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## WORLDS OF

VOL. 14, NO. 1

## 

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## MIRACLE ON MICHIGAN

TThe future is a pretty nice place to live. I know-I've just been there.

On certain Chicago TV stations, at the break, you'll see a photograph of a startling structure twin towers studded with little curved balconies - which the Second City is using more and more as a city symbol, like Paris's Eiffel Tower, New York's Statue of Liberty, San Francisco's Golden Gate Bridge. I had the very great privilege of meeting the architect and the dreamer, and the one-man dynamo, who is responsible for the structures known as Marina City.

The towers (and a flat office building, and a 4000-seat theater, under construction when I saw it) stand at the edge of the Chicago River not far from Lake Michigan. Each tower begins from ground level, with a spiral ramp with a roadway wide enough for two cars and radial wings where cars are parked; this spiral rises nearly a hundred feet before the building itself begins. Altogether the towers are about sixty stories high. The central core contains elevator shafts, ${ }^{-}$and the apartments radiate out from this core. Each has its little balcony.

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The rooms are unusually shaped but extremely comfortable. The odd shape becomes less so when you realize how seldom, in your own square or rectangular room, you actually use the corners. More often than not you'll have an easychair shoved in there, or even a china-closet or a TV catercornered. If you cut the corner right off, chances are you wouldn't miss it. The gently rounded pie-segment shape of the Marina City rooms is therefore functional and pleasing. Closet space is ingeniously placed in the apartments. The rentals are mid-range, running from $\$ 115$ up - not excessive for a centrally located wonder like this.

So much for the Up. But down from ground level - way down you will find slips for 75 motorboats, plus service areas, plus storage space for 700 more boats.

I was given a guided tour by Mr. Robert Goldberg, the architect, at night. Standing between them and
looking up, I was ready to swear those towers were hooked right on to the stars. And as cars pulled up and down the ramps, their headlights slashed time and again diagonally across the glass-and-concrete face of that backdrop of an office building. Beautiful. I sincerely envy him the knowledge that he will leave behind him such a durable monument.

Here's the future. Buildings like this, with schools, theaters, offices and stores - beautiful and functional buildings - will obsolete the chrome cracker-boxes for good and all, and they should.

And - practical? Here's the thing that flabbergasted me. My house stands on about three acres. So does Marina City - with space for two thousand people and their cars and boats, and an office building and theater to boot!

You're going to see more of these. Watch for them and be glad.
-THS

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# SATURN'S RINGS 

## BY ROBERT F. YOUNG

## ILLUSTRATED BY LAWRENCE

The weird old castle on Saturn's moon was a fortress - protecting a dynasty and a terrible secret!

TThe summer of Matthew North's life was a dream so deep in his past that he sometimes doubted whether he had really dreamed it. Autumn had set in eons ago, it seemed, and now winter was on hand. He did not find its cold and bitter breath the least bit to his liking.

Once again, pale Hyperion was coming forth to meet him. Once again, resplendent Saturn was advanciug in her ice-błue gown. How
many times before had mother and daughter greeted him at journey's end? How many times before had they seen his sleek jettractor emerge from the immensities with a big black egg impaled upon its prow?

Too many times.
Well, there would be no more times. The Bimini base was gone, and the mysterious source of the many payloads which he and the other jettractor-pilots had delivered to the House of Christopoulos down through the centuries was buried beneath the raging waters of a new-
born sea. The unanticipated tectonic revolution had begun mere hours after he had blasted off from the little Proxima Centauri planet which Nick the Greek had christened "Bimini" some five hundred years ago.

For a long while Matthew had been in a state of shock. Recovering from it, he had radioed the news on ahead. He could just as well have waited, though, and delivered the news by word of mouth, for while radio waves exceeded his jettractor's near-photic velocity, they did not exceed it by very much. In all probability the message had preceded his arrival by no more than a few weeks.

Such proved to be the case. Message received last week, the words that suddenly spelled themselves out on the luminous bulletin-panel informed him. Establish capsule in orbit, memorize but do not record readings, then land and proceed to the Hostel, there to await further instructions. - Zeus Christopoulos IX.
"Orders acknowledged, sir," said Matthew North. "Will proceed as directed."

Precisely as directed. One does not question the commands of God, no matter how unorthodox those commands may be. And to Matthew North, Zeus Christopoulos IX was God, just as the previous male descendants of Nick the Greek had been God. The fact that Matthew had never laid eyes on any of these gods argued for rather than against their divinity, and the fact
that he had never been permitted to set foot inside the House of Christopoulos bolstered rather than undermined his respect for them.

Choosing a polar orbit of maximum altitude, he reduced the jettractor's momentum to the velocity he wanted. Then, after mentally recording his instrument readings, he disengaged the capsule and fired his retros. He watched the huge eggshaped container dwindle into the blue-black distances and fade from sight. Finally he began orbiting in.

Saturn hove into sight with each crossing of the twilight belt, but each time he saw not Saturn but a rich and dazzling jewel hanging upon the Brobdingnagian cheek of the Ethiope goddess Space - the black bitch-goddess of vast immensities and burning suns at whose cold and unfeeling feet he had laid the best years of his life. "For you, Zeus, I did this thing," he said, unconsciously lumping the successive heirs inte a single entity. "For you I put my years upon the block in order that your House might never be without the precious payloads I have delivered to its door - payloads I have never seen and do not even know the nature of. And now they are no more.
"Now I have come home to die."
But he had no true right to regret, and he knew it. He had put his years upon the block, yes - but no one had forced him to, and he had not auctioned them off for nothing. With them he had bour':t a safe little island of changelessnass in the giddy onrushing torrent of time.


Night passed, and came the day, the pale day with its cold and distant sun and its wan, cold stars.

Gliding downward along an evershrinking orbital path, firing his retros with the passing of each dawn, Old Matt North became Young Matt North again - Young Matt North standing in a bustling bar that bewildered him, rubbing shoulders with strangely garbed, gesticulating people who frightened him; Young Matt North recently returned from a Hyperion-Sirius XXI run, adrift in a civilization that, thanks to the Lorentz-FitzGerald contraction, had left him almost two decades behind.

Beside him stood the man from the House of Christopoulos who had spotted him from across the room. He had come over and bought him a drink and told him glowingly about the Great Opportunity. "You paint a pretty picture," Young Matt said. "I'll say that much for you."

The man was young - almost as young as Young Matt North. His cheeks were smooth and plump, and you could smell money on his breath. Zeus I was his shepherd he did not want.
"As true a picture as it is pretty, Matthew North," he said. "The House of Christopoulos takes care of its spacemen. It doesn't cast them adrift between runs the way the commercial carriers do. Zeus I was a spaceman once himself he knows what it's like to be cast adrift. That's why he spared no expense when he built the Haven.

That's why he duplicated a sane and sensible setting out of the past instead of building a modern setting. That's why he guarantees his jettractor pilots a job for life. Thus far, there are only two, and he needs but one more, but the Haven is large enough to accommodate a hundred. And it will never change. The Hostel will always be there waiting for you when you return, and during your six-months layovers there will be girls.for the asking, and taverns with open doors."

## II

Ihad been true - every word of it. And it was as true today as it had been then

Old Matt North berthed his jettractor, climbed out through the locks carrying his duffel bag, and walked around the big platform-lift on which he had lowered so many capsules into the subterranean pneumotube that led to the crypts beneath the House of Christopoulos. The little port gave directly onto the single street of the Haven, and he walked down the street toward the big stone structure at its farther end. As always, the sight of the Hostel reassured him. There was a permanence about stone that could not be duplicated, a solidity that other materials lacked. Inside, there would be warmth and welcome, and more food than he could eat and more wine than he could drink. And there would be girls, too. If he still wanted them.

He wondered if he did.
It was mid-morning, and a cold
wind was blowing in from the surrounding ice-flats. It outlined his spacetogs against his spare frame and ridged his skin with gooseflesh. Beyond the Hostel, the great pile of the House of Christopoulos stood massively against the gray, starstarved sky. It had been patterned after the Parthenon, but in the dis-tance-decimated sunlight its noble Doric columns and magnificent entablature took on a pale cast that was out of keeping with the trabeate architecture. And while the force-field that played darkly between the columns let in what little light there was, it gave back nothing in return. The over-all effect was one of Gothic gloom.

Usually the House awoke vague longings in the deeps of Matthew North's being. Today it did not perhaps because he was not really seeing it.

He was seeing the girls he had known instead - the girls he had slept with down through the decades, some of whom were old and withered women now, and some of whom had lain for centuries dead. The pretty little call girls he had had with the sweet sad swiftness of a hummingbird's flight and then had known to more... and now the room that summer dresses in new bloom was empty, and only the sporadic fluttering of the window curtains betrayed the presence of their ghosts.

It was as well, perhaps - who knew? Matthew North sighed, and walked past the tavern doors agape.

He avoided the expectant looks of the villagers - the viHagers
whose function it was to cater to him during his layover and see to it that he wanted for nothing, and beneath whose breasts pulsed not hearts but tiny motors that never ran down, and behind whose welcoming eyes dwelled not memories but memory banks. Only the girls had been real. The rest was technological fantasy.

The interior of the Hostel had not changed one whit. Indeed, he could have sworn that the log burning in the great stone hearth was the same log that had been burning there the day he left. The hostler was no longer the same though. Matthew stared at the small and portly - and unquestionably human - man who came forth from behind the bar to greet him. The man smiled at his bewilderment. "Zeus IX decided that human personnel could do the job better," he explained. "Taverns are one thing, but an inn needs a human touch. He offered me the building, and the keep of my wife, my daughter and myself if we would school ourselves in mid-twenty-second century lore, and condition ourselves to the early-twentieth-century way of lifo which the Hostel symbolizes. I agreed to do so, and here I am. Welcome home, Matthew North."

Clearly, the hostler had not as yet been informed that the Bimini base was no more.

Matthew did not bother to enlighten him, and allowed himself to be led over to a big wooden table that stood before the hearth. Presently the hostler's wife - a strapping woman with eyes the hue of
port wine - brought in steaming platters of food and a tall and dusty bottle of Venerian Chianti. Matthew knew an appetite he had not known in years and ate hugely. He drank largely of the wine. It was red and fiery, and warmed his very bones. Stupor stole over him. "I would sleep," he said.

$\mathrm{T}^{\mathrm{b}}$he hosteler's wife depressed a buzzer at the end of the bar, and a moment later a tall girl with shoulder-length brown hair entered the big raftered room. She was wearing cling-slacks, and short fleece-lined boots; a white plastijacket covered her arms and shoulders, fell loosely round her hips. Youth shouted from her blue, smoke-filled eyes. "Faustina will show you your room," the hostler's wife said. "Ask her for whatever you want, and she will get it for you."

The girl came forward, picked up his duffel bag, shouldered it effortlessly and led the way through the side entrance to the period-piece outside-stairway. On the second step she paused and turned. "Would you like some girls perhaps?"

The amusement in her eyes diminished him. He lowered his gaze to the ground. "No," he said. "Not now."

She shrugged and resumed her ascent of the stairs. He followed, marveling at the smooth flow of her limbs, at her graceful strength; at the youth that was manifest in her every movement. Lord, to be young again! he thought. He felt suddenly, horribly, cheated -
robbed of life and love. He yearned to lean upon her shoulder, to steal some of her youth and strength. He wanted to see desire in her eyes. Instead, when she lingered for a moment in the doorway of the room the hostler had prepared for him, he saw pity.

She lowered his duffel bag to the floor. "There's a buzzer by the bed," she said. "If you need anything just press it." She turned and walked down the hall and out onto the lending.

He heard her footsteps on the stairs. Silence came.

The room was a large one. All of the rooms in the Hostel were large. Large and empty.

Over the decades he had slept in a dozen of them. He would sleep in this one now, sleep the sleep of the dead, and he would forget stars and space, and loneliness. He would forget the pity he had seen in a young girl's eyes and he would forget that the only love he had ever known was the love that the Houso of Christopoulos had paid hard cold cash for, and itemized on the same list on which it had itemized his bread and wine. He would forget - for a little while, at least - that for all the slowed-down clocks that had given him relative immortality, he was an old, old man.

He added wood to the fire in the big stone hearth and turned back the sheets of the huge four-poster bed. He undressed, showered, then climbed into the period-piece bed and let his weary body sink deeply into the eiderdown mattress.

He thought of Bettinger and

Flynn, the other two jettractorpilots. Bettinger must have reached Bimini by now, and seen the dark sea raging where once the android settlement and the fenced-off lake had been. In a few more months - years, if you computed the time objectively - Flynn would arrive there. Both would return with empty capsules.

Matthew sighed, and turned on his side.

There was nothing he could do. The Bimini base was no more, and that was all there was to it. He thought fleetingly of the orbiting capsule and wondered why Zeus IX had not wanted it brought down; but the ways of God were by their very nature inscrutable, and not to be questioned, and presently Matthew North ceased wondering, and slept.

Aknock on his door delivered him up from a haunting dream of his lost youth. "Yes?" said Old Matt North, sitting up in bed. "What is it?"
"You have a visitor, Mr. North."
"A visitor? Who?"
There was awe in Faustina's voice. "Hera Christopoulos. She's waiting for you downstairs. Hurry, Mr. North!"

Fading footsteps. Silence once again.

For a while his consternation held him chained. Finally, breaking free, he climbed out of bed and pulled his best suit out of his duffel bag. He got into it, trembling all the while, and wetted and combed his gray and thinning hair. The dark
stubble on his cheeks distressed him - he should have shaved before going to bed. Now it was too late.

Hera Christopoulos. The wife of Zeus IX....

She was tall, and coldly beautiful. Her dark eyes were set beneath delicate black flares of brows, and held in them a quality that was reminiscent of deep space. Her black hair, upswept into a twist that flowered out and spilled down like the waters of a Cimmerian fountain, stole microcosmic stars from the hearth-fire before which she statuesquely stood. A scarlet sarong, secured by a silver chain around her throat, swirled thrice around her Junoesque body and terminated in a silver band just above her right knee.
She had unfastened the throatclasp that had held her ermine cloak in place, and the cloak had fallen to the flagstone floor like snow, half-burying her sandaled feet, and she stood in the snow haughtily, the firelight heightening the insolence of her naked arms and shoulders and her semi-naked legs.

Entering the room, Matthew thought for a moment that he had seen her before. The absurd thought was followed instantly by the memory which explained it. Oftentimes descendants duplicated the physical traits of a long-dead ancestor. Hero was a case in point. It was not Hera whom he had seen, but Dione Christopoulos - the wife of Zeus IV, and Hera's great-great grandmother.

The memory, once unleashed, ran rampant in his mind. Onco
again the long-ago night closed in around him - the night and the wine and the laughter, the girls and the synthetic gin. Once again he was forty-five and afraid. Once again the strange restlessness came over him, and suddenly the intervening years were no more and he was plunging out of the stifling Haven bar and into the wind-washed street.

The coldness of the night shocked him, but he did not go back inside for his greatcoat. He welcomed the coldness. He reveled in it, and ho let the icy wind wash over him as though he were a boulder lodged in midstream, delighting in the clean, clear current. Saturn was on high, a great and gleaming jewel hanging in the heavens, bathing the iceflats in bluish light and imparting to the House of Christopoulos a majesty which the daylight would destroy.

Something about the storied structure tied in with his restlessness. He set off across the flats, into the river of the wind.

## III

The building was less than a mile distant from the Haven, but the wind and the ice made the going arduous. Only the heightened sugar-content of his blood enabled him to reach the row of artificial cypress trees that paralleled the rear line of columns.

Gasping, he collapsed in the lee of a gnarled trunk and massaged his numb legs. When his breath returned, he peered round the trunk - and saw the rift.

It was the result of a circuit dofect in the force-field, and apparently neither Alexander the Great nor the other three roguards had noticed it as yet. It wasn't a largo rift, but it was large enough to see through. The trouble was, it was way up on the force-field wall just beneath the entablature. However a tall cypress stood not far away. From its topmost branches an enterprising man might obtain a glimpse of the building's interior if he wanted to badly enough.

Matthew North did.
He was at the base of the tree in a matter of seconds. Minutes later he was riding the wind on a lofty bough, chest tight from the climb, hands numb and bleeding. The rift had a pinkish cast now. The room beyond it was pink.

The room was a bath.
He hād believed in his naivete that because the House had been patterned after the Parthenon, it must of necessity have but one floor. He saw now that such was not the case. For all the loftiness of its ceiling, the bath into which he was gazing was unmistakably a part of a second story.

Apparently the rift in the forcefield wall was on the visual circuit only, for the three women in the room seemed unaware of the cold wind.

Two of them would have been unaware of it in any event, for they were not truly women. They were android handmaidens. One of them had been created in the image of Helen of Troy, the other in the image of Hecuba. So perfectly
wrought were they, however, that he would not have guessed the truth had it not been for the names embroidered beneath the neck lines of their Grecian Tunics.

The woman in the bath proper was real, though. She put to shame the flaming torch of Helen of Troy, and all but extinguished the flickering one of Hecuba. A monogram on one of the huge white towels the handmaidens were holding revealed her identity: Dione Christopoulos.

Matthew could not breathe.
Dark of hair and eyes, scarlet of sultry, almost sullen lips, soft-white of water-rivuleting skin, she stood up in the marble basin. He saw the full breasts, scarlet-nippled to match her lips, the gracefully flowing buttocks, the breathless slopes of gleaming thighs. As though cognizant of his presence and eager to flaunt the pastures in which he could not feed, she faced the rift for one full minute before surrendering herself to her handmaidens. He saw the birthmark then: the purple dagger-shaft between her breasts, its blade seemingly buried in her white flesh -

At the same time, his eyes caught a movement at the base of the tree.

Lowering them, he saw the roguard standing there. Saturn's iceblue light glittered on the Macedonian armor, on the long, lethal lance whose inbuilt laser tube was capable of leveling a mountain. Matthew shrank against the bough, trying to efface himself from view.

He needn't have. Antigonus or Seleucus or Ptolemy-whichever
of Alexander the Great's generals the roguard was - had eyes only for the rift and was utterly unaware of the Peeping Tom in the tree above his head. Presently he left tho trunk and hurried round the corner of the House, heading for the entrance where Alexander the Great was stationed, and leaving the coast clear.

Matthew reached the ground in seconds, and began running across the flats. He was spent when he reached the Hostel trembling when he climbed into bed. All night long Dione Christopoulos had walked through his twisted dreams, and he had carried a mental picture of her standing in her bath down through the years to this very moment.
$T \begin{gathered}\text { he resemblance between her } \\ \text { and the beautiful young wom- }\end{gathered}$ and the beautiful young woman standing before him in the Hostel was striking. He had heard it said that interfamilial marriages had been the rule in the House of Christopoulos ever since Nick the Greek had married an indentured cham-bermaid-a peasant girl named Antonia Anzalone - and set the dynasty in motion. Matthew had always discredited the rumor, but now he wondered if perhaps there might not be something to it.

He shuffled across the room and paused humbly before his visitor, staring down at the ermine snow that lay around her feet. Should he bow? he wondered. Or should he kneel? In his indecision, he did neither but stood there like the bewildered and frightened old man he was.

Hera Christopoulos looked him up and down. Her voice was as cold as the wind that blew across the ice-flats. "Where is the last capsule?" she demanded. "Why wasn't it delivered to the House?"

He could not think at first, could only stand there dumbly. When at last words came, they emerged in a meaningless mumble. "What did you say?" Hera Christopoulos asked.

He clenched his hands in a vain attempt to still the trembling of his fingers. Faustina appeared timidly at his elbow, bearing a tray with two cups of coffee on it, and in his agitation he seized one of them and gulped down its throatsearing contents. Belatedly, he remembered that he should have let his visitor serve herself first. Acute embarrassment all but overwhelmed him. Miserably, he returned the cup to the tray.

Hera declined the other cup with a disdainful look, and Faustina hurried away. The log fire crackled, and the crackling reverberated throughout the room. "Are you dumb?" Hera said contemptuously. "Or have you only temporarily lost your tongue?"

Anger sparked him into articulation, and he raised his eyes. "The capsule is in orbit, in accordance with your husband's directions."

She took a step backward, and the fluffy pile of ermine snow became a windrow. The deep-space darkness of her eyes intensified. "He ordered you to put the capsule in orbit. Why?
"He did not say why."
"When did he contact you?"
"This morning, just before I made moonfall."
"I order you to bring it down."
"I can't bring it down unlesa Zeus IX authorizes it," Matthew said.
"Zeus IX was called away on business. Quite naturally I am empowered to speak for him in his absence. I hereby countermand his order with an order of my own: Bring the capsule down and see to it that it is delivered to the Houso immediately." With a catlike movement she bent down and picked up her cloak. Straightening, she showered it around her shoulders. "Immediately," she repeated, and, turning, started for the door.
"No," said Matthew North. "I can't."
She spun around, a flurry of whiteness and woman. "I order you to bring it down!"
$T^{\text {he commoner in Matthew }}$ quivered, and the servant in him quaked, but his loyalty to Zeus IX refused to let him retreat.
"When your husband notifies me and gives me the necessary order, I will bring it down," he said, "but not before. I am sorry, but I have no right to act otherwise."
"Very well then. Give me the orbital readings and I'll have someone else bring it down."

Matthew shook his head. "I'm sorry," he repeated. "I can't do that either. You see," he went on, "Zeus Christopoulos IX represents more to me than just the ninth Zeus in line. He represents all the others who preceded him. I-I have worked
for the House of Christopoulos almost all my life. And I have come to regard my duties as a sort of sacred trust - a trust that I could never bring myself to violate. I would die for the House of Christopoulos. I would die for you. But I cannot obey your order."

She regarded him for some time, the Cimmerian fountain of her hair spilling darkly down to the white snowbanks of her shoulders. Thought, not anger, now resided in her deep-space eyes. At length, "I believe you would at, that," she said; and then, "Such loyalty should not go unrewarded."

Surprised, Matthew said, "It has not gone unrewarded."
"But it has not been rewarded in full." She glanced at the magnified dial of her ring-watch. "It is now six-twenty. At eight-thirty you will arrive at the House of Christopoulos for dinner. That is an order. Will you obey it?"

Weakness came into Matthew's knees and sent his legs to trembling. His gratitude was so great that he could barely speak. "Yes - yes, I will obey it. And thank you."
"I will expect you then."
She turned and walked out of the Hostel, her cloak snowsqualling around her. She climbed into the glide-car in which she had come, the glide-car hummed to life, and a moment later she was gone.

## IV

The Alexander the Great roguard stationed before the multi-columned entrance of the

House was a product of the "realistic school" of android manufacturing. He was slightly larger than his long-dead flesh-and-blood prototype, but in all other respects he was a faithful reproduction. He possessed not only his prototype's character but his prototype's specialized knowledge as well.

The look he bestowed upon Old Matt North artfully combined aristocratic arrogance and militaristic contempt. When Matthew said, "I'm Matthew North - Mrs. Zeus Christopoulos IX is expecting me," the roguard acted as though he hadn't heard. Nevertheless, he relayed the information into the tiny radio attached to his helmet.

A moment later Hera Christopoulos' imperious voice sounded crisply on the night air: "Well, let him in, you synthetic snob! I told you this afternoon that you were to pass him."'

Without a word Alexander the the Great stepped to one side and pointed toward the multicolumned facade of the House of Christopoulos with his laser-lance.

Still shivering from his wind-beset walk across the flats, Matthew approached the Pentelic marble steps, all the while staring nervously up at the frieze upon which were carved bas-reliefs of the divine consorts of the original Zeus - Metis, Maia, Leto, Dione, Demeter, Mnemosyne, Themis, and Eurynome. Above the cornice and centered beneath the peak of the gable was a big bas-relief of Hera that rather startlingly resembled the flesh-and-blood Hera with whom he
was about to break bread. Flanking it on either side, in attitudes of $a b-$ ject adoration, were bas-reliefs of various mortals who had contributed to the glory that was Greece. Some of them he recognized from the pictured busts and sculptures he had viewed on his jettractor's librarytape: Thucydides, Heraclitus, Aristotle, Plato, Epicurus, Sophocles. One of the figures was groveling at her feet. It was a bas-relief of Ho mer.

Night had fallen an hour ago, in accordance with Hyperion's neorotational period established some five centuries ago at the instigation of Nick the Greek. Now Saturn was climbing into the sky. Lowering his eyes from the gable, Matthew began ascending the wide marble steps.

The Doric columns seemed to rise higher and higher above him. The feeling of insignificance that had afflicted him ever since he had set forth from the Hostel increased. He felt very small indeed when at last he stepped through the doorway that appeared transiently in the black curtain of the force-field, and into the enormous room beyond, and he wished that he had not come.

The room occupied the entire front half of the rectangular building.

Strictly speaking, it was more of a great hall than a room. On three sides of it, the magnificent Doric columns rose up to the architrave; on the fourth side - the side opposite the entrance - a grand Pentelic staircase climbed majestically to
a railed mezzanine, beyond which dozens of ornate doorways could be seen. The appointments were made of Peistelic marble, too - benches, tables, chairs. And in the center of the room a Pentelic marble fountain sent up an exquisite nosegay of twinkling water. High above the fountain, seemingly suspended in midair, an incongruous chandelier, wrought in the shape of a barredspiral nebula, shed soft but penetrating radiance. The inter-columnar force-field that so effectively concealed the building's interior from the eyes of the outsider existed here only as a diaphanous mist. Through the mist, the garish bonfire of the mile-away city of Saturnia showed like gentle candlelight.

A robutler dating from the same "school" as the Alexander the Great roguard and wearing a Grecian tunic on the front of which the name Pindar was embroidered, came forward on sandaled feet. He took Matthew's greatcoat and earflapped cap, and conducted him across the room to a round marble table that stood at the base of the staircase. Passing the fountain, Matthew gave a start when he saw the silvery flashes that spelled the presence of Venerian piranhas.

There were hundreds of them. No, not hundreds. Thousands. Hera's pets? he wondered.

After seating him at the table, Pindar retired to the columnar sidelines. Matthew saw the other androids then.

There was one standing at the base of each column. All of them
wore tunics and sandals similar to Pindar's, and all of them save one were standing in statue-like immobility. The exception was an old "man" with a sensitive, bearded face who was regarding Matthew intently.

As Matthew watched, the android left his column and came over to the table. He leaned forward, the tiny tubes that constituted his eyes alternately dimming and brightening. Matthew remembered encountering a similar reaction in one of the robartenders at the Haven. The robartender was a product of the same "school" that had produced the House of Christopoulos "personnel", and in common with all such "character" androids he could function effectively only as long as the scheme of things which he had been built to fit into remained at least reasonably in keeping with his "personal" sense of right and wrong.

His sense of right and wrong was clear-cut enough. But therein lay its weakness. He believed that the three jettractor pilots should drink themselves into insensibility in his bar at least once during their layovers, and when Matthew had refused to touch a drop during one of his (he had been combating a peptic ulcer at the time), the robartender had suffered a mechanical breakdown, the first symptom of which had been an alternate dimming and brightening of his eyes.

Matthew read the name on the old "man's" tunic. "Aeschylus?"

The old "man" nodded eagerly. "Yes. Aeschylus - overseer of baths and bedrooms." And then, "This
morning, darkly plotting deep within, the monarch sleeping softly by her side, she -"
"You dare leave your post after hours!"

It was Hera. Hera in a saronglike gown that glittered with diamonds. Hera, tall and imperious, eyes abyss-dark with rage.

Aeschylus stepped back, eye-tubes working furiously. "Bumbling old fool," she went on. "Get back to your column! You'll be scrapped tomorrow - I never could stand listening to your plays anyway. They're stupid!"

The old "man" turned and shuffled back across the floor and took up a stone-like stance by the column he had so recently left. Hera turned to Matthew who had risen to his feet. "I apologize for his presumption," she said. "Please sit down."

Matthew did so, and she sat down next to him on the bench. There were lines of tiredness at her eyecorners - or perhaps lines of worry; it was difficult to tell - and her face seemed slightly thinner than it had been before.

She clapped her hands. A moment later a mech-maid bearing a tray with a tall dark bottle and two flower-stem glasses on it emerged from a doorway to the right of the staircase. The embroidery on her tunic-front revealed her name to be Corinna. "Will that be all, madam?" she asked, after setting the glasses and the bottle before them.
"For the moment. Begone, kitchen wench!"

Corinna departed. Hera filled the glasses and handed one to Matthew.

She raised the other. "A toast to your loyalty, Matthew North," she said. "May it hover forever over the House of Christopoulos like the great and shining star it truly is."

They touched glasses, drank.. The wine ignited cool fires within him. Lambent flames rose up and licked his thoughts.

Was this the wine the House of Christopoulos was famous for? he wondered. The wine that Nick the Greek was reputed to have made his fortune on? Matthew did not think so. Such a wine was far too dear ever to have been distributed on the mass market. And besides, it was said that the real source of the Christopoulos fortune was the synthetic gin which Antonia Anzalone had developed in her bathtub before Nick the Greek had married her, and which the good citizens of Earth and the Seven Satraphies had been incontinently consuming ever since.

Hera refilled the two glasses, and clapped her hands again - twice, this time. Immediately Corinna and another mech-maid, whose name was Psappho, began bringing in viands.

The amount and the quality of the food left Matthew speechless. The entree was Martian ptarmigan, a delicacy which he had never tasted before. With each course a different kind of wine was served, none of which he had ever tasted before either, and each of which was more potent than the last. All that saved him from drunkenness was the quantity of food he con-
sumed. And in the end this did not save him either, for the meal proved to be no more than a foundation for the wine to come. There was red wine and blue wine and amber wine, and there was even a red wine with a greenish cast which Hera said came from the vineyards of Sirius XVIII's southernmost continent and had been aged in deep space. Was there another wine, Matthew North wondered, a wine that she had not seryed him? - a wine that was a product of Bimini and which had also been aged in deep space?

He could not recall seeing any vineyards on Bimini, though, either during his orbits or during the walks he had been forced to take while the android personnel loaded his capsule. About all he had ever seen on Bimini were trees and more trees. That was all Bimini was, really - or rather, all Bimini had been. A big jungle in the sky.

Give or take a few lakes and rivers, of course - and the saltwater sea that had recently kicked over its traces.

The ship of small talk put into this port and that, Hera at the helm and Matthew sounding a polite note of concurrence whenever he thought one was called for. Presently it ran aground on the subject of Greek religious mythology. Hera dwelled lengthily on the Euhemeristic theory of the origin of the gods. "Then you don't think they were true gods, after all?" Matthew asked at length.

She sipped her wine, set the glass back down. "On the contrary, I'm
positive that they were true gods. The mere fact that they were once mortal doesn't mean that they couldn't have become immortal. Mortality is a necessary prelude to immortality, just as immortality is a necessary prelude to the superapotheosis which must logically follow. But aside from all that, the real proof of the immortality of the Greek gods has been staring scholars in the face for centuries. And they have been too short-sighted to see it."
"I - I guess I'm too short-sighted too," Matthew said.

She laughed. It was a genuine enough laugh, but for some reason it deepened rather than lightened the lines at her eye-corners. "They lived near mortals and had dealings with mortals when they could just as easily have lived by themselves and had nothing to do with lesser beings," she explained. "Immortality, you see, is relative. Living with other immortals exclusively and avoiding mortals, they would have been unable to appreciate their superiority. Living near inferior beings and having dealings with them, they could appreciate it. It's such a simple truth that the scholars have overlooked it, the way they've overlooked so many simple truths. Scholars are stupid anyway - almost as stupid as philosophers." She faced the staircase. "Come on out, old man," she called, "and start cleaning off the table."
$A^{n}$ android with a block-like head shuffled out from behind the staircase. His huge face was
ugly almost beyond belief. A straggly white beard dribbled down from cheeks and chin and upper lip into a mop-like tangle. Only the eyes saved the sorry visage from complete catastrophe. They were a clear, benevolent brown.

The letters embroidered on his tunic spelled Socrates.

He began collecting the dishes and the platters, and stacking them, his slab-like bare feet going flap-flap-flap on the Pentelic marble floor. The dishes and platters stacked, he started carrying them through the doorway to the right of the staircase. His movements were slow and clumsy. There was something grotesque about the whole performance. Something pitiful.

A scrap of ptarmigan had fallen to the table. Hera brushed it to the floor, and when the old "man" returned for his last load, she pointed to the scrap with the toe of her sandal. "Pick it up, old man," she said.

Socrates did so, then carried the rest of the dishes and platters from the room. "Make sure you get them clean, old man," Hera called after him. For a moment Matthew felt sick to his stomach. Why Socrates? he wondered. Why Pindar? Why Corinna? However, he held his silence, and presently the matter drifted from his thoughts.

All matters drifted from his thoughts. All save one....

Hera was a strong and scented wind blowing through him. The wine strengthened the wind, and ho found it increasingly difficult to
stand against it. He swayed when the said, abruptly and without prelude, "Will you bring the capsule down?" But he did not fall. Not quite.

## "No," he said, "I can't."

She moved closer to him, the diamonds of her sarong-gown dancing in blinding blues and whites. "You would not be bringing it down for nothing. I pay cash!"
"On delivery?" he heard his strange voice ask.
"You are an honorable man. Your word is good enough."

He swallowed. Her face was very close. It fascinated and repelled him simultaneously, but the repulsion was a form of fascination in itself - a perverted form, perhaps, but nonetheless compelling. The thoughts that it awoke added to his drunkenness. He remembered that she was the only human being he had seen since entering the House, and he knew suddenly that they were alone, and that she had meant for them to be alone.
"Do I have your word?" she asked.

The dancing diamond-light of her sarong-gown half blinded him. He tried to speak, could not. His glazed eyes made speech unnecessary. She stood up. "You have not seen the mezzanine," she said. "Come, I will show it to ycu."

He followed her up the marble stairs on unsteady stilts of legs. Seen from above, the enormous room brought to mind the
concourse of an ancient railroad terminal. The mezzanine itself was a graceful promenade, and the walls between the doors that opened off from it were decorated with the simplest of Grecian designs. Hera opened one of the doors and stepped into the room beyond. Trembling, he followed.
"My bath," she said.
It was the same bath he had peered into - how many years ago - and seen Dione Christopoulos. He had been forty-five and afraid then. He was still afraid, but he was no longer forty-five. Nevertheless, the restlessness that had afflicted him then came back.

Now he was in a position to apply the cure - if making love to a beautiful woman who was far above his status really was the cure. In any event, it was for sale. And circumstances had provided him with the price.

The trouble was, part of the price was his loyalty to Zeus IX.

What was it that the capsule contained that Hera found so irresistible? he wondered. So irresistible that she could not wait till her husband returned to indulge herself?

Drunk as he was, Matthew was still incapable of asking her pointblank. Wine or no wine, he was still her servant. He dared not risk incurring her ill-will. But was her motivation really important? Wasn't it enough that she did want the capsule brought down, and that only he knew its celestial hiding place?

After the bath, she showed him several other rooms, the last of which was her bedchamber. It was
a large room, and the three-dimensional murals on its walls made it seem even larger. The subject of the murals brought a blush to his withered cheeks. He had read of the rites for which the Temple of Diana at Ephesus had been famous. But reading about them was one thing - seeing them graphically depicted was quite another.

Hera was looking at him questioningly. Light emanating from the obscene murals gave her flesh a reddish cast, deepened the darkness of her eyes. He looked over her shoulder, saw the huge sleeping dais with its scarlet pillows and black counterpane. He heard the hoarseness of his breathing and he felt the pounding of his heart, and he knew all at once that in order to possess her he would betray far more than what Zeus IX represented; that, like all loyalties built on self-deception, his loyalty to the House of Christopoulos was worthless.

He stood there helplessly as it came tumbling down around him. "I'll bring the capsule down whenever you wish," he said.
"Yes," she answered absently, as though she had heard the words long before he said them. And then, "If you will wait outside, I will have my handmaidens prepare me." She clapped her hands.

Trembling, he stepped out onto the mezzanine. Helen of Troy and Hecuba appeared, side by side, entered the room and closed the door behind them.

His trembling increased. To relax his thoughts he walked over to
the marble railing and looked down into the great room below. At the fountain and the tables and the benches. At the columns, at the android standing at the base of each, as though chained. At Ictinus and Callicrates, the architects who had built the original Parthenon; at Phidias, the sculptor who had supervised the building; at Zeno, Polyclitus, Praxiteles, Homer, Parmenides, Leucippos, Aristophanes, Sophocles, Euripides, Aeschylus -

Aeschylus was looking up at him, eyes flashing on and off.

Now the android left his column, crossed the floor and ascended the stairs. He walked over to where Matthew was standing and touched his arm. "Come," he said, "I will show you so that you will believe."

Matthew was annoyed, "Show me what?"
"I will show you," Aeschylus repeated. "Come."

The blink-rate of the eye-tubes was alarmingly high. What illogicality had this old "man" stumbled upon that could have upset him so? Suddenly curious, Matthew said, "All right - but you'll have to hurry."

Aeschylus led him down the mezzanine to an imposing door at the farther end. The door was locked, but Aeschylus produced a ring of keys from a pocket in his tunic and inserted one of them into the anachronistic lock. A moment later, the door swung obediently open. Following the old "man" into the room beyond, Matthew found himself in a large bath.


It put Hera's to shame. The concave wall was one continuous mural of an Elysian countryside, and it blended imperceptibly into a ceil-ing-mural of a blue, cloud-scattered sky. So vivid was the illusion of depth that for a moment he thought he had stepped across space and time to ancient Greece. Real grass grew beneath his feet. The bath became a quiet pool on the bank of which he stood. Two life-size statues stood on the opposite bank one Pan, the other, Syrinx. Syrinx was running away, and Pan was in ithyphallic pursuit.

Matthew looked down at the pool at his feet. It was perhaps nine feet in diameter and had a maximum depth of about five feet. Its concave bottom consisted of white marble. As he gazed into the bluish
water, he thought he saw a flash of silver. Reflection? He wondered. Peering closer, he saw other flashes. He identified the shining flickering shapes as Venerian piranhas then, and suddenly sober, he drew back. The water was alive with them!

Why would any man - even a rich man who could afford to be eccentric - want to keep Venerian piranhas in his bath?

Aeschylus was pointing toward the bottom of the pool. Stepping forward, Matthew looked down into the strange blue water once again -

And saw the bones -
The grisly bones, picked clean of living flesh. The white bones that almost matched the marble basin. Femurs, pelvis; empty rib box. Dark-socketed skull. Bone-fin-
gers, one of them still encircled by $a$ ring - a ring that bore a familiar seal.

The seal of the House of Christopoulos.

Or, if you looked at it with Aeschylus' eyes, the seal of the House of Atreus....

Sickened, Matthew turned away. "When?" he forced himself to ask.

Aeschylus faced him. As the android spoke, his blink-rate rapidly increased:

This morning, darkly plotting deep within,
The monarch sleeping softly by her side,
She rose, and did with goblet vile
Scoop death from waters rampant and carry it aloft,
And pour it into this, her monarch's pool.

The old "man" paused. Raising his eyes to the counterfeit countryside and lifting his arms in supplication, he went on:

Come, Eumenides three, and haunt her. Dog her bloody trail!
To Apollo and Athena make her flee. Come, do not wait -
Orestes is no more; Electra lurks not at this sorry bier.
Beyond the cloud-cast sky where once dimly shone the sun.
Only darkness can be seen. Woe unto her - woe!
Awake, ye fiends incarnate, and
right this crime
The indifferent gods looked down but did not see!

Horrified, Matthew seized the keys which the old "man" still held in his hand, and ran from the room. He sorted through them as he hurried down the mezzanine, and by the time he reached the door to Hera's bedchamber he had the one he wanted.

He fitted it into the lock, and turned it. Then he tried the door. It did not give.

He went loking for a visiphone.

## VI

$T^{\text {he }}$Saturnia police had to knock out the Alexander the Great and his three generals with a deactivation ray to gain entry.

Matthew did not know this till he left the House hours later and saw the four "bodies" sprawled on the marble steps. Instinctively, he looked away. They brought too vividly to mind the "body" he had found by the piranha-infested pool when he had returned to the bath with the Saturnia Inspector of Police. Alexander, Ptolemy, Seleucus and Antigonus could be re-activated. Aeschylus could not be. Aeschylus had gone insane; his circuits had shorted out, blowing his eye-tubes, and all that remained of him now was a blackened shell.

Perhaps, though, it was just as well. Now that the House of Christopoulos had fallen, there was no more need for period-piece androids.

Nor for period-piece spacemen.
Old Matt North shivered in the raw wind that was rushing across the flats. He turned up the collar of his greatcoat, and thrust his hands deep into his pockets. Dawn was beginning to edge into the sky, and Saturn had long since crept to rest. He wondered what it would be like, living in a world that had left him over four centuries behind. He could not possibly adapt himself to it. He was too old. Too tired -

A tired old man.
A filthy old man.
That was what Hera Christopoulos had called him when the Saturnia police had led her shrieking from her bedchamber. Disheveled, half-naked in the obscene negligee in which she had adorned herself to awaken his desire and which revealed a dagger-birthmark startlingly similar to Dione's, she had screamed the words at the top of her voice. "Filthy old man," she screamed, face white, and suddenly, shockingly, thin. "I made the Christopoulos fortune - not Zeus! It was I who deserved your loyalty - not him. And you sold me out! Filthy old man! Filthy old Peeping Tom!"

Confronted with the bones at the bottom of the drained pool, she had not even bothered to conceal her guilt. "It would only have been for twenty or thirty more years anyway," she said. "Maybe it's better this way." Abruptly her voice rose. "It was all his fault! There would have been enough in reserve to have lasted us for another century if he hadn't squandered it, if he
hadn't given it away. Given it to his mistresses. 'Would you be beautiful forever?' he asked them, and they fawned at his feet. Then he sickened of them and let them wither away, one by one, and found others to give away his years to. My years. And then he tried to cheat me out of the handful we had left. Well, I beat him there. I'm glad I fed him to the fish. I hope they dined well." She gave a hideous laugh. "I'll bet his flesh was stringy, though. I'll bet his skin was tough!"

More laughter erupted from her, each burst more hideous than the last, and finally the police dragged her from the room. Then the Inspector began to question Matthew.

Matthew withheld nothing. He had nothing to withhold. But the questions which the Inspector threw at him told him more than his answers told the Inspector.

They told him that the condition of the bones at the bottom of the pool indicated that Zeus IX had climbed into his bath shortly after sending his message to Matthew. They told him that the House of Christopoulos had no heirs and that it would become the property of the Hyperion Satrapy. They told him that the House itself had long been a source of mystery to the Saturnia police, and that they had been eagerly waiting for years for a pretext to break into it. They told him that the Inspector was completely in the dark as to Hera's reason for murdering her husband and equally in the dark as to Zeus IX's reason for ordering Matthew
to put the capsule in orbit. They also told him that the Saturnia authorities knew nothing about the Hyperion-Bimini shuttle, and hence knew nothing whatsoever about the nature of the Bimini cargo.

Neither did Old Matt North. And now that the Saturnia authorities were going to bring the capsule down themselves and launch an official investigation, he probably never would know. Unless -

He paused on the wind-swept iceflats. Deliberately, he finished the thought: Unless he brought it down himself.

Well, why not? Who had a better right to bring it down than the man who had pushed it all the way to Bimini and all the way back again? Who, indeed!

He began to run. Actually, it was more of a stepped-up shuffle than a run, but it was the best that he could do.

He was gasping when he reached the port, but he did not stop, and minutes later he was in his jettractor, climbing, climbing, up the dark and breathless stairway of the night and into the great star-ceilinged hall of space. He caught the capsule deftly, brought it down on a Harlequin-orbit of nights and days and dawns and set it on the lift-platform. He got out and climbed up on the platform and began examining the meteor-pitted hull. Dawn had departed. Morning was airing the first dirty linen of the day above the warped back yard of the horizon when at last he found the hatch.

Owing to the capsule's present
position, the metal plate was low on the hull, and this made opening it all the more difficult; but finally the final dog gave way before the hammer he had brought from the jettractor, and the plate fell free. He dug through the intervening layers of chemically-treated insulation to the inner hull, expecting to find an inner hatch. He did not find one he found a valve instead.

Wine? Had he been playing Bacchus all these weary years?

Well, he was at least entitled to a taste.

The valve was a large one, and could be opened only with a wrench. He got a large one out of his jettractor and locked its jaws on the protruding valve-stem. He did not mean to turn the stem all the way, but the wrench gave him more leverage than he thought he had and far more than he actually needed, and before he knew what had happened, a stream of ice-cold liquid had gushed forth and sent him tumbling off the platform.

He landed on his back and lay there dazed, the liquid pouring down on him and drenching him to the skin. Finally the coldness shocked him into consciousness and brought him gasping to his feet. Finding the wrench, he climbed back up on the platform and tried to close the valve. But in order to get a firm grip on the stem he had to move into the gushing stream, and again the force of it proved too much for him and once more he went tumbling to the ground. This time, the wrench struck him glancingly on the temple and knocked off his ear-
flapped cap. Blackness came then, and when at last it went away the stream had dwindled to a mere trickle, and the contents of the capsule were no more.

He sat up. All around him he heard the sound of liquid running off and seeping into the innumerable crevices in the ice. Clothes dripping, he floundered to his feet. He licked his wet lips, but he did not taste wine.

Jack and Jill went up the hill to get a pail of water.

Day spread more invisible clotheslines in the sky and hung out more dirty linen to dry. The wind grew sharper. Hatless, he started walking down the street in the wind.

Something was happening in his bones.

He could not get the nurséry rhyme out of his mind. Jack and Jill went up the hill to get a pail of water

Faustina saw him from the Hostel, and came forth to meet him. "Are you all right, Mr. North?"
"Yes, I'm all right," said Old Matt North. Jack and Jill went up the hill to get a pail of water.
"You're wet. You're cold. Let me help you to your room."
"Walk up the stairs before methat will be help enough."

Faustina obeyed. He followed, drinking in the sweet and thrilling youth of her. Lord, to be young again! he thought...and even as the thought went through his mind he felt strength flowing into his half-frozen legs and building up in his back and arms. He felt his shoulders straightening, Old Matt North did, and he felt himself growing taller, as one by one the weary fruitless years slipped silently away.

The wine from the stars was no human drink: It was that heady juice called - youth.

No, Ponce de Leon never found his Bimini, but Nick the Greek found his. High up on the big black hill of time and space he found it, and the waters of it were good.... Young Matt North paused at the top of the stairs, and Faustina turned and faced him. The consternation in her eyes soon gave way to better things. Standing on the landing in the wind, he smiled at her.

She smiled back.
END

## All in the February issue of Galaxy - on sale nowl

# GUARDIAN 

## BY JEROME BIXBY

> They sought the Guardian
> who had defended ancient
> Mars - and destroyed it!

$\mathrm{P}^{\prime \prime}$hobos rose . . .
The two men stood outside the Martian temple. Their faces were worried.
"Let's get going!" said Pym. His voice sounded distant in the thin, chill air of the red desert. "Now. The hell with getting more stuff to take back!"
"One more load," said Adams. His round face was nervous, but determined. He turned and entered the high, shadowy, triangular door of the temple. Pym sighed and fol-
lowed. They switched on their torches, revealing bleak stone walls around them. Echoes of their footsteps were a constant murmur in the nearly circular confines.
"If I was sure about it," said Adams, "I'd be running. I'd probably beat you back to the ship. But - I'm not sure

Pym flashed his light upward held it steady on a pictograph. Then he moved the light onward to the next - and the next -

The series of huge pictographs,
seventeen in all, ran around the entire inner wall of the temple, about eight feet above the floor. They were deeply graven in the rusty sandstone. They were ugly.

Pym shuddered.
"I'm no expert," he said, "and even I get the message."
"They certainly seem to be representational," Adams agreed. "Nevertheless, they may be symbolic. That thing - the Guardian - may just be a god, a protective spirit, an imagined entity -"
"It's a machine," Pym said, certainty in his voice. "Look at it, for God's sake! Why fight the obvious?

Their flash-beams converged on the pictograph at two o'clock from the door - the one bearing the most detailed image of the thing which they had nervously christened The Guardian.
"Apparently a dodecahedron," Adams nodded. "Gigantic-if those are really spaceships it's destroy-ing-"
"With round eyelets all over it," Pym said harshly, "and rays coming out of the eyelets! And there -" his flash-beam lowered a little - "those tiny figures spilling out of the ruptured ship... doesn't that give you an idea of its size?"
"Should it?" Adams said. "When we don't know the size of anything else in that context? Maybe the Martians were an inch tall."

Pym flashed his light at the nine-foot-high doorway. His expression, in the reflected glow, said nuts.
"All right," Adams grinned.
"There's still no legal limit on the size of gods."
"It's too sophisticated for that!" Pym said. He turned to irony: "Quite a primitive god-image!... with eyelets, and fanning death-rays, and mathematically symmetrical!"
"I admit that it may well be a machine," said Adams. "I simply refuse to conclude that it is. Or was." He turned and commenced to gather up fragments of stone urns and plaques and other artifacts from the inches-thick dust. on the floor. He stowed them in the widemouthed sack hung on his belt. His light probed here and there. He fingered a shard of vase: "Okay... they were taller."
"Is? . . . or was?" mused Pym. "What if it's still around?"
"Then, if our understanding of the pictographs is correct," said Adams, "we have every reason to feel as nervous as we do." He moved off through an inner doorway. His light flickered on the walls of a chamber beyond.
"The Guardian," said Pym, staring up at the multi-faceted thing portrayed in the two o'clock pictograph. "A machine. A robot... hellishly armed. Built to detect and destroy extra-Martians life forms." He moved his light to another pictograph, in which the Guardian apparently was incinerating a multitude of scurrying tiny forms on a desert battle field. "I've dreamed up a theory to cover that, Adams."

Adams laughed. "It's your day for theories."
"Brainwaves," Pym said. "A portion of the Guardian's sensory ap-
paratus could be tuned to the alpha kappa of the Martian brain, with a signal generator in its recognition circuits that constantly produces the key pattern, matching it against all outside patterns received. If a pattern is picked up that doesn't jitter right, a binary computation takes place whose answer is no -"

Adams appeared at the door. "Masterfull And then the Guardian tracks down and blasts hell out of the alien brain!" He picked up a piece of pottery, put it into the sack he was carrying and moved on into another chamber.
"An interplanetary war," Pym mused on, his light illuminating another pictograph. "When Mars was at the height of her civilization. She had forgotten war. Suddenly, without warning, the Invaders were upon her. Half of Mars died in the first attack." He paused thoughtfully: "Maybe the Invaders were from Planet X...the one that blew up to create the Asteroid Belt. If they knew what was due to happen, they'd sure as hell want lebensraum

Adam's cannonade of chuckles echoed around the close, dark walls. "Superb. What a talent for fiction!"
"You," said Adams coldly, "are an unimaginative God damned anthropologist. Remember Pictograph Two? The Invaders' fleet is shown coming from the next outer planet -"
"Jupiter," came Adams's voice. "Or the thing is meant to show a swarm of bugs, like locusts, coming
out of the sun, like superstition, to ruin the crops. Or it could mean God knows what it could mean!" He came out of the chamber and dumped his filled-up sack on the floor. He clipped another to his belt. "You're a lazy bastard. Give me a hand. Stop taking my first assumptions as gospel. I should interpret the Martian mind in six hours? And, yes -" he' paused, in his search for more artifacts - "I will admit that it appears to be a fleet coming from the next outer planet. Satisfied?" He moved off.
"Lord, what I'd give to know!" Pym's light slowly moved along the series of huge graven scenes: "Some scientists escaped, right? They formed Mars's defensive core. While the Invaders pillaged the planet, the scientists worked. They turned the thing loose... and it --" he swallowed, looking at Pictographs Nine through Fifteen - "it destroyed the Invaders. Utterly. It got all of them who had colonized the surface. It got the lookout ships, in orbit. It got all the lifecraft who tried to escape. In a day."
"Or a year, or a thousand years," said Adams, his voice echoing from a corridor he was prowling. "Or it never happened at all." His voice was amused. "Maybe the pictographs show what happened to tho lousy bugs who came and threatened the crops. Some other bugs came along, big round ones, and they ate the baddies and saved the day!"
"One big round faceted bug," Pym said. "Just one. With rays coming out of-""

Adams's footsteps had faded. He couldn't hear.

Pym shivered in the chill of the temple. He looked out the door. The dark rolling dunes of Syrtis Major seemed flooded with a frosty fire; smooth shrouds of paper-thin ice made sparkling traceries of the ripples that marched down each slope into shadow.

Off in the distance was the Mars I, like a toy, like a silver trophy, the cyclopean stare of its nose-port fixed on the cold-starred horizon.

Pym wondered what he would do if a giant robot were suddenly to rear up hugely over that horizon, humming and clicking, a thousand eyelets searching, a thousand deadly rays ready to lash forth at him as the thing's "mind" said kill.

Pym took his eyes from the temple door - away from spectral imaginings.
"Too late," he said to the pictographs. "The Guardian saved Mars too late. Ninety per cent of you were dead. You declined into savagery - wandering tribes, staring at the rubble of cities. The scientists died, and science with them. The centuries passed, and nothing was left of the greatness of Mars." He flashed his light on the last two pictographs: "Nothing except - the Guardian. You remembered it, all right. It was your legendary savior. You deified it. You built this temple to it, and probably many other temples. It was your god - but, by real God, your legends recalled it as a machine."
"Bravo!" said Adams, at Pym's shoulder, and he clapped gloved
hands together in applause. "You've damn near got me convinced! Happily, there are other theories." He shoved the twisted necks of two chockful sacks into Pym's hands. "All right, then. It appears that we're in great danger. I'll race you to the ship!"
"Furny," Pym grumbled. "Funny." He shouldered the sacks. "Is there anything we haven't photographed?"
"You want to wait around," Adams said in mock worry, "when the Guardian is on the warpath?"

Pym called him a name and walked out the temple door.

Adams followed after first flashing his light around for a look at the pictographs. And he wasn't smiling.

$T$hey trudged through the steep moonlit dunes toward the Mars I. It lay in the distance like a silver cigar between them and the horizon.
"It might still be running around out on the desert somewhere," Pym said.

They were on the brink of a long slope, one which bore the slanting scars of their previous up-and-down passages. Adams started down, and the thin snap and crackle of ice made his reply unintelligible. Pym followed, balancing arms-out like a skier, digging in with the sides of his feet. They moved crabwise down and along the face of fine, crisp sand.
"What?" Pym said loudly.
Adams shook his head. He vanished into the pool of inky shadow
at the base of the dune. A moment later, he reappeared, black against silver, on the up-slope of the next dune. He waited for Pym.

Thirty feet behind them, twice that above them, the temple humped up out of the sand like a giant peaked cranium-dark, silent, against the red-and-black streaked sky. Its outer surface was graven with a twisting, sinuous ornamentation - an alien geometry.

Pym plunged into shadow. The slope began to level invisibly beneath his feet. He skipped, got sort of a jumping run under him, came to a stop beside Adams. "What?" he asked again.
"You've got me terrified," Adams grinned.

Pym looked closely at the roundfaced man. "By God," he said, "I have, haven't I? Wipe that smile and don't kid me!"

Adams nudged stiff sand with his foot, watched it skitter and tumble down into the shadow between the dunes. He raised his eyes to the temple. "Everything you said," he said, "fits my preferred interpretation of the pictographs. I hate to admit it. Let's go."
"It could still be alive," Pym said.
"A machine doesn't live," Adams said. "It doesn't die. There may once have been a machine. It may be rust in the sands - and it may be targeting us. We may be crazy. Let's go."

They labored upward, crunching icy sand.

Behind them was the temple.
Above them was Phobos. Pym studied it through half-closed eyes.

A few tiny craters were visible along its twilight boundary, and it gave back a faint rust hue which faded visibly as the little moon circled further toward nightside. Soon Mars's other moon, Deimos, would bullet up over the horizon, to race the stars for mastery of the night.

The men moved on toward their ship, in the silver light of Phobos, whose name meant Fear.

They topped a long rise. Before them stretched a vast level area of sand. And stretching off into the night were the deep tracks left by the Mars I's great wheels in landing. Three feet down into the sand. Thirty feet apart. A mile long, and straight as a ruler over the darkened face of Syrtis Major. Such was the mark of the first Earth ship to reach Mars, eleven hours ago.

The men struggled on through the ruddy sand.
Was there somewhere a giant robot, grim and cold, watching over this dead world, waiting patiently for sign of alien brains to be destroyed at the whispered bidding of its ancient builders?

For how many centuries had that been a futile search?

And now - not futile.

- wandering the red deserts, giant treads bruising sand and polar ice and the criss-crossed mud of canal bottoms ages dry - nosing alertly, testing air, ground, radiation - a steel bloodhound, a racing silver tower, a deadly behemoth; soundless, perhaps, save for the whisper of steel on oiled steel, the clicks of relays.

How huge? How powerful? Perhaps it would blot out the sky. Now it was sniffing toward them, somewhere out over the sands, coming faster than the wind and more silent. The whine of rising power, a million lights blinking directions into photo-cells, dispensary circuits humming, eyelets searching, probing, pinpointing, while little robot repair-machines waited in niches to swarm out at first sign of damage or wear....

Did it have a brain? Could it think? Could it tell that Earthmen were not enemies? Or weren't they? To ancient, peaceful, quiet Mars, would they have come as friends?.. .
"I was right"" gasped Adams, as they plunged down a slope. "You're right. I'm scared! It's clear as hell, now! . . ."
"What?" yelled Pym, over the crackling of paper-ice. They reached bottom.
"What else could the pictographs mean?" Adams moaned.
"Bugs," said Pym sardonically.
They started up the next slope...
Above them loomed the robot.
They squalled and flopped flat on the slope of the sand-dune, and they dragged out their repeat-ing-pistols, and they fired explosive pellets galore.

The night flickered, roared, flared, shook, and thundered with blue explosions. Fantastic shadows were created on the rippled sides of dunes. Thin ice turned to steam and rose in boiling clouds. Sandparticles rattled and danced as concussions slammed about.

The Robot stared down at them, stiffly motionless.
"Its head!" Pym shrieked. "Look at it! It's the Guardian!"

They concentrated their fire on the silent, huge, multi-faceted head of the robot. It seemed to regard them patiently. Their guns howiled at it, at the rate of ten limited fusion blasts per second per gun.

The head came off.
It wobbled off its boiling metal neck, struck a brawny metal shoulder, bounced and flicked molten droplets all around and thudded heavily to the sand at the top of the dune. It rolled over once rolled again - and then was st:" The sand beneath it snapped, as ...icon rebelled at infernal heat. Red glow faded in the darkness.

The rest of the robot still stoodheadless. It had not once moved, not at all.

The men gasped, stared upward, wheezed, and finally recovered their breaths.

Pym sat up. He holstered his gun. He got to his feet. Boldly, ho trudged up the slope until he stood before the silent robot.

He kicked its ankle, and cried jubilantly, "So much for the goddam. lousy Guardian!"

He put his foot on the face of the detached, fallen head and struck a pose as Adams joined him.

Adams was frowning.
He passed Pym, and inspected joints in the robot's great body.
"This thing," he said, "hasn't moved for a thousand years! It's rusted solid. It's been dead for God
knows how long." He shook his head, smiling at Pym's heroic stance. "We had nothing to fear from it...it's an absolute wreck!"
"Then," repeated Pym in satisfaction, "so much for the goddam Guardian!"
"Look at it," said Adams quietly. "Huh?" said Pym.
"It wasn't built for speed," said Adams. "It wasn't built to fly. Obviously, it wasn't built to withstand attack... and I'm sure the Invaders were better armed than we are. I wonder if it was even built to last." He put a hand on the thing's great, cold, quiet right arm: "It's a worker."

Pym stared.
Adams slapped the crude right "hand" of the Robot. "Do you know design? It's a digger - a miner -
a rooter-a sand-hog. Maybe it's a searcher-for-water." He shook his head: "It's not something created by Martian scientists to kill a million aliens "
"It came for us," said Pym.
"We came to $i t$," said Adams. He " motioned at the surrounding dunes. "We've wandered afield in our upset state. Have we taken this route before? No, I think we're a dune or two off the beaten track...."
"So much," said Pym hopefully, "for the Guardian."
"And good luck to us," whispered Adams.

They started for their ship again. They almost made it.

Deimos rose . . . and paused in its orbit . . . and remembered.

END

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# ALMOST EDEN 

## BY JO FRIDAY

## It was bad luck to name a planet "Eden" - but these <br> men weren't superstitious!

$S^{2}$enior Biologist Johnston looked about him with a reluctant approval: the shuttle system from the spacecraft was efficiently organized, clean and swift. True, the Service man was leaning negligently against the bulkhead, whistling the latest Service-sponsored favorite. But no one ever expected full respect from a Service man. Service men were ambitionless, restless louts with an inborn rebellion against law, whether man-made or nâtural. Most were bright, many were brilliant, but all had an impressive list of campus expulsions. Before the Exploration Drive existed these men were drifting delinquents, whether outcasts of the so-
ciety or members of some rough army. Senior Biologist Johnston's nose was superior but tolerant. This Service man's behavior might be insulting, but at least the man looked well - tanned and healthy. Perhaps this was an A grade planet after all.

The Group leader was waiting on the edge of the shuttle tarmac. Senior Biologist Johnston's sense of approval grew as the man greeted him deferentially, making all the seemly gestures.
"Your name?" asked Johnston on a tolerant note.
"Garfield, Senior Biologist," the Group leader said, with a bow of his head. He was a tall man, and
well built, though not as heavy as Service men tended to be, and almost improperly young. But he was remarkable. Johnston had fully expected this. To be a leader of a group of Service men, a man had to be remarkable.
"Very good, Garfield," Johnston said graciously, but as he cast a rapid assessing glance over the compound, his sense of approval lessened. The minimum time of exploration before a Senior could be called was six M. T. months. Considering this length of time, very few buildings had been erected. Johnston, no mincer of words, said so. "Is this all you have built?" he barked.

Garfield waved an apologetic arm around the green and blue vista. "Sir," he said earnestly, "this is an A grade planet. No rain falls, so you can imagine how hard it is to get the men to build shelters."
"No rain?" Johnston peered down at the rich brown earth and luxuriant dark-green growth.
"No rain," Garfield said simply. "But the place is riddled with underground springs. Most probably they're fed with the snow from the ranges."

Johnston allowed his gaze to wander up into the distance, to where the stately white crags of mountains reared jutting from mounded green slopes. "Wind?" he asked, into the clear still air.
"No wind."
"Hum." The Senior Biologist chewed this notion over for a while, and then allowed a faint rebuke to enter his tone. "Most interesting -
you should have sent for a Senior Meteorologist."
"The biology of the area is most interesting," Garfield murmured diplomatically, and waited.
"You know something about biology?"
"I specialized in it at the Service Center."

Johnston stared at Garfield for a full moment, and then joined in the young man's grin. "And you wanted a few little theories tested? Humph!"

Garfield's grin grew wider, and the two men began to pace slowly towards the compound. "We've set up a Service-specified laboratory," he ventured.
"Good, good." Senior Biologist Johnston stopped a moment, stretching his venerable bones and crinkling his eyes in the crystal air and bright warm sunlight. When he stepped off again his stride had become springier. "I admit I can understand why you found it difficult to get the men to build shelters," he said, a sharp twinkle in his eye.

An amicable relationship had been cemented.
"This is definitely an A-grade planet," Garfield said, following Johnston into the laboratory. "It betters all the Service specifications. In fact -" he hesitated - "we would have called it 'Eden', but . . ."
"Yes, yes, I know," Senior Biologist Johnston agreed. "Every planet they've named Eden has had its snake, indeed. A fatal flaw."
"Most Edens have eventually been found unfit for human settlement," Garfield said earnestly. "And, some-
how, we just didn't want to take the risk."
"I see, I see," Johnston said, smiling. "And I presume no fatal flaws have cropped up yet. What about predators? Carnivores?"
"There's only one true carnivore," Garfield said slowly. "The Bighead - that's what we call it, at any rate. You'll see what I mean: the animal has the biggest head I've ever seen. All muscles and teeth."
J
ohnson frowned. "Only one carnivore?"
"Yes." Garfield pulled up a chair for the Senior Biologist and straddled another, his tanned young face enthusiastic. "Let me give you the picture," he said. "The vegetation round here - I suppose you noticed. It's incredibly luxuriant. Very fast growing, and completely herbaceous. Yes," he said to Johnston's startled expression. "No secondary thickening at all."

Silently, disbelievingly, Johnston pushed aside his chair and went to the window. There was a long silence as he stood with his back to the room, and then when he spoke his voice was hushed. "No trees. Not a tree anywhere."
"That's right, sir," Garfield said. "But when you think about it, it's logical. No wind, no rain, a temperate climate with no extremes of heat or cold - no shelter needed."
"But light." Johnston turned. red cheeks aglow, an excited hand pulling at his dandy little white beard. "There must be competition for light. This is most interesting."
"Yes." Garfield bent forward.
"You see, this sort of environment favors one particular type of animal."
"The ruminant," Johnston said, his voice hushed. "Yes? Yes?"
"Yes," Garfield said triumphantly. "Herbivorous animals - millions of them, and the variation! You've no idea. And fast! There's one rather like a horse that I'd like to cart back to Signis III. Put it in a few races, and I could sit back in luxury for the rest of my days."
"And these animals have only one enemy?"
"That's right. The Bighead. One of my lieutenants - Parr - is an amateur paleontologist, though, and he got interested in the fossils round here. Plenty of them, too, all in excellent condition. And there's plenty of different types of carnivores." Garfield gestured towards a large number of ancient bones, all neatly laid out on the bench behind him. Excitedly Johnston poked around them, weighing skulls in his hand and testing sharp teeth.
"Interesting, interesting," he muttered, aligning limb bones. "It looks as if they were fast," he said critically.
"But not fast enough," Garfield interrupted. "You've no idea - you must see these herbivores."
"Hum," the Senior Biologist said thoughtfully. "So these carnivores became extinct, eh?"
"Except for the Bighead," Garfield said, following Johnston to the door. "They -"

Johnston had stopped so abruptly that Garfield crashed into him. "Sorry, sir!" Garfield began to laugh
but then his eyes followed the line of Johnston's rigid gaze, and his humor died a nervous death. Tempting brown bodies played in the distant sun.
"What - is - this?" The words were terrible, threateningly spaced.

Garfield coughed. "They're women, sir."
"Women!"
"Uh, yes, sir. They came out of the hills six weeks ago."
"Six weeks! And have you informed Central?"

Garfield coughed again, and the Senior Biologist turned a frosty eye on him. "No?" he barked. "Why not?"
"Uh, I knew you were coming, sir, and I thought that -"
"You thought! And tell me, young man, is it in your orders to think?"
"No, sir," said Garfield miserably.
"Humph! Well, I'd better have a look at these - these women." The word was incredibly scornful, but Garfield, hurrying after Johnston's stumping form, could not see why. The women were not beautiful, but that aura - Maybe their faces were flattened and featureless, but those silky clouds of hair, so caressing Maybe their bodies were soft and blurred, but those delicious curves... . And maybe the women were certifiable imbeciles, but that animal magnetism ....
"They are attractive," the Senior Biologist said strangely, peering at the poised, aware bodies.
"Attractive" was hardly the word for the jellifying effect that these
bodies had on men. "They'd put the Visagram girls out of business," Garfield allowed. "It's a quality that manufacturers of perfume have been trying to sell for centuries. You see what I mean?"

Johnston, thoughtfully stroking his beard, turned an alert eye on him. "I'm an old man, Garfield," he said, twinkling.

Garfield grinned. Evidently he was forgiven. "They're stupid, of course," he said.
"Language?"
Garfield shook his head. "A certain range of noises," he said, "and a limited number of facial expression. One of them is slightly more intelligent - I've trained her to do a little housework." He raised his voice. "Tania! Tania!" One of them looked up and glided smoothly over, with rich movements of her buttery body. "Remarkably humanoid, eh?" said Garfield, a master's pride in his voice. "I've called her Taria."
"So I noticed," Johnston said dryly. He began to amble away, bending over every now and then to poke around in the vegetation, but then stopped and looked back as the women began to raise themselves and point, crying out with hoarse, excited voices. A brown herd blurred across the plain in the flick of an eye.
"They're fast!" the Senior Biologist exclaimed in tremendous surprise. Then he saw that one shape, one brown segment of the herd, was dragged back, slowing, separated from its fellows. It lunged, straining forward, heaving in distant fright.
"Aw - ah! Aw - ah!" the women began to cry in chorus, leaping up and down. Johnston began to run toward that distant struggling shape, pulling at his beard with an excited hand and cursing his old heart. A purring disturbance of the air, and Garfield materialized alongside in a zoomer, shouting. Johnston thankfully climbed up beside him.
"It's a Bighead," Garfield shouted. He slammed the zoomer into slow motion, so that they could approach the struggle without disturbing the Bighead. Johnston had a momentary vision of the herbivore hauled down on its hindquarters, raising its long thin nose to the sky in a high-pitched violin scream as they flickered over the vegetation, and then they materialized beside the fight. The Bighead raised a huge, blood-dripping skull and reared back in sneering fright. And then it disappeared. Ran right off the horizon before the mind had registered that it existed. It had six legs.
${ }^{66}$ Mi said reverently." Johnston "The fastest thing on this planet." Garfield signed to the zoomer to stow the body of the slaughtered herbivore, and then kicked it into the homeward route.
"Faster than all the herbivores?" Johnston asked as they materialized on the compound.
"Yes. And it kills them wholesale. From most of them it doesn't eat a mouthful, even. It seems to be activated by a lust for massacre.

That's how we get our meat," Garfield said apologetically, and Johnston looked back to see that the zoomer had left the earcass in the cookhouse yard. "It's perfectly healthy, really - and we wouldn't have a hope of catching any of those herbivores."
"Quite so, quite so," said Johnston thoughtfully. "The Bigheads kill a lot of animals?"
"Yes. Hundreds. The only reason the herbivores aren't wiped out is that there are millions of herbivores and very few Bigheads."
"Then what happens to the carcasses?'

Garfield stared at him.
"There aren't any birds," Johnston pointed out. "And no other carnivores."
"Well," said Garfield slowly, "I suppose the Amoebans get rid of them."

## "What?"

Garfield grinned. "Come and see."

They climbed down from the zoomer and walked over to the cookhouse yard, pausing at the fence. The cook was standing on the step, berating a large jelly that was extending a sly pseudopod toward the carcass of the herbivore. The pseudopod guiltily retreated.
" Hi ," said the cook when he saw them. "Titus is getting greedy,". he said, in excuse for the jelly. He called to someone inside, and another man came out with a bucket of offal and bones, which he emptied onto the ground beside the Amoeban, talking to it as he did so. Titus slid rapidly on top of the pile, and
settled down with a contented squish.
"And keep off our good meat," said the cook, shaking an admonitory fist. With frequent and paternal backward looks the two men disappeared inside.
"See?" said Garfield.
"I thought you told me that there was only one carnivore," Johnston said severely.
"Oh, come now," Garfield objected. "You can't call an Amoeban a nasty word like that - can we, Titus?" He walked over to the creature and poked a doting finger into its protoplasm. It squiggled.
"'Amoeban' is not a bad title," Johnston observed. "It's very amoeboid."
"A much higher level of intelligence, of course," Garfield said.

The Senior Biologist grinned. "Enough to inspire extreme and unwarranted affection from otherwise rational men."

$\mathrm{H}^{2}$e bent over the creature, studying it. It appeared to be typically amoeboid, if gigantic, distinguished only by its peculiar diet.

The bones and offal were being rapidly absorbed. As Johnston watched they were completely surrounded by the jelly of the creature's body. Then he began to stroke his beard with a puzzled gesture. Vacuoles were forming round the food, widening and expanding as digestive juices were secreted, becoming large bubbles of fluid and the food, even the bone-matter, was dissolving. In five minutes all trace of the food was gone, and
all that was left were the bubbles of yellowish fluid.
"Fast," said Johnston thoughtfully.
"Titus? Why, he's as slow as a Service man after a night on Mars. Oh," said Garfield, "the digestion. I see what you mean. He'll eat as much as you'll give him, too - and he gets plenty. I've seen him at night twice his usual size with the big vacuole full of digested food inside him, but by morning it's all gone."
"All?" said Johnston thoughtfully.
"All."
From then on Johnston showed an unnatural interest in Titus, being found most times sitting on the ground beside the creature, even in the dark of the evening - an unnatural interest, because there was so much else to occupy him. Why, he didn't even bother to study the women, although they were the cause of his second argument with Garfield.
"Garfield!" he shouted one day, bursting into the laboratory. "Garfield!"
"Yes?" Garfield inquired mildly, looking up from a microscope. "Has Titus run amuck?"
"Garf́ield! Did you know your men are - are cohabiting with those women?"

Garfield flushed. "Yes," he said quietly.
"And what is the meaning of allowing them to do such a thing?"
"It seemed harmless," Garfield murmured.

Johnston's shout set the microscope swinging on its mounting.
"Harmless! And intermarriage of humans and Venusians has only been allowed fifty years!"

Garfield's eyes were steady. "Try and understand," he said. "My men are not angels - very far from it. The last planet we explored was like most of them - a livid hell. So when they get an A grade planet I allow them to take full advantage of it. Full advantage," he repeated for emphasis.
"Oh, my God," said Johnston, and sank limply onto a stool. "Do you realize that three of those women are pregnant?" he demanded.
"Yes." Garfield's eyes flickered a moment. "I must admit it was a shock," he said. "I hadn't expected that conception could take placethey're so obviously a different species." He was silent a moment, and then his next words were very quiet. "Tania is pregnant too."

It took a moment for the significance of this to occur to Jobnston, but when it did he groaned. "Oh, my boy, not you too? Didn't you know that relations with a humanoid species is forbidden until a full series of tests is carried out?"
"I realize that," Garfield said calmly. "But as I see it the worst risk is that the - offspring - will be as imbecile as the mothers. There is also the possibility that our intelligence will be combined with their peculiar attractiveness. In any case, I take full responsibility for the whole business." He turned back to the microscope in dismissal, but the Sonior Biologist remained on his stool.
"I shall notify Central," he said heavily.

There was a long silence, and then Garfield turned back to the Senior Biologist - not to contirice the argument, but to discuss his latest finding. "Very interesting," he said, waving a hand at the microscope. "Parr has been poking round the hills after fossils, and he found a series of caves, all with a peculiar brown vegetation growing on the floor. Look." He snapped a switch on the side of the microscope, and an image flicked onto the screen. It was a foliose organism, a dark reddish brown - about the color of liver - and, judging by the scale at the side of the image, about three feet high. It was lichen-like, crisp and shiny, and abundantly and dichotomously branched. Garfield adjusted the coarse focus, and the image distended rapidly until individual cells could be seen.

It was definitely animal. The cells were round, blurred and without cel! walls.
"Interesting," said Johnston, staring and stroking his beard. "I've never come across anything like that before."
"I've been analyzing it," Garfield said, his eyes alight with discovery. "Very strange. The outer boundary of each cell is protoplasm, all right, but the interior is either glycogen or a peculiar jellified amino acid."

Johnston's frown was tremendous. "Stored protein?" he muttered. "In a digested form?" The idea was so puzzling that his eyebrows climbed up and down rapidly, like fluffy white caterpillars unsure
whether to be star ${ }^{4}$ ed or tremendously thoughtíul.

Garfield and Johnston discussed this en rossing subject for a while, wondering about the mode of life of such an animal, but were able to make nothing more of it. And one night a week later something happened that put the problem right out of their minds. Johnston caught a Bighead.

$\mathrm{H}^{\circ}$e was crouched by Titus, studying him with the aid of a light, as it was much later than usual, and quite dark. Behind him was the reticulated wire fence, and suddenly, shockingly, this crashed and collapsed under a tremendous onslaught.

The Senior Biologist had had no warning at all. Not a single sound had reached his ears. One moment he was peacefully communing with Titus - and the next, out of a clear black sky, he was presented with a Bighead, howling slathering into his face, with two of its great fangs entangled in the wire. The Senior Biologist could have forgiven his old heart if it had quietly given up the job then and there, but instead it thumped erratically on; and he ran into the kitchen and fetched a longhandled knife and killed the Bighead.

It was a tremendous event. Within minutes the whole Group was crowded around him, creating bedlam and staring at this legendary animal.

The head was huge, fully a third the size of the body. The eyes were frontal, like a man's, so that vision
was telescopic and three-dimensional, and the slit-shaped pupils were distended within a red rim of iris. The body was lean and very muscular, with great driving pistons of middle and hind legs. The front legs were evidently manipulatory, for they were held up on either side of the head like the palps of a spider, and they were curved, and armed with huge tearing claws. Johnston noted this much in a single glance, and then, tearing at his beard with a wildly excited, blood-spattered hand, he ordered that the body be carried into the laboratory. This was done, and he locked himself inside.

He remained there three days, admitting no one, not even Garfield, and opening the door only for trays at mealtimes.

On the morning of the fourth day he called for Garfield. The Group leader hurried inside, expecting to be told of great discoveries, but Johnston merely waved him over to the dissection bench, where the fully opened animal lay under the preservative lights - and then left the laboratory and went to bed.

When the Senior Biologist returned in the late evening, with a refreshed look in his eye, and his beard washed, dried, brushed and dandy again, it was a thoroughly puzzled Group leader who met him.
"Is it all there?" Garfield asked.
Johnston nodded. "So you found the discrepancies?" he said, pedantic with an inner excitement.
"Yes. But I don't understand don't understand!"

Johnston twinkled. "Get the zoomer and come over to the cookhouse yard," he said. "Quickly. I'll answer questions later."

When Garfield arrived with the zoomer Johnston was in his habitual position, crouched comfortably on the ground beside Titus. He looked up and waved, and then climbed up beside Garfield.
"Don't laugh," he said. "But Titus is going to move soon - and fast. Set the controls to follow him."

Garfield did so, and then both men sat back in silence, staring down at the slight gleam of the amoeban, each occupied with his thoughts: Garfield gropingly, trying to understand, and Johnston concentratedly, going over each facet of his theory again and again. They waited an hour, and in all that time Garfield spoke once, helplessly.
"But how could it live? How can an animal live without a digestive system?"

Finally the zoomer gave a queer little shudder, disorientated, and Garfield looked down to see Titus extending tentative pseudopodia in all directions. Finally the right one was found, and the amoeban slithered into one long groping trickle. It seemed to gather itself, faintly gleaming - and then, shockingly, the zoomer screamed into overdrive, and the Amoeban was a silvery flash streaking across the plain.

The zoomer growled, flickering after Titus into the hills, but was hopelessly outpaced. When it materialized the Amoeban had been at its destination many microsec-
onds, and now it was in its usual sluggish form, lying jelly-limp outside a cave. Garfield neutralized the zoomer, and it hovered motionless above the Amoeban. He then looked inquiringly at Johnston, but the Senior Biologist gestured to him to remain still and silent.

For a long series of minutes it seemed as if nothing was happening, but then a faint flick of movement caught Garfield's eye. And into the phosphorescent glow cast by the zoomer jerked one of Parr's "plants" - the liver-brown foliose animal. With painful slowness it moved, jerking in little hops and leaps towards the Amoeban. Then, several laborious moments later, it was leaning against a pseudopod, and with a final little hop it flicked onto the taut membrane.
"A parasite?" Garfield whispered.
"Hush." The protoplasm of the amoeban was beginning to slither wetly, so that the foliose animal on its back was carried further into the center. Then abruptly, the shimmering flowing stopped. The foliose animal was directly above the huge vacuole of yellowish digested food.

Again the scene was suspended, and it looked as if nothing was happening - but the foliose animal was slowly, imperceptibly swelling, and the vacuole was equally slowly contracting.

Barely had Garfield registered this than the protoplasm of the Amoeban began to flow again. A long pseudopod formed, and Titus slithered sluggishly into the cave, still bearing the foliose animal on his back.
"Now," said Johnston, "I shall tell you my theory."
"Shouldn't we go in there?" Garfield suggested.

The Senior Biologist regarded him with a sharp eye. "It's unnecessary," he said. "I've seen it before."

Garfield relaxed, frowning into the green glow of the controls.
"You have told me," Johnston began, "that originally there were many carnivore species, but they all failed to adapt to the tremendous speed which the herbivores could attain. All except one - the Bighead.
"In that cave, young man, the foliose animal is finishing its meal, extracting all the digested food from the Amoeban. Then, as you noticed, it will store this food, producing branches in which to keep all the glycogens and jellified amino acids. Then along will come - yes, look -"

There was a brown flash across the glow of the zoomer, zipping into the cave.
" - a Bighead. This Bighead will eat the branches of the foliose animal. For this is how the Bighead adapted.
"One day," said the Senior Biologist lazily, long fingers gentle and reflective on his beard, "I shall make a study of how much the possession of a digestive system slows the organism down. At the moment all we know is that in times of emergency, when the body must reach its highest peak, the digestive system is shut down. In order for the body to reach top speed all digestion must stop. And to that
common piece of knowledge I can add another - that in order to become faster than the herbivores, the Bighead had to discard its digestive system. And how did it do that?"
"How?" Garfield's voice was a whisper.
"By some means-I suspect a mutation-it split into a number of animals."

"What!"
"Yes, yes," said Johnston indulgently. "I know: it doesn't make sense. At first I refused that theory, too, and considered that this was a complex example of symbiotic relationship. But now I know that the Bighead, the Amoeban and the foliose animal are all one creature. It's just division of labor carried to an extreme. The Bighead is the obtainer of food, the jaws and muscles of the creature. It has the speed, given, as you saw, by tremendous muscles and bone structure, and huge lungs and heart. And its function is to catch and kill the prey, leaving the carcass for the next part of the creature to deal with.
"The Amoeban is the stomach the digestive system. Its job is to absorb and digest the carcass, collecting the digested food in a vacuole for the next part of the creature.
"And, of course, the foliose animal has the function of storing the food. So that when the Bighead eats its branches, it gets predigested food in an assimilable form." Johnston finished abruptly, turning a smug gaze on Garfield for admiration.
"Amazing!"
"Yes," Johnston allowed.
There was a long silence.
"But how are you going to prove it?"
"Prove it!" The Senior Biologist was flabbergasted.
"Yes. Prove that it is all one animal, and not a symbiotic relationship.".

Tthe Senior Biologist laid careful fingers across his beard. "That will be difficult . . . It depends on what stage the animal splits if I could see a foetus . . . " Johnston sat bolt upright. "A foetus!" Garfield stared at him, with the same stunning thought. "The reproductive system," he stuttered. "The Bighead didn't have a reproductive system."

The fingers in Johnston's beard were agitated now. "The reproductive system.... Maybe the hormones slow the system down... but which part of the animal has the reproductive function?"

Garfield's voice was hushed. "Maybe none of them have. Maybe there's another animal -- one we haven't seen yet - the one that has the reproductive function -"

The men stared at each other, and then down at the cave, wildly trying to imagine what weird, budding, fissioning creature could be the reproductive phase of the creature. And as they watched, there was movement in the mouth of the cave, and a smooth form appeared, richly pregnant with new life.

Tania came out of the cave.
END

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# THE CITY <br> <br> THAT <br> <br> THAT GREW GREW IN THE SEA 

A Retief Story

## BY KEITH LAUMER

## ILLUSTRATED BY GAUGHAN

> Retief feared neither man nor alien . . . though sometimes he couldn't tell which was which!

## I

Cconsul-General Magnan clutched his baggy chartreuse velvet beret against the blast of air from the rotor of the waiting heli and beckoned Retief closer.
"I'll be candid with you, Retief," he said from the side of his mouth. "I'm not at all happy about leaving you here as deputy chief under a Groaci superior. The combination of unpredictable elements is an open invitation to disaster."
"I've never known disaster to wait for an invitation, where our Groaci colleagues were concerned," Retief commented.
"Naturalizing a Groaci was irregular enough in itself," Magnan went on. "Tendering him an appointment in the Corps smacks of folly."
"Don't underestimate the boys at headquarters," Retief said cheerfully. "Maybe this is just the first step in a shrewd scheme to take over Groac."
"Nonsense! No one at HQ would want to go on record as favoring such a policy..." Magnan looked thoughtful. "Besides, what does Groac have that we need?"
"Their cast-iron gall would be a valuable acquisition - but I'm afraid that's the sort of intangible that will elude the wiliest diplomacy."

Magnan pursed his lips. "Take care, Retief. If anything goes awry, I'll hold you fully responsible." The senior diplomat turned to the other staff members waiting nearby on the tower-top helipad, moved among them shaking hands, then scrambled into the heli. It lifted and beat its way eastward against a backdrop of vermillion-bellied clouds in a sky of luminous violet. Behind Retief, the voice of Vice-Consul Wimperton rose to a shrill bark.
"No want um basket! No need um beads! Want um heavy metal, you blooming idiot!"

Retief turned. A short-legged, long-torsoed local draped in a stiff lime-green garment stood roundshouldered before the Commercial Attache, dwarfed under a load of fancifully beaded baskets.
"No want um?" the Poon enquired in a voice that seemed to thrum in his chest. "Plenty too cheap -"
"Nobody want um! How many times do I have to tell you, you bug-eyed -"

A curtain twitched aside from a narrow doorway; a spindle-legged Groaci in Bermuda shorts, argyle socks and a puce and magenta aloha shirt peered out.
"Mr. Wimperton," he said faintly, "I must request that you refrain from abusing the locals so loudly. I have a splitting headache."

The deck lifted, creaking, and sank gently back. The Groaci put a hand against his midriff and clutched the doorframe. His name was Dools. He was new in his post - as well as in his citizenship.
"My, that was a dandy," Wimperton said. "Felt like my stomach came right up and bumped my chin!"
"I'm sure we're all aware of the motion, Mr. Wimperton. All too aware," Dools whispered.
"Say, you don't look at all well, Mr. Consul-General," Wimperton said solicitously. "It's this constant rocking, up and down, to and fro. You can never tell which way the tower will lean next."
"Yes, yes, a penetrating observation, Mr. Wimperton." The ConsulGeneral tilted two eye-stalks toward Retief. "If you'd step inside a moment, Mr. Retief?" He held the curtain aside, let it drop behind Retief.

Late sunlight filtering through the open-work walls of the Consulate

splashed a checkered pattern across colorful rugs of kelp fiber, low couches, desks and chairs of woven wicker work. Consul-General Dools looked at Retief nervously.
"Mr. Retief," he said in his faint voice. "Now that our previous chief, Mr. Magnan, has departed, I, of course, find myself in charge." He paused while the floor lifted and sank; his eye-stalks waved sickeningly.
"As a newcomer, perhaps you've noticed certain . . . oh . . . irregularities in our little organization here." Four of his eyes studied different corners of the room. Retief said nothing.
"I wished merely to caution you: It would be unwise to evince excessive curiosity..."

Retief waited. The tower leaned to the steady pressure of the rising gale. The floor slanted. ConsulGeneral Dool clung to a desk, his throat-sacs vibrating.
"There are many ways," he started, "in which accidents could befall one here."

The floor sagged, rose abruptly. Dools gulped, threw Retief a last despairing glance and fled as Wimperton came in, still muttering. He looked after the departing Groaci.
"Consul-General Dools isn't a very good sailor," he commented. "Of course, in the week you've been here, you haven't seen a real blow yet - "

The native peddler poked his round head through the door hanging, padded across the room on large, bare webbed feet and paused before Retief.
"You want um basket?" The round, amber-and-olive patterned face gazed hopefully at him.
"I'll take that one," Retief said in the native language, pointing.

The wide lipless mouth stretched wide in the local equivalent of a delighted grin.
"A sale! I was beginning to think you High-Pockets - excuse me, sir - you Terries were tighter than weed-ticks in a belly-button." He lowered his wares, . extracted the basket.
"You shouldn't encourage him," Wimperton said snappishly. "For months I've been indoctrinating him to bring in some gold nuggets. The land-masses are practically solid with them - but no, they build their town on a raft of seaweed in mid-ocean and weave baskets!"
"They evolved in the weed," Retief said mildly. "And if they lifted the embargo on gold, in six months the planet would be swarming with prospectors, dumping their tailings into the ocean. They like it the way it is."

The Poon caught Retief's eyes, jerked his head toward the doorway, then ducked out through the door hanging.

$R$etief waited half a minute, then rose lazily and stepped out on the wide observation deck.

All around, lesser towers, intricately patterned, rose from the miles-long mat of yellow-green seaweed far below, moving restlessly with the long ocean swells. Sea fowl with weed-colored backs and skyblue undersides wheeled and
screamed. Between the owaying pinnacles, a spiderweb complex of catwalks swung in hundred-yard festoons. A continuous creaking of rattan filled the air. Far away, the white-flecked surface of the open sea was visible.

Retief crossed to where the Poon waited by the stairwell entry.
"You seem like a good fellow," the peddler said as Retief came up. "So I'll give you some free advice." He glanced around at the colordrenched sky. "There'll be a Big Blow tonight. Get down below don't waste any time." He hitched at his load of baskets and turned to the stairs. "And don't bother to tell those clowns." He jerked his head toward the Consular offices. "They're bad medicine." He bobbed his head and was gone.

Retief threw a sharp glance at the clouds, got out a cigar and lit up, turned from the rail.

A tall, broad-shouldered man in a somber uniform stood by the catwalk mouth, looking Retief over. He came across the close-woven deck and thrust out a large, welltanned hand.
"My name's Klamper, Planetary Monitor Service. I guess you're the new man."

Retief nodded.
"Let me give you some advice. Watch out for the natives. They're sly, tricky devils." He paused. "You were talking to one just now. Don't let him lure you into going down into the native quarter. Nothing down there but natives and dark holes to fall into A helluva place for a Terry. Knifings, poisonings -
nothing there worth climbing down thirty flights of wicker steps to look at."

Retief puffed at his dope stick. The wind swirled the smoke away.
"Sounds interesting," he said. "I'll think it over."
"Plenty to do right up here in the Consulate tower," Klamper said. "I guess you've seen the Tri-D tank a twenty-footer - and the sublimation chamber. And there's a pretty good auto-banquet. And don't over look the library. They've got a few dandy sense-tapes there; I confiscated them from a Joy-boat in a twelve mile orbit off Callisto last year." The constable got out a dopestick and cocked an eye at Retief. "What do you think of your Groaci boss, Consul-General Jack Dools?"
"I haven't seen much of him. He's been seasick ever since I got here."
"First time I ever ran into a Groaci in the CDT," Klamper said. "A naturalized Terry, I hear. Well, maybe he hasn't got all five eyes on an angle - but I'd say watch him." Klamper hitched up his gun belt. "Well, I'll be shoving off." He glanced at the stormy sky. "Looks like I've got a busy night ahead."

Retief stepped back into the office. A small, round man with pale hair and eyebrows looked up from the chair by Wimperton's desk.
"Oh." Wimperton blinked at Retief. "I thought you'd gone for the day." He folded a sheaf of papers hurriedly, snapped a rubber band around them, turned and dropped them in the drawer of the filing cabinet.

Wimperton rose. "Well, I'll be nipping along to Dorm Tower, I believe, before the wind gets any worse. This breeze is nothing to what we get sometimes. I'd suggest you take care crossing the catwalk, Retief. It can be dangerous. In a cross-wind, it sets up a steady ripple." His limber hands demonstrated a steady ripple. "Other times it seems to float up and down." He eyed Retief. "I hope the motion isn't bothering you?"
"I like it," Retief said. "As a boy, I had a habit of eating candy bars - you know, the sticky kind while standing on my head on a merry-go-round."

Wimperton's eyes stared fixedly at Retief. A fine sweat popped out on his forehead.
"Feels like it's building up, all right," Retief said genially. "Feel that one?"

A distant, thoughtful look crept over Wimperton's face.
"It's good and hot in here, too," Retief went on. "And there's that slight odor of fish, or octopus, or whatever it is . . "
"Uh . . . I'd better see to the goldfish," Wimperton gasped. He rushed away.

Retief turned to the round-faced man.
"How was your trip, Mr. Pird?"
"Ghastly," Pird piped. His voice sounded like a rubber doll. "I visited continents One and Two. Bare rock. No life higher than insects, but plenty of those. You know, it never rains on Poon. All five continents are deserts, and the heat -"
"I understood the Zoological In-
vestigation and Liaison Council Headquarters had financed a couple of wild-life census stations over there,' Retief said.
"To be sure, facilities were provided by ZILCH but unhappily, no volunteers have come forward to man them." Pird smiled sourly. "A pity. Consul-General Dools has expressed a passionate interest in wildlife." Pird grabbed at a paperweight as it slid across the desk-top. The walls creaked; wind shrilled, flapping the door hanging. The floor heaved and settled back. Pird swallowed, looking pale.
"I believe I'd best be going," he said, starting toward the door.
"Hold it," Retief called. Pird jerked. His eyes blinked.
"Aren't you going to warn me about anything?"

Pird stared for a moment, then scurried off.

A lone, Retief stood with 1 braced feet in the Consular office, gloomy now in the eerie light of the stormy sunset. He crossed to the filing cabinet, took a small instrument from a leather case and went to work on the lock. After five minutes' work, the top drawer popped out half an inch.

Retief pulled it open; it was empty. The second contained a dry sandwich and a small green flask of blended whiskey. In the bottom drawer were four dog-eared copies of Saucy Stories, a prospectus in full-dimensional color illustrating Playtime on Paradise, the Planet with a Past, glossy catalogs describing the latest in two-seater sport
helis and a fat document secured by a wide rubber band.

Retief extracted the latter and opened the stiff paper. It was an elaborately worded legal instrument. In the fifth paragraph he read:
"... whereas such body is otherwise uninhabited, unimproved, and subject to no prior claim filed with the proper authorities as specified in paragraph 2 A (3) above, and;

Whereas claimant has duly established, by personal occupancy for a period of not less than six Standard Months, or by improvement to a value of ..."

Retief read on, then removed the elaborately engraved cover sheet of the document, folded the rest and fitted it into an inside pocket.

Outside, the wind rose to a howling crescendo; the floor shuddered; the walls tilted precariously. Retief took a magazine from the drawer, fitted the document cover over it, folded it and snapped the red rubber band in place, then replaced it in the drawer and closed it. The lock seated with a snick. He left the consulate and crossed the swaying catwalk to the next tower.

## II

Retief stood in the doorway of his room, smoking a cigar. Pird, just starting down the stairway, clucked. "Better hurry, sir. Everyone else has gone down. The wind is rising very rapidly."
"I'll be along." Retief looked down the empty corridor, undulating in the dim late-evening light, then
went along to a curtain-hung doorway and stepped out onto a windswept balcony. From it a swaying wicker catwalk launched itself in a dizzy span to the Consulate Tower, a hundred yards distant.

A dim light winked on in the consular offices, moving about slowly. Retief watched for a moment, then turned up the collar of his windbreaker and stepped off into the dark tunnel of the wildly swinging passage. The gale buffeted at it with a ferocity that had increased even in the quarter-hour he had spent in the Dorm Tower. The sky had darkened to an ominous mauve, streaked with fiery crimson. Below, lights sparkled all across the lower levels.

The last fifty feet of the crossing was a steep climb up the sagging catwalk. Abruptly the catwalk dropped three feet and came to a stop with its floor canted at a sharp angle. Retief steadied himself, then went on, climbing now. Ten feet ahead, the yellow and blue hanging at the end of the passage was visible. It moved. The slight figure of Consul Dools appeared for a moment, wrapped in a dark poncho, then whisked back out of view.

Retief made another two yards against the bucking of the sloping passage. He could hear a rasping now, a harsh sawing sound. A wedge of electric-purple sky appeared through the wicker roof ahead. It widened . . .

With an abrupt crackling of breaking fibers, the end of the catwalk broke free and dropped like
an express elevator. Retief locked his fingers in the twisted rattan and held on. The face of the tower flashed past. Retief slid two feet and caught himself with his torso half out the open end. Air shrieked past his face. A foot from his eyes, the severed end of the supporting cable whipped in the screaming windcut clean.

Retief looked down and saw the massed lights of the native section swooping up to meet him. A wall rushed close; Retief felt the whistle of air as he brushed it; then he was hurtling past low towers with lighted windows behind which alien faces gaped briefly. He swept low over a narrow street ablaze with colored lights, felt a shock as the catwalk brushed a building somewhere above; then the street was falling away below as the freeswinging catwalk cracked-the-whip, soaring upward in a wild zoom, slowing now . . .

A wall loomed before him with a narrow balcony before lighted windows. For an instant, it seemed to hang before his face - and Retief lunged, kicked his legs free of the twisted wicker. He caught the heavy rattan guard rail. He hung on. groping with his feet, with the gale tearing at him, shrieking in his ears

Hands gripped him, hauling him up. He shook his head to clear it, felt a heavy hanging brush his face. Then he was standing on a yielding floor, blinking in the soft light of a primitive incandescent lamp, feeling the warmth and strange, spicy odor of an alien room.

Afive-foot native stood before him, staring up anxiously with large protruding green eyes in a smooth, olive-colored face. The wide, almost human mouth opened showing a flash of pink interior.
"Are you all right, buddy?" a strangely resonant voice inquired in the bubbly local tongue.

Retief felt of his jaw, moved his shoulders gingerly. "A little dazed by the speed with which the boys work, but otherwise fine," he replied.
"You speak Poon like a native, by Hoop!" the alien said. "Here sit down. How about a drink of Yiquil?" He indicated a low couch heaped with varicolored cushions and turned to a cupboard, wide webbed feet in bright yellow sandals gripping the swaying floor.
"You fell off a catwalk, eh?"
"Something like that," Retief accepted a deep two-handled porcelain jug, delicately shaped. He sniffed the drink, then sipped.
"My name's Url Yum. I'm a netter for Matwide Fooderies."
"I'm Retief. I'm with the Terran Consulate." He glanced around the room. "Handsome apartment you have here."
"Oh, it's all right." There was a sharp whistle at the door.
"You feel like meeting a bunch of people? I guess they saw you fall, and they'll be crowding in now to take a look at you. We don't often see Terries here in town, you know."
"I'd rather not go on exhibit right now. Yum."
"Sure, I know how you feel. I had
to go over to Dryport on business a few months back, and every damn do-gooder wanted to have me in for tea and look me over."

The whistle sounded again at the door. Url Yum padded across to the closet, brought out a large satchel and pulled out brightcolored gear of plastic and metal.
"I was just about to go for a swim. Why don't you join me? You don't want to go back up tonight in this wind. We can go down the back way. How about it?"
"A swim? In this weather?"
"The best time. Hunting's good. The small stuff shelters under the Mat, and the big stuff is in there hunting them - and we hunt the big stuff." He held up a polished spearhead.
"Look, Yum, I'm just a Terry. I can't hold my breath more than a minute or two."
"Neither can I. That's what the gear's for. You burn oxygen, same as we do, don't you?"

The whistle came again, more peremptory now. "Hey, Yum!" a voice called.

Retief finished his drink. "That yiquil's great stuff, Yum; it's already affecting my judgment. Let's go!"

They stood in a narrow way that wound between high walls hung with dights and signboards, studded with balconies from which pennants fluttered, crowded with brilliantly mantled and jeweled Pupoony, filled with the shriek of wind, the chatter of whistled conversation, and over all the polyphonic creaking of the city.
"I've heard of twisting roads," Retief called. "This is the first time I ever saw one that really twisted."

Yum put his mouth close to Retief's ear. "You know the whistle dialect?"
"I can understand it," Retief shouted back. "But I can't whistle it."

Yum motioned, led the way down a side alley to a sea-shell ornamented hanging and pushed into a low room with couches along one wall, open shelves on another. A portly Poon waddled forward.
"Oi, Yum! Oi, stranger."
"Oi," Yum said. "Gipp, this is Retief. We're going down. Can you fix him up with a spray job?"
"Lucky you came to my place, Yum. I happen to have a compound specially prepared for Terry requirements, a fresh batch, just concocted yesterday."
"Good. Retief, put your stuff over there." Yum opened his satchel, took out equipment and laid it out on a low table. He selected a pair of goggles, handed them to Retief. "These are a little big, but I think they'll seat all right." He handed over a heavy cylinder the size and shape of a beer bottle, added other items.
"Okay: propulsion, communication lights, breathing apparatus, emergency gear. Now, after you strip and get your equipment buckled on, Gipp will fit you with wa-ter-foils and spray you in."

Retief donned the gear and watched with interest while the portly proprietor shaped a putty-like material to his feet, forming large
fins which stiffened to a rubbery consistency, then brought out a portable apparatus with a tank, compressor and hose with a wide nozzle.
"Give him a Striding Devil job, Gipp," Yum ordered.

Gipp hesitated, looking at Retief. "I suppose you've had a lot of experience - ?"
"He'll be all right," Yum put in. "He catches on fast, and he's got a good arm."
"Whatever you say, Yum - but you ought to warn him that a Death Angel will jump a Strider on sight."
"Sure. That way we don't have to go looking for 'em."
"Well, if you get one remember I'm paying top sprud for stones."
"You'll get first crack."
Gipp started up the compressor, twiddled knobs, then directed a heavy spray of viscous, greenish fluid on Retief's chest, working it in a pattern that covered him to the knees. Then the Poon shut down and set about changing hoses.
"What's this stuff for?" Retief inquired, studying the thick, soft layer hardening on his skin.
"Protective covering. It's tough as yuk skin. And it has an osmotic action; passes oxygen in, and CO 2 out. The color disguises you so you don't scare off the game - and the finished job holds all your gear in place. It's a good insulation, too. That water's cold. It strips off easily when you come back in."

Gipp worked for another five minutes. Retief craned his neck to look at himself. His back, he saw,
was a dull black, with red and white flecks, separated from the glossy green front by pale gray sides. Broad pink gill-flaps flared from throat to shoulders. The ankles and fin-covered feet were a vivid red.
"He's got the build for it," Gipp said, looking him over. "If I hadn't done the job myself, I'd swear he was a Strider, by Hoop?"
"That's the idea, Gipp. Now jus give me a straight Big Mouth outfit." Yum took a flask from a side pocket and offered it to Retief, who took a generous pull, then passed it to Gipp, busy with his apparatus.
"No, thanks. I don't need any delusions of grandeur tonight. I hope to do a good volume of business before the storm hits its peak." He worked carefully, covered Yum with a uniform dull gray, added a peaked crest of garish yellow.
"All right, Retief." Yum handed him a light, short-barreled rifle from the muzzle of which a razoredgjed spearhead protruded. "Let's go down."

Gipp led the way to a back room and opened a wide wicker cover set in the floor. Retief looked down to the sloping surface of a three-foot tube of close-woven strips.
"Follow me," Yum said, and dived, head first, out of sight. Retief gripped his spear-gun, waved Gipp a cheery farewell and dived after him.

## III

The water was ink-black, alive with darting lights in red and yellow, ponderous-moving patterns
of green and blue and, far below, dull gleams of violet. Retief kicked his feet, watched lights scatter before him in a boil of phosphorescence.

A dark shape darted from the gloom and hovered before him. He recognized Yum's yellow crest, waving gently in the moving water.
"Only peaceful place in town, when the wind's working," Yum's voice crackled in Retief's ears. "Let's work our way east to get clear of the activity around here; then we'll see if we can't bait an Angel up."
"How deep are we?"
"The Mat's twenty meters thick here. We're going to work Underside first; if that's no go, we'll move down."

Yum darted off with a flick of webbed feet. Retief followed. Above, the mass of the floating continent of weed was a fairyland tangle of waving fronds, fantastically shaped corals, coiling weed, and moving lights.
"Use the knob on your left hip as a jet control," Yum said. "Steer with your feet - and keep your rifle ready. If you see anything that looks like you, let him have it."

Retief tried the knob, felt water churn past his knees; he leaped ahead, driving through the water with a speed that blurred the weedscape above. A slight twist of the ankles sent him angling sharply toward the depths; a minute adjustment brought him back to Yum's side. His eyes adjusted to the darkness, picked out the shapes behind the lights now. Massive, sluggish
swimmers cruised, wide jaws open. Slim torpedo shapes darted and wheeled. A rebulous form, glowing with a nacreous pink, rose up and reached out with feathery arms; Yum swerved away, Retief following fifteen feet to one side of his bubble-trail.

After a ten-minute . run, Yum siowed, rose until he brushed the tops of the coral trees, then reached up with his feet, planted them in a swirl of smoky mud and stood, inverted. Retief came alongside, twisted, felt the soft ooze under his feet.
"It's a little confusing at first," Yum's voice came clear in Retief's ears. "But you'll get used to it."

Retief looked around. The undulating surface of the weed mass stretched away into deep gloom, studded with waving fronds, stiffbranched trees of red-violet, orange and chartreuse coral, feathery banks of leafy undergrowth set with multi-colored flowers as big as dinner plates, among which moving lights sparkled and played.
"I'll pace you, off to the left," Yum said. "Move along with big, leaping strides. Anything your size except another Strider will give you a wide berth. If you see one, hit him fast. Aim for the mid-section. Now, if we pick up an Angel, you'll notice the shadow first. Just keep moving; I'll get under him and hit him where it hurts. When he turns, give it to him near the big red spot on his back. Got it?"
"How many rounds in this rifle?"
"Five in the magazine, and a spare on your left shoulder."
"How do we know there aren't other hunters around? I'd hate to spear a friend of yours by mistake."
"You'll get a recognition tone in your phones if anybody gets within fifteen yards - maybe. That's part of the game. I got a nice barb cut out of my left leg last year. Some-joker wanted a Big Mouth for cut bait." Yum waved and flicked away. Retief picked an open avenue between towering corals and started off. Walking was not too difficult after the first few steps; rather like tramping the dusty surface of an asteroid, he reflected-except that the diving gear was considerably less bulky than a spacesuit.

There was a movement to Retief's right. A tall biped stalker into view ten yards distant, barely visible in the glow of phosphorescence. Retief halted and brought the gun around. The newcomer moved on in great floating leaps. Retief turned to follow.
"Never mind the Strider," Yum said. "He didn't see you; he must have just fed. We'll work off to the right here and let him have this territory."

Retief watched as the biped bounded off into the gloom, then moved on.

Ahead, the darkness seemed deeper. A cow-sized creature with warts and glowing rings around wide eyes blundered past, rocking him with a surge of water. Tiny fish flashed by. The gloom deepened.
"Action!" Yum's voice came,
tense in the earphones. "Keep going; we've got a big one coming up to take a look!"

Retief twisted to look toward the depths, like a black sky in which a dark cloud moved. He went on.
"That's the stuff. Act like you don't notice him; otherwise he'll let fly with his musk, and we'll be working in the dark...."

The shadow moved, spreading. All around, the scene darkened. At last a sluggish sea-creature humped past, raising a trail of mud-fog.
"Hey," Yum's voice came. "He's by-passing us, moving on."
"Maybe he's just not hungry tonight."
"It's that Strider we saw; he's after him. Let's go!"

Retief turned, saw a swirl of phosphorescence, jetted after it. The surface of the weed sloped, an inverted hill. Retief moved up beside Yum, following the immense shadow that fled across the rolling surface. The Strider came into view, leaning back toward the two hunters.
"Take him!" Yum barked. "I'll get under the big boy!" He swirled away. Retief brought the rifle to his shoulder, aimed -

A brilliant light flashed from the Strider's chest. The creature reached, grabbing at its back . . .
"Hold it!" Yum's voice snapped. "That's no Strider!"

The long greenish beam of the searchlight swung, flashing from coral trees, glowing through drifting mud-clouds.
"The damned fool! He'd better douse that light!"


The Death Angel closed, like a hundred-foot blanket of black jelly settling in; the stranger backed, working frantically to fit a magazine to his rifle, bringing it up -

The Angel struck. For a moment it hugged the surface of the weed, rippling its edge - then it heaved, recoiling violently -
"Good-oh!" Yum yelled. "I planted one fair and square! Move in and hit the hot-spot, Retief, and we'll be up half the night counting gold over a bottle of hundred-year yiqu:!!"

Retief hurled himself forward, kicked clear of the weed-bed, centered his sights on a foot-wide patch of luminous red at the center of the vast writhing shape, and fired, fired again, then went tumbling as the turbulence caught him and bowled him over.

Retief and Yum crouched by the prone body of the Angel's victim.
"He's a Terry, all right, Retief. I wonder what he was doing Underside - alone?"
"Probably a tourist, out to see the sights. Though I hadn't heard of any travellers registered with the Consulate."
"You may be right. We're not far from the Tap Root; he was headed that way, and he seemed to know where he was going."

Retief checked the man's equipment, noted his pulse and respiration.
"He seems to be all right."
"Sure. He just took a good jolt of current. We didn't give the Big Boy
a chance to get his shredding hooks into him."
"We'd better take him up."
"Sure. Soon as we stone out our Angel, before the Big Mouths get him. There's a public entry-well not far away; probably the one he used. We'll just tow him along with us. He'll be okay."

The vast bulk of the Angel drifted fifty yards from the crowns of the coral trees. They swam to it, shooed off an inquisitive scavenger, moved around to the red spot on the expanse of black hide. A short spear stood, half its length buried dead center in the target. A second spear protruded a foot away.

Yum whistled. "You work close, Retief. Nice shooting." He unclipped a slim-bladed knife, made an incision, plunged an arm into the rubbery body and brought out a lumpy organ the size of a grapefruit. He whistled again.
"This must be the beachmaster of all Angels! Look at the size of that pouch!" He slit the leathery bag carefully, dipped in two fingers and extracted a black sphere as big as a large grape.
"Retief, we make a great team. Look at those stones!"
"What do you use them for?"
"We grind them up and sprinkle them on our food. A great delicacy."
"Yum, what's this Tap Root you mentioned?"
"Eh? Why, it's - well, it's the root that supplies the mat."
"Just one for all this weed?"
"Sure; it's all one plant - the whole Mat."
"I'd like to take a look at it. I can't picture a Terry swimming around down here at the height of a storm, just to rubberneck - not unless it's a pretty spectacular sight."
"It doesn't look like much. Just a big, tough cable, running down into the Big Deep." Yum tucked the pearls into a pouch clipped to his belt and led the way along the sloping weed surface. He indicated a dark mass ahead.

"TThat's it - back in that tangle of rootlets there. The Tap's a hundred feet in diameter and over a mile long. It anchors the Mat, and feeds it, too."
"Let's take a closer look."
Retief moved in among the waving rootlets.
"Say - what's that?" Yum's voice came over the earphones. Ahead, a large dark shape nestled among the entwining roots. Retief swam up alongside.
"It's a scout boat - Terry design." He swam to the entry port, found it locked. "Let's reconnoiter a little, Yum."

The two moved over the waving mass of rootlets, cruising beside the moss-grown, barnacled wall of the immense root. Retief caught a glimpse of a white object, fluttering in the dark water. He headed for it.

It was a plastic tag, wired to a spike driven into the husk of the root. Below it hung a small box, metal covered, with an insulated, cable projecting from one side.
"What is it? Who'd come here and
tamper with the Root?" Yum asked, puzzled.
"It's a detonator," Retief said. "The cable is designed to plug into a packaged explosive charge."
"Explosive! Here, by the Root?"
"How long would the weed last with the root cut?"
"Last? It wouldn't last a day! You cut a sprig of the weed, it crumbles in a matter of minutes. Oh, the fruit, leaves, husks, are tough enough - but the main mass would disintegrate like a sugar lump in a mug of hot roca."
"Somewhere there's a bomb to go with the detonator, Yum," Retief said. "Probably aboard the boat. Our swimmer was on the way to get it, I'd guess. Let's check him for keys.

Yum fumbled over the limp body. "He's clean, Retief. He must have lost them in the fight."
"All right; let's get him to the surface and see what he has to say."

## IV

In the damp-smelling cavern of the public entry hall, Retief stood over the unconscious man. Water dripped from him, puddled on the heavy-duty rattan ramp that sloped up from the water. The attendant on duty came forward, clucked at the sight of the inert body.
"He left here, not fifteen minutes ago. Wouldn't accept my offer of a guide. I warned him..."
"Where are his clothes?" Retief asked.
"On the shelf - there." The at-
tendant pointed to a coat, trousers, boots, a tangle of heavy leather belts and an empty holster in a neat pile.
"A cop?" Retief said. He examined the garments. "No identification," he said. "And no keys."
"What happened?" the attendant asked.
"An Angel hit him."
"He'll be out for hours, then," the attendant said. "A big Angel gives a pretty good shock. Hah! These tourists are all alike."
"Yum, you don't have a police force here - or an army?"
"No. What would we need with those?"
"Can you get a few friends together - volunteers, to watch the patrol boat?"
"Sure, Retief. All you want."
"Station about a dozen in the underbrush around the boat. Tell them to keep out of sight - we don't want to scare anybody off. But be careful. A spear-gun is no match for a Mark IV blaster."
"I'll call the boys." Yum went into the attendant's office, emerged five minutes later.
"All set," he declared. "What about him?" He indicated the sleeping cop.
"Have the fellow on duty watch him until your friends get here. Meanwhile, he'd better put him somewhere out of sight."
"What about the bomb?"
"We'll have to try to stampede somebody. Whoever sent our friend here doesn't know he didn't make it."

Retief looked at Yum, frowning
in thought. "Yum, peel out of that scare suit and put the uniform on." He began stripping off the Striding Devil disguise. "I'll borrow some local garb."
"You've got an idea?"
"Not much of one. Just a wild hunch."

Yum kicked free of the last of the diving gear, pulled on the shapeless Patrol outfit. It hung ludicrously on his squat frame.
"Retief, I wouldn't fool anybody in this."
"That's just the point, Yum. Now let's move!"

Yum stopped before a dark entry and pointed up at a lighted floor above.
"This is it," he called over the howling wind. Retief's long violet cloak whipped at his ankles; Yum held onto his patrolman's cap with one hand.
"All right." Retief leaned close to Yum and shouted. "You wait five minutes, Yum; then just move off down the street. Move as though you were in a hurry. Then you'd better go back and help out the boys. If anybody comes close, let him get the port open; then hit him fast."
"Well - I guess you know what you're doing."

Retief climbed the trembling wicker stairway, gripping the handrail as a violent gust bounced him against the swaying wall. Two flights up he pushed aside a hanging lettered TERRESTRIAL CONSULATE GENERAL - EMERGENCY QUARTERS.

Wimperton and Pird looked up from a table on which a meal of emergency rations was laid out in the bleak light of a feeble DC lamp. Wimperton's mouth opened wide. Pird scrambled up and stood wiping his fingers on his pink vest.
"Hi, boys," Retief said cheerfully. "Damnedest thing happened to me. You'll never guess."
"Ah . . . you fell out a window?" Wimperton hazarded.
"Close, but no dope-stick; the catwalk broke under me. Quite a ride." He strolled to the window. "Some wind out there. Say . . ."
"Yes, indeed, quite a wind, you're right," Pird piped.
"Look here," Retief said. "Is that a Patrolman? Wonder what he's doing out in the storm!"

Wimperton and Pird jumped to the window, craned. Below, Yum's ungainly figure waddled briskly along the pitching strcet, turned a corner.
"Hey, that's -" Wimperton started.
"Yes, that's strange, all right," Pird cut in. "Poor weather for a stroll."
"But that wasn't -"
"Wasn't anything for us to worry about, ha ha," Pird babbled. He pretended to yawn. "Well, about time to turn in, eh?" He patted his mouth, watching Retief.
"I'm glad you suggested that," Retief said. "I was afraid you'd want to sit up and talk."
"Just take that first room there," Pird said eagerly. "Lovely room. Just lie right down and drift right off. Wimperton, you show Mr. Re-
tief the room and I'll just...ah... check a few things."

Retief glanced back from the door, caught a glimpse of Pird darting past the outer hanging. He stepped into the room. There was a tidy bunk, an easy chair, a rug, a tri-D set.
"This is dandy." He patted the bed. "Well, Wimperton, have a pleasant night."
"Yes, indeed. You too." Wimperton disappeared. Retief flipped the light off, lay back on the bed and waited. A minute passed. The door curtain twitched aside for a moment, dropped back. Lights winked off in the outer room.

Retief rose, glanced out. The shelter was deserted. He crossed to the outer hanging, went down the swaying wicker stairs three at a time, stepped out into the stormwhipped street. Pird and Wimperton, each dragging a suitcase, staggered out of sight around the corner. Retief wrapped the cloak close a.nd followed.

S
tanding in the shadows by the straining, wicker-work wall of a Public Entry Well, Retief watched Wimperton and Pird as they paced the ramp. Pird glanced at a finger watch.
". . . any time now . . ." the words came faintly through the hammer of the wind and the groaning of wicker. Pird stopped before Wimperton, apparently asking a question.

Wimperton reached inside his coat, brought out a thick packet of papers restrained by a red rubber
band, waved them at Pird, put them back. Retief edged somewhat closer."
". . . don't like it either," Wimperton's nasal voice stated. "Either the locals are wise - or they've got a deal with..." The wind whirled the words away.

Retief stepped back into the street, saw the pink glow of a public phone fifty yards distant. He fought his way to it through the wind, dialed and asked to speak to Yum.
"No action here yet," the native said. "How did the routine go over?"
"Our pigeons flew the coop, all right. They know they've got troubles, but they're not sure just what kind. They're at a Public Entry near the Consulate, waiting for a pickup."
"They'll have a long wait. Their driver's still asleep."
"Yum, I have a feeling the bomb's timed to go off at the peak of the storm. How long will that be?"
"Oh, about two hours, I'd say."
"What will conditions be like at the top of the Consulate Tower now?"
"Rough. The towers lean to the wind. The ceilings fold right down against the floors in a good blow - and this one's a dandy."
"We're about out of time, Yum - and there are two parties still unaccounted for. I'm afraid I have one more trip in this wind."
"You're coming back here?"
"I'm going up-and I'd rather get moving while there's still crawl space in the Consulate."

Ahowling gale struck Retief's head as he hauled himself up from a dark opening onto the thirtieth-floor balcony and looked up the long slant of the tower face. Forty feet above, the guard rail lining the terrace of the Consulate pent-house was dimly visible in the murk.

Under Retief, the tower wall trembled and moved like a living thing. He reached for a handhold, started up the thirty-degree slope. Gusts tore at him. He rested, hugging the surface, then went on. Ten minutes later he pulled himself over and lay full length on the steep slope of the tower roof.

The wind was less, here in the shelter of the canted floor. Retief slid down, then jumped, tumbled through the wind-tattered entry hanging, caught himself and blinked through the gloom of the deserted office.

From the far wall, a grunt sounded. Retief made his way across the room and flicked a wall switch. Dim light glowed, showed him the trussed form of Consul-General Jack Dools huddled in the angle of wall and floor. Five blood-shot eyestalks quivered appealingly at Re tief.

He went to a tilted desk, extracted a letter knife from a clip, came back and sawed at the cords binding the Groaci, then pulled the gag free of the mandibles.
"Ah, the shining of the sun on your ancestral egg-hill," Dools gasped in Groaci. "To express heartfelt gratitude; to vow eternal chumship...."
"Think nothing of it, Mr. Dools. You feel well enough to travel? We'll have to go down the outside. The stairs are collapsed."
"How pleasant to see you alive, dear fellow," Dools went on in Terran. "I feared the miscreants had done their worst. I tried to interfere, but alas -"
"I saw you. At the time, I had the idea you were doing the sawing, but then I got to thinking about the booze and girly-book supply in the filing cabinet. Alcohol would poison you and as for unadorned mammals -"
"Mr. Retief, take care!" Dools hissed. "My hearing is keen; someone comes...."

Retief looked toward the doorway, then hastily tucked the cut ends of the rope out of sight under Dools' body. "Play 'em close to your thorax, Mr. Dools," he cautioned.

A tall figure climbed through the flapping door hanging, crouched on the sloping floor, braced by one hand. The other held a power pistol, aimed at Retief.
"Just stay where you are, bright boy," Klamper called over the screech of the wind. "Don't bother untying him. My errand won't take but a minute."

He half-sid, half-crawled to the filing cabinet, keeping both eyes on Retief, fumbled a key from a pocket. He opened the top drawer, then the next, rummaged, tried the last drawer, then turned on Retief, showing even white teeth in an expression that was not a smile.
"I ought to have my head examined. I let those two lightweights
sell me a story. What an act! Wimperton gobbled like a turkey when he opened up that phoney cover and got a load of the funny-books inside. So I let 'em sucker me into a goose-chase . . . unless you've got it?" He came closer. "Turn out your pockets, hotshot."

Retief shook his head. "If you're looking for the papers, forget it. I left them in my other suit."
"You loused up six months' work, greenhorn. But I'll be back to fill out some fresh forms. Too bad you won't be here to watch."

He raised the power pistol; behind him, Dools lunged for the patrolman's ankle.

A bolt of blue fire crackled harmlessly past Retief's ear as he leaned aside, chopped at Klamper's gun hand, followed up with a knee to the face. Klamper rolled with the blow, scrambled over a sagging desk and dived for the doorway. Dools started after him.
"Let him go, Mr. Dools," Retief said. "I think I know where he's headed. Now let's get out of here before we get our clothes pressed - with us in 'em!"

## V

$\mathbf{A}^{\mathrm{t}}$ the Public Entry Well, muscled locals met Retief.
"Our man was here about ten minutes ago," Yum said blandly. "Big fellow, in a big hurry."
"You let him through?"
"That's right."
"Then you warned the boys at the boat to stop him?"
"Well, no, Retief. I told them to let him go. As you pointed out, he had a blaster. He's several hundred miles out by now."

Retief folded his arms. "There's something funny going on here, Yum. What about the bomb? It's probably timed to go off at the height of the storm - say in another ten minutes."
"Oh, that. I found it. It's taken care of."
"Found it where? And how the devil do you take care of a sealed titanite charge?"
"It was aboard the boat. You were right about that -"
"Come on, Yum. Give!"
"Well, Retief, I was a little curious. You can't blame me, after meeting you under such - unusual circumstances. I took a look through your clothes. I found this." He held up the document Retief had extracted from the Consulate files. "A fancy piece of paper laying claim to the whole damned planet of Poon - which it states is uninhabited - which it would have been if the bomb idea had worked out. The Mat would have broken up in the wind, and when the sky cleared, it would look like just another natural disaster. And in a few months, all five continents would be one big gold mine."
"So?"
"So I held out on you. Our slumbering pal had keys, all right. I went back and opened up the boat. There sat the bomb-all labelled and ready to go."
"Except for the detonator. That was wired to the root."
"Uh-huh. A safety precaution. But I found another one. It wasn't hard to install. I had an idea the owner would be along to see about it before zero hour; but I didn't like the sight of the thing sitting out in the middle of the floor, so I tucked it away."
"Where?"
"In the chart storage bin."
Retief whirled to the discarded Terran uniform, jerked the communicator from the lapel clip, keyed it on the official frequency.
"Klamper, if you can hear me, answer - fast!"

After a moment, Klamper's voice came back, a thin piping in the miniature earphone. Yum and Dools leaned closer.
"Klamper here. Who're you?"
"This is Retief, Klamper -"
"Oh, yeah, the bright young official. Well, I predict a big change in the near future for you. In about thirty seconds, to be exact."
"Klamper, there's a bomb -"
"Well, well, so you found out about that, too. Sorry I can't help you. So long, su -" The earphones went dead.
"Klamper!"
Yum looked at his watch. "Right on the button," he said.
"At least," Dools said, "he lived long enough to exonerate Mr. Retief."

There was a patter of hurried footsteps. Retief and Yum turned. In the door, Wimperton and Pird stood like ruffled birds, staring.
"I'm afraid you lads missed the
boat," Retief called. Yum signaled with his hand. Half a dozen local citizens fanned out to hem in the new comers.
"Oh, why Mr. Retief . . . What are you doing out of bed?" Pird squeaked.
"Oh, I just dropped down to offer you boys a crack at a peachy new opportunity in the Achievement Corps. Consul-General Dools here has need of two volunteers to man the new wildlife census stations over on continents One and Two. I'm going to give you first grabs at it. We'll go over to the Shelter and type out your resignations from the CDT and a couple of five-year enlistment contracts in the A.C. - on a non-compensatory basis, of course."

Wimperton's mouth sagged open.
"And I have a number of microtape recordings I'll contribute," Dools said. "They're quite exciting. All about bombs and land claims and gold mines. You can play them over during your leisure time during sand-storms, perhaps."
"But - Mr. Retief," Pird cried. "We - we've found conditions here somewhat less than congenial . . ."
"What if we refuse?" Wimperton gulped.
"In that case, Yum and his asso-
ciates would like to interview you on the subjec! of homesteading."
"Your pen or mine for the signature?" Pird said hastily.
"I'll ask a couple of the boys to help these two philanthropists over to the Consulate," Yum said. "Let the business wait till morning.. You and I have a bottle of Yiquil to finish, Retief."
"Show Mr. Dools a few of those pearls we netted, Yum."

Yum fished out the stones, handed them to Dools, who canted two pairs of eye-stalks at the lustrous one-inch spheres.
"Gentlemen - this is precisely the product I need to qualify Poon as a Class One commercial world! Can these be supplied in any volume? Say, a dozen a month?"
"I think it could be arranged," Yum said in heavily accented Terran. "Why don't you join Retief and the boys and me in a snort?"
"Well, I really don't think . . ."
"I know a barman who can concoct a suitable booze for any metabolism," Yum urged. "And a hangover cure afterwards."

Retief linked arms with the slender Groaci. "Come along Mr. Con-sul-General," he said. "We won't take no for an answer."

- END


## HOW TO HAVE A HIROSHIMA

## BY THEODORE STURGEON

"TThe next great breakthrough in science," I said during a recent symposium, "the breakthrough that will have the kind of impact on us all that the Hiroshima bomb had, will be in the area of psychophysiology: mind and brain. And the man who will bring it about walks the earth today."

Since then I have been asked many times to say a little more about this, and I'm happy to oblige. Let me begin, however, with a disclaimer: I can't say exactly what the breakthrough will be. I am convinced of what kind it will be, however, for one simple reason: you can't, you just can not, do as much research, in as many ways, with as many advanced tools, as are being turned to this goal, without making such a breakthrough!

Consider: Dr. Lilly, in his pursuit of the language of the dolphins
(work which is partly financed by the Space Administration, which has an exciting reason, to science-fiction readers: how do you communicate with a mind as good as a man's, but not like a man's?) uses a technique called stereotaxia - among many, many others. Imagine a rigid steel frame in which the head of the subject is clamped, after careful measurement, X-rays and surface mapping. On the frame are three thumbscrews, each of which directs a long fine sterilized electrode in a different dimension: one for up and down, one for right and left, one for forward and back. Each one is calibrated and has a vernier adjustment. At the desired location, a fine hole is drilled in the skull, just down to the dura mater, the very outside tissue of the brain. Then the electrode is positioned and lowered down through the brain cells, to the
precise location under study. The researcher presses a button, and a carefully measured, tiny pulse of electricity jolts the small area perhaps only a dozen cells - at the tip of the electrode. Observations are then made - and they are extraordinary.

Ahuman subject will experience flashes of light, or hot or cold sensations at certain parts of his body, or perhaps a burst of sound. Sometimes there are snatches of memory - and some of these are not real!

Exactly what reaction is experienced depends on the location of the probe and the intensity of the current. Bit by bit, segment by segment, the brain is examined - not, of course, the same brain, but great numbers of similar ones, until the motor and sensory centers of cats, dogs, rats, monkeys, humans and of course dolphins - become increasingly well-known - and understood.

It's a common tale that we use only a fraction - some say a fourth, some say a tenth - of our available brain cells. Most researchers today will not commit themselves on this. It is beginning to seem that we use all of the parts of the brain -but none of them at maximum capacity, and not all of them in ways which are completely understood.

A great deal has been written about lysergic acid (LSD), and most of it irritates me to the bellowing point. There is admittedly a good deal of spectacular material in
the research, but the way it is played up for these effects is pretty repul sive. The watch-and-ward mentality is ever so quick to put moral values on its use, describing it vividly as a sort of super goofball - and acting therefore as advertising agents in exactly the ways which appeal most to the goofball mentality. Meanwhile one or two cru-sading-type groups are marching systematically off in directions almost guaranteed to have this particularly valuable baby thrown out with the bathwater, which is what happened to hypnotism a hundred years ago when it became part stagecraft, part practical joke, and part evil incarnate of the Trilby and Rasputin variety, until only now is it regaining some respectability.

There are still some researchers who are doing important exploratory work with LSD, and who will ultimately unlock the secrets of its strange behavior and great potency. That this substance, or certain ones allied to it, will open new pathways to the study and treatment of the mind is beyond doubt; we can only hope that they will be let alone to do it.

One further word on hypnotism: here is an insight which might intrigue you. Beset as it is by real and fictional accounts of fixed, glazed eyes staring at lights and glittering pendulums, while the soft-voice Man of Power lulls the subject into deeper slumber, hypnotism has a hard time making itself known in its other and more widespread effects. We know for example. that the mind can direct the realization of
pain away from a specified area of the body under hypnosis. You've surely read of hypnotic anesthesia in childbirth and dentistry, and the stage trick of pushing a needle through a fold of the subject's flesh, which not only is not felt, but does not bleed. But has it ever occurred to you that your own body, right this very minute, is performing the same trick of anesthesia? (I use the word in the sense of "lack of sensation" and not that of "lack of pain".) Got your socks on, friend? Well, either they are pulled up tight and pressing against your calves or they hang down sloppy and you can feel the soft folds around your ankles. Right? But you didn't feel those things before you started to read this page, did you? Not until your mind and yours truly got together to make the sense impressions come through.

The mind is there and the nerves are there and the stimulus is there -but the mind automatically switches off the recognition of most sense impressions until it is told, in some way or another, to switch it on again. You want another? Sit absolutely still with your hands on this page (close your eyes if you like) and let yourself become aware of your hairline in the back, beginning just behind your left ear and slowly working around your nape until you reach a point just behind your right ear. Not only will you find yourself aware of almost every point along the way, you will almost certainly develop an itch so sudden and penetrating that it will be impossible for you not to scratch it.

If you are one of those who resist suggestion, you will scratch it anyway but you will not know you are doing it. Watch yourself, now!

The point I am making here is that in this sense most of us are "hypnotized" over most of our bodies most of the time, and old Soft Voice swinging his gold watch on its glittering chain hadn't one damn thing to do with it.

On the apparently sound theory that anything once experienced is never forgotten, men work today on ways to bring back, or bring out, "forgotten material. This could lead to eidetic, or "camera" memory - a handy thing not only in psychotherapy, but in a court of law. Studies are being made on the extraordinary metabolism of the brain cells, which seem to use blood fractions physically and chemically ${ }^{-}$ in different ways from other body cells. And aside from these and other researches on the organic activity of the brain, many profound and widely varied studies are being made on brain function - that is, behavior: the learning process, for example, and psychosomatic illness.

All this barely dusts over the surface of what's being done - and I haven't even touched the quagmires of ESP! So: you don't - you just don't - turn so many tools in so many ways on such a subject without coming up with a breakthrough. And when it comes, it's going to change the face of our earth...

Ha! You scratched!
END

# WHAT CROOCH DID 

## BY JESSE FRIEDLANDER

## These new-fangled ideas where will they all stop?

Mr. President, honored guest, members of the Athletic Commission, fellow Innovators. It gives me great pleasure to report that the year 2206 holds promise of imminent success for our cause. Our next annual meeting may well be in the form of a victory dinner!

Through the untiring efforts of our organization, our national pastime, which has been stagnating in its own rigid rules for more than a century, is now on the verge of developing to its wonderful potential. While we still face formidable opposition from the Traditionalists, under whose rule the popularity of the sport continues to decline, during the past twelve months we have made tremendous progress. The new stadium, for instance-or rather the special features tonight's guest of honor, master architect Thaddeus Brutus, has had built into it-stands as tribute to our achievements.

Through my work as historian for our organization, I have discovered that today's crisis is far from the first our national pastime has faced. The rare books and newspaper articles that have survived the wars and ravages of time reveal that, on more than one occasion, the sport rebounded from seeming extinction. In fact, it appeared doomed only a few short decades after its birth in the late 18th or early 19th century, when it was known simply as wrestling, or gruntangroan.
In its archaic form, the sport pitted two men against each other in a small, padded enclosure called a ring-facetiously, I suppose, since every available record indicates it was square in shape.

Each contestant, armed with nothing more than some ancient skill in the use of leverage, would struggle toward the benign goal of pressing his opponent's shoulders to the can-
vas flooring. Two out of three of these "pins" or "falls" would decide the match.

It is easy to understand why such mild sport failed to become particularly popular. Actually, within half a century, it had all but fallen into oblivion when snatched from its deathbed by the advent of viewsoriginally known as television, or TV.

These early views machines were cumbersome devices, capable of casting only two-dimensional imagessome of them not even in coloron screens that were just a few inches in diameter. Wrestling, confined as it was by a ring, proved a natural for the new medium. It quickly claimed widespread interest, helped by the fact that entertainment was not considered suitable fare for TV in those days.

However, wrestling's basic weakness remained. It just wasn't interesting enough. And, as the novelty wore off, its popularity waned.

Promoters, in a frantic effort to rekindle interest, resorted to presenting one combatant as the hero and the other as the villain, prearranging the result so that good would triumph over evil. Reduced to such a farcical exhibition, deprived of any aspect of honest competition, once again the sport began.a rapid decline toward extinction - this time to sarcastic cries of "author, author" after an obviously rehearsed match.

This "theatrical" trend led many wrestlers to adopt bizarre personalities in the wild hope of capturing a bit of public interest. For instance, one affected a long, blond, highly ef-
feminate hair-do; another dressed and acted the part of a full-blooded Indian; a third billed himself a meriber of a royal family.

One can see why, in 1979, after less than a century of existence, wrestling was again in its last throes. However on September 9th of that year, new life was injected into the sport.

This historic occurrence took place during a minor bout in Scranton, Pennsylvania, which matched the second-rate talents of a veteran named Doc Mauler with those of a newcomer from the Canadian forests-Lumberjack Lenny.

Since Mauler-who claimed a real medical degree-was the local contestant, it was arranged that he should take the "match" by winning the first and third falls. Lenny, however, in the excitement of his first bout, forgot his instructions and unceremoniously pinned the veteran in a matter of minutes. When it appeared that Lenny was about to suffer a similar lapse of memory in the second fall, Doc Mauler called upon all his medical know-how and came up with the correct therapy for his opponent's mental condition. It was at this precise moment that the sport -and Lenny-received a shot in the arm.

Let me explain that, before the bout started, Mauler had left his identifying stethoscope and hypodermics on the apron, or edge of the ring. In that desperate moment, just as he was about to be pinned for the second time, he found these implements conveniently within his
reach, picked up a hypodermic needle and jabbed it into his opponent's arm.

Lenny, sent reeling back by this new onslaught, retreated to his own corner, pausing only to gather up his own trademarks-a lumber jacket and a two-edged axe-before reengaging his adversary.

The newspaper accounts of the day tell us that Mauler wisely attempted to move into close quarters, feinting with the hypodermic while trying to slip the stethoscope around Lenny's neck. As he explained from his hospital bed after the fight, although his main objective was to garrote his foe, he had not overlooked the possibility of injecting an air bubble into his bloodstream.

However, he never got the chance. Lenny, calling upon the experience of his many barroom brawls in the north woods, faked an opening with his lumber jacket, then shortened the fight - and Mauler's right leg with a quick backhand chop.

Fortunately, the promoter of that historic match was none other than Eddie Crooch, whom we all revere today as the father of the sport. The audience's truly enthusiastic response to this refreshing exhibition of competitive feeling did not escape Crooch's shrewd eye and he lost no time in changing the rules of the sport to encompass it.

Lumberjack Lenny and his Educated Axe was one of the first greats of this new phase of the game. Although Doc Mauler never fully recovered from his first encounter, his younger brother, Intern Izzy Mauler, strung together an enviable skein
of victories until he found himself outweaponed, some years later, by Spearfisher Frank.

Other immortals of that era were Plumber Sam and his Sturdy Stillson Wrench, Homer Hittinger and his Lead-Loaded Bat, Electron Eddie and his effective (if cumbersome) High-Voltage Generator, and Bill Guillotine, to name a few.

Even while these stars were packing the stands, Crooch was able to recognize in the sport the first faint signs of waning popularity. Unlike our Traditionalists today, he fully realized that Innovations led to renewed public interest.

His inventive mind devised the switch to the full-sized arena, the next step toward modernizing the sport. This was accomplished in 1977 while the meeting on horseback of the White Knight and Prince Valiant in a bout that matched the Lethal Lance against the Singing Sword, the latter proving fatally short by about three feet.

Acclaimed as the greatest champion of this era, according to newspaper accounts, was Count Cruel, highly skilled in the use of mace and chain. However, even he fell before the slings and arrows of the young upstart, Arthur the Archer.

Arthur's short-lived reign was brought to a sudden end by Carbine Carl, who, in turn, was dispatched by Machine Gun McGurk.

It was this same McGurk who took part in the most famous match of all, pitting his skills against the two outstanding challengers of the dayRichard of the Nepal Flame Throw-
er and Hand Grenade Harry. The brilliant careers of McGurk and Harry came to an equally brilliant end that day in a memorable battle which proved, among other things, that bulletproof glass wasn't always. Aside from the deposed champion and Hand Grenade Harry, eightynine spectators, two officials and three ushers failed to survive the final contest of what I like to think of as the romantic era of the sport.

The incident was followed by a Senate investigation into the misleading labelling of glass products and a movement among misguided reformers to outlaw the sport. Fans and promoters alike turned to Crooch, already honored as the first Czar of the game, to find the solution. He met the challenge by appointing a committee of outstanding sports writers, businessmen and politicians to help create a new set of rules. As a result of the "Slaughterhouse Scandal", as it was picturesquely labelled by the newspapers, a glass company went into bankruptcy and Crooch's Gladiator Code was born.

That Code, my research reveals, is virtually identical to that which now governs our national pastime, clearly showing how reactionary our Traditionalist opponents really are. Even as today, the original Code permitted gladiators a choice of nothing more lethat than a short sword or three-pronged spear. Swordsmen were to be equipped with shields, arm and leg guards, breast plates and helmets, all of light metal. Spearmen, who sacrificed protection for mobility, were also provided with
fish nets with which to confound and entangle opponents. Then as now, although the majority of fans watched the combats on views, only those present at the arena were permitted to give the "Thumbs Up" or "Thumbs Down" sign.

While combats still make pleasant enough fare for a Sunday afternoon, the repetition throughout the years has sapped it of its original zest and crowd appeal. Certainly you will agree with me that Crooch, the greatest Innovator of them all, would not have let the sport decline as it has for lack of inventiveness. We do not seek to ban the Traditional Combats. With all its pageantry it might well serve as an interesting preliminary event for our Innovation . . . that great Innovation which, I predict with complete confidence, will be adding a fascinating new dimension to the sport within the year.

And now, it gives me great pleasure to introduce our guest speaker, the brilliant young architect who designed the new stadium-which incidentally, he has named the Coliseum after a famous 20th Century edifice. It was his foresight and confidence in the ultimate adoption of our Innovation which led him to include in his plans the tunnels under the stands. Tunnels that lead to the arena floor through heavy wooden doors at one end, and to chambers closed off by iron bars at the other. These passageways, while too low for a man to walk through, are just right for lions.

And now I give you . . .
END

# tHREE WORLDS то CONQUER 

BY POUL ANDERSON

## ILLUSTRATED BY McKENNA

## conclusion

Man and alien, both were doomed. Now they had nothing to fearfor all had been lost alreadyl

He brought the transceiver disc 1 to his throat, but could not hold it steady. "Most yes," he stammered. "I hear your message, friend. Speak!"

Another flash in the sky showed the sentry. Rain rushed off his flanks. He had not stirred. In so much wind and wave-beat, the lit-
tle sound muffled in Theor's hands did not reach him.
"I've been...busy. This is my first chance at a transmitter linked with JoCom's. How are you?"

Theor told his story in a few flat words.
"Oh, God damn everything," said Fraser beyond the lightning.

## the characters

FRASER was a scientist, not a soldier; he had chosen his life as a communications specialist on Ganymede, his wife and children with him, his project an attempt to reach and talk with the strange methane-and-ammonia quadrupeds who lived on the high-pressure hell of Jupiter's surface. Yet when a renegade Earth traitor landed his ship on Ganymede, Fraser found himself involved in a sudden, suicidal war. His fellows were defeated. Earth itself was threatened. Yet even so Fraser found his thoughts going out toTHEOR, centaur-like in body, his metabolism a sink of poisons, his thoughts utterly alien to anything human. . . . yet a friend to Fraser, and like Fraser the defeated in a sudden war. For while Ganymede had been captured by treason, on Jupiter itself Theor's people had been overrun by larger, stronger creatures migrating in search of land to till and cities to loot. Fraser had promised Theor at least the help of a mystic message to confound the other creatures and perhaps frighten them. But he could not deliver even that much, for at the appointed time Fraser was a fugitive, cut off from the transmitter that could reach Jupiter.
Now Theor was defeated and captive . . . and now, when it was too late, Fraser's voice come through on the tiny radio medallion he wore around his neck.

"What has happened to you, mind-brother?"

The air had grown cold, and was damp in Theor's gills. He recalled what he had once been told by Fraser, that Ganymede was so chill that ammonia itself lay frozen. Jupiter's atmosphere trapped heat... but tonight the heat seemed to be bleeding away, back toward those dead globes that rolled through outer space. He shivered.
"Theor, I'm so unspeakably sorry about you. About me." A bleak chuckle. "Better off, but also beaten. They stopped our attack on Aurora and threw us back. Now we're camped at the place they ordered, and their leaders are about to open talks with ours."
"Ill is this time. Has the whole universe gone awry? But tell me, if your foes have so much power, why do they negotiate at all?"

Perhaps there is a clue buried in that to what I should do about my own enemy's wish.
"Well, we'd be hard to wipe out. And, of course, if driven to desperation, we might wreck the city. We wouldn't actually, but I suspect Swayne credits us with a touch of his own fanaticism. He needs its facilities for his scheme. So he'll try for some compromise, such as us returning home without any further punishment."
"Have you any hope of striking again, successfully? Or at least of summoning help from Earth?"

The sand was chill and moist beneath Theor's pads. He rubbed his feet one by one against his legs.

Fraser sighed. "I don't see how. Even if we could get hold of a moonship, none is equipped to go beyond the Jovian System. That is, they could, but they'd be unable to accelerate long enough to build up the speed for a hyperbolic orbit. The trip would take many months. We haven't got that much time before Swayne returns home."
"Be cheered," said Theor clumsily. "At worst, you will still live on your own land, and even if you do not like your masters, they will be of your own kind."

Lightning flamed anew. The thunder rolled for minutes, shaking the ground.
"Whereas you - Theor, we've got to get you out of there."
"How?"
Despite all hopelessness, the Jovian's pulses jumped. They had so many marvels in the sky; could there possibly be one somewhere for him?
"Describe your situation as carefully as you're able."

Theor did so. When he had finished, the transmission time stretched till he thought it must break.
"Hm. You're not very near anyone else, and you've got a storm for cover. That's something. Could you somehow manage to overcome your guard?"
"I am hobbled and my hands are bound. He has a pike and dagger also."
The answer flashed into Theor even as he waited.

Fraser spoke it: "If you could distract his attention, you might be able to grab one of those weapons. Eh? Dangerous as hell, but you don't have anything in particular to lose. Turn up your communicator to full volume and throw it out when he isn't looking. I'll yell."
"Aye!" Theor pulled the cord of the disc over his head.

Fraser hesitated. "If you get hurt, though -"
"As you say, that makes small difference to my present plight. Hurgh ... let me think." Calm descended upon him as he stood. "Yes, I would do best to steal a boat. They could track me over this wet ground, and they can run faster than I. In the past I have had some experience with sail, and you can also advise me. Very well, when you hear me call aloud, speak for a few moments. Imitate a Jovian voice as well as possible - though it will still sound impressively alien. I have a feeling that night makes these Ulunt-Khazul nervous anyway."

He paused, wondering how to frame a farewell. Before long he might lie with a blade of whetted ice alloy between his ribs.
"If it made any sense for me, I'd say God be with you, Theor. Good luck, anyhow." Fraser's voice wavered. "Yeah. All the luck in the universe."
"No, keep some for yourself. Now wait for my call. Good-bye, mind-brother."

Theor advanced to the doorway, the disc hidden between his palms. He stuck his head out. Rain flung against his brows and runneled

down his crest. The guard, a bulk in the flicker-touched gloom, very faintly glowing by his own infrared radiation, growled an order at him and jabbed with the pike.

Theor pointed with his arms and exclaimed.

The guard looked in that direction, only for a split second, but there was time for Theor to toss the communicator a little way to his other side. Now came the transmission lag.

The warrior scowled back at him and poised his shaft. No doubt he was saying, "Get inside before I skewer you."

The disc wailed.
The Ulunt-Khazuli leaped in the air. Fraser's words snarled at him. Lightning ignited; briefly the beach lay under ruthless white illumination, so that Theor could see the guard's sheathed knife, the rivets on his pike and a scar on his cheek. Dazzlingly to Jovian eyes, the disc reflected that glare.

The guard jabbed wildly at it. His mouth gaped with terror and his throat worked with shouts for help. Theor was forgotten. As thunder came to drown out both voices, the Nyarran lurched forward.

His hands closed on the knife. The Ulunt-Khazuli swung toward him. Theor drew the blade and stabbed under the great jaws.

Arms closed around his torso. Pain lanced as his gills were bruised. He haggled the knife in an arc. Blood spurted into his face. The clutch on him slipped away. The guard went to the ground, flopped like a landed fish, and died.

Now only the wan shimmer in the sky gave light, continuous electric discharges in the upper atmosphere whose radiation filtered down through many cloud layers. The sea, the camp, the land were locked away in rain. Theor said aloud: "I have him, Mark. Keep silence. I can only hope that no one heard the fight." He caught the pike awkwardly between his foreknees and sawed the bonds on his wrists across the edged head. It kept slipping sideways and cutting him. Rain beat his body, wind skirled, the sea stamped.

Free! He withdrew the knife from the guard's throat and slashed away the hobbles on his legs. Next best take the belt and sheath. The body was heavy to roll over. He got the belt around himself, the communicator back under his head, picked up the guard's pike and started for the beach.

Lightning turned the world incandescent again. Theor saw two Ulunt-Khazul approaching. They must be on their way by mere unlucky chance, for they were in no hurry. But the axes on their shoulders shone through the rain.

Darkness and thunder. Theor ran.

The boats lay on the beach, not far off, anchors biting the ground. Half blind, Theor strained against one prow. No... no movement... he'd have to flee on foot, then. By wading through the shallows he could prevent tracks, but it would be deadly slow... The hull stirred and grated down the sandslope. He
flung the anchor and pike aboard and gave himself to the task.

Each time that lightning came, he thought surely he must have been seen. Confusion was loose in the camp, warriors galloping back and forth, shouting as they ran. The dead guard had been found, but probably no one except Chalkhiz knew he'd been watching a prisoner, so -

Ammonia splashed about Theor's hocks. The boat came afloat. He pulled himself into the open hull and lay shaking.

No. He mustn't. He had to be away. He picked himself up and groped aft to the mast. The sail was furled around the yard, an unfamiliar arrangement of lines and grommets baffled him. But at least there was some light here, from the sea.

Slowly he puzzled out what he must do, while the boat rose and fell, rocked and yawed in the waves. He undid the last lashing and pulled on the halyard. The sail cracked like thunder and threshed up. Theor made fast. The sail filled and the boat plunged its nose into a wave. Spray sheeted cold and flaming across him. He let down the daggerboard and crawled onto the tiller.

Now - straighten her out - fill the sail with wind - drive her!
"Mark!" he called exultantly. "I am free again!"

The vessel heeled. Billows rose with a volcano noise under the hissing strakes, climbed and climbed, broke in a flurry that spouted into the open hull.

The man's tiny voice said, "I
haven't got words for how glad I am . Uh, are you having trouble with the boat? If so, describe the layout and I'll give you whatever recommendations I can."

Theor did so, while rain beat him from behind. The shore was now invisible.
"Gosh, it sounds so much like one I had when I was a kid. Let me think a bit. The general principles of sailing ought to be the same for you as for me, but the application -" After a pause, Fraser issued a crisp lecture.

Theor heeded the counsel. "That does well, mind-brother. I feel entirely confident of riding out the storm. It should not last much longer in any event. Wind velocities like this are quite rare."
"Have you any idea where to go?"
"Only vague ones. I could attempt to double back and reach Nyarr, but at best I would merely be one more mouth to feed and at worst - and most probable - I would find the Ulunt-Khazul already there, and sail straight into their grasp. Reckless though it seems, I think I must continue north until I am past the Steeps of Jonnary, then abandon the boat and strike inland in search of Walfilo's folk, that core of our army which escaped today."
"M-m-m, it's wilderness country there, isn't it? And mighty big. You could wander forever without coming upon them."
"That must be hazarded."
"Well . . . I feel so bloody helpless, Theor. I can't even stay by the
radio much longer. I'm due at the conference, and after that, I don't know what'll happen."
"Call me when you can. Good fortune to you, mind-brother."

The loneliness closed in again.

## X

Fraser sat for a while staring at the transceiver, until he clenched both fists and brought them down on the panel. The blow rang through silence and shadows. A beam of sunlight pierced the forward viewport, making veins and knobby knuckles stand forth with a certain cruelty. Noticing that reminded him how he still ached from over-exertion. Nuts! Forty isn't old. But it can sure feel that way. Ah, stop sniveling. Make yourself presentable. You smell like a dead billy goat.

Stiffly, he got up and moved to the rear of the gannycat. Danny Mendoza had turned it over to him when he said he had to contact Jupiter, so he could use its communication equipment and have room to stretch out between calls. He stripped, drew some water into a basin, and sponged his skin. There wasn't much sense in cleaning up, just to meet a she-quisling. Well, morale. And she was attractive in her fashion. He grinned lopsidedly at himself.

Memory ran back to the hour when she slipped him the note. That had been in Aurora rather than Swayne's battleship headquarters - doubtless to make sure no one came to the conference after a
hearty meal of dynamite, and lit a cigar. Fraser had accompanied Sam Hoshi. Lorraine was there too, and a couple of senior Navy officers. Supposedly she represented the town. Everyone sat on the edge of chairs, in the bleak, crowded room: except Swayne, behind the desk, who overpowered the scene. Not that he shouted, or even scolded; but he had the self-possession of victory.

His hand sliced the air. "Let's stop exchanging swear words," he said. "From my viewpoint, you are insurrectionists. You killed and wounded a number of loyal men. Your heavy casualties are less than you deserve."

Hoshi opened his mouth, snapped it shut again, and writhed his fingers together. Two of his sons lay dead outside.

Swayne quirked a smile that went no further than his eyes. "You, of course, look at it differently," he continued. "Nobody's opinion is likely to be changed here and now. Well, I am a professional fighter. I'm willing to admit you're sincere, however misguided. The problem is not one of emotional attitudes, but of what to do. I'm more interested in getting on with my job than in immediate justice."
"What about justice later on, though, when the political cops arrive?" Fraser demanded. "Why should we give in, if we're to be arrested inside a year, jailed, shot, or brainwashed?"

Lorraine's thick fair brows drew into a frown. "That last is a nasty word, Mark," she said.
"So call it re-education," he answered. "I'd still rather die on my feet."

66 can't give you any absolute guarantees," Swayne confessed. "However, think a bit. The restored government will have its hands full on Earth and the inner planets for a long time to come. Why should it waste effort on a bunch of isolated colonists? Especially if I put in a good word for you? Cooperate with me and you have my promise as an officer of the United States Space Force that I will do that."

Fraser saw the taut face and believed. As for the police and the courts - yes, there was a pretty fair chance that Swayne had also called that turn correctly. Nonetheless, defeat was a jagged lump to swallow.

Hoshi leaned forward. "There are five thousand people in the Jovian system," he said tonelessly. "A lot fewer than a single one of your missiles would kill on Earth. Not to mention everybody who'd go before a firing squad, back there if not here. On balance, we ought to let the whole colony die if that can stop you."
"It can't, though," Swayne said. "It would be a setback, yes. But the Vega would still be at large. There are other places we might go, certain asteroids, for instance. Not as suitable as this, but worth trying if Ganymede is knocked out. And I don't believe you're able to accomplish that, anyway."

He leaned forward, bridging his fingers, nailing the visitors with his eyes. "Admit the facts," he said.
"You're beaten. The only duty you have left is to your wives and children. I repeat my offer: withdraw to your homes, make no further trouble, and we'll leave you alone in turn."
"You can even take along those people who want to leave Aurora," Lorraine added. "And the rest of us will continue the flow of essential supplies to you."
"Nice gimmick," Hoshi snorted. "Get rid of potential mutineers and saboteurs, huh?"
"Of course," said Swayne. "But are you so inhuman that you won't take them in?"

He talks of inhumanity! Fraser thought. I'll never understand Homo Sapiens.

Maybe that's why I like Theor so much. Anxiety touched him. I should get back to the vehicle. He may have called.

The talk dragged on, endlessly, meaninglessly. "We can't pull out at once," Hoshi said. "We've got wounded to care for."
"I'll send out the hospital staff," Lorraine promised.
"I want you out of here fast," Swayne insisted; and the haggling began anew.

In the end, the mean little bargain was struck. The Ganymedeans rose. "Good day to you," Swayne dismissed them.

Lorraine went over to Fraser. He was already at the door, sick to get away. "Mark," she said.

He gave her his coldest stare.
"Mark, I'm so sorry."
"You ought to be." He opened the door.
"Can't you understand? I have to do what's right, the same as you. And how can we know what's right? It isn't something you weigh or measure. No -" She looked away. Her teeth caught her lower lip. "It can tear you apart."

She had put on a dress for this occasion, severe in cut but still revealing of long legs and high bosom. Tears blurred the emerald eyes. He remembered shared work and shared laughter, and could not hate her.
"Would you shake hands?" she whispered.

Hoshi wasn't looking. Fraser's arm jerked forward. She caught his hand in a spasmodic motion. Her other hand closed over the clasp, bending his fingers. He felt a small stiff object. She shook her head, ever so faintly. His heart banged. He slipped it into his pocket, feeling as if the entire cosmos watched.
"So long, Mark," Lorraine said. She turned and walked from him, out the opposite door.

He followed Hoshi to the nearest airlock. A pair of armed spacemen tramped behind. The corridors were deserted. Most of Aurora's population had been ordered behind doors while the emergency lasted. Hoshi moved slump-shouldered, speaking not a word. Fraser's head was in too much of a whirl to attempt any remark.

Besides, what could the conquered say?

Alone again in Mendoza's cat, he took out the card. She had scrawled on it: Meet me behind the moon-
ships at 0800 next cycle. Don't let anyone know.

Ganymede's day equalled 7.15 of Earth's. The colonists measured time in twenty-four hour units, Alpha Cycle, Bravo Cycle, and on through Gable, with Harry a truncated addendum. There were too few people on the other moons to make a different system worthwhile for them. The rendezvous was upon him.

But what the devil can she want? To explain herself further? To offer me - He dismissed that possibility with a wry chuckle. Face the fact, he was an ugly old married man. Not that occasional thoughts hadn't crossed his mind . . . And this was no damned time for them, while Eve waited beyond the mountains, and Sam Hoshi prepared for the homeward retreat, and Sam's boys were blocks of ice on the lava, along with Pat Mahoney and so many others.

Fraser completed his bath, squeezed the sponge into the basin and emptied that into the reclaimer, ran a depilator over his bristly features and a comb through his hair. Long John, spacesuit, pass through the lock and look around.

The colonial fleet glimmered in ranks under the brutal mass of Apache Crater. Men moved about here and there on various errands, in and out of shadows cast by the westering sun. But they were few; most sagged in their vehicles, waiting only to depart. Stars crowded the eastern horizon above the Glenn peaks, and Jupiter swelled enormously toward half phase at the
zenith. Nonetheless, darkness dominated the land.

Fraser kept to the gloom until he was behind the crater, then cut due east to put Aurora out of sight. Landmarks were like old friends, showing him how to circle around and approach the field again from the north, unseen. But he had an irrational feeling that they had stiffened into the same voicelessness as his dead.

The clustered vessels rose before him. A figure stepped out from among them, took his arm, and led him back to their shelter. Helmet rang against helmet in a cave of night.
"Oh, Mark!" Both her hands clutched at him. "I didn't know if you'd trust me enough to come. Thank you, thank you."

He shifted awkwardly from foot to foot. "Why, uh, shouldn't I?"
"It could have been a trick. Remember, your escape was the first successful defiance. He was furious, in that cold creepy way of his. He talked about making an example of you. I didn't know if he might not seize you when you came yestercycle, in spite of everything. And yet, when we arranged for the conference, I had to suggest your name, had to ask you to come along, not being sure, not knowing if he'd respect your immunity or, or kill you." The words tumbled from her, broken by unsteady breaths. "I told him you were, you are one of the most :mportant men in the colony, you could better speak for your side than anyone else, even Hoshi."
"That's not so. I, uh, you know I
never was any kind of politician or leader. Not forceful enough, don't have enough sense of human relations. I almost refused."
"I never feared that. You have too much sense of duty."
"Huh? No, ridiculous. And to hell with it, anyhow. So you risked my life to arrange this meeting. Why?"
"I risked my own too," she said defensively.
"You?" he jeered. "The whitehaired girl of the glorious counterrevolution?"
"Mark, I'm on your side!"

He could only gape into lightlessness.
"I didn't approve of the Sam Halls," said the hurried, muffled voice. "I thought they were honest but mistaken. Maybe I still do, I don't know, everything is so confused. But I can't go along with a man who ... who'd do something like that...turn nuclear weapons on his own country. On any country that hasn't done it first! I sat alone and cried. Oh, God, I was scared and sick -"
"But you've collaborated," he said stupidly.
"Yes. Don't you see? The call went out over the intercom for volunteers. I had to do something. What else could I do but get myself into a position where maybe, somehow, I could sabotage? They'd already inquired about a lot of us. They don't have psycho-probe equipment, or I'd never have fooled them. But they do have a couple of tough political officers who know how to, to interrogate. They knew
that everyone thought I must be on their side. So when I volunteered - Not that they took me on faith. I still see those two men in my dreams, barking question after question after question. But I got through it. Don't ask me how, but I did. Now I'm the mayor. I keep the city running, and act as a go-between. They, the people, they obey, but I know how most of them loathe me. I can almost hear them thinking, If we can only get rid of the ship that bitch'll wish she never was born-even more than I do now!"

She gulped and was still.
"I beg your humble pardon, Lory," Fraser said.

When she didn't answer, he asked: "What's the situation like in there?"
"Queer," she said in a wondering tone. "I'd never imagined how queer it would be. You think of occupation as being like everybody in jail. But no, life goes on, in a crippled fashion. People still have their jobs to do. They still go home at the end of a watch, and cook dinner, and play cards or talk or ... whatever. Only a few vital points are guarded. And the guards, well, they aren't exactly jailers. People have occasion to talk with them, and one word leads to another, you know, here's this boy from Iowa so you ask him if he knows your cousin Joe and how the new Des Moines rocketport looks. Or looked. Maybe the fighting wrecked it; neither you nor he know.... Some men, who made open trouble, are under arrest, but they aren't mistreated and you can visit them at certain
hours. Even the out-and-out collaborators have their human side. They're still the folks you used to work with, chat with, invite to parties. You look for a change in them and can't see any. Only there's this wall around them, it's invisible and sound passes through, but something is strained out." She gave a forlorn laugh. "I'm talking as if I were an ordinary colonist. Actually , of course, I'm a collaborator myself."
"Are any of the other collaborators faking it like you?" Fraser inquired.
"I don't know. I haven't dared approach them. Maybe they don't dare approach me. Still, I doubt it. Nearly all you settlers have been away from Earth so long that you've gotten politically naive. You aren't used to, well, handling the official jargon while thinking of something else. I believe most of you, trying to be sleepers, would soon make some word or gesture that didn't ring true. And at once you'd be under suspicion, and off to the brig with you."
"What's a sleeper?"
"See, that's what I mean. You don't know as much as any child does at home. A sleeper is one like me. No, I think the other collaborators are genuine, some out of sincerity, some out of fear or opportunism. Of course, if we could destroy Swayne, they'd all claim to have been Sam Hall fifth columnists!"

Like you, Lory? Fraser forced the question away with an effort. "How many are there?"
${ }^{66}$ A couple of hundred. And fewer spacemen than that, of whom some have to stand watch aboard' the Vega. It's the real threat. Without it we could overpower the crew in no time, even if they do have the only firearms. But as long as it can shell the city ... well, the loyal people bide their time, hoping something will turn up. Which makes them collaborators of a sort too. doesn't it?"
"Also us, Hoshi's men, after today," Fraser sighed. "How's the warhead manufacture coming along?"
"We're still getting organized. I have to say 'we' - part of my work is personnel screening. Mostly production can be automated, but a few engineers and technies will be needed to set up the plant, and a few more to run it, plus others to mine the ores, bring them in, refine them and deliver the isotopes. Every colonial will be under guard every minute he works, naturally; but even so, we have to assemble a predictable staff, shall I say. Not necessarily devoted to the cause, but obedient. We can do it, too, by evaluating the psyche records in the medical files. That takes time, though. And of course I'm as inefficient as I dare be."
"I wonder ... it occurs to me... is every man in the ship's crew reliable?"
"Yes. Career military personnel always got thorough probing at intervals, you know. especially in a sensitive organization like the Space Force. Swayne told me he'd only had to send threc men out the airlock Only!"
"Well -" Fraser searched for words. Silence pressed in so heavily that he didn't stop to polish them. "Okay. What do you want with me?"
"You're the one man I can trust who might possibly be able to help," she told him.
"Huh? How?"
"You're a good space pilot."
"You mean you can smuggle me onto a moonship? That's useless."
"More useless than you realize. Every one of these boats has had the air bled off and the reaction regulator taken out. It'll only be put back in when an absolutely essential trip has to be made; and then a couple of guards will go along. There are no free ships left on the other moons, either. Before your army arrived, Swayne sent his boats out. The Traffic Control records told them where to look. They shot a small missile at each parked ship. Partly that's a precaution against someone trying a suicide dive onto the Vega - though its guns could doubtless abort any such attempt quite easily. Mainly, though, it's to tighten his hold on us. If we don't behave, our people on Io and Callisto and the other moons will be left to starve. Or maybe gunned down - there's a picket boat in orbit around each one."
"I see." Fraser swallowed. His palms felt clammy. "What do you have in mind?"
"He overlooked one ship. And she's got the acceleration to reach Earth in time to warn them."
"Come again?"
"The Jupiter ship, The Olympia."

Fraser stared at her, incomprehending. "But -"
"I know. Her mission was postponed because of the trouble on Jupiter, and she's not yet stocked with food, water, or anything else for life support. But she's otherwise set to go!"
"And with so much else on their minds - and the ship sitting right under the Vega's guns - yes." The blood pounded in Fraser's ears and at the base of his throat. "If the stuff could, somehow, be smuggled aboard -"
"I don't know how. I haven't had much time to think myself. But maybe we can figure out a way. And you can drive her, can't you?"
"How would I ever get aboard? Hoshi's leaving before sundown."
"Come into the city with me. Entry is safe, especially in the confusion there'll be when the evacuees go out. Not too many of them, actually; essential personnel won't be allowed to go. But still, quite a number. You can hide in my place and we'll make plans when I'm off duty. We may lose a little weight, sharing one ration between us, but $I$ don't mind. The risk is pretty horrible, I know. I won't blame you in the least for refusing. You've got a family, I don't, it makes a difference. But this is just all I can think of to do."

To be free again.
No, that was a phrase for a 3V melodrama. Fraser looked at the implication and his bowels cramped inside him. Captain Manly Valiant,

Terror of the Spaceways, might load a few tons of necessities on a wheelbarrow, ram it through a cordon of guards, vault into the ship and be on his way before the astonished villains had gotten the wax out of their mustaches. But Mark Fraser, now, had seen an army macerated, a man die in his arms, a leader bend the neck and go home with two cold lumps which had once been dear to him. Mark Fraser had Eve, Ann and Colin to look after. He had endured arbitrary government in the past, grumblingly, but not finding life too bad; he knew perfectly well that he could endure it again if he must. He was aging and staid and had learned that man's fate is a series of compromises. He saw no way to accomplish anything but his own heroic death, and doubted that there would be much heroism. He would scream as loudly as the next slob when a laser beam punctured his belly; or cringe from their boots when they caught him -

Foulest thought of all: this woman admitted that Swayne wanted his head.

While Fraser was with Hoshi's men, he came under the general amnesty. But if he was lured into the city and arrested, Ganymede wouldn't revolt again merely to save him. In fact, his execution would be one more blow at the spirit of his fellows: maybe the last one that was needed before they made the interior surrender.
"What do you want to do, Mark?"
He barely heard through the querning in his brain.
"Anything you decide is right by me," she told him. "But you have to decide now."
"I hope - " His voice betrayed bim with a squeak. He tried again. "I hope you've got some happypills in your place, Lory."

## XII

Theoretically, the most efficient procedure would have been to sleep in dormitories, eat in messhalls, and share a few washrooms. In practice, privacy was an urgent need. Every apartment had complete facilities, and Aurorans were not in the habit of dropping in on each other unannounced. Moreover, Lorraine was under a social boycott by the majority. Fraser had little fear of being surprised.

Nonetheless his nervousness grew. Bachelor quarters amounted to a bed-sitting room, plus a tiny kitchen and bath. He felt trapped. And there was no tobacco, and his belly growled for more food than was available, and the small supply of psych medicine had to be saved for times of real need. The first "night" they were together, he and the woman had talked in circles, finding no answer, until sheer exhaustion put them to sleep; and, while a floor didn't make too stiff a bed in this gravity, he had slept ill.

She went back to work after breakfast, and he settled down to business. Whatever scheme they arrived at must be mostly his. Her mind was too occupied with main-
taining her balance on the tightrope. For several hours his thoughts kept straying beyond the Glenns. Hoshi would have returned by now, bearing that letter he had scribbled for Eve.

The leader had protested, called Fraser a lunatic, insisted that at least a younger man go with Lorraine. "No, I'm afraid not," Fraser had said. "You see, the guys who were supposed to pilot the Olympia, who're briefed and trained, they're inaccessible. One's in the brig for assaulting a Navy man, and the other, well, she isn't sure about him. We can't multiply risks more than we have to, can we? And in the getaway, the ship may have to dive into Jupiter's atmosphere to escape pursuit. That's not a situation an ordinary rocket jockey can handle. But I've piloted submersibles, back on Earth. The Olympia design is based on terrestrial bathyscaphes." He shrugged. A tic in his cheek contimued the gesture. "I wish to hell I could find a substitute. But if the job's to have any chance of success, I seem to be elected."

In the end, Hoshi regarded him for minutes before saying, "Okay. And . . . win or lose, I envy your son."

Would Eve understand as much?
She seemed very remote, the recollection of her blurred by his immediacies, as if she were someone he had known in a past that had long slipped through his fingers. Reality was these walls, the start in his pulse when feet passed in the corridor outside, the absence of his pipe, the occasional wondering
whether Theor had gotten safely to land, the dreary round of plans for stocking the escape vessel and perception of their flimsiness.
Item: Several guards were always posted on the field around the Vega. They'd see anyone who carried stores aboard the Olympia, and questions would follow.

Item: Spacesuits had been returned to their owners after the colonial army left. One of Lorraine's man-sized spares - every locker held extras - would equip Fraser for the sprint from a city airlock to the ship. But he'd never make the distance before a sentry shot him.

Item: Lorraine might conceivably get together a few men who were willing to die in an attack on the guards, while Fraser used the diversion to get away. But sounding them out, overcoming their suspicions of her, assembling their gear, would take many cycles. In that long a time, Swayne might very well disable the Olympia. Some collaborationist could remind him of her potential. Besides, Lorraine wasn't blindly trusted. She was hardly ever alone outside her dwelling - the nature of her work made that inevitabie - and an eye was kept upon her. If she started having a number of visitors here, that would soon be noticed and investigated. In any event, the supply problem wouldn't be solved thus.

I got too damn fired up. I should have thought of this before committing myself. That ship might as well be in orbit around Alpha Centauri.

No, wait. What do you do when a problem looks insoluble? You back up and look at it from another angle. A different approach.

I'm too tense. Okay, I'll invest one of these pills in the project.

He swallowed coolness and determination, sprawled on the bed and turned his analytical mind loose. The answer grew before him.

Lorraine came in. She shut the door behind her as Fraser sat up. "Hullo," she said. "How're you doing?"

Her voice was dull and there were shadows under her eyes. Yet she moved elastically, and he noticed her high color and thought how much more she had in the way of looks than any conventional prettiness.
"I may have our answer," he said.
"You do?" Weariness vanished from her like fog burnt off the sea by a morning sun. She reached the bed in a jump and clasped his shoulders. "I knew you could!"
"Whoa, there. Let's talk this over and see what the holes in the scheme are." Still, he felt a glow, and if it was mostly chemical, was it any the less real for that?
"Sure. But you wouldn't say you 'may' have licked something unless you knew you had." She pirouetted across the room. "Whee!"
"Good Lord, Lory, you're acting like -" for some reason he stopped before saying "my daughter" - "like a kid let out of school."
"That's how I feel, too. With an end in sight to this horror, why not? Look, I've got a bottle of whisky

I've been saving for some extraspecial occasion. What say we break it out now?"
"I don't like the taste of alcohol. Often wish I did, but I guess we all have some handicap or other. Don't let me stop you, of course. Only, well, we do have to discuss this seriously."
"Uh-huh." She sobered, though the vibrancy remained in ber tone. "I'll start dinner, with something nice that I've been saving too, and while it cooks we can be earnest." She flushed a bit. "I'd like to change clothes, also."
"Sure." He retreated to the bathroom till she said he could come back. A close-fitting black dress with a single aluminum-bronze pin, a stylized comet, did her a disturbing amount of justice. Light gleamed in her hair's gold. He sat down and tried to arrange his thoughts while she bustled in the kitchen.

Returning, she took a chair opposite his. "All right, Mark," she said. "What's your proposal?"
"Well-" He squirmed about and stared past her, at a picture on the wall. It wasn't the sentimental Earth landscape of the average colonial home; NGC 5457 coiled stark and glittering in space. "Well, the problem breaks into two parts - provisioning the ship and getting aboard her. Then a little warmup time is needed, and time to accelerate before a gun or a missile can hit, but that's part of the whole boarding operation. What hung us up was assuming the two phases had to be in that order."

She slapped her knee. "I think I get your idea. Why didn't I see? But go on."
"There are still radiophone lines to every outlying settlement. And with so much else to do, I don't imagine Swayne's gang monitors them."
"N-no. I have to make fairly frequent calls outside of town, to the mines for instance. And I can choose a moment when I'm alone in my office. Who should I. contact?"

66 he people at Blocksberg. It's nearly antipodal to Aurora, you recall. And Gebhardt was with us, so I'm certain they'll cooperate. He can check your bona fides with Sam Hoshi if he wants. It'd be better to alert somebody on one of the other moons, but that goes through a different circuit."
"Which isn't automatic, and the operators are collaborationists. Besides, you couldn't get undetected past the picket boats. They're posted on radar watch against ships from Earth, mainly, but each one has some missiles. Okay, it'll be Blocksberg. I tell them to have your supplies ready for quick loading, right?"
"Yes. The boxes can be slung through the cargo hatch in five minutes, and I can restow them when I'm in space. I won't need too much. The crossing won't take a dreadful lot of days. Mainly I'll need air, water, food, and interplanetary navigation equipment, including an ephemeris and reduction tables. Nobody can cross the Solar System by the seat of his pants!

Drugs would be helpful. With Antion I can pass nearer the sun than the screens would otherwise permit, and so shorten the passage time. And I'd prefer not to spend a week in hospital on Earth, recovering from the effects of so much high and zero gee, so booster pills would also be nice. But I can get along without the medicine chest if I have to."
"Check. You'll blast off from here, then, and hop to Blocksberg?"
"Yes. On a long curve. Maybe clear around Jupiter, so their radar won't tell them where I'm bound. In fact, I'll start out in such a way that it'll seem I'm headed for another moon. I can reach any Galilean satellite without instruments or data, given as much reaction mass to waste as I know the Olympia has."
"But are you sure that what's-hisname, Gebhardt, has the equipment you want?"
"I'm sure he does not. Why should he? But the Glory Hole isn't far from his place, and you remember it has a small, unmanned emergency spacefield. He can raid the depot there. I don't dare land directly at the field, because Swayne might expect that."
"You'll have to allow a few cycles for them to assemble your stuff."
"I know. Now as for Phase One of the plan, that depends on you. You've got to sneak me out of town."
"Hm. I've worried about that. They've gotten awfully cautious. Most of the airlocks are sealed off,
and there's a guard at every one still operational. You can't take a cat without a crewman accompanying you."
"I don't want a cat. I only have to get out on foot, with some tools."
"Still not easy. They require a pass. But tell me what you have in mind."
"I'll walk beyond the horizon, circle around, and get 'in among the moonships. They won't see me if I come from the north, as I did in meeting you. You told me the reaction regulators have been sequestered. Well, I'll go aboard one of the boats, dismantle the safety cutoffs, and start the engine."
"What? It'll blow up!"
"Not exactly. Not like a bomb. anyhow. But there'll be some fancy fireworks. If that doesn't give me a chance to sneak into the Olympia, I resign."

Lorraine stared at her feet. "You could get killed, Mark," she said.
"There'll be time to get clear before the engine blows. The warmup period is much less than for a thing the size of the Vega, but it still amounts to several minutes. The surrounding ships will screen off radiation pretty well. As for the Olympia's own warmup, I count on things being so confused that nobody will notice she's purring."
"Well-Damn! I don't like it."
"You have a better idea?"
"I haven't any," she said in a thin voice.

He leaned over and patted her hand "Don't be such a worrywart, kid. I've even calculated my
schedule. Ninety seconds from the moonship cluster to the Olympia. Thirty seconds to open the cargo hatch and get inside."
"Longer than that. The accommodation ladder isn't there. You'd have to scramble up the jacks and balance yourself somehow, holding on with one hand while you undog the hatch with the other."
"Well -"
"Two people could manage a lot faster," she said. "One standing on the other's shoulders, see? Also, there's the problem of getting you out. I tell you, you can't simply wander up to one of those sentries and ask him to let you through. I could try to fake a pass for you, but it'd be risky as the devil."

In spite of her words, she was looking happier. "What do you propose?" he asked.
"That I go along."
"You're crazy!"
"No. Look. I can manufacture an excuse to go out, myself, with no trouble. I'll tell the entry control officer that I've gotten word of equipment failure at the Navajo diggings, and it might be sabotage. So I'll tell him I want to stroll over, make an inspection and fix it myself. I've been doing a little electronics repair work right along, we're so shorthanded. I'll have him write a pass for me and an assistant, like say Chris Coulter; only I'll have seen to it that Chris is working on the other side of town that watch. The sentry knows what I look like. Everybody does by now. But he'll hardly know one technie in Aurora from another. He'll let
us through, and a bag of tools. I'll help you detonate the moonship, board the Olympia with you, and get off at Blocksberg."
"But - reprisals against you -"
"Gosh, I'll be safer out of town than in, once this thing breaks. Though I don't imagine Swayne will do much when he sees you're well away. He can't fight nuclear-armed ships that have been warned about him. He may surrender; or he may pull out; or at worst, he may hold Aurora hostage and bargain for a pardon. But he'll know he's lost the war."
"Even so ... well, yes, I'll be glad to have you clear of him. Agreed!"

She thrust out her hand. Her eyes held a Valkyrie light. Their clasps joined, and they looked long at each other.

Suddenly he kissed her. She hung back an instant, then responded, and it lasted quite a while.

Breaking away, with a shaky laugh, she said: "I'd better go tend our celebration dinner."
"I suppose," he mumbled.
"Would... would you... are you sure you won't have a drink?"
"No. But go ahead yourself."
"I will. I need one."
They talked until very late, and she told him more of her past than was entirely wise, and he had a great deal of trouble getting to sleep afterward, down on the floor.

## XV

The volcano stood isolated in ble vantage point from which to see
where Walfilo's fugitive army was. Theor had spent days making his way to it. Now, at its foot, he admitted wearily to himself how poor the possibility was.

He stood where the forest gave way to bare rock. The trees were mostly yorwar, thick-boled, with hollow upward-floating limbs and the characteristic Jovian leafage which would have reminded a man of lung tissue. Their "photosynthesis," building complex molecules out of methane and ammonia, releasing hydrogen in the process, depended on synchrotron radiation as well as lightning and the feeble sun, and so required a maximization of internal surface. The crowns rarely reached more than fifteen feet above the roots. But they stretched endlessly on.

Ahead of him, the volcano reared dark against the flicker in a slowly approaching rainstorm. Infrared light glanced off the smoke of disintegrated organic matter that poured from its crater and from a smaller vent halfway up. He heard the thing rumble, and felt the deep ground vibrations through his bones.

He was not unfamiliar with natural firepots, he had helped cast implements over some of them in Ath. But that had been in a smithy, with tools and helpers. Today he was awesomely alone.
And unarmed. His pike had been lost in his surf-troubled landfall, his knife broken against a bone in an animal he hunted. Now that he had abundant stone, the situation must be remedied. He climbed onto the
slope and pawed about in the debris until he found a suitable pair of rocks. Chemically, they were water crystallized together with a small amount of silicon and magnesium compounds. But they fractured like obsidian. He quickly struck out a coup de poing and several spearheads. Returning to the woods, he used the handax to gnaw a fairly straight shaft off a larrik bush, and secured one of the points to this with a strip cut from the fibrous interior of the plant. The spares he wrapped in a leaf and slung at his belt. His weapons were cruder than any belonging to a local barbarian - those tribes had not lost skill in this art as had the civilized peoples to some degree - but he felt a good deal happier for them.

Now, food. His last meal was already long behind him.

Perhaps his luck had turned. He cast about for less than an hour before coming upon the fresh track of a skalpad. A while he hesitated. That was a formidable thing to attack, even with a good lance and fresh muscles. But there was a lot of food there.

Also .... He clapped his hands together. An idea had come to him.

Excitement thuttered in his veins. He suppressed it. "'One step at a time,' said the snakefish as he went ashore," he cautioned himself. His voice was so small against the steadily rising wind and nearing thunder that he fell silent and concentrated on following the trail.

It debouched in a meadow. The skalpad was feeding. Even through the troubled air, Theor could hear

the crunch of jaws and see the bushes ripple outward, wavelike, from the great domed shell that heaved above them. He circled until he faced the animal, took a firm two-handed grip on his spear, and charged.

The armored neck lifted, tendrils drew back and the hooked mouth gaped. Six thick legs waddled to meet the attack. The earth quivered beneath a bulk more than twice Theor's.
"Kee-yi!" At the last second, he shifted his aim toward the vulnerable throat pouch. With all his weight and speed behind it, the spear drove through.

The skalpad twisted around. Theor barely dodged a bite that could have taken off an arm. The head shook, the embedded shaft splintered against the soil, blood pumped out over the scrub. Theor believed the wound was mortal, but night was approaching even faster than the rain. He couldn't wait much longer.

Unwrapping his bundle, he took the ax in one hand and a point in the other. The rest he held in his mouth. He raced around the threshing monster, came alongside and drove the daggerlike spearhead into one eye. His next several passes missed, when he must duck from the snapping jaws. When nothing remained but the handax, he charged again and again, striking when he could. It was a savage business. He felt nearly as tired and sick as his prey when the skalpad's limbs finally buckled and the creature at last was still.

But there was no time for guilt, if he was to take advantage of the weather. Light was already draining out of the west, too. He assaulted the body with the cutting edges of his coup de poing, not stopping to do a good butcher's job, concerned only to get the shell off and some pounds of meat for himself. Let the scavengers have the rest. Wings rattled overhead and howling went among the trees.

When roughly cleaned out, the shell could be rolled. Otherwise he would never have gotten it over those dark, tangled miles back to the volcano, let alone up the slope. After the mountains he had traversed, this wasn't any climb to speak of. But he was shaking with exhaustion by the time he reached the secondary vent halfway between foot and peak.

By then, also, the first rain was upon him. Heavy drops of ammonia lashed his skin, and the low cloud roof was almost continuously lit by lightning. Where it struck the firepot, the rain hissed back in steam, so that Theor entered white billows of fog in which danced tiny sparks.

The vapor offered some protection, however, against the heat that radiated from the vent. When he looked into that yard-wide hole, his eyes were dazzled. The roaring down there was as loud as the thunder around him. His gills cramped shut in reflexive protest against the fumes; again and again he must retreat for air.

The moltenness which raged within was water, and its temperature was only a few hundred de-
grees Fahrenheit. Lui Theor's kind of life had not evolved to endure such conditions.

And in truth the forces which brought them about were stupendous. The metallic core of Jupiter is wrapped in thousands of miles of solid hydrogen. Above this is a shell of ice, less vast but quite adequate to maintain pressures that collapse ordinary molecular structures. Somewhere in those depths, an equilibrium had been broken. The pressure in a certain volume dropped below a critical value. A titanic mass of ice changed to a less dense crystalline phase, in an explosion comparable to that of a large thermonuclear bomb. Liquefied by the released energy, water spurted through the riven planetary surface.

It could not vaporize; the atmosphere weighed too heavily on it. Cooling and congealing, it built up a cone which rapidly grew to be a mountain. The flow might continue for centuries before a new balance was struck and the volcano became extinct.

Slowly, painfully, Theor built a wall of stones on the lower lip of the vent, until he had a roughly level rim around it. He spent nearly his last strength getting the skalpad shell up on top, inverted to the sky.

Now he could only wait. He found shelter beneath an overhang further down and tore a haunch of meat with his teeth. The rawness meant nothing to him. Cooking was still a highly experimental art, indulged in by a few Ath folk who had ready access to heat. But he missed the spices of home.

Home . . . did it still exist?
He huddled back and waited. The rain brawled on. Well, the longer and heavier the fall, the better for him. He had thought he might need several storms, but perhaps this one would do. He slept.

The rain continued through the night and day and night, on into the following morning. A human would not have been able to comprehend the Noachian magnitude of precipitation; but it was not unusual for Jupiter, which is constructed on another scale than Earth. When at length the fog that followed it had lifted, Theor emerged. He felt physically better and more hopeful than at any time since Gillen Beach. Still, his pulses racketed as he dragged the skalpad shell off the firepot with a stone chipped into a sort of hook. Its hard substance was blackened and shrunken, but the bowl was still intact and struck the ground with a crash. Eagerly, Theor peered inside.

Several pounds of metal glistened on the bottom.

He was careful to wrap his hands in leaves before taking the cooled lumps forth. It was unpredictable what the stuff might do to him in such a quantity, even though he was adapted to breathing it and probably used it in his metabolism. Fraser had told him how tricky raw sodium could be.

The man had also explained that this element, dissolved by ammonia and forming complexes with it, was what supplied many of the cloud colors. And it reacted powerfully
with liquid water. Perhaps that explained certain disasters in the early days of hydrurgy. For when you boiled away the ammonia -

The rest of Theor's day went to climb the mountain and erect a wall on the southeast verge of the crater. He stared often in that direction Walfilo's host must be somewhere yonder, if. they yet lived - but saw only forest and the remote Wilderwall. This land was so big that an army was swallowed without leaving a trace.

Night fell. He glanced at the seething below, summoned his courage, wrenched loose a gob of the soft metal and threw it over the edge.

His dive for shelter was barely fast enough. Fire vomited, water drops pelted his barricade, the volcano smoke was lit yellow. He could not see that color, his eyes registered a lurid pirell, but he felt the radiation beat on his skin. Echoes snapped back and forth until his head tolled.

When the explosion was over, he cast a second piece. And a third. Wait several beats; then a fourth and fifth in quick succession. He had duplicated in light the call for help of a milifary drummer.

He had only sufficient material to repeat the cycle once. And then he could only wait. Reflected off clouds, the flashes were so brilliant to Jovian vision that they should be perceptible for fifty miles or better. But were his people that close? And would they investigate? He crept tiredly back to his shelter to wait and hope.

Footfalls roused him some hours after dawn.
Two males were climbing the mountain. They were gaunt and dirty, but they carried Nyarran weapons. And when they saw him they burst into a gallop.
"Reeve, oh, my Reeve!"
Theor embraced them. For a space he was joyous, he had beaten the wilderness, reached his own kind by a road no Jovian ever trod before. Then he thought, The real fight is only begun, and said, "We had best start back at once. This is not a good country."

The scouts had come on forgarback, with a couple of remounts. Before turning one over to Theor, they brought him up to date on what had happened. "Though little there is to tell, Reeve. We could not make a stand anywhere on the plain, so we crossed the Steeps and went on for two days north, to where there is a lake and game can be gotten. There we are still encamped, not knowing whether to return or die, or stay and become Rollarikans. Some have argued that we could swing far east of Medalon and so south until we reach the Foresters, who might aid us. But doubtful that is, and our homeland would long have fallen to the enemy before we could act."
"Yes, we have little time," Theor agreed. "Nyarr cannot stand siege much longer than foodstores last, and they are scant at this season. Without Nyarr 'city and the ice works of Ath, even if we won back the land we would be meat for the next barbarian incursion."

He pondered what to do as they traveled. There was no clear answer. But his resolution stiffened, and he entered the camp with long strides.

It was not conspicuous. The plaited lean-tos were scattered through the woods and most of the people were out each day on the chase. But Walfilo had had a large hut erected on the lake shore, and his banner flew above.

The scarred professional welcomed Theor with a genuine gladness, heard his story and was gratifyingly impressed. But then he asked, "What shall we do?"
"Return as fast as we can," Theor answered. "If we cross the Wilderwall at Windgate Pass, we will enter Medalon not far from the Brantor River, with forests close by for the making of rafts. Thus we can approach the city with speed, unobserved until we are near - at which time we will go ashore and attack the Ulunt-Khazul. When those within sally forth, the enemy will be caught between two hosts."
"Which he will chop Into bits," Walfilo grunted. "We are not the army which your demi-fathers led out. Death, wounds and hunger have dealt hardly with us."
"What other choice have we?"
"This. We are settling into Rollarik, already learning its ways, having daily more success at winning food. No band of miserable woodsrunners can oppose us. Belike we can even raise a smithy on that volcano where you were, and so continue to have cast weapons. We can establish ourselves as the germ of a new nation."
"Leaving our kin to be devoured?"
Walfilo winced. "That is a hard necessity. But I have been a fighter all my life, Reeve. This is not the first time I have had to sacrifice much in order to keep something vital. A march against the UluntKhazul can only end in us too being devoured; and then darkness will indeed fall over the world."
"You may know more of war than I do," Theor said angrily, "but you show little knowledge of what is needed for a civilization. Why do the Rollarikans forever seek to spill across Medalon? Because this country is poor. Rains leach the soil until only trees as hardy as the yorwar flourish. The plants that supply most of our fiber would not grow here. And do you know how many octads of years it would take to clear enough land for even the scantiest ranching? As for that velcano, the ice minerals I have seen there are not those which make good alloys. We are too few to maintain a literate culture-and how much help would mates be that we stole from the barbarians? I tell you, if we remain here the darkness will come even more surely than if we go home and hazard our lives."
"That is your judgment. Mine is otherwise. We might in time regain Medalon, you know, by the help of allies -"
"A Medalon ruined, with its people dead or scattered or enslaved, because we were too cowardly to help them!"

Walfilo's comb bristled. "Call me not coward," he said, "or I will cease to call you Reeve."
$T$ heor choked off his own wrath. An inbred coolness descended; he weighed the problem, watched the balance tilt, and said: "I take it you forbid a return." Walfilo gestured yes. "Let us assemble the army, then, so that they may understand the case."

He spent the remainder of the day preparing his speech. His education had included rhetoric, and his conversations with the alien Fraser had sharpened that training.

Toward sunset the host gathered by the lake. Theor mounted a tree stump and looked over them. Spears and helmets blazed in the last light, rank upon rank; the shields were faded and battered, but he could still make out emblems which had a proud history.
"Males and demimales of Nyarr." His voice rolled into a deep, waiting stillness, where the forest stood black above the lake's glimmer. The least stirring went through the armed lines, like a small gust before a storm. "Both my demi-fathers died at Gillen Beach, where you also left comrades and kin. Now I am told I must betray them."
"What?" Walfilo started furiously. "I deny-"
"The Reeve is speaking!" Theor said. "By the law of Nyarr, you shall say what you will afterward; but none now may interrupt." He turned back to the army. "The enemy has pillaged his way to our city. He seals it shut with edged ice, and waits for our children and mates to die. I cannot call that an evil thing to do - not yet - not while we are doing just the same."

They roared!
When Theor had finished, Walfilo took the stump, looked coldly at the weapons which threatened him and cried, "If this is your will, so be it. We shall spend two or three more days gathering food, and then we return to Medalon. Dismissed!"

He stepped down again and sought Theor. "That was a cruel and unfair word you gave them," he said through the shouting. "You knew well that I was acting as seemed best for the people."
"Indeed I do." Theor clasped the warrior's shoulder. "But had I not the same obligation? You told me yourself, often one must sacrifice much to keep something vital."
"So my honor is the sacrifice."
"No, never. They won't recall my words against you. Not very long. What will live is the fact that you led us home."

Walfilo stood a while in the twilight regarding the younger male. Finally he laid his ax at Theor's feet, the ancient sign of obedience. "Indeed the blood of your folk is in you," he said, "and you are a Reeve born." Teeth flashed in a smile. "And thank you! My decision was nigh too heavy for me to bear. You have lifted it onto your own back. I will die sooner, following your counsel - but much more gladly!"

## XVI

F "That's that," he said. "No more safety cutoff on this engine. Now we only have to start her."

He rose, awkward in his scit, and found himself confronting Lorraine. The flashtube she had held to furnish him light wavered in her hand, making grotesque shadows chase across the room, over crowded machines and dully gleaming bulkheads. There the undiffused puddle of glow was reflected. Behind the faceplate, her features stood forth against the darkness in the doorway, and the gold hair seemed almost to crackle with the cold that filled the moonship.
"Well," he said, wishing he had better words, "let's go."
"Mark -"
"What?"
"Oh... nothing, I guess." Her eyelids fluttered down. He could see how she braced herself. "I just wanted to say... if we don't make it...you've been a grand guy. There's nobody I'd rather be with now."

Despite the synthetic emotional control he had eaten, his heart sprang. He patted her hand, fabric on fabric. "Same to you, kid. I'll even admit -I think younl understand - I had a tough time remaining a gentleman, all those cycles in your apartment. I might not have managed it with someone I thought less of."
"Hell, you think I wasn't having trouble being a lady?" She turned on her heel. "C'mon."

They climbed the ladder to the control room. Fraser set the engine to warmup and threw the starter switch. The preliminary whine shivered through his boots.
"Quick, before the fusion starts!"

She hung back at the airlock, as if to let him go first. He shoved her ahead. The vibration built up with unnatural speed and raggedness. When he was halfway down the accommodation ladder, he jumped tho rest of the distance.

Blind in the gloom between the parked vessels, he fumbled around after her. Fingers closed on his arm. She led him to the north end of the area, and around westward.

Cautiously, he peered from behind a landing jack. The field stretched yellowish gray between him and the town, in the light of third-quarter Jupiter. Ahead and to his right stood the Olympia, his entire hope. But his gaze was held on the enormous spheroid of the Vega, on the guns silhouetted lean against the Milky Way and the dozen armed men ringing her in. Another minute, I'd guess, till that engine blows. As if his estimate were exact, he counted down. Fifty-nine, fiftyeight, fifty-six, no, seven, fiftyfive -
-twenty-four twenty-three, twen-ty-two-

The world shuddered beneath him. A roar passed through his feet and hammered in his skull. The ship beside him reeled on her jacks. He knew better than to look at the fire which spouted upward, but he saw its light pitiless no the ground, bluewhite, making each rock beyond the concrete apron stand forth like a mountain.

A crack opened in the field and ran zigzag toward the blind safety wall before Aurora. A moonship on the south side swayed, tottered, and
fell with infinite slowness, struck at last and made the ground ring with her metal anguish. Vapor boiled through the space she had occupied, hellishly tinted by the fire.

Tthe chaos enc...ed for one split instant, then the reactor was destroyed and the reaction ended. Night came again. Jupiter looked wan and the stunned eye could make out not a single star.
Fraser and Lorraine ran.
They didn't pause to see if they were noticed. A shot would tell them that. In long frantic bounds they crossed the open field, reached the Olympic, and skidded to a halt.

Because she was meant to land aerodynamically, on unknown and possibly unsafe terrain, in a strong gravitational field, she rested on wheeled jacks, and horizontally rather than vertically. Hence the cargo entry was lower than for a reggular spaceship - but nonetheless higher than was convenient. Fraser braced his hands against the support below the hatch. Lorraine sprang onto his shoulders, reached up and spun the manual control. A circle opened. She chinned herself through, flopped down and extended a hand. Fraser jumped to catch her. Briefly, he was afraid she would be dragged out by his weight. But she drew him in. He rolled over, bounced to his feet and pelted for the pilot room. She closed the batch and followed.

An equally massive door guarded the human part of the ship. Fraser cranked the wheel and cursed its gear ratio. Through! He entered
the forward section and plunked himself down in the pilot's seat. The board was as dark as the rest of the vessel, and laid out differently from those he was used to. He was helpless until Lorraine came behind him and aimed the flashtube at his hands.
"That's better," he panted. When he could see the layout, it was familiar. It ought to be. He'd spent hours memorizing the diagrams sho smuggled to him, the instructions and specifications. After so much mental rehearsal, the act had a tinge of falsity, as though it, too, was only practice.

A throbbing awoke, the hull transmitted it to him and he leaned back with a whistle. Sweat coursed past his brows and stung his eyes. Ten minutes for warmup. That was cutting matters pretty fine, but ho dared wait no longer than he must.

There were no ports in this ship, and he didn't want to risk activating the viewscreens before he was ready to lift. Someone might be sniffing around outside with a detector. "What're they doing, do you think?" he asked inanely.
"Running around like beheaded chickens, I'll bet," she answered. "They'll come to order fast. They'vo got tight discipline. But right now I'd love to watch the confusion."

He leaned over to assist her into the harness of the chair beside his. "Well," he said, "so far it went like the proverbial clockwork. I wouldn't be surprised but that the whole operation will succeed. How are you going to like being a heroine?"

She forced lightness into her tome. "As much as you're going to like being a hero. Which is to say, pleaty."
"Ub, I dunno. No more privacy, no more daring to indulge in little human fallings from virtue - God, Ill bet I wind up addressing a Rotarian lunch! It's different for you, of course. You can enjoy the glamor ampect. But I'm too old and homely."

Her look lingered on him, in the dim shadow-haunted light. "You're not old, Mark," she said low.
"You don't deny the homeliness, eh?" He tried to chuckle.
" $\Gamma m$ old enough not to care for boys. I prefer men. And you're more a man, in every way, than anybody else I ever met." She drew a quick breath. "Oh, dear," she said confusedly, "we're not getting this harness fastened right at all."

They fell into silence.
The engine rumble strengthened. "Time!" said Fraser. He switched on interior lights and viewscreens.

It was as if suddenly he commanded a tower above the field. Men swarmed about in an antlike orderliness. Those working by the moonships wore bulky radiation armor. A'dozer had already arrived and started heaping a protective ringwall. "Swayne's even sharper than I thought," said Lorraine grudgingly.
"Damn!" Fraser said. "Our blast'll incinerate those guys."
"Do you care? - Yes, you would. I guess we can spend thirty seconds' worth of warning time."

Fraser flipped the radio to the general communication band and plugged in a jack to his helmet set. "Attention all personnel." he droned. "Your attention out there! Spaceship Olympia about to lift. Clear the area. Clear the area."

A voice screamed back: "What the hell is this?" But Fraser was watching the Vega. He saw a turret swing about, readying to shoot as soon as he went beyond the minimum radius.
"You've got ten more seconds to get away," he called.

They ran. Two men came nearer, though, stopped at the very edge of the danger zone and raised their laser guns. They've got guts, for sure, Fraser thought, and pulled the main switch.

The surge of power clattered the teeth in his jaws. He saw the exhaust cloud spreading below him, like snow tongued with fire, out across the field. Even by conduction, the noise invaded his entire being. Steering jets blasted as the jacks withdrew. The ship's nose swung sickeningly upward. Acceleration struck. The field fell away.

Ganymede fell away. It was a pocked and pitted crescent below him, and the sun rose over the rim.

Fraser cut the thrust when he had twice escape velocity and returned his chair to the upright position. Free fall was stillness and dream, with stars crowding the spaceward screen, but he was too busy to notice. "Run me a radar beam back that way, Lory. I want to make sure we aren't being followed."
"We can't be. Every one of their boats is tied up in orbit around the other moons, or out toward the asteroids. And we can outrun the Vega."
"We can't outrun a missile," he said bleakly. "I've got to bring us down at Blocksberg undetected, remember?"

Her fingers danced over the console. The screen came aglow. A computer threw figures onto a set of meters and drew two continuously changing curves on a fluorescent dial.
"A couple of rifle shells," she deduced. "They aren't on a collision orb.t with us, though."
"Whew! That's a relief. Not that we couldn't evade them, at this distance, but I was worried that Traffic Control might have managed to slap a radar beam on us. Now our angular diameter is too small for them to have any real chance of doing so. I'll swing us around be-hind- Jupe. By the time we orbit back here, everything should have settled down and we can make a quick sneak landing."
Without navigation tables or equipment to give him information more precise than memory and trained vision supplied, he could only calculate approximate vectors. They would serve, though, for his rough purposes. He set the panel and applied one-tenth gee acceleration. More than that, and the exhaust would be detectable at too long a range. He'd speed up when they'd put a hundred kilomiles or so between themselves and Ganymede.

The receiver blinked a red signal. "Oh, oh," Lorraine said. "Callers. Think they've locked onto us?"
"No. They're broadcasting. I may as well reply. They aren't set up to triangulate on us." Fraser plugged his radio connection back in.
"Attention, spaceship Olympia!"
"Swayne's voice," Lorraine whispered. He saw fear touch her face.

That roused anger in him. "Olympia speaking," he snapped. "What the devil do you want?"
"I might ask the same," Swayne answered dryly, "as well as who's aboard. This is the commandant of the military administration."
"Nu?" Fraser decided not to admit his or Lorraine's identities: partly out of contrariness, partly to avoid reprisals on his family. Of course, they'd soon guess hers -
"Return at once, in the name of the law."
"If that's all you've got to say, over and out."
"Wait. I know what you're after. It's obvious. You think you can make Earth. You can't. That ship isn't supplied. You can't have carried along enough to make any difference. A spaceship's water recycler needs a certain minimum quantity to function. You haven't even any air."
"I'm breathing."
"You know as well as I do that the cycler in a spacesuit is different from the powered system in a ship which also requires a certain pressure to work. Your chemicals will be used up in a matter of days."
"If you're trying to scare me, you're wasting air yourself. Let me scare you instead. When the Navy arrives, you'll be held to account for everything that's happened in the Jovian System. Think that over and conduct yourself accordingly."
"Shut up," Swayne said. "Do you believe I'm such an idiot as you? You must have arranged to get supplies somewhere. I doubt very much if it's at one of the other moons. How could there be secret communication between them? But in case that is your aim, then, for your information, each has a boat on orbital radar picket, and each boat will get radio orders to fire at sight of you."

Uh-huh. That's why you can't keep watch on all Ganymede.
"I think you must plan to come back to some part of this moon," Swayne said. "I've thought for some time, in any event, that we need a close-in patrol as an added precaution. So ... a number of moonships are promptly going to take up stations. They aren't well equipped for such work - they will be when we get their radars rebuilt - but meanwhile they can keep every square foot of the surface under visual observation. If you land anywhere on Ganymede, you'll be seen. The Vega will scramble and blast you. She can do that on a few seconds' notice if she's kept on continuous full alert, warmed up. And that's what she will be until I'm certain you've been taken care of."
"Oh, no, no, no," Lorraine gasped. The color bleached from her skin.

It was as if a boot had struck

Fraser in the groin. But somehow he snarled, "Why should we come back to your firing squad?"
"I admire your spirit," Swayne said, "and it was decent of you to warn the men. You have my oath as an officer that if you return peacefully, at once, you will simply be held in brig and receive a fair trial when the lawful government has been restored."

$\mathrm{H}^{\mathrm{H}}$is voice was fading as the distance lengthened. The stars crackled their scorn through every word. But the ring and cold in that tone remained clear:
"If you do not come back, if you get away. I shall maintain the Vega on alert for the week or so which is the maximum time you could possibly survive. However, that will tie up too much manpower; the armament project will be halted. I don't want that. Nor do I want to take the risk, even if it is small, that you have a cache somewhere, on some orbiting rock, that I don't know about. Therefore, if you do not reverse acceleration at once, I shall fire a missile."

Fraser stared at Lorraine. She shook her head, eyes blind with tears.
"Stop playing hero," Swayne urged. "Your death won't gain anything for your cause. Come back, and you may yet have a chance to be of service."

He spoke almost at the limit of audibility now, a ghost's whisper. "All right," Fraser croaked. "You win. Roger and out."

He snapped off the transmitter.

Lorraine's gauntleted fists beat the arms of her chair. "I'd rather be dead," she wept.
"You may get your wish," he said harshly. "I agreed just to gain us some time. The longer the wait before he shoots that missile, the more distance it'll have to cover, and the larger the volume of space in which it'll have to hunt around for us."
"You mean -" she stiffened "we might evade it altogether?"
" N -no, I'm afraid not. We haven't got that much of a head start." He reached for the main switch, but withdrew his hand. "Uh-uh. We'd better stay at low thrust. If they detected a jetblast with a red shift, they'd fire immediately, and the missile's detectors would latch onto us for keeps. As is - Lory, this is a long chance to take, and even if it succeeds, I don't know how to reach Blocksberg. Tell me if I have a right to." He sighed. "People depend on me. And then there's you, you've got your life ahead of you."
"How much would that be worth, after they put me through 're-education'? But Eve and your kids -"'
"Hell! We'll try it! Our own radar will tell us when the missile's found us and started homing in. Then we'll open our engine up. Full acceleration. This boat's got more thrust than we can maybe stand, not having any booster drugs along, but we'll try."

She had stopped crying. The tears still glistened on her face, but she watched him unwaveringly and her tone held only puzziement: "I don't get it. I thought you intended to play hide-and-seek, hoping the mis-
sile wouldn't spot us before it ran out of fuel. But if you don't think that's possible, how can you ever believe we can outrace it?"
"We can't, over the long haul. But if the race is short enough, perhaps
" unconsciously, his hand closed over hers and squeezed - "perhaps we can get to safety ahead of it." "Where?"
He pointed to the starboard front viewscreen. Jupiter filled its darkness.

## XVII

$\mathbf{A}^{\text {s }}$ they came up the gorge that cut through the north side of the Wilderwall, they heard the first drums. Theor stopped in his tracks. The army behind rattled slowly to a halt. Like a single animal it strained to hear; but by then the beats had ceased.

For a space Theor stood in a silence broken only by the whine of wind above the cliffs. They hemmed him in on either side, blackly outlined against a strip of sky almost as dark with clouds and evening. Trees grew sparsely on top. Their limbs writhed in the cold sliding of the air. Down here on the bottom of the ravine, shadows were thick and the host was a vague mass, faintly glowing by its infrared radiation, the chillier weapons and armor revealed in silhouette. The detritus that carpeted the way was sharp under his feet.
"Did you hear that?" he asked.
"Yes," Walfilo said. "Watchers' signals."

The drums muttered again,
sonewhere on the heights to the left.
"This is an ill place to be caught," said Walfilo. "They could hurl stones at us from above."

Theor debated whether to advance or retreat. The entrance of the gorge was closer than the pass ahead. By going back, he would soon reach ground where his soldiers could deploy. But then they might sit for days awaiting attack, while Leenant and Pors starved in Nyarr. "We'll advance," he said.
"I would not ordinarily counsel that," Walfilo muttered, "but our mission is so forlorn anyway -" He clapped his hands together. An adjutant hurried up. "Dispatch a patrol to find out whatever it can about that messenger. Have the rest close ranks and continue."

The army's own drums banged forth the order. Echoes rolled emptily from wall to wall. Ice alloy clanked, stones clattered, feet shuffled in their thousands and the Ny arrans moved on.

The murk deepened as night fell, but there was no siopping. One couldn't lose his way here! The soouts returned with the expected report: no trace of a spy. He had all the mountains to hide in when they approached. However, more encouragingly, there was no indication of a barbarian war-band either.

Or was that anything to cheer about? Theor felt his mouth tighten as grimly as Walfilo's.

They reached Windgate Pass dropped away behind them and a
rough but open slope lay ahead, downward to their own country. Theor could see a remote gleam, the luminous Brantor winding south toward Nyarr and the ocean. Even after he had gotten camp established and conferred with Walfilo, he slept little.

Sometime before dawn, the drumming roused him. He started out of uneasy dreams, momentarily looking for lightning and rain. But no, it was another signal, off in the night - and not a short-range one this time. Those thunder-pulses could only come from one of the biggest military drums, such as needed four Jovians to carry it but in this atmosphere could be heard for ten miles or more.

Others had been wakened too. He heard cries in the dark, overridden by the rolling, crashing blows off the heights. Then Walfilo's command bit through the racket. His own drummers repeated it: Silence, silence, silence. The strokes above ended almost simultaneously, and a thrumming hush arose.

Abruptly Theor realized what his general had in mind. He turned his head south, held every muscle moveless, and listened. It came soon, dwarfed almost to nothing by that immense night, but every note clear. Boom-bom-brr-bom! Boom-bom-brrbom! Ra-ta-ta-bom-boom, ra-ta-taboom, brr-ta, brr-ta, bom-bom, bombom -

Walfilo issued another serics of orders. Feet thudded and weapons clinked. Theor followed the noise, arriving just as a good-sized patrol galloped off. Close at hand, Wal-
filo's akin radiated brighter than normal, so that Theor could make out the wrinkles which scored the face. "I sent them off in the hope of catching those spies," the older male said.
"I realize as much. But may they not be ambushed?"
"No, the enemy scouts must be very few. A larger party would be heard by us whenever they approached near enough to observe anything useful."
"They must be Ulunt-Khazul," Theor said dully.

Walfilo spat. "What else? Chalkhiz knows more local geography than even I feared he would. Almost at once after the last battle, he must have established pickets to watch every route by which we might return, and lines of communication from them to his headquarters. There is no more chance of surprising him. Every move we make will be known."

Theor slumped. "What should we do?"
"We could withdraw."
"No."
"We could establish ourselves here, then. It's a highly defensible position."
"What use would that be?" Theor asked. "He would simply take Nyarr, and afterward deal with us at his leisure."
"True. I see only one course, then-to proceed openly. Not stop to make rafts, just march as fast as we can, feeding ourselves at the ranches along the way. But first we should make some rough fortifications here, so that we have a
strong point to retreat to if we are beaten in the field."
"You mean when we are beaten, do you not?" Theor agreed unwillingly. The delay would give time to the enemy, but he knew too well the weakness of his forces.

Dawn broke in fiery clouds and nacreous mist on the plain. The army fell to work, dragging stones into place for a series of walle across the pass, heaping other boulders up to roll down on attackers. Theor lost himself in toil. But from time to time he heard the drums talking in the distance It was small consolation that the patrol had captured the one on this ridge. The operators of it had gotten clean away.

The planet spun through another night before Walfilo conceded that preparations were as adoquate as possible. The next morning the army came down the Wilderwall. It took them the whole day to reach the foothills. They camped by the Brantor.

Toward sunrise Theor heard drums again, nearer than could be accounted for by his own advance.

They started off at an early hour. Their food supplies were nearly exhausted, hunters could bring in only a niggard ration, and the flat pasturelands were still a couple of days off. The Nyarrans plodded thin and mute along the riverbank, over the rolling, sparsely wooded landscape. The current ran louder than their footfalls, white-streaked on its way to the sea.

We will be in better shape when
we can commandeer from the ranches, Theor assured himself.

Late in the day, a forgar landed. The rider sprang off and raced to the head of the army. "Reeve - General - I've seen the enemy! His entire host, I think."
"What?" Walfilo bellowed. "So soon? Impossible!"
"They're in ships. The Brantor is covered with their ships." As if it had heard, a drum started up, miles away but strong and arrogant.
"Pulled by their beasts?" Theor gripped his ax helve till his knuckles creaked. "Yes, they could come that fast, even upstreatm. But are you certain of their numbers?"
"I counted from above. More than two sixty-fours of crafts, each loaded with warriors."
"But then they must have raised the siege of Nyarr."

Walfilo snorted. "Not exactly. They've withdrawn from its neighborhood, but I hardly think the people inside can venture far out. For if they do, the returning UluntKhazul might well fall on them unawares."
"The defenders could sally, to attack the enemy rear."
"How? Those ships outpace any land army. No, Chalkhiz has seen an opportunity to defeat us in detail." Walfilo rubbed his massive chin. "Of course if there is a sally, and it caught up with him while he is still engaging us -" He glowered at the ground for a while, then said:
"It's our only hope. We must fly the message to Nyarr, that they are
to hazard everything - though uttle there is left to lose - and hurry north. Meanwhile we must prolong the battle, retreating back to Windgate Pass. Perhaps Chalkhiz will not realize our strategy in time." The soldier shook his head. "Of course, even if it works for us, I doubt we can prevail. So many will have fallen by the time the reinforcements come, that the UluntKhazul can likely handle what's left without overmuch trouble. Still, it will raise the price they pay for our country."

Theor mastered a sickness and asked, "When will they fall on us?"
"Ush. I daresay they'll camp tonight, lest unseen rocks tear the bottom out of ships. Tomorrow morning. Short time to make ready."

He summoned his underlings and began giving commands. I wish I could lose myself thus, Theor thought.

The Nyarrans moved onto a hill some distance from the river. Its saddle-shaped ridge would protect their flanks, and the swale behind offered a northward line of retreat. The bushes were soon trampled into mud, and the slopes became strewn with red centaur bodies, sharpening weapons, talking in a desultory way, staring into the sky or past the woods to the hazed mountains. Theor could count the ribs on them. There was no protest when Walfilo ordered most of the forgars slaughtered for meat. Too few were left to be of much service in battle, and an unfed army wouldn't last a day. Nonetheless

Theor had trouble getting the food down.

1 brought us to this, he thought bitterly. He almost looked forward to the spear thrust that would end his guilt.

The sunlight disappeared in the west. Not many Nyarrans slept well. Theor heard stirrings the whole night as he stood wakeful.

$I^{1}$
n the morning a shadow passed through the fog and landed on the hillcrest, an aerial observer using one of the half-dozen animals which had been spared. He reported that the Ulunt-Khazul had grounded their ships, tethered their swimming beasts to them and set off afoot. They seemed to know just where their opponents were. Well, they were swimmers themselves; a scout, gliding along with little more than his eyes above the river surface, could have gone ahead of his own people.

The mist lifted. Ice shimmered in the Nyarran ranks. Three tattered banners fluttered listlessly over the taut, massed faces, scale-armored bodies and stubbornly planted feet. Theor stood near the middle of the front line, with Walfilo on his left. They could think of nothing to say to each other. It seemed long before the Ulunt-Khazul emerged from the woods at the riverbank.

They formed for the charge under the volcano rumble of their drums, line after line of great gray thick-tailed shapes, fangs gleaming under the overshadowing helmets, menace painted on shields and cuirasses and flags. Nearly thrice our
number, Theor estimated. But that no longer seemed important. There was only the day's work to do. He took a firmer grip on his own shield and swung his ax.
"See there!" Walfilo pointed. "The chiefly banner."
"Hurgh?"
"I paid heed to such details, on Gillen Beach. Chalkhiz himself is here today."

The drums by the river broke into a steady tattoo. Footfalls answered them, a pad-pad-pad which became a sound like surf as the enemy neared. Voices rose curtly from the Nyarran lines, and the spears of the second and third ranks snapped down past the shoulders of the first. The Ulunt-Khazul couched their own lances and broke into a gallop.

Closer, closer, closer. The few forgars swooped, the riders dropped stones, but to no effect that Theor could see. He remembered, briefly and distantly, his experiments with a bow and arrow, carried out at Fraser's suggestion. It hadn't been practical under Jovian conditions. Would that it had! His gaze focused on a hostile warrior who would evidently be the first one to come against him. The fellow had a partly healed wound on his left cheek. Let's give it a mate. Theor raised his ax.

With a roar and a kettle clang, the Ulunt-Khazul fell upon the Ny arran spears. Their shields and horn breastplates protected most from being spitted, but the momentum of their charge was spent. Theor saw one spearshaft snapped
by the collision of a giant on his right. The Ulunt-Khazuli stumbled. Another spear flicked out and caught him in the unarmored abdomen. He shouted - it could not be heard through the din - and struck back with a saw-toothed club.

Then Theor's antagonist was upon him, shoving the pikes aside and stabbing with his lance at the Reeve. Theor caught the thrust on his shield. It glided off. His ax crashed down. It struck a shoulderpiece. The warrior growled and jabbed at Theor's throat. Theor beat the shaft aside. A powerful hand shot out and caught his weap-on-wielding wrist. He raised his shield and chopped the edge onto that arm, and the Ulunt-Khazuli let go. Theor smote him twice on the helmet. He staggered. Theor took the one step forward permitted a soldier in the line and struck across the enemy warrior's back. The impact shivered along his own sinews. The gray barrel of the body crumpled. Blood ran gaudy. The UluntKhazuli sank to earth, still alive. The one behind trampled over him to get at Theor.

The Nyarrans had held firm, the charge had failed, now it was mass opposed to mass. The rear lines on either side thrust, sliced, clubbed with their spears. The first ranks stabbed and smote. Theor slipped in blood. That was fortunate for him; a knife whirred where he had been. He raised his forequarters and struck sideways at a leg. He didn't know what damage was done, for the tide of combat took that war-
rior from sight. He rose to confront another. They traded blows, ax on shield, and Theor felt his lesser strength melting under the shocks.

What was that vibration beneath his mailcoat?

An impact banged nearly hard enough to break his arm. He chopped wildly, missed, the UluntKhazuli grinned and pressed inward. Theor was only half aware of his danger. He could not hear with his ribs, but he could feel - the communicator on his breast had come alive.

He warded off another blow, but sank purposefully beneath it. The webbed feet of his enemy ramped across him. Let the male behind me take over. This is more important. Theor held the shield above him and squirmed between the churning legs.

Or does it matter? I have no right to desert. He glimpsed Walfilo, painted with blood, hewing and hewing. I left his side when he needed me. Now Theor was past the front line, in among his own spearfolk. He ignored their aghast stares as he rose and pushed through to the rear. But he could not drive away the image of Walfilo.

## XVIII

A
fter five gravities of deceleration, the change to free fall was like stepping off a prectpice edge. Fraser's brain whirled into red-streaked night.

A thread of consciousness re-
mained, quivering with pain. The fear of death drove him to climb it, hand over hand, again and again slipping back into a gulf that tolled. When finally he broke through and remembered who he was, he felt a weak astonishment that only minutes had passed.

Perhaps that was too long. He couldn't see the missile yet, among the stars which frosted the forward viewscreens; but the radar said it would soon close with him. In a convulsive movement, he activated the steering nozzles. The Olympia spun about and faced into Jupiter.

There was no longer a planet to be seen against space. He was too close; there was only a monstrous vision of clouds, yellow and brown and cobbled with shadows. A storm marched behind that curtain, a cauldron of lightning ten thousand miles wide. The horizon tilted into sight. He stopped the ship's rotation and threw the main switch. Once more his own weight suffocated him, his gear and body throbbed in time with the jets.

High thrust to make the crossing as quick as possible had had to be countered by equally stiff deceleration, lest the hull disintegrate in the Jovian atmasphere. But the enemy rocket was under no such necessity. It was fast overhauling its prey.

Fraser stole a glance at Lorraine. She had passed out noore than an hour ago. Her face was smeared with blood from the nose, and he couldn't tell if she still breathed. Well, she won't feel what's to come, anyhow. Maybe I won't either. We could crack open when
we strike, if the missile doesn't get us first.

He knew the should be thinking of Eve at this penultimate moment, but there was too much to do, bringing the ship in at what he could only hope was the correct angle. And he was too weary, too beaten and bruised by the passage.

Here we go!
He looked behind. A thin silvery streak swelled in the after screen.

Then a troll's fist slammed into him, the universe exploded, and he watched no longer.

So steep is the density gradilope that there was little heating while the Olympia flashed down through the uppermost layers only enough to turn the hull red on the outside. A second or two afterward, she struck a level which, under her speed, acted as a solid, elastic surface. In huge shaken bounds, like a stone skipped across a lake, she rounded the curve of the world.

The missile's hunter-pilot circuits were not intelligent enough to foresee that and change course while there was still time. It screamed straight down, an artificial meteorite. Ablation peeled away its skin. The chemical warhead exploded. The Jovian night did not notice that short, feeble burst of light.

Rapidly losing velocity, the Olympia spiraled toward the surface. The cherry glare of her exterior vanished in stratospheric cold. Great winds buffeted her to and fro, back and forth, and filled her full of their shrieks.

That roused Fraser. He struggled back toward awareness, remembered that he must get clear before the final plunge began and unleashed the jets. Time dragged toward eternity while he beat his way starward. He knew only pain. His bleared eyes needed a while to recognize the sight of open space. Now...get her into orbit...stay awake till you've established orbit, you've got to, you've got to . . y you have-

He let go all holds and drew the dear oblivion about him.

The first thing he observed on waking was the clock. A dozen hours were gone. He blinked around the cabin. Free fall embraced his aching body; Jupiter glowed warm amber in the port and forward screens; the ship brimmed with an unbelievable stillness. Lorraine floated toward him. He saw that she had cleaned herself up and looked almost rested.
"How are you, Mark?" she asked softly.

He shook arms and legs, twisted his neck inhaled and exhaled. "Ugh! Uh, I - I don't think anything's busted. You?"
"Same. I came to a while back. I wondered whether to do anything for you or not. Oh, God, I was worried! But you seemed better off sleeping." She stopped her flight with a hand on his shoulder. "Now I'm going to spend a few minutes simply enjoying the miracle that we both came through."

They exchanged a long-lived smile. She belied her words by offering him stimulant and analge-
sic from the scanty kit they had carried with them. He shoved the pills through the eating valve on his helmet, followed by a long suck of water from the suit's bottle. Wellbeing coursed through every cell. "How about some chow?" he said.
"I haven't touched any myself." Her happiness disappeared. "We've only got those few standard food bars."
"And need some now. We've a lot of recuperation to do, girl."

Afterward Fraser followed her example and entered one of the emergency boxes for a wash. It wasn't much bigger than a coffin, and a man with no other recourse could do little except lie there, breathing the few hours' worth of air in its attached bottle and hoping for rescue. Squirming, Fraser swabbed himself off with alcohol tapped from the inoperative water cycler, and did what little he could to clean the space outfit crowded and collapsed in the box with him. The stubble on his face must perforce remain there. But it felt so good to get the crusted blood and sweat off that he could tolerate residual discomforts with ease.

Returning forward, he found Lorraine with eyes on the planet. Sho glanced at him and back. Her voice whispered in his earplugs: "I never knew anything could be so terrible and so beautiful."

He nodded. "It compensates for a lot, that view."

She turned away and said with quick desperation, "Not for our failure, though. We have failed, haven't we?"
"Don't say that," he chided her, well aware that he was whistling past a graveyard. "We outran and outfoxed a space missile, probably the first time an unarmed ship ever has. We're free."
"Free to die of thirst - unless our air gives out before hand. We can't even leave the Jovian System with any hope of success." She smote the bulkhead with her fist, and rebounded. "If we just had navigational equipment! We could still win, you know. We could put the ship on course for Earth, write our message, and deliver it dead. Isn't there some way you could improvise -?"
"No. I don't know whether to be sorry or not, but even given instruments and data, we couldn't use them to any effect. To arrive in time, we have to travel at hyperbolic velocity. Since the Olympia was never intended to do that, she hasn't got an autopilot which could make rendezvous at the end of such an orbit without human assistance."
"If Jupiter were only the least bit like Earth!"

An oath broke from Fraser.
"What's the trouble?" she asked.
"No trouble. I got a sudden idea. Crazy wild, but -" He pondered. "What we need besides pilot stuff is air and water; we can go without food for the transit time. Well, Jupiter has them!"
"What?"
"We've a big cargo space. There's ice down on the surface. Theor's people can load it aboard for us. I should be able to rig a gadget for electrolyzing oxygen from some of
the water. We have a pretty well equipped workshop along."
"But the methane, ammonia, all the poisons. We can't get them out of the mixture . . . can we?"
"I don't know. It doesn't seem plausible. Stin - I ought to call Theor anyway." Fraser settled in the pilot chair and plugged in a radio jack.

The ship carried a small neutrino set, too weak for any but short-range communication. In orbit, though, he could employ the relay satellites. He hadn't the data tables by which to send a beam, but he must be close enough for a broadcast to reach the nearest one. He adjusted the dials. "Theor," he called. "Mark speaking. Are you there?"
"That's a weird language." Lorraine said. After a while: "No answer, eh?"

Fraser sighed. "None. I'll try the frequencies used by the other personal transceivers, but I'm afraid none will reply. His cause lost out also."

He turned his face away from the planet, but even after they should have adapted, his eyes were too full of tears to see the stars.
"Well -"
"Marhk! Kstorho g'ng korach!"
"Him! - I wish I had a God to thank." Fraser sagged where he floated. "How are you, boy?"
"Sore beset, mind-brother. I have crept away from what may be our last combat. But gladness can yet touch me that you live."
"Tell me. I'm not far off, as you
can guess from the absence of transmission lag. Maybe, even but tell."

Fraser heard out the story. Numb with dismay, he recounted his own situation.
"Strange how our lives intertwine," Theor mused. "I know not what counsel to give you. As for myself, I must return to the fight. I sit on the ridge above and see my folk die under the axes. Yet we strove well, you and I. Did we not?"
"If I could help .... Wait!" Fraser yelled. "I can!"
"Hurgh? Locked in your vessel as you must be?"
"Look, Theor, I don't want to waste time in arguments. I'm coming down! Stay put. Keep yourself out of combat. I'll need your help to find you. Can you hold out a few hours yet?"
"Yes . . . yes, surely. I expect the enemy will soon withdraw, to rest a while ere charging again. We had hopes of playing him for days, a running off-and-on battle - But Mark, you cannot, ill prepared as you are."
"Stay put, I told you. Wait for my next call. I'm coming!"
Fraser snapped off the radio, which would be useless during atmospheric flight, and turned to Lorraine. "Strap in, girl. I'm sorry to do this to you, but we survived five gees, so I guess we can stand half that for a bit."

She made no demurral, went quietly to her chair and got to work on the harness. As he fastened himself in place, Fraser explained how matters stood.
"At least we'll win his war for him," he finished.

She reached over to touch him. "That's very like you, Mark."
"Besides...there's an idea at the back of my mind, something I can't quite pin down, that might work better for us than - Well, I'm going to bleed some bathyscaphe gas into the main compartment. A few atmospheres' worth. The descent wasn't originally planned to be that way, but there is provision for doing it as an emergency measure, and I don't fancy sitting in vacuum with Jovian air pressure outside."

The gas rushed in with a hollow noise. The quality of light and shadow changed as dust particles became airborne. The awakening engine boomed through ears as well as flesh. Jetfire blossomed aft. The Olympia spiraled backward and down. That was a slow descent, with twenty-six miles per second of orbital velocity to shed, but neither Fraser nor Lorraine spoke much during it. The sight that grew before them, and finally engulfed them, was too overpowering.

The stars vanished. The sky turned from black to deep violet, where high ice-clouds coruscated in sunlight. Below lay the banded ocean of air, a thousand hues tumbled and streaming, with sheets of lightning at play between them.

When the instruments showed air density equivalent to Earth's at twenty miles - here, the altitude was much less - Fraser cut the space drive and went over to the aerodynamic system. The upper-
most stratum of ammonia clouds was immediately beneath him. He entered it.

Blackness closed in, above, around, below. He switched the screens to infrared conversion, reducing the wavelengths that penetrated this far, or were produced thermally, to ones that he could see. But little appeared except bluegreen whirls. He advanced cautiously. The time grew long that he spent in formlessness. The ship clove atmosphere with an ever deeper sound that seemed at last to permeate his whole being, take him up into itself so that he rode in a Nirvana of thunder.

An electric discharge flashed white, lighting up cliffs and canyons of cloud for mile after vertical mile, each bank the size of a terrestrial continent. The noise and the gust that followed made the ship plunge like a roweled horse. Instruments danced crazily. Fraser's body slammed against his harness with the whole brutal weight of four hundred and twenty pounds that now burdened him. Each movement was an effort. His touch on the controls made the console ring. But he was too absorbed in grandeur to pay heed.

The turbulence fell behind; once more the Olympia droned through an abyssal calm. In one sense, it was illusory, for the pressure at this level would have crumpled any other ship men had ever built. And still it rose as she descended.

But she was meant for this place. Cabin and engine room were burrows in an ovoid block of alloy steel
whose near-perfect crystals locked each molecule with a force close to the ultimate. Only the airlock and the cargo compartment doore broke that surface, and they were equally massive, squeezed ever more tightly shut by the outside atmosphere. There were no ports to be shattered. Instruments and viewscreens employed solid-state devices akin to those which had been landed on Jupiter. As far as sheer strength was concerned, this part of the Olympia could have gone some way below the solar photosphere.

About a fourth of the hold was similarly constructed, in order to bring back minerals whose allotropy required Jovian surface conditions. The rest, though sturdier than spaceship hulls to be found anywhere else, amounted only to a number of cells which would tako samples of atmosphere at various higher altitudes. At the moment, they were all open and had no net force on them.

Engine energy had been shunted from the rockets to a set of turbojets. And above, a flexible, immense ly tough bag had expanded. Controlled by a barometer, pumps filled it with gas supplied by the breakdown of carbohydrate; heat flowed in to keep the interior less dense than the cold native hydrogen-helium which surrounded it at equal pressure. Thus the overall effective weight of the system was almost nil.

The Olympia was, in effect, a space-going bathyscaphe. She did not so much fly as swim through the Jovian sky.

Almost like old times, in the seas of Earth, Fraser dreamed. Then again the hull rocked and yawed, a wolf howl ripped at him, he heard the clang of ammonia hailstones and felt the metal shudder benath their blows. Lorraine's cry came tiny: "They must be as massive as I am! What if they tear the bag open?"
"Then we're done for," he said between his teeth and fought the controls.

By halting the gas pumps, lowering the nose, and pouring on power, he broke through the bottom of the storm. It didn't reach the ground against the pressure from below; it couldn't! When once again they were in a green calm, Fraser needed several minutes to stop shaking.

His god-sense was gone. He felt very mortal. But suddenly he entered into wonder.

The surface became visible.
No little distorted glimpses through a screen, no clumsy Jovian attempt at description, had prepared him for this. Overhead arched a golden heaven, where the lowest clouds floated turquoise, ultramarine and copper. Rain rushed from one bank on the northern horizon, a cataract to dwarf Niagara, silverglinting, with lightning in the smokeblue caverns above. Dusk lingered over an ocean in the west; and under it each wave shone, spouting sparks. Rollers more huge and rapid than a tidal wave at home marched east into daylight, shining like damascened steel. They burst
on the shore and flung foam so high that it made a continuous glitter in the air. Beyond, a plain stretched boundless, blue and yellow bushes, a forest whose branches rippled in the wind and shook forth eerily shaped clusters of leaves, until the eastern edge of the world lost itself in gold-bronze vapors. A low escarpment rose in the south, blackly and metallically agleam, ice cliffs down which a river leaped foaming toward the sea.

Stunned into muteness, Fraser and Lorraine hung there and looked, lost themselves in the scene, for a time beyond time. Nothing but the memory of Theor roused the man.

Reluctantly, he studied his instruments. The powerful automatic radio beacon that had been landed close to Nyarr in anticipation of the human visit registered faintly. So his dead reckoning as he came down hadn't been too far off! He reduced altitude and drove the ship northward.
"Look." Lorraine pointed.
A flock of devilfish shapes wiiged half a mile away. They shone as if burnished. Down on the plain, a herd of six-legged animals with magnificent horns bolted when the Olympia passed over. There were thousands of them; the earthquake roll of their feet reached so high that it was picked up by the sonic relays.
"And I always thought Jupiter was... was a kind of frozen hell," she faltered.
"To the Jovians, Earth is a kind of hot hell," he replied.
"But, I mean well, this splendor! This much lifel"

He nodded his heavy head. "Uhhuh. That's the real wonder of the universe, I suppose. Life."
Her bitterness returned. "And we have such a short time alive, and still people spoil it."
"Jovians do too. They aren't so very unlike us, eh?"
"Your friend Theor," she said uncertainly. "He's got a family, didn't you tell me?"
"Yes. He's quite devoted to them."
"Lucky fellow."
He gave her a startled glance, but she had averted her face.

Prresently he spied a river that must be the Brantor. He followed it until the radio compass said he was above Nyarr, and hovered for a look. There was plainly an extensive artificial area below, though it resembled more a cultivated maze than any city he had imagined. Through high magnification, he saw crowds scurry about, staring and gesturing at him.

He activated the neutrino set. "Theor, are you still okay? How goes the fight?"
"Worse for us than we hoped. Nigh had I despaired of you, Mark. They have not yet driven us off the hilltop, but each attack they make thins our lines. Where are you?"
"At your home town."
"Lives the city yet?"
"Yes. No one's camped outside, either. But they haven't tried to contact me."
"Give them time, the councillors who know how to use the equipment. You must be a fearful apparition."
"We can't wait for them, you and I. Now describe your location exactly, and your people, so I won't attack the wrong army. Then get your commander to start his retreat during the next lull in the fighting, over the hill to the other side."

Fraser stopped. Only now did the implications of his tactics become clear to him. He shrank from them. "Hold on!" he said waveringly. "Can you communicate with the enemy?"
"I believe Chalkhiz, their leader, understands our drum code as well as our language."
"Warn him that the Oracle is coming, and will destroy him if he doesn't surrender."
"How he will laugh!"
"No doubt. But still, with some advance notice, they may suffer fewer casualties."
"You do not know what they have done to us, Mark, or you would have no care for them."
"I like to think that I would."
"For your sake, then, it shall be done. Now, as to the information you need -" Fraser had known Theor long enough to recognize the joy behind those few crisp words. It heartened him a little.
"Check," he said. "One more thing. Warn your own people not to look at me after I arrive. They're to cover their faces, and crawl behind their shields if possible. Got it? I'm on my way."

The Olympia surged forward. Lorraine regarded Fraser long. "Isn't your idea working otat?" she asked. "You look like death."
"Oh, it is," he bit off. "That's what's wrong!"

TThe time was all too short before he passed over the ships and sea monsters of Ulunt-Khazul. Beyond, the forest opened on undulant country with another ice range in the north. It seethed with Jovians.

Fraser's untrained eye could make little sense of the ordering and movement, but he saw that a lesser group were bunched on one slope of a hill while a larger one was advancing from the river side. The crest between was littered with dead; they looked as empty and pathetic as any slain man.
"Theor, are you ready?"
"Aye!"
Fraser brought the ship down.
He had cherished a hope that the invaders would flee at sight of him. But they had too much discipline, too much bravery. The sonics brought him a challenge cry, an eruption of drumbeats and clang of weapons. He saw a ripple go through their mass, they locked ranks and raised their lances in defiance of every god this land might loose on them.
"Theor, I see an extra-large flag at the point of their wedge formation. Is that where their chief would be?"
"Indeed so. Chalkhiz fights in his own van. I feel ashamed that I did not likewise."
"You and me both. Well - I'll go after Chalkhiz."

The ship tilted around until her stern jets pointed at the prideful banner. Fraser gunned the rockets.

It was a low thrust, barely sufficing to push reaction mass out against the atmosphere. But the energy required for that much was so great that only the riven atom could yield it. And the gas emerged at thousands of degrees.

To Jovian senses, the world lit up as if all the lightnings that ever raged had struck in this one place. The sky turned molten, the earth glowed, rocks melted and ran over ground that exploded in live ammonia steam. Air flamed with momentary incandescence, wrapped itself around each living thing and consumed the flesh. Then the shock wave came.

The ground heaved up, a wave that ran out and out until it struck the rise and brought the hillside down in avalanche. Dust and smoke whirled in a cloud, through which dreadful fragments went flying. The roar which followed seemed to burst heads open. Back and forth the echoes beat, shock upon shock, and as they faded a great brief wind whistled across desolation.

Fraser did not know how many Ulunt-Khazul perished in that circle of Ragnarok. He dared not reckon them up. Still less dared he look on that which crawled about at the edges, blind and charred, and screamed. He could oily remind himself, over and ove: a ad over, that thousands didn't appear to be seriously hurt, that they galloped in
every direction, their weapons cast away, their will utterly broken, crazy with panic, no longer a conquering army, no longer anything.
"Mark, mind-brother, deliverer," Theor chanted. The drums of Nyarr crashed triumph behind him.
"Are your people unharmed?" Fraser asked mechanically.
"Ush, yes, we were well protected. Already Walfilo issues commands for detachments to go capture the enemy ships and as many warriors as possible. Not that they are ever likely to rally, but they could turn bandit if we let them escape. Herded off to Rollarik, they will be less troublesome...Can you land? The first man on this world!"
"Sure, I can land," said Fraser, and wept.

Lorraine unstrapped herself, dragged her weighted body to his side, and cradled his head in its helmet against her armored breast. "Oh, Mark, darling, don't let it hurt you. Think how many more lives would have been lost if you hadn't come and, and saved a whole civilization. Think what we've got left to do at home. You have to free us, too, Mark."

He tore loose from her, she saw the upsurge in him and he shouted: "We can, by glory!"

## XIX

$\mathrm{H}^{\prime}$e was less certain - he had no certainty whatsoever - by the time they were ready to go.

The long confinement in his spacesuit was driving his body to-
ward revolt; it sent him petitions of itch, manfestos of stench and impeachments of nausea. Matters might paradoxically have been less endurable were he not so worn down by hunger and gravity. At least that enabled him to spend most of the hours asleep while Theor's people loaded his ship.

Now he sat erect in the pilot chair, Lorraine beside him, and wondered how he had ever imagined so fantastic a scheme as his might work.

Though there was no alternative, was there? They could refine water for him in the firepots of Ath, but Theor doubted that the smith community, disrupted by the war, would be able to resume operations soon enough to do the humans any good. Maybe, given a rested and nourished brain, Fraser could have thought of some less precarious plan. But the heavy blood was unwilling to rise in him, his ankles swelled and his head felt scooped-out empty. Jupiter was no place for any man to linger long; and if the man had spent the last dozen years on Ganymede, and was getting old -

He stared out at a wild and marvelous sunset. The disc itself was not visible through the many cloud strata overhead, but a part of the sky was always brighter than the rest. That luminosity had slipped behind the western mists and turned them to fire. The light reached the northern scarp and flared back off it, as if the Wilderwall had become molten and yet somehow remained standing. Trees shook their branches
aloft in a slow wind, which blew with a sound like the ocean. Fog had begun to rise on the open country, but the river still gleamed sword bright.
"I wish -"
"What, Mark?"
"Foolishness. That I could come back here some day."
"Why not? With booster drugs and proper equipment, you could spend several Earth-days at a time. Don't you think I want to return? But I'm a woman, and untrained for the work, and...I never will. You, though, with your knowledge, and with everyone so grateful to you - why, the next expedition will insist on taking you."
"'Fraid not. Any service I could do could just as well be done from an orbital post. I've no business coming down here. Pharmacopoeia or not, I can't stand the gaff as well or as long as a younger man. I'd hinder the work. So, well, we'll have an unfulfilied wish in common, Lory. Along with everything else."

She bit her lip and made no reply.
"I do wish, however, I weren't so tired and light-headed," Fraser said. "I can't appreciate what's out there. It doesn't quite register. You're in better shape. Look close for me, will you, Lory? And listen to the wind and feel the weight, even. So you can tell me afterward what it was like."
"If there is an afterward," she said.
"We have to assume we'll carry off the plan, or what is there for us?"
"I wasn't thinking about the op-
eration against Swayne, Mark. I meant after that."

Ttheor called out an order. The Jovians who had been at work by the cargo hatch dispersed.

It hadn't been fair to make them load the high-pressure compartment with rock, almost immediately after their battle. Fraser could see how the round heads were bowed, crests drooping, arms hanging loose, sturdy striped bodies barely able to shuffle away toward the river. But they could rest now before starting home. The humans' work was hardly begun.

Theor himself came around to the bow. The unset light gleamed off the disc on his breast and the big eyes. "We are done, mindbrother," he said. "Would that we could do more. But we have nothing left to offer you except our hopes."
"You've done plenty," Fraser said.
"Must you go at once?"
"Yes."
"I have not even seen you, behind that hull. And our hands will never clasp. Ush-heu, this is a strange universe."
"I'll call you when I'm able."
"I shall have no ease until you do. May the Powers ride with you always."
"Good-by, Theor."
"Farewell, Mark."
The Jovian moved off to a safe distance. Fraser worked the controls to close the hatch and start the engine. Heat expanded the gas bag. The ship rose. Theor stood
waving. Fraser and Lorraine watched him until he vanished in distance and night.

The passage up was slow. Fraser had to bleed the bag, lest pressure rip it open. At appropriate heights he closed off the air sample cells. The ship moved sluggishly, weighted by her cargo. He dreaded a storm. But none was encountered. It was as if the whole planet wanted to aid him.

In the end he glimpsed the sun, started the jets and felt his heart labor under acceleration.

When finally he judged they were in orbit, the simple act of turning off the thrust was almost as much as he could do. Sleep smote him where he sat.

He awoke hours afterward, weak, sore and ravenous, but more
refreshed than he had expected. His mind was almost unnaturally clear. Yet the time on Jupiter did not seem quite real; it was like something he had dreamed long ago. Nothing existed but the cabin, the woman and the task.
"I think we'd better eat our last food bars, don't you?" Lorraine said. "We'll need our strength."
"Uh-huh. Break 'em out, will you?"

TThe stuff was tasteless in his mouth. He drank deep; there was no longer any reason to hoard water. "Well," he said, "now we have to figure out our switching arrangement."
"I've already done that," Lorraine answered. "I came to well before you did." She pointed at a

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tangle of tools, wire and replace-ment-parts metal, netted in place on one of the bunks. "In fact, I've almost got it finished."
"Good girl." Fraser regarded her for a space that grew. The amber light from the planet was gentle to her features, toning down their strength, lending a glamor of which he was much too aware. "You know," he said, almost involuntarily, "you're a beautiful girl."
"Don't, Mark," she murmured; and then: "No, do. For this one time. There can't be another, can there?"
"I guess not."
"I'm going back to Earth," she said.
"No!"
"I have to. It's the only way out."
"Well...I wish you wouldn't," he said.
"No, you don't wish that, Mark. Not down inside."
"I could envy the man who marries you."
"I do envy the woman who married you. But you know, I'm not jealous of her. I feel sorry for her, that she'll never have what I've had."
"You've had nothing except a hard time."
"With you." She blinked repeatedly. "C'mon, we'd better get to work before I start bawling."

Fraser swore behind shut lips. If Lorraine -

But she was right, of course, and he was a rat for what he had briefly hoped. Life isn't a story book, he lectured himself. There are no happy endings. It just goes on.

Carefully impersonal, they finished the installation. Mounted on the board was a simple deadman switch connected to the main thrustcontrol lever and to a battery-powered timer. An acceleration of one Ganymedean gravity provided weight for testing and adjustment.
"I guess it'll work," Fraser shrugged, "and possibly it won't kill us."

Jupiter was then between him and the sun. He saw stars in plenty, so great a multitude that he needed his whole piloting experience to identify the constellations. Ganymede was visible, a tiny cold crescent. He banged computer keys, working out a vector with respect to the stellar background that should bring them to approximate rendezvous. The terminal maneuvers would be carried out by seat-of-the-pants, a wasteful, hazardous procedure but feasible if you had a skilled hand on the board and a lot of reaction mass to squander.

The ship throbbed under his touch. Jupiter fell behind.

The first stages were rough. They could have spiraled out under low thrust, but that would have required a great deal of time, so he gave a full five gravities for several minutes. After that the Olympia was so far out that he could drop the acceleration to a reasonable value. Most of the crossing he made at half an Earth-gee. Besides the need to spare their bodies further abuse, he didn't want to build up an unmanageably high velocity. Course corrections were difficult enough without that.

They talked together, he and Lorraine, during the hours that followed; but what they had to say was no one else's business. Not even Eve's.

Ganymede came near. Fraser was surprised to note how little fear there was in him, and how much savage anticipation. There was something wrong about feeling guilt at killing members of another species, and none at what might happen to men as warm-blooded as himself. Well, the Ulunt-Khazul had done him little personal harm, and they had not been able to shoot back at him. Matters were different now. Yeah, quite a bit different!

With an angry, chopping motion he switched the ship's radio to broadcast. "Spaceship Olympia calling Aurora Space Traffic Control," he spat at the raw mountainscape rolling before him. "Request guide beam and permission to land."
"What? Olympia, did you say?" exclaimed an unfamiliar voice.
"I did." Fraser gave his approximate coordinates. "Your radar can find me somewhere in that vicinity. Go ahead, slap a beam on. But relax. We're headed in to surrender."
"Wait. Can you hold on for a minute? I have to check with my superiors."

Sure, I can wait. I may be in a mean mood, but I'm not anxious to put Lory's life back in jeopardy. And l've got to.

The radio buzzed with star noise.
"Aurora Space Traffic Control to Olympia Stand by."

A second later, Swayne's curbed and bitted wrath entered his ears. "You! What are you up to?"
"We're beaten," Fraser said. "We tried to lick you and failed, so we're coming back."
"Who are you, anyway? Vlasek is with you, isn't she?"
"Yes," Lorraine said. "Proud to be."

Fraser gave his own name. Anything else would have been out of character.
"How did you escape that missile?" Swayne demanded.

Fraser told him, quite truthfully. "We landed on Jupiter," he finished. "You'll see, when we get close, the gas bag is inflated. We had a faint hope the Jovians might be able to help us somehow. But the radio beacon down there was out. I guess the invaders wrecked it. You'vo heard about that war, haven't you? We couldn't even find the city we've been communicating with, in so much territory. Our supplies exhausted, we decided to give up."
"Assume an orbit and I'll send a boarding party."
"I'd rather not," Fraser said. "Our air is pretty foul. We could be dead before your boat matches velocities. Give me a beam and I'll follow it down to the spaceport."
"Um-m - no, you'll have to take your chances. I don't trust you one centimeter."
"What the devil could we do? Attempt a suicide dive on your precious ship? A rocket would blast us before we'd got halfway. Would we have returned if we didn't want to live?"

Swayne hesitated. Fraser could almost see that thin countenance twisting in thought. At length: "Are you so anxious to live that you'll give us the names of your confederates?"

Fraser's heart bounded. This is it He opened his mouth. Lorraine shook her head and raised a finger to her faceplate.
"Well?" Swayne said. "For people whose air is running low, you're almighty leisurely."
"It's a hard thing to ask of us," Lorraine said.
"I want those names while you ride down. Otherwise I'll fire on you. There will be further interrogation, a thorough interrogation, after you've landed."
"Okay," she mumbled.
Good girll Fraser thought. That reluctant act convinced him.
With a radar fix now on the Olympia, the guide beam snaked forth and locked fast. "Give me my right position and velocity too," Fraser reminded.
"Naturally," Swayne said. "But I've further instructions for you. I don't want you landing on the field. You might be tempted to try some fancy stunt, with your jets for instance, once you're inside our radius of fire. Set down on the Sinus, a mile west of Aurora, just north of Navajo Crater, where we can keep you covered. Any deviation from this line, from any of these instructions, and we'll shoot."
"Check," said Fraser sullenly. "Turn me over to Control."
"At once. Vlasek, start giving mo those names!"

With his set tuned to the tower band, Fraser couldn't hear her. He could see her lips move, and imagined he could read them. Bill Enderby? Pete La Pointe? Ellen Swanberg? We've got to carry this off, or we've spilled their lives too. He lost remorse in the furious activity of correcting his vectors.

The moon swelled aft as he backed down until its peaks seemed to reach through the screens. Morning lay on Aurora; Jupiter was a pale, lost crescent.
"You go on straight visual in sixty seconds," the voice told him. "Countdown: Sixty, fifty-nine, fifty-eight-"- zero. Over and out."
Fraser looked upon Mare Navium, dark and barren - at Dante Chasm - at the fangs of the Gunnison.

One day there would be a sea here. But he would be very old then. He thought of returning to Earth, and realized he couldn't. For then Lorraine must depart, and she deserved oceans and blue skies.
The ground rushed up. He mixed in a sideways thrust of steering jets, to avoid the crater that grabbed at him. Now/ said the altimeter. He pushed the switch to extend the belly jacks. Dust boiled around him. Balanced on wildfire, he gauged his moment. This was a tricky beast to land non-aerodynamically. Couldn't be done on a larger world than Ganymede, and perhaps not even then; he had not been trained in that sort of operation. If he cracked up-
"I'm not going to," he said, cut out the main blast and applied rotatory thrust. The nose swiveled to horizontal. Steering jets gave less acceleration than gravity. The ship fell.

Shock-mounted, the wheeled jacks absorbed most of the impact. Nonetheless it rocked him. He tasted blood and realized he had bitten his tongue. So much for the big bold hero.

The nuclear engine continued to pulse, but silence oozed up through the noise. The dust outside settled and the sun appeared.

Lorraine unplugged her helmet set from the board, tuned to the standard frequency, and said, "He wants us to come out at once. I told him we have gas in here, under pressure, and don't want to be blown through the airlock. So we've got time to cycle through and -" Her words trailed off. She was already at work on her harness.

Fraser spent an anxious minute sighting at the Vega. The ship glimmered on the field, enormous even at a mile's remove. He sighed with relief; the Olympia was pointed accurately. He'd kept an excuse in reserve for realigning her if necessary, but Swayne was so suspicious that it might not have worked. Quickly he switched the autopilot to connection with the inertial compass.

Lorraine started the timer. "Five minutes," she said. "Let's go." Her face was very white.

They entered the airlock chamber and waited for it to exhaust. A curious peace possessed Fraser. He had done what he could; the
rest lay with the laws of physics. Or with God, maybe. He patted the steel beside him. "So long," he said. "You were a good ship."

Lorraine started to cry, quietly and alone.
$\mathrm{T}^{\text {to }}$ chug of the pamp dwindled away. Fraser cracked the outer door.

With no ladder to help the ground seemed a long way off. He jumped. The landing hurt his shins.

Lorraine joined him. She touched her helmet to his. "They're watching us from the battleship," she pointed out needlessly. "We'd better start walking."
"And get incinerated by the blast? Not you!" He pulled at her arm. They bounded off toward Navajo Crater.
"Hey, there!" Swayne's voice was brittle in their earplugs. "Where do you think you're going?"
"Why, we're headed around the safety wall," Fraser said innocently. "You want us in town, don't you?"
"I want you to come straight onto the field. Quick, before we shoot."

Some eons ago a meteorite had struck the crater. The scar was still fresh. The boulder lay at the bottom of the slope. Fraser and Lorraine plunged toward it.

A laser beam winked, intolerably bright. The lava melted where it hit. It swung after the running targets. Fraser grabbed Lorraine and threw her to the ground with himself for a shield. "No," she cried, "you've got Eve - "

The timer completed its appoint-
ed number of cycles. A relay clicked back a catch. A spring yanked the lever coupled to the main switch. The Olympia leaped forward.

Someone fired a shell. It exploded yards behind the spot where the runaway ship had been. The titanic rush of exhaust gases vaporized the smaller fragments. Spreading, it raged in a fog across Fraser. The ground shuddered and kicked him. Heat clawed through his armor. Blinded, stunned, he heard a roar so great that it ceased to be noise, an unchained elemental force battering his bones.

Had the Olympia been less stoutly built, her jacks would have torn her open. As it was, the wheels gouged a double trail of smoke, dust, sparks and splinters. Having been ordered to steer a straight line, the autopilot used side jets for correction, flame and fury to right and left against the volcano that bellowed aft. The men on the Vega had perhaps fifteen seconds to watch the dragon charge them.

There was no way to stop that onslaught. The ship from Jupiter was beneath the lowest arc of gun and missile tube sooner than a human could take fresh aim. A laser battery might have destroyed her in time. But time was not granted.

Yet the Vega was on battle alert, her engines warm, every station manned. The pilot threw his own switch and she blasted. At maximum thrust she lifted over the oncoming mass, poured her exhaust down upon it with a force that smashed the concrete beneath.

The gas bag disintegrated. The
thinner cells in the hold of the Olympia gave way. Jovian atmosphere exploded into vacuum. Under that much violence, already weakened by the battleship jets and and with its structural cross-bracing now gone the surface-condition compartment split. Hydrogen came out at more than sea-bottom pressure. Shrapnel chunks and boulders of allotropic ice were hurled heavenward. In airlessness and rocketblast temperatures, the water molecules crashed over to a low-density form even as they flew. The energy released could be measured, but never imagined.
A shock wave through the stone of Ganymede hurled Fraser aloft. He landed hard, with a gasp, and rolled over several times before he stopped. He scarcely noticed. Nothing could be noticed but that Luciferean burst which annihilated the Vega.

It was over in less than a second. The gases fled back to interstellar space.

A shallow crater had opened in the field. Wreckage rained down into it. Smoke and dust puffed away, the stars glittered forth, a vast and terrible silence fell.

Fraser rose to unsteady feet and helped Lorraine up. She stared wildly at him. "Are you all right?" asked part of him. The rest was still ringing and reeling.
"Alive, anyhow," "You? The town?" Frantic, she peered east against the sun. The safety wall was partly crumbled, the main radio mast bent into a grotes-
querie. But Aurora herself stood firm.
"We did it," he breathed. "Before heaven, we did."
"Yes. B-but . . . oh, I don't know. Trumpets ought to sound for me, I suppose, but mainly I just nọtice how I ache, how much I want to rest - and all those poor young men, and you belonging to - Let's walk back as slowly as we can." Her gauntlet closed on his. He was rominded of Ann.

Bill Enderby met them as they neared the west central airlock. Ho stopped and waited, blocky in his spacesuit. The face behind the helmet was overwhelmed by victory.
"Hello," he ventured shyly.
"What about the garrison inside?" Fraser demanded.
"They haven't done anything," Enderby said. "What could they do? Swayne was aboard that ship, along with most of their buddies." He lifted the firegun he carried. "I took this off one of 'em. He just sat there and cried. We're rounding them up now."
"There are still the boats on patrol duty," Lorraine said.
"No worry. What can they do either, except come in to surrender when their supplies run low? Even if they tried to dis us, they've only got three or four small rockets apiece - okay against a spaceship but not much use at a place built like Aurora. Not that they will try. Their cause is lost, and without us they'd plain starve to death."

Enderby drew a long breath. "This is your doing, isn't it?" he asked. "You two?"
"We three," Fraser said. He didn't ious. But so very tired."
amplify.
"I haven't got any words for you, Enderby said. "Nobody does. Those words haven't been made yet. Here, uh, Miss Vlasek." He thrust the gun awkwardly at her. "This is a hell of a nice little piece. It's yours."

She shook her head. "No, thanks. I don't want to touch a weapon ever again. Can you get us to a doctor?"
"Oh, lord, yes. Anything!" Glory turned to worry. "You're not hurt bad, are you?"
"Oh, no," she said. "Nothing ser-

She leaned on Fraser as they approached the airlock. "You know," he said, "I don't feel tired at all." The remark was perhaps a little heartless, but he couldn't help making it when he was walking with his head lifted so high.
As Colin and Ann will walk, he thought. It seems impossible already that I, my own poor self, had the honor of buying them that right.

He looked upward. The sun was nearing Jupiter. But Eve should have gotten here even before the eclipse was ended. END


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## The Place Where Readers And Editor Meet

## Dear Editor:

Your January cover was the most unusual I have ever seen on any magazine, but you might do better to put the picture in the upper right-hand corner where it is more noticeable on the magazine rack.

I suppose you realize what the reaction of a less-than-longtime imaginative fiction fan would be to Waterspider. Now I know for sure what you are doing with If. - Irvin Koch, 835 Chattanooga Bank Building, Chattanooga, Tennessee 37402.

Dear Editor:
Your November issue was the best in some time - there wasn't one thing in it that I didn't like, so naturally, I will itemize.

The Governor of Glave: Now there's a Retief story worthy of Laumer! The planetary revolution story is one of my favorite types, and although Laumer's plot has been used before, he has somehow turned it into a great story. I do not mourn the loss of aliens in the
story - all too often they are nothing but costumed Romans, Huns or Nazis. After all, if we are going to have an Attila or Hitler, an Earthman can play the part better. I never cease to marvel at the near telepathic Retief, he finds out more than the whole CIA.

Muck Man! A real good story. However, it should somehow have been 10 pages longer. The section concerning the trip back should have been lengthened. Anyway, more stories of changelings would be welcome by me - Mr. Dodge can handle a story line!

A Better Mousetrap: Somewhere back when I got sick of the "we're property" idea, but Mr. Brunner had the courtesy not to make it the main idea of the story. It had enough action in it for me not to feel a bit insulted about the ending.

Second Class Citizen: It was in the typical Knight style, but it occurs to me that the dolphin was talking under water, a difficult feat for a mammal!

Long Day in Court: Okay, but
looking at it again it seems a bit pointless, except maybe to say, "Thou shalt not judge thy BEMish neighbors."

There is nothing I can say about The Reefs of Space that would not bring me into the realm of superatives! More power to ye, Pohl and Williamson.

One final question, any hope for an anthology? You've reached that height!-David Lebling, 3 Rollins Ct., Rockville, Md. 20852.

## Dear Editor:

Your November cover makes the second artistic inspiration you've published in a row - far above your usual standard. The new logo appeals to me; because it seems more dignified, I suppose. The cover story was the best in the magazine and one of the best you've published in some time. But tell me - is Fremont Dodge a pseudonym for Jack Vance? The styles seem almost identical.-Jim Harkness, 112 West Harding, Greenwood, Mississippi.
$\bullet$ Nope. - Editor.

## Dear Editor:

Yep, Retief is still a winner! Mr. Laumer's stories draw me to If since I make it a practice never to buy sf mags with a serial. In this case the serial was so interesting that I searched out and found back issues for the rest of it.
I must say that your If has some of the flavor of the 1940's that has been sadly lost. - T/Sgt. Jeff Tisdale, 2127 Comm Sqdn, Box 1111, APO 328, San Francisco, California.

## Dear Editor:

First I must congratulate you on your new magazine, Worlds of To-
morrow. I think the two issues of Worlds of Tomorrow that I have read are better than any single issue of either If or Galaxy. There are a couple of points I must make about the distribation of all your magazines in Australia, however. I have just finished reading the Soptember issue of If, while W of T. for August hasn't appeared on the newsstands here yet. Another thing is the price. In American If is sold for 40 cents, $W$. of $T$ for 50 cents, which is 25 per cent more. In Australia, I can buy If for 3/ - while W of T costs 6/ -, TWICE as much.

Your September issue has a lot of top-line names in it, and their stories live up to expectations. This is one of the best issues in some time, but certainly expected with names like Van Vogt, Leinster, del Rey, Pohl, Williamson and Sturgeon. Keep up this standard in If, please, and I will certainly stay a regular reader. A welcome sight has been the names of some British authors on your contents page John Brunner and Brian W. Aldiss. More, please! - A. G. Thomas, Boldrewood, New Line Road, West Pennant Hills, N.S.W., Australia.

- More? Well, how about this igsue's "first" - Jo Friday, a young lady who teaches science in Australia, and writes about as well as any heretofore-unpublished writer we've seen in a long time. We also have another "first" - or, in this case, almost "first," since the writer has been published a time or two in in other fields, though not with science fiction, in Jesse Friedlander.
By the way, notice who's leading off our next issue? Name's E. E. Smith, Ph.D. And the story is a winner! - Editor.


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