

"The *exact* moment?" I stalled.

"That's what I said."

I held my breath, which is one way to create a maidenly blush. I said, "I respectfully decline to answer, sir. My reputation——"

"Your reputation," roared Inspector Cooper, "is not worth a damn anyway. Answer, sir!"

I shrugged. I said, "Well, after all, I can't be court-martialed for dreaming. You see, there's this blond kitten named Dolly. Sweet kid, but—well, impetuous. And I was——"

Cooper turned crimson. With rage, I guess. Or maybe he's the prudish type; how should I know?

"What! You claim you were sleeping? We distinctly heard you talking, Donovan! Whom were you talking to?"

I said plaintively, "Well, it was this way. Dolly was putting up an argument——"

"Silence, sir! I'm not interested in your amatory fantasies." He glowered about the cabin once again, helplessly, then grunted and turned toward the door. "Very well, Donovan. But if I find out you've been engaging in any skulduggery—— Let's go, Captain Hanson."

And they left, Hanson tossing me a backward glance that meant undying affection and a bonus in next month's pay envelope. When their footsteps faded from earshot, I made a dive for the concealed set.

But I'd missed the important part. Joe Marlowe was just signing off when I donned the phones.

"—Captain Biggs will then lift his command," came the closing sentence, "from Sun City, in accordance with orders awaiting him there. That is all, *Saturn*." And he was gone.

Boy, was I nearly busting! I couldn't wait for the sonic echo to die away so I could buzz Biggs in the radio room.

"What did he say, Lance?" I hollered. "Cooper came pussyfooting, and I missed the message. So you're going to get a command, eh? Congratulations! Tell me, which ship——"

"*Whonk!*" went my set suddenly. "*Gwobble-phweeee!*"

Out of order! Again!

Well, that was a tough break. But I had learned *something*, anyway. Biggs was in line for a captaincy, and his new command was waiting for him at Sun City. I dug a copy of Lloyd's *Spaceways Record* out of my desk and leafed through it. The information was encouraging. Vessels currently cradled at the Venusian port included the transport *Antigone*, the lugger *Tethys VI*, and the brand-new, magnificent, special-extra-deluxe passenger liner *Vega*. Any one of those ships would be a feather in the cap of the skipper who took her bridge. Lancelot Biggs was getting off to a Big Start.

So I should have been very happy. But I wasn't. Not altogether. Somehow I couldn't help feeling the *Saturn* wouldn't be the same ship with Biggs no longer ambling the quarter-deck.

A sentimental sap? Well, maybe I am. But when you've laughed and cried and fought and triumphed and shared sadness and joy with a right, tight, snug little gang of men, all of whom you love like brothers, you hate to think of one of them leaving you.

And that's the way it was aboard the *Saturn*. Sure, we had our little squabbles and fusses. MacDougal is sort of crotchety, and Todd sometimes has a tendency to let others do his work. The Old Man's no ball of fire any more. After all, he's been pushing ether for more

years than I've been alive; he's not as keen and alert as some of the fresh young brevetmen. And Biggs's genius for getting us out of tough spots is second only to his ability at getting us in again.

But we're a *team*, see? And now, with Biggs moving up the ladder, some stranger would step in . . .

It was hot!

I'd been so busy with the crying towel that for a few minutes I hadn't realized just how hot it was. But now, glancing at the thermometer on my wall, I was shocked to find the mercury standing at 98 degrees!

Without pausing to recollect that the audio system was out of order, I reached for the wall phone, bawled into it, "Ahoy, the bridge! Something's gone wrong with the——"

That's what I *meant* to yell, anyway. As a matter of strict accuracy, I got just as far as, "Ahoy—*blub!*"

For the moment I yanked the earpiece off the audio, a pencil of clear, cold water shot from the instrument like a diminutive geyser!

I turned and hightailed it for the door. My guard, a crewman named Jorgens, let loose a roar as I appeared.

"No you don't, Sparks! I got orders to keep you in your cabin!"

"That's what you think!" I yelled back. "I'm not going to be roast Donovan for anybody. I'm *hot!*"

"Then maybe this will cool you down." He grabbed the fire hose, pointed it at me, turned the wheel. I wailed, and tensed for the punching gout of water to sweep me off my feet. But it didn't come! There came a rushing sound, and from the nozzle spilled——

Air!

Jorgens dropped the hose with a howl of surprise. He gave up all idea of stopping me. He was three steps ahead of me when we hit the end of the corridor, but I beat him up the Jacob's ladder to the bridge by the simple expedient of using his vertebrae as rungs.

Together we charged through the upper companionways, turned onto the ramp that leads to the control turret. By now everything had gone stark, staring mad. All the time we were on the hoof, I kept hear-

ing music. And every once in a while a wild burst of static rasped my eardrums. And the heat increased.

It took me some minutes to realize, with a burst of horror, that the music was coming from the radiators, the static from the darkened electric bulbs set in the ceiling, and the heat was pouring in a torrential flood from our air supply—the ventilating system!

We reached the control turret, shouldered the door open. But the situation there, if anything, was worse. Cap Hanson, perspiration streaming down his crimson face, staining his jacket, was bending over a calculating machine that was flickering hazily with motion pictures! Across the room Dick Todd was masterfully struggling to subdue the clamor of a generator that was chattering wildly in the dots and dashes of the Universal Code.

Above the bedlam, I managed to make myself heard.

“What’s wrong?” I bawled.

The Old Man acknowledged my presence with one look of torment.

“The ship’s gone nuts! The heater plays music, an’ the telephone’s a spring; there’s static in the lights an’ electricity in the oil jets. The ventilators give heat, an’ Slops just called me on his refrigerator to tell me the gas stove is spittin’ ice cubes!”

Cooper, his face flaming with fury, pulled his paws from his ears long enough to scream, “This is disgraceful! Whoever caused it should be court-martialed! And by the gods of space——”

Just then the door opened, and into the room, with a big, friendly grin on his pan, gangled our lanky lieutenant, Lancelot Biggs.

“Hello, folks,” he said amiably. “Sort of noisy around here, isn’t it?”

Cooper glared at him wildly.

“Biggs, what are you doing here? You’re supposed to be in the radio cabin repairing that transmitter.”

Biggs smiled sheepishly.

“Well—er—you see,” he said, “that’s why I’m here. I—I guess I

must have got a little bit mixed up. I got the wiring circuits crossed and—well, darn it, this is what happened!”

By sheer coincidence, just at that moment the air stopped hissing, the music stopped playing, and the tumult that had been flooding the room died away to a whisper. In the brief, horrible silence that ensued, I heard Cap Hanson gasp, “Lance! *Lance!*” and heard the outraged snort of Inspector Cooper.

“What? *You* caused this, Lieutenant?”

Biggs’s pale eyes shifted, and he twisted his lanky frame into a pretzel.

“I’m afraid I did, sir. I couldn’t seem to get things straightened out in the radio cabin, so I went down to the central control room and—well, I guess I must have turned the wrong knobs or switches. Or something . . .”

His excuse faltered into silence. But Cooper didn’t.

“Wrong knobs! Wrong switches, indeed!” He swung to me, quivering like an electroscope in a pitchblende mine. “Sparks, can *you* do anything about this disgraceful mess?”

“I think so, sir.”

“Then get to work! As for you, Lieutenant”—his eyes burned Biggs’s pale, embarrassed face—“it will not now be necessary to determine whether or not you are versed in Safety Code practices. You have demonstrated quite clearly that you are not yet capable of assuming the rank and duties of a commanding officer. Your butter-fingered handling of a simple, routine test has resulted in the worst shambles it has ever been my lot to witness!”

Cap Hanson said, “Look, Inspector, anybody can make a little mistake. He’s only a boy. Give him a chance to——”

“There is no place for boys,” snorted Cooper, “on the bridge of space-going vessels. Lieutenant Biggs has possibilities, yes. But I shall recommend to the S.S.C.B. that he be given another year of intensive training under an old, accomplished spaceman—yourself, Captain Hanson—that he may learn resourcefulness, coolness, how to act under stress of emergency.

"And now, gentlemen, I shall retire to my quarters until we reach Sun City. Sparks, for God's sake, quiet this bedlam as soon as possible!"

And he stalked from the bridge with as much dignity as a man can muster with hands clapped over a pair of sweat-soaked ears.

I went below. It was a mess, but not an impossible one. I got it straightened out in an hour or so. By the time things were back to normal, we were warping into a cradle at Sun City spaceport.

Afterward everyone was sympathetic. Bud Wilson said, "Too bad, Biggs! But you'll get another chance." And he went out. Dick Todd said, "The hell with it, Lance. You were just a little excited, that's all." And he left too. Which left Biggs and the skipper and me alone in the turret.

Biggs squirmed and said meekly, "I—I'm sorry, sir. I didn't mean to be such an idiot. But—well, after all, I *am* young. And I *haven't* had your years of experience."

The skipper still looked like a man who'd kissed a cobra by mistake. He shook his head sadly.

"I wouldn't have thunk it of you, Lancelot, son," he grieved. "You was always so quick at graspin' things before. I was bankin' on you to make it two captains in the same family. But—well, never mind. Next year you'll get another test. An' in the meantime I'll try to teach you more about how to act in emergencies."

Biggs said gratefully, "Thank you, sir. And—Diane?"

"We won't tell her," said the Old Man promptly. "I always say that what women don't know won't hurt 'em. We'll keep this to ourselves. But mind you"—a flash of the old fire lighted his space-faded eyes—"but mind, I want you to study hard durin' this next year! If you want to win your stripes, you got to listen to a wiser head."

"Yes, sir," said Lancelot Biggs. "I will, sir."

Then the skipper left. A grand old guy. No longer listless and lackadaisical, space-weary, but a rejuvenated man, imbued with a strong, fighting new urge. The determination to help a young man

earn his spurs. There was something admirable in his attitude and something a little pathetic too.

After he had left I turned to Biggs. I said, "All right, pal—come clean."

He started.

"I beg your pardon, Sparks?"

"Come," I repeated, "clean. You can fool some of the people some of the time, and you can fool some of the people some of the time—but you can't fool some of the people some of the time. And I'm them."

"Biggs, I know you like I know my own birthmark. I've seen you in a thousand tight spots, and I never once knew you to go into a dither. But you messed this one up so bad that it smelled from here to Pluto. What I want to know is—why?"

Biggs's larynx bobbled painfully.

"I don't know what you mean, Bert."

"Talk," I said grimly, "or I start rumors. Why?"

And then—Lancelot Biggs grinned.

"So it really looked bad, eh, Sparks?"

"Bad? Awful! That heat—— Great comets, pal, you nearly baked us all! But why? I heard part of that transmission from Luna. Enough to know that if you passed your final test you were going to be given a command immediately. A ship of your own. The *Tethys* or the *Antigone* or the *Vega*. All swell ships——"

Biggs said quietly, "There was another one, Bert."

"What? No there wasn't. I looked it up. There were only three ships waiting captainless in port."

"But there would have been four," he said, "when we dropped gravs. Sparks—Cap Hanson's a great guy, isn't he?"

"Sure. A grand old-timer. But——"

And then at last I got it. Got it, and realized what an all-around humdinging hell of a fellow Lancelot Biggs really is. I said, "You mean—you mean that if you had earned your stripes, the Old Man

was going to be set down? And you'd be placed in command of the *Saturn*? Is that it? Why, you——"

And I swallowed hard, and I gave him a shove. And I said, "Lance, damn your buttons——"

But Lancelot Biggs isn't the kind of person you can act gooey with. He just grinned again, and he said, "Sparks, old-timer, what do you say you and me have a drink or three, eh?"

So we did. Double. Without soda. And I never told *him* this, of course, but I drank one silent, heartfelt toast to the grandest guy I know. To Lancelot Biggs—spaceman.



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