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ROBERT GUINN, Publisher

H. L. GOLD, Editor

EVELYN PAIGE, Managing Editor

WILLY LEY, Science Editor

W. I. VAN DER POEL, Art Director

JOAN De MARIO, Production Manager

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OPEN FOR BUSINESS

AS an old hand at science fiction, I know what happens when you set your spaceship down on an alien world, whirl open the airlock, spring out alertly on the turf for Man's first look at this strange planet, and out of the lush foliage comes a —

Comes a *what?*

If you're a writer with integrity, you want something really new, so you go out for a thoughtful walk and may not return for days. When you do, you find yourself defeatedly settling for tentacles, antennae, extra mouths and/or legs, etc., etc.

You're not happy with the solution, but what else can you do? Well, friend, you need help. I'm trying to give it here and Willy Ley is doing likewise elsewhere in this issue. We may not succeed, but it won't be for want of trying.

Tentacles, antennae, extra mouths and/or legs are all right for getting on with a story, when the aliens aren't particularly important, but by not challenging the problem, we're leaving a whole area of speculation unexplored. Let's have at it, shall we?

The big handicap, of course, is

that we have only our own planet to go by. However, that is better than having none at all. At least it gives us an idea of nature's method of solving life problems.

The setup we're familiar with consists of vegetation living off soil and air, herbivores living off vegetation, carnivores living off herbivores. But is that the only one possible? Some plants eat insects and small animals. I don't know if there are any animals that can subsist on minerals, but that doesn't mean it can't be.

In one story, I built a race of extraterrestrials that ate rock. Worked out rather nicely, too, except that, being limited in wordage, I had to ignore the other life-forms on the planet. If it's universally true that whatever lives off soil may be considered a lawn and something must mow it, the idea of intelligent flesh-eating plants isn't absurd.

Willy Ley, though, quotes de Camp to set a minimum limit to the size of an intelligent form. I disagree — on Ley's own authority; he himself revealed that the Portuguese man-of-war is actually a colony of small animals, all combining to make one of the

most fearsomely efficient fishing forms imaginable. Ants, bees and termites also, by joining forces, evolved something remarkably like a civilization. At any rate, the only comparable society on Earth is mankind's. So, if 40 pounds is really the minimum body-weight for an intelligent creature, as he and de Camp agree, it can be achieved by teamwork.

For that matter, we can claim — with truth — that it takes a certain irreducible number of creatures to attain a civilization of any given level, *if* we use our own history as an inflexible guide. But would that hold if we had nothing but highly skilled specialists and machines?

Since any advanced society is necessarily more versatile than even its most versatile genius, *at least as far as we know*, the weight of the body politic might be more significant than that of the individual member.

And who says the body politic must consist of a single species? Let's go even further. Our civilization is dependent not only on an irreducible minimum population, but on an irreducible minimum of bacteria, enzymes, earthworms, plants, insects—not freight or food animals. I'm not suggesting we give these things the vote, merely stating that they can't be left out of the required weight of

a civilization. Those like ours, at any rate.

But aren't other arrangements feasible? I think so. Trying to figure in advance what they might be is the hard job. Once we see how nature solves its problems, we generally kick ourselves for not having thought of the solutions.

For instance, there's the problem of chewing. Birds have no teeth — so they use gizzards filled with swallowed gravel that acts as miniature millstones. Reptiles have to gulp prey whole — so they have digestive systems that would do credit to acid vats. Ungulates have multiple stomachs; if they are frightened while grazing, they can chew when danger is past.

And how about built-in cleats? Snakes have 'em. Or animals that can drown both in air and water? Whales, of course; being breathers, they can drown in water, but because of their huge size, they need the buoyancy of water to help their lungs and so drown in air when aground.

Far from running out of material, Willy Ley and I had to limit ourselves severely. All it takes is a little research to come up with more than anyone can use. If you have any notions you want to share, let's have them. Same with questions.

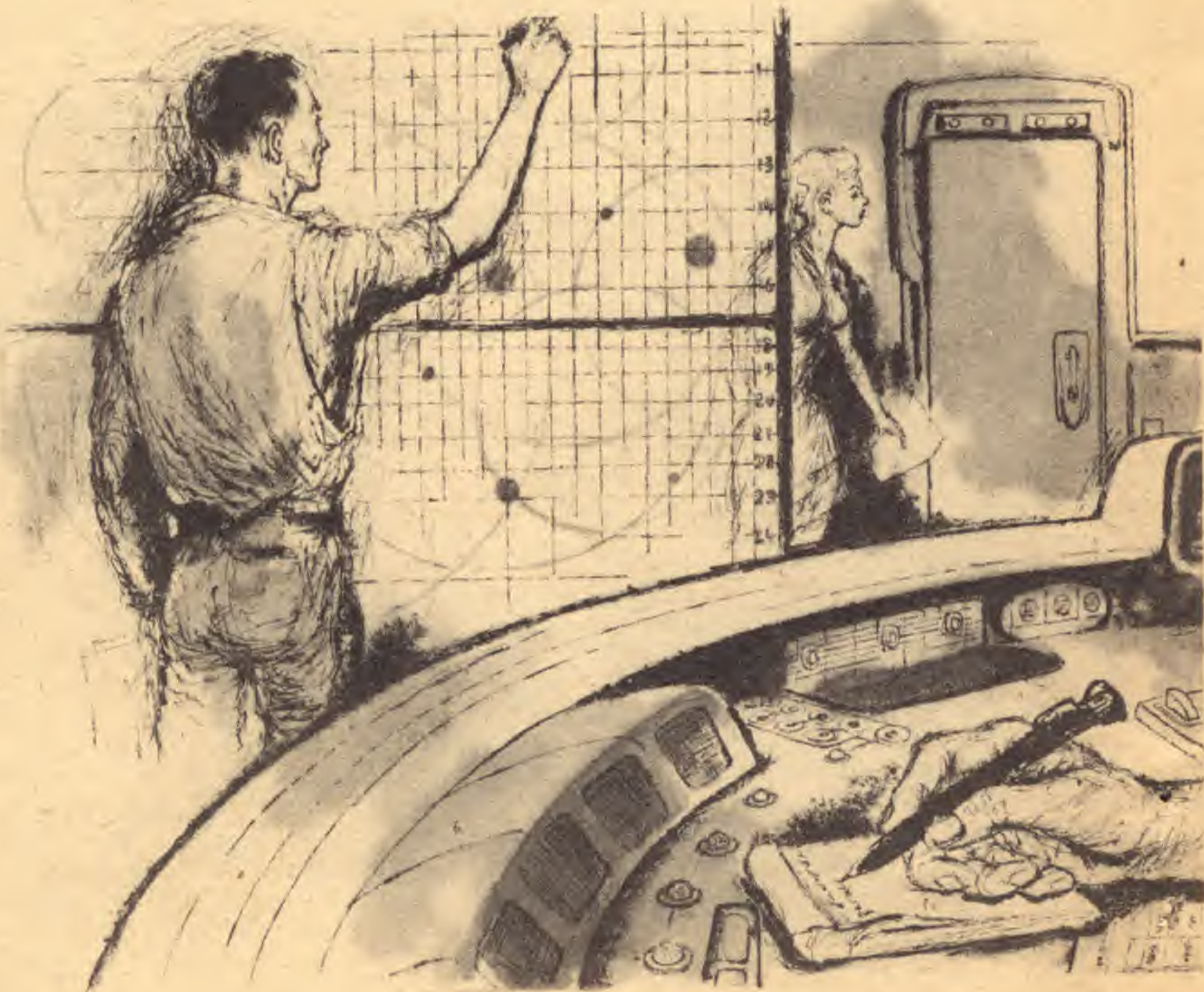
—H. L. GOLD

Swenson,

By R. DeWITT MILLER

Illustrated by FRANCIS

*There were no vacuums in Space Regulations,
so Swenson — well, you might say he knew
how to plot courses through sub-ether legality!*



GALAXY SCIENCE FICTION

Dispatcher

IT WAS on October 15, 2177, that Swenson staggered into the offices of Acme Interplanetary Express and demanded a job as dispatcher.

They threw him out. They forgot to lock the door. The next

time they threw him out, they remembered to lock the door but forgot the window.

The dingy office was on the ground floor and Swenson was a tall man. When he came in the window, the distraught Acme



Board of Directors realized that they had something unusual in the way of determined drunks to deal with.

Acme was one of the small hermaphroditic companies — hauling mainly freight, but shipping a few passengers — which were an outgrowth of the most recent war to create peace.

During that violent conflict, America had established bases throughout the Solar System. These required an endless stream of items necessary for human existence.

While the hostilities lasted, the small outfits were vital and for that reason prospered. They hauled oxygen, food, spare parts, whisky, atomic slugs, professional women, uniforms, paper for quadruplicate reports, cigarettes, and all the other impedimenta of war-time life.

With the outbreak of peace, such companies faced a precarious, devil-take-the-hindmost type of existence.

THE day that Swenson arrived had been grim even for Acme. Dovorkin, the regular dispatcher, had been fired that morning. He had succeeded in leaving the schedule in a nightmarish muddle.

And on Dovorkin's vacant desk lay the last straw — a Special Message.

Acme Interplanetary Express
147 Z Street
New York

Your atomic-converted ship Number 7 is hereby grounded at Luna City, Moon, until demurrage bill paid. Your previous violations of Space Regulations make our action mandatory.

*Planetary Commerce
Commission*

The Acme Board of Directors was inured to accepting the inevitable. They had heard rumors along Blaster's Alley of Swenson's reputation, which ranged from brilliance, through competence, to insanity. So they shrugged and hired him.

His first act was to order a case of beer. His second was to look at what Dovorkin had left of a Dispatch Sheet.

"Number 5 is still blasting through the astraloids. It should be free-falling. Why the hell isn't it?"

Old Mister Cherobie, Chairman of the Board, said quietly: "Before you begin your work, we would like a bit of information. What is your full name?"

"Patrick M. Swenson."

"What does the M stand for?"

"I don't know."

"Why not?"

"My mother never told me. I don't think she knows. In the

name of God, why don't you send Number 3. . ."

"What's your nationality?"

"I'm supposed to be a Swede."

"What do you mean, 'supposed'?"

"Will you open one of those beers?"

"I asked you. . ."

Swenson made a notation on the Dispatch Sheet and spun around in the swivel chair. "I was born on a *Swallow Class* ship in space between the Moon and Earth. My mother said my father was a Swede. She was Irish. I was delivered and circumcised by a rabbi who happened to be on board. The ship was of Venutian registry, but was owned by a Czechoslovakian company. Now you figure it out."

"How did you happen to come here?"

"I met Dovorkin in a bar. He told me that you were in trouble. You are. Is one of the Moulton Trust's ships at Luna City?"

"Yes."

"Then that's why you're grounded. They've got an in with the Planetary Commerce Commission. What's the demurrage?"

"Seventy-six thousand dollars."

"Can you raise it?"

"No."

SWENSON glanced at the sheet. "How come Number 2 is in New York?"

"We're waiting for additional cargo. We have half a load of snuff for Mars. And we've been promised half a load of canned goods for Luna City. It's reduced rate freight that another company can't handle."

"Dovorkin told me about the snuff. That's a starter, anyway." Swenson turned back to the Dispatch Sheet and muttered to himself: "Always a good thing to have snuff for Mars."

Mister Carobie became strangely interested.

"Why?"

Swenson paid no attention. "What are you taking a split load for?"

"We had no choice."

"You know damn well that the broken-down old stovepipes you buy from war surplus are too slow to handle split loads. Who promised you the canned goods?"

"Lesquallen, Ltd."

"Oh, Lord!" said Swenson. "An outfit that expects lions to lie down with lambs!"

The red *ship-calling* light flashed on.

"Number 4 to dispatcher. This is Captain Elsing. Dovorkin. . ."

"Dispatcher to Number 4. Dovorkin, hell. This is Swenson. What blasts?"

"B jet just went out. Atomic slug clogged."

"How radioactive is the spout?" asked Swenson.

"Heavy."

"Have somebody who's already had a family put on armor and clean up the mess," Swenson said, "and alter course for Luna City. I'll send you the exact course in a few minutes. When you get to Luna, land beside the Moulton Trust's ship. Now stand by to record code."

Swenson reached back to Mister Cerobie. "Acme private code book."

Silently, the Chairman of the Board handed it to him. When Swenson had finished coding, he handed the original message to Mister Cerobie. The message read:

"Captain Elsing, have crew start fight with Moulton's crew. Not much incentive will be necessary. See that no real damage is done. Urgent. Will take all responsibility. Explain later. Cerobie."

"Swenson," Mister Cerobie said quietly, "you are insane. Tear that up."

With slow dignity, Swenson put on his coat. He stood there, smiling, and looking at Mister Cerobie. The memory of Dovorkin stalked unpleasantly through the Chairman's mind. Everything was hopeless, anyway. Better go out with a bang than a whimper.

"All right, send it," he said. "There is plenty of time to countermand — after I talk to you."

WHEN Swenson had finished sending the coded message, he turned back to Mister Cerobie. "What's this I hear from Dovorkin about a Senator being aboard Number 7 at Luna?"

A member of the Board began: "After all. . ."

Mister Cerobie cut him off: "Your information is correct, Swenson. A Senator has shipped with us. However, I would prefer to discuss the matter in my private office."

Swenson crossed the room to the astrographer in the calculating booth and said: "Plot the free-falling curve for Number 5 to Mars." Then he followed Mister Cerobie into the Chairman's office.

Half an hour later, they came out and Swenson went back to his desk. First he glanced at the free-falling plot. Then he snorted, called the astrographer and fired him. Next he said to Mister Cerobie: "Is that half load of snuff. . ."

"Yes, it is. You know Martians as well as I do. With their type of nose, they must get quite a sensation. I understand they go a bit berserk. That's why their government outlaws snuff as an Earth vice. However, our cargo release states that it is being sent for 'medicinal purposes.' It's no consequence to us what they use the snuff for. We're just hauling it. And I don't have to tell you how

fantastic a rate we're getting."

"To hell with the canned goods part of the load," Swenson said. "Can you get a full haul of snuff?"

"Possibly. But it would cost."

"Even this outfit can afford to grease palms."

"I'll see what I can do."

"What's the Senator on the Moon for?"

"He's supposed to make a speech on Conquest Day." Mister Cerobie lit a cigar. "That's day after tomorrow," he added.

"Exactly where is this eloquence to be expounded?"

"THE Senator is speaking at the dedication of the new underground recreation dome. It's just outside Luna City. They've bored a tunnel from the main dome cluster. This dedication is considered very important. Everybody in Luna will be there. It's been declared an official holiday, with all crews released. Even the maintenance and public service personnel have been cut to skeleton staffs."

"With that fiesta scheduled on our beloved satellite," said Swenson, "we won't have to worry about getting the Senator off for some time. His name's Higby, isn't it?" Mister Cerobie nodded. "Then he'll whoop it up long enough for you to get that demurrage mess straightened out."

"Unfortunately, it isn't that sim-

ple. The Senator is due for another speech on Mars. The timing is close — he only has a minimum of leeway. As you mentioned, Number 7 is grounded for demurrage. And we can't ship the Senator out on Number 4 because of the bad jet."

Swenson was silent for a long time. The beer gurgled pleasantly as he drank it. Then a bright smile — which could have been due either to inspiration or beer — spread across his face.

"If that idiot Dovorkin can be trusted," he said, "the Senator is speaking in the early afternoon, our time. Do you happen to know just when he starts yapping? And the scheduled length of the spiel?"

"I'll check it." Mister Cerobie turned to one of his assistants. Swenson took down the *Luna Data Handbook* and thumbed through it.

A moment later, the assistant handed a slip of paper to the Board Chairman.

"The Senator," Mister Cerobie said, "will speak from 1300 hours to 1500 hours."

Swenson smiled and stuck a marker in the *Luna Data Handbook*.

"Now," he said, "about this snuff. Can you have it loaded by tomorrow night?"

"I don't see how."

"Remember our agreement in the office. If we don't do some-

thing, we're through, so all we can do is lose. Leave me be and don't ask questions. I want to blast Number 2 into low Earth-orbital tomorrow night."

Mister Cerobie looked off into that nowhere which was the daily destiny of Acme. "All right," he said, "I was born a damn fool. I'll do my best to have a full load of snuff aboard — somehow — tomorrow night."

Swenson went back to his Dispatch Sheet. During the next five hours, he looked up only long enough to order another case of beer and a new astrographer.

Finally, he called Heilberg, the assistant dispatcher who was on the night shift, gave him a lecture concerning dispatching in general and the present situation in particular, promoted a date with one of the stenographers, and departed.

WHEN Swenson came back the next morning, he was sober, ornery and disinclined to do any work. He cornered O'Toole, the labor relations man, and began talking women. O'Toole was intrigued but evasive.

"Your trouble," Swenson said, "is not with women. It's with evolution. I don't blame evolution for creating women. I blame it for

abandoning the egg. Just when it had invented a reasonable method of reproduction which didn't make the female silly-looking and tie her down needlessly for nine months . . ."

"I don't think they're silly-looking."

"Maybe you don't, O'Toole, but I do. And you must admit that nine months is a hell of a long time to fool around with something that could be hatched in an incubator under automatic controls. Look at the time saving. If evolution hadn't abandoned the egg idea, half the human race wouldn't waste time being damned incubators."

O'Toole backed away. He had never heard the legend of Swenson's egg speech.

"Don't tell me," Swenson went on, "that evolution is efficient. Are you married, O'Toole?"

"Yes, I —"

"Wouldn't you rather your wife laid an egg than —"

"I don't know," O'Toole interrupted, "but I do know that I'd like to find out what the dispatch situation is at the moment."

Swenson grabbed a piece of paper and drew a diagram.

While O'Toole was studying the diagram, someone laid a Special Message on Swenson's desk. Swenson glanced at it:

Acme Interplanetary Express
 147 Z Street
 New York

Your ship Number 4 is hereby grounded at Luna City, pending an investigation of a riot involving your men, and for non-payment of bill for atomic slug purification. Your Number 4 is also charged with unpaid demurrage bill.

Planetary Commerce
 Commission

SWENSON muttered: "Good!" and threw the Special Message in the wastebasket. Mister Cerobie, who had just entered the office, fished the form out and read it.

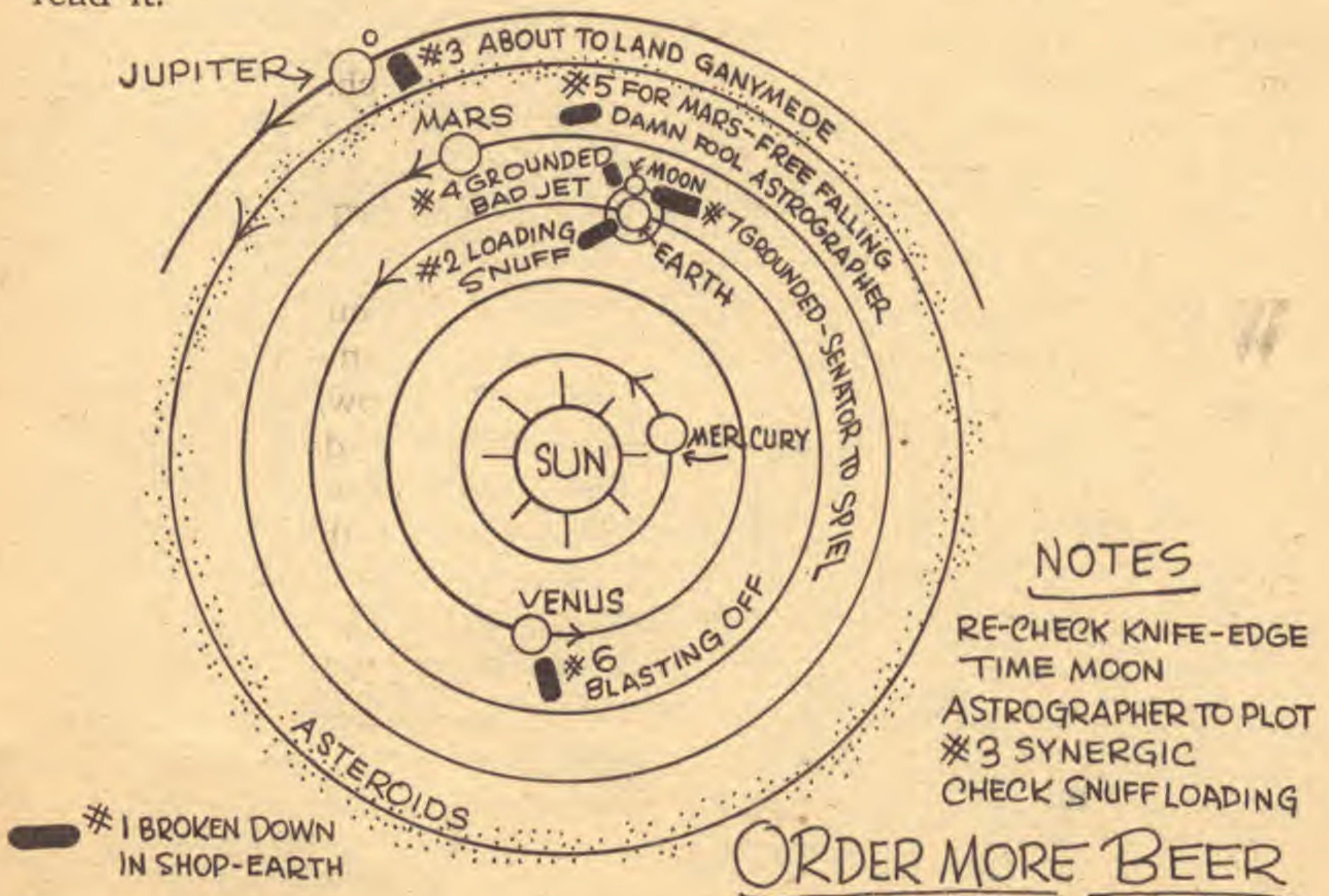
"It never rains, but it pours," he said.

"You can't stand long on one foot," Swenson answered without looking up. "Put all your troubles in one basket and then lose the basket. *Morituri te salutamus*. Have you heard my theory about the advantage of reproduction via the egg? And get me a beer."

"I will get you a beer, but if you say a word about that egg theory, I will fire you. I heard you talking to O'Toole."

"Okay. We'll forget the egg for the nonce. Did you pilfer that snuff?"

"It's being loaded. And it cost Acme —"



"Did you expect it would fall like manna from heaven?" Swenson flipped the switch of the intercom to Acme's launching area. "Give me Number 2. Captain Wilkins."

"What are you going to do?" Mister Cerobie asked.

"Don't you remember what I told you yesterday? Where's that beer?"

Mister Cerobie smiled, a weary, dogged smile, the smile of a man who had bet on drawing to a belly straight.

"Captain Wilkins," came over the intercom, "calling Swenson, dispatcher, for orders."

"Blast as soon as loaded for low altitude Earth-orbital." Swenson was silent a moment, then: "Hell, don't you know the plot? All right, I'll give it to you. Full jets, two minutes, azimuth. . ."

Mister Cerobie interrupted quietly: "Swenson, don't you think you'd better check with the astrographer?"

Turning off the intercom, Swenson spun in his chair. "Any decent dispatcher knows that one by heart. So maybe I'm wrong. Then Number 2 will pile up on either the Moon or the Earth. If that happens, you can collect the insurance and get out of this mess." He flipped on the intercom switch. "Sorry, Captain Wilkins, brass interference. As I was saying, azimuth . . ."

MISTER Cerobie made no effort to continue the conversation. He was reading an astrogram, which had just been handed to him.

**ACME INTERPLANETARY
EXPRESS**

147 Z STREET

NEW YORK

EARTH

HEAR PERSISTENT RUMOR YOUR SHIP ON WHICH I AM A PASSENGER HELD HERE FOR NON-PAYMENT OF DEMURRAGE. MUST MAKE WORLD CRISIS SPEECH ON MARS AS SCHEDULED. ASTROGRAM TRUTH OF SITUATION AT ONCE. INVESTIGATION OF SUCH MATTERS NOW PENDING BEFORE SUBCOMMITTEE. DO NOT ASTROGRAM COLLECT.

SEN. HIRAM C. HIGBY

Swenson snapped off the intercom, glanced at his Dispatch Sheet, leaned back in his chair and closed his eyes. He was silent for the next half hour and drank three beers, looking either thoughtful or asleep. Mister Cerobie smoked a cigar until it burned his mustache.

When the third beer was finished, Swenson reached for an astrogram blank and wrote:

HON. SENATOR HIRAM C.
HIGBY ESQ.
ACME INTERPLANETARY
EXPRESS
LUNA CITY

RUMOR RE UNPAID DEMURRAGE UTTERLY UNFOUNDED. INFORMATION HERE THAT RUMOR STARTED BY YOUR OPPOSITION. HAVE VITAL NEW DATA FOR YOUR LUNA CITY SPEECH. WILL SEND SPEECH INSERT AT ONCE.

JAMES CEROBIE

Mister Cerobie, who had been reading over Swenson's shoulder, said: "You know that demurrage rumor is true."

"If things don't work out and we have any trouble, you can say you hadn't heard about the demurrage. By the way, can you write an insert to a political speech?"

"I suppose so. I've lied before."

"Make sure it will take ten minutes to deliver—even talking fast—which Senators don't usually do."

"What," inquired Mister Cerobie, "shall I write about?"

"You know that scandal Senator Higby's opposition just got involved in. That business about slave labor exploitation on Venus. The story broke this morning. Get touch with my friend Max Zempky on *Telenews* and have

him give you some inside details. It doesn't matter if they're important or not. The Senator will grab anything that might pep up his speech. Besides, he's probably been having a large time in Luna City and hasn't heard about this morning's story."

Mister Cerobie executed a sweeping bow. "Yes, sir. And if this thing doesn't work, I told you yesterday in my office what would happen."

Swenson shrugged. "Kismet."

AS Mister Cerobie opened the door to his private office, Swenson called after him: "Where's this outfit's attorney?"

"In the Board Room."

"Find him and send him in here."

Mister Cerobie nodded.

"And," Swenson added, "be damned sure that speech insert will run at least ten minutes. More, if possible."

Mister Cerobie slammed the door.

Five minutes later, slim, soft-spoken Van Euing, Acme's attorney, coughed behind the dispatcher's chair. Swenson swiveled from coding the astrogram and dropped his cigarette. "What the hell—oh, you. Lawyers are like policemen—they sneak up on people."

"How did you know I was the firm's attorney?"

"I watched you try that unfair-trade-practice suit against Lesquallan Ltd. two years ago. It was snowing outside. I was broke and the courtroom was warm. You should have won the case. Some of their evidence looked phony to me. Anyway, you did a good job."

"Thank you."

"Did you ever stop to think about the advantage of the egg —"

"Mister Cerobie said you wished to speak to me."

"That's right. I want you to draw up a something-or-other — you know what I mean — grounding Moulton Trust's ship on the Moon until this fight hassle is settled."

"You mean you wish me to prepare a restraining order?"

"Restrain, yeah! And restrain them as long as you can. I wish you could restrain them forever. This solar system would be a better place."

"On what grounds am I to base my order?"

"Claim they started the fight and our crew's so bashed up that we haven't enough able men to blast off."

"But I'm afraid we can't prove that."

"And what's it going to cost us to try? You're on retainer. The total bill for said restraining order will be only the price of some legal paper and the services of a

notary. The steno's hired by the month, like you."

Van Euing looked puzzled. "What good will it do?"

"You know how long it takes courts to do anything. Before your order is tossed out, Moulton will have been grounded for a week."

Van Euing lit his pipe. "In legal parlance, it is something irregular, which, being translated, means it's a slick trick."

"All it's going to cost *you* is being half an hour late to lunch."

Van Euing puffed a moment on his pipe and said: "Because of your audacity, Swenson, and furthermore, because you'll be fired tomorrow, I'll prepare the restraining order."

Swenson put out his hand and his blunt fingers closed around Van Euing's delicate ones.

When Van Euing had gone, Swenson returned to coding the astrogram. He checked the form twice and sent it.

Then he turned over his desk to an apprentice dispatcher, left orders to be called if anything broke down, and went out to lunch.

IT was 2:30 P.M. when news of the restraining order arrived in the quiet, streamlined offices of the Moulton Trust. Two minutes later, the offices were still streamlined, but not quiet.

The three major stockholders

of the great organization, N. Rovance, F. K. Esrov, and Cecil Neinfurt-Whritings, formed a tiny huddle at one end of the long conference table. Esrov was waving a copy of the order.

"Gentlemen, we can consider this nothing but an outrage!"

"Blackmail, really!" It was Neinfurt-Whritings's lisping voice.

"Whatever it is, this sort of nonsense must be stopped at the beginning. It might set a precedent."

"May I suggest," Rovance broke in, "that, as the matter of precedent is sure to arise, we take no action without first consulting Lesquallan Ltd."

"An excellent idea," Esrov nodded. He switched on the intercom to his first secretary. "Connect me with Lesquallan Ltd. I want to speak with Novell Lesquallan. Inform him that it is urgent."

"He just entered our office." The voice that came from the intercom carried the slightest trace of surprise. "He said he desired to discuss something about canned goods and snuff. I shall send him in at once."

Rovance turned to Neinfurt-Whritings. "I fear that old Cerobie is becoming senile. Apparently he has lost his mind."

"But really, did he ever have one?"

Nobody laughed. Esrov

slammed the restraining order on the conference table and stood up. "Gentlemen, what shall we do concerning —"

"Yes, gentlemen, that is just what I want to know."

Three heads pivoted. Novell Lesquallan, sole owner of Lesquallan Ltd., stood in the doorway. He was a broad, ruddy-faced man with a voice trained to basso interruptions.

"I understand, Mr. Lesquallan," Esrov said, "that you have a matter to discuss with us."

"Yes! Sit down, F.K. We have some talking to do — about that bankrupt, dishonest Acme Interplanetary Express."

"Quite a coincidence," Neinfurt-Whritings murmured.

"You got trouble with that outfit, too? That settles it. They've cluttered up the orderly progress of free enterprise long enough. Out they go."

Novell Lesquallan swiftly read the document and bellowed an unintelligible remark.

"Something, quite," Neinfurt-Whritings agreed.

LESQUALLAN got his voice under control. "What action do you intend to take?"

"We hadn't decided," Rovance answered. "We received the order only a few minutes ago."

"Before we form our plans," Esrov said, "we would like some

information about your problems with Acme. We understand it involves canned goods and snuff."

"Yes, those damned. . . . At the last minute, they turned down a small load of canned goods for Luna that we'd been decent enough to give them at reduced rates. They can't get away with that kind of thing long. But that's just the beginning. They got hold of the contract and permit to haul a consignment of medicinal snuff to Mars. We had already arranged for that cargo. You know that snuff situation. Through certain contacts, we have been able — perfectly legally — to have permits issued. That customs man must have taken a double —"

"We understand," Rovance broke in. "We have had occasion to make similar arrangements. The rates — and other inducements — are extremely satisfactory."

"Well, gentlemen," Lesquallan demanded, "what are we going to do about this unprecedented situation?"

"I suggest," Neinfort-Whritings said, "that we have our legal staffs meet in joint session. We should impress on them that the quashing of this restraining order is urgent. Perhaps we should consider debts owed us by the judiciary we helped elect."

"An excellent idea," Lesquallan declared. "I will take care of that

part of it myself, personally."

"As to the snuff matter," Esrov said, "I think we should emphasize to our mutual contact that he should be more discriminating in issuing permits."

"That's all right for now," Lesquallan snapped. "But he's done with, too. I'll see to it that he's replaced."

"As to the canned goods situation," Rovance said, "it seems to me that we should have a subsidiary company to handle our excess cargoes — at reduced rates, of course. It shouldn't cost too much to pick up one of the less financially secure companies — such as Acme."

Esrov nodded. "An excellent idea."

"I agree," Lesquallan said and sat down. "But first we must dispose of today's damned annoyances. I suggest that we outline a plan for immediate action."

"To begin with," Esrov reminded him, "we must deal with the restraining order."

WHEN Swenson came back from lunch, he was not as sober and thus in a better mood. Mister Cerobie's insert to the Senator's speech was on his desk. Swenson read the first few lines:

As a further indication of the methods, devices, malfeasances, and corrupt practices employed, used, and sustained by those with whom

you have called upon me to negotiate in the highest tribunal in Washington, let me cite the following information which I have just received. Although this information is top-drawer, restricted and highly secret, I was able to obtain it through certain channels which, as a man of honor, I must leave undisclosed.

The right of all creatures to be free is a fundamental, an inviolable, right and yet on Venus . . .

Swenson said to himself: "Mister Cerobie is in the wrong business," and started coding the insert. He had almost finished when the ship-calling light flashed red.

"Number 5 to Dispatcher. Captain Verbold speaking."

"Dispatcher to Number 5. This is Swenson. Go ahead."

"I'm afraid you can't help me. May I speak to Mister Cerobie?"

"He's out to lunch."

"This matter is serious. I am faced with what amounts to mutiny."

"Sorry, but I got troubles, too. Maybe I can find Mister Cerobie, maybe I can't. Why don't you tell me your grief?"

Captain Verbold hesitated. "It's something I've been expecting. The crew has stated that they will leave the ship at Mars." Captain Verbold's next sentence was pronounced word by word in code. "I even have private information that there is a plot to take over the ship and blast directly to Earth, where the crew feel their

case can be more justly presented."

"What are they squawking about?"

"Everything. Wages have not been paid for six months. Poor radiation shielding. Food not up to standard. You know the story."

"It's not the first time I've heard it."

"What am I to do?"

"FIRST, read them section 942 in your copy of *Space Regulations*," said Swenson. "If they divert ship from Mars without your permission, it's mutiny. That means the neutron death chamber or, if they are very lucky, life sentences to the Luna Penal Colony. Get them all together and read it to them. You're free-falling now, so even the jetters won't have to be on duty."

"But if I could talk to Mister Cerobie —"

"I've already told you I don't know where the hell he is. He couldn't do you any good, anyway. Didn't you ever read *Space Regulations*? Section 19: 'The captain of a ship in flight is *solely responsible* for the maintenance of discipline and his orders cannot be changed or overruled'."

"Swenson, you said a moment ago that this was your first suggestion. I presume, therefore, that you have others."

"I have two others." Swenson

paused long enough for a brief study of his Master Ship Location Chart, which he had just brought up to date. The chart showed the position of all ships at the moment in space. "There's a patrol cruiser loaded with gendarmes three million miles behind you on a course paralleling yours. It's one of the new Arrow Class and if they blast full, they can catch you in ten hours. Mention to the crew that you could notify the police boys and have them pick you up and escort you to Mars."

"What is the patrol ship's number and call letters?"

"Arrow — British — Earth — number 96. Call letters MMXAH."

"Thanks. If things get too bad, I might take advantage of our valiant guarders of the spaceways. All right, you said you had three suggestions. What's the third?"

"Some goons on a Moulton Trust ship, parked beside our number 2 on the Moon, started a fight and beat up our boys. We're about to sue Moulton for plenty. Tell your crew about it and suggest that if they behave, we'll cut them in on the proceeds from the suit, in addition to paying their wages as soon as a snuff cargo that I had to send into orbital gets to Mars."

"On whose authority am I to make such a statement?"

"Swenson's. You don't need any other, do you? I know most of

the boys on your mobile junkyard. They trust me, so they'll trust you. You have my word that Cerobie will go for the idea."

"You talk to Cerobie and let me know what happens. Meanwhile, I'll think over your suggestions."

THE ship-calling light blinked off and Swenson went back to coding the speech insert.

As he was finishing, O'Toole came in.

Swenson looked up. "O'Toole, sure and it's one hell of a job you're doing. You've got me in a fight with myself. My Swedish half wants to ignore you and my Irish half wants to punch you in the nose. You're supposed to handle labor relations. And I just received a message from Captain Verbold of Number 5 that his crew is about to mutiny."

"Mother of God, what can I do?" cried O'Toole. "This outfit's so broke, it doesn't have enough money to pay the filing fee for bankruptcy."

"In the face of adversity, you should spit."

"Who are you quoting?"

"Me."

"Look, Swenson, I'm supposed to supervise labor relations, sure. Labor is something you hire. That's done by paying wages — on time."

"At least you should have

brains enough to understand the advantage of the egg."

"What?" asked O'Toole blankly.

"I've already explained it to you. Apparently it didn't get past your hair. I shall therefore make a second attempt. Do you understand the principle of the egg?"

"I don't—"

"Of course not. You never stopped to analyze it. You just assumed that because human beings are born the way they are, it is the best method. How much pain and trouble does a hen have laying an egg? Does she—"

"Getting back to number 5," O'Toole said firmly, "what did Captain Verbold—"

"Consider the advantage of the egg from another angle, O'Toole. Let's say your wife lays an egg and, at the moment, you don't have money enough to support another child. All you would have to do is put the egg in cold storage until your ship comes in. Then you can take the egg out and incubate it. Instead of being—"

The click of the latch as O'Toole closed the door caused Swenson to spin in his chair. Tossing his pencil on the Dispatch Sheet, he put on his coat and went home.

WHEN the dispatcher for Acme Interplanetary Express arrived at the office the following

morning, a Special Message lay in sublime isolation on his desk. Swenson opened a beer and read the message.

*Board of Directors
Acme Interplantary Express
Gentlemen:*

Your restraining order concerning our ship at Luna City can only be considered as representing a warped and intolerable concept of justice. We will take every legal action available to us.

Moreover, your action in refusing, without notice, a load which we were so kind as to offer you and your immoral dealings in contraband snuff force us to sever all commercial relations with your organization.

We are taking appropriate action with the Planetary Commerce Commission.

*Yours sincerely,
Moulton Trust
Lesquallan Ltd.*

Swenson was smiling cherubically and bringing his Master Chart up to date when O'Toole came in.

"Swenson, did you have eggs for breakfast? And how goes with the dispatch?"

Carefully noting the last change of ship position on the Master Chart, Swenson turned to O'Toole.

"Things are like so," he said, and drew a diagram.

While O'Toole was studying the diagram, Swenson placed a call to Moulton Trust. "Give me Esrov. Yes, Esrov himself. This is Swenson, Acme Interplanetary. If Esrov doesn't want to talk to me, jets to him, but I think I have some information he can use."

"Will you please hold on, Mr. Swenson? I will convey your message."

Swenson looked at O'Toole for a moment in silence. "No, I don't like eggs for eating. My theory concerns another aspect—"

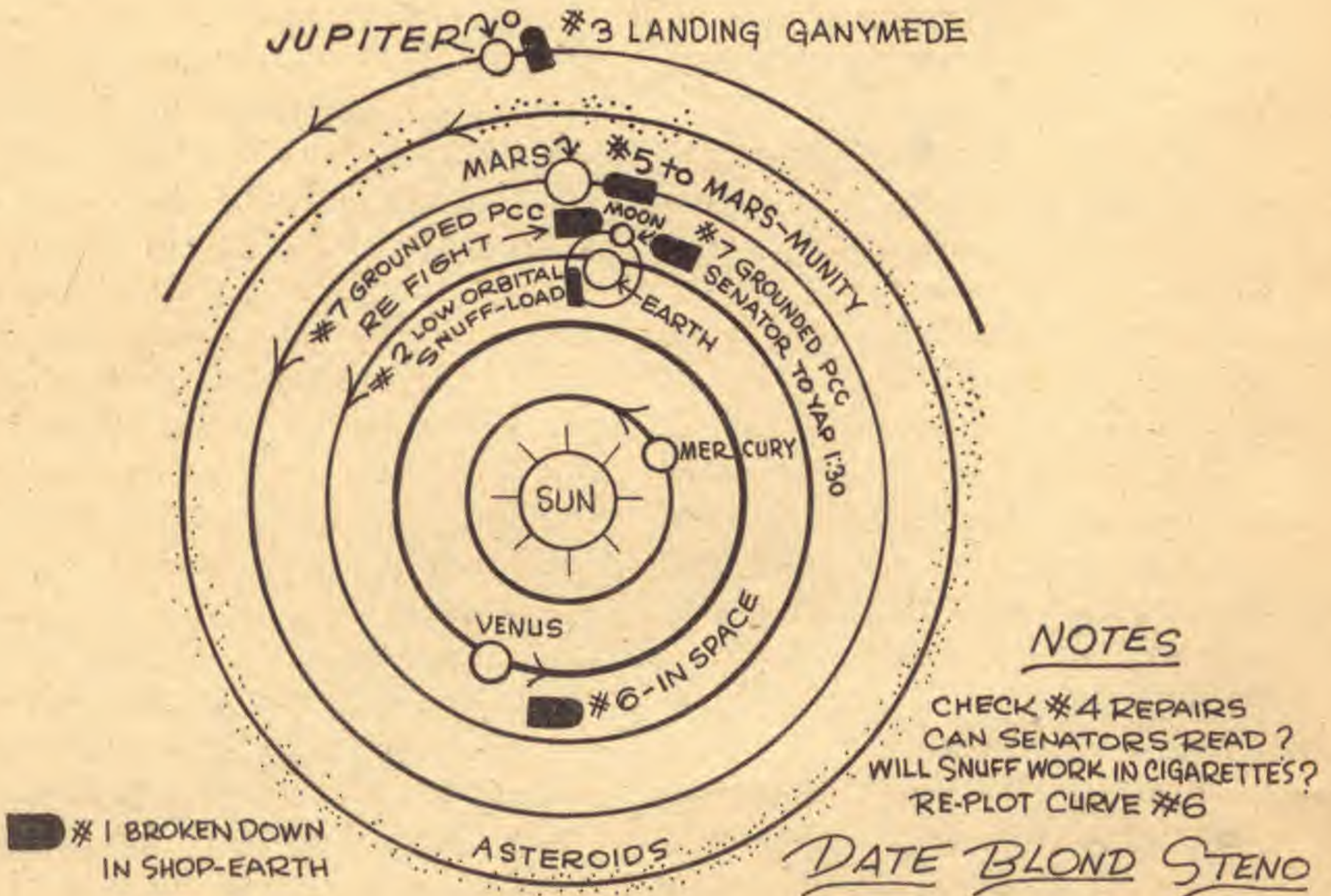
"I know," said O'Toole resignedly.

ESROV's urbane voice came from the desk speaker. "Mr. Swenson, you have some information for us?"

"Yes, Esrov. I've just seen your message to our Board and I want you to know that I can certainly understand your position. I could not prevent the restraining order. However, I have a suggestion as to what you can do about it."

"We are doing everything we can."

"Didn't you support Senator



Higby for re-election last year? Well, he has shipped with us on an inspection tour of planetary outposts. Right now, he's on the Moon and will speak at 1:30 this afternoon at the official opening of the new Recreation Center. It occurred to me that it might be worthwhile for you to send him a message suggesting that he incorporate in his speech something about the laxity of the Planetary Commerce Commission that allowed you to get into this mess."

"An excellent idea, Mr. Swenson. We shall give it immediate consideration. And, by the way, if for any reason your employment with Acme should terminate, we should be able to find a suitable position for you with our company."

"Thanks, Esrov." Swenson switched off the set.

"You dirty, stinking," O'Toole blared, "doublecrossing—"

"Calm down, O'Toole. Don't get off the rocket until she's on the ground. I've got reasons."

"Reasons? You haven't even got *reason!* And you're a crook!"

"Now don't let my Irish half get on top. I want that Senator to talk as long as possible. Let's go back to the egg."

"Youve laid it."

"For the last time, let me explain. If evolution had followed my theory, I, being a man, would not lay eggs. Women would and

therefore they would escape —"

"Swenson," Mister Cerobie called from the door of the Board Room, "you are hired—tentatively—as a dispatcher, not an egg-evolution theorist. Now come in here. The Board wants to talk to you."

Swenson jerked the diagram out of O'Toole's hand and followed Cerobie.

Ten minutes later, he came out of the **Board Room**, saying: "Gentlemen, the Senator speaks at 1:30 this afternoon. At 6:00 either fire me, crucify me and make me drink boiled beer alone, or give me a raise."

THE clock on the wall over the dispatcher's desk showed 2:59 when Swenson called Acme's Luna City Terminal. "Dispatcher to Numbers 7 and 4, have crew stand by to blast off in exactly 15 minutes. I don't give a damn about regulations or the P.C.C. This is an order from your company. It must be obeyed. Number 7 will follow course as originally planned—destination Mars. Number 4 will blast for Earth, curve to be given in space."

Fifteen minutes later, the dispatcher's office at Acme Interplanetary Express was quieter than an abandoned and forgotten tomb. The Board of Directors stood silently in a semi-circle behind Swenson. Every employee,

even the stenographers, were jammed into the frowsy room.

As the hand of the clock sliced off the last second of the 15 minutes, Swenson looked over his shoulder — and laughed, a great, resounding laugh. Then he flicked the switch and picked up the microphone.

“Swenson dispatcher to 7 and 4. Blast! Over. Swenson dispatcher to 4 and 7. Blast!”

Suddenly the silent room was filled with the roar of the jets as they thundered in the imaginations of the men and women crowded around the dispatcher’s desk. The tension broke as almost a sob of gladness. What if it proved a hopeless dream, a mere stalling of inevitable ruin? They were no longer grounded. They were in space.

To those in the room, it seemed only an instant until the ship-calling light flashed on. “Number 7 to dispatcher. In space. All clear.”

“Dispatcher to Number 7, steady as she goes.”

The red light was off for a moment. Then: “Number 4 to dispatcher. In space. All clear.”

“Dispatcher to Number 4. Temporary curve A 17. Will send exact curve plot in half an hour.” Swenson turned to the astrographer. “Give me a plot for Chicago. I don’t want to land her in this state. Just a matter of prudence.





She's registered in this state."

The astrographer shouldered his way through the crowd. When he reached the calculators, his swift fingers began pushing buttons. Swenson leaned back.

"Mischief, thou art a'space," he said. "Now take whatever course thou wilt."

AT 3:30, Swenson reached again for the microphone. "Dispatcher to Number 2. You are circling Earth at low orbital. Decelerate and drop to stratosphere. Maintain position over New York. Curve and blasting data. . ."

At 4:00, he called Max Zempky at *Telenews*. "Anything frying at Luna?"

"My God, yes! Senator Higby yapped sixteen minutes overtime and the shadow knife-edge caught everybody with their air tanks down. The control crews were listening to the speech and there wasn't anybody left to switch over the heating-cooling system. You've been to the Moon, so you know what happens. When day changes to night and you haven't got any atmosphere, the temperature drops from boiling to practically absolute zero. Sure, the automatic controls worked, but there wasn't any crew to adjust and service the heaters and coolers. It's a mess. Say, haven't you got a ship or two up there?"

"I got 'em out in time."

"Well, Moulton didn't. Their ship's been considerably damaged."

"Thanks, Max. Let me know if anything else breaks."

While Swenson had been talking, two Special Messages and an astrogram had been laid on his desk. He first read one of the Special Messages.

*Acme Interplanetary Express
147 Z Street
New York
Gentlemen:*

We are holding you responsible for the damage to our ship Number 57, now on the Moon. The captain of your ship should have known the potential danger and warned Senator Higby of the time factor.

We will contact the PCC at once.

*F. K. Esrov
Moulton Trust*

Swenson scribbled an answer and handed it to an assistant.

Moulton Trust

Nuts, Esrov. You've got to think up something better than that. We have no control over public officials, except during flight. Bellyache all you want to the PCC.

*Sedately,
Swenson*

The astrogram was from Senator Hiram C. Higby:

MY BEING STRANDED ON MOON UNMITIGATED AND UNPARALLELED OUTRAGE. MUST SPEAK AS SCHEDULED ON MARS. FIND ME TRANSPORTATION. WILL DEAL LATER WITH YOUR COMPANY CONCERNING INFAMOUS TREATMENT.

SEN. HIRAM
C. HIGBY

Swenson replied:

UNFORTUNATE CIRCUMSTANCE UNAVOIDABLE. YOUR SPEECH MAGNIFICENT. WILL MAKE EVERY EFFORT TO SECURE IMMEDIATE TRANSPORTATION TO MARS.

SWENSON

THE second Special Message was from the PCC and asked with crisp and blunt formality why two Acme ships, which had been officially grounded by the Commission, had blasted off the Moon.

In answer, Swenson was mild and apologetic. What else could he have done? Surely the Commission must understand that his first duty was to save his ships from damage. He had been informed by his captains that the

shadow knife-edge was almost due, and there was no possibility of the control crews servicing the temperature-change compensators in time. It was an emergency. The matter of the grounding could be settled later.

When his answer was finished, he coded it, along with the Special Message from Moulton Trust, the astrogram from Senator Higby, and his replies. Finally, he coded the Special Message from PCC.

Then he called Number 5.

"Number 5 to dispatcher. This is Verbold. What goes on now?"

"You tell me. Dwelleth thy household in peace?"

"For the moment."

"Have you followed my instructions?"

"In general, yes."

"Did your crew hear Senator Higby's speech?"

"Most of them. What else is there to do in this rat-trap?"

"I could think of a lot of things. But as long as the crew heard the Honorable's spiel, that's all that matters. Do you know about the little affair half an hour ago at Luna City?"

"No."

"Check your news recorder. Have the item broadcast to the crew. Then decode the sequence of messages I'm about to send and read them—at your discretion—to the men. Stand by to record code."

When he had finished, Swenson leaned back and opened a beer. "All we can do now is wait. But I'd give my grandmother's immortal soul, if the old shrew had one, to be in the sacred sanctum of Moulton Trust."

LESQUALLAN sat on the edge of the long table in Moulton's Board Room. He spoke slowly and for once his voice was low:

"Esrov, did you or did you not suggest to our Senator Higby that he lengthen his speech on the Moon to include certain new information? And did that information involve my company along with yours?"

"Mr. Lesquallan, the matter concerns only a minor aspect of policy," said Esrov placatingly.

"Minor aspect of policy, hell! It concerns business. Look what happened at Luna. And you let us get publicly involved in it. Such matters must never be handled openly."

Esrov did not answer.

"Did you send such a message, Rovance?" Rovance shook his head. Lesquallan turned to Neinfort-Whritings. "Did you?"

"No, Lesquallan." Neinfort-Whritings gently pulled a Special-Message form from beneath Esrov's folded hands as they lay on the gleaming conference table.

Lesquallan swung back to Es-

rov. "Did you send it?"

Esrov looked down at his folded hands. At last he said quietly: "Yes, I sent a message to the Senator—in our mutual interests."

"Was it your own idea? Or did someone else suggest it?"

"The basic thought came from a most unexpected source. It was, we might say, one of those happy breaks of industry. The dispatcher at Acme had the sense to cooperate with us. He gave me certain otherwise unavailable information, and—"

"What was his name?"

"I don't—oh, yes, it was Swenson."

"You . . . you fool . . . idiot!"

Neinfort-Whritings handed Lesquallan the Special Message he had taken from Esrov. It was the one from Swenson, which began: "Nuts, Esrov."

Lesquallan read the message. Then he said slowly: "I've dealt with that clown Swenson before—over minor matters. I never thought he had that much brains." He looked at Esrov. "Or insight. Swenson's a smart man. Therefore, he must be eliminated."

"I still maintain," Rovance said, "that the basis of the matter is the strangling of free enterprise."

"I agree," said Lesquallan. "What right has Acme to interfere with free enterprise? They haven't a dollar to our million."

"What shall we do?" Neinfort-Whritings murmured.

"Follow Swenson's suggestion. We're going to the PCC—and we're going to our top contacts. They owe us plenty."

"Shall we dictate a memo?" Esrov put in.

"Call the PCC," Lesquallan ordered. "We're not dictating anything. And we're not sending any messages to anybody. Let the PCC send them!"

NO employee of Acme Interplanetary Express had left the smoke-dense office when the ship-calling light went on: "Number 5 to Swenson. Verbold speaking."

"Dispatcher to Number 5. Go ahead."

"Uproar under control. I followed your instructions. A crew that's laughing won't mutiny. The crew sends thanks and their most pious wishes for the distress of Moulton. The men expect shares of the proceeds, if any, in the lawsuit. But they insist on being paid on Mars."

"They will be, Captain Verbold. Now I've got to keep this beam clear. Good luck." Swenson turned to Mister Cerobie. "I presume you can at least find enough cash for the back pay?"

Mister Cerobie did not answer. He was staring at a Special Message which had just been handed

to him. He dropped it on Swenson's desk.

*Acme Interplanetary Express
147 Z Street
New York*

Because of your violation of Space Regulations and unprecedented effrontery, your ships Numbers 7 and 4 are hereby ordered to return to the Moon. There they will be impounded. A police patrol escort has been dispatched to insure your compliance with our order.

*Planetary Commerce
Commission*

Swenson read the message and looked up.

"Well?" asked Mister Cerobie.

The murmur of voices died. The dispatcher's office of Acme Interplanetary Express was a silent, isolated world. Swenson wrote an astrogram and handed it to the Chairman of the Board.

"Shall I code it?"

Mister Cerobie read the astrogram. He read it a second time and his perplexity vanished.

"But will it work?" he asked.

Swenson shrugged. "It ought to. Remember what happened when Solar System Freight lost that chemical load? We're stratospher-ing over New York. Anyway, he wouldn't dare take the chance. Shall I code it, Mister Cerobie?"

"Absolutely!"

THE men and women of Acme crowded and squirmed for a look at the astrogram on Swenson's desk. O'Toole realized first and yelled. Slowly, as understanding came, other voices took it up, until the office was a chaos of sound. Bottles appeared from nowhere. O'Toole raised one of them: "Sure and St. Patrick would have loved it!"

Calmly, Swenson coded:

SENATOR HIRAM C. HIGBY
ACME INTERPLANETARY
EXPRESS
LUNA CITY

ONLY TRANSPORTATION AVAILABLE OUR SHIP NOW IN EARTH STRATOSPHERE ABOVE NEW YORK WITH CARGO SNUFF. WILL DISPATCH THIS SHIP SPECIAL TO MOON FOR YOUR DISPOSAL. HOWEVER MUST JETTISON CARGO TO LIGHTEN SHIP. WILL NOTIFY AIR POLLUTION AND PCC. ONLY ALTERNATIVE COMPLETE CLEARANCE BY PCC OUR SHIPS NUMBERS 7 AND 4. WILL THEN DISPATCH ONE OF THEM TO PICK YOU UP. ORDER TO JETTISON WILL BE GIVEN IN HALF AN HOUR UNLESS WE RECEIVE WORD FROM YOU. HAVE YOU ANY INFLUENCE

WITH THE PCC? SEND REACTION AT ONCE. URGENCY OBVIOUS.

SWENSON

The dispatcher for Acme said to himself: "I doubt very seriously if any sane Senator up for re-election would want the official records to show that, because he talked too long on the Moon, a cargo of snuff was dumped over New York. Sneezing voters cannot see candidate's name on ballot."

Twenty minutes later, the replying astrogram was in Swenson's hand.

ACME INTERPLANETARY
EXPRESS
147 Z STREET
NEW YORK
EARTH

ORDER CLEARING YOUR SHIPS 7 AND 4 APPROVED BY PCC. HAVE SHIP IMMEDIATELY REVERSE COURSE AND PICK ME UP. UNDER NO CIRCUMSTANCES JETTISON SNUFF. SEND FURTHER INFORMATION CONCERNING SLAVE LABOR EXPLOITATION VENUS FOR INCLUSION IN MY FORTHCOMING MARS SPEECH. HAVE SPEECH INSERT IN SAME FORM AS BEFORE. SENATOR HIRAM C. HIGBY

“AND that, Mister Cerobie,” said Swenson, “is how you slide out of a jam. You’ll get enough cash for that snuff haul to Mars to pay the crew of Number 5 when she lands there. And you’ll have enough left over to pay the demurrage and repair charges at Luna. Now open me a beer.”

Mister Cerobie opened the beer wearily.

“You’re fired, Swenson,” he said. “I’ll be damned if I’ll write another speech or be your bartender.”

Swenson drank and smiled.

The ship-calling light flashed red. “Number 3 to dispatcher. This is Captain Marwovan. Compartment holed by meteorite. Cannot land on Ganymede until we make repairs. Send me the orbital curve so we can circle until the hole is patched. And tell Mister Cerobie that the crew is complaining about back pay.”

Transferring the beer to his other hand, Swenson grabbed the microphone. “Dispatcher to Number 3. . . .”

— R. De WITT MILLER

FORECAST

When Frederik Pohl’s *SLAVE SHIP* concludes next month, you won’t have to apologize for sagging in relief, as at the end of a particularly tense and deadly mission — for this tautly suspenseful serial has hurled you, alive and fearful, into a future that makes frightening sense. For instance, you know now that it’s possible to kill by the millions — but, considering our horrible nuclear and bacteriological arsenal, it can’t be done under the name of “war!” And these first two installments have shown exactly why “universal conscription” must be so universal that it includes not only men, women and children, but animals as well! The vital key to the destructive non-war, though, is the Glotch, that hideous weapon which can kill anyone anywhere, no matter how far from the Cow-dye enemy or how well concealed. Wait till you discover what it is and how it works — and just who its victims are!

Almost five years ago, Wyman Guin’s novella *BEYOND BEDLAM* burst into these pages with a shock that is still influencing stories being written now. Evidently that dazzling effort took so much out of Guin that he wearily went back to being vice-president of Lakeside Laboratory. Now, finally recovered and filled with vitamins made by his company, he returns with *VOLPLA*, a novelet that turns tragic because, paradoxically, it has a “happy” ending! The protagonist, you see, always felt that the only gag worth pulling was a cosmic one — until he finds out that the Cosmos has a really nasty sense of humor!

Another novelet, of course, plus short stories and our regular features . . . including some thoroughly documented fish stories by Willy Ley that should make you wonder if we’ve really left the past behind us!

PROTECTION

By ROBERT SHECKLEY

*I had the finest bodyguard on
any world to protect me . . . but
what was it that watched him?*

Illustrated by RAY

THERE'LL be an airplane crash in Burma next week, but it shouldn't affect me here in New York. And the feegs certainly can't harm me. Not with all my closet doors closed.

No, the big problem is lesnerizing. I must not lesnerize. Absolutely not. As you can imagine, that hampers me.

And to top it all, I think I'm

catching a really nasty cold.

The whole thing started on the evening of November seventh. I was walking down Broadway on my way to Baker's Cafeteria. On my lips was a faint smile, due to having passed a tough physics exam earlier in the day. In my pocket, jingling faintly, were five coins, three keys and a book of matches.

Just to complete the picture, let me add that the wind was from the northwest at five miles an hour, Venus was in the ascendancy and the Moon was decidedly gibbous. You can draw your own conclusions from this.

I reached the corner of 98th Street and began to cross. As I stepped off the curb, someone yelled at me, "The truck! Watch the truck!"

I jumped back, looking around wildly. There was nothing in sight. Then, a full second later, a truck cut around the corner on two wheels, ran through the red light and roared up Broadway. Without the warning, I would have been hit.

YOU'VE HEARD stories like this, haven't you? About the strange voice that warned Aunt Minnie to stay out of the elevator, which then crashed to the basement. Or maybe it told Uncle Joe not to sail on the *Titanic*. That's where the story usually ends.

I wish mine ended there.

"Thanks, friend," I said and looked around. There was no one there.

"Can you still hear me?" the voice asked.

"Sure I can." I turned a complete circle and stared suspiciously at the closed apartment windows overhead. "But where

in the blue blazes are you?"

"Gronish," the voice answered. "Is that the referrent? Refraction index. Creature of insubstantiality. The Shadow knows. Did I pick the right one?"

"You're invisible?" I hazarded.

"That's it!"

"But *what* are you?"

"A validusian derg."

"A what?"

"I am — open your larynx a little wider please. Let me see now. I am the Spirit of Christmas Past. The Creature from the Black Lagoon. The Bride of Frankenstein. The —"

"Hold on," I said. "What are you trying to tell me — that you're a ghost or a creature from another planet?"

"Same thing," the derg replied. "Obviously."

That made it all perfectly clear. Any fool could see that the voice belonged to someone from another planet. He was invisible on Earth, but his superior senses had spotted an approaching danger and warned me of it.

Just a plain, everyday supernatural incident.

I began to walk hurriedly down Broadway.

"What is the matter?" the invisible derg asked.

"Not a thing," I answered, "except that I seem to be standing in the middle of the street talking to an invisible alien from the

farthest reaches of outer space. I suppose only I can hear you?"

"Well, naturally."

"Great! You know where this sort of thing will land me?"

"The concept you are sub-vocalizing is not entirely clear."

"The loony bin. Nut house. Bug factory. Psychotic ward. That's where they put people who talk to invisible aliens. Thanks for the warning, buddy. Good night."

FEELING light-headed, I turned east, hoping my invisible friend would continue down Broadway.

"Won't you talk with me?" the derg asked.

I shook my head, a harmless gesture they can't pick you up for, and kept on walking.

"But you *must*," the derg said with a hint of desperation. "A real sub-vocal contact is very rare and astonishingly difficult. Sometimes I can get across a warning, just before a danger moment. But then the connection fades."

So there was the explanation for Aunt Minnie's premonition. But I still wasn't having any.

"Conditions might not be right again for a hundred years!" the derg mourned.

What conditions? Five coins and three keys jingling together when Venus was ascendant? I suppose it's worthy of investiga-

tion — but not by me. You never can prove that supernormal stuff. There are enough people knitting slipcovers for straitjackets without me swelling their ranks.

"Just leave me alone," I said. A cop gave me a funny look for that one. I grinned boyishly and hurried on.

"I appreciate your social situation," the derg urged, "but this contact is in your own best interests. I want to protect you from the myriad dangers of human existence."

I didn't answer him.

"Well," the derg said, "I can't force you. I'll just have to offer my services elsewhere. Good-by, friend."

I nodded pleasantly.

"One last thing," he said. "Stay off subways tomorrow between noon and one-fifteen P.M. Good-by."

"Huh? Why?"

"Someone will be killed at Columbus Circle, pushed in front of a train by shopping crowds. You, if you are there. Good-by."

"Someone will be killed there tomorrow?" I asked. "You're sure?"

"Of course."

"It'll be in the newspapers?"

"I should imagine so."

"And you know all sorts of stuff like that?"

"I can perceive all dangers radiating toward you and extend-

ing into time. My one desire is to protect you from them."

I had stopped. Two girls were giggling at me talking to myself. Now I began walking again.

"Look," I whispered, "can you wait until tomorrow evening?"

"You will let me be your protector?" the derg asked eagerly.

"I'll tell you tomorrow," I said. "After I read the late papers."

THE item was there, all right. I read it in my furnished room on 113th street. Man pushed by the crowd, lost his balance, fell in front of an oncoming train. This gave me a lot to think about while waiting for my invisible protector to show up.

I didn't know what to do. His desire to protect me seemed genuine enough. But I didn't know if I wanted it. When, an hour later, the derg contacted me, I liked the whole idea even less, and told him so.

"Don't you trust me?" he asked.

"I just want to lead a normal life."

"If you lead any life at all," he reminded me. "That truck last night —"

"That was a freak, a once-in-a-lifetime hazard."

"It only takes once in a lifetime to die," the derg said solemnly. "There was the subway, too."

"That doesn't count. I hadn't

planned on riding it today."

"But you had no reason *not* to ride it. That's the important thing. Just as you have no reason not to take a shower in the next hour."

"Why shouldn't I?"

"A Miss Flynn," the derg said, "who lives down the hall, has just completed her shower and has left a bar of melting pink soap on the pink tile in the bathroom on this floor. *You* would have slipped on it and suffered a sprained wrist."

"Not fatal, huh?"

"No. Hardly in the same class with, let us say, a heavy flowerpot pushed from a rooftop by a certain unstable old gentleman."

"When is that going to happen?" I asked.

"I thought you weren't interested."

"I'm very interested. When? Where?"

"Will you let me continue to protect you?" he asked.

"Just tell me one thing," I said. "What's in this for you?"

"Satisfaction!" he said. "For a validusian derg, the greatest thrill possible is to aid another creature evade danger."

"But isn't there something else you want out of it? Some trifle like my soul, or rulership of Earth?"

"Nothing! To accept payment for Protecting would ruin the



emotional experience. All I want out of life — all any derg wants — is to protect someone from the dangers he cannot see, but which we can see all too well." The derg paused, then added softly, "We don't even expect gratitude."

Well, that clinched it. How could I guess the consequences? How could I know that his aid would lead me into a situation in which I must not lesnerize?

"What about that flowerpot?" I asked.

"It will be dropped on the corner of Tenth Street and McAdams Boulevard at eight-thirty tomorrow morning."

"Tenth and McAdams? Where's that?"

"In Jersey City," he answered promptly.

"But I've never been to Jersey City in my life! Why warn me about that?"

"I don't know where you will or won't go," the derg said. "I merely perceive dangers to you wherever they may occur."

"What should I do now?"

"Anything you wish," he told me. "Just lead your normal life."

Normal life. Hah!

IT STARTED out well enough. I attended classes at Columbia, did homework, saw movies, went on dates, played table tennis and chess, all as before. At no time did I let on that I was under

the direct protection of a validusian derg.

Once or twice a day, the derg would come to me. He would say something like, "Loose grating on West End Avenue between 66th and 67th Streets. Don't walk on it."

And of course I wouldn't. But someone else would. I often saw these items in the newspapers.

Once I got used to it, it gave me quite a feeling of security. An alien was scurrying around twenty-four hours a day and all he wanted out of life was to protect me. A supernormal bodyguard! The thought gave me an enormous amount of confidence.

My social life, during this period, couldn't have been improved upon.

But the derg soon became overzealous in my behalf. He began finding more and more dangers, most of which had no real bearing on my life in New York — things I should avoid in Mexico City, Toronto, Omaha, Papeete.

I finally asked him if he was planning on reporting every potential danger on Earth.

"These are the few, the very few, that you are or may be affected by," he told me.

"In Mexico City? And Papeete? Why not confine yourself to the local picture? Greater New York, say."

"Locale means nothing to me,"

the derg replied stubbornly. "My perceptions are temporal, not spatial. I must protect you from *everything!*"

It was rather touching, in a way, and there was nothing I could do about it. I simply had to discard from his reports the various dangers in Hoboken, Thailand, Kansas City, Angkor Vat (collapsing statue), Paris and Sarasota. Then I would reach the local stuff. I would ignore, for the most part, the dangers awaiting me in Queens, the Bronx, Staten Island and Brooklyn, and concentrate on Manhattan.

These were often worth waiting for, however. The derg saved me from some pretty nasty experiences — a holdup on Cathedral Parkway, for example, a teen-age mugging, a fire.

BUT HE kept stepping up the pace. It had started as a report or two a day. Within a month, he was warning me five or six times a day. And at last his warnings, local, national and international, flowed in a continual stream.

I was facing too many dangers, beyond all reasonable probability.

On a typical day:

"Tainted food in Baker's Cafeteria. Don't eat there tonight."

"Amsterdam Bus 312 has bad brakes. Don't ride it."

"Mellen's Tailor Shop has a

leaking gas line. Explosion due. Better have your clothes dry-cleaned elsewhere."

"Rabid mongrel on the prowl between Riverside Drive and Central Park West. Take a taxi."

Soon I was spending most of my time not doing things, and avoiding places. Danger seemed to be lurking behind every lamp post, waiting for me.

I suspected the derg of padding his report. It seemed the only possible explanation. After all, I had lived this long before meeting him, with no supernatural assistance whatsoever, and had gotten by nicely. Why should the risks increase now?

I asked him that one evening.

"All my reports are perfectly genuine," he said, obviously a little hurt. "If you don't believe me, try turning on the lights in your psychology class tomorrow."

"Why?"

"Defective wiring."

"I don't doubt your warnings," I assured him. "I just know that life was never this dangerous before you came along."

"Of course it wasn't. Surely you know that if you accept protection, you must accept the drawbacks of protection as well."

"Drawbacks like what?"

The derg hesitated. "Protection begets the need of further protection. That is a universal constant."

"Come again?" I asked in bewilderment.

"Before you met me, you were like everyone else and you ran such risks as your situation offered. But with my coming, your immediate environment has changed. And your position in it has changed, too."

"Changed? Why?"

"Because it has *me* in it. To some extent now, you partake of my environment, just as I partake of yours. And, of course, it is well known that the avoidance of one danger opens the path to others."

"Are you trying to tell me," I said, very slowly, "that my risks have increased *because* of your help?"

"It was unavoidable," he sighed.

I COULD HAVE cheerfully strangled the derg at that moment, if he hadn't been invisible and impalpable. I had the angry feeling that I had been conned, taken by an extraterrestrial trickster.

"All right," I said, controlling myself. "Thanks for everything. See you on Mars or wherever you hang out."

"You don't want any further protection?"

"You guessed it. Don't slam the door on your way out."

"But what's wrong?" The derg seemed genuinely puzzled.

"There are increased risks in your life, true, but what of it? It is a glory and an honor to face danger and emerge victorious. The greater the peril, the greater the joy of evading it."

For the first time, I saw how alien this alien was.

"Not for me," I said. "Scram."

"Your risks have increased," the derg argued, "but my capacity for detection is more than ample to cope with it. I am *happy* to cope with it! So it still represents a net gain in protection for you."

I shook my head. "I know what happens next. My risks just keep on increasing, don't they?"

"Not at all. As far as accidents are concerned, you have reached the quantitative limit."

"What does that mean?"

"It means there will be no further increase in the number of accidents you must avoid."

"Good. Now will you please get the hell out of here?"

"But I just explained —"

"Sure, no further increase, just more of the same. Look, if you leave me alone, my original environment will return, won't it? And, with it, my original risks?"

"Eventually," the derg agreed. "If you survive."

"I'll take that chance."

The derg was silent for a time. Finally he said, "You can't afford to send me away. Tomorrow —"

"Don't tell me. I'll avoid the

accidents on my own."

"I wasn't thinking of accidents."

"What then?"

"I hardly know how to tell you." He sounded embarrassed. "I said there would be no further quantitative change. But I didn't mention a *qualitative* change."

"WHAT are you talking about?" I shouted at him.

"I'm trying to say," the derg said, "that a gamper is after you."

"A what? What kind of a gag is this?"

"A gamper is a creature from my environment. I suppose he was attracted by your increased potentiality for avoiding risk, due to my protection."

"To hell with the gamper and to hell with you."

"If he comes, try driving him off with mistletoe. Iron is often effective, if bonded to copper. Also —"

I threw myself on the bed and buried my head under the pillow. The derg took the hint. In a moment, I could sense that he was gone.

What an idiot I had been! We denizens of Earth have a common vice: We take what we're offered, whether we need it or not.

You can get into a lot of trouble that way.

But the derg was gone and the worst of my troubles were over.

I'd sit tight for a while, give things a chance to work themselves out. In a few weeks, perhaps, I'd . . .

There seemed to be a humming in the air.

I sat upright on the bed. One corner of the room was curiously dark and I could feel a cold breeze on my face. The hum grew louder — not really a hum, but laughter, low and monotonous.

At that point, no one had to draw me a diagram.

"Derg!" I screamed. "Get me out of this!"

He was there. "Mistletoe! Just wave it at the gamper."

"Where in blazes would I get mistletoe?"

"Iron and copper then!"

I leaped to my desk, grabbed a copper paperweight and looked wildly for some iron to bond it to. The paperweight was pulled out of my hand. I caught it before it fell. Then I saw my fountain pen and brought the point against the paperweight.

The darkness vanished. The cold disappeared.

I guess I passed out.

THE derg said triumphantly, an hour later, "You see? You need my protection."

"I suppose I do," I answered dully.

"You will need some things," the derg said. "Wolfsbane, ama-

rinth, garlic, graveyard mold —”

“But the gamper is gone.”

“Yes. However, the grailers remain. And you need safeguards against the leeps, the feegs and the melgerizer.”

So I wrote down his list of herbs, essences and specifics. I didn't bother asking him about this link between supernatural and supernormal. My comprehension was now full and complete.

Ghosts and spirits? Or extra-terrestrials? All the same, he said, and I saw what he meant. They leave us alone, for the most part. We are on different levels of perception, of existence, even. Until a human is foolish enough to attract attention to himself.

Now I was in their game. Some wanted to kill me, some to protect me, but none cared for me, not even the derg. They were interested solely in my value to the game, if that's what it was.

And the situation was my own fault. At the beginning, I had had the accumulated wisdom of the human race at my disposal, that tremendous racial hatred of witches and ghosts, the irrational fear of alien life. For my adventure has been played out a thousand times and the story is told again and again — how a man dabbles in strange arts and calls to himself a spirit. By so doing, he attracts attention to himself — the worst thing of all.

So I was welded inseparably to the derg and the derg to me. Until yesterday, that is. Now I am on my own again.

Things had been quiet for a few weeks. I had held off the feegs by the simple expedient of keeping my closet doors closed. The leeps were more menacing, but the eye of a toad seemed to stop them. And the melgerizer was dangerous only in the full of the Moon.

“You are in danger,” the derg said yesterday.

“Again?” I asked, yawning.

“It is the thrang who pursues us.”

“Us?”

“Yes, myself as well as you, for even a derg must run risk and danger.”

“Is this thrang particularly dangerous?”

“Very.”

“Well, what do I do? Snake-skin over the door? A pentagon?”

“None of those,” the derg said. “The thrang must be dealt with negatively, by the avoidance of certain actions.”

BY NOW, there were so many restrictions on me, I didn't think another would matter. “What shouldn't I do?”

“You must not lesnerize,” the derg said.

“Lesnerize?” I frowned. “What's that?”

"Surely you know. It is a simple, everyday human action."

"I probably know it under a different name. Explain."

"Very well. To lesnerize is to —" He stopped abruptly.

"What?"

"It is here! The thrang!"

I backed up against a wall. I thought I could detect a faint stirring of dust, but that might have been no more than overwrought nerves.

"Derg!" I shouted. "Where are you? What should I do?"

I heard a shriek and the unmistakable sound of jaws snapping.

The derg cried, "It has me!"

"What should I do?" I cried again.

There was a horrible noise of teeth grinding. Very faintly, I heard the derg say, "*Don't lesnerize!*"

And then there was silence.

So I'm sitting tight now. There'll be an airplane crash in Burma next week, but it shouldn't affect me here in New York. And the feegs certainly can't harm me. Not with all my closet doors closed.

No, the problem is lesnerizing. I must *not* lesnerize. Absolutely not. If I can keep from lesnerizing, everything will pass and the chase will move elsewhere. It must! All I have to do is wait them out.

The trouble is, I don't have any idea what lesnerizing might be. A common human action, the derg had said. Well, for the time, I'm avoiding as many actions as possible.

I've caught up on some back sleep and nothing happened, so that's not lesnerizing. I went out and bought food, paid for it, cooked it, ate it. That wasn't lesnerizing. I wrote this report. *That* wasn't lesnerizing.

I'll come out of this yet.

I'm going to catch a nap. I think I have a cold coming on. Now I have to sneez

—ROBERT SHECKLEY

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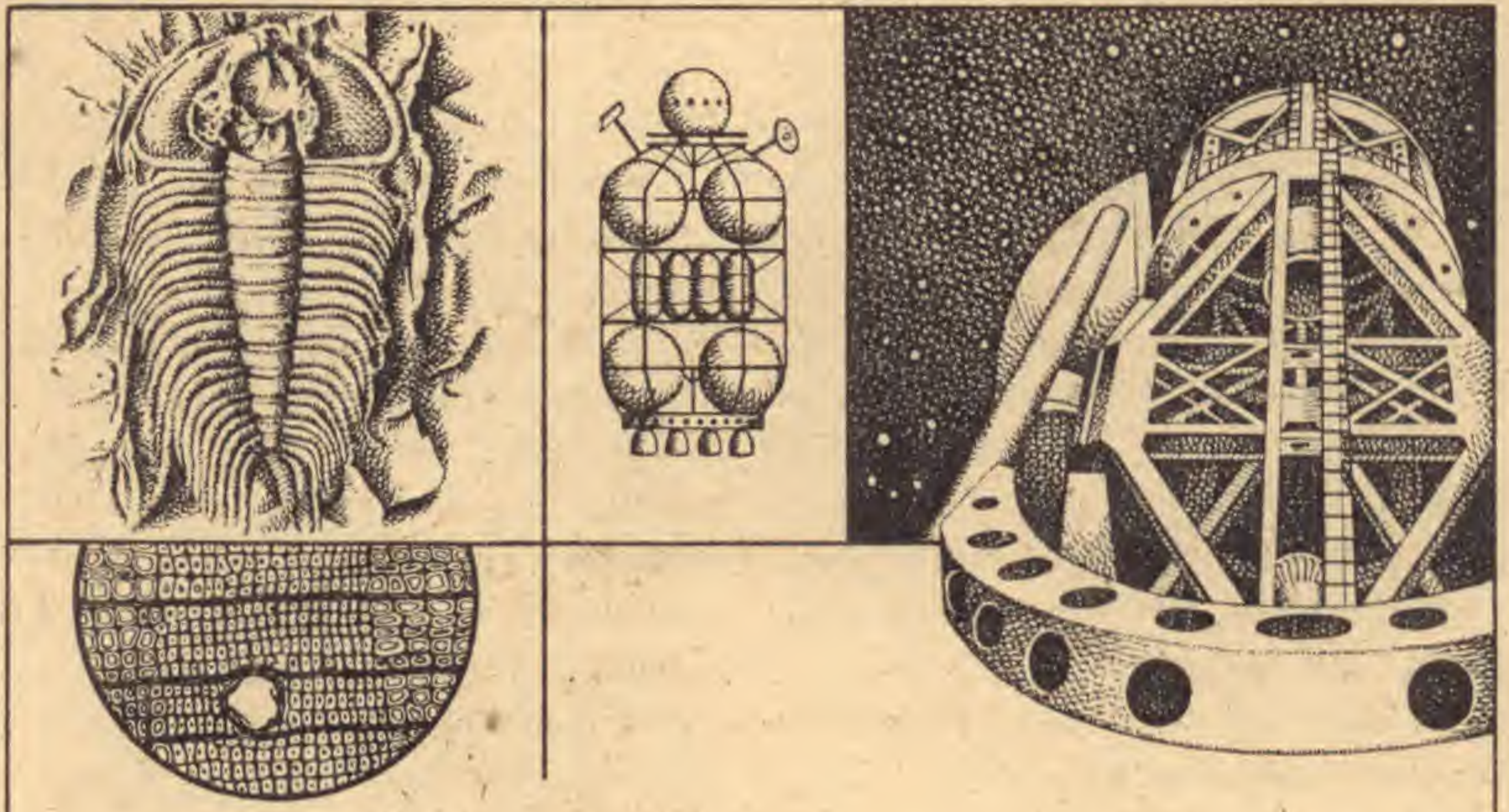
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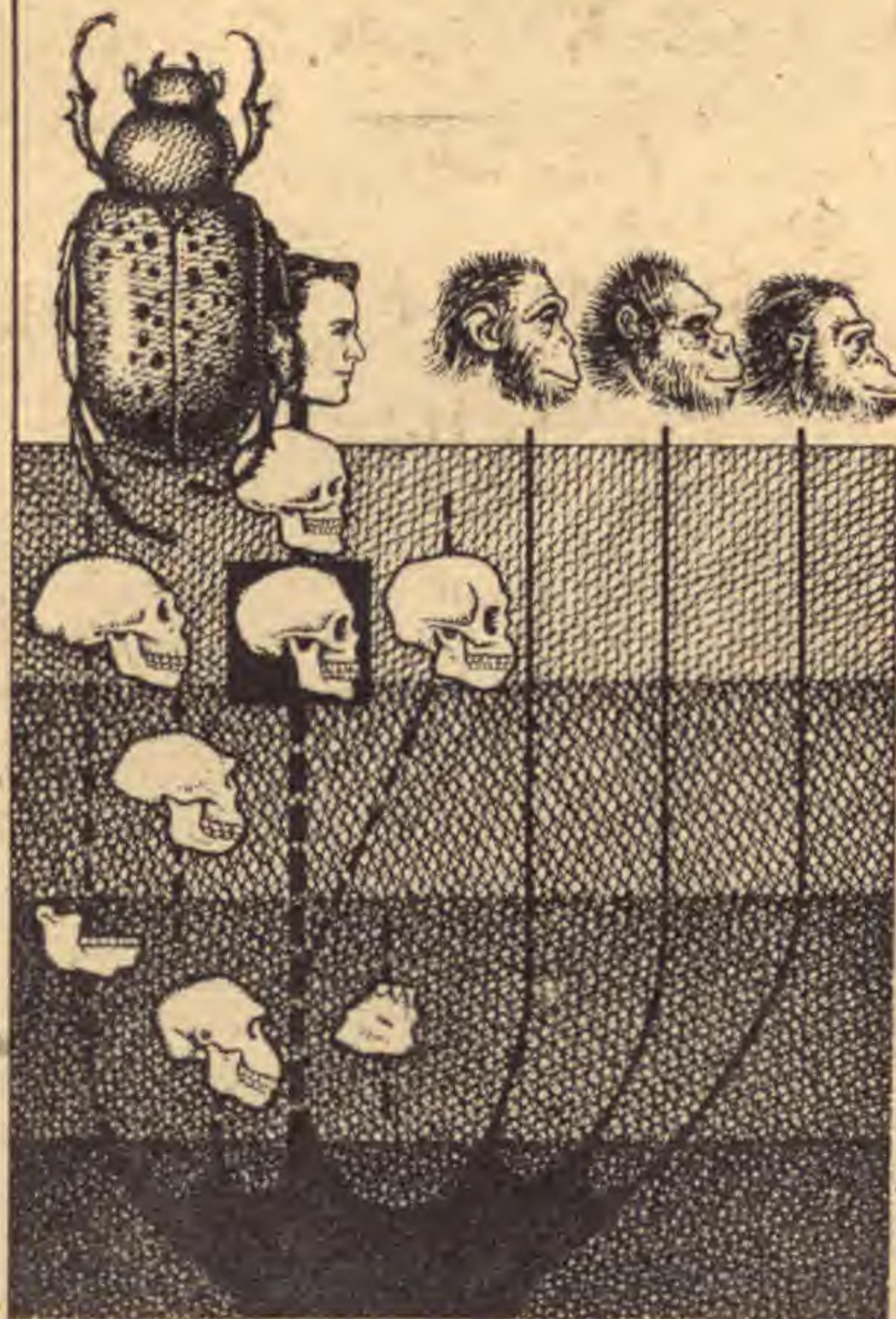
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By WILLY LEY

LET'S BUILD
AN EXTRATERRESTIAL!



FOR at least the last three decades, a large number of science fiction writers have been confronted, at one time or another, with the problem of constructing extraterrestrial life-forms. Naturally the professional chemists and biologists who write science fiction on the side did best, not so much because their professional knowledge led them for long distances on hitherto un-

trodden paths, but because it made them stop at the right moment.

As regards those who were primarily writers, the results make one suspect that they at first tried to apply what biology they knew. Since this apparently did not get them very far, they presumably threw overboard whatever it was they had not quite arrived at and wrote things like this: "Surprisingly, the aliens were quite human in shape, the only major differences, or at any event the ones which were easily visible, being a strong tail and a bluish complexion."

Or else, if the actual contact with the aliens could be fleeting, they resorted to saying that the forms the Earthmen beheld were so alien, so outside of all terrestrial experience, that it was impossible to describe them.

ALL this refers to recent science fiction, of course. Now let's take a quick look back to the forerunners of modern science fiction and see whether they did any better.

The first man who seriously attempted to think up life-forms of another heavenly body (the Moon, in this case) was the great Johannes Kepler, when wrestling with his book *Somnium*, which he never really finished. The planetary conditions he had in mind

consisted of a rocky surface with many caves, large and small, and broiling sunshine through a thin atmosphere. Hence the creatures of the Moon mostly have the shape of terrestrial snakes, to be able to escape the deadly sunshine quickly and thoroughly.

Of the science fiction writers of the nineteenth century, I am selecting three and naturally the list has to be headed by Jules Verne. I think that I have read all of Verne and, unless a minor work escaped me, I can only report that he refrained from building any extraterrestrials whatever.

Jules Verne's compatriot and contemporary Achille Eyraud (in his *Voyage à Vénus*) and his English contemporary Percy Greg (in his novel about a trip to Mars *Across the Zodiac*) were both proficient in describing pretty girls, but the only alien creature I remember is a flying snake in Greg's book.

As for Sydney Whiting's *Heli-ondé: or, Adventures in the Sun*, published in London in 1855, which is based on Sir William Herschel's notion that the Sun is a dark body with a luminous atmosphere, it can hardly be considered science fiction. But even if it is, it does not offer much in the line of extraterrestrial creatures; a fairly typical example of the things you encounter is a bush which does not grow seed pods

but cakes of perfumed soap.

Unlike Jules Verne, H. G. Wells went in quite heavily for extraterrestrials in his earlier years. When the engineer Cavor goes to the Moon, he finds gigantic moon calves and a ruling race modeled both in bodily and in social organization after the ants or termites of Earth. I think that Wells is the original inventor of the giant insects which have plagued science fiction editors ever since. But, as you also know, when Wells' Martians come to Earth, they turn out to be air-breathing octopi in shape — not, as has been said on many occasions, a very likely shape.

HOWEVER, the occasional science fiction writer of the past was not the only type of creative genius who did, or could have, exerted ingenuity in the building of an extraterrestrial. There were many others who engaged in a very similar line of endeavor for the purpose of representing gods, demons or just outlandish creatures, somewhat along the line of the Midnight Marvels to which I devoted a column some months ago.

To put it bluntly, nobody showed much imagination and the method was standardized at an early age:

Combine the features of various kinds of living creatures into

something that could be drawn, painted or sculptured and the job was done. Put a woman's head on a feline body and you had a sphinx. Add the head of a bird to the body of a man and you had ibis-headed Thoth. Take a horse and supply it with the wings of an eagle and Pegasus was ready for flight, though with lateral stability only. Take another horse, cut off its head and graft the upper half of a man's body to it and the centaur was ready.

Christianity brushed away these particular examples, but the method must have remained, for at one point St. Bernard had harsh words to say about decorations he encountered in monasteries:

"What business have those ridiculous monstrosities, those amazingly freakish beauties and marvelously beautiful freaks in the cloisters right in front of the eyes of the monks who are supposed to be reading or meditating? You see one head with many bodies or one body with many heads. Here you have a serpent's tail attached to a quadruped and there a mammal's head attached to a fish's body. There you have a creature that is half horse and half goat and here one with horns and the rear end of a horse."

Just what business such creations had in a cloister is a still unanswered question, but artists



The Hydra which was removed from the Mediterranean landscape by Hercules

just could not think of another method.

The fabulous unicorn was drawn as a horse with the feet of a goat and a narwhale's tusk on its forehead. The mermaid—a

fairly late invention—was a woman from forehead to waist and a fish below that. (Virgil Partch, in a recent cartoon, put the left-over halves together as an alternate choice.) And the traditional picture of the devil was that of a man with two small goat's horns, one goat leg and a tail. Demons differed from devils by having a few more incongruous parts added to an improbable anatomy.

EVEN when it came to something as simple, comparatively speaking, as the legendary Hydra, the extirpation of which was one of the feats of Hercules, the artists stuck to their formula.



Flying snakes from Gesner



The Forest Devil, said to have been caught in Switzerland

The story spoke of a seven-headed snake and this should not be a very hard task for an artist. What he did draw was the body of an exceedingly well-nourished snake with seven heads that might be described as humanized lion faces and with two, just two, lion paws with six toes.

We do not know who made this drawing; it was preserved for us by Konrad Gesner in his *Historia animalium* with a warning that his readers should not take the Hydra to have been historical reality. But the same book contained "flying snakes," since classical authors had vouchsafed their existence. Some just had wings. Others had wings and feet.

A far more complicated creature was the Forest Devil, also from Gesner, an unclassified and unclassifiable beast caught just

once in a Swiss forest. Here the artist went all out: the body is that of a mammal with a tail, the legs are human but with bird feet, the arms human with lion's paws. The creature has a beard and the masculine article is used throughout in the description — but there are pronounced pendulous breasts.

And then you had the really complicated creatures, the griffin, the dragon and the basilisk. In the case of the basilisk, the legend was definite on a few things: the basilisk was the king of the serpents and came into being when a seven-year-old rooster laid an egg which was hatched either by a toad or by the Sun. In appearance, then, it had to have both characteristics, those of serpents and those of the rooster.

I offer two attempts to combine these characteristics.

Greiff.

Griphus.

Crach.

Draco.



Left: The griffin, old German drawing
Right: The dragon, from the same source

The artist who drew the picture for Sebastian Munster's *Cosmographia* more or less settled for a lizard's body with a long tail. The head—wearing a crown—was mostly that of a rooster and there were eight rooster's feet, four on each side.

The other picture (artist also unknown) is from an old German natural history book. In this design, the rooster largely won out, except for the long reptilian tail and the wings, which are not bird wings. The griffin is a wild mixture of bird and mammal all the way through, while the dragon is, in this case, a comparatively tame creature. More often, it appeared as an enormous crocodile with gigantic bat wings.

THAT a random combination can do almost as well is proven by Fig. F, which is the

outcome of a game my wife used to play with our two daughters. In that game, one of the three participants would start by drawing a head, which could be either human or animal. Then the head was folded under, leaving only the lines of the neck visible, and the next player could go on from there, knowing only that it was a neck. And so forth.

In this particular case, resulting in a bug-eyed monster which could quite easily have graced (if that's the word) the cover of certain magazines at a certain period, the daughter who drew the head obviously had some sort of fairy tale caterpillar in mind. The mind of the next player was on cats, but the first still stuck to caterpillars. The one who had cats in mind produced the skirt of which the hem remained visible, so that the dancer's legs resulted.

So you obviously cannot produce a biologically possible or even believable creature by the (random or artistic) combination of separate parts. Fine — but how can you go about it? All I can say offhand is that it isn't easy; so much depends on so many different circumstances.

There is, in the first place, the planetary environment, consisting of such factors as either much water or very little water; temperature which depends mainly but not only on the distance of the planet from its sun; seasonal changes which depend on the inclination of the axis of rotation of a planet to the plane of its orbit



Top: The basilisk,
from Munster's *Cosmographia*
Bottom: The basilisk,
hatched from a rooster's egg



Not an extraterrestrial but the result of a game. Same method, though

around the sun.

It depends on the presence or absence of a large moon (or moons) because, with a large and nearby moon, you get pronounced tides, while without a moon, or only very small moons, you only have the solar tide, which is likely to be unimpressive.

The relative abundance of the chemical elements in the outer crust and in the atmosphere certainly also plays a role.

LET us, for a first test, take our two neighbors in the Solar System, Venus inside the Earth's orbit and Mars outside it.

When I started reading books on science, as a schoolboy, Venus, in most of them, was firmly declared to be a *panthalassa*, the technical term for a planet completely covered by water without any land showing. This, after various attempts to be "different," has recently been revived by Whipple and Menzel as the most likely concept.

Now such a shoreless ocean — I am avoiding all other consideration and am concentrating on just the one fact that it is an ocean — can harbor virtually everything in abundance. But with limitations; you can't just mix the fauna of the equatorial Pacific Ocean of today with equatorial seas of the Jurassic and Cretaceous periods and obtain a believable or even possible picture.

You can have, if you want to, most of the arthropods, lobsters and sea spiders, trilobites and, if you insist, something like a sea-going centipede. But you must specify that there are shallow areas in this ocean if you want to have clams, for they don't grow too far down. You can have jellyfish in fantastic numbers of species as well as individuals.

You can have octopi and all sorts of fishes. But you can't have a turtle, for example, because when, in Earth's past, some fishes went up on land, they first produced what we now call amphibia

— say, primitive salamanders — and the reptiles, the birds and the mammals came afterward. They all are creatures of the land, even though some reptiles, like the turtles and the sea snakes, and some mammals, like the whales and the seals, returned to the ocean at a later date.

And don't make anything more intelligent than the most intelligent fish — I don't know which fish that is or could be — for the open sea is a region of steady movement and no intelligence is needed for that. The exceptions to the statement that this is a region of movement are armored forms like clams, but a perfectly sessile creature which relies on its armor for individual protection and on numerous offspring for survival of the species also is not going to develop intelligence. It doesn't need any.

So a shoreless Venusian ocean — I repeat I am concentrating on no other fact than that it is a shoreless ocean — might harbor a very varied life and some forms may be rather pretty. But I challenge anybody to think up an aquatic form of life, especially among the invertebrates, which would look radically different from what we have in our oceans. The multitude of forms on our own planet is so overwhelming that one always gets the impression that anything that can sur-

vive with the shape it has is also in existence.

ONE thing is absolutely needed in this shoreless ocean if it is to have any life at all. There must be plants, microscopic or otherwise, because animal life alone is an impossibility.

You know the old tall tale about the man who made a living by having a mouse and cat farm. The cats, of course, ate the mice, and when the cats were big enough, he killed and skinned them, sold the pelts and fed the cat's bodies to the mice. Even if the mice were carnivorous, this just wouldn't work. Somewhere at the beginning of such a cycle, there has to be the original food producer, the plant, which makes living (and edible, as a rule) tissue out of dissolved minerals, carbon dioxide and sunlight for energy.

I might as well, at this point, present two strong hints at caution. If, in that sea, you have a tribe of *Kraken*, octopi a mile in circumference and the largest thing in the ocean, don't make them smart. If they are the largest thing in the ocean, immune to all danger except an occasional outburst of the elements, such as a submarine volcano opening up, and, of course, old age, they don't have to be intelligent. What has been said about oysters a while

ago applies also to the invulnerable life-form.

Likewise, don't make something one millimeter in diameter into an intelligent life-form. Some time ago, somebody wrote a story in which the main character, who was not a hero, caught what he thought to be a shiny wasp. It stung him so hard that he had to let go—and then noticed to his surprise that the wasp sting made his Geiger counter chatter wildly. The implication was, of course, that this was a tiny spaceship with atomic drive.

Though I liked the story, I knew that this could never happen. In order to be intelligent enough to even discover atomic energy, a being has to have a rather large number of brain cells. These brain cells must be nourished, which needs organs for eating and digesting food. The digestive tract must be protected by some covering and this package must be moved around in some manner so that it can find food. It must also move around to avoid being eaten, at least until it has attained the intelligence that splits atoms and controls what they do after splitting.

IT has been said and bolstered with many pounds of statistics that, in a modern army, 98 men are needed to enable two men to shoot at the enemy. This relation-

ship must apply also to the number of cells needed to support the brain cells that do the thinking. Since a cell, in order to function as a cell, must consist of a very large number of molecules and since the size of molecules is a given fact, there must be a minimum size for a functioning cell.

L. Sprague de Camp, who was to my knowledge the first to present this chain of reasoning (in a two-part article in *Astounding*, May and June issues of 1939), came to the conclusion that an overall body weight of around 40 pounds would be needed if you want intelligence on the human level.

It is possible that a few facts permit a little more stretching, so that the minimum weight could be less. But the reasoning itself is valid and the reduction cannot be very much. Whether the first interstellar hero has to establish relations with something weighing 45 or only 30 pounds does not make much of a difference.

But I did not want to slip out of our solar system yet.

Now if we look at Mars, we are helped no end by the fact that we know a great deal about it. Here is a small planet with very little water and a thin atmosphere consisting mostly of inert nitrogen. It is generally a cold planet, but during the summer the equatorial regions can attain tempera-

tures between 60 and 70 degrees Fahrenheit at noon. To make our problem still easier, we are virtually certain that we see plant life.

The dark greenish patches which all bear nice classical names due to Signor Schiaparelli of half a century ago cannot just be mineral discolorations. When covered up by yellow dust from the deserts, they manage to break through again and just during the last close approach of Mars, in 1954, Dr. Earl C. Slipher, working at Bloemfontein, South Africa, found a new one almost the size of Texas under about 15° northern Martian latitude and about 235° Martian longitude, which means about halfway between the northern end of *Syrtis major* and *Trivium Charontis*, two well-known Martian markings.

THERE has been a lot of discussion recently in learned journals on whether any terrestrial plant could grow on Mars, and if so, which one. Naturally any suggestion made by anybody was countered with heavy arguments by somebody else. But the fact remains that we see something growing on Mars which is, in our terminology, plant life. If we do not understand their biochemistry under the conditions we are forced to assume from astronomical observations, this can only mean one of two things:

Either we cannot observe all the conditions and something which we have missed, or are bound to miss with present instrumentation, is a perfectly fine explanation; or else we don't know enough biochemistry and there is a way of living and growing under these conditions.

The reasoning that forced us to say that there must be plant life in the Venusian oceans, if we want animal life of any kind, almost forces us to say that, since there are plants on Mars, there must be something that we would call animals.

Some biologists with whom I discussed this stated with professional caution that this reasoning does not necessarily hold true. I don't agree. Speaking in the largest sense, the animals of Earth, from sow bugs to elephants, are parasitic on plants. Now life, at least on Earth, behaves in such a manner that *if* there is something to be parasitic on, something else will be happy to take over the role of the parasite.

Something feeding on these Martian plants must have the power of movement because it needs so much plant tissue for its own sustenance that the rate of the plant growth cannot furnish the necessary amount. Hence it must be capable of locomotion.

Whether this supposed Martian plant-eater is built along the lines

of a locust, or along the lines of a desert tortoise, or along those of a rabbit is something entirely different again. One can assume that it simply freezes into a death-like state during the cold Martian night and remains in that state until thawed out by the Sun. In that case, it could be insectlike in organization.

One can assume with equal justification that the "animal," at the first sign of cold in the evening, burrows into the ground for a few feet and goes to sleep normally in an environment where the temperature may be quite cold, but where there is very little deviation from whatever temperature it may have. In that case, it could be something comparable to a desert tortoise.

Or you can make the assumption that it has an internal mechanism like the birds and mammals of Earth, something producing heat. Then it does not have to dig itself in. All it needs is an effective heat insulator around its body, which might be hairlike, or featherlike, or, if this sounds more "alien," something like bark or sponge rubber.

SO far, I have mostly talked about extraterrestrial animal life in order to show some of the difficulties. When it comes to an extraterrestrial *intelligent* life-form, the difficulties rapidly in-

crease in number and kind.

It may come as a surprise, but the first tentative recipe for the construction of an intelligent extraterrestrial was written by the Dutch physicist, philosopher and astronomer Christian Huyghens. The title of the book is *Kosmotheoros* and it appeared posthumously, in 1692, at first in Latin. Nobody seems to know just when Huyghens wrote the major portion of the book.

He said there that an extraterrestrial must have eyes and ears — that is, senses “and pleasure arising from his senses.” He must know the art of writing to remember things, arithmetic and geometry to understand relationships, hands to make things — and he must be upright.

It does not become quite clear from Huyghens' book why he must be upright. It sounds as if Huyghens made this condition to free the forelimbs from the task of locomotion so that there are “hands to make things.”

The insistence struck me as amusing because Sprague de Camp, in the articles mentioned, also was insistent on that point, but more for mechanical reasons. The brain must be protected against shock as much as possible and the more bone, cartilage and tissue there is between the feet, which take the shocks, and the brain, the better.

All this is sound logic and it is obvious that the body of the extraterrestrial must be such that it functioned well as an animal body before it grew to be intelligent. Of course, one can postulate that accidental environmental conditions of the past helped along.

Around the turn of the century, a number of biologists and zoologists toyed with the idea that Man had evolved in what they called an asylum, an area accidentally free from large predatory animals and with a gentle climate. They obviously did not think much of the human body as a well-functioning animal. We now know that they were wrong and that the idea of the “asylum” is not needed. But it may conceivably have happened somewhere else, for the Galaxy must be full of planets and possibilities.

THERE is just one major difficulty in imagining a believable intelligent extraterrestrial — we have never seen one. What I mean by this remark is this:

We know the organization of living animal tissue on Earth. We know that the organization of the mammal is superior. True, it “wastes” food by making its own heat, but this fact makes it climatically independent. And though a reptile can do quite well in the proper climate, it is very limited. When the air grows too

cold, it must be inactive, though it usually survives. When the air grows too hot, it dies of heat stroke, for, lacking a temperature-regulating mechanism, it not only cannot keep warm, it also cannot keep cool.

Now this vertebrate body, whether mammalian or reptilian, has *two* pairs of limbs and usually a tail. What we don't know is whether it *has* to be built that way.

To use a classical example: we don't know whether the centaur shape is possible or not. On Earth, it doesn't exist; that much is certain. But is this due to an anatomical necessity for which we

don't know the reason or did it just happen that way here?

As for comparatively minor matters, we do know that they just happened. Genus Homo is tailless and almost hairless. But it doesn't *have* to be hairless and tailless to invent writing, to build and ride cars and to engage in research, politics and crime.

If we had fur and a tail, our fashions, habits and morals would be different, but if brain and senses and hands were unchanged, we'd still write books and symphonies, build houses, ships and airplanes — and try to build an extraterrestrial.

— WILLY LEY



Point of Departure

*As if Donner's troubles weren't bad enough
—they were a repetition of something that
had created chaos thousands of years ago!*

By VAUGHAN SHELTON

Illustrated by WEISS



“HALLECK, for Pete’s sake, sit down! You act as if you were ready to attack Donner with your bare hands.” The president of the Research Foundation removed an expensive cigar from its plastic cocoon and lit it from young Taplin’s eagerly offered lighter. Halleck sat down. “Sorry, G. W. This business has me on edge. I feel responsible for Donner’s activities—and for the missing \$300,000, too. The whole thing reeks of larceny.”

“You are responsible, Hal.” The



president's tone was crisp but not accusing. "That's what a general manager gets paid for. Isn't it time Donner showed up?"

"He's to be here at ten, Mr. Caples. The girl will buzz us as soon as he comes in." Orville Taplin was a very good secretary, but

his eagerness to prove it sometimes irked his superiors. "Shall I order some coffee sent up, Mr. Caples?"

"Not just now. Look, Hal, have you checked on this Simon Kane that Donner mentions in his letter? He doesn't sound quite real.

Do we know if there is such a person?"

Taplin interrupted the general manager to answer the question. "Yes, sir. There really is a Simon Kane. I talked to Dr. Reed by transatlantic telephone last night. He said Kane was public relations man on his first expedition to Egypt in 1958."

"Why the blazes didn't you let me talk to him?" Halleck was on his feet again, a sharp-faced, balding man with a temper that suggested ulcers. "G. W., I—"

"Forget it, Hal! What else, young man?"

"Well, Dr. Reed said he fired him at the request of the Egyptian government and sent him back to the States. He said it was a long story and he didn't want to get into it on the phone."

LEANING across the wide mahogany desk and tapping the blotter for emphasis, Halleck said, "Look, G. W., Kane doesn't matter. He's just a name. The Utah Flats plant is short \$300,000. Let Donner explain it in court. If Kane or anyone else was involved, let Donner prove it."

The buzzer wheezed and Orville Taplin's finger shot to the key. "Yes?"

"Mr. Donner is here."

G. W. Caples nodded to the question in the secretary's face. "Send him in."

The man in the doorway was tall, sandy and rather stooped for early middle age. His straight lined features looked competent, but the mouth was compressed to a narrow hyphen, as if he had lived through this ordeal many times in anticipation and always come out of it badly. His gray business suit was wrinkled with travel.

"Good morning, Mr. Caples. Gentlemen."

Although he closed the door gently, the click of it sounded loud in the silence. "I hope I'm not late."

"Right on the dot, Ray. Glad to see you. Pick a comfortable chair." The president smoothed the crumpled letter in front of him on the desk and waved the silent Halleck to a seat. "You can order that coffee now, young man."

When Taplin had called for the coffee and started the recording machine, G. W. Caples addressed the newcomer again with heavy, executive affability. It was authentic enough to ease the watchspring tension in the room.

"Before we start, Ray, keep it in mind that this isn't a trial or anything like that. I, for one, have an open mind. If your record hadn't been beyond reproach, you wouldn't be a research plant manager in the first place."

"Thank you."

"But your letter here mentions

an unauthorized experiment that cost \$300,000, a missing man—two missing men, in fact—your fear of ugly publicity and—well, various other details that leave me thoroughly confused. Now, you're going to give us all the facts—not as a culprit, but as a trusted official.”

“I appreciate that, sir. Shall I begin at the beginning?”

“Yes. Forget the letter. Begin where you like.”

“Well, first, you know Dr. Wilson Reed, the archeologist. Top man in the field. He made the Yucatan discoveries and located the Poseidon Tablets in the vaults under the Sphinx—the newspapers called him the ‘Columbus of the Past.’ But I don’t need to tell you that. This all began with a letter I had from Dr. Reed shortly after he left for his second expedition to Egypt.”

CAPLES nodded. “I know his reputation, but I never met the man.”

“That’s one of the many things I don’t understand, Mr. Caples.” Raymond Donner sat on the edge of the leather lounge chair and kneaded his long, thin hands. “You see, the letter asked me to cooperate with Simon Kane in every way and there was an inter-office memo from you enclosed, instructing me to do so, written in your own handwriting.”

Caples leaned across the desk, startled. “A memo from *me!* Now see here, Ray—Where is the memo? Where’s the letter?”

“They’re gone, Mr. Caples. They were stolen.”

The buzzer sounded and a cheerful redhead brought in a tray with four cups, cream and sugar bowls and a large aluminum coffee urn. It remained untouched on the desk when she had gone.

“I see. They were stolen.” The president’s casual manner was gone and the tension returned unchecked. “Go on.”

“I’m sorry, sir. But the letter and memo were the keys to the whole business. And I want to remind you at the beginning that I’m not a scientist or an aviation engineer, but an administrative officer—”

“Maybe we should say you *were.*”

“Shut up, Halleck! Let him go on.”

The president glanced at the recorder spinning silently and drew short, angry puffs on his cigar.

“And I want to remind you, too, gentlemen, that I’m here of my own volition. My fears are for the Foundation’s reputation, not for myself alone. After all, there’s no motive for murder and—”

“Murder!” The two executives looked frozen. Taplin, starting to

reach for the coffee, changed his mind.

"—and, to put it bluntly, no dead body. But let me take it from the beginning."

AS I said, the letter and memo came in May, just after Dr. Reed left for Egypt again. A week after that, Simon Kane phoned from Salt Lake City to make an appointment for the following afternoon.

He turned out to be a dark-featured, very distinguished type in his late forties. His eyes were an intense black, heavily browed and, though he wasn't big, his voice was deep and arrestingly modulated. Listening to him, it was easy to lose track of what he was saying. His mouth was wide and — well, sympathetic.

We talked for about an hour that first day, mostly about Dr. Reed's marvelous discovery in Egypt. Kane said the Poseidon Tablets described a magnificent civilization, scientifically advanced, that had flourished on an equatorial continent until it was destroyed by the Biblical Flood — around 10,700 B.C.

He spoke of Dr. Reed as an intimate friend and said he had been greatly impressed with you, Mr. Caples.

THE PRESIDENT scowled. "I've never heard of the man.

But it seems pretty strange that he should have turned up when Halleck was in Persia and I was in Europe on atomic-inspection duty and Reed was off to Egypt."

"Looking back at it, I agree with you," said Donner, taking out a cigarette and lighting it. "But it didn't occur to me at the time."

"Well, get on with it."

IF I COULD give you a better idea of Kane's remarkable voice, its hypnotic quality — but I guess I can't. Maybe that's just an excuse. I wish I'd thrown him out of the office the first day.

When we got around to the reason for his call, he asked if there was any chance of our being overheard. I assured him there wasn't and he told me his weird story.

It seemed Dr. Reed had found another series of fourteen tablets along with the others, but these hadn't been publicized. A translation of the first half dozen showed that they concerned an outstanding — perhaps the ultimate — scientific achievement of the Poseidon civilization: a small solar energy converter, able to deliver such fantastic power that it made our nuclear sources look as primitive as the windmill.

When I said the invention wouldn't be very welcome in a country where the entire econ-

omy was geared to atomic power, Kane agreed and said that explained the secrecy. He said you, Mr. Caples, and Dr. Reed felt the device should be tested under wraps and then turned over to the government, since private ownership of a dirt-cheap power source — if it worked — might precipitate economic chaos.

G. W. CAPLES sat stiffly in the same position. "The whole idea is pure nonsense, the most transparent fraud. A child wouldn't swallow it."

"You may be right. It was my misfortune not to be a child."

SIMON KANE made it sound completely plausible. He said two good men could build the gadget in a month. He agreed to bring the specifications to my office the next morning and I showed him out, feeling very excited about the thing. I had a lot to learn about Mr. Kane.

In the morning, I called in Ruhl and Heiniger and told them they were to work on a project involving 100% security. They agreed, of course. The hush-hush jobs are usually the most interesting. Then Kane came in with his sheets of specifications and gave them the details. Their faces were — I was going to say like children viewing their first Christmas tree.

Since it was all Greek to me, I left the three of them to discuss the project and went off about some other business. Kane was gone when I got back and had left a note inviting me out to his house for a cocktail or two that afternoon.

When I could get away, I drove out to his place, a great, sprawling ranchhouse he'd rented a few miles from the plant. No one else was there, but Kane was an ingratiating host and a couple of hours passed very pleasantly. I kept wondering why he wanted such a big place, way out in the hills, just for himself.

Around five, I phoned Ruhl at the plant. He's rather a stolid type ordinarily, but he was stuttering with excitement. He said the power unit was revolutionary and might change the course of history.

Kane laughed when I repeated that to him. "Maybe it already did," he said. "A few thousand years ago."

We shook hands at the door and agreed to meet the next morning and get to work.

As I was walking along the house toward the drive where my car stood, a movement at one of the windows near the end of the building caught my eye. I paused and looked up — into the face of one of the most beautiful women I've ever seen.

She was youngish, not over 27 or 28, pale in coloring with rich, black hair piled up behind her neck. The large, dark eyes were looking squarely into mine. I must have stopped and stared for several seconds, for, in addition to her beauty, I thought I saw a great dread written in the girl's face. Then she was gone.

All the way home, I kept wondering why Simon Kane hadn't mentioned the woman in his house. The silly thought that she was being held captive there kept coming to me, no matter how often I dismissed it.

CAPLES poured a cup of coffee and made a face when he sipped it. "Donner, I don't know why you have to ornament this yarn with hypnotic-voiced villains and captive girls. Can't you just tell us if your expensive gadget worked?"

Halleck slumped glumly. Taplin fluttered over the cold coffee and ordered some more.

THE DEVICE *did* work, Mr. Caples. I set Ruhl and Heinger up in the isolated shop at the west corner of the plant area and they had it functioning in three weeks. We brought in a skilled glass-cutter to form the big, faceted eye to receive the Sun's radiations. Naturally, he didn't know what it was for.



By the time the eye was ready, they'd assembled the conversion elements. They rigged the thing to deliver electrical current through a series of step-down transformers. The result was appalling. Until the current was reduced to a tiny fraction of the



potential, it blew out every testing gauge they plugged into it.

Up to this time, I think all three of us — Heiniger, Ruhl and myself — had been kept hopped up by curiosity and Kane's infectious confidence. Now it was evident that something incredible had been produced. Think of it —

two men could lift the converter between them, yet its potential was as great as any atomic pile we have!

"IT SOUNDS crazy." Caples was getting restless. "Are you sure you didn't dream all this, Donner?"

"That story will sound great in court — but it doesn't account for the \$300,000." Halleck's laugh was thin, with no amusement in it.

The buzzer sounded. "Here's your hot coffee, Mr. Caples," said Taplin. When the girl had gone again, Donner continued patiently, speaking in Halleck's direction without anger.

SO FAR, we had spent less than three thousand dollars, including salaries, materials, overhead, everything. The experiment seemed to be finished. I wrote up my report and showed it to Kane before filing it in the project folder with Reed's letter and the memo and everything else concerned. I supposed Kane would be on his way east and I'd be expected to verify his statement of the results. But he didn't come in to say good-by.

One morning, I stopped in at the isolated shop and found Heiniger still working with the power unit. Naturally, I asked what he was doing.

"Getting it ready to mount in the projectile, Mr. Donner," he said.

I said, "What projectile?"

THEN he explained how Kane (and I) had leased a surplus one-man rocket from the White Sands Project and that he and

Ruhl were to rig the solar unit in it. Rather than let Heiniger know something was wrong, though I felt like blowing my top, I asked him how on Earth an electrical plant could power a rocket.

"There's nothing to it," he said. "It's all in Mr. Kane's translations of those tablets of his."

I was beginning to wonder if this was really happening or if I was dreaming. Heiniger described some sort of method for setting up a magnetic field in *front* of the rocket so that it could be *pulled*, rather than pushed, at almost any speed through the atmosphere that the pilot wished — five, ten, twelve thousand miles an hour — whatever the pilot could take.

It was hard to believe an experienced man like Heiniger would swallow that. I said, "It's ridiculous! The skin would melt!"

"Oh, no," said Heiniger. "Mr. Kane has the formula for an alloy that won't melt at any speed in atmosphere. His tablets tell how it was used way back there for the same kind of flight. He's having a special sheath of it made for the rocket in Santa Fe."

PRESIDENT CAPLES stabbed his cigar into the ashtray. "Donner," he said, "what do you take us for? You're making it almost impossible for the Foundation to back you up, coming in

here with such a fairy story."

Raymond Donner seemed to shrink in his clothes and he slumped deep in his chair. "I know how it sounds. I'm a fool—I admit it. But Heiniger isn't, nor Ruhl. They were convinced they were working on the modern world's first practical spaceship."

I LEFT the plant with my head spinning and drove out to Simon Kane's place. I was determined not to go any farther with this without authority from you, even if I had to chase you all over Europe.

When I reached the house, Kane's car was in the driveway. He met me on the patio and pushed me inside before I could say my piece. There was a young man in the drawing room whom he introduced as Porter Hays. He was a handsome chap in his middle twenties with cropped, blond hair and an engaging candor about him. I guessed he was a flier by the recklessness about his mouth and eyes. He seemed very excited.

They took me to a table spread with photographs and typed sheets and, for the first time, I saw pictures of the original tablets. The typed sheets were translations.

"Porter has agreed to fly the ship," said Kane, as if I knew all about that. "He's with the Pan-

Columbian Project and has flown all the other types that have been developed so far."

"But this is the one that will make history, Mr. Donner!" I looked at Hays closely and saw that he meant it. "This will fly anywhere in our solar system—and probably clear out to most others—without carrying a fuel supply. And the best thing about it is the absolute guarantee of a return trip. Those geniuses down at Pan-Columbia have plenty of ideas for getting you out there, but very few for getting you back."

I realized the Simon Kane magic had been at work on the young man. He was sold completely and—considering the possibilities and that he was willing to risk his life on them—the objections I intended to make seemed rather puny at the time. Still, I was about to ask Kane to see me in private when the young pilot spoke up.

He said, "Say, Mr. Kane, where's the last tablet? There are only photos of thirteen here."

"Why, that's right," Kane said. "I forgot to mention it. The first thirteen take us through the construction of the unit and the ship and the inventor's successful trial flights. Number fourteen hasn't been translated yet—it takes about a month to decipher each tablet."

Porter Hays had a disarming way of asking anything he wanted to know. "And who does it? Do you, Mr. Kane?"

"No. That is, it's a special gift, takes years of study —"

"Then who *does* decipher them?"

"Well, you see —" It was the first time I'd seen Simon Kane uneasy and at a loss for words. "My wife does it. She's Egyptian, a scholar in her own right, daughter of one of Egypt's foremost antiquarians."

HAYS insisted upon meeting her and, although Kane tried every evasion, he finally left the room and was gone quite a while. During the wait, I talked with young Hays and confirmed my high opinion of him. I wondered how he'd react to Mrs. Kane if she turned out to be the beautiful girl I'd seen in the window a few weeks earlier.

I soon found out, for Kane came back leading the girl by the hand. I might have said "dragging," but it wasn't quite that obvious. At closer view, wearing a sort of chiton-draped white dress, she was even more lovely than I'd thought. The long lashes veiled her eyes, except when she acknowledged Kane's introductions with a quick glance and a murmured, "How do you do." Her name was Nalja.

Hays was obviously impressed and, in his uninhibited way, said, "Good Lord, Kane! If I had a dream like this at home, I wouldn't hide her. I'd keep her out on display to make the other guys jealous."

The girl gave him a grateful look and just a flicker of a smile, but said nothing.

Simon Kane's reaction was curious. The color drained from his face and hostile was the only word for his expression. Then he seemed to get under control and became his genial self. "My dear," he said to his wife, "we thought you could give a hint about the text of the fourteenth tablet. Are you far enough along?"

Her voice was low and throaty, with a slight British accent. "I'm sorry. I have only just started."

"Have you no idea what it's about?"

"Only that it seems to be some sort of testimonial. The language symbols are a little different than the others and it's difficult to read."

Then she was gone and Porter Hays stood looking at the door through which she had passed, as if he had just seen a vision.

"**W**AIT a minute, Donner," Caples cut in. "How's that tape holding out, young man?"

"Fine, Mr. Caples. At least an hour more to go."

"All right. Go ahead, Donner. Can't you leave out some of the side issues and get to the finish of this?"

"They're all related to the outcome of the matter, Mr. Caples. It wouldn't make any sense at all without them."

"Nor with them," said Halleck sourly, staring out the window.

KANE WAS to drive Hays back to Salt Lake, so I only had a moment alone with him. When I told him I wanted to hold up everything until I'd checked with my superiors, he just laughed it off. He said that you, Mr. Caples, had seen all thirteen translations and your memo covered the whole works. I'm sorry to say this convinced me.

Next day, a carload of equipment came in for testing and I didn't see Simon Kane for about a week, though I learned things weren't going so well. There was some trouble with the alloy. The rocket was shipped in, though, and turned out to be a very recent model with the latest developments in shock and pressure compensation, oxygen plant, homing-beam navigation and all that. The credit to White Sands was only \$32,000, including insurance, so I authorized it without misgivings, figuring that the persuasive Kane had swung a good deal.

Ruhl got back from Santa Fe

and said they'd licked the alloy problem, though it had been hard to avoid publicity. The metal could only be worked in a molten state, so the fabricator was casting the nose sheath and three overlapping girdles with rivet holes, also rivets and fin shields of the same stuff. It sounded heavy to me, but Ruhl said that would eliminate all possibility of vibration. This metal casting accounted for most of the \$300,000.

During the next two weeks, I was too busy with other things to worry much about the project, but two incidents happened that had a bearing on it.

On a visit to Salt Lake, I was dining at the Pioneer Arms one evening and spotted Porter Hays at a table across the room. He was with a young lady who looked familiar to me, even from the back. They were deep in conversation. Hays looked up and saw me just as the waiter brought my dinner. His expression was far from friendly. When the waiter moved out of the way, I looked over and saw that Hays and the girl were gone.

A little later, a bellboy brought me a note. It read, "I expect you'll be guided by your own ideas of honor in a case like this. But if you can conscientiously keep your goddam mouth shut, you may help to correct a great injustice. Hays."

CAPLES had joined Halleck at the window. Now he interrupted. "I suppose this note and the bill of lading on the rocket were stolen, too?"

"I tore up that note myself, Mr. Caples. The bill of lading, though — the second incident concerns it."

Young Taplin had begun to fidget.

ON JULY 19, Kane telephoned and said the airship was all rigged and ready to go. He had chosen a spot in the desert for the test and had scheduled it for the next morning. He'd engaged an expert communications man — a friend of Ruhl's — and the ship and all ground equipment were loaded on a trailer under canvas, ready to leave at nightfall. Ruhl, Heiniger and the radio man would ride out there together in the trailer.

I was irked not to have been consulted on the arrangements. Kane wanted me to pick up Porter Hays and follow the trailer out, saying he'd be delayed, but would be there at dawn. I told him I had an appointment for dinner — some government brass — but would be there in time for the test.

Kane seemed to become furious at this. He railed about the lack of cooperation and how he'd had to work out the details of the project almost single-handed, in

spite of a clear directive from my superiors. It ended by my hanging up on him.

Driving home around eleven that night, I passed the plant and noticed a light burning in the darkened office building. Before I reached the gate, it struck me that the light was from my own office. The guard at the gate had just come on duty, but his clipboard had no incoming signatures on it. So I went to take a look. I turned the knob of my office door and Kane was standing by the desk with his briefcase in one hand and his hat in the other.

I was shocked at the change in him. His eyes were sunken and deeply rimmed with shadow. He looked ten years older than the last time I'd seen him.

But he wasn't at all abashed. He walked around the desk and took my hand, saying, "Raymond, I've been waiting here an hour. Felt sure you'd stop by. Wanted to apologize in private for my disgraceful performance this afternoon."

Kane must have seen I wasn't satisfied. "The strain of this undertaking has been greater than you realize," he added. "So much is at stake, such a great responsibility to Dr. Reed, your foundation, the whole world —"

I mumbled something about forget it and told him to come along to my place for a bracer

and we'd ride out to the site together. But he said he had a couple of matters to attend to and we parted at the plant gate.

HALLECK came back and sat down. Caples took his seat at the desk. "I have a feeling," he said, "that we are about to learn if this prehistoric spaceship of yours ever got off the ground."

"Shall I order some more coffee, Mr. Caples?" asked Taplin eagerly.

"No. Just shut up, you idiot! Are you too young to appreciate this breathless, *undocumented* melodrama Mr. Donner's describing for us? This last incident explains the lack of documentation, doesn't it, Donner?"

"I'm afraid it does. I discovered later that the folder with all the papers relating to the project was missing from my files, but I have other evidence to offer—a witness." He glanced at his wrist-watch. "If my witness is prompt, I'll just have time to finish this."

"Please do! Does the next scene take place at the launching site?"

YES. I GOT there a little late—missed the turn off the highway and went a long way past it. When I found the place, everything was ready and they were waiting for me.

The aircraft lay on its side, looking fat and very ungainly, I

thought, because of its increased girth. Porter Hays seemed tense, but eager to get on with it. He wore no flight garb except his helmet with the earphones. Standing there in slacks and sweater, smoking a final cigarette, he didn't look theatrical enough for such an occasion. I thought of telling him I'd kept my goddam mouth shut, but didn't get a chance.

The plan was to take the ship up a few hundred feet and jockey around to test everything. If the equipment and ship were all right, Hays would whip her up a few hundred miles and cruise at his discretion. There was to be no long flight that day. Since we were far out of the traffic lanes, we didn't expect to attract any attention.

At last the Sun came up full, there was a final conference, and Hays climbed into the ship's rotating cabin by the door at the rear. He waved and shut the door. He could see out with his television, of course, but we couldn't see him.

While the radio man checked the ship-to-ground contact, the rest of us moved back out of habit, though there would be no blast here.

VERY slowly, the ship raised itself to a vertical position. It rose gradually to about ten feet, stopped, then shot up a couple of

hundred and stopped again. It was incredible!

"Give me the phone," said Kane. He was as white as paste and his eyes were fever-bright. "How's it doing, Hays? Looked good from here. Is she powering right?"

The answer must have been gratifying because Simon Kane's white teeth flashed when he heard it.

After that, the ship bobbed around in swift dashes, stopping, then darting upward till it was only a dot, reaching unbelievable speeds. All this time, Kane was talking with Hays on the phone, asking questions, suggesting new maneuvers. Though he was trembling with excitement, his voice was calm, controlled and persuasive. I realized later that he was egging Hays on to try more and more spectacular tests of the ship.

Suddenly it shot away in a steep climb toward the west and was out of sight in a matter of seconds. Kane laid down the telephone and turned to me.

"He's satisfied the craft works perfectly," he said. "He's going to take it straight out for four or five hours and then come back."

We all stared at him, for Hays wasn't to have stayed up over an hour. I said, "He can't do that. There's too much he doesn't know about the ship. Tell him to come back!"

Kane didn't look at me. "The boy knows his business. Leave him alone. He's making history."

"But the first time —"

"I'm going down the road a few miles to get some breakfast. Take turns talking to him, why don't you?"

He got in his car and drove off.

"**E**XIT the villain! Donner, you've got a talent, but you're in the wrong line of work." G. W. Caples dug a chubby forefinger under his collar and worked the tie knot loose. "This scenario is worth every single cent of \$300,000."

Raymond Donner's mouth pressed a little tighter and his tongue pushed through to moisten his gray dry lips.

"He never came back," he said hoarsely. "And neither did Hays."

Something in the man's voice stopped the president from going on with his sarcastic attack.

"Did the ship crash?" he asked more soberly.

"No. It just flew away and never came back."

The silence hung like a shroud. All three of them — even the self-conscious Taplin — stared at Donner.

"We talked to Porter Hays in turns. We begged him to come back. But he just laughed and said he was having the ride of his life. After about two hours, his

voice faded out suddenly — and that was the end of it.”

“How long ago was this?”

“Four days.”

“Have you notified the authorities, the police or — well, anyone?”

“No. I’ve been putting it off. You see, Hays gave us no hint of any trouble. The others are still sitting out there in the desert waiting for him, trying to make radio contact. The ship carried a standard survival kit with seven days’ rations and water. If he’s had no operational trouble, Hays could stay out at least a week.”

“And what about Simon Kane?” demanded Caples.

WHEN Kane didn’t come back by noon, I went to look for him.

On the way to his home, I stopped at the office, on a hunch, and discovered the records were missing. At last it began to penetrate that there was something rotten in Denmark.

Dusk had fallen and there were no lights in the Kane house when I got there. No one answered the doorbell. I called and pounded and finally climbed in a window to look for signs that the Kanes had packed and left. There were none. Everything was in order.

Then, as I was leaving, I heard a knocking sound from the end of the building and traced it to the last room on the west side, a sort

of study. The knocking came from a locked closet. The key was gone, so I had to smash the door.

Nalja Kane was sitting on the floor, staring at me without seeming to see me. She looked frightful, with her hair awry and her eyes red and glassy.

She sort of moaned as I helped her up. “Did it happen? Did he fly the ship?”

I said, “Yes, but something’s wrong. Where is your husband?”

The girl seemed to go all to pieces, turning her head from side to side and repeating, “Oh, no! Oh, no!” Then she collapsed.

I drove her to the hotel in the nearest town and called a doctor I knew. He said she had emotional exhaustion, needed rest rather than hospital care, and gave her a strong sedative. When I got home, I stayed awake long enough to write that letter to you and then fell into bed.

The phone woke me around ten the next morning. It was Ruhl, calling from a gas station on the highway. He said Hays wasn’t back yet and promised to call again at five.

I mulled the whole thing over all day, trying to sort out the facts, but they just wouldn’t add up to anything. When Ruhl called again with the same bad news, I decided to come on east and get it off my chest. It’s all beyond me. I don’t know what to do.

DONNER searched in his pockets and pulled out a cigarette pack. It was empty and he crumpled it absently. Halleck patted his own pockets but couldn't find any.

"Now take it easy, Ray," said Caples, walking around the desk with the humidor and holding it open. "This is the weirdest thing I've ever heard — yet I think I believe you. Leave it to you solid types to foul up on a grand scale! How about this witness you mentioned?"

"On the train — I wanted more time to think, so I didn't fly here — it occurred to me how flimsy this would all sound, without your memo or anything else to back it up. I couldn't even prove the tablets ever existed. In Chicago, I phoned Nalja Kane. She was much better and quite calm. When I told her the spot I was in, she agreed to take a plane in the morning and try to be here at 11:30 today."

Taplin's finger darted to the key panel, but Caples brushed him aside and opened the circuit himself. "This is Mr. Caples. Is there a lady in the outer office?"

"Yes, sir. Mrs. Simon Kane."

"Ask her to step in, please."

The four men rose before the door opened — Donner, slowly, with great weariness. She stood a moment, looking from one face to another, cool and regal in sum-



mer white with a small flowered hat. Faint purple circles gave her black eyes a brilliance.

Raymond Donner took her hand and led her to a chair. "Thank you for coming, Mrs. Kane. May I present Mr. Caples and Mr. Halleck, my superiors — and Mr. Taplin."

When they were seated, she spoke first in her low, passionate voice, without waiting for questions. "I will tell you what I know of Simon Kane, gentlemen, though it may be less than you would expect from a wife. In return, I ask you to use all your influence to find him and bring him to justice. He is a monster and a murderer!"

"You have my word on it, Mrs. Kane," said Caples, "if you can supply the evidence that crimes have been committed. Taplin — the recorder. Move it closer."

As she began to speak, an occasional small break in her voice hinted at the emotional turbulence the girl was holding in tight rein.

I MARRIED Simon Kane in Egypt in 1958. We met through my father, who represented the Egyptian government on Dr. Reed's excavation project. At first, Simon was charming and devoted. We left Egypt almost at once and entered upon a very pleasant, if secluded, life in this



country. The only discordant note was my father's obvious dislike for Simon. His letters were stiff and infrequent, and finally stopped altogether.

One day, after we had lived here about three years, my husband brought home two heavy cases and called me in when he opened them. These cases contained the fourteen tablets that Mr. Donner has probably mentioned. Simon told me Dr. Reed had turned them over to him to be deciphered.

I knew at once that this was not true, since Dr. Reed is one of the world's foremost students of ancient writings and would have prized the tablets too highly to let my husband carry them around in his car. When Simon asked me to make the translations, I refused.

He became nearly insane with rage and finally told me he had persuaded my father to help him steal them a few weeks before our wedding. If I did not agree to translate them, he threatened to expose my father and disgrace him before the world. So I did as Simon demanded and it killed my love for him.

In his twisted, possessive way, I think my husband continued to love me. Once the translation was under way, he tried very hard to win my voluntary cooperation. He said the device described in

the tablets would upset the economy of the entire world. The government and industry, he claimed, would pay any price he asked for suppressing it, once it was tested and proved. We would live like royalty. But I told him that, if not for my father, I would expose him without the least hesitation.

When we moved to Utah, Simon found an isolated house for us and I was virtually a prisoner.

NALJA KANE stopped. The danger signals of emotion breaking through showed in the swift, anxious breathing. The four men studied her helplessly and then it was Taplin who got the glass of water that bridged a difficult moment. She went on.

"The first day you came to our house, Mr. Donner, I wrote a note of warning. I intended to hand it to you through the window, but Simon came into the room behind me and I couldn't."

"I'm so sorry, Mrs. Kane. You were obviously in trouble. I should have —"

"Perhaps it was better. It might have cost you your life to cross Simon at that point."

ANYWAY, PORTER HAYS stopped by one day. My husband was out and I answered the door. He was a fine man, sensitive and kind, considering his adventurous temperament. He could

see I was nervous — you know the disarming way he had of asking the most personal questions.

I was afraid to talk there and asked him to drive me to Salt Lake. On the way, I told him the whole story. He was very sympathetic and promised to help — beginning by trying to contact my father. I hoped he would refuse to fly the ship when he knew about Simon. But he had absolute confidence in it and no fear at all. His plan was to complete the test and then ask you, Mr. Donner, to impound the ship and all the records on it.

The day before the test flight, I put in the time completing the translation of the fourteenth tablet.

Simon had shown no interest in this, believing it to be a summary of the others. As the sense of it began to emerge, I was horrified. By midnight, I had finished it and I sat down in the drawing room with a typed copy in my hand, waiting for my husband. I waited all night and must have fallen asleep around dawn.

The door chime wakened me. It was a messenger with a note from Porter — Mr. Hays. A newspaper friend of his in Cairo had been checking and discovered that my father had been dead six months. The circumstances of his death were curious and Mr. Hays suggested contacting the Cairo

police as soon as the flight was over.

This news was a terrible blow, but the moment I read it, I was free of Simon Kane. I went to the phone and asked the operator for the police. While I was waiting for the connection, there was a slight sound behind me. I turned and Simon was crossing the room. He was in his dressing gown. He must have come in while I was dozing. I ran for the door, but he caught me and pushed me into a chair.

WHEN he had hung up the phone, he read Mr. Hays' note without saying a word. His face was terrible and I knew I was in danger. Then I saw that the typed copy of the fourteenth tablet was gone.

"You read it — the last tablet," I said. "And you know you've done all this evil for nothing. The flight can't take place. If you — if you stop me from telling the police, Porter will tell them. He knows everything."

He took my wrist and dragged me to the studio and forced me into the closet and locked the door. I could hear him crumpling and burning papers for a long time.

At last he came close to the door and said, "There, my dear! Try to prove that the tablets ever existed!"

When he was gone, I screamed and pounded on the door until I was exhausted. A frightful thing was going to happen and there was nothing I could do to stop it.

Only once—only one time since this all began have I opposed my husband successfully. And it had no effect on the outcome. When I typed up the text of the last tablet, I made a carbon copy and put it in my handbag. I have it here. I believe it will be evidence enough to prove that Simon Kane is a murderer.

NALJA KANE reached in her flat beaded bag and found a folded sheet, which she handed to Donner. He smoothed it on his knees with hands that trembled a little.

"May he read it aloud, Mrs. Kane?" asked Caples.

"Certainly, if he wishes. But the first part is technical data on a flight by an inventor named Axtel. The two last paragraphs contain the evidence I am offering you."

DONNER nodded and ran his finger down the sheet. He read:

"The foregoing record is accurate and we acknowledge Axtel's superlative contribution to science. But we must admit that his greatest contribution is in the proving of an axiom: Where ultimate force is involved, it is better to know *none* of the laws than to know *most* of them.

"On the fourth day, the aircraft returned from far space to the point of its departure. It was in excellent condition—but empty. Nothing remained of Axtel but merely his clothing and his ring."

Nalja Kane covered her face with both hands and sobbed noiselessly.

The four men all gazed at the paper as it rustled in Donner's quivering hand.

Presently the buzzer ripped the silence like the tearing of a shroud.

After the second sharp buzz, G. W. Caples tripped the switch and croaked, "Yes?"

The girl's voice, bright and businesslike, answered, "There's a long-distance call from Utah for Mr. Donner. It's a Mr. Ruhl. He says it's urgent."

— VAUGHAN SHELTON



Garrity's Annuities

By DAVID MASON

*Every planet is badly in need
of family men, naturally—but
the same one on all of them?*

YOU might say Garrity brought it on himself. The way I put it, Garrity was the architect of his own disasters. It's a nicely put phrase, I think. Anyway, a lot of people tried to tell him what might happen. I did, for one, though I'd never have thought it would happen in just that way. What I would have predicted for Garrity would be trouble, but just ordinary trouble: jail, or getting his Space En-

gineer's ticket suspended, or something like that. Not the kind of trouble he's got.

I remember distinctly the first time I heard Garrity explaining his theory. It wasn't a new theory, but the way Garrity talked about it, you'd think he'd invented it personally. We were sitting in the messroom in the *Aloha* — that was the old *Aloha*, the one that belonged to the Muller Space Lines. Talking about women —

Illustrated by RAY

trip like that.

Neither Garrity nor I had ever touched down on Seranis, which was where we'd be in another week or so. The other off-watch man, Gloster, had been there several times and liked the place.

"A lot of Earthside Oriental in 'em," Gloster said. "They're little brown characters, real obliging. The girls especially. You just treat 'em polite and they'll treat you right back."

"Uh-huh," I said, considering the idea.

GARRITY curled his long lip. "It'll cost you just as much in the end. Women are always looking for something."

"Not this kind on Seranis," Gloster said. "Best port I've ever been in. I'm staying on the *Aloha* till I get to putting curtains on my cabin port."

Garrity shook his head. He looked as cynical as he could, for his age, which was twenty-four. We were all of us fresh out of Lunar, with the ink hardly dry on our Engineer tickets.

"I'll tell you," said Garrity. "I haven't seen a woman yet that wouldn't cost you more than she was worth in the long run."

"Long run?" I asked him. "We don't spend more than a few days down on Seranis. Isn't going to be any long run. If she runs, let her

to catch her before takeoff time."

Gloster chuckled, but Garrity just looked righteous.

"You'll see what I mean," he told us.

"Yeah," Gloster said. "I guess you and me will go downtown and pick up a couple girls and take in some high-priced amusements, like listening to records at the Spaceman's Union Lounge. After which we hurl our hard-earned cash away on a quart of pink arrack and we take the girls home with it. In the morning, we haven't got a credit left, so we blast off with nothing but a set of beautiful memories." Gloster crowed. "What's the matter, anyway, Garrity? The Union gets us the best wage scale in any space fleet and you still think girls cost too much? Even the Seranese?"

Garrity kept on looking wise. "I'm not kidding. I've seen a lot of men come up to retirement without a credit put away. Half-pay and nothing else, all because they spent everything having a good time."

"You can do without women, maybe?" I asked.

"No," Garrity admitted. "I'm a normal man."

"Yeah," said Gloster, very flat. Garrity looked peeved. "Well, I am. But I'm careful, too. I figured it all out a long time back. I aim to have everything you



guys look for and not go to half the trouble and expense."

"What did you figure out?"

"I'm going to get married."

Gloster and I just sat there, looking at each other. After a while, Gloster finished his coffee in silence. He got up, looked at Garrity, shook his head sadly, and went out.

IT took me a while to finish looking Garrity over, myself. When I managed to get my voice under control, I asked him what he was talking about.

"I saw what happened to my old man," Garrity told me. "When he came up for retirement, he was broke. He doesn't complain, but he never has anything left out of his retirement pay. Spends his time loafing around and writing his memoirs. It was women, mostly; after he lost my mother — she died when I was born — he went off to space again. Sent back enough to keep me, spent the rest in one port or another."

I didn't say anything, but it was beginning to add up. I don't know anything about psychology, but I thought there might be something like a reason in what Garrity was telling me for the way Garrity was. Somewhere he'd got the idea that his old man wasn't happy. I doubted it, because I've seen and talked to lots of old retired hands. Most of them had a good life be-

hind them and they were still enjoying the taste of it.

But I didn't argue with Garrity about it. I've got more sense. When a man's got a pet notion, leave it alone. You won't pry him off it and you might get him mad at you. A spaceship's too small to make enemies in.

"Suppose you get married," I asked him. "So you have a place to go, and a girl in it, in one port. How about all the others? Going to take a permanent port watch instead of seeing a little fun?"

"Easy," Garrity said. "I'll just get married in all of them."

"All of them?"

"Well, the ones I'm in most often. Terra City, Chafanor, some other places. I'm thinking of homesteading on one line as soon as I pad on a little seniority."

The notion did have a certain cold practicality about it. I didn't like it, but as far as getting away with it went, he could.

Garrity went on to explain a bit more; his system seemed to have been worked out to the last detail. He'd set up two, three, maybe four or five happy little households, spend his end-of-run leave in each, dividing up his time nice and even. All of them together wouldn't cost him what a night or two on the town might.

To add to that, he'd pick out his wives with care. They'd all be different in a lot of ways, for the

sake of variety, but they'd all be affectionate, home-loving girls, and careful with money. They'd save his credits for him. And when he retired, he could keep active and happy visiting them and his various families, which he expected to include a real lot of kids and grandchildren.

"I don't believe in small families," he explained.

AT the time, I never thought he'd try to carry it through. I've heard wild ideas in mess-rooms before, particularly half-way through a long trip. They usually fade out when a man gets his feet down on gravity again. This one didn't.

But it might have worked out, at that. It was just Garrity's luck that he signed on the *Brooklyn*.

The *Brooklyn* carried ore from Serco to Terra, and Terran machinery back to Serco, a regular, steady run. When I bumped into Garrity in the hiring hall, he told me he'd just signed on her, and I told him I had, too. Naturally, I asked him how the Garrity old-age-insurance system was working out.

"Well," he confessed, "I'm not married yet. But I've got a likely girl here in Terra City. All I've got to do is ask her. Now if I can line one up in Serco—"

"In Serco?" I turned a little pale, I think. "Listen, Garrity,

have you ever been in Serco?"

"No. Why? Aren't they humanoids?"

"Oh, sure." I was trying to think just how you'd describe Serco and its peculiar people. "Only different."

"How're they different?"

Looking at that stubborn mug of his, I knew I wasn't going to be able to explain this in a million years. It was just no use. Garrity had everything all figured out. But I took one try.

"They've never been much of a mechanical culture; they buy all their stuff from outside, in exchange for ore and timber. But they're one of the oldest civilizations in the Galaxy. They've spent a million years learning about minds and thoughts, all that philosophy sort of thing. I don't mean they aren't perfectly all right. They're human, but they know a lot. It wouldn't pay to fool around with them."

Garrity laughed. "Maybe they might read my mind?"

I knew it was no use. I just shrugged, bought Garrity a beer to celebrate, and we headed for the spaceport.

No, the Sercoans don't read minds. At least, I don't think they do, though there are times when they're that clever at adding you up that you'd think they were looking at your thoughts.

Garrity didn't get caught that

way. He got caught because he couldn't keep from telling the rest of us about his great idea. One of the navigators, a man named Lane, was the one who told Katha about it.

LANE was in love with Katha, naturally. Everybody was. She worked in the port medical office and she was one of the reasons why it took a high-seniority card to sign on a ship for Serco. There were a lot of men who'd take an extra set of immune shots just to have Katha give it to them. And it isn't a bit easy to figure out why.

She wasn't any beauty. Good-looking, sort of, but not especially so; a tallish girl, with gray eyes and a long, narrow, sensitive face. Brownish-red hair that always looked a little carelessly cut. As I said, nothing at all special. It was just something about her. She could have had her pick and she picked Garrity. And only Lane broke the rules and told her. Trouble is, he told her a couple of weeks too late.

It was because Lane had never thought that Katha would fall for Garrity that he hadn't told her before. But when he touched down at Serco port and heard that Katha and Garrity had gotten married the week before, he didn't waste any more time. He called Katha up from the spaceport, and

told her all about the Garrity plan, and how she was only the first, but definitely not the last.

Lane told me afterward what Katha had said.

"I am not jealous," she'd answered. "If he had wanted others when he was away, he could have done as he wished, as a man might. But he has spoken to you as a child, not a man. I do not like that."

She didn't sound terribly angry. It was the way she phrased it that bothered Lane.

"But he is not a bad man," she said thoughtfully to Lane. "And he is a good lover and makes a fine husband. I will not hurt him, but I think I will give him something which will teach him, if he wants to learn. And when he has learned, I will take it away again and he may be as free as he can . . . as free as any of you of the outside ever are."

I can't tell you what it was she did. Neither can Garrity. Hell, he didn't even know she'd done anything! He kissed her good-by at the port gates and went on his way, and she went back to work in the port medical office. As far as any of us could see, the Garrity plan was well under way.

IT wasn't six months before I saw the thing starting off. That was when I was invited to Garrity's second wedding. It was in

Terra City, and when he asked me to come down with him for a witness, I assumed it would be the girl he had been busily courting before he went to Serco. But when I walked into the marriage registry office and took a look at the girl, I got a clear, horrific idea of just what Katha had done to Garrity.

He didn't think anything had been done to him. He was all smiles. He brought the girl toward me, proud and possessive, grinning all over his face.

"This is Mary Collins," he told me, and I kept on looking, not saying anything. She smiled, and shook hands, and I could tell by her expression that she knew exactly what I was thinking.

Unfortunately, I couldn't say a word about it to Garrity. There was always the faint possibility that I might be wrong, in which case I could make a lot of trouble by saying a few words. The words were there, though, straining to get out. When he said, "Mary Collins," what I wanted to say was, "No, it isn't. It's Katha."

Because it was. After I watched the girl long enough, all the way through the marriage ceremony, then down in the elevator and out into the street, I became dead certain.

There was a brown mole on Katha's arm. Mary had it, too. And there was a look about the

eyes — well, there could only be one Katha.

What I could not understand was why Garrity didn't see it. After all, he'd been *married* to Katha.

But when I tried to say something to him, he brushed it off.

"Sure, Mary looks a little like Katha," he agreed with me. "But there are all kinds of small differences. Things a man finds out as he goes along. Look, I'm very fond of both of them. I know the difference. You're just confused by the slight resemblance."

The clincher was the problem of how Katha had reached Terra City ahead of Garrity, to begin with, and whether there was still a Katha in Serco. I asked a man off a ship fresh from Serco and he told me Katha hadn't been there for some time. No one knew where she'd gone, but she had said she'd be back.

So Mary *could* be Katha, given a fast passenger ship.

And Arnel could be Katha, too. Arnel had a mole in the right place. So did Lillian. And Ruth. And Virginia.

YES, Garrity married every one of them. Six girls, six planets. It took him a while, and by the time he got as far as Ruth, he was going to a lot of trouble to arrange his shipping runs so he could make the full circuit. But

every so often I'd hear from him, or run into him, and there would always be a new one.

The Garrity plan was going fine, but it lacked that one ingredient he had counted on — variety. Every one of those girls was Katha.

He didn't think so. He could call off the differences between them by the hour. To listen to him, if you hadn't actually seen them, you'd have believed every word he said.

Each one of them gets a share of Garrity's pay — a big share, from the looks of it. Each one of them keeps a nice place for Garrity and, when he comes into port, he eats and sleeps as well as any honest groundwalker. And each one of them has a small fat baby

boy, of whose exact age Garrity never seems to be quite sure. Two or three of the kids seem extremely advanced for their ages and they were all born fairly close together, which was enough to make Garrity as proud as a rooster.

And Garrity seems to be the only one who can't tell.

Thinking about it might make a man want to rush off to Serco and find a girl like Katha . . . and Serco is full of them. I'd *like* having a girl like Katha. I'd like having six Kathas even better.

But I'm not going to.

I won't drive myself batty trying to figure out how she'd be keeping me fooled.

And especially *why*.

— DAVID MASON



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GALAXY'S

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THE GIRLS FROM PLANET 5
by Richard Wilson. Ballantine
Books, 35c

I DID not find this book hilarious. I merely found it fresh, fascinating and vastly amusing. Wilson does a takeoff on *The Warrior's Husband* that should end all Amazon stories, if we're lucky.

The gals have taken over the U. S. by the end of the century and have everything running like housework — oops! — clockwork. The only place fitten fer a real man is (where else?) Texas.

When a feller's had enough of "Biddyland" and escapes to man's country, his 'copter lands on the roof of Nieman-Marcus and he comes out on ground level on a cayuse.

Wal, pardner, this is the divided country that faces the invader when a gigantic spaceship hovers over West Alexandria, Va., and wipes it out with a backwash from its unknown propulsive power. When the invaders turn out to be gorgeous babes wearing metallic bras and skirts and seemingly without menfolk, you can see that problems might arise.

Wilson even throws in a new twist, a multitude of BEMs pursued by the above lightly clad FEMs.

Something tells me that Wilson had as much fun writing this book as I had reading it.

ALIEN MINDS by E. Everett Evans. Fantasy Press, Inc., \$3.00

FOR some reason, the phrase "poor man's E. E. Smith" kept running through my head while reading this work. The similarity of name helps; also, the fact that the plot of the story concerns a telepath incognito on an alien world smacks of old-time space opera. In particular, when this telepath is a Secret Operative of the Interstellar Corps who pursues his espionage through his control of insects, birds and beasties à la Kimball Kinnison, the result is a bit startling.

However, as I said, this is the poor man's version.

George Hanlon, the off-the-beaten-telepath, is young, inexperienced and inclined to be a bit of a sad-sack. Unlike his doughty predecessor, Kinnison, he doesn't haul keel above the surface of Estrella and go gallivanting through the parsecs once throughout the entire book.

Still, after bumbling about a bit, he manages to find out why a sudden crime wave and burst of

anti-Federated Planets feeling had almost killed the chances of Estrella voting itself into the Federation. That's what is so hard for him to savvy. The Estrellans are basically extremely ethical people. It's a feather in George Hanlon's space helmet when he is able to spot the real and unsuspected culprit. It is also pleasant to report that George isn't a SUPERman. He's a—well, a SUPERman.

CAVIAR by Theodore Sturgeon. Ballantine Books, 35c

STURGEON is a prime example of the maturation of S-F over the past couple of decades and this volume is an excellent case in point. It contains eight stories, four of which appeared prior to 1946. All are good Sturgeon.

However, the contrast between the early and recent stories is startling. "Microcosmic God," "Medusa" and "Prodigy" all appeared in *Asf* and are straight science fiction done in a straightforward reportorial manner. "Ghost of a Chance," "Blabbermouth" and "Shadow, Shadow on the Wall" appeared in various places and are fantasies, the last a shiny little horror story. "Bright Segment" is new and uncategorizable (shades of Gloria Lockerman!). It is also a tremendous

mood story. And "Twink" appeared in this magazine last year.

The last two items point up Sturgeon's mastery of plot, technique and suspense. For those unfortunates who have not read his *More than Human*, the award-winning novel based on "Baby Is Three," which appeared here first, this collection will serve as both introduction and consolation. But read both—the novel is also available.

PREFERRED RISK by Edson McCann. Simon and Schuster, \$2.75

AS you no doubt know, this volume is the winner of the joint GALAXY-Simon and Schuster Contest and ran in these pages from June to September of last year. Like the Pohl-Kornbluth novels, *Gladiator-at-Law* and *Gravy Planet*, this opus envisages a future in which some present aspect of society has burgeoned into a Frankenstein monster. In this instance, insurance companies have made the logical step forward of preventing accidents, diseases and wars by taking over the enforcement agencies.

Policies are written for just about any and all necessities as well as exigencies, having such names as Blue Plate, Blue Blanket and Blue Heaven. Sounds like

Blue Heaven, indeed, but who needs insurance if everyone is healthy, whole and protected? And there lies the story!

Even if you read it in this magazine, you'll want this handsome book for your permanent shelf.

ARK OF VENUS by Clyde B. Clason. Alfred A. Knopf, \$2.00

THIS is a teen-age juvenile that has both good and bad points. It is well written and interesting and even gripping at times. It concerns a neglected son of a famous engineer.

The father is constructing a spaceship for a final try at Venus, ten other expeditions having failed disastrously. The boy is invited to visit with his dad at the site in the Arctic after several years of separation. Earth has been completely exploited and new frontiers must be opened.

Naturally, due to the previous failures, there is a great deal of feeling against the expedition, particularly when it involves three hundred people, one-third of the population of the Arctic town that has volunteered to attempt the trip. Fanatics make an abortive attempt to destroy the ship, wounding the father. The boy, Tal Roberts, to whom such an adventure previously was abhorrent, is thus able to go along in

the place of another boy injured in the fracas.

THE CAVES OF STEEL by Isaac Asimov. Signet Books, 35c

HERE is another GALAXY serial that has gone through both printing and reprinting. Asimov's fascinating science-detective story here is republished as a paperback, after Doubleday did it last year in hard covers.

If you recall the story, you will understand its deserved popularity. It takes place in the distant future, when Earth consists of enclosed cities of steel. The Spacers, who feel nothing but contempt and revulsion toward Earth, are descendants of Earthmen who colonized the Outer Planets and are at present virtually quarantining Earth in its hermetic cities.

When one of them is murdered, an explosive situation develops. Then the hero, an Earth detective, must of necessity work with a Spacer robot, in spite of his anti-robot bias.

If you are a detective fan as well as a science fiction addict, you will get especial delight in pitting your wits against the author's. Betcha Asimov wins.

THIS FORTRESS WORLD by James E. Gunn. Gnome Press, \$3.00

I WOULD say that the author did better on his own this time than he did in his collaboration with Jack Williamson in *Star Bridge*. If you remember that epic, you will recall the hero to whom nothing was impossible. Now there was a man!

In comparison, William Dane — well, the jacket says he is a "callow acolyte." That, I think, is going too far. Why, he got himself an education that would equip him to make a living as a mugger in any big town.

This transformation comes about because of a girl fleeing into Dane's cathedral while he is on duty in the miracle-making control room. She has a crystal pebble of obvious value, because, after entrusting it to Dane, she is murdered by the Mercenaries, bad eggs, let me tell you. Seems that, in the hero's feudalistic world, the pebble has some significance for releasing the down-trodden masses.

Dane has to flee the sanctuary of his monastery and do lotsa killing in order to preserve the thing.

And so develops "one of the most harrowing chases in Science-Literature."

You know something, they're right! Then how is it that I got a kick out of the book? The answer must be that it did just what it set out to do — create excitement.

— FLOYD C. GALE

Time to Kill

By E. C. TUBB

*He had been hired to commit
a whodunit — now what turned
it into whodunwhat-to-whom?*

THE MAN in the red cloak and mask led the way into a booth, hit the switch with the palm of his hand and, when the screen snapped across the opening, leaned forward.

"Listen," he said quietly. "What I want is simple. I want you to kill a man for me."

"Simple," agreed Fenwick drily. He glanced around the booth and then through the polarized screen into the main room. It was filled with the usual party crowd of

men and women. From the way they stamped and snapped their fingers, he guessed that someone had switched on the tingle-tubes to full blast. From inside the booth, he couldn't feel the intoxicating electronic pulsations. He couldn't recognize anyone, either.

The fad that year was for Renaissance costume. Last year it had been Victorian and next year it could be Grecian, but this year everyone wore long, sweeping cloaks from neck to heel and

Illustrated by RAY

oddly distorted masks which covered the face to just above the mouth.

Fenwick, even while obeying the dictates of fashion, thought it stupid. In his avocation — he had no vocation — it was necessary, even though it meant changing one's whole wardrobe every year, which, of course, was the reason. It was good for business.

"We are screened," said the man when it became obvious that Fenwick had no intention of speaking. "You have nothing to fear."

"You have nothing to fear," corrected Fenwick. "I don't even know your name. You're a stranger who invited me to join him in a private talk and now it turns out to be murder. What do you think I am?"

BENEATH the edge of the mask, the man's lips curved into a smile. "I know what you are. You're a hunter, a hardened slayer of the innocent and helpless."

"Hunting is not murder," Fenwick said.

"No? Tell me, what is the difference between killing a bull ape and a man?"

"You pay a heavy fine if you are caught killing an ape," said Fenwick bluntly. "The punishment is rather more severe for killing a man."

"Is it? But the reward would be higher. Very much higher indeed — and you needn't be caught."

And there he put his finger on the important thing. Fenwick had no conscience; if he had, he would never have been a hunter in the first place. But he did have a healthy regard for his own skin. To kill was simple; to escape the consequences of murder was something else.

"No motive," urged the man. "No possible suspicion. No reason or cause for the police to look for you at all. If any man on Earth can commit murder and get away with it, it's you."

"You flatter me." Fenwick wished the man would remove his mask so he could read his expression. "But I am no assassin."

"You need money and, as I said, the reward would be high."

"High enough to be worth risking my life?"

"It wouldn't come to that. A quick attack, a quick escape. Nothing to it."

"The police are clever," reminded Fenwick. Despite himself, he was intrigued by the proposal. Killing, as the stranger had said, came easily to him, but lately the slaughter of inoffensive creatures had grown stale. Hunting had become too easy, but what about other prey?

"The police are clever," ad-

mitted the stranger, "but not as clever as they would like you to think. You know their routine? Everyone remotely connected with any crime is given null-censor and questioned beneath a lie detector. If a suspect is guilty, they will find him. But what if the guilty person is not a suspect? Can they question the ten million inhabitants of this city?"

He reached beneath his cloak and paper rustled as he produced a sheaf of crisp new bills. "I said that the reward would be high. Twenty thousand credits, to be exact." He pushed the notes toward the hunter. "Would you call that high enough?"

FENWICK sweated behind his mask. Until now, he had regarded the entire thing as a joke, the stranger accosting him at the party, the conversation, the suggested murder. The sight of the money made it all very real.

"If you want this man dead so badly, why not kill him yourself?" Fenwick asked.

"I have a motive, obviously, or I would not want him dead." The man smiled again, his lips moist beneath his mask. "Still thinking of the police?"

"You're damned right I am. No one has been murdered for the past fifty years. No crime of any kind has been unsolved in all that time. There are rumors—"

"They're false," said the man quickly. "The police don't have a machine with which they can look back through time. It's just propaganda to discourage potential criminals."

"Perhaps. But how can you be sure?"

"Because I know. But even if they had such a machine, what of it? You will be masked and are a trained hunter—you know how to cover your tracks. They won't know who you are and how can they check a whole city? But the question doesn't apply—there is no such machine." He fingered the money, letting the edges of the notes ruffle over the ball of his thumb. "And there is no longer any death penalty."

"Right," said Fenwick thoughtfully. "But the risk is still great."

"The risk is as great as you care to make it," said the man evenly. "Look at it as a challenge. You, the hunter, against the full power of the law. You must kill and then you must escape. For you, the killing will be easy—and the escape should prove exciting." He riffled the money again and Fenwick stared at it.

"I could agree and walk out of here and forget what you want me to do," he pointed out.

The man nodded. "You could," he said easily. "Will you?"

"No." Fenwick picked up the money.

THE victim was a man named Carl Gerard. He was about Fenwick's own age and lived in a class B apartment. Why the stranger wanted him dead was something Fenwick didn't bother to think about. Gerard was quarry. He was twenty thousand credits.

First Fenwick arranged for his escape. A travel agency sold him a ticket on the Mars Express leaving every night at midnight from the local field. To lure the quarry from his lair and then to identify him was the hardest part of the whole business. Even that, however, proved disappointingly easy.

From a costumers, Fenwick bought a female skin-mask complete with artificial hair. He found a videophone with a tone-selector, adjusted it to emulate a female voice and called Gerard. He aroused no suspicions. If anything, Gerard was too eager to meet the strange female who had called him to suggest a date.

Rendezvous time was set for nine o'clock at a busy corner. With time to kill, Fenwick bought a ticket to a horrorscope and sat in thoughtful silence while all around him men and women shrieked and shivered to the artificial stimulation of their nerves and glands. He had reason to be thoughtful—he was thinking of the temporal police.

The stranger had denied the existence of any machine which was able to scan time. Rumor had it otherwise, but that could have been instigated by the police and cleverly publicized.

If there were such a machine, though, it would account for the crime-free fifty years. No murderer could hope to escape if the police could scan back and actually see him at work. Even if masked and disguised, he wouldn't stand a chance. All the police need do was follow his image back in time until they saw him as he really was.

For a moment, Fenwick considered abandoning the whole thing. Then, as he thought about it, he shrugged. His employer, whoever he was, had gauged him too well. The thrill of the hunt was in his blood, the problem intrigued him, and he knew that he was going to earn his money.

Anyway, no one knew for certain whether or not there was a time-scanning machine. And even if there were, it would take time for the police to identify him. By then, he would be halfway to Mars and beyond their jurisdiction. He relaxed, amused at the gasps and shudders of those around him even as his own skin crawled and adrenalin flooded into his bloodstream.

Half an hour before rendezvous time, he left the theater and,



taking an elementary precaution, walked toward the scavenger part of the city. It was unhealthy in its deserted houses and broken streets, but it was scantily populated and, more important, badly lit.

He stepped into a pool of darkness, neat and trim in his puce cloak and mask. He stepped out again dressed in light blue. With no time to waste, he caught a 'copcab. Five minutes later, he was at the rendezvous.

Gerard was early. He stood on the corner, conspicuous in his yellow cloak and mask, both ornamented with black arabesques—the cloak and mask that he had told his caller he would be wearing. In turn, he looked for a silver assembly, the most unlikely color Fenwick could think of. Watching him, the hunter felt a rising excitement. He was in no hurry. It would take less than fifteen minutes by 'copcab to the field and the less time between the murder and takeoff, the better. His deadline was thirty minutes before midnight, which left ninety minutes to go. Ninety minutes in which to watch and stalk, to baffle the quarry and head him on the path he must take. Ninety minutes of skill and cunning culminating in the final moment of victory when the knife he carried beneath his cloak would sink into warm and living flesh.

He could afford to wait.

It was almost an hour before Gerard admitted to himself that the call had been a hoax. Reluctantly he moved away and behind him, like a colorful figure of destiny, Fenwick waited for time and place to coincide.

Gerard seemed aimless. He wandered at random, staring at the window displays, looking at the public information strips, glancing at the scintillant bursts of the flash-advertising, acting more like a yokel than the city-dweller he was.

AFTER a while, Gerard went into a tavern and Fenwick, always cautious, waited outside. When Gerard came out, he seemed nervous. He kept glancing over his shoulder, his yellow mask grotesque in the shimmering light of the advertisements, and his pace had increased from a casual saunter to a determined walk.

And yet he didn't head back toward the safety of his apartment. He followed an erratic, winding path which led him through side turnings and narrow passages between the towering buildings and his direction, incredible as it seemed, was toward the bright glow of a 'copcab center.

Fenwick chuckled as he increased his pace and cut down the

distance between them. High on a building, the illuminated face of a clock warned him that his time was running out, but he wasn't worried. From the center, he could get transportation to the field so that, though Gerard didn't know it, he was actually helping his murderer to escape.

The man in the yellow cloak seemed even more nervous than before. He paused at the mouth of a narrow alley winding between two brightly lit streets. Then, his head down between his shoulders, he almost ran through the alley.

Fenwick stared after him, his brain alert as he assessed time and speed and distance. If he ran after Gerard, he would frighten the quarry. But if he cut around the corner and ran hard for a few hundred meters, he would reach the mouth of the alley before him. He would bump into him in the sheltered darkness, kill and be on his way to Mars before anyone discovered the body.

He smiled as he put his plan into execution.

There was a big red sign at the corner of the alley where it joined the main street. It flared and died, flared and died, so that the walls and gutters seemed painted in blood and darkness. It flared as he reached the corner. It flared again as he stepped into the alley. It flared one more time as he

struck at the man in the yellow cloak, thumb to the blade and ripping upward in the murderous slash he had learned as an apprentice hunter.

Before the body fell, he was running down the alley, wiping his hand on the inside of his cloak and the blood and fingerprints from the knife before throwing it away. He'd had it so long that no one could possibly trace it to him, and he wanted to be rid of the damning evidence which chemical analysis and micro-tests could reveal. But he needn't have bothered.

The police were waiting for him at the other end of the alley.

THERE was no trial. Trial supposes doubt and there could be no doubt as to his guilt. But there were plenty of questions and Fenwick owned them all.

"How?" he asked for the hundredth time. "I'd just committed the crime. How did the officers get there so fast?"

"The temporal police?" The man they had assigned to him looked bored. "Surely that's obvious. When we discovered the body, it was simple to determine the time of death. So the officers merely went back to just before the actual moment." He looked tiredly at Fenwick. "Didn't you know we could travel backward in time?"

"I'd heard that you could scan the past, but not actually travel to it. Can you? Scan it, I mean?"

"No. I wish we could. It would make things so much easier."

"I see." So in one thing, at least, the stranger had told the truth. Fenwick frowned at the wall of his cell. "But if you can travel back, then why didn't you prevent the murder?"

"How could we?" The man — Johnson, his name was — shielded a yawn. "If there had been no murder, there would have been no murder to prevent. No body, you understand, so there would have been no reason for going back at all."

"I don't get it," complained Fenwick. "Or do I? No murder, so no body, so no reason for going back. But if you didn't go back, there would have been a body. So . . ." He broke off looking baffled. "A paradox!"

"No," said Johnson. "There are no paradoxes in time."

Fenwick shook his head. "What about if someone went back and killed his grandfather?"

"I'm tired of hearing that old chestnut," said Johnson. "All right, what would happen if a man did that? First, if he killed his grandfather after his father had been born, it wouldn't make the slightest difference. If he killed him before his father had been conceived, then, naturally, he couldn't

exist. As he didn't exist, he couldn't have killed his grandfather. So, being alive, he didn't kill his grandfather. He *can't* kill his grandfather. The argument is ridiculous."

"It still seems like a paradox to me," insisted Fenwick.

"There can be no paradox in time. Think about it for a while and you'll understand why."

"To hell with it," said Fenwick disgustedly. "All I know is that I've been caught. What happens to me now?"

"The only thing left to happen — your punishment."

"NATURALLY," agreed Fenwick dryly. "Pardon my curiosity, but just what form will that punishment take?"

"You murdered a man," said Johnson. "What punishment do you expect?"

"There's no death penalty," Fenwick said. "Or is that another piece of trickery, like not letting people know you can go back in time?"

"No. You will not be legally murdered."

"What then? Ten years imprisonment? A lifetime?"

"Oh, nothing like that." Johnson seemed to have recovered his good humor. "A peculiar thing, time travel. Unfortunately we are limited to fifty years, so we cannot satisfy our curiosity as to the

past. Also, its uses are strictly limited. No tourists, for example, no exploitation or exploring or going back to visit dead relatives. No paradoxes," he explained. "If you went back to visit your dead father, he would know it. He would have told you, so you would know it. Since he didn't, you didn't, so you won't. Simple."

"In other words, the police have suppressed it and use it solely to fight crime." Fenwick wasn't fooled. He had recognized Johnson's hate for a murderer. "Interesting, but what's it got to do with me?"

"I'm telling you," said Johnson mildly. "You committed a murder. We caught you, but our job is as much to prevent crime as to avenge it. But a body had to be discovered in order for us to catch you." He smiled at Fenwick's expression. "Think about it. You were caught, therefore you must have killed. Because you killed, you must be punished. Yet, at the same time, we must protect the public, so we cannot let you kill an innocent man in order that we can catch you to punish you."

He rose and looked down at the hunter. "It's all very simple. I'm sure that you will be able to appreciate the justice of it before long." He smiled and something metallic gleamed in his hand. Fenwick recognized it as a hypo-gun and, for the first time

since his capture, felt fear.

"Wait a minute! What about the man who hired me? Isn't he guilty, too?"

"Why should he be? Intent is harmless without execution. You could have refused to commit the murder."

"But . . ."

HE broke off because Johnson had gone, the cell had gone, everything had gone and he was sitting in a tavern with a drink in his hand, while all around him drummed the frenetic pounding of jazz.

"Crazy," he muttered and shook his head. But he wasn't crazy and this, as he soon discovered, was cold reality and not a dream.

He examined himself. He was wearing a yellow cloak and mask, both adorned with black arabesques. It was a familiar cloak; he had seen it before, but just when and where, he couldn't remember.

Drugs, of course — he still felt doped. Johnson had knocked him out with the hypo-gun and they had drugged and dressed him and brought him to this tavern. But why? *Why?*

He shook his head and finished the drink and looked around for the police who must be guarding him. He didn't see any and began to have hopes that he was really free.

Leaving the tavern, he walked down the street. He walked quickly, glancing behind him for fear of seeing a hated uniform, but aside from a man in a light blue cloak and mask, no one seemed to be following him. It was while he was walking that the drug began to wear off.

The streets were familiar, too familiar. So were the shops, the displays, the advertising signs — even his very movements.

The man in the blue cloak! Himself in yellow!

Gerard had worn a yellow cloak; he had worn a blue one. The man following him was himself! The streets he had walked down then were the same ones he walked down now!

Grudgingly, he admired the beauty of it. The tables turned, the hunter hunted. The paradox resolved by the simple expedient of making himself his own murderer.

But if he'd killed himself, then how could he be guilty of killing Gerard? And if he hadn't killed Gerard, why was he being punished? Or was he? There were no guards, no police, nothing to prevent him going to the spaceport and catching the midnight Express to Mars. The bright glow of a 'copcab center attracted him and he headed toward it.

Behind him, the man in blue quickened his pace.

FENWICK thought of stopping and facing him and explaining what had happened. He didn't because he knew himself too well. The man in blue intended killing the man in yellow. It wasn't a question of personalities or explanations; as soon as time and place were right, the blow would be struck and Fenwick would be dead. And there was another, more important reason.

Fenwick had neither money nor a ticket, but the man in blue had both. And there was only one way to get them.

He simulated fear, glancing constantly over his shoulder and almost running down a narrow alley he remembered from before. He smiled as he saw his follower hesitate and then run down the street. He knew exactly what he intended and he would be ready for him. He wasn't Gerard, that timid fool whom the police had obviously removed to safety after putting Fenwick in his place. He was a hunter, as skilled and as strong as the man in blue — and he knew what the man in blue was going to do. No hunter could have a bigger advantage than that.

The man in blue would race around the other way to head him off. Fenwick knew it even before the other suddenly made the decision, for he had done it himself.

But then what? The man in blue had a knife and he didn't.

But he had the cape — and there was a refuse can. He draped the cape over it and stood worrying for an instant. It didn't look at all like a man; it was too short and squat. He dragged it over to the wall, where even the big red sign that kept flaring into life left it in shadow. Would that fool the man in blue into thinking it was his quarry hunched down fearfully, hoping to escape detection? Even more important, could he himself rewrite the past?

There was no time to think further — the man in blue came running into the alley. Fenwick pressed back out of sight in the deeper shadow. The man in blue hesitated only for a second before thrusting the knife into the cape. As soon as the blade rang against the metal of the refuse can, Fenwick had stepped behind the man in blue and chopped at the back of the neck with the edge of his palm — not too hard, for he didn't want to kill his earlier self, yet powerfully enough to knock him out.

He knew just where the money and the ticket were, and he had them out in a flash of movement and was running toward the end of the alley. He faltered there, apprehensive, but there were no police waiting. Almost arrogantly then, he flagged a 'copcab and

ordered it to take him out to the spaceport.

IT was on the way that bewilderment hit him. No paradox, eh? Gerard hadn't been murdered. Fenwick hadn't been killed by the man in blue, as Johnson had planned. The man in blue was unconscious but safe.

Then what crime had been committed? None — and yet Fenwick had to flee to Mars! If he turned back, he had no assurance that he would not be picked up by the temporal police.

Scowling, he tried to reason it out. The spaceport lights were glaring below when he finally found the answer. It made him smile — a bitter and yet admiring smile.

Naturally there had been no crime committed, either by him or anyone else in the past fifty years! But he had been willing to kill, just as others had undoubtedly been willing to murder or steal, and that was enough for the temporal police. If he didn't go to Mars, they were sure to have another trick like substituting him for his victim. Only, of course, he wouldn't put them to the bother; that one or the next might work.

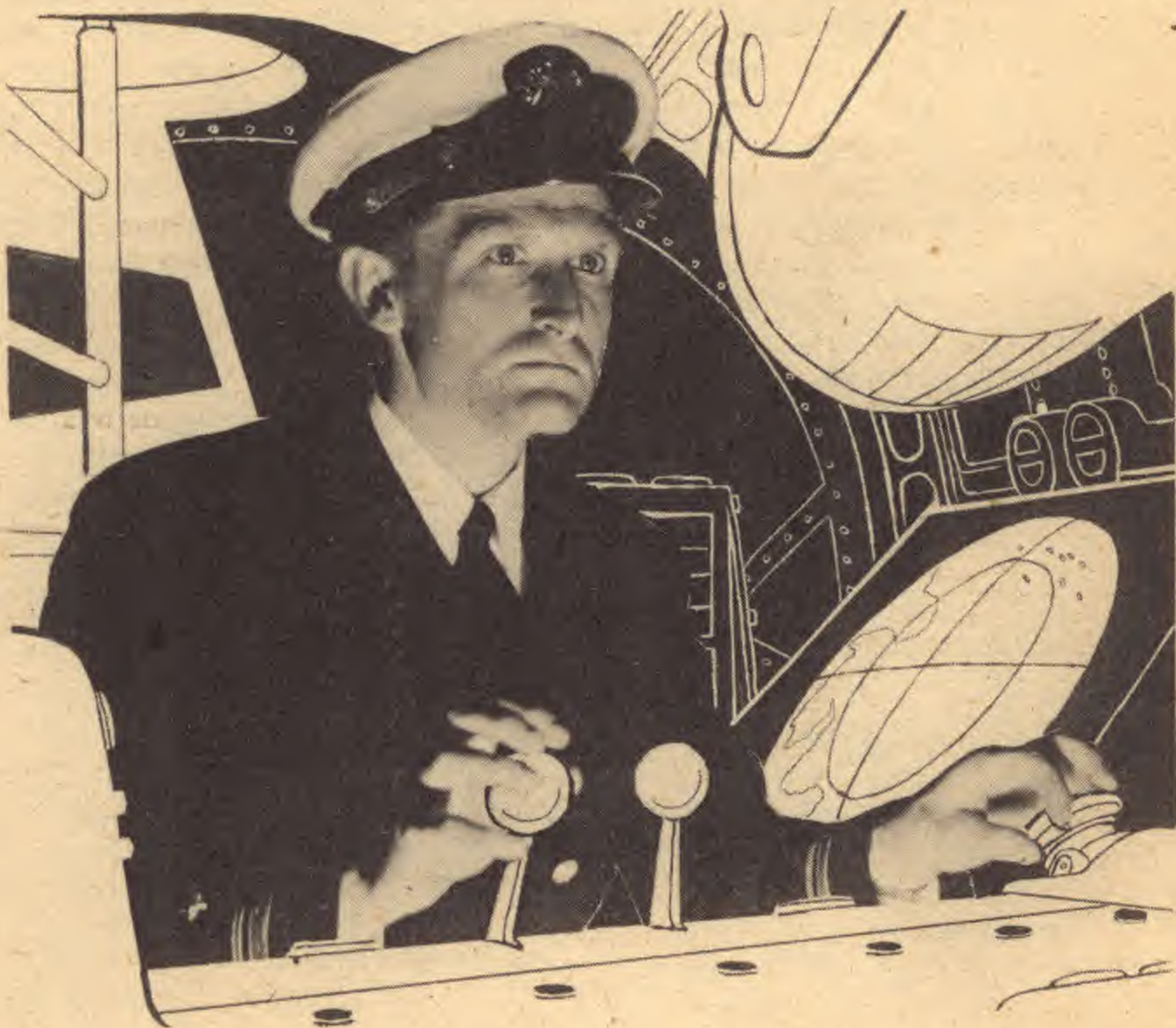
Not feeling a bit jaunty, as a hunter should, Fenwick turned in his ticket and went aboard the ship for Mars.

—E. C. TUBB

SLAVE SHIP

Part 2 of a 3-Part Serial

*In this wildest of all possible non-wars,
the order was wilder still . . . spare every
animal . . . and throw the men to the wolves!*



SYNOPSIS

By
FREDERIK POHL

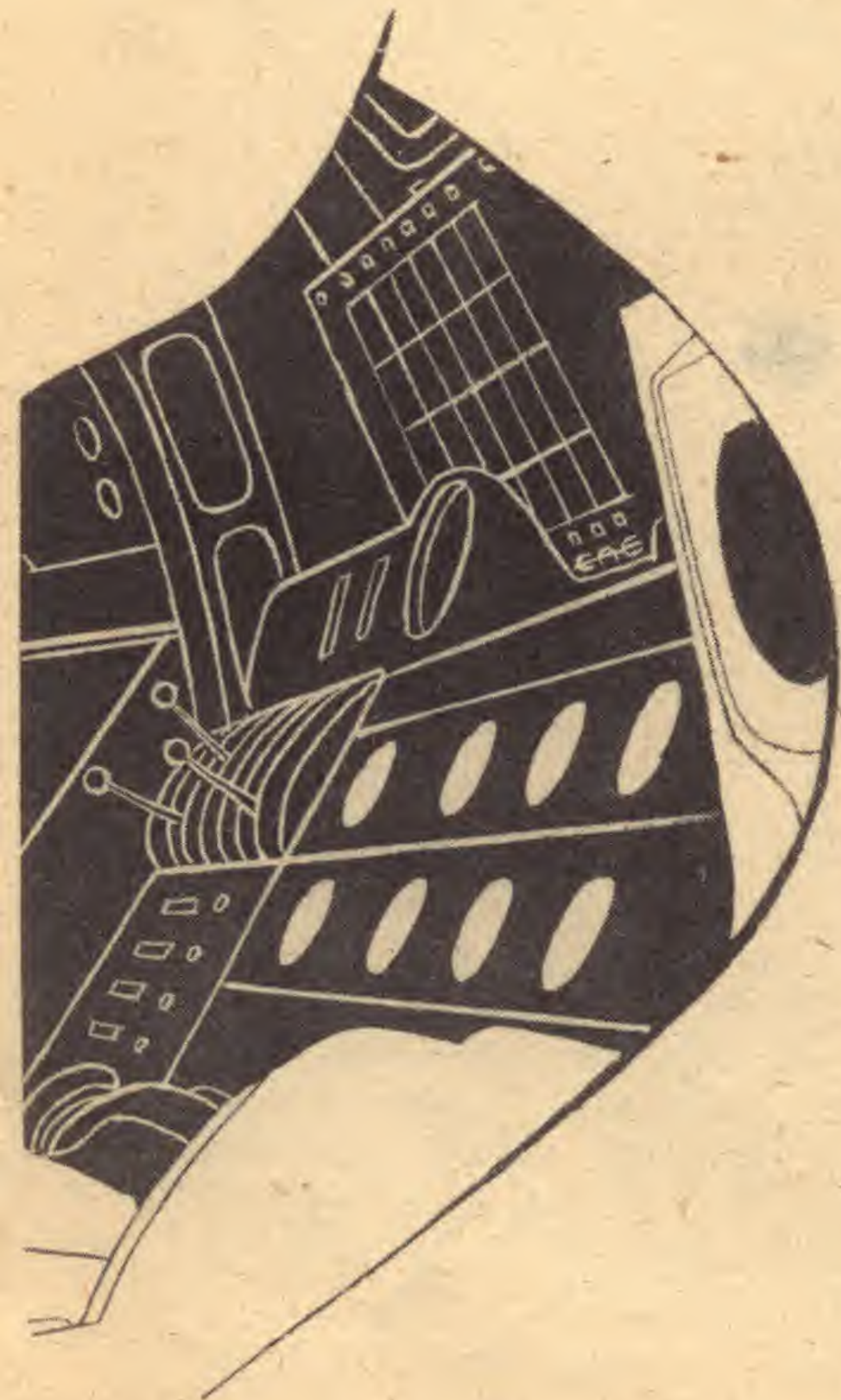
Illustrated by
EMSH

LOGAN MOELLER is my name, Lieutenant, U. N. Naval Reserve. I was once a combat officer of the line, piloting a scout torpedo in more than eight hundred hours of combat sweeps against the enemy. Risky? Sure—operating a thousand meters under the surface of the sea, everything is a risk, and the enemy made it its business to make the risks high. But war is hell; you expect danger in war. The only thing was — where was the war?

You only go to war with countries, and the Caodais weren't a country; they were a religion that had swept up out of Indo-China and through all of Asia, Oceania and Africa. But war? No, it wasn't war. If it were, both sides would use the A-bomb, the H-bomb, the C-bomb, the bacteriological-warfare sprays and mists and dusts.

So it wasn't war, because that would be the end of everything. But meanwhile we kept pounding each other — strictly on neutral territory, like Europe or the open sea. And meanwhile we kept doing odd things to each other — taking prisoners, for instance.

Elsie was only one prisoner, but she was the one who counted with me, because she was my wife. She volunteered, when it would have been months before



the universal draft caught her. Even worse than that, the first thing she did was voluntarily go on a courier flight over Caodai territory, and naturally the Cao-dais niked her down; and she was alive and safe in a prison camp on Zanzibar, the Red Cross told me. It wasn't so bad while I was on combat duty afloat, but then I was transferred to a top-priority, most-secret, ultra-urgent naval project on the Florida shore.

Project Mako was the biggest disappointment I had in the Navy. It was a dairy farm! Commander Lineback told me, the day I arrived, that I would find it a pretty unusual dairy farm. I watched the cattle being milked, I heard their drovers give them the orders for the day, I listened to the cattle arguing back. And then I went to Lineback with blood in my eye. Unusual! What was unusual about that? But he calmed me down by promising new developments as soon as certain equipment and personnel arrived.

But the new developments came earlier than that, or one new development did:

The Glotch. Some people called it that, but I've also heard it called "unidentified ballistic phenomenon, presumably hostile." It was a kind of radiation burn that killed — all but me. I got it; I was

lucky; I survived. But if the Cao-dais could reach out and strike down someone anywhere in America as easily as it appeared, that was the end for us.

Anyway, the new equipment arrived, and with it the new personnel. I found out what we were supposed to be doing: research into animal communication. What did the Navy have to do with talking to animals? And what, for that matter, did some of the new personnel have to do with the Navy?

Senior Lieutenant Semyon Il-yitch Timayazev, late of Krasnoye Armeé, now, since the Red Army no longer mattered to anybody, a military attache of the People's Democratic Tsarist Republican Russian Government-in-Exile; he was one of the new personnel, and a dog-trainer by vocation. A dog-trainer! And he ranked me — me, an officer of the line! But at least we were doing something and I began to suspect that maybe, somewhere, there was some purpose behind all this, when Project Mako suffered a serious interruption. There was a ship-to-shore shelling from Cao-dais somewhere out in the Atlantic, coupled with an outbreak in the prisoner stockade down the beach. I found myself out in a scout torp again, scouring the sub-sea area for the Caodai ships.

I found them. Eight of them.

EIGHT Caodais — corvettes at the least, by the size of them in the sonar screen. And I was in a little thirty-foot torp, with four missiles to fight with. If I got a 4.0 hit with every one of them, that still left four to beat the dubbing out of me.

I didn't feel heroic; I felt scared. But I didn't turn around and run for it, either.

If I ran, they could catch me. If I attacked, they could pound me to pieces before I got within range. If I sat still and prayed, I would at least enhance my dubious prospects of getting to heaven, which would at any rate be something constructive so my last minutes on Earth wouldn't be a total loss. But what I did was fight.

It was habit and instinct and routine. Full speed forward, turn the navigation over to the autopilot. Cut the fire-control remotes in on missile Number One, discriminate, lock, arm, fire. Cut in on Number Two, fire Number Two. Cut in on Number Three, fire Number Three. Cut in on Number Four, fire Number Four . . . and *then* it was time to run.

In fact, it was past time. They were on course for me and I was on course for them; we had closed to less than five thousand yards. By the time I came about, it was forty-five hundred — and a corvette can catch a scout torp with

a forty-five-hundred-yard lead in roughly twenty minutes. It is only a matter of relative speeds. Of course, in twenty minutes I could be closer inshore than they would dare to follow —

But they didn't really have to catch me. Their missiles would do the job for them.

I WATCHED the sonar screen with very close attention. It was all I could do. There were the eight of them, big and ugly by now; there were the four staggered little streaks that were my missiles. And there — yes, there, just before the lead Caodai, were two other little glowing streaks. They were missiles, but they weren't mine.

I kicked the auto-armor pedal home. My scout was now defensively armed; it was dropping random-sized masses of fine-spun metallic wool into the slipstream, hoping to divert the Caodai missiles.

Unfortunately, the Caodai were doing the same. I saw a mushrooming flare around one of my missiles as it went off, far out of effective range of the enemy craft, triggered, no doubt, by just such a blob of chaff. And another. And then the sonar screen was awash with light from rim to rim. The pressure spheres surrounding the exploding missiles confused the sound waves, made them return conflicting images.

I scrambled the sonar screen and snapped on the audic. At least I would know if something big was getting close to me.

Something big was! But not the Caodais — it came from due south, down the coast, and it was big and fast. IFF gave the answer: It was a *Spruance*-class cruiser, coming to the rescue.

The Caodai might get me, but Big Brother was going to get them! I snapped open the TBS and yelled excitedly; "Welcome to the party! I'll give you my bearings for cross-check. My grid position —"

But I didn't finish. Audic tinkled and cut out in my earphones. There had been a nearby explosion and the filters, designed to keep the wearer from ruptured eardrums, had cut off the amplification.

I waited for the smash.

I never heard it, but I felt it. Something hit the side of my head and that was all, brother, that was all.

"**O**NLY the good die young," growled somebody with a Russian accent.

I sat up abruptly. "Semyon!" I said. "What —"

The heel of his hand caught me in the chest and I went back down again. "Doctor says to lie still! You should have been dead, Logan! Don't provoke fortune!"

Well, I was alive, though it took me a while to believe it. What had hit me had been nothing but concussion, and the torp, though sprung a little at the seams, was still intact. The autopilot shut itself off when the hull was breached and, when nobody took the controls, automatically surfaced the vessel — and hydrofoils found it, with me inside. But I was alive.

"Did they get them?" I demanded.

"Get who? The Orientals?" Semyon shrugged. "They did not yet have the courtesy to report to me, Logan. I can only assume —"

"All right. What about the stockade?"

"Ha," he said, sitting up. "Such a struggle, Logan! Through the jungle like savages, screaming and fighting, deadly beyond —"

"What about the stockade?"

"Is over," he grumbled. "We fought a little bit, and then armor began coming up from the highway, and when the Orientals saw the tanks, they ran. Oh, some got through; they will be caught."

So that was that. Well, I thought, leaning back against the pillows of the sick-bay and listening to the thumping in my head, it wasn't so bad, after all.

A free ride in a scout torp — I'd thought I'd never get to pilot one again. A successful, or anyway fairly successful, combat

sweep against superior odds. A sure commendation in my file jacket, maybe even a citation from COMINCH. Who knows, possibly a Navy Cross — stranger things had happened. And the whole thing was over, a pleasant interlude in a dull existence.

What I didn't know was that nothing is ever really over.

Semyon said commandingly: "The doctor!" I sat up and he pushed me down again.

The doctor poked me and looked into my eyes. "Back on duty in the morning. Meanwhile —"

He reached for a needle. I protested: "I can go to sleep without that!"

"That's good," he said, squeezing the plunger.

I SAW him going out the door and then, magically, he was turning around and coming back, only it wasn't the doctor any more.

It was Elsie, just the way she had been the day we were married, lovely and desirable and all the wife a man could want.

"Darling," I said to her and she bent and kissed me and held me in her arms. And then, all of a sudden, her left eye blossomed out in a ripple of greenish light, and then her nose, and then she was awash from side to side with light, just like a sonar scope, and

the rest of the dream was hardly pleasant at all.

But I was fit for duty the next morning. And what's more, they put me to work.

Remember Manhattan Project? They had a big, difficult, important job. They needed an isotope of uranium — U_{235} , as every schoolboy knows, and they needed lots of it. They even knew ways they might get it — *had* got it, in microgram quantities. There was thermal diffusion — the endless flow of uranium salts through osmotic barriers. There was the mass spectograph. There was the "breeder" reaction. And there were others. Manhattan Project had to make a decision.

So they decided to do them all.

That was the military mind at work, and who is to say they were wrong? Project Mako worked along the same lines. We had half a dozen paralleling projects going at once. Lineback's own group was tediously expanding their vocabulary of Cow. Semyon Timayazev was bedeviling his little dogs with yes-no codes, persuading *them* to talk to *him*. A team of four full lieutenants was reading meaning into the elevation of a dog's tail and translating it into flipper-positions for the seals they were given to work with. And more.

And I, with a fifty-year-old Wave, a Barnard graduate with a

degree in statistical mathematics, to help me — I was assigned the programing of a computer series that would make sense out of what they were doing.

It was simple enough to assign conceptual values to the parts of language and I couldn't complain about the equipment the Navy gave me. The basic unit was an old RAGNAROK, but some considerate genius in BuSup had added a self-checking circuit to flush triple voltage through the tubes to pick off the bad ones, between operations, so that the unit was pretty reliably good for 99-six-nines per cent effective operation.

There were forty-eight memory tanks in the mercury-delay class, plus a batch of magnetic drums for instructions and a large electrostatic storage unit. With its card punch, reader and teleprinter, it pretty well filled my space.

I looked at it and felt something like the midget who married the circus fat lady. It was a lot of computer to handle all by myself.

BUT the hard part wasn't running the computer; it was making sense out of what came out.

Semyon had told me so. He formed the habit of dropping in on me for a coffee break now and

then. I don't know if all Russians are the same way, and if they are, it might account for the way they made out in the war, for he seemed to need his coffee break every hour on the hour.

He said: "Is a question of vocabulary, Logan. RAGNAROK has not the vocabulary."

I said stiffly: "A computer a quarter the size of RAGNAROK translated Russian back in the 'fifties."

"Ah, Russian, you say? It is the language of animals, you say?"

"I didn't mean —"

"No, no. I do not mean I am insulted. I only ask, is Russian the language of animals? It is not, we will suppose. It is merely a human language."

"Merely?"

"*Merely!* Small vocabulary, you see. Not like animal, *large.*"

I stared at him. "If I understand what you're saying, which is unlikely, you're trying to tell me that animals have a bigger vocabulary than Russ — than people have."

"Exactly so, Logan. Think! Is it engraved on your machine, that motto? 'Think!' Read the motto, Logan, and do as it says. Think, for example, if an animal possesses the capacity for abstract thought. He does not, you will say? Correct."

"But that makes for a smaller vocabulary, doesn't it?"

Semyon crossed his legs, sipped his coffee and got ready for a nice, long chat.

He said professorially: "Be, for the moment, my little dog Josip and think of how he thinks. Are you and I 'men,' Logan, in Josip's eyes? Or is each of us a man, an individual — you, perhaps, 'man who sits and watches' and I 'man who makes clicking sounds and gives food'? It is the latter, you will see. For that is how nouns begin in speech, as proper nouns, not class-words but names for particular things. This is why, with Josip, I have followed in the great tradition of my mother and cut to the root. Two words! Just a single word and a silence which is —"

"You told me," I said shortly. "Do you mean that to an animal, each *thing* has its own individual word?"

"I simplify," Semyon said sunnily. "But you grasp my meaning."

I did — and I also grasped his arm and escorted him to the door. He'd made the job look even harder than before.

YET things got done. Three days after the Caodai incident, we were in full swing. The seeker groups fed me long lines of symbols, representing — they thought — the conceptual elements of the language of cows and seals, dogs

and rabbits, cats and pigs. We got nowhere with the rabbits — too stupid; and the pigs were farm-bred, too fat to do anything but eat. But with the other animals, there was progress.

The seekers watched the animals the way Haroun al Raschid watched his harem favorites. They recorded every sound, photographed every movement. With chemical nostrils, they examined the odors the animals gave off (someone had remembered that bees use odor to indicate sources of nectar); with a million dollars' worth of electronic equipment, they palped the electromagnetic spectrum for signals that coarse human senses could not read.

And they found things — sound, scent, body posture, bodily functions: these were the elements of language.

Whatever seemed to have meaning, they assigned a symbol, even if the meaning itself was not clear. (Usually it wasn't.) Then they had a list of the essential parts of the animal vocabulary — lacking translations, for the most part, but very nearly complete. And that was *half* their job.

The other half was to record, in infinite detail, everything the animals felt and saw and experienced. That was the list of referents for the "word" symbols.

The two lists gave, first, the "words," second, the meanings.

And then it was up to me and my Wave to tape the findings, program them and feed them to RAGNAROK, so that RAGNAROK's patient electronic mind could, from frequency and from context and from comparison with the known parts of other languages, match symbols with referents and make for us a dictionary of Pig and Cat and Seal.

I made the dictionary, but when I thought I could use it to win an argument with Semyon, I was kidding myself. He came wandering in one afternoon for coffee and found the first pages of a typed report summarizing what we had learned of Essential Cat.

I tapped him on the shoulder. "It says 'Most Secret' at the top of the page," I reminded him.

"Eh?" He looked at me absently. "Of course, Logan. Most interesting. I will return it in the morning."

I STOPPED him as he was walking out the door and took it away from him. "You'll probably get a copy, but not from me. Anyway, you won't enjoy it, because it makes a liar out of you."

"Oh?" He beamed at me. "Is difficult, Logan. How often can a maiden be betrayed? And what is this lie?"

I hesitated, then showed him. After all, he'd already looked at it. "Cat," I said. "Look them over,

Semyon. Fifty-eight symbols, that's all. Seven tail movements, three kinds of rictus, twenty-two noises — add them up. Fifty-eight. And you said the animal vocabulary would be larger than the human."

"I did," he acknowledged. "And I still do. Fifty-eight symbols, but are they fifty-eight words? I think not. Call them phonemes, like the sounds of English. There are forty-some of those, I think? But put them together this way and that, and you have three, four, I do not know how many hundred thousand words." He sighed. "I have one question for you, Logan. When you were knocked unconscious by the Orientals in that little boat — how could you tell?"

"Good-by, Semyon," I said, holding open the door.

The next morning, we had our raid. It started out normally enough — punctually, one hour after breakfast, Semyon showed up with the coffee containers and his usual good humor.

I said: "I'm busy, Semyon."

He smiled forgivingly. "*Khora-shaw*. That means, 'I do not mind,'" he explained. "Will you pass me the sugar?"

I sighed and passed it. I counted: Six spoons of sugar.

"Ah," he said, tasting the first sip, "one lives again. At the Academy was like heaven to drink coffee, Logan. Only once a day. And

coffee was from Turkey, you know. Once —”

“Better drink it fast,” I advised. “I have to get back to work.”

“— once four cooks drank coffee and died,” he went on. “Whole batch had to be thrown away, because someone had put strychnine in it. Terrible.” He frowned reminiscently. “A Turk? One imagines so. Was terrible time —”

“Good-by, Semyon.” I threw my empty container in the wastebasket and stood up.

“— was terrible time when Soviets of Russia were surrounded by hostile nations. Now, of course —” he shrugged — “it is greatly different. We are friend to all, what of us the Orientals left. Do you find this a lesson to you, Logan?”

I held the door open for him. “I do, Semyon. Good-by.”

HE WINKED amiably at me as he left and I couldn't help smiling. It was hard to realize that his country and mine had torn each other apart for the salvage of the splinters not much over a decade before, when Semyon was a fresh eighteen-year-old junior officer, straight out of the Academy into the Yugoslav Push that had touched off the Short War. That was Semyon's first battle — against Marshal Tito's stubborn little army.

And now he had named his dog in honor of his late enemy, the marshal, whose real name was Josip Broz.

Semyon was a nuisance, but it was with a little disappointment that I realized, later on, that he hadn't shown up for his ten o'clock coffee. And he didn't show up at eleven and he was late, actually *late*, for lunch.

“Logan,” he explained sorrowfully, staring without appetite at the plate the mess attendant put before him, “Josip is sick. Could someone have hurt him, Logan? He is bleeding and he will not let me come near. Poor little dog, perhaps he has been in a fight. And he behaves oddly. I play with him and show him tricks, and he whines and hides under the desk and whines again.” He began to chew morosely.

“Maybe you ought to call a vet.”

“I did! Of course I did. And he said, ‘Terribly sorry, old man, but it will have to wait; we must scrub the cattle's teeth for Commander Lineback first.’ And poor Josip, he is in pain.”

It was silly, but he was worried. He even left the table early, so that when I took the 'copter down to our area, it was without him and he missed all the excitement.

Because, from the 'copter, somebody saw a running figure in

the palmettos, where nobody should have been running at all. We radioed back to Lineback's administrative area and in less than ten minutes we encircled, closed in on and recaptured eight Caodai escapees roasting the carcass of a pig over an open fire.

There were three more pig carcasses in the clearing; the prisoners must have worked like demons to get the animals driven off the research area while most of us were at lunch. The security guard hadn't noticed a thing — no doubt because the security guard, relaxed and happy with the sure knowledge that nobody would ever bother a place like Project Mako, was sound asleep under a palm.

LINEBACK said ruefully: "I guess that's the end of the Pig section of the project. But what bothers me is the radio."

It wasn't much of a radio — the sort of thing that prisoners somehow smuggle in, piece by piece, but it could easily have reached out past the horizon to where a Caodai ship might be lurking, barely awash.

Somebody snickered and Lineback turned on him sharply. "Belay that! Mako might be funny to you and maybe it's even funny to me. But it isn't funny to COMINCH, because he classified it Most Secret and he isn't going to

like Caodais with radios roaming around it."

"But, Commander," ventured Kedrick, "these guys were just looking for something to eat. They wouldn't have raided the pigs if they'd been after bigger stuff."

"Tell COMINCH," said Lineback shortly. "In fact, that's an order — get it dispatched at once."

Semyon wasn't exactly disappointed at missing the excitement, when I dropped in his section to tell him about it. He had other things on his mind. "Is very bad with Josip," he told me worriedly. "Look!"

All I could see was a slack tail sticking out from under a chair. I said, not too tactfully: "You're lucky. The Pig section is worse off than you. The Caodais ate them up."

I had his full attention. "What?" he demanded.

I had to tell him all about the Caodai escapees again. He kindled like a rocket.

"Curse them!" he raved. "I see it, I see it! They come here to destroy us, Logan! They eat the pigs, they hurt my little dog, heaven only knows what damage they do to the other stock! Call Lineback, Logan! Get him here. No, give me that phone — I will do this myself!"

And he did, he got Lineback there in a matter of minutes. It

sounded preposterous, of course, to me and no doubt to Lineback. Still, the Caodais had been in the area and it was at least something of a coincidence that one of our experimental animals should be in trouble just then. And Josip was in trouble. Semyon managed briefly to coax the dog into his lap, but Josip wasn't happy there. He looked up at us with eyes as big and unhappy as Semyon's.

I said uncertainly: "Maybe — maybe if we clean him up a little —"

Well, we tried it. Semyon raced down to the head and came back with an armful of paper towels and a dish of water; but Josip wouldn't sit still for us to wash off the blood. He jerked convulsively and moaned and scurried, whining fretfully, under a desk.

BY THE time Lineback got there, Semyon had worked up a storm against the Orientals and he blasted his commanding officer with demands for the instant arrest of every Caodai within reach on grounds of espionage, sabotage and treason.

"Easy, Timayazev!" rapped Lineback. "What's the story?"

"I am telling it you!" cried Semyon. "My dog has been sabotaged — wounded! Do not believe me. I am only a Russian, a dirty foreigner. Do not take my word! But see for yourself!"

He gestured dramatically at the desk.

Lineback looked at us worriedly for a moment. "Oh, hell," he sighed. "The things this Navy makes me do — you say the dog's back there?"

"I say it!"

Lineback reluctantly got down on his hands and knees, had a sudden thought, hesitated and looked at us.

"Is he vicious?"

"Josip? Vicious?" Semyon withered Lineback with an unbelieving look.

"All right," said Lineback placatingly and put his head down to the floor to look under the desk. He suddenly jerked his head up and stared at us, then bent again and reached underneath.

"Do not hurt Josip!" Semyon warned sharply. "He is ill. He has been hurt —"

Lineback's expression was unreadable. He pulled something out from under the desk and held it out to us.

"Mouse!" gasped Semyon. "Poor Josip, he has caught a mouse!"

Lineback shook his head slowly. Then he looked down at the little animal in his very gently cupped hands.

"Not exactly a mouse," he said at last. "It's what we call a puppy. Josip, my innocent friend, has just given birth to it."

LINEBACK was broody, worried about the possibility of Caodai transmission from the little radio the escapees had, I suppose, but he was also rather strained in his relations with Semyon and me. You can't blame him. He came to his position as head of Project Mako by the animal-husbandry route and he must have been astonished to find how little we animal experts knew about animals.

I don't say it was punishment, but the next time the officers' extra-duty roster was posted, Semyon and I were prominent on it: *To assist Project Veterinary Officer*, it said after our names. Of course "extra duty" is defined as that which you do after all your regular duties are well taken care of. That meant I spent the time from 0800 to 1600 running my RAGNAROK while Semyon worked with his dogs — including Josip, now renamed Josie, and her pups. Then, promptly after dinner, we reported to the veterinarian's office for a pleasant evening's relaxation.

And the veterinarian handed us a small box of thermometers with which we were to perform our duties.

It was, I told Semyon later on in the milkshed, a lousy way to fight a cold war.

"Cattle!" complained Semyon. "If it could be only at least a dog, which I know well, you understand, and like . . . But *cattle!*"

For all his grouching, Semyon was not unhappy with the job, so I turned the temperature-taking segment of it over to him and myself took the daily check-chart to record his findings. It was, I reminded myself, important work; Lineback had said so himself, too important to entrust to enlisted men.

But it didn't seem like important work. I wondered what Elsie would think if she saw me squatting soberly on a bale of hay, while the world crept closer to the point of ignition.

Elsie. I stared out at the brilliant white moon that, ten hours before, had been shining on Elsie, and I missed my wife very much.

"Logan! I have been talking to you!"

"Sorry, Semyon." He was looking worried; he waved the thermometer at me.

"Three of them, Logan! I examine three cattle and they are hot. Epidemic, no? So I examine two more and they are hot, too!"

I looked at the chart. It was true — I had written it myself but had hardly noticed what I was writing. Semyon had taken the temperature of five cows and they all hovered a bit over a hundred degrees.

I said: "It's not much of a fever, Semyon —"

"Call Lineback."

"But, listen, Semyon —"

"Call Lineback!"

I CALLED Lineback, getting him out of a pleasant bridge game at the club. "Sir, we've got some sick cattle here. They all have fevers, every one of them." And Semyon was chattering over my shoulder about the Orientals and secret germ weapons. Lineback sounded mad, but he promised to come right over.

And he did, with the veterinary officer at his side. And that is when I first learned that the normal temperature of a healthy cow is not 98-plus degrees, but a hundred and one.

It was still a brilliant full moon as Semyon and I limped back to quarters, nursing our wounds, but I wasn't enjoying it. Commander Lineback had been pretty rough on us.

"Ah, well," said Semyon philosophically, "at least we do not have that detail any more."

I told him to shut up. But gradually I was soothed. The clouds, white and fleecy in the moonlight; a mutter of thunder from over the Gulf Stream; a gentle, warm wind — it was pleasant.

I sighed. Semyon looked around at me. "You are thinking of your wife?"

"What?" I started to shake my head, but then I realized it was true — not with the top of my mind, no, but deep inside. "It's been a long time," I said.

"Two years? That is not so terribly long."

"It's long enough for me," I said shortly. "I wouldn't mind so much if I were doing anything to shorten it."

We walked along for a moment, but the night was no longer so pleasant.

"The trouble is not hearing anything," I told him after a moment. "No letters. No more esping — Lineback'd put me in irons if I tried it again."

"Terrible," he agreed, looking as sad as only a Russian can.

"And no chance in the world of ever getting anywhere near her. Semyon, that's the worst thing! At least, when I was on the cruiser, there was always the chance —"

"Lieutenant Moeller?"

It was a runner from the commander's staff, peering at us through the moonlight.

"Yes?"

"Commander's compliments," he said breathlessly, "and will you report to him at the milkshed on the double?"

"Oh-oh," said Semyon. We looked at each other. What was Lineback doing back at the milkshed?

There was only one way to find out. We went back to the shed — perhaps not exactly on the double, but near enough to it so that we were both breathing hard.

Lineback, the vet and a couple of other officers were a circle of bobbing torches in the darkness — not in the shed, but behind it, gathered around — a sick cow? Something on the ground, anyway.

I couldn't quite see.

KEDRICK flashed his light in my face. "Moeller, take a look." For once, he wasn't fussy, he wasn't an old maid. His torch shone on what was on the ground.

It wasn't a cow. It was a man. Or, at any rate, it had been.

"Oswiak," I said. But it wasn't easy to recognize him; the chin, the throat, one whole side of the jawline all were scarred and tortured. He was dead and he hadn't died easily. "The Glotch."

"The Glotch," said Kedrick. "You were here before. Any ideas about this?"

The only idea I had was to get away from that face. It reminded me of how close I had come, back in Miami.

I said so.

Lineback sighed heavily and I could hear him scratching his long jaw in the darkness. "So they've spotted Mako," he said. "Somebody's going to catch bloody blue

hell for this. Well, let's get him to the sickbay, you medics."

I didn't stop in the wardroom, I went right to bed; but not immediately to sleep. Oswiak's face was too clear before me.

I've seen dead men more times than one. I've been close enough to dying myself — not only in Miami, not only in the action after the stockade break, but on *Spruance*.

But Oswiak had been *burned* and there is something especially repellent about a man who has died of burns, yards from anywhere, in the middle of a healthy, unsinged stand of crabgrass. It wasn't natural; it wasn't — well, *decent*.

I swore at Semyon when he tried to wake me for breakfast and slept right through until he came back to the room just before lunch. By then, of course, he knew as much as I did — he and all the rest of Project Mako, all the more because Commander Lineback had put out an order-of-the-day placing the whole subject under top-secret classification.

Naturally, that insured that every officer and rating on the project had to find out just what it was that was secret. But it made it possible for me to duck discussing it with Semyon, who had a somber interest in such matters.

IT WASN'T much of a work-day for me. I went down to my workroom after lunch, but I wasn't there half an hour when the usual rating appeared with the usual compliments-and-get-the-devil-down-here from Lineback.

This time, for a novelty, he seemed almost sympathetic. "I've been talking to COMCARIB. You're in trouble, Moeller."

"Yes, sir," I said.

"That's nothing new, eh? Well, you're right. I've had you on this carpet before about using Giardano to get in touch with your wife and that's what you're in trouble about today. However, I'm sorry to say that you're in a little more trouble now."

"Yes, sir."

"You damned young fool!" he exploded. "How does it feel to know that you've killed a man, Moeller?"

That startled me.

"Killed —"

"Or the next thing to it. You saw him last night — Oswiak, with his throat burned out."

"That's not fair, Commander! I —"

"Shut up, Moeller." He got control of himself. "You didn't do anything on purpose, no. In fact, you don't do much on purpose ever, do you? You blunder into things. Like you blundered into

this one — and killed off a CPO."

He added moodily: "Ah, the hell with it. I just called you in here to tell you what COMCARIB said. *If* those burns are a Caodai secret weapon — there's small doubt of it, Moeller — there's evidence that they are linked with ESP transmission. From Project Mako, I guarantee, there has been absolutely no ESP transmission. Except once — not from here, but from Miami, when I didn't have my eyes on you for a moment — and that transmission was from you."

THERE was more. He reamed me out and through and up and down, but it didn't hurt very much because I was numb. I did not enjoy the thought that, however stupidly and unwittingly, I had helped the Cow-dyes kill an American.

"— there won't be any court-martial," he was saying and I focused on him again. "But you deserve it, Moeller, and I want you to know that from here until you leave this base, I'm watching you."

That seemed to be that. I said, "Yes, sir," automatically, and saluted, and turned to leave.

But he wasn't quite through. "One more thing," he said, his expression unreadable. "I picked up a piece of information that you might be interested in. You

were on *Spruance* before you came here, weren't you?"

"Yes, sir."

"Then you might be interested to know that this burning gizmo the Caodais have has just been tested out on a submerged vessel. The Caodais are probably pretty happy, because, according to a burst transmission COMCARIB intercepted, it works. The whole engineering section of the sub died at once and the sub hasn't been heard from since." He looked at me levelly. "It was *Spruance*, Moeller."

I had thought I was numb, but I wasn't numb enough. I was out in the anteroom, ignoring Giardino sitting there reproachfully, waiting for his own turn under the lash, before it occurred to me to wonder if I had saluted.

Spruance was sunk.

And I was tending cows and pushing buttons in a featherbed project ashore.

THERE had been big doings down in the bay for a couple of weeks, but we had been warned to keep our noses out of it. Something had been floated in on a moonlit night, guarded by a patrol boat, convoyed by two little Diesel tugs; and a huge tarpaulin tent had been erected over it, and Navy mechanics had been hammering at it day and night.

They weren't our own mechanics; they were flown in in shifts, and flown out again, even for mess.

Semyon and I strolled down one evening after work, but a husky seaman with a rifle leaned out of a cluster of palmettos and halted us. We didn't argue; I heard the snick of the bolt on his rifle, and we turned around and went home.

"Very silly procedure," Semyon said angrily. "They might have shot us!"

"I think they would have," I said. The seaman had looked very businesslike.

"Barbarous!" raged Semyon. "In Irkutsk, such a thing would not be. Ah, Logan, you Americans have not yet learned the proper conduct of a war. In *Krasnoye Armee*, when I was a cadet at the Suvorov Academy and —"

"I've heard," I said. "And what is *Krasnoye Armee* doing these days?"

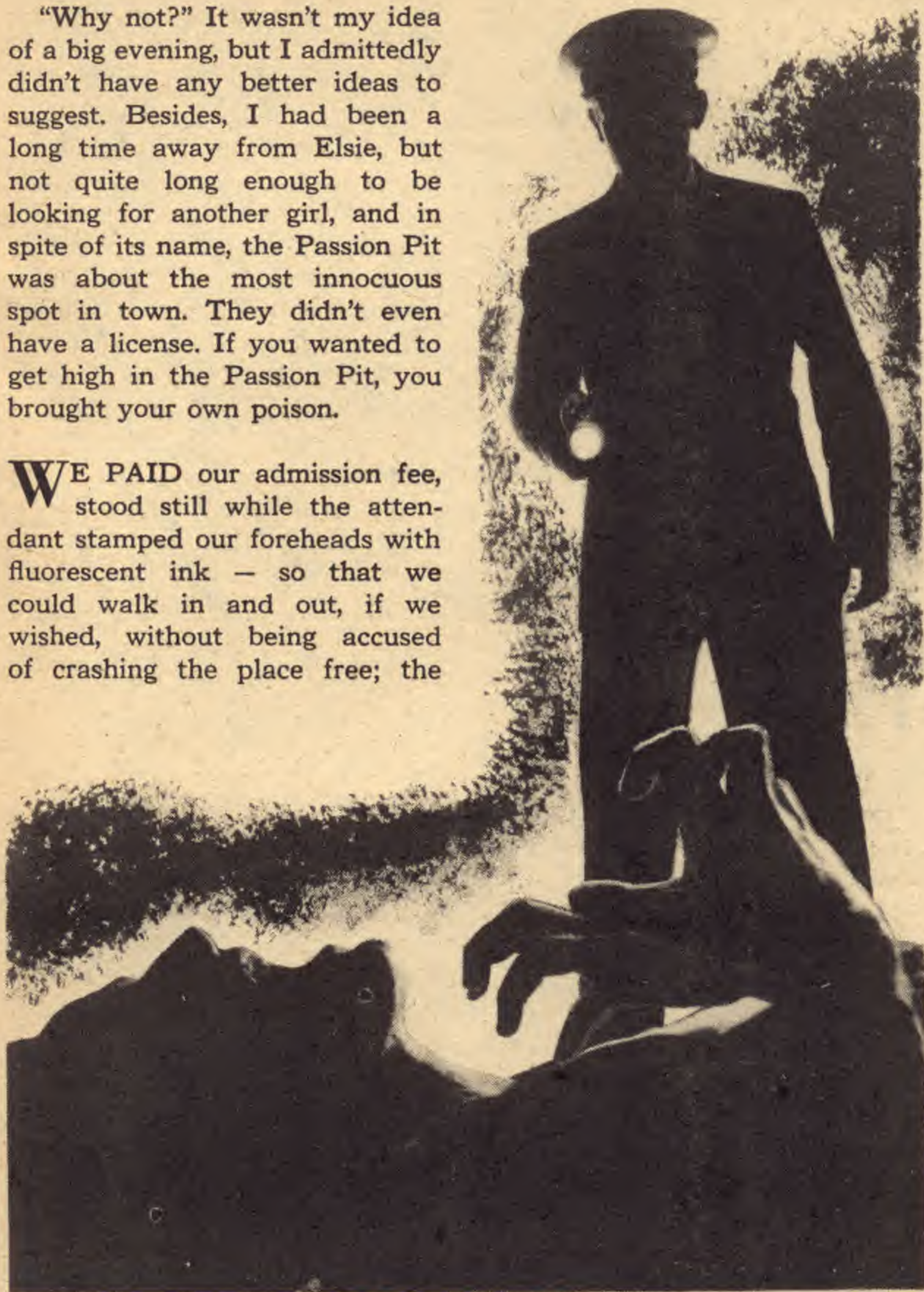
"Oh, granted!" Semyon agreed cheerfully. "You beat the ears from us; we lost. True. But, Logan, we lost so well!"

"Let's go into town," I said disgustedly.

We took a 'copter to Boca Raton and wandered around at loose ends. "Let us visit the Passion Pit," Semyon suggested eagerly.

"Why not?" It wasn't my idea of a big evening, but I admittedly didn't have any better ideas to suggest. Besides, I had been a long time away from Elsie, but not quite long enough to be looking for another girl, and in spite of its name, the Passion Pit was about the most innocuous spot in town. They didn't even have a license. If you wanted to get high in the Passion Pit, you brought your own poison.

WE PAID our admission fee, stood still while the attendant stamped our foreheads with fluorescent ink — so that we could walk in and out, if we wished, without being accused of crashing the place free; the



UV spotlight at the door showed who had paid admission and who was merely hopeful of getting in for free — and sat down to watch the floor show.

“We should have brought a couple of shots,” Semyon grumbled. “It is not fun, just sitting here. If I wish to see cows cavort, there are plenty at Proj —”

“Shut up.” It wasn’t only that I wanted to keep him from mentioning Project Mako by name, though we’d had pretty stiff orders about that, but the chorus girls were near enough to hear and one of them was glaring at us.

“All right. But we should have brought a couple of shots.”

I shrugged. Semyon didn’t pop and I didn’t drink — we’d had arguments about it — but there wasn’t any sense discussing it with him. Anyway, the Pit was filling up and if we went out for a shot, we wouldn’t be likely to get our seats back.

The Passion Pit wasn’t anything like a pit, really. It was on the beach, looking out over the ocean.

Only the size of it and the way the crowd acted on a busy night gave it its name. I suppose seventy-five people could have fitted into it comfortably. On a dull Monday, it usually held a hundred. The tables were more

than merely close; they almost touched each other, and where you fitted in your chairs was your own problem.

Semyon nudged me and pointed.

He had a thunderhead scowl and I saw why. Over against the wall, decorously eating in the midst of the uproar, ignoring the band blaring in their ears and the chorus line kicking past their noses, sat Commander Lineback and a dowdy middle-aged Wave jaygee.

“Even here, he follows us!” hissed Semyon.

“Don’t mind him,” I said. “Who’s the woman?”

Semyon pursed his lips. “You have never met the officer his wife? A very charming lady — almost as charming as this who comes now!”

He swiveled his chair around, eyes gleaming, completely forgetting about the commander and his wife. The feature stripper of the evening was making her appearance. She was new, but I had heard of her — she was actually a commissioned officer, which meant talent a good cut above the usual level of the Passion Pit, most of whose entertainers were lucky to make CPO. I flagged a waiter and ordered beer — the best you could do in the Pit — and sat back to enjoy myself.

But the three-piece "orchestra" had just begun the slow, deep-beat number that the stripper worked to when fireworks began going off outside. Sirens blared and search beams lashed the sky, and shots and signal rockets and more commotion than New Year's Eve in a madhouse.

Semyon said something startled and violent in Russian and we craned our necks to see out the window.

SOMETHING was going on down at the beach, but we could not see precisely what. "Let us go look," Semyon proposed gleefully. "Perhaps they have caught a patchifist."

"Pacifist. But I just ordered a beer and the show —"

"Logan, there is no show," he said severely. He was right; the stripper was standing at the window, staring out, and the musicians were right behind her. It was more exciting outside the Passion Pit than in, at that. Half the population of the town seemed to be beating the waterfront. "Let us look!"

We joined the throng beating its way down to the scene of the excitement. It was a fine, warm night, smelling of hibiscus and decaying palms, not fitting for so much turmoil.

"Patchifist, patchifist!" Semyon was bawling.

Whether he was the first to have the idea or not, I cannot say, but in a moment it seemed that the whole town was screaming: "Lynch the dirty pacifists! String 'em up!"

It was a frightening exhibition of mob violence, erupting out of nothing, driving remorselessly to a bloody goal. I had seen a lynching like this one once before, back in upstate New York, when ten square miles of countryside converged to dip one man by his heels into his own cistern. It turned out later that the original trouble had been over land and the man was no more a pacifist than you or I, only a queer, morose sort of recluse from the city, but that must have been little enough consolation to him when the rope broke.

Not that I doubted that pacifists, and dangerous ones, really existed, but there had been no pacifist up there in Barton.

And there was none here. The crowd surged to the water's edge and stopped.

In a writhing heap on a baggage cart, covered with a blanket, was a casualty of the cold war. A medical Army colonel was beside him, methodically injecting a series of drugs into an arm that was held by two sick-faced men. The injured man was unconscious and he wasn't screaming, but he was in pain.

Someone in authority was questioning the colonel. The medic shrugged without looking up. "I don't know," he said. "Obstetrics is my specialty, but I think he'll be all right. No, I don't know what did it. He was on harbor patrol, es —"

He looked up and a curtain descended over his face. "You'll have to ask somebody else," he said shortly. He waved at the fireworks out over the water. "They've found something, that's all I know."

They had found it, all right; there were more light Navy vessels, mostly high-speed hydrofoils, skimming over the water than I had seen since the Fleet exercises. The show went on for half an hour before we found out just what it was that they had discovered.

THEY brought him in on an airscrew hydrofoil, zooming up to the landing, stopping short as the screws were reversed, sinking down on the foils to its hull-lines just at the dock — a real hot-pilot operation. Semyon and I had pulled rank to get onto the landing itself and we were right there when the hydrofoil's crew handed him up.

He was a little fellow, not more than five-two or thereabouts, brown-skinned and olive-eyed. He was dead. He wore

breathing gear and frog flippers on his feet, and around his waist was a whole assembly line of weapons and equipment.

It was the first Caodai I had ever seen dead in that way. But it was not the first body I had seen, pitted and scarred, looking like the bottom man on a pile of football players, run over by a team with white-hot cleats on their shoes. When I saw the wounds on the Caodai frogman's back and neck, I knew what had been wrong with the injured man at the waterfront. He had lived, but the Caodai had not, any more than the CPO at Mako had.

Secret weapon? But if the Caodais owned it, how had it destroyed one of their own men?

We never did go back to the Passion Pit. It didn't seem like a good idea any more. We went home and to bed; and the next morning, Commander Lineback had me in his office again.

"I saw you on the raft last night, Moeller," he began heavily and I braced myself for what might be coming. He passed a hand over his face. "I don't know, boy," he said querulously. "I don't think there's anything wrong with you. Heaven knows I don't think you're a Cow-dye spy or anything like that, but why is it that whenever anything goes wrong, you're always right there on the scene?"

"Sir, Lieutenant Timayazev and I were in the Pa —"

"I know. I saw you." He shook his head and said kindly: "Look, Moeller, will you just try to stay out of trouble for a while? I've got work for you."

"Yes, sir, but —"

"Forget it." He pressed a button and a rating came in with what looked like an old-fashioned pilot's helmet, one of those close-fitting things with earflaps that the old open-cockpit boys wore as a badge of office, except that this one seemed to be woven of shiny aluminum.

"Try it on," the commander invited. "It's for you."

I put it on without comment. It squeezed my ears a little, but it wasn't too bad. Lineback half smiled. "It doesn't do much for your looks," he observed. "We'll see if it helps keep you alive."

"Alive, sir?"

"You saw that Cow-dye last night."

I swallowed and looked at the helmet again, turning it over in my hands.

"Put it back on," he ordered sharply. "Until further notice, you'll wear it twenty-four hours a day, every day, all day. That's an order."

I put it back on. "Why me, sir?"

The commander lit a cigarette and waved out the match. "I think I told you that the weapon is linked with ESP. You've been esp-sensitized. *Every victim so far has been sensitized.* COMCARIB thinks that means that if you haven't been sensitized, you aren't susceptible to the Cow-dye weapon — whatever it is. You'll find a lot of these hats on the project, starting today. You're the first."

"Thanks," I said. He glanced at me and I added, "Sir."

He said mildly, "You did see see that Cow-dye, didn't you?"

I had, and if the aluminum hat would keep me from looking like that, I would wear the aluminum hat. But something was bothering me. "If it's a Caodai weapon, sir, how come it hit him?"

Lineback shrugged. "Maybe COMCARIB knows, but if so, they haven't seen fit to inform me. All I know is that a seaman on harbor patrol — an esper, as it happened — reported detecting Cow-dye ESP off the shore. He alerted the harbor patrol and before they got on the scent, he was slugged with — with whatever it is. Radiation, I suppose. They say he'll live, by the way. I imagine the weapon backfired.

"They couldn't find any trace of a gun or anything like that — maybe it was portable and the Cow-dye dropped it when he was

hurt. Anyway, they're dragging—in five hundred feet of water, so don't hold your breath till they find anything." Lineback shook himself. "Enough of this conversation. I said I've got work for you."

I assumed a posture of attention. "Yes, sir!" I said, trying to look as military as possible. A new batch of animal bright sayings to process through the computer, I thought, or perhaps some pleasant little additional duty with the thermometers. If I had to take that sort of thing to stay in the Navy, I would take it, but at least I would try to be shipshape about it. I leaned forward and picked up the sealed orders Lineback flipped across the desk to me.

But it wasn't like that at all. I opened the envelope and stared in utter disbelief.

I was ordered to assume command of a sea-going fighting ship!

For a moment, I felt as though I were in the real honest-to-John-Paul-Jones Navy again.

BUT only for a moment, because when Semyon and I raced down to examine my new command, we discovered that there had been a few little modifications.

MHV *Weems* was a deep-sea heavy monitor, six thousand tons displacement, nuclear-powered,

armed with twenty homing-torpedo tubes and damned little else. *Weems* was an elderly lady by the time COMCARIB turned her over to me, but monitors of her class had served well and damagingly to the enemy in a great many actions, and she still could have been a command worth having — especially for a jay-gee.

However, COMCARIB's engineers had performed a sort of crude hysterectomy on the old girl.

She didn't look much different, under the tarpaulin tent, but her torpedo racks were empty, the tubes were plugged with steel disks, and far-reaching changes had been made in her propulsion system.

For one thing, four inches of sheathing had been stripped from her reactor. It made a nice economy in weight — *Weems*, from a lumbering snail of a vessel, could now in theory lope along as lightly as a corvette — but it had the one drawback that everybody inside her hull was subject to a wash of radiation all the time the reactor was going.

Semyon looked at me with the roundest of eyes. "Logan, are they making a Kamikaze of you?"

"Of us," I said, grimly enjoying myself. "You're part of my crew."

"I am not!" he yelled. "In *Krasnoye Armee*, is never —"

"It's all right," I assured him. "Relax. In the first place, this old wagon isn't going anywhere. In the second place, if it did, and you and I went with it, we would live up forward in a sealed whaleboat. When the reactor was on, we'd be behind a six-inch bulkhead. The only communication we would have with the main compartments would be over intercoms."

He meditated. "*Otchi khora-shaw*," he announced. "Is all right." He patted the heavy tube-loading gear, still in place because it was too clumsy to take out. "It not bad, this *Weems*," he said thoughtfully. "And you are commander. I congratulate you, Logan."

We toured the ship like midshipmen on their first training cruise. Semyon was delighted with the happy combination of sea and shore duty. We would spend our working days on *Weems*, sleep in our quarters ashore, have our evenings free for the Passion Pit. He had it all figured out —

Almost all.

THE whaleboat which would nominally be our quarters was comfortable enough, though not large. It was similar in design to the scout torpedoes I had piloted when I was attached to *Spruance*, but not as fast and not armed.

Its whole function was to get a part of the crew away in case the monitor was crippled or breached.

There were quarters for three: A "captain's cabin" — mine — the principal distinction of which was a curtain to draw across the bunk, and two uncurtained bunks fitted around the main drive shaft. It would be a little cramped on an extended cruise, but livable.

Something was troubling Semyon. We tramped aft from the sealing hatch to the whaleboat and he cast puzzled looks at the main control board, the fire-control panel, the complicated fighting gear of a deep-sea monitor. COMCARIB's engineers had been busiest here.

Most of the panel had been made fully automatic, run off a modified baby computer; what little could not be automatized had been redesigned. Pushbuttons had been replaced with big, soft-handled throw switches. Infinite-range microverniers had been ripped out and simple on-off two-position toggles put in their place. There could be little grace or flexibility in operating *Weems* with the new controls; power ahead would be "Full" or "Dead Stop" and rudder would be hard right or amidships.

But it would go.

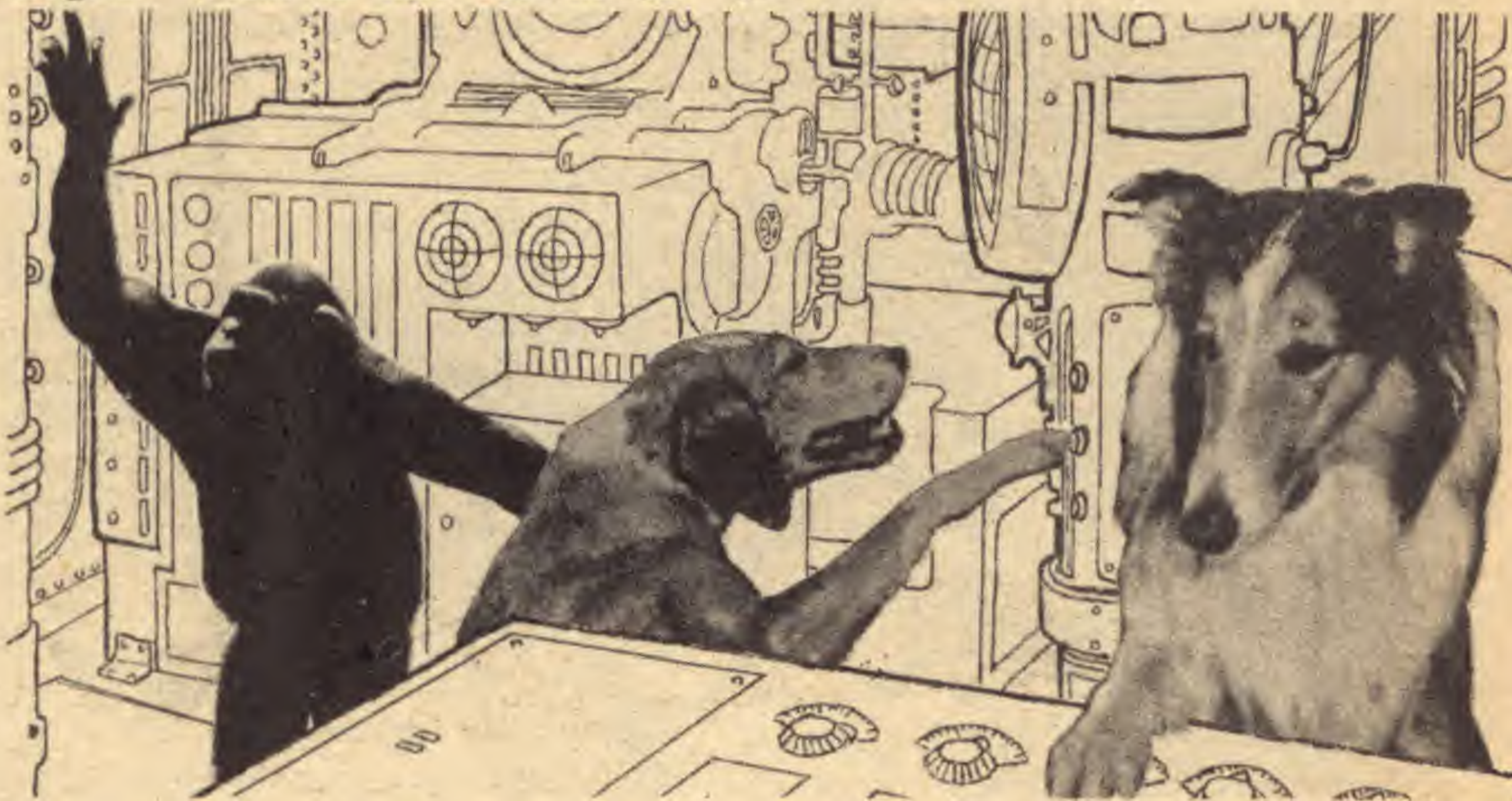
Semyon started to ask me a question a couple of times, but

frowned and stopped himself each time. It was only when we came to where the crew quarters should have been that he exploded.

"Logan," he said accusingly, "there is something here which is not right! Where are the bunks, Logan? What is this canvas on

stared, blinked, read again. Then he looked up at me. They say Russians are very emotional; perhaps that is why his eyes seemed dark and almost wet.

His voice was strained. "We are Judases, you and I. Those poor animals!"



the floor, Logan? Why is there no galley on this *Weems*, Logan?"

"You can figure it out," I told him. "You realize this whole area of the ship would be awash with radiation in action."

"Of course! That is why I ask, Logan!"

"Everything so simple, even a child could operate it. Maybe even less than a child, Semyon." He was staring at me. "Now perhaps you know what Project Mako was all about."

I held out the orders and he took them unbelievably. He

X

JUDASES we perhaps were, but the animals didn't seem to mind. We drew a full complement for *Weems*: Three dogs, including Josie, two small apes and a seal. The seal was not physically present — she stayed in the pool up in the Project area, but if *Weems* or anything like *Weems* ever put to sea, she would go along.

On an actual strike, it wouldn't be both the dogs and the apes, but one group or the other. In

our dry run, one of our principal missions was to find out which could operate a submarine better. The apes had manual dexterity, which was helpful, but in the sheaf of preliminary studies Lineback threw at me, it turned out that the dogs had more tolerance

poisoning, he wouldn't know it. Being an animal, he wouldn't ever know it, until he dropped dead—but that would probably take weeks.

The seal was somebody's bright idea and I could see that she might be the most useful of all.



for low-level radio activity, which might be more important.

THE reactor was not completely bare, of course; it had a stripping of some light metal around it, filtering out gamma radiation and some of the other byproducts.

But neutrons, for instance, floated right through.

With the light sheathing, being within range of the reactor meant slow, not sudden, death. And for the first part of the time the subject was dying of radiation

Imagine a seal, trained to follow orders, carrying a leech bomb to a cruising Caodai ship!

It wasn't that they couldn't detect her — but supposing they did detect her, what would they do about it? They weren't going to blow every fish, whale and dolphin that came within range of their sonars out of the water — and our seal would look like any other seal, except for what she carried. It was extremely doubtful that they could recognize that in time to do them much good.

Working with the seal, in fact, was child's play. All we had to do was to run through enough of a vocabulary to explain to her that if she swam to the object that was shown to her and pushed the big metal disk, she would get a fish — and prove it to her with a few fish.

She would be one surprised seal, though, when she pushed the big metal disk in an actual operation.

SEMYON got a fit of the giggles every time he saw me trying to take a shower with my aluminum helmet on my head. On Lineback's orders, I kept my mouth shut about what it was for, but as Lineback had promised, they began cropping up all over the base before long. Kedrick was the second man to turn up with one; then three or four of the other officers, including the Waves; then the enlisted personnel — apparently on the principle that they were comparatively expendable.

My own Wave appeared at the keyboard of the computer one morning with a feminine-styled model perched on the back of her head. It was smaller than mine, apparently a later issue — which, considering that mine was no more than three or four days old, indicated a pretty high priority in project development. Evi-

dently the burns were causing more trouble than the newspapers reported.

And by then, of course, the reason for the helmets was an open secret.

Semyon's feelings were hurt. "I have not enough brain then? The Orientals cannot vector in on the little brain of Semyon Timayazev, the son of a disciple of Pavlov? Hah!"

He was moody about it for days, until we got a shipment of helmets of a new size and shape. *Then* he was utterly crushed — the new helmets were for our dogs.

I tried to explain to him that it was a matter of ESP sensitivity, not intellect, that our work with the dogs might have made them susceptible. But you cannot tell a Russian anything once he gets an idea fixed in his brain, and for some little time after that, Semyon was of no use to Project Mako. All he could do was stare unhappily at the dogs.

But the work proceeded.

I pushed myself pretty hard, because along about the time I got my first command, I received a letter from the Red Cross.

"Lieutenant Moeller," they said, "we regret to inform you in answer to your request of 28 June that we are unable to establish contact with Elsie NMI Moeller, Signalman 2/C, last known to be

interned at AORD S-14, Zanzibar, due to current security restrictions in force. Application has been made for permission for a Red Cross representative to visit her for the purpose of ascertaining her welfare, in line with your request. However, we must inform you that there is a backlog in excess of fourteen hundred such applications. None have been granted."

So I pushed myself hard and the animals and Semyon harder still.

THE hull of *Weems* began to smell like an old goat barn. "Trained, these animals!" Semyon complained bitterly. "They are not even houses-broken!"

But that had little to do with their military occupational specialty. The chimpanzees were named Clara and Kay, both females, both young and friendly; they caught on to what we wanted of them quickly enough. It was a spectacular sight to see Semyon, vocabulary sheets in his hand, chattering and posturing at the apes, but it got results.

I found out very quickly that there wasn't any such thing as a conversation with an ape. You could stand there and tell it the chimpanzee symbols for, "Loud-noise. Hurry. Grab-that-thing. Pull," and it would merely look at you, head cocked far over on one

side, brown ape eyes staring vacantly. And then it would scratch and scamper away. But then the crash-dive bell would sound and Clara or Kay would leap up from her flea-hunt and jerk open the manual main-tank valve as skillfully as any twenty-year submariner.

I don't mean to say that they never talked back—often they would object and tell us that they wanted a banana or a shiny ball or a handful of mealworms. But there was little predictability in their responses.

The dogs were another matter entirely. Their main problem was garrulousness. You would explain to them, say, a complicated course-correction maneuver and they would bark, growl and semaphore the whole thing back to you. And they wouldn't repeat it just once; they would tell you the whole procedure two or three times, and then come up and put their forepaws on your legs and mention a couple of the high-spots, and tell you about the fire-control drill they had done the day before, with emphasis on how High-Shiny-Lever was *not* the same as Little-Thick-Lever, even though both of them had to be pulled sharply outward.

Semyon was astonished. "Oh, that Mamushka should not see! Observe, Logan! They chat like diplomat's wives!"

IT was true enough; when we left them in a simulated abandonment-ship, retreating to the whaleboat and communicating with the animals in *Weems* proper only through the telecom, they chattered at each other. Since a very large proportion of canine vocabulary is aromatic, that contributed to the soggy state of *Weem's* interior. Fortunately, those sections of their vocabulary — though of paramount interest to the dogs — had nothing to do with ship-handling, so it wasn't necessary for us to duplicate them.

The biggest hitch in communicating from the whaleboat was that we were living a lie and we knew it. It was all very well to dry-run the animals from the whaleboat, in communication by means of the telecom, but in actual combat we would not be so fortunate. Water bars microwaves; communication is possible, but only by sonar beam, and that presents a real challenge to a telecom.

But not one which COMCARIB refused. Early one morning, the engineers were back, ripping out all our communication equipment and replacing it with something complicated and new. Semyon and I sat on the shore, playing with Josie's puppies and waiting, and the whole business was noisily but speedily installed in an hour.

The engineer from COMCARIB mopped his brow and explained it to us, sweating. "It's a sonarvision installation and Flag Section thinks it ought to do for whatever kind of lash-up you guys have got here."

He looked puzzledly at Josie and at Semyon and shrugged. "Anyway, it'll give you a two-way picture. But not instantaneous; it's got a slow rate of scan and you can transmit about one full image every two seconds. There's a little bell that rings when your picture's taken. The phosphors in the picture tube —"

From there on, it got deep, but I understood. Instead of radio waves, which the sea would stop, this thing beamed sound waves, which the sea carried beautifully. But because of the slow speed of sound waves, apparently, we were confined to transmitting a series of stills instead of a movie.

When I pounded it through Semyon's head, after the engineers had left, he glowered at me. "But the essence, Logan," he protested, "the essence of the vocabulary is motion and —"

I patted him on the head. "Back to the computers," I said, as kindly as I could.

WELL, we worked it out and if we didn't have perfect rapport with the animals, there were compensations. With practice,

they got almost good enough to ship-handle by themselves, anyhow.

The image in the sonarvision screen wasn't terribly sharp, but by turning up the gain, we got a patchy sort of vivid light-and-dark silhouette that looked awful to me, but which the dogs and apes had no trouble recognizing. The only thing was, they couldn't seem to grasp the notion that the picture of Semyon was the same as the person of Semyon; they would take orders from Semyon in person, but the semaphoring stills only puzzled them.

We ran picture-recognition tests for two whole days and Josie was the first of the dogs to begin to get the idea. I pointed to Semyon and announced his name; I pointed to the photo of Semyon the signal lab had made for us, as contrasty as the screen image, and named it; and Josie got up on her hind feet and leaped over to the photo and licked it. It was like winning the Battle of the Atlantic.

"Good girl," I said in English, because by the time we got the dogs, they had already acquired ten or twenty loan words, like any other reasonably intelligent mutt. And in Dog: "Now. This one. Do."

It was a photo of a cow. Josie stared at it thoughtfully for a moment and then pronounced: "Big—" Well, never mind what the Dog word for "cow" is. But

she got it. I ran through a couple of dozen pictures and she called every one; and when I came to a photo of her puppies, she called each name and, barking the look-at-me symbol, rolled over on her back to display her swollen milk glands.

I took a break, scratching the back of Josie's neck and smoking a cigarette. She said the low, half-voice whine for "Bad smell" once, but only as a comment, not a reproof, and she nudged my cigarette case indulgently with her nose.

I picked it up and opened it. Elsie's picture was inside the lid, taken two years before. I started to tell Josie that this was my wife, but somehow it didn't seem right, translated into Dog, and I contented myself with showing her the picture. She looked at it a little dubiously, tongue lolling out, one paw on my knee.

I didn't think how odd that might look to anyone else until I heard Lineback's voice, scratchy with scorn, from behind me saying: "What are you trying to do, Moeller, make her jealous?"

LINEBACK went through Weems like a homing torpedo through a tube, and in that one half-hour inspection, there wasn't a thing that Semyon and I had been doing that he didn't touch on. He was wearing a sar-

donic expression when he began, but by the time he completed his tour and watched us put the animals through a couple of simple paces, his face was serious and friendly.

"Lieutenant Moeller, Lieutenant Timayazev," he said, "well done. Now I've got a hard question for you. Do you think you can make this thing work in combat?"

Semyon swallowed audibly.

I said quickly: "Certainly, sir."

Lineback looked at me thoughtfully. "You're pretty salty," he said and I couldn't tell whether it was approbation or not. "Well, you may get the chance. You'll have orders tomorrow." He reached over to pat Sammy, our wire-hair.

Sammy glanced at Semyon, who told him: "Boss. All right here."

Sammy whined. You could translate it as, "Well, if you say so," and suffered Lineback to pat him.

Lineback shook his head. "That business with your hands and the growl—you were talking to the pup."

"That is correct, Commander," agreed Semyon proudly. "I translate it like so—"

"Never mind," said Lineback. "I don't know, it seems to me things were simpler before this idea got started." Sammy was act-

ing ill at ease, so Lineback let him go. "Dogs usually like me. Been getting along with animals all my life. I suppose once they get in the habit of conversation with humans, it changes their attitudes a little."

"That is so," Semyon nodded eagerly. "One picks up a little of culture from the other; it is a phenomenon well known. You will find it in the papers of my mother, who worked with Pavlov."

"No doubt," said Lineback drily and got up to look for his hat. I got up with him; he had left the hat at A-Hatch and—

"Sammy!" I yelled. The terrier, surprised in the act, looked around at me. I rescued the commander's hat just in the nick of time.

Commander Lineback, I will say for him, rose to the occasion. He looked at me for a speculative moment, then smiled slightly. "I see," he said impassively. "Well, you won't have to translate that for me. Good day, gentlemen."

And he left, leaving Semyon and me staring at each other in horror and relief.

XI

SO we found ourselves on orders. It wasn't Lineback who handed them to us. It was a special courier-officer from a higher

command and it wasn't even COMCARIB that wrote them, though it had COMCARIB's humble and instant endorsement. But the orders were signed "By command of COMINCH" himself and the courier was a full commander of the line.

Semyon was awed. "It is big, Logan," he said portentously. "Did you observe? He shares your tastes in hats."

"I observed," I said. The commander had worn the aluminum skullcap under his regulation dress cap, a style which was becoming fashionable.

We broke the seal on our orders and read them hurriedly. They explained very little, only that we were detached from Project Mako as of 0800 the next morning and were to proceed without delay to a port on the Florida Gulf coast for assignment.

That was all my orders said. Semyon's had one extra paragraph—directing him to bring with him certain "experimental animals covered by Reference COMINCH KT-41-611-MAKO and COMINCH KJA-41-1845-MAKO, specifically one (1) bitch, two (2) dogs, two (2) apes, small, female, and one (1) seal."

The orders were headed **MOST SECRET** and consequently it was inevitable that everyone we saw on Project Mako stopped us to

say good-by. We reported in to Commander Lineback, who made the most sensible suggestion of the day: "Go out and get drunk. It may be a long wait for the next time."

So we headed off base and wound up in the Passion Pit—but not, this time, without shots of our own. When the waiter finally made it to our table, Semyon ordered ginger ale and I ordered chicken broth setups and we got set to enjoy the floor show.

The stripper went through the whole act without interruption and I must say it was worth it. She was a lovely woman, golden-haired, blue-eyed, tall and shapely. She had a figure that no woman deserved and it was incontrovertibly natural; she went to some trouble to prove it.

BECAUSE Semyon made a point of those things, we were seated at ringside and he invited her to our table when she paused right in front of us near the end of her number. I was surprised she didn't have us thrown out. I was even more surprised when, five minutes after she made her last bow, she showed up at our table.

"Lovely," said Semyon sentimentally, looking at her costume. It was civilian clothing, rare enough on a young girl; you could see the fall-away zippers and clip-



pers that marked it as part of her professional wardrobe. "I have not seen many such dresses in your country. May we offer you a drink?" He reached for his flask as I reached for my case; we both held them out at the same time.

"Thanks," she said with a warm smile. "I'll pop, please." Semyon shook his head in sad resignation.

"Mad," he said. "However — waiter!"

The waiter came over and took our orders — the same setups for Semyon and myself, beef bouillon for the girl.

"My name," she said, "is —"

"Caresse O'Nuit," said Semyon promptly. "I have seen the billboards."

"But my *name* is Nina Merriam, Ensign, USWNR."

"Of course," Semyon said humbly. "I am sorry, Nina. It is a much more lovely name."

"Which is?"

"Nina Merriam."

"Is it?" She thought about it. "No, I think you're wrong," she decided. "But it's my real name, so let's use it, shall we?"

Semyon said: "I would use any name that would bring you to me."

She looked at him. "Down, boy."

"Chicken broth," said the waiter, arriving. "Ginger ale. And here's your beef bouillon, Nina. Better take it easy; the old man's out back."

"Don't worry about me," said Nina, and looked at me expectantly. I took out the case again and offered her a choice. She hesitated, then picked a flat green one.

"They're doubles," I warned her.

"So we'll live a little." She popped the pastille into her mouth and swallowed it expertly, dry. She sat for a moment before she took the first spoonful of the chaser. "Good stuff," she said.

I WAS feeling my first one by then, but after all, as Commander Lineback had said, it might be a long time before we had another chance to hoist a few. I took a double, too — but unlike sweet, blonde, young Nina Merriam, I had to wash it down with half the chicken broth.

They say that you don't really get any physical kick out of popping for at least half an hour — it takes that long for the buildup. But I swear I get a tingle as soon as it slides down my throat. Call it psychological and maybe it is, but I can feel my temperature go up, I can see things begin to take on that lovely, fuzzy, dreamy look, I can feel that funny hot tingle go through my body.

Semyon, of course, disapproved. He sat glumly sipping his Scotch and ginger and watched us. "Filthy custom," he grumbled.

"Thank heaven is not found in Russia."

"They used to say the same thing about alcohol," I said dreamily. "'S just a poison, alcohol. Why would anybody want to poison himself?"

"Be easy on him, Lieutenant," Nina broke in, pushing away the balance of her chaser. "I kind of wish I could get as big a charge out of liquor as I do out of bios. I'm getting as fat as a pig on the chasers."

"Oh, no, *no!*" Semyon exclaimed at once, dropping the whole discussion. "I have seen many pigs, Nina Merriam. Truly, there was none of them who was not much, much fatter than you."

"Thanks."

"You are welcome," said Semyon proudly. "You have in no respect a figure like a pig's. Observe that in hog, the middle section bulges out like watermelon. Your middle section is slim — two-hands slim, I estimate. Utterly unlike pig. I have covered waist; now I proceed upward. Pig —"

"No, you don't," said the girl. "Forget about the pigs."

"Of course. But pig —"

"I think pigs are dirty animals!"

Semyon giggled and slopped more Scotch into his glass. "So you say of pig," he observed. "And pig says of you —" And he told her, in Pig, what pigs called humans. It was the same term they

used for portions of their swill; it sounded like a hay-fever patient blowing his nose.

The girl looked suddenly interested. "I didn't know you were a farmer," she said.

"Farmer? Timayazev is no farmer! Logan here and I, we —"

"Semyon! Shut up!" I had been half asleep in my chair, dreamily listening to them, thinking how far away and curious everything was; but Semyon brought me to with a bang.

HE said angrily, "Do not shut me up, Logan! I was not going to speak of Project Mako!"

"You better not," I told him and went back to examining my own sensations.

I was beginning to see things through a haze. I looked down at the floor, where a cigarette was smoldering far, far away. It reminded me to take a drag on my own cigarette, and when I raised my fingers to my lips, there was no cigarette in them. It posed an interesting problem. Cigarettes appeared from nowhere on the floor, cigarettes disappeared from my hands; it was all incomprehensible and suspicious.

Was it possible that the Caodais were up to tricks with my cigarettes? I thought it over and rejected the possibility. The pacifists, yes; that might be it. But it couldn't be the Caodais, because

they were too far away. It had to be pacifists. However, I had a plan to outwit them. It involved bending over and picking up the cigarette on the floor. It took a little thinking, but it was workable; it would restore the balance.

While I was figuring out the details, Nina Merriam said: "How about another round?" and the waiter appeared and disappeared, and new setups were on the table.

"Logan," Semyon was saying insistently. "Logan, why don't you answer me?"

"What is it that you would like an answer to?" I asked him carefully.

"I asked you if I might tell Nina about Josie's puppies."

I touched my fingertips together. "I see. You want to know if you can tell Nina about Josie's puppies."

"That's right."

"Don't interrupt me, Semyon! I'm thinking." I closed my eyes to concentrate. The problem had many ramifications and I couldn't help wondering how Semyon had got onto that subject in the first place. Lineback would throw a tizzy if he knew that Semyon had so much as admitted he'd ever seen a dog. But Lineback, of course —

"Logan!" Semyon sounded mad. "Wake up!"

I opened my eyes and smiled at him forgivingly.

"Well?" he demanded. "Can I or can I not?"

"This is my verdict," I announced. I paused to frame the thing in exactly the right words. I was feeling a little woozy from the double shots, there was no denying it. Not only was I flushing hot all over, but I could feel my skin getting dry and my pulse thudding; it was time to take it easy for a while. I said carefully: "You can't tell her about the puppies. You can tell her about Josie herself, all right, but you mustn't mention talking to her, or the *Weems*."

SEMYON shook his head disgustedly. "Curse this security," he said.

"Don't say anything about our shipping orders, either," I warned him.

"Of course not, Logan! Do you think I am a loose-tongue? Well, Nina, I cannot discuss the puppies, so do not ask me. I won't do it."

I nodded approvingly and closed my eyes to listen better. This time, it was the girl who said, with a touch of irritation: "Wake up, Lieutenant Moeller. The chaser's getting cold."

"Sorry," I mumbled and found my case. She grabbed it, apparently under the impression that I was going to spill its contents. "No need to get excited," I protested.

"You've only got one anthrax left. Maybe you'd better lay off for a while."

I sat up straight. "Help yourself," I said cordially. "Officer of the line can mix his shots. Don't expect girl to do as much."

She took the flat green pastille and swallowed it, making a face as she sipped the lukewarm bouillon.

I took one at random and popped it.

"Hey!" she cried, but I already had it down and was choking on the chicken broth.

"You shouldn't have done that," Nina said worriedly. "Do you feel all right?"

"I feel perfect — *perfectly* fine." It wasn't entirely true and I avoided her eyes, not so much because they were accusing as because they were attached to her face, and her face was moving. I didn't want to look at any moving objects just then. I stared at the ceiling, waiting for the slight tremor inside me to decide to go away.

It didn't.

I took a really deep breath and sat up straight — it seemed hard to stay erect for any length of time — and smiled at Semyon and the girl.

"Dance, Miss Merriam?" I invited.

"There isn't any music," she pointed out.

BUT Semyon responded, even if the girl was a spoilsport. His eyes jerked open. "Dance!" he said. "Timayazev will dance *lesginka* for you!"

"Oh, no, you won't," said Nina Merriam, and between us we got him back in his chair. I had had only one more shot than the girl, but I was frankly reeling and she seemed as fresh as ever. I don't know how women do it. She reminded me of my wife: Elsie and I had pub-crawled three nights a week for half a year before we were married and it was always I who began getting disorderly.

Semyon resisted only briefly. Then he sat back, sprawled in his chair, and smiled lovingly at us. "Good party, Logan," he said.

"The best," I agreed. I sneaked a look at my watch; it was hard to make it out and even harder to perform the necessary subtraction, but as near as I could figure, it was two hours since I had taken my first shot. The anthrax colonies in my system were pretty well established; I had a fine building case of fever and approaching delirium. Any minute now, the second layer of the pastille would dissolve and the antibiotics would take over, cleaning out the bacteria and sobering me up. It was about right, I thought fuzzily, computing the time to get back to base and the amount of sleep I would have before our

transportation arrived the next morning.

And completely forgetting the trouble with mixing your shots. For the antibiotics are specifics; the cores that will sober up your case of anthrax in an hour don't touch pneumococcus or the others. I was in for a double-jointed hangover — still drunk on the second dose while I was being sobered up from the first. I didn't know it and it was just as well.

But I knew it the next morning.

Oh, yes!

XII

“DO what I do,” I told Semyon, who was rubbernecking at the big ships in the wash. He glowered resentfully, but he followed orders.

We stepped into a submersible whaleboat and sat ourselves in the sternsheets while a couple of efficient seamen disposed the crates containing the animals in the cargo space. They were almost all the baggage Semyon and I had between us; the orders had specified strip-ship condition. It meant battle stations; it meant the big-ship Navy and a combat mission; it meant, perhaps, getting somewhere near the east coast of Africa and Elsie.

We boarded *Monmouth*, a forty-thousand-ton carrier, by one of

the three after gangways, and Semyon was so preoccupied watching the whaleboat carrying our animals to a forward gangway for loading that he almost forgot to salute the colors. I nudged him and he looked at me blankly for a moment before he remembered our careful rehearsal. Josie and the apes were easier to train than Semyon Timayazev.

Our quarters were small but comfortable; we shifted into dress blues and reported to the executive officer and were sent immediately to see the captain. I had almost forgotten such niceties of the naval service as the captain's call. I would have felt like the wanderer coming home, only I wasn't feeling much of anything except a queasiness in my stomach and a throbbing like *Monmouth's* main-drive engines in my head.

But I got through the interview with the captain all right and so did Semyon. Having a hangover is not the worst thing that can happen to a naval officer on his first day at a new ship. It tends to make you concentrate on what you are doing.

But as soon as we had a moment to ourselves, we headed for the sickbay and wheedled vitamin shots out of one of the surgeons. He thought it was very funny. They helped, but I did not enjoy the surgeon's prescription for

“helping to re-establish the intestinal flora” which he claimed the antibiotics had pretty well knocked out. It was yoghurt and I forced it down, but I almost lost it again when Semyon cried delightedly: “*Schav!* Please, Doctor — me, too!” and proceeded to swallow a pint of the stuff.

ALL in all, we were in pretty good shape for the briefing at nine hundred hours the next morning, except for Semyon’s worry about his beloved dogs. “Josie, of course,” he told me fretfully. “They understand Josie, she is on the orders. And Sammy is all right, and the apes. But the little puppies, Logan, will they be all right? No orders for them, you know.”

I chased him down to the whaleboat level to look them over.

Before sunrise, we got under weigh. *Monmouth* slipped lines and stood out into the channel — on the surface, since Caodai radar didn’t matter on our initial course in the Gulf. I was on deck in officer’s country as we sailed, feeling useless, with reason. I had no part in the complicated task of getting a war vessel on course.

Faint dawn light was coming up behind us. *Monmouth* blinkered good-by to the harbor monitor through a gentle drizzle and then the hailer gave all of us

idlers the warning, *Stand by to submerge*. I found a spot out of the traffic lanes, near a running port, and I watched through the glass as the deck parties stripped and stowed the outboard gear. They did their job and disappeared in well under sixty seconds.

Monmouth was a taut ship.

There was a hoot and jangling of bells and *Monmouth* slid downward into the water. Green and blue waves bubbled up over my port, turned brackish gray, and then there was nothing at all to see, nothing but a faint sourceless light through the water outside.

I went to the briefing in a thoughtful mood.

I was astonished at the number of officers at the briefing — nearly sixty. The ship’s executive officer rapped his knuckles against the standing microphone and called us to attention.

He looked at us queerly for a moment before he spoke. Then he waved a red-sealed envelope and said:

“Welcome aboard, gentlemen. You’ve all got quarters and you all know you’re on a crash-priority mission, and half of you have been haunting my office ever since we got under weigh. Well, I couldn’t tell you anything. I’ve been in this Navy for forty-six years, and I’ve heard of sealed orders, and I always thought they

were something you read about in books.”

HE slapped the envelope against the mike and the amplified *thud* rolled around the room. “That’s what we got here. Sealed orders. In —” he glanced at his watch — “in one minute, the captain’s going to be opening his copy of these and then we’ll all know what we’re up to. Until then, hold your breath.”

He rocked back on his heels, calmly observing his watch. Then he leaned forward again and I guess we all really did hold our breaths.

He said: “I forgot to tell you, those of you that don’t know it already, that Captain’s Calls are suspended for the time being, so don’t bother me for appointments.”

There was a groan from the sixty of us and he said: “All right, gentlemen. Here it is.” And he stripped the seals off the envelope and began to read.

It was a crash-priority mission, all right. Even the weary old exec stood straighter and seemed to come alive as he read the formal phrases from the orders.

It was — the Glotch, though that wasn’t what the orders called it. Intelligence had come up with the conclusion that the Caodai headquarters for the new weapon was not on the interdicted main-

land, but the island of Madagascar.

Our sortie was to make reconnaissance, to find out what was there — and, if possible, to pulverize it.

“Target Gamma.” That’s what the orders called it — a point fixed with grid markings on a map. Something was there, something which the Caodais were trying as ably as they could to hide. We were going to take a look.

The exec finished reading the orders and folded the sheet.

“Specific assignments will be given out later, by sections,” he said after a moment. “Gentlemen, this has been as much of a surprise to me as to you. But I suppose we all had an idea that it might have something to do with the Caodai weapon. I only want to add one thing to what you’ve just heard. It’s no secret that they have been hitting us pretty hard. Well, it’s been worse than you think. Worse than we can stand, in fact.”

He licked his lips. “Gentlemen, you’re in for some rough times and only a fool would try to tell you that you’re all going to come through them alive. But keep this in mind: This is for keeps. I have it from the captain. If this doesn’t work, the JCS’s next recommendation to the President will be a declaration of war. It’s as serious as that.

"We've got to come through — or else it means the satellite bombs for everybody."

That was that; we were dismissed. We left the briefing room silently, all of us too busy thinking about what the exec had said, and its implications, to talk.

But we were not all thinking of the same implications. I raced from the briefing room to the chartroom, to confirm what I already knew but could hardly believe.

Our target was Madagascar, a long, flat island hanging off the east coast of Africa. And next above it, inches away on the map, another island —

Zanzibar!

And Zanzibar meant Elsie.

SEMYON came chortling to me: "At last we are equals! I have been promoted — I am now considered as valuable as you and the animals!" He displayed what had just been issued to him, an aluminum helmet, protection against the Glotch. The whole ship was being fitted with them.

"We're late," I growled at him and tugged him away to our special section briefing.

I had been on edge ever since I had found out how close I was coming to AORD S-14, where my wife was eking out her days in the monotony of a prison camp. Incredible that I could come that

close to her and not see her! But impossible that I could do anything else! For all of my months on *Spruance*, I had been praying for just such a strike; and now that it was within grasp, it was worse than anything I could have imagined.

So near, I said to myself — and for the first time understood how powerful the ragged, overused clichés of speech had to be to survive so long — *so near and yet so far*.

Our special section briefing was very exclusive — the briefing officer, Semyon and me. He began without preamble: "There will be three waves against Target Gamma and you are in Wave One. There will be three groups in Wave One: Group A, air reconnaissance. That's radarproofed gliders, launched at sea, with infra-red scanners and so on. Group B is intelligence officers — they're Oriental nationals, mostly from Hawaii, I think, for infiltration. Group C is animal penetration — that's you."

HE closed his Plans book with a snap and said: "Your mission is to get your animals as close to Target Gamma as you can and then get them back. You will spend the next seven days rehearsing them. They will have to learn to use small cameras, which they will carry around their

necks, and they will take pictures of *everything* in the area. You two are expendable, but the animals are not — until they've got the pictures, anyway."

I glanced at Semyon. The briefing officer had just sunk *Weems* and my visions of my first combat command. "How are we supposed to get the animals back if we're expendable?"

"We'll establish a rendezvous point where they can be picked up. Frankly, I think you two will get caught. Maybe it will be even better if you *do* get caught," he added callously, "because it'll give the Caodais something to do. You —" he nodded at Semyon — "may get by; you'll have cover papers as a Ukrainian neo-Bolshevik refugee, of which Intelligence thinks there is a small colony on Madagascar.

"But you —" that was me — "are going to have to just stay out of sight. Oh, we'll color up your skin and give you what looks like a prosthetic arm and hope you may pass for a disabled Caodai veteran. But don't count on it. The dogs, remember; they're what's important. Unless there's been a worse security leak than we have any reason to believe, the Cowdyes won't be on to the animal bit."

Going back to our quarters, I thought of the endless days on *Weems*, training the animals to

operate a ship. Was it all camouflage? Were the guiding geniuses behind Project Mako trying to throw dust in the eyes of the Caodais, in case they penetrated our security?

Or was it merely that things had to go tight, and whatever long-rang plans COMINCH had for Project Mako had to be scrapped in favor of this all-or-nothing effort against Target Gamma?

STILL, I thought, looking through the portholes at absolutely nothing — we were fathoms down and running lightless — maybe the prospects weren't so bad. Maybe the expendable unit in this operation — myself — might actually enjoy being expended.

It was all pretty far-fetched, I admitted to myself, but consider: If the Caodais nabbed me, the chances were that they would not shoot me out of hand. True, I would be a spy and they certainly weren't going to pat me on the back and send me home with an ice-cream cone in one hand and a red balloon in the other.

But we weren't at war. We didn't shoot Caodai spies. We arrested them, and tried them, and threw them in jail or in concentration camps.

But would that be so bad — assuming, I mean, that the Caodais were as humane as we? May-

be the punishment would be something like imprisonment in a PW camp. And maybe, just maybe (but still, how conveniently close at hand it was!) the PW camp would be AORD S-14.

Semyon, grown queerly moody, spent most of his time slumped over a chessboard in our wardroom. I offered to play a game with him and his refusal was a masterpiece of tact. Even tact didn't get him out of a game with the duty officer late one night, though, and Semyon trounced him so economically that I realized why he hadn't been greatly interested in playing against me.

I tried to make friends with some of the ship's officers, but they looked on us with something of the attitude Chicago's stockyard workers have toward the cattle.

I did manage to get into a few bridge games in the ship's wardroom, but always with the feeling of being an interloper. And the ship's officers, for that matter, struck me as an eccentric lot, far below the standards of *Spruance*.

The only one I cottoned to at all was a gunnery officer named Rooie, like myself a former scout-torp pilot on a *Spruance*-class cruiser, now on limited duty because of injuries which accounted for some of the three rows of ribbons on his chest. He was salty and amiable, but unfortunately

the other officers of his duty section disliked me on sight.

FOR a few days, it was bearable, because they urgently needed a fourth for bridge. But after we went down five tricks, doubled and redoubled, after I had started with the Pratt convention (opening two-bid to show a void in a suit), my partner threw his cards on the floor. He was an ensign named Winnington, a beefy young redhead, and what he said about my bridge-playing was bad enough, but what he said about me personally made it impossible to stay in the room.

So it all worked out for the best. Semyon and I spent tedious hours with Josie and Sammy, while the chimps asked ridiculous questions and the puppies got in the way; and they were all ready for the big performance. Heaven knows what sense they made out of the answers we gave to their "Why"s, but they knew their jobs.

From Florida, we swept grandly south and east, as our course was lined out day by day in the chartroom. At forty knots—not our best speed, but the one which made the least noise and fuss to alert Caodai sonars—we were clipping off nearly a thousand miles a day.

Each night we surfaced briefly to let the navigators obtain a fix, and for a few moments each time,

half a dozen lucky souls were permitted out on the weather deck, perhaps to see the stars. But not me.

For eleven days, I counted my fingers and thumbs while we went from the Caribbean through the South Atlantic, and into the broad curve that grazed the Antarctic Ocean itself south of Good Hope. And then we were creeping up the eastern flank of Africa — slow and wary.

These were interdicted waters. If we were spotted here, we were dead; at the best, we would have to abort and run. Our orders were to avoid engagement unless it was forced on us, but there was a pretty fair chance that we might have no choice. Consequently the fire-control stations were double-manned around the clock, and we crept under the thermoplane, in the dense Antarctic Deep water, with our fingers crossed.

It was dead reckoning now. The navigators had only the fragmentary charts of submarine configurations to help them get a fix. Surfacing, even for a moment, was out of the question.

The strain was beginning to tell on the ship's crew.

I LOOKED in on Lieutenant Rooie's wardroom. It was like the condemned cell block in the death house. Rooie was there, watching a canned TV program

in a film viewer, and when I tapped him on the shoulder, he jumped.

"Oh, Moeller," he said, but his eyes were hunted and it was a moment before he smiled. "How are you?" He switched off the film viewer. "I don't know what the blasted thing is about, anyhow. Want some coffee?"

He signaled the mess attendant without waiting for me to answer. She was an enlisted Wave, rather attractive-looking from the rear; I didn't get a good look at her face as she went out for our coffee.

Winnington appeared from behind a bookshelf. "Hello," he said, a little stiffly.

"Hi." If he wanted to forget the fracas at the card table, I was willing.

We all sat down and talked about nothing in particular. They were eager to talk, even Winnington. It is an ugly companion, the knowledge that at any time some wandering Caodai sonar beam may bounce off your ship's hull and lead a torpedo to you.

"Your coffee, sir." Winnington took a cup, and the girl turned to me. She was attractive from the front, too; only a seaman-second, but young and fresh-looking. She wore no makeup, but —

But I had seen her before.

When I had seen her before, she had worn quite a lot of

makeup — makeup and little else!

"Nina Merriam!" I said. There was no doubt in my mind; the last time I had seen her, her hair had been a different color; but it was the same girl — the ensign stripper from the Passion Pit.

I stood up so fast that I kicked my chair over backward. "What the devil are you doing here?" I bellowed at her.

Rooie and Winnington were asking startled questions and I filled them in. Their reaction was sharper than mine.

"Spy!" gasped Rooie. "Moeller, you've caught yourself a spy! Look at her — American as you and me, selling out!"

WE took her at quick-march down to the ship's executive officers quarters, leaving Winnington gaping foolishly after us. There was an armed guard at his door. I told him: "Watch her. She's probably a spy. Hold her here while we talk to the exec."

The girl said sharply: "I'm not a spy!" But what else *would* she say? Rooie and I pushed our way into the exec's office, careless of shipboard protocol, and blurted out our story.

We must have sounded like idiots, but nothing ruffled the exec.

He'd said he had been in the Navy forty-six years; I believed every year of it. He stared at us thoughtfully and lit a cigarette.

"A spy, you say." He puffed on the cigarette in an infuriatingly meditative manner. He was past retirement age, the kind of grizzled old three-striper who keeps passing his fitness tests for pure spite, refusing to be put out to pasture. And he kept looking at us.

"Sir," burst out Rooie, "she's right in your anteroom. Why don't you —"

He stopped, just barely in time. Thunderclouds were gathering over the exec. Well, after all, he was the administrative officer for a ship of the line and Rooie was a very junior lieutenant. But the explosion looked as if it was going to be a beaut.

It probably would have been, if we had heard it.

But we didn't. The loud-hailers in the passageway rattled with the klaxon alarm and then the voice from the bridge suddenly and harshly blared:

"Attention on deck! Attention on deck! Bandits in fleet strength detected on intersecting course. Condition Crash Red! Battle stations!"

— FREDERIK POHL

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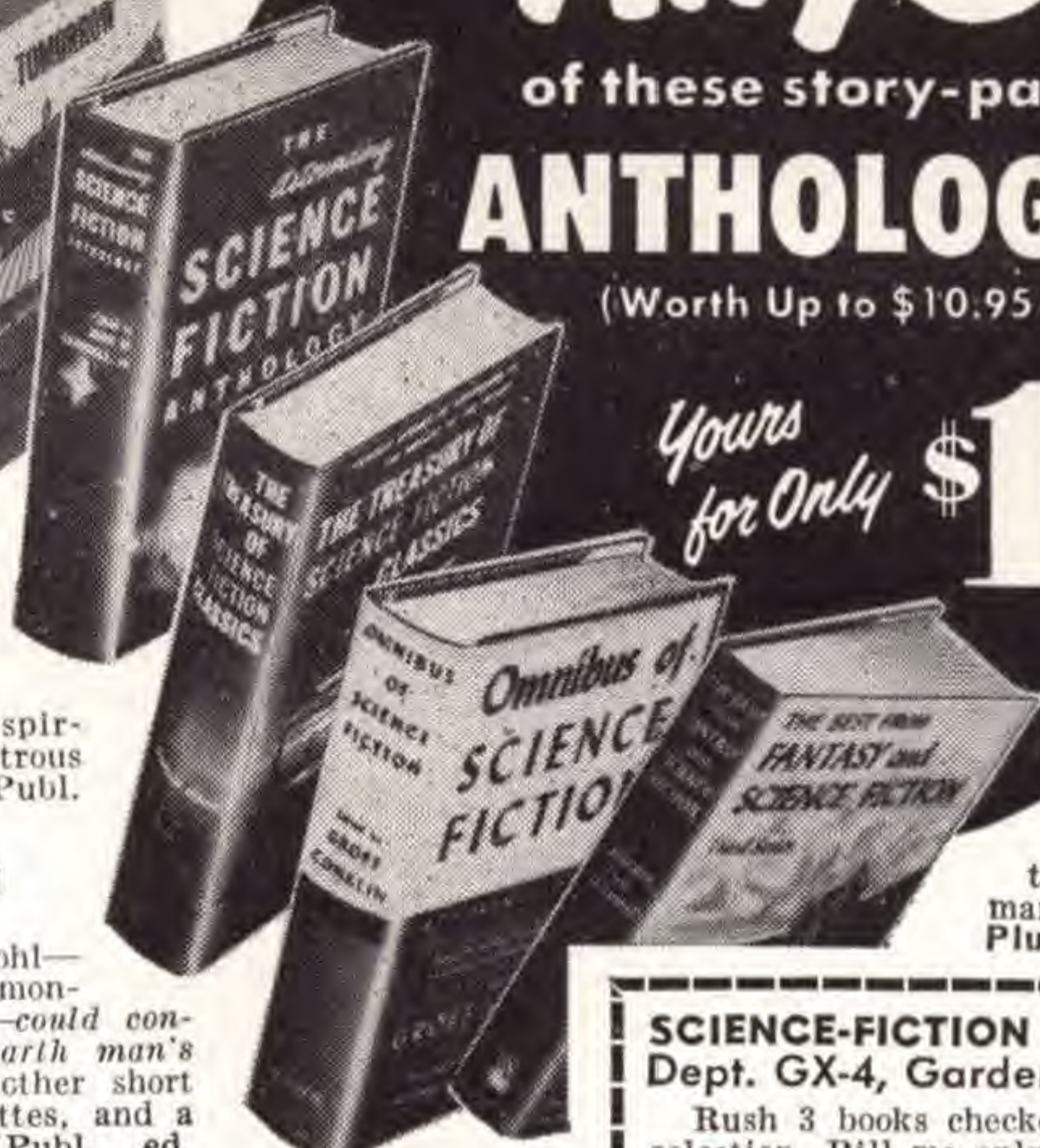
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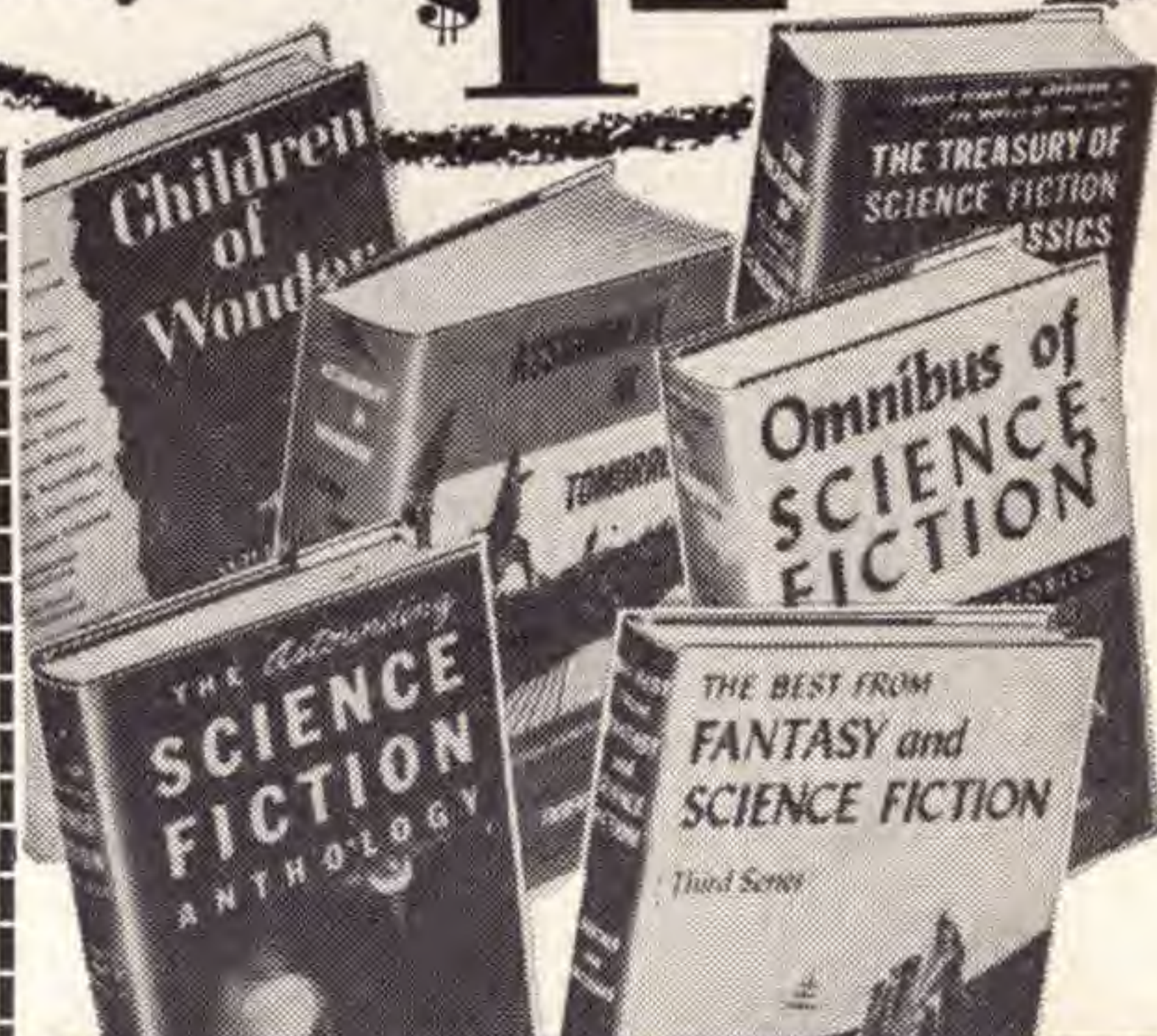
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