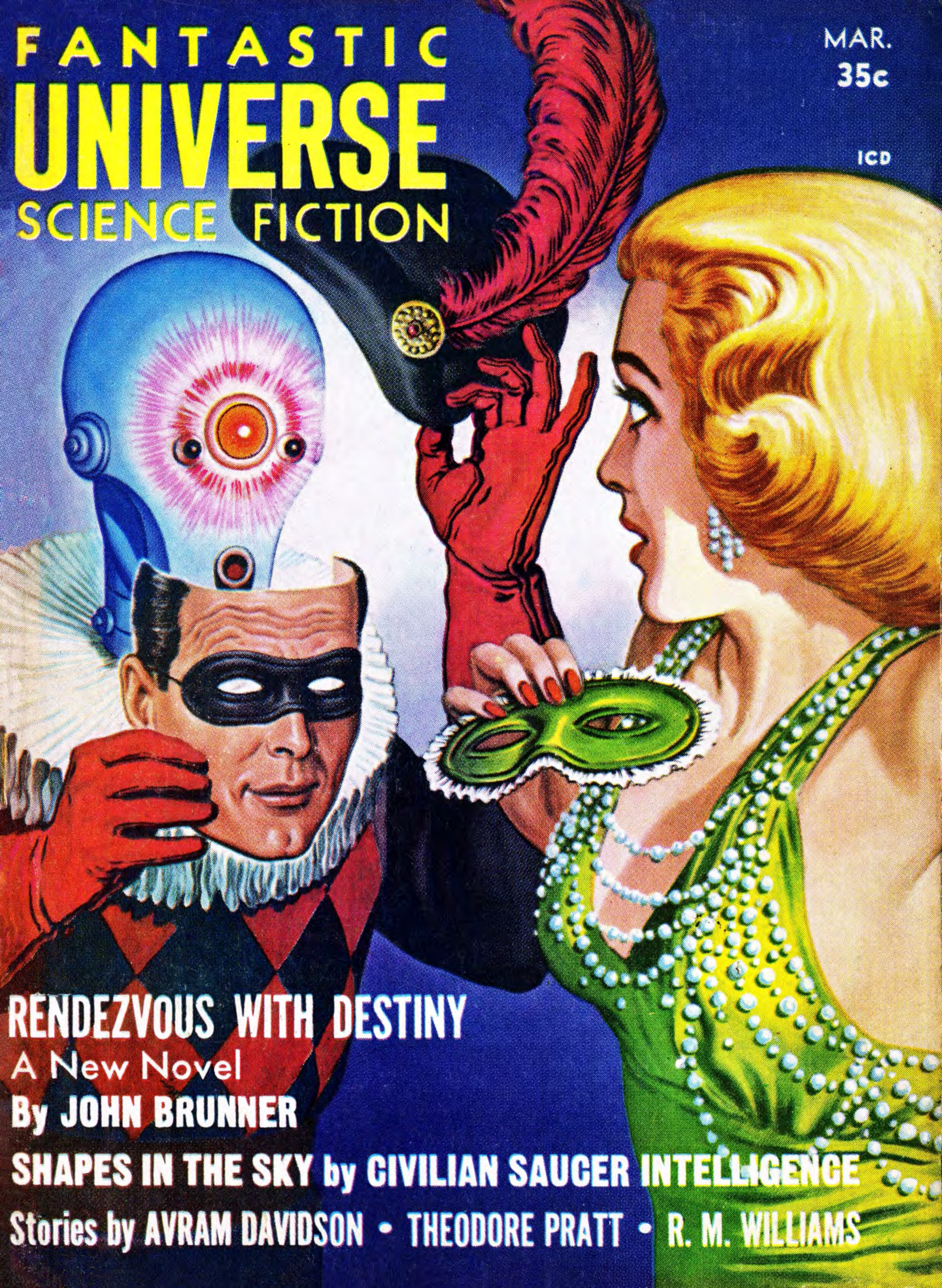


FANTASTIC UNIVERSE

SCIENCE FICTION

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RENDEZVOUS WITH DESTINY

A New Novel

By **JOHN BRUNNER**

SHAPES IN THE SKY by **CIVILIAN SAUGER INTELLIGENCE**

Stories by **AVRAM DAVIDSON • THEODORE PRATT • R. M. WILLIAMS**

FANTASTIC UNIVERSE

MARCH 1958
Vol. 9, No. 3

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rendezvous with destiny

by . . . John Brunner

The choice was theirs. The alternatives were to stay aloft — and starve — or to land, and perhaps survive.

ONCE upon a time there was a sea. It was full of life.

But the sea grew smaller and the life-forms more numerous. There was the problem of overcrowding. Perhaps, if any of the inhabitants had been capable of wonder, they would have turned their flat eyes upwards and asked themselves what it was like above the sky, beyond the shining barrier of the surface. There was plenty of room there.

Eventually, some of them found out the hard way what it was like. Stranded by the tide, they gasped their lives away along the shore; dying, they left their outline in the mud, which dried, and was compressed, and became rock.

And—a billion years later, and many more than a billion miles away—a man was studying the fossil shapes of some of those remote ancestors.

The reflection seemed suddenly to telescope time, and Franz Yerring gasped. He put out a shaking hand to turn off the projector which cast microfilm images on the wall before him.

For a long time after that he sat at the desk and listened to the sounds of the ship, identifying

John Brunner, one of the most interesting of the British SF writers, wrote some time ago that "word of mouth is something no natural catastrophe like fire or water can destroy." He quite possibly had this in mind when writing this remarkable novel of heroism and conflict.

every one of those that seeped through the thick insulating walls of the office with an ease born of thirty-seven years of hearing them. He did not move except to breathe deep shuddering sighs, until the buzzer on the door sounded. Then he roused himself to say, "Come in."

Tessa Lubova, his senior aide, slid the panel aside and stepped through with her habitual lithe grace. She carried the daily productivity reports, which she put on the desk before him.

On the verge of going out again, she paused and stared at him curiously. "What's the matter?" she demanded. "You look as white as paper!"

"It's nothing," said Yerring, getting stiffly to his feet. His voice had an irritable edge on it which he tried to disguise—it was not good to be sharp with the tripborn.

Tessa shrugged with one shoulder, hesitated a moment, and left the room. *Nice girl*, thought Yerring absently. Nicer than most of the tripborn, anyway—most of them would never have noticed, and if they had, they wouldn't have given a damn.

But then, she was one of the eldest.

He tripped the switch of the multipanel on the wall. It could be a picture, or an observation screen, or a mirror, according to the whim of the user. He selected the mirror setting and examined himself critically.

Yes, no wonder Tessa had been startled.

He forced himself consciously to relax, and went back to the desk, glad of the work which she had just brought him. He had been trying to throw away time by studying the textfilm, and had been unable to lose himself in it. No one in the ship now could get away from the tension which hung in the air like smoke. It had not been publicly announced that Trip's End was near—if anyone did know the exact time, it would be Sivachandra and possibly one or two of his navigation aides—but there were rumors.

And how reliable is a rumor? he asked himself wryly. He knew as well as any of the earthborn aboard that the trip was estimated to take not less than thirty-six and not more than forty years, but he had been there when the estimate was made, and he knew how much of it depended on guesswork, as well.

He glanced through the summary on top of the sheaf of reports, and frowned. Taking up a red write-stick, he entered the day's returns on the master ecological chart which occupied one full wall of the office. On it, population was plotted against productivity: two curves, opposing and balancing each other, averaged out from dozens of daily entries relating to air supply, vegetation, water reclamation. . . .

Sometimes he wondered how he kept track of it all.

His frown remained as he men-

tally extended the current downward sweep of the productivity line. Either Trip's End was close—

"Or we," he said to the air, "are going to be on short rations in less than a month."

That would be the sterile mutation in Culture B, he knew; it had been weighing the whole output down for days now. All the staff he had available was busy tracking down the mutated plasm, but it would take some time to eliminate it, and if one found more after that one could never tell if it was descended from a previously altered strain, or if it was a new series altogether.

"Hear this!" said the voice of George Hattus, the ship administration officer, from the public address speaker under the multipanel. "There will be a Captain's Conference at fourteen."

Yerring took the information in automatically, his eyes still fixed on the down-trending curve. It was bad—it really was. The cultures not only served to provide food for the crew; they were a main element in the oxygen re-cycling system. Perhaps he had recommended too optimistic an increase in population on the strength of having got away without a major incidence of sterility. He should have allowed for an increase in mutation with the rising radiation level as they homed on the sun of their goal. . . .

Just as well Magda's called this conference, he thought.

The chronometer showed it lack-

ed only eight minutes of fourteen hours. He gave a glance round the room by force of habit and went out, down the long green corridor towards the administration section.

Outside his main charge—the hydroponics section—he found a crew from maintenance taking up the plates to get at a gravity coil which had been on the blink, and called to the man directing operations.

"Captain's conference, Hatcher! Did you hear the announcement?"

Quentin Hatcher turned burning eyes on him. He seemed on the brink of saying something acid, but contented himself with a weary nod. He gestured to the workers round him, and they stood back to let Yerring pass, which he did with a word of thanks. He could almost feel those eyes on the back of his neck as he walked on.

I wonder when it first began, he thought. Of course, like the rest of the earthborn, he wouldn't have noticed it. Only the education staff, probably, had the chance. His life was shared with his friends, whom he had known for over forty years—since they came together to work on a ship which was no more than drawings on a board, stress equations in a computer, and a dream burning in their minds.

But the slow antagonism had arisen all about them, until now they faced it as a fact.

What made it that way? The tripborns' knowledge that it was with them that the future lay? That

the earthborn in the ship were condemned to spend their lives in space, perhaps living long enough to see Earth again before they died—and perhaps not—while they, the tripborn, would go on to plant the first human colony under an alien sun?

Somehow, though that explanation was pleasing, he could not be satisfied with it.

Aside from the technicians checking the recording equipment, there was only one person ahead of him in the conference room, and that was Tsien, the senior psychologist. He sat in the chair on the right of the captain's place, bald head bent low over a stack of psychometric data sheets.

He glanced up as Yerring entered and nodded to him. On the point of looking down again, he checked himself. "What's with you, Franz?" he inquired. "You look as if you've seen a ghost."

Hadn't he got over it yet? Yerring restrained an impulse to reach up and feel for the betraying expression on his face. "In a way, I have," he said wryly, taking his place one chair away from Tsien. "Don't let me interrupt you."

"You aren't interrupting," said Tsien promptly. "I've read all these papers already, and going through them again won't alter the facts in them. What's the trouble?"

Yerring shrugged. "I was thinking about the size and duration of the universe. It was as if—well, as

if I'd had a vision of the full extent of it. It was extremely disturbing."

"I can imagine it would be." Tsien settled back in his chair, big-shouldered, pot-bellied, reassuring of tone. "What did you find so particularly uncomfortable about it, though?"

"The sheer naked size of it!" Yerring was astonished at his own vehemence, and tried to continue in a lighter tone. "I mean, I was thinking in terms of millions of years, and we ourselves only live a hundred and twenty or so. That's the twinkle of an eye—"

"To whom?" Tsien shot back. "Not to us, Franz. To us it's a lifetime, and can't be otherwise."

"Yes, I suppose so. But we do quite cheerfully talk about millions of years, and yet we never stop and think just how long that is. We can speak of an age, an eon, but we can't appreciate them."

"Why should we?" Tsien spread his hands, palms upward; the movement made his chest and shoulders heave like a mountain in an earthquake. "No one ever experienced a million years, any more than anyone ever paced out the miles from here to M-39 in Andromeda. They just measured them. Think of yourself as one of Sivachandra's astronomy boys, trying to find the parallax of a star—only you're sighting on a fossil and using radio-carbon dating instead of a telescope."

"How did you know I was think-

ing of archaeology?" Yerring was startled.

"A guess," said Tsien frankly. "Probably because I've been re-reading the basics of my job—Freud, and Hal Jennings's work on space neuroses. It's symbolic. We're here to make a new beginning, so we look at what we know of other, earlier beginnings which we know to have had successful results. We may recognize intellectually that each beginning is unique, but it comforts us to see resemblances and convince ourselves that we aren't walking into unknown darkness."

"And are we?"

Tsien grinned. "All the time! But on your argument, Franz—to go back to what you were saying—a man is unable to appreciate any period longer than his own lifetime. I disagree. This whole trip of ours has been a contradiction of that. Do you honestly think that Garmisch, who designed the ship, and Yoseida, who devoted his whole life to financing it and finding a crew for it, were incapable of appreciating a longer period than a hundred-odd years? Would you yourself have volunteered to come if you hadn't been thinking in terms of millennia? Because it may be that long before the results are in, and neither you nor I will be around to see it."

Almost reluctantly, Yerring nodded. "I guess you're right," he said.

Towards the end of Tsien's speech, Tessa Lubova had come

into the room and taken her place as usual low down on the left-hand side of the table, where the trip-born members of the conference always sat in a tight, exclusive knot.

This sort of thing is going to have to stop, thought Yerring. With the toughest part of the job still ahead, they couldn't have petty jealousies and discriminations.

He raised his voice. "Tessa, I'd like you up here next to me," he said, trying not to make the words sound like an order.

She turned her sullen face, very striking under its crown of dark hair, towards him. "What's the point?" she said sharply. "We"—the word conjured up a sudden vision of Quentin Hatcher, Vera Hassan and Fatima Shan, the other tripborn members of the conference in their places beside her—"never have anything to say, anyway."

The atmosphere seemed to become ten degrees chillier.

"So you've noticed it, have you?" said Tsien softly, as soon as Tessa turned away, and Yerring nodded.

"That's something we weren't bargaining for, isn't it?" he said.

The techs finished checking the recorders and went out, and one by one the remainder of the twenty members of Captain's Conference took their places about the table. Lola Kathodos of engineering sat opposite Yerring; Philippa Vautry of Medical came between him and Tsien; Sivachandra of navigation next to Lola—Yerring greeted each in turn.

There was a slight stir as George Hattus of ship admin took his place on the left of the captain's chair; he was the most—unknown?—man in the ship. *Like a policeman*, Yerring thought, and remembered back to the days when there had been such people in his daily life; whenever the familiar blue uniform appeared round the corner, even the most law-abiding searched their conscience.

Last of all, precisely on time, Magda Gomez took her place at the top of the table, and they all fell silent, looking towards her.

"Captain's conference, Magda Gomez presiding, declared open at fourteen hundred hours, day ninety-one, year thirty-seven," she said for the benefit of the record. "All right. Now I suppose you want to know why I've called this conference so soon on top of the last one. It's because there have been too many sanitation rumors going round about the approach of Trip's End. People are started to get sloppy and careless. I want it to be borne in mind that when we reach Tau Ceti II, our job will be *beginning*—not over! We came here for a purpose, and we're going to carry it through."

Her gimlet eyes fixed on Sivachandra, and he looked uncomfortable; it was plain she had her own ideas as to who let the rumors get started.

"All right," she said finally. "Let's kill the false reports once

for all. Siv, tell 'em when we make Trip's End."

There was a rustle of excitement all round the table, and Yerring sat up in surprise. The first time that question had ever been asked in conference! Whispered comment spread and was swiftly killed among the tripborn.

Sivachandra looked around impressively and waited for complete silence. "We will be in orbit around Tau Ceti II," he said, "in less than fifteen days."

This time the talk was loud and assured; only Tsien sat silent among the exchange of congratulations.

"Quiet!" said Magda at length, and there was quiet. To Lola Kathodos: "Yes?"

"Is that for official circulation?" the engineering officer asked. "My staff have been particularly full of 'inside information,' and I'd like to crush it."

"Yes! Yes, by all means!" Magda looked down at a note in front of her. "All sections will have four hours' celebration time this evening, by the way, but I don't want anyone reporting tomorrow morning with a hangover. We're getting down to real work then. We can put some real meaning into boat drill and things like that from now on. Hatcher!"

Quentin Hatcher looked up.

"The flight simulator comes under you, doesn't it? I'd like you to pick your half-dozen best trainees and run them through final tests.

Then Siv can decide who gets the chance at the first touchdown."

Hatcher nodded and made a note.

"I'll ask Siv to give us an idea of his first plans in a moment, but before that, has anyone anything they want to say? Engineering? Medical? Admin? Psychology?"

The representatives shook their heads.

"Ecology, what about you?"

Yerring spread his hands. "I was going to have to give some bad news, but the nearness of Trip's End solves the problem."

"Better tell us what it is, anyway."

"Well, we had a major attack of sterility in one of our important cultures; with the drop in productivity, consumption would have been due to exceed output in a month or so. But by that time we'll have raw materials from the planet to tide us over, so it's okay."

Magda glanced to her left. "George, what's the population right now?"

"Uh—two thousand, one hundred forty-nine," said Hattus. "It's one below schedule, but there's a late birth coming up in Franz's section somewhere—hydroponics, I think."

"That's right," confirmed Philippa Vautry. "Edna Barsavitza's having a long pregnancy—she's five days past due. I think I'd better stimulate labor artificially; we won't want advanced pregnancies to cope with when we actually hit orbit." She scribbled a memorandum, and

Magda waited for her to finish before speaking again.

"Siv, give them a rundown of the immediate programme, will you?"

The navigation chief put up a pale brown hand and sleeked back his silver hair. "Fifteen days distant may not seem like a lot compared with thirty-seven years," he began. "But we're making for a small planet rather close to its primary, and it's been on the opposite side of its star for the past several weeks. So far, we haven't done much more than confirm that it's where it ought to be."

Someone down the table sniggered; Magda glared at the offender, but Sivachandra continued with unruffled dignity. "We've confirmed the composition of the air by checking the absorption lines, and that's about all. Of course, this is duplication of effort, since the survey teams did a very thorough job when they were here a century ago, but a remote chance does remain, I suppose, that they overlooked something because they weren't thinking of staying."

"So tomorrow we'll be launching some TV-eye missiles. With them, we'll carry out a complete survey of the planet, during our approach run. As soon as they start sending in good pictures, by the way, I'll have them plugged into the multipanel circuit so everyone gets a chance to see them. By the time we go into orbit, we should know what site will suit us best—"

"Are you landing party?" said Vera Hassan loudly and rudely from the lower end of the table. There was dead silence for a minute.

"What was the point of that, Vera?" said Magda at length, in a voice like an arctic wind.

Vera leaned back in her chair, a defiant expression on her face. "He said which site will suit *us* best. I just want to know if he's one of the people it's going to *have* to suit whether they like it or not."

There were murmurs of agreement from the other tripborn present, and Yerring saw Tessa give a nod of encouragement. Magda slammed her open palm down on the table.

"Vera, we have a job to do, and it's the responsibility of all the crew—not just of part of it. You know as well as I do that Siv isn't landing party. Nor am I; nor is Franz, or any of the earthborn. But it isn't from choice, believe me—we'd change places with you straight off. We're just too old."

Too old: the words echoed in Yerring's mind. Too old at seventy-seven, even if that was scarcely two-thirds of his lifetime gone, because the remaining third was due to be spent in this same ship, with nothing but the knowledge of having achieved a historic aim as compensation. . . .

He felt a sudden shiver go down his spine as he thought: what would it be like to have *nothing* to show for it? What if we fail?

Magda was still speaking in a persuasive tone. "We—all of us, Vera!—have given our lives to an ideal. We aren't going to relax our efforts simply because the period of waiting is over. The greatest task in history lies ahead of us." She touched a switch set in the tabletop. "It lies there!"

No one heard her last words clearly. They had all turned to face the multipanel on the wall, which had just sprung to life. It showed the disc of the reddish sun called Tau Ceti, set against a background of stars which were familiar to them all. But there was a new star among the rest: small, tinged with the same red as its parent.

Trip's End!

Yerring heaved a slow sigh, and stole a covert glance around the group. The earthborn were staring dreamy-eyed at their goal, except for Tsien, who was more interested in the reactions of his companions, but that was natural. The tripborn, however, were sitting stony and impassive, wearing expressions of—contempt? Nausea? Disappointment? He struggled to find a suitable word and rejected each of them in turn.

Finally Magda broke the spell. "That'll do for now. Remember what I said, won't you? Now go and inform your sections about the celebration time tonight. Conference adjourned at fourteen nineteen."

She slumped back in her chair, turning off the multipanel, and with

a scraping of chairs and shuffling of feet the members started to leave the room. Yerring was rising stiffly to his feet when he felt Hattus's hand on his arm. The admin officer looked grave.

"Magda wants to see heads of departments for a moment," he said. "Won't keep you long."

The pose of efficient domination which Magda had worn at the conference table dropped off her like a cloak when she stepped through the connecting door into her own office. She indicated with a gesture that the others present should sit down, and looked at Tsien. "Well?" she said.

The psychologist nodded. "I'm afraid so."

"As you think best. What did everyone think of that little scene?"

Yerring leaned forward. "The trick with the multipanel, you mean?" he asked. "You hadn't by any chance primed Vera to explode like that and focus the tension, had you?" He tried to sound hopeful, but he knew as he spoke it was wishful thinking, and Magda shook her head with a weary smile.

"No, Tsien warned me something like that might happen. It was an idea he had."

"How can they be so wooden?" Philippa Vautry spoke with vehemence. "Damn it, Tsien, why didn't you foresee this?"

"You're wrong, Phil," the psychologist answered. "We did. At least, Yoseida did. George, get out

the orders, will you? We have no choice but to use them now."

Hattus nodded and crossed to the safe set in the wall. Opening it, he took out a sheaf of envelopes with person-keyed destruction seals which would render the contents illegible if anyone but the addressee tried to open them, and handed the little bundle to Magda.

"I myself," the captain began, "don't know what's in these envelopes. I was told, though, during one of the final briefings George and I attended before we left Earth, that I might be called on to use certain emergency procedures at the request of the psychological section. Since Tsien first told me he was worried about the tripborns' attitude to landing, I've suspected one of the procedures might deal with that, and I was right."

"All of us here had the privilege of knowing Yoseida in person, and working under his guidance before the ship left. I think it's plain that only a man who was completely devoted to the high ideal of spreading mankind through the galaxy could have visualized so far in advance the need for plans to cover such a fantastic and unlikely contingency."

She sounded a little self-conscious as she finished the speech; it was platitudinous to say such things to people who had also known and admired that fanatical old Asiatic, but Yerring knew it was only her respect and regard speaking for her,

and nodded his approval. The others followed suit.

"We can't let him down now," said George Hattus, in his soft, agreeable voice. "A man like that deserves the memorial of success. I suspect what's in these orders may not be entirely pleasant to enforce, but we owe it to his memory to carry this thing through."

Taking the envelopes back from Magda, he distributed them; the recipients eyed them curiously but awaited permission to open them from the captain.

"Fifteen days isn't a long time to re-orient twenty-one hundred people," said Tsien thoughtfully. "It means this action will be pretty drastic."

"What do you mean?" said Philippa indignantly. "There are nearly two hundred and fifty earth-born, remember!"

Tsien nodded vigorously, but Yerring had the impression that he was cursing himself for making a slip. Magda interrupted before he was able to speak.

"Take these orders and read them in your own offices," she said. "On no account let them get anywhere where the tripborn can see them. All right, on your way. Good luck."

All except Hattus rose and went out. In the corridor, Yerring caught Tsien's eye and drew him aside for a moment.

"Were you making a mistake when you said twenty-one hundred?" he inquired doubtfully. "It

seems ridiculous—but I got the idea you meant it!"

The psychologist looked him soberly in the eye. "Franz, when did you last use the picture setting of the multipanel in your office?"

Yerring paused, dumbfounded. "Why—it must have been all of three years ago!" he exclaimed. "I hardly use it at all now except as a mirror."

"Exactly," said Tsien heavily, and walked on.

Yerring returned to his own section with his mind in turmoil. Tsien's sudden question had taken him by surprise; it brought back with discomforting vividness the terror he had experienced when he wondered what it would be like to know he had wasted his life in vain.

He passed the envelope from hand to hand, impatient to gain the security of his own office and find out what it was that constituted their last defense against failure.

But before that he would have to announce the news given at the conference to his own staff. Tessa would already be back, and could quite well have done it, but he knew it had not entered her head; like all the tripborn, she insisted with almost childish obstinacy that he exercise the full authority to which his status entitled him.

He tucked the envelope securely and inconspicuously into a pocket and stepped through the sliding door into the warm, slightly steamy

air of the hydroponics section. Sometimes he thought, looking down the lines of transparent culture tubes towards the blindingly bright focus of the light area, that it was odd how an ecological cycle which had begun as a planet-sized unit could be fined down to essentials and tucked into the comparatively tiny hull of this ship.

He followed the direction of the culture flow until he found Tessa studying a sample drawn from the mixture. He called to her, and she looked up slowly.

"I suppose you want to address the hands?" she said, putting down the testing phial. "I'll go and round them up for you." There was a faint sneer on her face, as if she were implying that Yerring could not be sure they would come at his order.

And in a way, Yerring was forced to admit, she was right. He had begun the trip with a staff of twenty-one, all earthborn—naturally—but since biology and ecology were two subjects the colonists would need to know backwards, they had gradually been transferred off to ship administration. Now he had a staff of a hundred and three, but he was the only remaining earthborn member of it.

Must remember to have some of my old assistants re-posted while we're in orbit, he reminded himself. We'll need them on the way home.

He felt for his dark glasses and put them on before walking out

across the big open space between the tubes where dead cultures were sluiced for drying, lysis and re-cycling as organic intake material. One by one, the hands came in—not talking, not excited, just coming in.

He tried to remember how he had pictured the enthusiasm which would greet the news of Trip's End, thirty-seven years ago. Very different from this; the passive concentration in their faces reminded him of what Tessa had said in the conference room—"We never have anything to say, anyway."

And it was true.

What had happened to all the talking and shouting? When I go into the conference room, I start a conversation with Tsien or someone; Tessa sits alone, not speaking even when one of her own generation joins her.

What did these taciturn people do off duty? Shock; I have scarcely an idea. They eat and watch the shows on the panels, sometimes we have dances they attend, some of them play music and some read books from the microfilm library; that's not the point. For example: could they fall in love?

Are they really alive?

These had been children like any other children: noisy, inquisitive, foolhardy, disobedient. If they had been otherwise, Tsien as director of the education staff would have been alarmed.

And yet they had grown up into these frighteningly self-contained people who could run the ship bet-

ter than the earthborn any time they put their minds to it, and still refused to take the initiative. . . .

"Everyone's here," said Tessa, just loudly enough to break through his musing, and he scrambled up on a breeding chest to make his announcement.

They took it as they took everything else, as if they were adding it to some store of information already prepared for use in some calculation Yerring could not guess at.

When he had delivered his message and got no response, his tension boiled over.

"If you knew how we envy you!" he exploded.

That startled them. He rushed on: "You have your whole lives to look forward to on a good world, a brand-new planet! We gave up ours to see you achieve that aim, and I for one don't regret it—but I wish I could be your age again and take your place!"

He got down blindly to the floor and walked hurriedly into the protection of an aisle between the banks of tubes.

Someone was standing there, immobile; with his dark glasses still on, Yerring could not tell who it was until he stirred and spoke. It was Quentin Hatcher.

"What are you doing here?" said Yerring gruffly, half-ashamed of his outburst.

"I came to see Tessa," said Hatcher placidly, and Yerring remem-

bered that he had known in a vague way the two were having an affair; promiscuity had to be encouraged to ensure the mixing of all available genetic factors.

He wanted to pass on to his office and read the orders in his pocket, but Hatcher looked at him steadily, and he did not dare even feel to make certain they were still there. "Are you in a hurry?" the other asked.

With an effort Yerring controlled himself; it would be a mistake to admit he was in fact in haste, when Tessa knew quite well there was no urgent work on hand in the section. Someone might draw the right conclusion. He shook his head. "Did you want something?"

"Yes. You earthborn are very free with your description of this planet as a 'good' world"—Yerring could hear the quotation marks. "But I know nothing about it beyond the fact that it's said to be habitable. Why?"

"Tessa could tell you as well as I can."

"Tessa could not." The girl moved out of shadow, and he wondered how long she had stood there listening. "I do know more about the planet than Quentin does, but it's going to be my job, apparently."

Yerring gave ground reluctantly. "You've found the reason," he said, thinking fast. "You'd have to ask the psychological section for full details, but I know the rough idea. When we set up the colony—"

"We?" whispered Hatcher, with

a glance at the girl; Yerring caught the word but pretended he hadn't, even to the extent of cancelling an impulse to frown at the echo of Vera Hassan's attack on Sivachandra.

He went on: "—we've got to have the best possible combination of experts to get the work done in minimum time. That's why, even though you know nothing about Cetian ecology, for example, you're three times as good a metallurgist and electronics engineer as someone your age on Earth. You're a specialist. So's Tessa. There's going to be so much to do at Trip's End that we can't afford to waste time teaching people knowledge they can't use. Of course, the data from the early survey is in the library for anyone to read who wants it—"

"I know," said Hatcher bitterly. "I've looked at it. But I haven't the time to teach myself the basics I need to follow it."

This time Yerring had to frown. He noticed that Tessa had stepped out of sight again.

"Give it to me in simple language," said Hatcher, managing to make it seem that Yerring would be in the wrong if he refused. "What kind of a planet is this?"

Yerring was tempted to snap that it was habitable and wasn't that good enough? Instead, he put it another way.

"Promising enough for us to have begun and carried through a project lasting all these years to colonize it, and that means very good indeed."

"If it's so habitable, why isn't it inhabited?"

"Because it hasn't got a moon." Yerring was falling automatically into the teaching style he used when taking trainee classes in the ship's school. "There's a lot of life in the sea—some of it eatable, by the way, which is useful—but the oxygen in the air is replenished only by colonies of free-floating algae which drift across the oceans. We'll probably supplement them with some of our own species.

"But on Earth, life was driven from the sea to the land largely by the effect of tides. Without a moon, the sea-level doesn't change significantly or frequently enough to produce land life."

Tessa had moved back into his range of vision during the last sentence. "That means," she put in sourly, "there's nothing to bind eroded rock into soil. It's all desert."

"So was Mars!" said Yerring sharply. "And it didn't even have good air. We took it over and remade it until it was nearly as good as Earth. This world could well be made *better*." After a pause he added pleadingly, "Do you honestly think we'd have started on this trip if it wasn't worth it?"

"You started on this trip," said Hatcher softly. "We hadn't much choice, had we?"

Yerring was silent.

"Suppose it's changed since the survey teams were here?" Hatcher pursued. "After all, it was nearly

a hundred years ago that they discovered this system—"

"But a hundred years is"—Yerring remembered the way he had put it to Tsien—"a twinkle of an eye when you're thinking of biological processes. No, there won't be any important change."

"So you say," insisted Hatcher doggedly. "But what will we do if it isn't the paradise you've promised us? Has anyone thought about that?"

Yerring had been thinking of it—entirely too recently for the remark to be pleasant. He turned on his heel.

"It will be!" he threw over his shoulder. And as he drew out of earshot, he muttered, "It's *got* to be!"

Alone in the privacy of his office, he sat down at the desk and put his hand in his pocket to take out the orders. He experienced a momentary surge of panic as his hand closed on nothing.

Then he felt in the other pocket, and breathed a sigh when he found the familiar oblong shape. *Odd; I could have sworn it was in the other—*

But when he examined the seal carefully, it showed no signs of tampering.

As he prepared to unfasten it, his eye fell on the multipanel, and he recalled Tsien's question. Was it really three years since he had used it last as a picture?

He paused to think of the scenes

he had liked most out of the enormous repertoire stored as electronic memory patterns in the master library. That flower garden, for instance—the play of colors was magnificent. But so was the sunset scene, and neither was as majestic as the view of Niagara, or as nostalgic as the riot of foliage under the dome of Copernicus Crater on the moon, where he had spent his first holiday off Earth as a small boy, stalking his younger brother through the "jungle" . . .

He took out the index of settings, which he had once had almost by heart, from a drawer, and chose one which had always been a particular favorite of his: a panorama of wheat fields in North America. Suddenly, yellow corn seemed to stretch into the distance through the wall when he tripped the switch; on the horizon, it melted into blue sky. Mile upon square mile of earth-surface, and every last inch of it bearing for the benefit of man!

And yet, somehow, it didn't provide the shiver of awe which it had once induced.

He dismissed the reflection with annoyance, and broke the seal on the envelope. There was only one sheet of paper inside; closely typed, it ran:

Deliver at the captain's discretion to the senior ecologist.

It is considered possible by the psychologists who have studied the likely mental development of the

crew after so long in space, that some measure of unconscious resistance to the prospect of landing may arise when the time of planetfall draws near. This is especially to be looked for in the case of those who, having been born on board, will not actually have set foot on terra firma.

As it has been explained to me, there is a close mental analogy between landing from a ship such as this, and the process of birth. A child objects to being born; it longs for the comfort and security of the womb to some extent for the rest of its life. The environment of the ship represents an extension of similar security into adulthood.

In the event of such a situation arising, action is to be taken as briefly outlined below **WHEN THE SHIP IS CLOSE ENOUGH TO THE PLANET FOR CONDITIONS ON BOARD TO REMAIN BEARABLE UNTIL IT IS REACHED.** An absolute maximum of two weeks is suggested; within that limit, time of commencement is left wholly to the psychological section.

(a) The medical officer is to prepare sufficient quantities of a suggestibility-heightening drug to render all affected members of the crew susceptible to influences designed for combating the subconscious compulsion against landing.

(b) The ecologist is to select a method of administering the drug. It will be essential to exclude those personnel who will be returning to

Earth to report the success of the mission, and whose business on the planet is only temporary; aerosol administration is therefore inadvisable.

(c) The senior psychologist is to organize counter-compulsions, given in detail in an appendix to be delivered only to that officer, directed to instilling a distaste for shipside conditions in the crew.

This expedient is analogous to shock treatment, and is to be resorted to in cases of emergency only. The chance of permanent mental effects, however, is estimated at less than one per cent. Man is a planetary animal; any other environment is unnatural to him, and re-adaptation will proceed much more smoothly than did the original adaptation to spatial conditions.

Yerring read the document through carefully, a frown deepening on his forehead, until he came to the signature. He looked at it closely. It was Yoseida's own.

Instantly, a curtain seemed to roll back in his mind, and he was once again a youth listening with adoration to the plans of a thin, fanatical Asiatic who was set on sending men out among the stars, and resolving that when the ship was built, he would be one of the crew. Yoseida was that sort of a man; in another age he would have conquered himself an empire at the head of an army prepared to die on his casual command, or formed a business concern and controlled the lives of

millions, decreed whether they would starve or surfeit. . . .

The old idealism was still smoldering in Yerring's mind, like a fire burning under a heap of ashes. He clenched his fists with determination. In that moment he was more certain of one thing than he had ever been: they were not going to fail!

He reached for the diet charts and studied them with care. The drug would have to reach everyone it was intended for, yet those who had to avoid it must be able to refuse the item containing it without exciting suspicion. It was an interesting problem.

He made his choice and sat back in his chair. This was a job he was going to have to do himself, obviously; he was the only earthborn left in the ecological section. None of the tripborn could be expected to understand just what this journey meant to the race of man, and to farsighted geniuses like Yoseida, who had given his life to this ideal. . . .

He would have to add it to the diet when the section was deserted, therefore, and during tonight's celebration was the obvious moment. The question was whether Philippa would have enough of the drug ready by then.

He reached for the phone, and then changed his mind; a tripborn technician might be monitoring the wires, looking for a fault. He would have to go down to medical section.

At the door, he gave his habitual glance around, and saw with momentary surprise that the multipanel was blank. He did not remember turning off the picture.

Sounds of singing from the mess rang the length of the empty corridors as he walked slowly through semi-darkness towards the dietary room. At least the tripborn were still human enough to enjoy themselves. He kept his mind blank and receptive to every stir of noise, acutely aware of the jar of reddish liquid in his hand. He hoped it might pass for a drink if anyone saw him.

He kept reminding himself that the section would be deserted; nonetheless, he found himself rehearsing the phrases of excuse he would have to use if anyone found him here. But as he stepped into the dietary room, he realized that the singing from the mess adjacent would drown any slight sound he made himself; if there was anyone in the sleeping quarters opposite, where his own staff slept, he would notice nothing.

The synthesisers which turned the raw material of the cultures into flavorsome, substantial and nourishing food were quietly humming; the air was warm, and had a pleasant rich smell. He knew the layout too well to bother turning on the lights; he crossed the floor swiftly, opened the additive cap on one of the synthesisers, and poured a careful half of the reddish liquid into the

mixture. Then he moved to the next unit and repeated the process again.

Closing the caps, he slipped the empty jar into a re-cycler for reduction to its elements and absorption into the resources of the ship. It was not until he was safely outside again in the corridor that he dared admit he had successfully completed his task.

In the humming warmth of the dietary room, Tessa Lubova came gracefully out of the cramped corner between two synthesisers where she had been hiding, and crossed to the door of the sleeping quarters. She made no attempt to discover what had been added to the food supply, nor did her face betray any hint of emotion whatsoever.

It was heartening to see the determination on the faces of his companions, thought Yerring, and knew that the same resolution inspired himself. Even when Magda passed a tired hand across her forehead, it was with impatience at her own inadequacy.

"Phil, how did the tests go?" she asked. "Maybe you'd better say what you actually did."

The doctor nodded. "Well, we took blood samples from random members of the crew, ostensibly to be included in the equipment of the TV-eyes to detect bacteria which can breed in them. We shall be doing that anyway, of course—can't have anyone getting suspicious. But the samples we took show a

hundred per cent incidence of the drug in the tripborn."

"That's Franz's doing," said Magda, with a glance at Yerring. "You picked an excellent medium to give it in. Right. Siv, the missiles were launched this morning—when do you expect the first pictures in?"

"Assuming a minimum of solar activity, late this evening," said the navigation officer. "They won't be of good quality over this distance, but they'll be clear enough to give us a rough idea."

"Fine. Plug them into the panels as soon as you can. Tsien wants to see what their effect is before going ahead."

The psychologist grunted heavily. "I'm still hoping we may not have to do this," he admitted. "It'll be a foul job with only a few of my staff to help me out."

"How's that again?" said Lola Kathodos.

"Well, naturally," Tsien shrugged, "I can't ask the tripborn to work on this, and as it turns out I can't even rely on all the earth-born."

"That's bad," said Lola complacently. "Well, I'm glad to say I'm every bit as determined to see this job through as I was when we left Earth."

"Of course you are," said Tsien with an effort at reassurance. "All of us in this room are. Not everyone is affected by the tripborns' apathy."

But I am, thought Yerring, and

found Tsien's eyes on him. *After all this time, the man must practically be able to read my mind.*

"I think it might be a good idea to tell us what you'll have to do," put in Hattus quietly. "Franz, for example, has no one but tripborn under him now, and he's worried about production as things are. Will he suffer any more for what you're doing?"

"Possibly." Tsien was dubious. "We'll be using verbal suggestion, of course—if any of you want hints on how to weight your orders to your staff, I'll be glad to advise you. But we ourselves are going through the book—subsonics, trigger smells, tactile suggestion. There's latent claustrophobia for the asking, too, of course; we'll have to touch off as much of that as possible."

"And what if it doesn't work?" Sivachandra voiced the idea which Yerring had not dared utter.

"Of course it'll work," said Tsien bluntly. "Believe me, I've looked after the psychological state of the crew long enough to be certain of that. My only reservation is that we shouldn't have had to use it." He hunched forward.

"Every mass entertainment we've put out during the voyage, every programme of tuition in the school, every talk and every briefing—they've all been slanted towards the resumption of planetside life. That's why we've refused to permit the germination of any culture with a shipside background; we've taken

special note of people with originality and qualities of leadership and diverted their aims, in case they made too great an impression on their fellows. The authority and the power is vested in the earth-born; we insisted on holding the prospect of independence up as a carrot for a donkey, and tried to make Trip's End the focal point of all the tripborns' ambition. The entire crew should have a load of subconscious commands twice as strong as their inherent womb-retreat factor."

"*Should* have!" echoed Philippa. "We even carried it so far as to develop easy birthing methods, to reduce birth trauma to a minimum. And yet look what we've wound up with!"

"There's something wrong," said Yerring. He watched Tsien's face as he spoke. "Isn't there?"

"Yes," the psychologist admitted. "Somewhere along the line, this trip has altered our mental attitudes in a way no one could foresee. Why? Because this ship is the first completely closed subplanetary ecological unit, Franz?"

Yerring shook his head. "It's not that easy. The exploration ships of a century ago were completely closed, too; what's more, the crews—except those which visited this system, naturally—found nowhere to land, so they spent the period of the round trip on board. Yet they were only mildly maladjusted when they returned to Earth."

"Yes, I've pored over their psy-

chological records long enough to be sure of that. What's the difference, then?"

"That we've bred in this environment?" suggested Hattus shrewdly.

Tsien shrugged. "Could be. But what else could we do? Load a cargo of babes-in-arms when we took off? Of course not! All the successful pioneering groups in history have included widely assorted age-ranges. By deciding to expand our population *en route*, we manage to arrive with not only a larger complement of capable workers than if we had kept to our original strength, but with about two hundred children who can be trained to take their places in the colony."

He looked around the room. "All of us here have grown children now; how many of us are grandparents besides myself?" Four people nodded—Magda, Hattus, Sivachandra and Lola. "And the rest of you will be soon; when we land, we can expand our population without foreseeable limit. No, if this revulsion against landing is an inescapable result of breeding in the ship, we're sunk, and human expansion to the stars is going to have to await the coming of a faster-than-light drive."

"Which is still impossible to the best of our knowledge," said Sivachandra flatly. "But—well, I don't know quite why, but somehow I'm *certain* this revulsion against landing is just a phase. We'll get around it."

The others echoed his confidence in assured voices, and Tsien said emphatically, "Of course we shan't admit defeat!"

There was silence for a while. Finally Magda stirred. "Siv, how about the landing itself?" she inquired.

"As soon as we hang up in orbit, we'll have a landing boat ready to go down. We're running the pilot tests all the time."

"Send your best man along to me before you tell him he's going," Tsien put in. "I'll need to make sure the conditioning has taken."

"Who is he—do you know yet?" asked Philippa.

Sivachandra shook his head; the lie was beautifully camouflaged, but Yerring was sure he could see through it. "We're down to a short list of half a dozen or so," he said. "I can't say yet which of them will actually go."

"Okay," Magda frowned. "Anything else before we go back to our jobs? Yes, Franz?"

"Suppose one of the tripborn *has* missed the drug," Yerring suggested. "Suppose he spots Tsien's 'influences'—what do we tell him then?"

"A good point," the captain nodded. "George, any ideas?"

"Say we're slowing to turn into orbit," Hattus offered. "It's producing stress noises in the fabric of the hull. Does that sound convincing, Siv?"

"Not to anyone in my section, or Lola's," Sivachandra answered.

"But to anyone else it might. It'll do, anyway."

There were no further comments; they rose and went out. In the passage, Yerring drew Sivachandra aside.

"You've already picked the man to make the first touchdown, haven't you?" he said flatly. "Why not admit it?"

Sivachandra's pale brown face remained enigmatic. "I had reasons for not mentioning his name in there," he said.

"Who is it?"

"Felipe Vautry. He's Philippa's son."

And then he realized, as Yerring's face went blank, he had made a slip after all. "And yours?" he said in a questioning tone.

"Yes," agreed Yerring. "And mine."

Does he know, himself? Yerring's mind wandered all round the question.

There could really be no such thing as a home in the ship; it *was* home, in itself, and therefore the ties of parenthood were not strong. He had three children—Felipe and two daughters—but they had gone into the crèche under the efficient, understanding care of the nursing staff, and then through the ship's school; they were dropped, like pieces of a jigsaw puzzle, into places in the crew exactly the right shape to receive them.

After that, they were just—trip-born.

How old is Felipe now, anyway? Twenty-six? Twenty-eight?

"We have two courses of action to prepare for," he said doggedly to Tessa, who sat impassively on the far side of his desk. "Which we choose, depends on whether the TV-eyes find an ideal spot for the settlement soon, or not. We'll know in another day or two—you've heard that the first pictures are going to be relayed this evening on the panels?"

Silence.

"Tessa!"

The girl's sullen face turned towards him, and he demanded, "Were you listening?"

"Yes."

"Well, why not answer my question?"

"Oh, I wasn't listening to *you*," she said with a hint of contempt in her tone. "I was listening to the ship."

"What about it?" Yerring hoped that the sudden guarded alertness in his manner escaped her. "We're slowing down to fall into orbit, remember—it alters the stress noises of the hull. It was much the same while we were accelerating away from the solar system, I remember," he added glibly, thinking that if he was going to tell a lie it might as well be a good one. He had no way of knowing whether she accepted it or not, but ploughed on.

"Now pay some attention, for goodness' sake! Our position is getting damned near dangerous, and you're supposed to be director of

ecology for the settlement, you know. As I was going to say: our margin for error is dropping like a stone. Our resources will take us barely two weeks past orbit as things stand. If we can land the advance party straight away, that'll lighten our burden enough to get us by; if not, we're going to have to import raw materials from the planet to tide us over."

He reached out and turned on the multipanel, choosing a view of some Martian plantations; it had just occurred to him that the surface of that world had been similar to that of Trip's End under its reddish sun, and the proof it had been made habitable was a useful semantic factor to work on the minds of the tripborn. He was surprised it hadn't struck Tsien.

He ran quickly through the arrangements which needed to be made for either contingency, and finished, "Pass on what I've said to the rest of the staff as they need it. Sivachandra will be asking for opinions on the site for the colony, by the way; you ought to make the decision rather than me, since after all you'll be living there." He had to avoid saying 'have to live there' by a conscious effort.

"Thank you for thinking of that," said Tessa, and he glanced at her sharply, wondering if she was being sarcastic. "Is that all?"

"Yes, that's all."

She rose with her usual fluid grace and went out; Yerring waited till the door had closed and then

brought in the observation circuit of the multipanel, anxious not to miss a moment of the pictures relayed from the planet. He had been staring at the blankly luminous surface of the screen for fully fifteen seconds before he realized it had previously been equally blank.

What happened to the picture of Mars? This absent-minded turning off of the panel—

He pulled the index of panel settings out of the drawer again and hastily thumbed through it. When he had checked twice to make absolutely sure, he sat back and drew a deep breath.

No wonder Tsien hadn't thought of using that picture of Mars as a tool to work on the tripborn.

There wasn't one.

Badly frightened, he got blindly to his feet and walked down the corridor the short distance to the mess. Just as he reached it, Hattus's voice echoed from the public address speakers, warning that the relayed views from the missiles were about to be put on the panels.

Instantly, that drove his preoccupation away, and he ran into the mess-hall. It was already half-full of people arriving for the evening meal, but he ignored them and sat alone where he could get a good view of a panel.

The first pictures were blurred and indistinct, but as the operators got the feel of the circuit, and grew more practiced at cutting in the one which was currently giving the best

reception, they improved rapidly. Even the color registration was good; Yerring could tell that from so often studying the photographs taken by the survey teams.

Good, thought Yerring, catching sight of one of the gigantic free-floating drifts of algae which kept the air oxygen-high; if there are many more that size, we won't have to worry about force-breeding our own strains to help out.

There was an ache in him at seeing the surface of their destination and knowing: *it's only a little way now!* It was like—well, like coming home.

Tripborn came and went around him; the earthborn, their eyes glued to the panels, let their food grow cold untasted, or—if they had to go elsewhere and thus lose sight of the pictures for even an instant—reminded themselves that anything important they missed would be on film with the rest of the records. He scarcely noticed when Tsien dropped into the chair next to him, except to glance and see who it was. It was several minutes later that he turned to face the other and breathe, "Isn't it wonderful?"

But the quizzical look on the psychologist's face cut through the warmth and excitement in him. Abruptly, he sobered.

"Is it bad?" he asked.

"Pretty bad," acknowledged Tsien. "I'd hoped the visual stimulus would touch off the drive we've tried to instil. It hasn't."

"But—you mean you haven't started your programme?"

"No!" Tsien stared. "Who told you we had?"

Yerring explained about Tessa listening to the ship, and Tsien looked relieved. "That's all right," he said. "I was thinking about something which happened this afternoon. To one of my own earthborn staff. He was convinced he was susceptible to the command to leave the ship, and tried to do it through an airlock right now."

The expression on Tsien's face scared Yerring; it was no longer that of his habitual self-assurance and confidence—he looked gravely disturbed.

"I wanted to ask you about something," he said slowly, and told Tsien of the Martian picture episode. When he had finished, the psychologist nodded.

"A consequence of stress release, Franz. All through this trip, we earthborn have been being wound up like a violin string, tighter and tighter. Now we're being let down, we can expect some pretty funny results. Nothing to worry about, in your case—it was auto-hypnosis from your seeing an identity between the conquest of Mars and the work to be done at Trip's End. Go down to Philippa before you go to bed and ask her for a sedative, will you?"

Yerring nodded; a comforting amount of Tsien's assurance had returned during his last speech, and he felt relieved.

"Well, I've been here long enough—can't keep putting off the decision," said Tsien abruptly. "Excuse me. I've got to go kick us off the ship."

Yerring nodded and watched him go. Somehow, he was no longer so keen to watch the panels, and he finished his meal and left the mess without reluctance.

The usual evening pastimes had been suspended tonight; every panel in the ship seemed to be glowing with the TV-eye transmission. Restlessly, he wandered through his own section to see the night shift, passing through hydroponics, biolab, feedmix monitoring, air control, master water room, dietary room—all the space which formed the lungs, heart and digestive organs of the ship. The staff were going about their tasks as usual: adjusting controls, setting up new programming, testing the cultures.

He paused beside a young worker as he took a sample and studied it, seeming not to notice Yerring next to him. "What's the incidence of sterility now?" he asked for want of anything else to say.

The boy turned calm eyes on him. "Going down," he said.

Irritated—by what, he could not tell—Yerring went on, "How do you think you're going to like working with soil when we land?"

"I won't," said the boy, and replaced the sample in the culture tube; it mingled with the rest of the semi-liquid mass and joined the slow flow towards the light-irradia-

tion area. Then he passed to the next tube and bent to repeat the process.

Baffled, Yerring did not try to stop him; there had been something so final about those two words. And they sounded not only final.

They sounded utterly honest.

Man had made the environment of the ship, and therefore it was as seemed good to him; the environment of a planet, on the other hand, had made man, and perhaps that was deflating to remember.

But we aren't going to fail!

They had planned for this time before the ship had even been half-built, and the procedure went into operation with oiled smoothness. That was one advantage of having everyone a part of a jigsaw, thought Yerring—of specializing. Ship admin: *who goes down when and with what cargo?* Ecology: *what can we use when we get there, what do we take?* Navigation: *at what height do we orbit exactly over the colony?* Psychological: *are we going to—?*

That was a question no one asked in full. There was always the subtle, nagging knowledge at the edge of consciousness: *we are having to force these people into something we gave up our lives for gladly.*

Somehow, it seemed—unworthy.

But the days passed in a flurry of work, until the ship was safely in its orbit, and they were ready to make the first landing.

Yerring walked slowly through the corridors towards a section of the ship he had almost forgotten existed. He had meant—somehow—to find time to get to know this pilot who was going to be remembered by the colonists all through their history. But the days had gone by, and there had been no time. Now, as he scanned the group around the boat lock, he had to think twice before he recognized this tall, black-haired young man with set face and deep, unsmiling eyes.

Sivachandra and Lola Kathodos were directing final checks of the instruments and engines of the boat; a group of orderlies from Medical, and Tsien and some of his staff, surrounded the tall Felipe. He met Philippa's eye as he approached, and wondered if she was thinking the same thing: that perhaps they should have taken another few years to plan and found a way in which *father* and *mother* might remain more than biologically inevitable terms.

They had been in love, he remembered—but each, to the other, had inescapably been one of many, and now there was hardly more than a flicker of memory to share.

He dropped his eyes and found Tsien approaching, mopping his forehead. The psychologist looked cautiously optimistic.

"Is everything all right?" Yerring demanded.

"As far as we can tell. Medically, Phil says, he's as fit as possible,

and we've done all in our power to make the landing easy for him."

There was a call from Sivachandra, who was studying his wrist chronometer. "Felipe!" he said. "Better go in now."

Yerring could stand back no longer; he pushed aside a couple of shipborn medical orderlies and grasped Felipe's hand. "Good luck!" he said with sudden fervency.

And then he turned slowly away, realizing that there was no sense of history in this son of his; he had been told to do a job, and that was all.

Perhaps we should have harped on the wonder of it all, he thought; perhaps we could have brought home to them how marvelous it is that beings spawned of the hot seas of a ball of rock enveloped by gas could have spread across the gap between the stars. . . .

It was too late to think of that now.

And yet—a fierce pride burned in him—we've done it! Whether they realize it or not, we've done something without equal in the universe; we've planned and waited and carried it through until success is in our grasp.

"Let's go up to navigation section," said Tsien softly. "We can watch it all from there."

Yerring suffered himself to follow the psychologist, glancing back only once, to see the door of the little boat closing behind Felipe.

It seemed like an age before the tell-tales on the hull of the boat reported the first whispers of atmosphere. In the navigation section, a tense, excited group faced the banks of screens and the instrument panels which kept them in contact with Felipe. At intervals he told them in a flat, monotonous voice that he was still all right.

Yerring heaved a sigh, and grew conscious that Philippa was standing next to him; in a gesture he was scarcely conscious of, so deep a need did it fulfill, he put an arm around her, and she gave him a quick, wan smile.

The red surface of Trip's End loomed up on the screens; rough-featured mountains gashed by narrow, swift-flowing rivers passed under the boat as it rushed towards the broad flat expanse of ground near the sea which was to be their first settlement.

"I can see the landing-place now," Felipe called at last. There was no hint of strain in his tone, and Yerring gave Tsien an inquiring, hopeful look. The psychologist nodded and wiped away a fresh stream of sweat.

The rocket motors cut in to check the boat's progress; it tilted and settled on its tail, finding firm footing. "He's made it," reported Sivachandra from his post at the instrument panel—and his companions went wild. They shouted congratulations to Felipe and Tsien, shook hands and kissed each other—even taciturn, sober Hattus seized

Magda by the arm and tried to make her dance.

They recovered their calmness slowly, and Tsien shouldered his way through them towards the microphone. "How is it where you are, Felipe?"

"As I expected." The voice was still toneless, with a hint of enormous patience in it.

"How's the air?" called Magda, glancing at the repeater dials.

"Good," said Sivachandra. "A full twenty per cent oxygen."

"Well, open the door and go out!" Magda exclaimed.

The screen showing the view inside the boat revealed Felipe silently undoing his harness and getting to his feet. He started towards the door, slowly, as if walking under water.

"High gravity?" said Lola suddenly. "Look how he's moving!"

"Can't be," said Hattus flatly. "The gravity's barely a twentieth higher than aboard ship."

A chill of premonition seemed to go up Yerring's spine as he watched Felipe undog the door. He wanted to shout, "Stop him! Stop him!"

But before he could utter the words, they could see over Felipe's shoulder the rolling landscape, dying into red hills on the skyline. The sky was not blue, but it was at least not black.

Still with the air of a man in a trance, Felipe stepped over the sill of the door and climbed the ladder to the ground. A camera in an ex-

ternal housing tracked down with him until he was standing at the foot of the ladder, turning to look round. The tension was beyond bearing.

And then he screamed.

For an instant there was absolute stillness in the room, only the echoes of the cry dying into silence. Tsien was staring at the screen as if he did not believe his eyes.

"What's wrong?" demanded Magda, rounding on him. "Look at him!" She gestured; the pilot had fallen to the ground, knees drawn up to his chin, and his face was slack-jawed, staring-eyed.

The question was taken up, each person present trying to find refuge from despair in accusations against Tsien. The psychologist buried his head in his hands.

"What's happened is obvious," he muttered. "We didn't condition him properly."

"But you said you couldn't fail," Philippa insisted, starting forward. Her voice was angrily pleading.

"I thought we couldn't." Tsien dropped his hands. "No human being should have been able to resist our efforts. But somehow—"

Hattus stiffened, and they all turned and looked to see what had startled him.

The tripborn technicians in the room had quietly moved from their posts; now they stood about the officers—not speaking—their faces threatening, their attitude vigilant and alert.

Quentin Hatcher moved out from among them when the silence had stretched to breaking point; his face was peaceful, his manner assured and confident.

"I think now you should be convinced," he said. "You have seen for yourselves what we have known must happen for a long time. I assure you we regret the necessity to take over the ship from you, but you are no longer capable of facing facts."

"Mutiny . . ." breathed Magda as if she was blaspheming.

"Say rather that the real is supplanting the ideal." He paused as Sivachandra made a move towards him, only to be deterred by a minute adjustment of position from one of the tripborn near him. "We do not intend to harm you—in fact, you will be permitted to go about your sections freely when you have accepted one thing. *There must be no more talk of landing.*"

"You're mad!" said Hattus huskily. "You're insane!"

Hatcher laughed shortly. "Ask the psychologist," he suggested.

"You knew!" Tsien declared. "You must have known about the conditioning."

"Yes, we knew. Tessa Lubova watched Yerring putting the drug into the synthesizers."

"But you ate the food," Yerring broke in. "I know you did, because I saw you. How did you avoid the effects? What did you do?"

"Nothing," Hatcher answered, with a lift of one shoulder. "There

was no need. You see, we knew it would not work."

They were breaking down now; Yerring felt Philippa collapse against his arm, and Sivachandra had begun to sob, dry-eyed; Magda was biting her nails, seeming not to dare take her gaze from Hatcher's face.

He spoke in a voice whose steadiness surprised him. "But we shall have to land, Hatcher. Or we will starve to death."

Hatcher lifted an eyebrow at him. He went on, "Our own resources will provide food, air and water enough for only two more weeks in orbit; our numbers are too great."

Hatcher shrugged. "Then we'll bring material up from the surface. Or since you tripborn are so determined to found your colony, why should you not take our place?"

"That would only postpone the end." Yerring felt a desperate fear growing in his mind; he had to convince this bland young man of the truth in his arguments, or they had no chance left at all. "The boats were designed for shipping cargo down, not up. Once we start using forty tons of fuel to bring one ton of material up from the planet, we're finished. Ask Tessa," he finished pleadingly. "She'll tell you I'm speaking the truth."

"I didn't know it was that bad." Magda stared at him.

"It wouldn't have been. With our population cut to what it was when we started out, we could have

imported enough materials to last us the whole voyage back." Yerring tried not to let the implications in his statements come home to him; he knew he would break down if they did.

"I thought this was a closed system," Lola said, staring.

"It is. Landing on the planet would open it, though."

"Then what are you talking about?" said Hatcher with exaggerated patience. "Didn't you hear what I said? We are not landing! We are *not* landing!"

Yerring mastered his growing terror and thought of the sharpest way to bring it home. "Then you'll nominate one thousand people to be killed," he said.

There was a pause. Hatcher broke it in quite a different voice. "What did you say?"

"That's better. Start listening with your mind instead of your muscles. This ship is a closed system, but it's overpopulated. You stand there and tie up water, calcium, carbon, oxygen, nitrogen, about eighty or a hundred pounds of valuable organic compounds—*now* do you see what I'm getting at? At half its present population, the ship could in theory continue indefinitely. Right now, we have too much of our resources bound up in our bodies."

He finished flatly, "We stay up here, and starve, or we stay up here and eat each other till the population drops, or we land. Which is it to be?"

We stay up here and go mad, he thought. *At least, I'll go mad if I stay here any longer.*

He paced restlessly up and down the office; there was nowhere else for him to go. All the earthborn had been confined to their quarters, efficiently, without fuss, but without mercy.

Three days' reserves wasted, he thought; he could almost taste the foulness starting to taint the air, feel the slow drain of their last resources—

The door opened, and he whirled to face it. Two stern-faced tripborn stood in the gap.

"Come with us," said the first, and he numbly obeyed.

They led him down the corridors, guessing about his destination. Not ship admin; not navigation—they passed the entrances to those. In the end there was only one possibility left.

They brought him into the psychological section, and a sunken-cheeked Tsien looked wearily up from his desk. The only other persons in the room were Hattus and Quentin Hatcher; the tripborn looked—frightened.

"So you're still sane, Franz," said Hattus with charnel humor, and Yerring stiffened.

"What's been going on?" he demanded. "I've been locked in my room these past three days—"

"George, and you, and I," said Tsien flatly, "are the only three sane earthborn left in the ship. Everyone

else has gone into fugue—Magda, Siv, Lola, Phil, every last one."

"But—why?"

Tsien slammed his hand down on his desk. "Because they have been faced with an intolerable decision! They have to plant the colony, and they've been forbidden to, and there's nothing they can do about it!"

"Why can't they accept that it must be so?" Hatcher put in, and Tsien gave him a sour stare.

"That's what I want to find out. Franz, when you received the sealed orders detailing the compulsions we had to instil in the tripborn, how did you feel?"

Yerring remembered clearly. "I felt extra determination to see things through."

Tsien gestured to Hattus, and the admin officer thrust a piece of paper under Yerring's eyes; it was folded so that he could see only one line of it, but that line—

He had to see that the colony succeeded, but the tripborn refused to land. Consequence: failure. If they didn't land, they starved. Consequence: death—

It was suddenly overwhelming, terrifying. He cried out, feeling a weight of black despair loom up in his brain. The prick of the needle in his arm scarcely produced even a reflex withdrawal; his mind was running around a closed system. Closed system—starve—

Slowly, his eyes focused, and he was looking at Tsien's anxious face. "Are you all right?" the psycholo-

gist asked. Weakly, Yerring nodded.

"What—?"

"A shot of a euphoric. It'll hold you for the time being, until we can cure you. This settles it, you know."

"Am I ill?" Yerring was confused. "What of?"

"A form of contagious madness." Hattus was grim, but seemed to gain melancholy pleasure from the words. "You caught it the same way I did. From Yoseida."

"You thought you volunteered for this trip, didn't you?" said Tsien. "Well, you didn't. None of us did. You reacted when I showed you Yoseida's signature just now, because it was the trigger of an ordinary post-hypnotic compulsion. Every earthborn in the crew had that compulsion."

Watching his face, Yerring believed the incredible. So Yoseida, the visionary, the dreamer, turned out to be a megalomaniac who wanted nothing less than a planet as tribute to his mania. . . .

"Why have we three got away so far?" he demanded.

"You, I suspect, because you had a sane reason for demanding a landing," said Tsien. "The others hadn't. You were arguing from a viewpoint of simple self-preservation. George seems to have got away because his concern is ship-side; the matter of the colony is incidental to him, and no major worry. And I"—he shrugged—"maybe I subconsciously diagnosed

Yoseida's condition, and it led me to suspect the trouble could be put right."

So I gave my life for nothing, Yerring thought. He waited for despair, and oddly it did not come.

"We still"—Hattus broke the silence—"haven't solved anything."

The three earthborn turned slowly to look at Hatcher, who trembled under their gaze. "Yes," said Yerring, remembering. "Do we suffocate, or turn cannibal, or land?"

Hatcher's face wrinkled, and he burst quite unexpectedly into tears.

They sat in amazement and watched him. "Is this the way the greatest feat in history must end?" said Hattus in a hushed voice. "A shipload of catatonics to carry the race of man to the stars?"

"If our inescapable compulsion is hypnotic," Yerring demanded of Tsien, "what's theirs?"

Hatcher got blindly to his feet and ran from the room. "He'll recover without difficulty," Tsien said without sympathy. "They brought Felipe back, you know? By remote control. He got over a shock which would have scarred you or me mentally for life in less than a day. Oh, their compulsion?" He spread his hands. "Lifelong, Franz. Total."

"How long will it take to cure the rest of us?" George asked.

"Days, at least, maybe months. We shall have to dredge through their minds and find out where and when the compulsion was instituted, and then erase it. It'll be a long, slow process."

"Wouldn't it be quicker to cancel it with a new one?"

Tsien gazed at Yerring. "You have a reason for asking that, haven't you, Franz? What is it?"

"Would an earthborn be able to land on the planet?"

"Damn! Franz, you should have been the psychologist instead of me." Tsien's mind was a step ahead of his tongue—the words tumbled over one another. "Convince them the colony is founded?"

"Better. Land them. Land us all—"

"You said that was no answer."

"But it will be! *If we build another ship.*"

Blank faces greeted his words, and he rushed on. "Look, the tripborn will never land. I've worked all this out in the past few days—how long they could last without the earthborn—but the new ship just hit me. Cutting the population by two-fifty would give a margin of perhaps five years, supplemented by material shipped up to orbit. At the end of those five years, they have assembled, in orbit, a new ship—"

"Impossible," said Hattus. "It took ten years to build this one, with all the resources of Earth behind us."

"George, that was thirty-seven years ago," said Yerring soberly. "There has been progress. With the materials on hand—the tools we were going to use to build a modern town for ten thousand, remember!—we can build that ship."

The sincerity in his tone struck through Hattus's apathy, and the admin officer nodded, hope dawning on his face. "And we go back to Earth," he said softly.

Yes, that's one thing the tripborn have lost, Yerring thought. *The looking forward to going home. Because they are home already. Anywhere. Anywhere else.*

"It's a solution," frowned Tsien. "Yes, the earthborn can be cured if they're landed; the tripborn live in space and assemble the ship; when it's over—where do they go?"

"Anywhere."

"But why?" Hattus turned pleading eyes to Yerring. "Why does it have to end like this—in this untidy, empty way?"

"I don't know," said Yerring steadily. *Once there was a sea. . . .* "But I can guess."

"Tsien said that any normal human beings would have succumbed to his conditioning to planetside life. The tripborn didn't. And I think the answer is this: they aren't human."

"They didn't need to plan and plot to mutiny against us—they *did* it, by common decision. George, you had your finger on the pulse of the ship; conspiracy could never have escaped you. And you've noticed that they scarcely talk, except to us, but the ship has run smoothly nonetheless. They aren't human any more. They're—crew."

"So this is the end of humanity," said Hattus softly, and Yerring shook his head vigorously.

"Never! George, long ago on Earth the sea was the only habitat of life—as it is today on that world down there. But the sea grew crowded; certain species were forced into the shallows, and sometimes the shallows dried up. So some of the creatures learned to take the sea with them, as we brought the air of Earth in this ship.

"The blood in your body now is precisely as salty as was that long-ago sea. Of course, for a long time the animals had to come back to the water to breed.

"But—one day—an animal left the water and never came back.

"This isn't the end of man; there are still snakes and birds and dogs on Earth, still amphibians which have to return to the water. We're the amphibians, you and I. For a long time we've had to return to our rock pools, our planetary bases, at frequent intervals. But the ship we build here need never do so. We have found out how to breed now. And after that, there will be a snake, and a bird, and a dog—"

"And in the end," said Yerring slowly, "there will be a man."
