

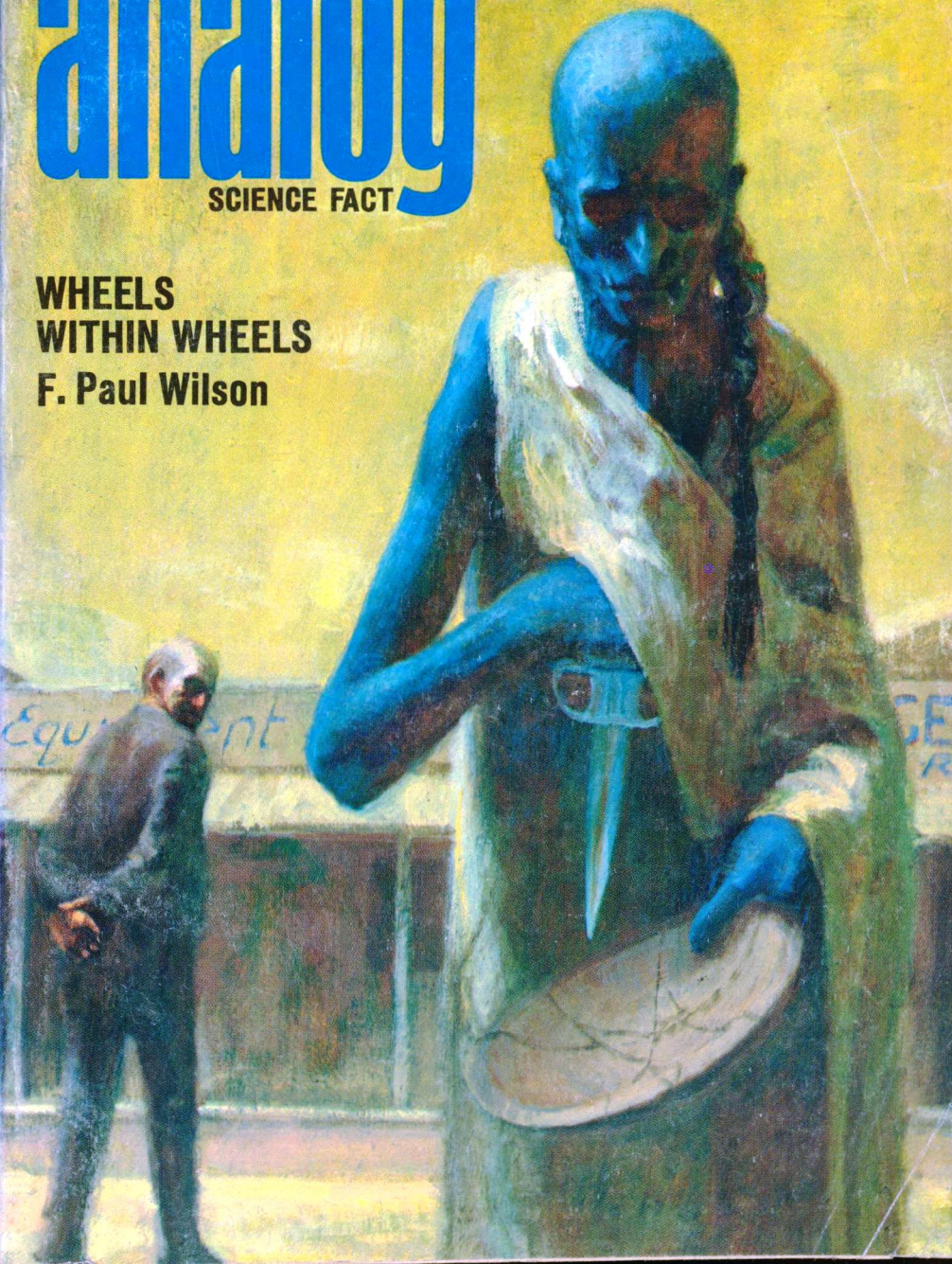
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SEPTEMBER 1971 60c (6/-)

# analog

SCIENCE FACT

**WHEELS  
WITHIN WHEELS**  
F. Paul Wilson



A black and white photograph of a forest. The trees are mostly bare, suggesting a fire-damaged area. A sign is attached to a tree trunk in the center. The sign lists various activities that are prohibited in the area.

**NO CAMPING  
NO SWIMMING  
NO HIKING  
NO RELAXING  
NO FISHING  
NO HUNTING  
NO RIDING  
NO SIGHTSEEING**



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# ANALOG

SCIENCE FICTION SCIENCE FACT

VOL. LXXXVIII, NO. 1/SEPTEMBER 1971

NOVELETTES

WHEELS WITHIN WHEELS, F. Paul Wilson..... 8  
 THE FINE PRINT, John T. Phillifent..... 103

SHORT STORIES

TO MAKE A NEW NEANDERTHAL, W. Macfarlane ... 135  
 KNIGHT ARRANT, Jack Wodhams..... 141

SERIAL

THE LION GAME, James H. Schmitz..... 62  
 (Part Two of Two Parts)

SCIENCE FACT

STRONG POISON I, Carl A. Larson ..... 50

READER'S DEPARTMENTS

THE EDITOR'S PAGE ..... 5  
 THE ANALYTICAL LABORATORY ..... 134  
 IN TIMES TO COME..... 139  
 THE REFERENCE LIBRARY, P. Schuyler Miller ..... 162  
 BRASS TACKS..... 168

One of the great Causes obsessing a lot of fanatics around the country is the Terribly Important matter of Ecology.

The following brief notes are offered in the hope that some of the Deeply Concerned members of that cult will become instead a bit more on the deep-thinking, as well as caring, side.

Basic proposition: Instant Experts are predictably like mutations; the odds are 999,999 to 1 that they'll be destructive in their Instant Answers.

There is nothing you can do that has *only one effect*; everything has side effects, bugs, complications, kick-back reactions and/or catastrophes built in.

The typical performance of the Instant Expert with Immediate and Simple answers, is to demand that the clear, simple and obviously necessary answer he's come up with *must* be implemented *right away*, and any reluctance to do so is proof of evil, selfish, greedy, or tradition-bound motives. The possibility that

reluctance to use the shining, wonderful, simple new answer may stem from caution, and the recognition of the fundamental principle of You Can Never Do Just One Thing—fundamental, because it's the basic law of *real* ecology!

One simple example is heroin. Heroin is the Instant Answer to the problem of feelings of inadequacy, worry, and how to achieve a feeling of happiness and security. It definitely works, too. It demonstrably *does* make one feel warm, secure, happy, and competent.

The side effects can be ignored for now—we'll cross that bridge when we're ready, and besides, "I'm not gonna get hooked!"

Ralph Nader & Co. had one instant answer for the automotive manufacturers: he and his followers demanded the *immediate* installation of "energy-absorbing steering systems" in cars, *right now*. No more of this shilly-shallying and "It's not ready for use," delaying tactics allowed!

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## Ecological Notes

EDITORIAL BY JOHN W. CAMPBELL

GM yielded to the public clamor and installed it in some of their cars.

It wasn't ready. The engineers had said it wasn't ready—that it hadn't been adequately tested and debugged. But Nader's dedicated followers knew better—they knew GM was holding back because of rock-headed traditionalism, lack of care for the people who rode their cars, and because it would cost money to build the new systems.

So the early installed-immediately-and-no-stalling! equipment proved to have some slight bugs. Like breaking the steering shaft if the front wheels hit a curb a bit too hard in parking.

All hail the victory of the Do It Right Away boys!

Then there is the great Concerned Ecologist (Instant Expert division) drive to get phosphates out of detergents, to stop the destruction of our lakes and streams, because they knew that phosphates in the sewage got into the waters, caused a great bloom of algae, which wound up depleting the waters of oxygen, and killing off nearly all the fish.

I fell for that one myself, being guilty of a false assumption: I assumed the biologists had actually done their job, and had actually made studies before blowing off their mouths in public.

This led to a great to-do about getting phosphates out of detergents, and major companies spent quite a few millions developing some kind

of alternative to the use of phosphates that would be maybe half as effective. Their best bet was a complex derivative of cyanide—a nitrogen compound—that, while it wouldn't do the job alone, could do the job with about a quarter as much phosphate as before. Plants to produce the nitrogen complex were built, and production started . . .

And then some studies were started on the biological degradation products of the complex—which turned out to include some interesting carcinogenic substances.

Unlike the phosphates, the nitrogen complex put a carcinogen in the streams and lakes; instead of getting algae, we got cancer-causers instead.

This quite abruptly dimmed the interest in the nitrogen complex. The latest Instant Answer was proving to be not quite so wonderful as the Instant Experts *knew* it was.

So now they were back to Square One?

No, because about then somebody had actually done his science homework—actually studied what caused the blooms of algae, and eutrophication of lakes. Turned out the algae had *not* been hungry for phosphates—it was lack of available nitrogen compounds that limited their growth. Phosphate detergents couldn't stimulate their growth; there was enough phosphate present anyway. It was nitrogenous material they needed—you know, something like that nitrogen-based replacement

for those terrible phosphate detergents. The combination of phosphate and plenty of that nitrile complex would have been just the thing to *really* give the algae a boost!

In the meantime, a number of thoughtful two-bit companies had jumped into the breach, nobly offering "low-phosphate" detergents that all good Concerned Instant Ecologists were practically required to buy. One of these noble new detergents—Ecolo-G—turned out to be approximately fifty percent good old NaCl, plain salt.

It was definitely low-phosphate. And it wouldn't contribute a bit to the growth of algae in fresh-water ponds and streams. And besides, salt's a lot cheaper than suitable polyphosphates.

Incidentally, that sort of material is published fairly promptly in the technical journals, and the industrial trade journals (such as *Chemical & Engineering News*, the American Chemical Society's weekly newsletter) but is remarkably slow in appearing in any of the Concerned Liberal Press media.

Who, of the Concerned Instant Ecologists wants to get the news that he's been running hard, shouting loudly, in the wrong direction? That sort of thing is very bothersome to Instant Experts. Why bring it up in public?

Then there's the problem of low-lead gasolines.

This one was a slightly different problem, coming in two or more stages. Here the basic motivating problem was a real-pollution problem—not an hysterical-pollution problem. The worst of all the real-pollution generators is the automobile engine; it pours off highly toxic nitric oxides, carbon monoxide, lead bromide fumes, and partially oxidized hydrocarbons which produce extremely irritant "photochemical smog."

Except for the lead bromide fumes, which are the breakdown products of the anti-knock solution added to the gasoline, those pollutants are all the result of non-equilibrium combustion reactions. If the combustion in the cylinders lasted for seconds instead of milliseconds, and a fully adequate air supply were available, the CO would go to CO<sub>2</sub>, the unstable nitrogen oxides would break down to oxygen and nitrogen, and the hydrocarbons would complete their oxidation to CO<sub>2</sub> and water.

If the exhaust fumes are passed over an effective catalyst, with an admixture of adequate air, they can be made to reach equilibrium, and harmless CO<sub>2</sub>, H<sub>2</sub>O and N<sub>2</sub>.

BUT—catalysts (the most effective being platinum metals) are rapidly poisoned and rendered useless by lead and bromine.

Therefore to make catalytic pollution-eliminators workable, the lead had to be removed from the gasoline.

*continued on page 174*

# Wheels Within Wheels

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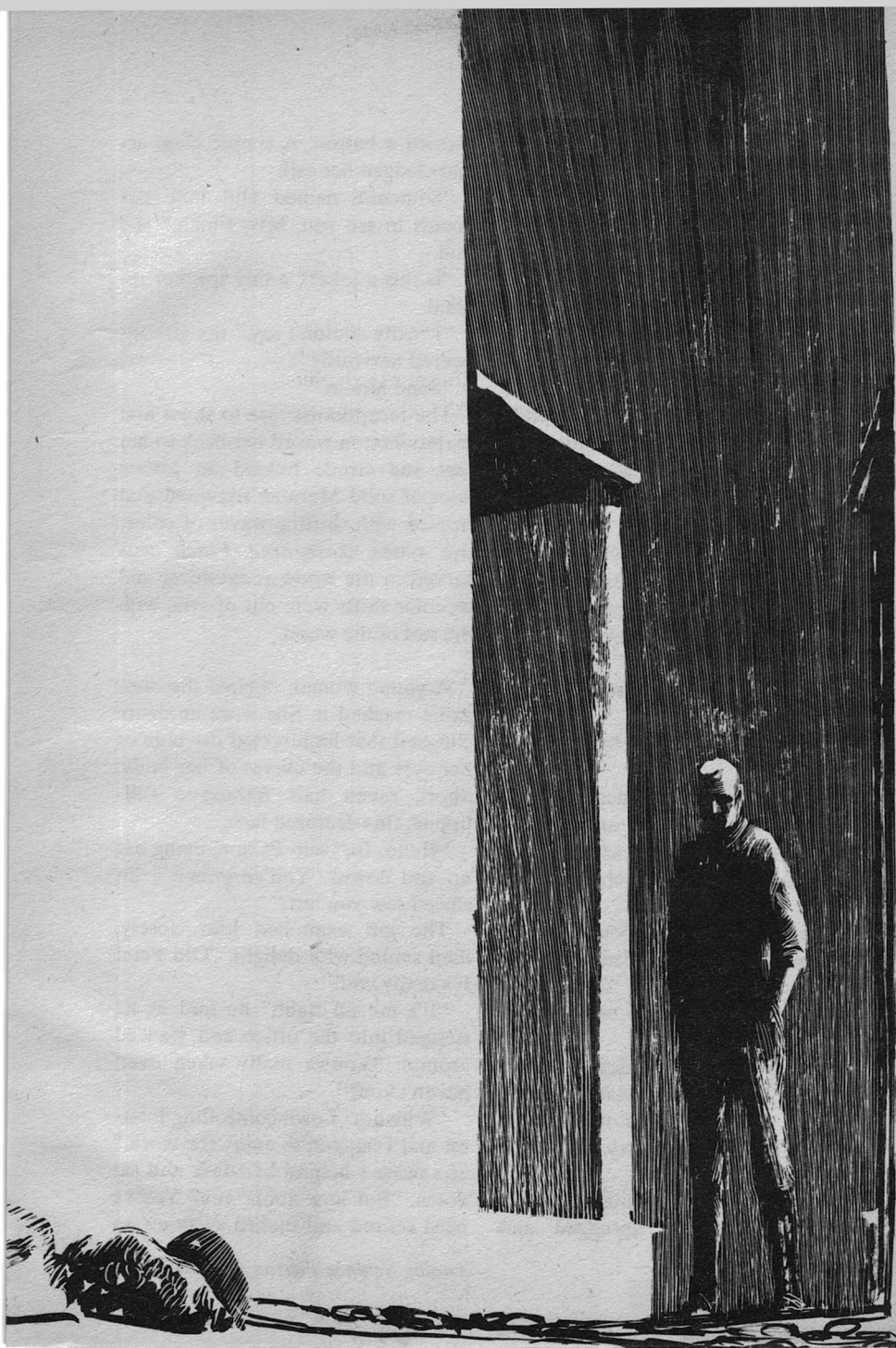
A man doesn't have to have a title,  
or even be widely known, to be the absolute ruler  
of a planet. But it makes him very hard to find  
and stop when he isn't labeled!

BY F. PAUL WILSON

ILLUSTRATED BY JOHN SCHOENHERR







Peter J. Paxton marveled as he moved his old body through the brand-new offices of Interstellar Business Advisers. He had played no small part in the genesis of the organization, but in the old days he and Joe Finch had operated out of a small, rented office on the far side of the city. IBA now owned the building in which it was located and many others. The firm had come a long way.

He was on his way to the top office to see Josephine Finch. She had been a teen-ager the last time he had been on this side of Ragna; she'd be in her late twenties by now.

"May I help you, sir?" the receptionist asked politely from behind her pearly desk.

"Yes. Is Miss Finch busy at the moment?"

She answered his question with another. "Do you have an appointment?" Her day book was open and her pencil was poised to check off his name.

"No, I'm afraid not. You see—"

"I'm very sorry," she said, closing the book with an air of finality. "Miss Finch can see no one without an appointment."

Paxton rested a gnarled hand on the desk and leaned toward the girl. "Listen, dearie. You just tell her Old Pete is here. We'll worry about appointments later."

The receptionist hesitated a second or two, then shrugged and

pressed a button. A simple click acknowledged her call.

"Someone named Old Pete demands to see you, Miss Finch," she said.

"Is this a joke?" a tiny speaker replied.

"I really couldn't say," the girl answered nervously.

"Send him in."

The receptionist rose to show him in, but Paxton waved her back to her seat and strode toward an ornate door of solid Maratak firewood that rippled with shifting waves of color; the name *Josephine Finch* was carved in the wood at eye-level and its color shifts were out of sync with the rest of the wood.

A young woman opened the door as he reached it. She wore an azure clingsuit that highlighted the blue of her eyes and the curves of her body. Short, raven hair framed a full-lipped, fine-featured face.

"Hello, Jo," said Paxton, eying her up and down. "You've grown a bit since I saw you last."

The girl examined him closely, then smiled with delight. "Old Pete! It's really you!"

"It's me all right," he said as he stepped into the office and glanced around. "You've really taken over, haven't you?"

"Why not? I own controlling interest and I happen to enjoy the work." She moved behind her desk and sat down. "But how about you? You've been retired and tucked away on an

island in the Kel Sea for the past eight years. What brings you to IBA?"

Old Pete smiled as he settled himself into a chair. "Beating around the bush never was a Finch trait."

Jo shrugged. "As second largest stockholder you should know that IBA's being plagued with a host of imitators. You can't beat around the bush and stay on top."

"True, true. So I'll get to the point. Jo, what do you know about the Restructurist Movement?"

She paused before answering and regarded her visitor. Why would an aging man travel halfway around a planet just to ask her what she knew about the Restructurists? A simple call would have accomplished the same purpose with much less difficulty. Something was up.

"It's a political group that wants to change the Federation," she replied. "Elson deBloise is their current leader, I believe. They want to broaden the powers of the Federation to include planetary affairs."

Paxton nodded slowly. "To say, 'change the Federation' is to understate their purposes by a long shot—turn the Fed inside-out is more like it! The Federation was designed to keep the lid on interplanetary affairs, but that's not enough for the Restructurists. They think the Fed should be some sort of equalizer between planets; they want to regulate trade and aid underdeveloped planets."

Jo was unconcerned. "They'll

never get anywhere. The Federation Charter severely limits its activities."

"But there's an emergency clause in the Charter that allows for a temporary increase in powers should the Fed, or its planets, be threatened."

"I'm aware of that," Jo said. "But they've tried to invoke that clause many times and every time they've been voted down. And even if they did invoke it, so what? It's only temporary."

"That's where you're wrong, Jo," Paxton said gravely. "If you look at the history of old Earth, you'll find that very seldom is any increase in governmental power temporary. The emergency clause is the key to Restructurist control; once they invoke it they'll have their foot in the door and the Federation may never be the same again. I don't want to see that happen, Jo. Your grandfather and I were able to make IBA a growing concern because the Federation's policy toward a legally operating business has been strictly 'hands off.' We humans have got as far as we have as fast as we have because of that policy. I don't want to see that changed. I don't want the Federation turned into an empire, and I see the word 'Empire' looming in the future if the Restructurists get their way."

"But they won't."

"I wouldn't be too sure of that, my dear. Many of the Restructurists may be starry-eyed idealists but not a few of them are crafty plotters with power as their goal. I've made a study of the movement and Elson

deBloise is by far its most dangerous member. He's after empire, I'm sure of it. He's a capable man—a mere planetary delegate ten years ago, he's now a sector representative. And something is cooking in his circle. I don't know exactly what it is, but a connection has been made between deBloise and a certain physicist named Denver Haas. If deBloise thinks Haas can further his aims, then both Haas and the Federation had better be on guard!"

"Well, why not go directly to the Federation?" Jo said.

"For the simple reason that deBloise's affairs need looking into and to obtain the information we want we need secrecy. The Fed is a wonderful organization, but it's too open and aboveboard in its maneuverings. A Fed investigation of deBloise would be pointless because he'd be ready when they came. But IBA has contacts as far flung as the Federation's. I think we can move on our own to find out the connection between Haas and deBloise and *then* go to the Fed."

Jo was silent a moment. "But it's always been a policy of IBA to stay out of politics. It's one of our bylaws, as a matter of fact."

"I know," Paxton replied, his face creasing into a smile. "I wrote it."

"Then why the sudden change of heart?"

"Well, I could say it's for the good of the company—and it is—but it goes deeper than that." He hesitated.

"You never really knew your grandfather, did you?"

Jo's mouth twisted. "I hardly knew my own father. But when he was still around I remember you two talking a lot about Joe, Sr. He must have been quite a man."

"Oh, he was!" Paxton enthusiastically agreed. "We both started out from Earth when the Federation was young and growing by leaps and bounds. The Earth government was very big, very bureaucratic then. Starting a new business was no easy matter on Earth in those days, that's why Joe and I came to Ragna—that and, uh, other reasons. As I guess you know, your grandfather already had a successful book publishing company under his belt, though how he made it work I'll never know. The sale of Finch House gave us enough capital to leave Earth and come to Ragna to start IBA. Yes, your grandfather was quite a man. Why . . ."

Jo tuned the old man out momentarily and considered the situation. Joe Finch, Sr. and Old Pete had been the shrewdest pair of businessmen in the galaxy in their day; their counsel had pulled countless businesses out of the red and had started just as many others on their way. But Joe was long dead and Old Pete had carried that moniker for as long as Jo could remember. Was the current structure of the Federation really in danger, thereby endangering IBA, or was Old Pete suffering from a touch of senile paranoia?

"I'll tell you what we'll do," she

said, interrupting Paxton's reminiscent monologue. "I'll have someone run a check on this Denver Haas character. If we can learn something about Haas, maybe we can get an idea of what deBloise has in mind and go from there." Catching a nod of approval from Old Pete, she went on. "We have a suite of rooms upstairs for visiting clients, it's empty now and you can use it for as long as you like. We'd be honored to have you as a guest."

Jo pressed a button as she finished speaking and the receptionist came through the multi-hued door. "Take Mr. Paxton to the guest suite," she told her. "He'll be with us for a while."

"Let me know as soon as you hear anything," Old Pete remarked, rising.

"You'll know as soon as I do," Jo assured him.

When she was alone, Jo sat behind her desk and stared at the two-dimensional painting of Joe Finch, Sr. that hung from the wall.

"I hope your old partner is wrong, Gran'pa," she muttered.

## II

Old Pete appeared somewhat shaken when he entered Jo's office a few days later.

"I just saw a man," he said, "walking down the hall with what looked like a space rat on his shoulder."

Jo smiled. "That's just what it was. His name is Sam Orzechowski and it

seems he's tamed the space rat. I'm trying to help him work up some commercial uses." She pointed to a chair. "Sit down. We've got some information on Haas and deBloise."

Old Pete leaned forward. "What have you found?"

"I don't know just yet," Jo replied. "I put one of the best investigators in the sector on the job. He just called to say that he's got some interesting information."

"Why didn't he tell you when he called?"

"Larry Easley rarely says anything of interest when there's a possibility that the wrong ears might hear it."

"Well, then, when does he arrive?" Pete asked.

Jo shook her head. "He doesn't. He never comes to this building. IBA uses his services quite often and frequent visits would give away the relationship. We're to meet him tonight at the Casino."

"Why there?"

"Because it's a perfect meeting place. I make it a practice to visit the Casino once a week and he stops in whenever he's on Ragna; that way no one thinks it's strange when we run into each other now and then—especially since we're both avid pokochess players."

"I hope you've included me in your plans tonight," Old Pete said. "I haven't had a really good game of pokochess in years."

"Of course you're included," Jo told him. "I want you along to question him on his information since

you seem to have made a private study of deBloise and his activities.”

“Just his public life. I know nothing of his private affairs.”

“That’s a start,” Jo said.

Later that night, as they flittered toward the Casino, Jo turned to Old Pete. “There’s something I’ve been wanting to ask you for a long time,” she said.

“What’s that?”

“It’s about my father. You were the last person on Ragna to see him and were closest to him except for my mother. What kind of a man was he?”

Old Pete studied her for a moment. “You’re a lot like your grandfather,” he said finally. “Junior—your father—was different. He was never a very happy person; he was a born achiever, but his major problem was that he was born at the top, the heir apparent to IBA. He tried his best to make it with the company while your grandfather was alive, but after Joe died he became increasingly restless.” Old Pete’s mind drifted back to the day of Junior Finch’s departure.

“But where are you going?” Paxton asked.

Joe Finch, Jr. shrugged. “I haven’t really decided yet. It’s only for a year, Pete, and I’m sure IBA won’t miss me. You’ve been running the show ever since Dad’s death anyway.” He put his hand on Pete’s shoulder. They were close—Junior

had called him “Uncle Pete” as a kid—and Pete now and then tended to take on a fatherly attitude. “I’m a big boy now, Pete. I’m thirty-three, I have a wife who understands and a ten-year-old daughter who’ll miss me but who’ll somehow survive a year without me.”

“I know what’s eating you, Joe,” Pete said gravely. “But can’t you climb a mountain, or something?”

Junior laughed. “I’ve no desire to be a mountain goat. I just don’t feel a part of IBA, that’s all. It’s not my company. I had nothing to do with its growth, or founding . . . it was just handed to me.”

“But the company has a lot of growing to do,” Pete said. “You could be part of that. Its future will ultimately depend on you, you know.”

“IBA’s present momentum will carry it another ten or twenty years with little help from anyone. I’ve got no qualms about taking out a year to go somewhere.”

“And do what?”

“I dunno . . . something.” He stuck out his hand. “Good-bye, Pete. I’ll contact you when I get where I’m going.”

Peter Paxton watched him walk off in the direction of one of the shuttle ramps, a man in the shadow of his father, the only son of Joe Finch trying to prove to himself that he was worthy of the title.

Junior didn’t know why he picked Jebinose. Maybe he had heard about

their minor racial problem once and had tucked it into the back of his mind for future reference. Maybe he was drawn to situations in flux. Jebinose was in minor flux.

Jebinose was one of those mistakes that blot the early history of man's interstellar colonization. In the old days of the splinter colonies, exploration teams were sent out to find Earth-class planets and now and then one of these teams became a little careless. A major criterion for colonizable classification was the absence of an "intelligent" native species. No one was quite sure just exactly what was meant by "intelligent" but tool-making was the favorite rule of thumb for dividing the intelligent from unintelligent. The Jebinose fiasco had nothing to do with interpretation of the rules. The fact of the matter is that Jebinose was given an "M" classification (Earth-type, suitable for settling) after the most cursory of examinations. The colonists were indeed surprised when they found out that they were sharing the planet with a tribe of primitive humanoids.

No one knows too much about the early colonial history of Jebinose. The splinter colony that landed there was conspicuous only by reason of its particular ineptitude at the task of colonization. But for the Vanek, not a single member would have survived a decade.

The Vanek are an alien enigma. They are quiet, humble, peaceful, fatalistic. They are few in number, in-

tensely religious and welcomed all newcomers to their fold. They are humanoid with blue-gray skin and long spindly arms. Their civilization had reached a plateau in its development and they were quite willing to let it remain there. They swallowed up the colonists.

The cross-breeding phenomenon between human and Vanek has yet to be explained. There are many theories but not one has received general acceptance. No matter . . . it worked. The Jebinose colony, as in the case of many other splinter colonies, was completely forgotten until the new Federation tried to order the chaos of the omnidirectional human migration. By the time it was rediscovered, human and Vanek genes had been pooled into a homogeneous mixture.

Much heated debate ensued. Some argued that since the original colony had been completely absorbed, resettlement would, in effect, be interference with an alien culture. Others argued that the Vanek were now part human and thus had a right to Terran technology . . . and besides, Jebinose was favorably situated in regard to the emerging trade routes.

Jebinose was resettled.

The Vanek had settled in one of the agricultural regions and it was through this area that Junior wandered. Eventually he came upon the town of Danzer. It was a tiny place consisting of eight buildings, a gen-

eral store-restaurant among them. Locals and Vaneks peopled the dirt street that ran down the middle of the town. On each side of the street ran a raised wooden boardwalk; Junior found a shady spot on one of these and sat down.

He had been walking for days and was bone weary. A cool breeze helped evaporate the sweat beading his face. A middle-aged man glanced at him from across the street and then came over for a closer look.

"You're new around here, I believe," he said to Junior, as he stuck out his hand. "I'm Marvin Heber and I like to know everyone around."

Joe shook the hand. "My name's Junior Finch and I'm *very* new around here."

"Just moved in, huh?"

"No, I'm just wandering around the region to see what I can see." The man was friendly but nose-y so Junior decided to play it safe and be as oblique as possible. "Lot of virgin land left around here."

Marvin Heber nodded and eyed the newcomer. "If you want to settle, I'm sure we can find a place for you."

As Junior was trying to think of what to say next, an elderly, spindle-armed beggar in a dusty robe came up to him and asked for alms. His skin was bluish gray. Junior dropped a few small coins in the proffered alms bowl. "Wheels within wheels, *bendreth*," said the beggar.

"Was that a Vanek?" he asked as

the beggar walked away. "I've heard they're common in this region, but that's the first one I've seen since I arrived."

"They keep pretty much to themselves and only come into town to buy supplies now and then. There's always a beggar or two about, however."

Junior said nothing but looked sincerely interested. He recognized Heber for a talker and was quite ready to prove a willing audience.

"They spend most of their time fooling around on their reservation, meditating and carving their little statues."

"What little statues are those?" Junior asked.

Heber took this opportunity to sit down and share Junior's shade. "You won't see any around here. Some company in the city buys them up as fast as the Vanek can turn them out and sells them as curios—'Handmade by alien half-breeds.' They're pretty popular over most of the settled galaxy. The Vanek have no financial worries, no, sir."

"Then why do they beg?"

Heber shrugged. "It's somehow mixed up in their religion which nobody really understands. You heard him say, 'Wheels within wheels' after you gave him some coins."

"Yeah," Junior said. "Then he said, '*bendreth*.' What does that mean?"

"Not much. *Bendreth* is the Vanek equivalent of 'sir' or 'madam.' They say that to just about everybody.



'Wheels within wheels' has something to do with their religion. According to tradition, a wise old Vanek philosopher with an unpronounceable name came up with the theory that the universe was a conglomeration of wheels, wheels within wheels within wheels within wheels. It got to the point where the only answer, or comment, he would make about anything was a simple 'Wheels within wheels.' It's a very fatalistic philosophy; they believe that everything works out in the end so they rarely take any decisive action. They figure the wheels will turn full circle without their help." He paused.

"Did you notice the crack in the begging bowl, by the way?"

Junior nodded. "Looked like it had been broken and then glued back together."

"That's part of the religion, too. You see, that old philosopher went to a banquet once—this was in the ancient days when the Vanek were rather barbaric—and the chief of the tribe sought to question him on his philosophy. Of course the only answer he could get was 'Wheels within wheels.' This annoyed the chief but he contained his anger until they all sat down at the eating table. During the meal it is said that the old philosopher uttered his favorite phrase over two hundred fifty times. The chief finally flew off the handle and broke a heavy earthen salad bowl over the old man's head, killing him. So now all the Vanek beggars carry an earthen salad bowl that they have

broken and then repaired as a sign that the old man did not die in vain."

Junior shook his head in wonder. "They must be strange folk. Do the local Terrans get along with them?"

"I guess 'get along' is about the only way you could put it," Heber admitted. "There's no open animosity between the two groups, but there's no friendship either. The Vanek float in and out of town and have no effect on the Terrans. I guess there are cases where the Vanek are discriminated against by the Terrans, but it's a passive thing. Most Terrans have little or no respect for the Vanek because the Vanek don't seem to care about respect and do nothing to engender it.

"It's not racial enmity as many outsiders might think." He cast a significant glance at Junior as he said this. "The fact that the Vanek are partially alien has little to do with it; that's a minor difference. There're other differences."

"Like what?" Junior asked.

"For one thing there's no first-person singular pronoun in the Vanek language. Some people thought this was a sign of group consciousness but that was disproved. It's just that they don't think of themselves as individuals. This makes it hard for Terrans to relate to them as individuals and thus it's hard to respect them as individuals."

"So it comes right back to a lack of respect again," Junior observed.

"Right! But try to convince the legislators in the capital about that!

They're getting together a bill to combat the so-called discrimination against the Vanek, and it looks like it'll pass, too. But that won't make Terrans respect the Vanek and that's where the real problem lies." He kicked a stone out into the middle of the street. "Damn fools in the capital probably don't even know what a Vanek looks like! Just trying to make political names for themselves!"

"But if it helps the Vanek get more equality—" Junior began.

"Lip-service equality!" Heber declared angrily. "A forced equality that might well cause resentment on the part of the Terran locals. I don't want to see that. No, Mr. Finch. If equality's going to come to Danzer and other places like it, it's gotta come from the locals, not from the capital!"

Junior made no comment. The man had a good point, but one could never know whether it was sincerely meant or just an excuse to oppose some legislation that interfered with his racial prejudices. He noted that Heber made no alternative proposals.

Heber glanced at the sun. "Well, time for me to get back to my job," he said.

"What's that?"

"I'm the government in town, you might say . . . mayor, sheriff, judge, notary, and so on." He smiled. "Nice to have met you, Mr. Finch."

"Nice to have met *you*, Mr. Heber," said Junior. And he meant it.

Heber was a pleasant man, but Junior wondered why he had taken so much time to explain the Terran-Vanek situation to him. Politics, maybe. If enough outsiders could be turned against the pending Integration Bill, maybe it wouldn't pass. Whatever his reasons, Heber had been very informative.

Junior walked across the dusty street to the general store. A land-rover passed close behind him as he crossed. Ground transportation was common here, possibly because flit-ters were too expensive to buy, run and service. It was hard work living off the land on Jebinose and the rewards were minimal. The farmlands were a depressed area as far as economics went. That would help explain a part of the poor Terran-Vanek relations; the Terrans were in control as far as numbers and technology were concerned and they owned all the businesses. But the Vanek held a superior economic position through the sale of their crude little statuettes. The Terrans broke their backs to keep their heads above water, while the Vanek did quite well by merely sitting around and whittling. The situation was tailor-made to generate resentment.

He approached the general store-restaurant building. The foodstuffs and supplies piled out front in their shiny, colorful plastic, or alloy, containers struck an odd contrast to the weather-beaten wood of the store. All the buildings in Danzer were

handmade of local wood; prefab probably cost too much.

A hand-lettered sign proclaiming that Bill Jeffers was the proprietor hung over the doorway and Junior's nostrils were assailed by a barrage of smells as he passed under it. Everything from fertilizer to frying food vied for the attention of his olfactory nerve.

His retinas had not yet adjusted to the diminished light of the store interior and Junior bumped into someone just inside the door. Straining his eyes and blinking, he saw that it was a young Vanek.

"Sorry," he said. "Can't see too well in here just yet." He made his way to the main counter in the back, not noticing the intense gaze he was receiving from the Vanek.

"Yes, sir!" said the burly bear of a man behind the counter. "What can I do for you?"

"I'd like something to eat. What's on the menu?"

The big man winked. "You must be new around here. You don't get a meal here, you get *the* meal: local beef, local potatoes and local greens."

"All right then," Junior said with a shrug. "Let me have *the* meal."

"Good. I'm Bill Jeffers, by the way," the man said and stuck out a paw.

Junior shook hands and introduced himself.

"Staying around here long, Mr. Finch?" Jeffers asked.

Junior shook his head. "No. Just

wandering about the area." Again the questions about who you were and how long you were staying.

Jeffers nodded and then looked over Junior's shoulder. "What'll it be?"

"The meal, *bendreth*," said a sibilant voice behind him. Junior turned to face the Vanek he had accidentally jostled on his way in.

"Hello," he said with a nod.

"Good day, *bendreth*," replied the Vanek. He was young and slight with piercing black eyes.

"How are you today?" Junior asked in a lame effort to make conversation. The Vanek interested him and he wanted very much to get into a conversation with one. But finding a common ground for a discussion was no easy matter.

"We are mostly well," came the reply. Junior noted the plural pronoun and remembered what Heber had told him. It might help to open a conversation.

"I've heard that the Vanek always use the word 'we' in the place of 'I' and I've been wondering why that is so."

"It is the way we are," came the impassive reply. "Our teachers say we are all one on the Great Wheel. Maybe that is so, we do not know. All we know is that we have always spoken thus and no doubt we always shall. There is no Vanek word for a single man."

"That's too bad," Junior said without thinking.

"Why do you say that, *bendreth*?" The Vanek was showing some interest now.

Junior would have to come up with a tactful yet honest answer. "Well, I've always thought that a race progressed through the actions of individuals. The progress of the Vanek seems to have been terribly slow. I mean, you've gone nowhere in the past few centuries. Maybe that's the result for having the word 'I' absent from your functional vocabulary."

The Vanek eyed him closely and was about to speak when the meals arrived. Each paid for his meal and Junior expected the Vanek to follow him to one of the small tables situated in the corner. Instead the alien turned toward the door.

"Where are you going?" Junior asked.

"Outside. To eat."

"It's too hot out there. We'll sit at one of these tables."

The Vanek hesitated and glanced around. The store was empty and Jeffers had disappeared into the back. Wordlessly, he followed Junior to a table.

Both were hungry and once seated they began to eat. After swallowing two mouthfuls, Junior said, "Now, what were you about to say?"

The Vanek looked up and chewed thoughtfully. "You may be right. Once we might have said that we have progressed as far as we desire but that doesn't hold true any more. The Vanek seem to have proved

quite willing to accept the benefits of a civilization technologically far superior to their own. So perhaps it has not been by desire that our culture has been stagnated. But it is our culture and—"

"Hey!" came a shout from behind the counter. "What's he doing in here?" It was Jeffers. He was pointing to the Vanek.

Without looking around, the Vanek picked up his plate and walked out the door. Junior watched in stunned silence.

"What was that all about?" he asked. "I was talking to him!"

"We don't allow any Vaneks to eat in here," Jeffers told him.

"Why not?"

"Because we don't, that's why!"

Junior could feel himself getting angry. He tried to put a lid on it. "Just who are the 'we' you're referring to?"

"Me!" said Jeffers as he came around from behind the counter and approached Junior's table. "It's my place and I've got a right to call the shots in my own place!"

"Nobody said you didn't only . . . only you could treat him with a certain amount of human dignity." He winced at the triteness of his word.

"He's a half-breed!"

"Then how about half the amount of dignity you'd accord a human? How's that sound?"

Jeffers's eyes narrowed. "Are you one of those meddlers from the capital?"

"No," Junior said, dropping his

fork into his mashed potatoes and lifting the plate. "I arrived on the planet about a week ago."

"Then you're not even from Jebinose!" Jeffers laughed. "You're a foreigner!"

"Aren't we all," Junior remarked as he walked out the door.

The Vanek was seated on the boardwalk finishing his meal. Junior sat down beside him but put his own plate aside. He was choked with what he knew to be self-righteous anger and couldn't eat. He tried to cool himself back to rationality.

"Is it always that way?" he asked finally.

The Vanek nodded. "Yes, but it is his store."

"I know it's his store," Junior said, "but we're going to change his attitude and I think I know just the way."

The Vanek gave him a questioning glance.

"You're going to take me to your tribe, or camp, or whatever it's called and we're going to put some pressure on Mr. Jeffers." Junior was speaking of economic pressure, of course. Economic pressure was a household word as far as the Finch family was concerned.

And so it began. Junior had found something unexpected in the young Vanek's attitude, had read it in the flick of a gaze, the twist of a mouth. For all their outward indifference, their detached air, the Vanek were keenly aware of the discrimination

they faced daily in the Terran towns. Junior had seen through the facade and this gave him an incentive to do something about the situation.

He convinced the young Vanek to take him to the local Vanek leaders so he could present his plan. The scheme was simplicity itself. If Jeffers would not allow a Vanek to eat in his store, then no Vanek should spend a cent in that store. Since the Vanek made up a good fifty percent of the local buying public, they could cripple Jeffers' profits in no time.

The Vanek leaders quickly agreed to the plan and a very self-satisfied Junior Finch spent the night in a nearby field. The morning held some surprises, however, when he returned to town; for as he approached Jeffers's store, two Vanek emerged carrying sacks of foodstuffs.

Junior had overlooked one simple fact: Jeffers's store was the only place within a twenty-mile radius where you could buy food. He would have to think of another way to put pressure on Jeffers.

There were two options: the Vanek could either open their own store, or they could find a way to buy food from a store twenty miles away. The first was out; the Vanek were not cut out for shopkeeping. That left buying in another town as the only solution.

Junior started walking. It took him over six hours to reach Zarico, the nearest town. As he entered the town he had an intense sensation of *deja vu*; it was as if he had traveled in a

tremendous circle and wound up right back in Danzer. The buildings were amazingly similar to those in Danzer; there was even a general store-restaurant.

The attitudes were similar, too. Vincent Peck, the owner, allowed no Vanek to eat in his store. But Junior changed his mind . . . it took two hours of hard talking, a half-gallon of local wine and endless repetitions of Junior's promise to increase sales by at least fifty percent if only he'd let the Vanek eat lunch in his store.

Peck finally agreed. He wasn't exactly crazy about the Vanek, but he was a businessman first and increased sales meant increased profits. This was the plan: Junior would use Peck's lorry to ferry the Vanek back and forth from Danzer for a two-week trial; if the plan turned out to be worth his while, Peck would continue to cooperate.

Apparently Peck found it very worthwhile for after the trial period he offered Junior a salary to keep on driving the lorry. Jeffers and many other Danzer citizens resented this intrusion into their affairs by an outsider, but Marvin Heber was overjoyed; he went so far as to inform the news media.

This was a mixed blessing: it resulted in the anonymous donation of a bus for transport of the Vanek from Danzer to Zarico and back, but it also heightened the local resentment toward Junior—the people of Danzer felt that the rest of the planet was laughing at them. And one night

a couple of locals in their cups administered a mild beating to Junior. But there was no real harm done.

Finally, one of the legislators from the capital paid a visit to Junior and invited him to speak before the legislature on behalf of the Integration Bill. As Junior turned him down—explaining that the success of his venture in Danzer would prove the bill unnecessary—Bill Jeffers walked up and capitulated. He had tried to hold out but it was useless; he was beaten. His business could not survive without the Vanek and so they could eat lunch in his store from that day forward.

Junior and Jeffers left the legislator to his own devices while they went off to drink to harmony and higher profits in Danzer.

Next morning, Junior was found lying in the alley next to Jeffers's store. He was dead, a Vanek ceremonial dagger implanted in his heart.

No one for a moment believed that the Vanek were responsible for the act, even when they confessed to it. No Vanek had ever been known to lie, but this instance was considered an exception, especially since they buried Junior themselves with full rights and honors, a ceremony accorded only to the wisest and most beloved of their own race. They were not killers and certainly wouldn't kill a man they loved so. Marvin Heber came to the conclusion that the Vanek were lying out of fear and so he looked for a human agent. He found none.

And as is so often the case, the ghost of Junior Finch was tearfully used to obtain enough votes to pass the Integration Bill, the very bill he had tried to prove unnecessary.

"IBA sent out its own investigators, of course," Old Pete said as they pulled into the Casino, "but they could uncover nothing new. Either the murderer was a human, who did a perfect cover-up job, or your father actually was killed by the Vanek—a highly unlikely possibility.

"And, as you know," he concluded, "we left your father's body in its grave on Jebinose. It somehow belonged there."

Jo nodded. She had not asked for a full recounting of the events on Jebinose, but Old Pete had obviously made a careful investigation and the details had given her a fuller picture of her father's character than she had ever got from her mother. She was glad she had asked.

Alighting from the flitter they were greeted by an elaborately costumed doorman to whom Jo was obviously a familiar figure. He bowed them into the front entrance.

The Casino consisted of a number of large rooms, each devoted to particular games of chance. Jo headed directly for the pokochess parlor. This was her favorite game, a game of chance and skill in which each player was "dealt" a king, three pawns and five other randomly selected pieces. The two players could place wagers on the outcome at any

point during the course of the game. Pokochess was not very popular with the Casino because the house could make money only when a guest played the house "pro." But the game was the current rage on Ragna and a pokochess parlor was found to be a good draw; patrons could use the Casino's parlor for a small fee per game.

Larry Easley was sitting at one of the tables with an associate. Easley could have been a very distinguished looking man if he had wanted to be, but the nature of his profession demanded a somewhat nondescript appearance. And so he made certain that his clothes, his posture, the cut of his hair, everything about him invited anonymity. He was a detective and very, very good at his work.

He looked up and saw Jo and Old Pete approaching. With a smile, he rose and greeted them. Introductions were made all around and the four of them seated themselves around the table. After a bit of polite conversation, Easley's assistant, Deggs, excused himself to make a call.

"What's the news, Larry?" Jo asked. "We'll discuss that first and then I'll give you a rematch at pokochess . . . and I hope you do better this time."

Easley nodded. "O.K. First off, I found out a good deal about this Denver Haas you're interested in. He's a physical engineer who has recently developed something he calls a 'warp gate' and he's ready to go into production."

Noting the questioning stares, he explained. "It seems that Haas has eliminated the necessity for an individual warp unit on every interstellar ship. He's also found a way to make trips of almost any distance in one jump. All you have to do is set up two gates—one at each end—and go through one and come out the other."

"Teleportation!" Old Pete exclaimed.

"Not at all," Easly said. "The ship in question travels in warp just like ships do now, but the advantage lies in the fact that the ship merely follows a beam between the gates in a single hop. It's quicker and you can send ships through one after the other and the ships need be equipped only with tube drive. Do you realize what this will do for interstellar trade?"

Pete frowned. "I know what it *can* do . . . but I also see some problems."

"I see them, too," Jo said.

Easly was puzzled. "What do you mean?" he asked, looking to Jo.

"I'm talking about getting the product off the ground." Old Pete nodded in agreement with Jo. She continued. "The device is a definite fortune-maker, but it will take a while before it starts to pay off. You see, every single ship in every merchant fleet is equipped with its own warper, so a warp gate is of no value to those fleets, at least not yet. They won't start buying warp gates until

they start replacing some of their ships."

Old Pete summed it up. "In other words, the warp gates will be phased in only as fast as the individual warpers can be phased out."

"And that may not be fast enough for Mr. Haas's little company," Jo added.

"And what does *that* mean?" Easly asked.

"Star Ways," was the extent of Jo's reply but Easly understood.

"But what's the connection between Haas and deBloise?" Pete asked.

"Money," Easly said. "DeBloise is financing Haas but for some reason he wants his name kept out of it; he's gone to an awful lot of trouble to cover any connection between Haas and himself. The same goes for the others who are in on the deal."

"Who are they?" Paxton asked.

"The list reads like a who's who of the Restructurist movement. The cover job has been excellent, by the way. I couldn't prove to any court that deBloise is behind Haas. My informants have assured me that they'll deny every word they've said if they're brought into court."

"Well, at least *we* know he's behind it," Jo mused. She turned to Old Pete. "What do you think? I'd be tempted to forget the whole thing except for the cover-up; that makes me suspicious."

Paxton shook his head. "I really don't know what to do next. Maybe Mr. Easly could send one of his men



to Jebinose to just sort of sniff around and—”

“Jebinose!” Jo exclaimed. “What’s Jebinose got to do with this?”

“Didn’t you know?” Old Pete said with surprise. “That’s deBloise’s home planet.”

Jo was shocked. “I knew he represented that sector, but I never dreamed he was from Jebinose itself.”

“Yes, he was born there. As a matter of fact, he was principal sponsor of the Integration Bill when your father was there. As another matter of fact, he pleaded for the bill’s passage with the cry that Junior Finch must not have died in vain!”

Jo shook her head. “I never realized . . .” Her face suddenly hardened, “Larry, I want you to go to Jebinose personally and look into deBloise and see what you can find, if anything. And you might check out a town named Danzer while you’re at it.”

“I thought you didn’t want to get IBA involved in any political matters,” Old Pete remarked in a slightly bantering tone.

“This political matter just might become a personal matter,” Jo replied.

Old Pete leaned back in his chair and tried unsuccessfully to prevent a very satisfied smile from creasing his face.

### III

Jo decided to pay Denver Haas a

personal visit. The man had ignored all the literature forwarded to him and had refused to see any IBA representatives. Jo hated interstellar travel, hated that wave of nausea that occurs each time the ship comes in and out of warp, but Haas was located on Dil and that was only two jumps away. That wasn’t too bad and maybe a personal visit from IBA’s number-one officer would have some effect on the man. She hoped it would be worth it. He had promised to see her when she arrived.

Haas lived and worked in a converted warehouse not too far from the spaceport. The most vital and innovative aspects of his warp gate were now covered by Federation patents and so security was no longer of great importance. Still, Jo had to be cleared twice before she was allowed to enter the building.

Haas was obviously not out to impress anybody. The inside of the building was as dingy as the outside and a lone, harried receptionist-secretary occupied the single desk in the cluttered foyer.

Jo presented the girl with her clearance sheet. “Josephine Finch to see Mr. Haas,” she said.

The girl took the sheet without looking up, checked the appointment book and nodded. She pressed a button and said: “Miss Finch is here.”

“Send her in,” replied a gruff voice.

The girl pointed to a nondescript

door with a simple "Haas" printed on it. Jo knocked and entered.

The office was an unbelievable clutter of filing cabinets, diagrams, blueprints and miscellaneous notes and drawings on scraps of paper. Denver Haas, a feverish little man, was bent over his desk, reading and making notes, looking like a gnome king ensconced among his treasures. He looked up as he heard the door close.

"Ah, Miss Finch," he said, smiling tightly. "You've come. This is quite an honor even if it is a waste of time for both of us. He rose, gathered some papers off a chair and threw them on the floor. Pushing the chair around to the front of the desk, he said, "Please sit down."

Jo did so and waited for the little man to regain his seat. He was older than she had imagined with an unruly shock of graying hair and, of all things, a beard. With all the permanent depilation techniques available, facial hair was an unusual sight.

"Well, what is it you wanted to see me about?" he demanded.

"Your new product," Jo said simply. "I think it has good potential and I'm here to convince you that IBA can help you get the most out of it."

He smiled with what he thought was slyness. "And what makes you think I need any help from IBA at all?"

"The very nature of the warp gate," she stated. "It's major advan-

tage is the simple fact that once you have a pair of them set up, shipping over any distance will become quicker, easier and dirt cheap. That's fine for the major companies along the major trade routes, but that won't sell too many gates for you. I don't know what it will cost to purchase one, but I'm sure they won't be cheap."

Haas nodded in agreement and Jo continued.

"And don't forget that all the freighters currently in use are equipped with individual warpers. It would be of little use for a company to send these ships through a gate when they can go by themselves. And what about the smaller companies that may have trouble meeting your price—"

Haas held up his hand. "I've thought of that and it's all taken care of. If we get an initial flood of orders—and I've no doubt we will—we'll be able to produce the subsequent gates at a lower price because we'll be able to increase production scale." He leaned back with a what-do-you-think-of-that? look on his face.

"I figured on that," Jo said. "But what about Star Ways?"

"What about it?"

"Competition. Star Ways is the biggest conglomerate in the galaxy and the individual warper is their meat-and-potatoes product. You don't think they're just going to sit still and let you make their primary product obsolete, do you? They're

going to cut their prices down—way down—until you fold. And when you go out of business, they'll come along and buy up the rights to the warp gate. The royalties you'll receive from them will give you enough money to last you three lifetimes, of course, but your company will be gone. IBA can prevent that from happening, or at least give SW a battle the likes of which it's never seen."

"No," Haas said, shaking his head, "that will never happen. SW will never get the rights to the gate because I own them completely—*completely*. And I'll never sell. I'm not after money . . . it's something more than that. The warp gate is my life, I've worked on nothing else for as long as I can remember. Only recently have I been able to devote my full time to it, but it has been with me always. I've worked as an engineer, an architect, even a technician when times weren't so good, but I've always come home to the game. It's part of me now . . . I would no sooner lease the gate to another company than I would lease my right arm to another man. The Haas company will only lease the rights from me and if the Haas company can't sell the gate, no one will."

Jo smiled inwardly. She wondered if deBloise was aware of Mr. Haas's plans for his invention: this monomaniac was just asking for financial ruin.

"I wonder what your backers

would say if they knew this?" she asked.

"They know and they're with me one hundred percent!"

Jo was taken aback by this statement; it didn't make sense.

"And just who are your backers?"

"I can't tell you. It seems they wish to remain anonymous which is strange, but none of my concern. I've searched long and hard to find men with vision such as these. We are in complete accord and everything is legal so I really don't care if they want to remain anonymous." He rose. "And now I must get back to my work. But I do want to thank you for stopping in; I've had the utmost confidence in the gate but you've managed to boost it even higher."

"How's that?" Jo asked, puzzled.

"I was, at first, a little surprised that you knew about the gate but then I realized that IBA has far-reaching contacts. The fact that you were interested enough in the gate to come here and try to get 'in on the kill' is proof that its success is guaranteed. IBA rarely takes on losers."

Jo was tempted to say that IBA had a reputation for turning losers into winners but decided it wasn't worth the effort to explain. She merely shrugged. IBA could have done a lot for him but under no circumstances could she work with a man such as Haas. She merely shrugged and headed for the door.

"And there's one thing you forgot," Haas said with a gloat in his voice.

Jo gave him a questioning glance.

"Military contracts! You forgot about military contracts! The gate is perfect for supply and personnel transport on a military scale!"

She wanted to laugh in his face. The Federation forces would, of course, be glad to know that such a thing as the warp gate was available, but they'd need very few in peacetime and the prospect of a war was highly unlikely.

"Yes," he went on, beaming, "I don't think there will be any problem in getting those initial orders. We'll just have to sit back and watch them roll in."

Jo left the warehouse in a daze. How did people like Haas get into business? He was, no doubt, a brilliant designer and theorist—the existence of the gate proved that—but he had no idea of the economic forces he would be up against. IBA could have helped, could have mounted a campaign to convince the backwater planets to purchase their own gates to cheapen import costs. This might have got Haas over the hump; but without the man's cooperation such a plan was out of the question. As things stood now, SW would wipe the company off the map in no time and deBloise and his circle would lose a pile of money.

But according to Haas, deBloise was well aware of this idiocy. That didn't make sense. She had done some research on deBloise and he had proven to be an extremely crafty

man who planned well and covered all exits. Involvement in this fiasco-to-be was highly out of character and that bothered Jo, bothered her very much.

Returning to Ragna, Jo filled Old Pete in on the details and he was none too happy with the situation either.

"It doesn't fit, Jo," he said. "I've been watching deBloise carefully ever since he made political hay out of Junior's death and this isn't like him at all. I don't like it."

"Well, there are only two possible answers," Jo sighed. "He has either made a big mistake this time and completely underestimated the situation, or he knows something we don't know."

"Don't worry about making a choice, Jo; the answer is simple: he knows something we don't—he *must!*" The old man shook his head and smiled ruefully. "Imagine Denver Haas thinking that military contracts would pull him through! Ha! There's no one to fight! I mean, who are we going to go to war with, the Tarks?"

Jo had been reaching for the handle of one of her desk drawers but froze at the mention of the Tarks. Old Pete noted the arrested movement.

"Don't be silly, Jo," he said. "The Federation may not be on the best terms with the Tarks but there's no war in sight. There are economic and territorial disputes and it may even-

tually come to blows but not in the near future." He turned toward the door. "And deBloise and his faction are nowhere near powerful enough to start one. That's a blind alley, I'm afraid."

Jo smiled and nodded. "I guess you're right. I'll see you later." But when he was gone her demeanor changed. She leaped upon the intercom. "Find William Grange—tell him to drop whatever he's doing and get to my office immediately." She cut off without waiting for a reply.

The Tarks were the key. Old Pete had been right about the war aspect: there was no way deBloise could start a war. But the pieces had suddenly fallen together for Jo—at least she hoped they had—and what she saw was a most ingenious, devious plan. Denver Haas had given her all the pieces and Old Pete had brought in the catalyst: the Tarks.

She couldn't help but smile with admiration as she considered all the delicate aspects of the insidious plot. This deBloise character was a truly remarkable man. The Restructurists were lucky to have him on their side. But the Federation had Josephine Finch.

Grange came in then. "You wanted to see me, Miss Finch?"

"Yes, Bill. I need some quick information on SW."

Grange visibly relaxed at this statement and took a seat. He knew more about Star Ways than many of its board members. The company had been the first to develop a com-

mmercial interstellar warp unit and quickly changed its name from Heller Technical to the more picturesque Star Ways Corporation. Through innovative marketing and financial maneuvers and the tried and true business practice of hiring the best and making it worth their while to stay on, Star Ways had securely placed itself in the number one spot as far as gross income was concerned. The corporation had never needed the services of IBA.

"What specifically do you want to know? I could talk all day."

"I know you could," Jo replied with a smile. "But I want to know SW's two top subsidiaries—not necessarily the most active but the ones most important to the gross income."

"The first is easy: their tube-drive company. When they acquired that they really began to move because they could outfit ships for both interstellar and peristellar travel. They have a number of fair-sized competitors . . . Fairgood is giving them the best fight they've had in years." He beamed as he said this; Fairgood was an IBA account.

"The second most important subsidiary is a debatable choice. General Trades generates a lot of income on luxury items but there's that pharmaceutical company they acquired a while back—Teblinko Drugs—that's been a thorn in their side. They had to pour a lot of money into it but things seem to be paying off at last. Latest figures show that it's pulled up behind Opsal

Pharmaceuticals which makes it the number two drug firm. So I'd say that Teblinko and General Trades are of equal importance at the moment, but once Teblinko consolidates its gains its well-being will be somewhat less crucial to overall profits."

Jo nodded and made a few notes.

"What's this all about?" he asked.

Jo had decided to keep her counterplan to herself. She was debarking on a precarious course of action, the repercussions of which might well reverberate throughout the whole galactic economic structure; the fewer who knew about it the better.

"Just working out a theoretical problem," she replied. "You've been a big help. May I call on you again if I need you?"

"Sure," Grange replied, taking the hint and rising. He was too canny to be fooled by Jo's lame explanation—you weren't told to drop everything and get up to the head office because of a theoretical problem—but he was confident of being filled in on all the details if and when he came to be involved.

When he had gone, Jo ordered the complete files on Fairgood Drive and Opsal Pharmaceuticals; both were long-standing IBA accounts. She began poring over them as soon as they arrived.

With the Fairgood file was an envelope with new information: a natural deposit of Leason crystals had been found on the second planet of

the Rakò system—the Tarks, however, were also claiming the find since Rakò occupies a place along the mutual expansion border. To further complicate matters, consent for export had to be obtained from the inhabitants—a group of senile savages.

Jo shook her head and put the file aside. That would take a very careful evaluation. Now to look at Opsal.

Opsal and Teblinko were in a pitched battle for the galactic pharmaceutical trade. The two companies were about equal in product quality but Opsal had a slight advantage in distribution since it was slightly older. Teblinko, however, was closing the gap.

What was clearly needed was a new product and both companies were vying for the rights to a certain grain rust on the planet Lentem. Again, the only thing holding them up was the native intelligent race. For the Tarks wanted the same item and the natives were holding out, hoping to use their commodity as a bargaining point between the two interstellar races.

Jo frowned. The Tarks were popping up more and more lately. There would be a clash someday—a big one. The Tarkan Empire was ruthless and active and no doubt took the Federation's *laissez-faire* attitude as a sign of weakness, or poor organization. One day they would overstep their boundaries to test the Federation's mettle. That would be a fatal mistake for the Tarks.

She fed the Opsal data into the computer and asked for a few correlations and information on any existing variables which she might be able to manipulate. The machine gave her a number of items, among them was the fact that the Tarcan representative was due for another visit to Lentem in quest of the grain rust rights. Also, there emerged a short biography on a man named James Rondo, a terran and the only "alien" allowed permanent residence on Lentem.

She immediately sent an urgent message to the president of Opsal telling him to send a man to Lentem as soon as possible and to place one thousand shares of Opsal stock under the name of one James Rondo, resident of Lentem. She could give no reasons now but asked the president to trust her . . . IBA had done well for them in the past and was trying to do so now.

Now for Fairgood: that company had followed IBA's advice by sending out exploration teams to any star systems which showed spectroanalytic traces of Leason crystals. It was an expensive undertaking which had yielded only analogues until last year when a motherlode of true, natural Leason crystals had been found on Rako II. Leason crystals were the major lining of peristellar drive tubes and until now could only be obtained through an expensive, low-yield synthesis; a large natural deposit was priceless.

However, the Tarks were claiming the planet, too. A major incident was avoided—luckily—by the discovery of a dying, semi-savage race on the planet. By mutual agreement, Tark and Terran had agreed not to exploit any planet with intelligent natives without the permission of those natives. These natives wanted rejuvenation of their race in return for the crystals, and both the Fairgood company and the Tarcan Empire had research teams at the site trying to solve the problem. No one was meeting with any success. A public-relations expert was clearly indicated here—only the "public" in this case would be a group of aliens.

Jo thought she knew the firm which could supply the right man; if he was free at this time and the firm could be convinced to send him, Andy Tella was the man. She got a message off to Fairgood and virtually insisted that they send one Andrew Tella off to Rako II—and be sure to give him plenty of incentive, she added.

These preparations completed, Josephine Finch could only sit and wait. If her plan was successful, deBloise would be countered. That was all that mattered. As far as she was concerned, this was merely an economic move with political implications. She was using her economic influence to preserve a political system she believed in.

She was totally unaware of what Larry Easley would find on Jebinose and had no idea that her detachment

toward deBloise was about to be transformed into a very personal involvement.

#### IV

After two fruitless weeks on Jebinose, Easly went to Danzer to contact the local Vanek group. He still had his suspicions about Junior's death and wanted confirmation directly from the mouth of a Vanek. For Vaneks never lie.

It was easy enough to find one. The Vaneks had made a sort of shrine out of the place where Junior had died and there they mounted a constant vigil. In the fatal alley, in the center of a crude circle of stones, sat a lone Vanek beggar, humming and jiggling his broken salad bowl.

"Wheels within wheels," he said as Easly approached.

"Sure," said Easly, stopping outside the circle. "Uh, can I speak with you a minute?"

"Speak, *bendreth*."

Easly squatted and looked at the Vanek. Pupils dilated from a long watch in the shade of the alley looked out at him from beneath hooded eyelids. The blue-tinted skin of his face was wrinkled and dusty. This was one of the older Vaneks.

"I want to know about Junior Finch."

The Vanek smiled. "He was our friend."

"But he was killed."

The smile remained. "Wheels within wheels, *bendreth*."

"But who killed him?" Easly asked.

"We did."

"But why?"

"He was our friend."

Easly was getting annoyed. "But why did you kill a man who was your friend?"

"He was different."

"How was he different?"

The Vanek shrugged. "Wheels within wheels, *bendreth*."

"But why did you kill him?"

"He was our friend."

"Oh, hell!" Easly muttered, rising and dusting off his knees. He realized he was wasting his time and turned away without giving alms. *Damned if I'll give them a cent.*

How could you figure a bunch of alien half-breeds who kill the man who's trying to help them, and then make a shrine out of the place where they murdered him?

He growled to himself and headed for his flutter. He had an appointment with Elson deBloise himself later in the afternoon and he didn't want to be late. His favorite and most successful cover—that of an author researching a book—had paid off again. DeBloise was no different from any other public figure . . . he couldn't pass up the chance of having his name used as a source.

He spent most of the early afternoon going over his plan of attack. He expected to get little information from deBloise but at least he'd be able to size the man up in person. Larry Easly's job was people and he



could get a lot out of a personal conversation, even if the subject was the weather. And Josephine Finch wanted to know about deBloise and what he knew about her father.

He arrived at the plush home planet offices of the Sector Representative a little early and sat eying the receptionist until it was time for his appointment.

Elson deBloise gave him a warm greeting. "Well, Mr. Easly, what do you think of our fine planet?" He was a big, puffy-looking man, but Easly immediately sensed a core of steel.

"Very nice," Easly lied as he took the indicated seat.

"I understand you're doing a book about Joe Finch, Jr."

Easly nodded. "I was hoping I could get a personal glimpse of the man from your viewpoint."

"I'm afraid I didn't know him at all, never met him."

"But that was quite an impassioned speech you made about him on behalf of the Integration Bill."

"I didn't have to know him to say what I did," deBloise replied with a faint smile. "I knew what he was trying to do. He was trying to bring equality to those less fortunate and he was trying to give the Vaneks a little dignity. He was going out on a limb for his fellowman. I understood him perfectly and I'm willing to bet that if he were alive today he'd be very active in the Restructurist Movement."

Easly doubted that very much but

kept his opinion to himself. "What about that Integration Bill, Mr. deBloise? Would it have passed without Mr. Finch's death?"

"Definitely—not with such resounding unanimity, of course, but it would have passed. That bill, by the way, was pending before he even arrived on Jebinose. I was its main sponsor."

"And on the reputation you earned with that bill, you went on to successfully run for Planet Rep to the Federation, isn't that correct?"

DeBloise paused and scrutinized his interviewer. "Is this book about me, or about Finch?"

"It's about Finch, of course," Easly said, flashing the most disarming smile in his repertoire. "But I want to get into the long-range effects of his stay and consequent demise on Jebinose."

"Of course," deBloise said, somewhat mollified. He had the distinct feeling of being under a microscope. This writer, Easly, had a manner about him which deBloise did not like. He'd have to run a check on the man.

The intercom buzzed and deBloise accepted the call with some annoyance. "I said I wasn't to be disturbed during the next few minutes!"

"I'm sorry, sir," said the receptionist, "but Mr. Proska is here and wishes to see you."

The casual observer would have noticed nothing, but Larry Easly's attention became riveted on deBloise.

At the mention of the name "Proska," every muscle in deBloise's body had stiffened and there was the slightest blanching of the skin, the slightest tightening of the mouth. The man's body was transmitting fear, acute fear. His voice, however, was calm when he spoke.

"Tell him I'll be with him in a moment." He released the button and turned to Easly. "I'm sorry, but some urgent business has just come up and I'm afraid we'll have to cut this interview short. I'm leaving for Fed Central tonight but I should be back in a few weeks; please make another appointment with my secretary."

Easly said he'd be sure to do so. As he reentered the waiting room, he saw only one occupant besides the receptionist. A small, sallow, balding man sat with his hands on his knees. Easly was about to classify him as a timid nonentity until he caught a look at the man's eyes. There was not a hint of timidity or even mercy to be found there. This was no doubt the Mr. Proska who struck such fear into the heart of Elson deBloise, powerful, secure, influential Elson deBloise. Mr. Proska must have some sort of hold over deBloise, something that terrified the man. Larry Easly suddenly became very interested in finding out just what it was. He started with the records at the Planet Center.

When the human race broke its Earth-shackles and reached out for new stars and the virgin planets that circled them, its fertility apparently

trebled and its numbers grew in a geometrical progression. With interplanetary travel commonplace and interstellar travel a routine, planet-hopping became the rule rather than the exception and it was virtually impossible for one individual to find another. The problem was easily solved with the introduction of planetary record centers. Vital, identifiable statistics of all natives were kept on record, usually in a place near the major spaceport. Data such as date of birth, parents, education, employment record, present location and so on were kept in a file open to the public. Some people grumbled about the records as an invasion of privacy, but most realized that with billions upon billions of humans strewn about the galaxy, they were necessary.

It was to these files that Easly hurried as soon as he was out of the deBloise office complex. It was a slim chance, but Proska just might have been born on Jebinose. If so, Easly would at least have a starting point. In the Planet Center, he found a free computer station and punched in Proska's name. There were only two people on record with that name. The first was deceased; the second had been born forty-four years before and still resided on the planet.

That was the one—at least the age was right. Easly checked down the list and noted that Cando Proska had attended the Jebinose psi school as a boy but had dropped out at the age

of ten. That in itself was strange because people with psi talents are always in demand; even those with the most mediocre abilities are assured a good income for the rest of their lives. Proska must have talent or else he would never have been admitted to the school. Why did he drop out? He had held a routine office job until about fifteen years ago when he quit. No employment since then. Also strange.

That was the end of the record. Not much information, but Easley felt somewhat satisfied. Something had clicked in the back of his mind as he reviewed the information; he couldn't place it right now—his mind often made correlations without immediately informing him—but he knew from experience not to push it. Sooner or later it would come to the surface.

He decided to take a look at Proska's home and wrote down the address. It was a nice day so he rented an open flitter and punched in the address. To his surprise, the flitter took him to the outskirts of the city and into the center of an exclusive well-to-do neighborhood. It hovered over a large home of elaborate design and a red light flashed a warning that clearance was required from below before it could land. Easley took a closer look at the grounds and his trained eye picked up traces of a very effective and very expensive protective system.

"Not bad for a guy who's been out

of work for fifteen years," he muttered.

He was about to start a slow circle for a better look when he noticed another flitter approaching. He took control of his own vehicle and moved off at an unhurried pace. The other flitter was closed with the windows opaqued. He watched it land in front of the Proska house and cursed himself for his carelessness in renting an open flitter. If deBloise had been in that flitter and had recognized him, Easley's cover was in jeopardy. His policy in a situation such as this was to assume the worst. That being the case, he would have to hurry and make another inquiry and then, possibly, get off-planet immediately.

Easley had obtained another address before leaving the Planet Center, that of Jacob Howell. He now punched that address and gave his flitter full throttle. Howell had been in charge of the Jebinose Psi School at the time Proska had dropped out. Maybe he could supply another piece to the puzzle.

Howell was retired now and lived off his pension in a small apartment in the city. He seemed to be a lonely old man and welcomed Easley openly. Any company, even that of strangers, was better than sitting alone.

Easley decided on a direct approach. "Do you remember a student named Proska, Mr. Howell? About thirty-four years ago, at the age of ten, he dropped out of the Psi School."

Howell wrinkled his brow. "Proska?"

"Cando Proska."

Howell nodded. "Yes, I believe I do remember him. The name isn't familiar but it's so rare that someone drops out of the school that I believe I know who you mean. Nasty business, that."

"What do you mean?"

"Well, little Proska got into an argument with another boy whose name escapes me—it was in the psychokinesis lab, I think—and the other boy died right there on the spot. Proska blamed himself and would not return to the school."

"What did the other boy die of?"

Howell shrugged. "We don't know. His parents were from the farm region and were devout members of the Heavenly Bliss sect—we have a lot of them on Jebinose, you know—and they refused to allow an autopsy. It's part of the Heavenly Bliss canon that the human body not be willfully mutilated. It was known that the boy had some sort of congenital heart defect and that was assumed to be the cause of death. It was probably the excitement of his argument with little Proska that brought it on, but Proska could not be blamed. You couldn't convince *him* of that, however. He considered himself responsible and never wanted to come back."

Easily was interested. "Congenital heart defect? But that's ancient history! Nobody walks around with that sort of condition anymore!"

"They do when the parents refuse to consent to surgery," Howell said. "Mutilation, you know. If the same thing happened today there would be an autopsy, Heavenly Bliss sect or no. But we weren't as well organized then as we are now. I wish we had insisted on an autopsy. Then little Proska would have been spared such a burden of guilt. It was a shame to lose him. I seem to remember that he showed promise."

Easily's mind turned this new information over a few times and looked for correlations. None. He rose and thanked Howell for his help. The man virtually insisted that he stay for dinner, or at least for a drink. Easily begged off and left feeling guilty for not repaying the man for his information with a little companionship. But time was too short, and instinct was prodding him to leave Jebinose immediately.

He shrugged it off. He was interested now, too interested to give up just yet. He had a tantalizing feeling that all the pieces were there; all he had to do was arrange them in the proper light. He started laying them out for examination. It was important to Jo to stop, or delay, deBloise and this Mr. Proska might well supply the lever with which she could apply some pressure.

First of all, deBloise was terrified of Proska. Proska was a psi who might possibly have caused the death of a boy at school as a child. He had never returned because of guilt. Why

so much guilt? Unless he *knew* he had killed the other boy!

Could Proska kill with his mind?

Proska had a hold over deBloise and a big, expensive, well-protected house . . . and he hadn't worked for the past fifteen years. Fifteen years . . . the Integration Bill was passed almost fifteen years ago—

The subconscious correlation his mind had made back at the Planet Center suddenly came to the surface: it was fifteen years ago that Junior Finch had been killed on this planet! And it was possible that Proska could kill with his mind . . . and Proska quit work fifteen years ago! And he had a hold over deBloise.

But that didn't fit. The Vaneks killed Junior; they admitted it openly. And Vaneks never lie. And it was generally conceded that Junior's death merely increased the margin by which deBloise's pet Integration Bill was passed. So deBloise had nothing to gain from Junior's death. Or had he?

Against his better judgment, Easly decided to pay another visit to the alley where Joe, Jr. had been killed. Perhaps the same Vanek would still be there. He would no doubt be as reticent as he had been earlier in the afternoon so Easly made a stop at his hotel room. This time he would be better prepared; all he needed now was the tiniest bit of cooperation from the beggar.

The sun was well below the horizon when he landed in Danzer and he made his way quickly through the

darkened streets hoping that he would find the same beggar in the alley.

He did, Easly wanted an older beggar, one who might have known Junior personally.

"Wheels within wheels, *bendreth*," the beggar greeted him. "Have you come again to meditate on our friend, Junior Finch?"

Easly nodded. "I would also like to meditate on someone else. His name is Proska."

The beggar's eyes remained impassive. "We know Mr. Proska but we do not fear him. We are not completely human and so his power is ineffective against us."

"What power?" he asked with a start. He hadn't expected such a direct answer.

"There are many powers in the Great Wheel," the Vanek said. "Mr. Proska possesses quite an unusual one."

"Yes, but just what is his power?"

The beggar shrugged. "Wheels within wheels, *bendreth*."

Easly knew right then that he would get little more out of the Vanek without some help. The evening breeze had yet to rise so he had to act now. He withdrew a cigar from his pocket and took his time lighting it. By the time the tip was glowing a bright red, he and the beggar were enveloped in a cloud of aromatic smoke. This was the effect Easly had wanted. He had a tiny vial of gas in his hand. He opened the nozzle and let it stream toward the Vanek. The

gas worked as a highly effective tongue-loosener on humans but was not entirely odorless and colorless. Thus the improvised smoke screen. He could only hope the Vanek nervous system was still sufficiently humanoid for the gas to work.

It took only a few seconds for the vial to empty and Easly casually slipped it back into his pocket, allowing himself to breathe again.

"What is Proska's power?" he repeated.

"Wheels within wheels, *bend-reth*," came the standard reply.

Easly cursed and was about to get to his feet when he noticed the beggar begin to sway.

"I am dizzy, *bend-reth*. I fear it is the smoke you make."

"I'm very sorry," Easly said with the slightest trace of a smile. A mild dizziness was the drug's only side effect. He ground the cigar out in the dirt.

"Maybe you didn't understand my question," he said carefully. "I want to know what *kind* of power Mr. Proska possesses."

"It is a power of the mind," the Vanek said, putting a finger to his forehead.

*Now we're getting somewhere*, Easly thought with mental relish.

It was fully an hour later when Easly returned to his flitter and took to the air. Even with the help of the gas it had been hard work to pull any concrete information out of the beggar. The Vanek think in such a circumspet manner that you almost have to start thinking like them in order to get the answers you want. But Easly had his answers now and he wasn't even going to stop at his hotel. First stop was the spaceport.

His expression was grim as he flew through the night. The mystery of Joe's death and Proska's diabolical talent had been cleared up. He shuddered at the thought of running into Proska now. The little man couldn't kill with his mind as Easly had originally suspected. No, what Proska could do was much worse.

At the spaceport, Easly dropped the flitter off at the rental area and headed directly for the shuttle desk. He couldn't afford to wait for a direct route to the sector in which Ragna was located. His immediate concern was to get off Jebinose; he could worry about getting to Ragna later.



On the way to the shuttle area he passed the subspace communication area and thought it might be a good idea to get a message off to Jo . . . just in case something happened to him. He entered one of the large, glass-enclosed booths, closed the door behind him and seated himself at the console. The information computer informed him that it was mid-day in Calmer City on Ragna. That

would mean there was a good chance of catching Jo in her office. Easily put his identifying card in the slot and gave the desired destination of his call. A staggering price flashed on the screen but he pressed the "Accept" button immediately. This would go on the expense account.

Jo was surprised when she learned that she had a subspace call from

Larry Easley. He would make such a call only under emergency conditions so he must have something important to say. Yet in all the time she had known him, Easley had never said anything important unless it was face to face. She started to smile as his face appeared on the screen and then remembered that he could neither see nor hear her—subspace calls were strictly one-way affairs.

"Jo?" he said. "I hope that's you on the other end. The indicator says it is, but I can't be sure so please excuse the cryptic nature of what I'm about to say. First of all, as to your father's end, there's more here than meets the eye. The man you sent me here to investigate may well be involved, but there's a new factor: a psi talent who . . . who—"

As Easley's voice faltered, Jo noticed his face go slack. He swayed in front of the screen, seemingly engaged in a battle to keep his balance. Utterly helpless, Jo had to sit and watch in horror as his eyes rolled up into his head and he sank from view.

Picture transmission was not interrupted, however, and Jo anxiously watched the passers-by, hoping one of them would glance in and realize that something was wrong with Easley. One man did stop and look in the glass. He was small, sallow and balding. His hard little eyes seemed to rest on the spot where Easley had fallen, but he registered no surprise, made no move to help.

He merely smiled and turned away.

Jo arrived on Jebinose the next day with Old Pete. She would have liked to have confronted deBloise but he was well on his way to Fed Central for a meeting. She made a call, then hired a fluttercab to take them to the offices of the company that leased the sub-space phones to the spaceport.

"Aren't you going to the hospital first?" Old Pete asked.

"Not yet. I just called them and he's still in a coma." Larry was in good hands. As soon as Jo had been sure that he would not be getting up off the floor of the call booth, she had placed a call of her own to the local hospital to have Larry placed in an intensive care unit immediately. Every possible thing that could be done for him was to be done and all bills would be paid by the sector account number she gave them.

They arrived at the offices of the booth leasers. A tall, hawkish man greeted them.

"May I help you?"

"Yes," Jo said. "I'd like to speak to someone about the call booths you lease."

The hawkish man's face brightened. "Ah! You wish to lease some?"

"No. I just want some information."

"Oh," the man said with sudden sullenness. He handed Jo a brochure. "All the information you need is in here."

Jo flipped the brochure back in his



face. "Listen, you!" she said. "One of my employees, who happens to be in perfect health, went into a coma in one of your booths and whether or not you find yourself up to your ears in a lawsuit depends on the answers I get from you right now!"

The man was suddenly quite agreeable. "You must mean the unfortunate incident last night. I assure you, our booth had nothing to do with that. Every piece of equipment is of the finest quality and everything is insulated and shielded. Why, we even have a psi shield around each and every—"

"Psi shield?" Jo said with heightened interest. "Why a psi shield?"

"Well, as you know, a telepath can't read a nontelepath . . . unless the nontelepath is speaking; and then he can only read what's being verbalized, so it's not very useful. *Unless* you want to know what is being said in a soundproof booth."

"Such as one of your call booths," Jo added with a nod.

"Correct. So we fit each booth with a psi shield which sort of dampens all psi transmissions."

"In either direction?" Jo asked.

The man paused and considered this. "Yes, come to think of it, it acts as a wall and so interference would be met in either direction."

"Thank you," Jo said. "That's all I want to know." She wheeled and stalked out to the street. A bewildered Peter J. Paxton followed.

"What was that all about?" he

asked as they regained their seats in the flittercab.

"Larry mentioned something about a psi talent before he collapsed. I'm just wondering if maybe Larry was supposed to die in that booth but the shield somehow dulled the effect."

"You mean a psi killer?" Old Pete scoffed. "That's a fairy tale!"

Jo was pensive. "Wouldn't all the psi killers in the galaxy like you to think so? I mean, there's no way you can prove that a man has been killed by a psionic thrust, and surely no one's going to admit that he has such an ability because there's only one way he could know about it: murder."

"I see your point, Jo, but it's pretty farfetched. It's clear that Larry stumbled onto something and deBloise tried to silence him. But I doubt that he's the victim of a psi killer. I wish he were conscious so we knew what deBloise is up to."

"I already know deBloise's plan," Jo said. "I'm surprised you haven't figured it out yet."

"What do you think it is?" he asked.

"I'll tell you this much: "I made an all-out effort to obtain the Rako II Leason crystals for Fairgood and the *hassa* rust for Opsal and it paid off. Both contracts have been landed although the operatives took some steep risks to get them."

"I can see what a natural supply of Leason crystals will do for Fairgood and I congratulate you for helping

them get it—they'll leave the competition behind in no time. But I'm not familiar with this *hassa rust*."

"*Hassa* is a grain that grows on Lentem; it's commonly afflicted by a peculiar rust that has turned out to be the pharmacological find of the century. Every known kind of bacterium becomes addicted to the *hassa rust* should enough of it be ingested by the host; and if you remove the rust from the host's diet, the bacteria die."

"Even the enterics?"

Jo nodded. "Every single one in the body. The patient is then reinfected with his everyday, nonpathogenic bacteria and sent on his way, cured."

"But why do you need a contract?" Old Pete asked. "I'm sure some hotshot botanist could grow his own *hassa*."

"It's been done already," Jo said. "But no one has had the slightest bit of luck in getting the rust to grow. It seems to be highly sensitive . . . and it grows wild on Lentem."

Old Pete shook his head in wonder. "I'm proud of you, Jo. In two moves you've put two IBA accounts into the top of their respective fields."

"And countered deBloise in the process," she added.

"I still don't see how," Old Pete mused. He watched his young female companion closely. He had thought it unfortunate when he had learned that Josephine Finch had taken administrative control of IBA.

Her stock holdings entitled her to it, but she had seemed such a girlish thing when he had retired. She was a woman now and more like her grandfather than Old Pete had imagined anyone could ever be; she had his take-command attitude, his coolness, his decisiveness, his ability to deal practically with abstract situations. Yet her femininity was ever apparent and, somehow, enhanced by these qualities. IBA had been in her hands for five years now and was flourishing. Old Pete wished he were about fifty years younger.

His reverie was interrupted by their arrival at the hospital. There they learned that Larry had nothing physically wrong with him. All tests had come up negative.

"About the only thing I can suggest," the doctor told Jo as they stood beside Larry's bed, "is that this may be a psychogenic coma. It almost seems as if the mind induced this state upon itself but for what reason I can't imagine."

"Protection?" Jo suggested.

"Possibly, but from what?"

"That remains to be seen," Jo muttered.

Later, when the doctor had gone and Old Pete was out attending to hotel accommodations, Jo sat alone in the darkened room and watched Larry Easley's peaceful face. She fervently hoped that Larry's prognosis was as favorable as the doctor had indicated. And she wasn't thinking of the secret now sealed within him.

Three years of close association had formed a close bond between the two of them, a bond that might well grow into something more if they would only momentarily slow the pace of their individual lives. Larry was stopped in his tracks now; maybe if Jo decelerated a little . . .

There was a noise behind her and Jo turned to see five cloaked figures filing through the door. Wrinkled, blue-gray faces peered out from their hoods. Vanek. Jo's feelings toward the Vanek were ambivalent. She couldn't believe that they had killed her father, yet there was the fact of their confession to the crime. She waited for them to speak.

"We came to see the daughter of Junior Finch, our friend," said one.

"How do you know who I am?" Jo said, springing to her feet. She had carefully hidden her identity on this trip, even to the point of using an account listed under a phony name to pay for Larry's medical care.

"Vanek eyes are everywhere," came the enigmatic reply.

"What do you want here?" she asked.

"We wished to pay you homage," said the speaker. The five Vaneks bowed toward her.

"Wheels within wheels, *bendreth*," they chorused. Then, in complete silence, they filed out.

Jo hesitated a moment, then rushed to the door and peered out. The Vaneks were gone. She flagged a nurse who was rounding the corner to her left.

"Where did those five Vaneks go?" she asked.

The nurse smiled. "Did you say *five* Vaneks? Dear, I've worked in this hospital for nearly ten years and I've never seen *one* Vanek set foot inside this building. They have their own medicine, you know."

"I guess I was mistaken," Jo lied after the slightest pause and closed the door again. Jebinose was proving to be a very strange planet.

On Jo's order, a small psi-shielding device was placed in Easly's room and hidden under the bed. She didn't know exactly what had happened before but was quite sure there had been an attempt on Larry's life and she wanted to be prepared in the event the assassin returned to finish the job. A psi shield might be the reason Larry was alive now and she wanted to take no chances.

The doctor returned and told her that the latest test results indicated a progressive shallowing of the coma; Easly was expected to regain consciousness within the next six or eight hours.

Jo placed a call to Old Pete. She stood at the window and stared at the last rays of sunset as she waited for the connection. Old Pete's face appeared on the screen.

"I'm staying here tonight," she told him. "I'll call you as soon as there's something to call about."

Old Pete nodded from his hotel room. "O.K. I'll be there first thing in the morning."

Jo broke the connection and sat down beside the bed. She sat there with her thoughts and didn't bother to turn on the room lights as night crept in. Consequently, she was startled when the night nurse popped in and threw the switch.

"Just checking up on him," she said with a pleasant smile. She walked over to the vital signs indicator on the bed, glanced at the readings and nodded. "He's coming along fine," she said and departed.

The door opened again a few hours later. It was an orderly, a short, balding man in white.

"You'll have to step out a minute, Miss, while I prepare him for some final tests," he said in a rasping voice. "Sorry, but that's the rule."

Jo stood up. "Going to finish the job you bungled in the call booth?" she said through tight lips.

The orderly turned on her with blazing eyes. "Who are you?"

"I'm the person who was on the other end of that sub-space call when you tried to kill him," Jo told him. "I saw you on the screen."

Calmer now, Proska nodded. "So it seems I made *two* mistakes last night: not only did I forget about the psi shield on the booth but I carelessly got in range of the pick-up, too." He shook his head. "Not as careful as I used to be. But I'll tie up *all* the loose ends tonight. But before I do, tell me about this man. What was he after?"

Jo hesitated, not sure of what to do. There was a little red button on

the visiphone for instant contact with the police. A single push would bring them immediately. She wanted to see this man in the hands of the police—although how they'd handle him was beyond her—but more than that, she wanted information. He obviously planned to kill her along with Larry so it might not be too difficult to get him to open up. Then she'd press that button.

"He's a detective I sent here to get some information on Elson deBloise," Jo said.

"What kind of information?"

"Something that might be of political use," she replied.

Proska's eyes gleamed. "Black-mail, perhaps?"

"Perhaps."

"We thought it might be something like that. He had an interview with deBloise, then he was seen hovering over my house, then he went to Danzer and spent a long time talking to a Vanek. We didn't like that; and then the speed with which he headed for the spaceport convinced us that he knew something, something dangerous." He moved toward the bed. "But now it doesn't matter what he knows."

Jo reached for the red button on the visiphone but never made it. Her vision blurred as nausea and vertigo swept over her. She found herself sprawled flat on her back on the floor.

Proska's teeth were clenched. "That was a futile move! I sensed a psi shield the moment I entered the room but your detective's condition

should be proof enough that a shield only dulls my powers." He stopped speaking suddenly and eyed Jo as she slumped on the floor, eyed her sprawled legs, the curves of her body accentuated by the clingsuit.

"You know," he said as he came around and sat on the edge of the bed, "it would be a shame to waste you." His gaze roved her body again. "You could be very entertaining."

Jo propped herself into a sitting position and laughed in his face.

"Don't be so smug, my dear!" he flared. "You're talking to Cando Proska and he can do unheard of things with his mind! I discovered as a child that I could kill with thought and it terrified me. But after years of being pushed about by people with power and money and being treated like any other worthless slob, I decided I'd had enough. I began experimenting with my powers and I learned, I learned. A fair number of people are dead or worse because of those experiments but I finally knew my capabilities."

He glared at her, ego blazing in his eyes. "So do not laugh at a threat from Cando Proska! I could take your mind and purge it of all cognitive ability. That no doubt would make you quite entertaining for a while—completely mindless, of course, but *quite* responsive! It's no idle boast . . . I've done it before." A thought suddenly struck him and he glanced at Easley.

"Come to think of it, that's probably what your detective discovered.

I 'purged'—that's my own little name for it—an off-worlder some years ago in Danzer. His name was Finch; you might have heard of him."

Jo's body froze with shock and rage. She managed to speak with only the greatest effort of will. "I'd heard he was murdered."

"Oh, he was. But not by me. You see, Finch's success at integrating the town of Danzer was threatening to kill a bill on which Elson deBloise had staked his political future. I merely went to deBloise and told him I could help him if he'd meet me in my apartment. He was desperate by then so he came and I offered to stop Finch cold without the slightest use of force, or violence . . . for certain considerations, of course. He had learned that Finch was on the verge of success so he agreed. I merely went to Danzer and relieved Finch of all his cognitive abilities. He was a drooling vegetable when I left him in that alley."

"But the knife," Jo said.

Proska nodded. "One of his Vanek friends came along and saw his condition. He conferred with other Vaneks and they decided to kill him. They practically worshiped Finch and felt he would prefer to be dead than allowed to live on as a mindless blob of flesh. It all worked out rather well, actually. The Integration Bill passed with an impressive majority and I've been bleeding deBloise dry ever since." He smiled at Jo's questioning glance. "That's right. I made

a recording of our little 'business conference' in which he promised to pay me for stopping Finch. And if I should happen to die in a manner that is in anyway suspicious, a copy of that recording will go directly to the Federation Ethics Council and deBloise's political career will be finished.

"And anytime I want to put pressure on him, I threaten him with Finch's fate. It's a perfect setup: he's scared to death of me and yet he doesn't dare do a thing to get rid of me. He'll do just about anything I tell him to . . . it's amazing how some people fear being a vegetable more than they fear dying." He turned his gaze on Jo. "And now it's your turn."

"The shield!" she warned, hoping to deter him.

"That's no problem. I know it's hidden in this room and after you're unconscious I'll find it and disconnect it."

As Jo struggled to her feet, Proska fixed his eyes upon her and she felt the vertigo and nausea again. But this time she was ready for it and resisted.

"You're strong," Proska commented. "Finch was strong, too, but eventually he was defeated."

Jo's knees suddenly buckled and she fell to the floor but kept resisting. "It must run in the family," she said.

Proska must have been somewhat surprised, or puzzled, by this statement for the indescribable pressure

on Jo's consciousness lessened momentarily. She took advantage of the lapse.

"He was my father!" she screamed.

Not being psionic, Jo could never know, understand or explain what happened then. Proska recoiled—mentally and physically—at this revelation and at the intensity with which it was uttered. And in doing so he left open a channel between himself and the girl. Something flashed across that gulf, all the concentrated hatred, rage and disgust that had collected while Jo had listened to this horrid little monster of a man cold-bloodedly recount the murder of her father, the fury, resentment and repressed self-pity that had waited fifteen years for an object found one and channeled along the waiting path.

Proska twisted in agony and clawed at his eyes. He opened his mouth to scream, but no sound came forth. Unconscious, he crumbled to the floor.

Relief and reaction flooded Jo and she felt her own consciousness dimming. But before everything went black, she thought she saw the door to the room open and a hooded blue-gray face poke itself inside.

She was brought back to consciousness by the night nurse. "Feeling better now?" the woman asked. "I think you'd better take to a bed, Miss; you look awfully tired. You might have been on the floor for

hours more if I hadn't got the buzz."

Jo was fully alert now and looked around the room for Proska. "Buzz?" she asked.

The nurse beamed. "Yes. Mr. Easley snapped out of his coma a few moments ago, saw you on the floor and rang for me."

"Larry!" Jo cried, leaping to her feet. He lay there in the bed, smiling and looking perfectly healthy.

"Hi, Jo," he said. The nurse quietly slipped out.

"Where's Proska?" Jo said with no little agitation once they were alone.

Easley was surprised. "You know about Proska?"

"He came here tonight to finish you off, Larry. Wasn't he here when you came to?"

"No," Easley said, totally bewildered. "What are you talking about? And what were you doing passed out on the floor when I woke up? The nurse explained what she knew about what happened to me, but what happened to you?"

Jo placed a call to Old Pete and then proceeded to tell Larry all she knew. When she told him what Proska had said, he nodded.

"That's what I found out from that Vanek in Danzer," he said. He shook his head. "They consider him the most dangerous man in the universe but were just sitting around waiting for the Great Wheel to bring him his due. Frankly, it scares the hell out of me to know he's running around loose!"

Old Pete arrived then and Jo re-

lated the events of the night again.

"Did you say his name was Proska?" Old Pete asked.

Jo and Larry nodded in unison.

"Well, then, you have nothing further to worry about. As I came in I found the hospital in an uproar over the body that had been found outside the city. He had been wearing an orderly's uniform but his name was Proska and no Proska had ever been employed by the hospital. I would have ignored the whole story except for the bizarre way the man had been killed."

"You mean he's been murdered?" Jo asked.

"Yes, almost ritualistically. It seems some person or persons nailed him to a tree, sawed off the top of his head, scooped out his brain and smashed it at his feet."

"The Vanek!" Jo said.

"Not a chance," Old Pete declared. "The Vaneks never take any decisive action on their own behalf, or on behalf of anyone else."

"Maybe they've learned something," Larry mused. "Maybe Junior Finch taught them that a little initiative is better than waiting for the Great Wheel. Maybe they didn't want the daughter of their honored Junior to go the same way as her father and decided to do something."

There was a pause, then: "For beginners, they sure don't kid around," said Old Pete with a visible shudder.

"This means deBloise is finished," Jo said with satisfaction. "Proska's recording should be on its way to the

Federation Ethics Council by now. That's where he said it would go if his death had anything suspicious about it."

"That stops deBloise," Old Pete concurred, "but what about the Haas plan? The other Restructurists can carry it through without him."

Jo smiled. "That remains to be seen." She turned to the visiphone and placed a call to the Jebinose brokerage house.

"I'd like to buy some stock in Op-sal Pharmaceuticals and Fairgood Drive," she said as a man's face appeared on the screen.

"You and everybody else," he said with a smirk. "I've been trying to get a bid in on those two issues all night. The Galactic Board has gone wild!"

"How about Teblinko, or Star Ways Drive?"

The man's eyes lit up. "As much as you want! Good prices, too!"

"I'll think about it," Jo said. "Thank you." She turned to Old Pete and Larry. "Well, that's the end of deBloise's plan."

"I still don't understand," Old Pete said.

Jo moved away from the phone and slumped into a chair. "DeBloise was planning on SW running Haas out of business. He knew it would happen; and when it did he expected to go before the Federation and plead that further development of the warp gate is vital to the security of the Fed and will be needed on that inevitable day when we clash

with the Tarks. He'd claim that unregulated competition was depriving the Federation of the gate, and he'd demand invocation of the emergency clause so that the Fed could intervene against SW."

"That's it!" Old Pete cried with dancing eyes. "If the plan succeeded, the Restructurists would have had a foothold in one of their prime target areas: regulation of trade!"

Easily was still somewhat puzzled. "How can you be so sure this is the plan?"

"It's obvious when you tie everything together. DeBloise was carefully hiding his financial link with Haas—that indicated he feared a conflict of interest charge. He was also aware that backing Haas was financial suicide . . . Haas is a monomaniac and a lousy businessman to boot. With him in charge of production and marketing, the warp gate was doomed; Star Ways would drive him out of business before he could get off the ground. And since Haas will allow no one other than himself to produce the gate—to which he has full legal rights—the warp gate would thus be lost to humanity and 'unregulated trade' would be painted as the villain.

"The obvious military advantages of the gate would have made it a perfect lever to get at the emergency clause. The Restructurists would scream Security and it would be difficult to oppose them. So I decided to stop them before they got started . . . I struck at SW."



Jo leaned forward as she spoke. "You see, SW is a well-diversified corporation and could afford to lose money on their warper in a price war as long as they could count on their subsidiaries to make up the difference. So I aimed at SW's diversity: I took a gamble and tried to hurt its two biggest subsidiary companies and succeeded. An effective competitive price war is almost impossible for SW now and so there's no excuse to invoke the emergency clause!"

Old Pete was on his feet. "This calls for a celebration!"

"Not yet," Jo said, her facial muscles tightening and her eyes going crystalline. "Not until I go to Fed Central and personally see Elson deBloise thrown out on his ear!"

DeBloise was not to be thrown out. When the accusation was made in the General Council, he and his Restructurist allies were ready. Jo and Old Pete arrived in time to hear the end of his fiery speech.

"... And so we take our leave of you. You haven't driven us out with your false, slanderous smears against my character! It is your stupidity, your blindness which causes us to leave you to fester in this pool of anarchy called the Federation! We've tried to warn you, tried to help you bring order to the galaxy but you seem to desire chaos. Then chaos you shall have! We leave to form a new coalition of worlds. And woe to everyone who stands in our way!" With a dramatic swirl of his cloak he

left the dais and headed for the door. Other Restructurist members of the Council followed him out.

Jo and Old Pete were standing by the main door as the group marched through. Jo stared intently at deBloise; their eyes met, then deBloise was past. She was just a bystander to deBloise. He did not know—and perhaps never would—that the young, attractive woman watching his grand exit was the cause of his downfall.

A vid reporter rushed frantically around the foyer of the Council hall trying to get reactions. He approached Old Pete and aimed his recording plate at him.

"Sir," he asked, breathlessly, "what do you think this means? Do you think there's a chance of war between the Fed and the new Coalition?"

"The secession is certainly a bold move," Old Pete replied, "but I doubt if it means war. Oh, there might be a few armed skirmishes over some of the resource planets, but I hardly think the Fed will go to war in the full sense of the word."

This calm, reasoned reply was not at all to the reporter's liking. He turned to Jo.

"What about you, Miss? Mr. deBloise claims the terrible charge against him is all part of a plot to destroy him? Do you think there's a possibility of such a thing?"

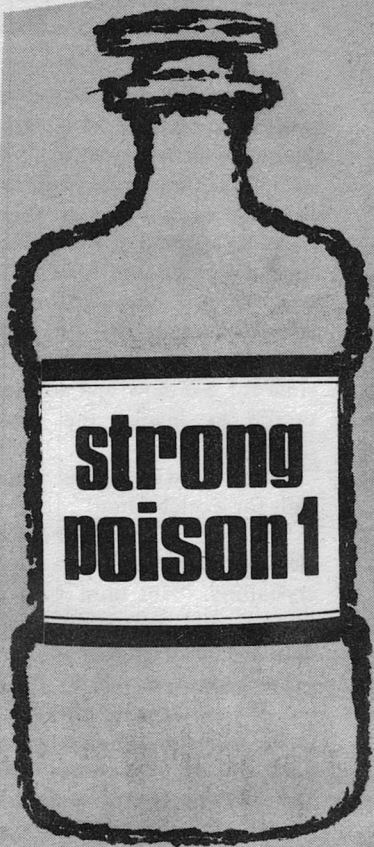
Jo smiled and shrugged. "Wheels within wheels, *bendreth*."

She took Old Pete's arm and they walked away, laughing. ■

Your heart needs no excuse for beating a little faster right now, this is the climactic experience of your lifetime and you would not trade it for anything in the world, new or old. For days you have seen the new planet grow larger, with white polar caps and reddish-yellow, barren crater fields. Now the spaceship enters the landing orbit for your first and only planetfall. As one of the chosen few you feel the excitement, long lost to your tribe, of gaining a virgin homeland, waiting for you in severe grandeur. You are girt for a harsh courtship, but not for a kiss of poisoned death.

Or are you? You have been carefully briefed: Gravity inconveniently low, yet about twice that on the Moon; atmosphere thin, check and use your breathing equipment; nights with subzero temperature, but you are well clothed. You are aware of some other problems, and of your ability to cope with them. But poisons—you are not conscious of them as a threat at this sublime moment, really?

At first sight, toxicologic problems would demand little attention when



Dr. Larson is a specialist in Medical Genetics—and it is the work of geneticists that has demonstrated not only the truth but the underlying cause of the long-observed phenomenon that "One man's meat is another's poison!" When we go to other planets, that wild variable is apt to be critically important—and useful.

**BY CARL A. LARSON**

we start pole jumping to asteroids and planets. Let's agree not to call the inability of an environmental element to support life poisonous in a strict sense. Attempts to breathe the Martian atmosphere, as is, would kill us through oxygen deprivation before giving us a chance to die from carbon dioxide poisoning, which could otherwise, with some justification, enter the discussion. Usually we associate with a true poison a degree of reactivity which is extreme when the poison is strong.

What happened to Angus McDonald, who settled on a low-tax asteroid, very well equipped with means to make his life comfortable? After a few weeks he developed a rather alarming weariness, he was rapidly thinning away and he could barely feel his pulse. Was he dying from some insidious poison?

Some poisons are lethal but slow, often enough it is a matter of dosage. Even Martian settlers could develop symptoms and signs of this slow but conspicuous emaciation and mental inertia. But the first cause to think of would be deprivation rather than some active, deleterious agent. When

deprived of normal gravity you will eat less, you may suffer protein loss and there will be a relative leveling off between blood pressure in the upper and lower parts of your body. Demands on heart action decrease and some reduction of the muscle volume and strength of the organ will ensue. Such changes, largely preventable by systematic exercise, could confuse the picture of specific nutritional deficiencies, notably those of the vitamin B complex, but also of poisoning with, for instance, heavy metals. Neither serious diagnostic difficulties nor, indeed, real hazards of the types suggested should arise in well planned and medically supervised planetary missions.

Let us take careful planning and faultless execution for granted. Your Martian settlement will be backed by virtually unlimited financial and engineering resources. In due time you will eat the fat of the land, hand down your skills and experiences to a new generation who will in turn make cautious preparations for the next step towards planetary or asteroidal colonization. Would such

wary progress have to include any precautions against poison?

You may feel stronger about that question after your first Martian dust storm. At wind velocities up to 60 mph the tooth-gritting, eye-irritating stuff is getting under your skin, almost literally, in spite of your gas-tight suit. But will it poison you?

Not very likely. In the human body free iron can certainly harm and the red stuff consists mainly of hydrated ferric oxides—by a qualified guess, the proof of this pudding is in the eating. More than two thousand years ago Greek physicians treated patients with extreme paleness and weakness by having them drink water in which old swords were rusting. These empiricists had, of course, no idea what they were really doing. (Incidentally, their anemic patients recovered; in modern time it was “proved” that inorganic iron could not be assimilated and incorporated into red-blood pigment, right now such evidence has, however, been refuted—inorganic iron is indeed absorbed and rapidly improves iron-deficiency anemias).

Nor had the alchemists any trace of reflection photometric evidence when they identified Fe, iron, with the sign of Mars, the red planet; Mars, the god of war, had imbued the sword metal with strength, it was as simple as that. In its ferric form inorganic iron is, however, not readily absorbed and Martian dust is not harmful in the quantities of conceiv-

able exposure. If you would press the point, asking whether the lithosphere of our next space migration targets can be given a clean bill of harmlessness, the answer is no. But the arsenic compounds and other inorganic poisons we have learned to avoid here should be no great threat there.

The last statement requires a qualification, but, taking things in due order, we may proceed to the rather specific hazard emanating from minerals with a dangerous distribution. Space pioneers are not likely to descend unwarned upon highly radioactive rocks, but a whiff of radon in a cave, for instance, would certainly meet the requirements of a strong, killing poison. The wider problem complex of ionizing, mutagenic radiation on colonized planets and asteroids belongs to the reconnaissance of forces which will finally, at a cost, knead and mold our species into *Homo transmundanus*. But we are now concerned with the thin line of planetary pioneers, their individual survival chances, their prospects in a somewhat homelike, yet essentially novel surrounding. It is in this context we must qualify, in a somewhat different way, the statement about easy avoidance of inorganic poisons.

It must be remembered that we have spent some three billion years, and untold trillions of lives, to learn how to live on this planet Earth.

It is predictable that any new planet, differing subtly as it inevitably will, will cost us more years, and more lives, before we adapt to its

specific characteristics. There will be poisons.

When eating the fat of the arid Martian land you may find yourself on a rather slimming diet. Indigenous fungi or mushrooms, as we could tentatively call such advanced Martian life forms as might be there, would still do tricks most terrestrial organisms have abandoned. Oxygen is in short supply on the red planet, and life as we know it requires oxidation. Chemists tell us that oxidation is, in fact, loss of electrons; oxygen is one electron acceptor, nitrogen gas is another. Early life forms on our planet used  $N_2$  as electron acceptor, other oxidants with this function were carbon dioxide, sulfate and nitrate, still used by anaerobic bacteria today. But a microbe found in river mud by Wolf Vishniac of the University of Rochester, New York thrives grandly on a substrate with hydrated ferric oxide as the only electron acceptor. Thus it would be pre-adapted to a Martian existence, which is, however, not really the point to be made here.

The point is that Martian environments, diversified, stressing, stimulating, are more likely than not to have provided material for evolutionary ladders—given organisms with the climbing itch. Then highly qualified rock eaters would offer themselves for food; they would have started their evolutionary ascent approximately where our anaerobic lithotrophs, oxygen independent rock feeders, have agreed to rest

and be thankful: Sulfur microbes and some hydrogen bacteria, for instance, still use carbon dioxide as their sole carbon source. It's anybody's guess what minerals Martian mushrooms, starting their evolution from there and still oxygen independent rock feeders, would incorporate and use for various purposes. They would build carbohydrates, quite attractive as food sources for Martian dwellers, but they could be flavored with mineral poisons.

Still the greater threat would not necessarily lie in mineral poisons even by a roundabout route. In our present abode we have to count with organic poisons as supreme killers. Among them are organic phosphorous compounds—for military purposes tagged GB and GD—which kill when present in concentrations of ten milligrams per cubic meter of air. They act as specific enzyme inhibitors, meaning that they cut a catalyzed process in the human body, in this case the removal of an effector substance, acetylcholine, of muscular contraction. When not removed, this product of the human body becomes a poison, laming the muscles of locomotion and respiration. This is how organic phosphorous poisons kill, by suffocation; microbes, plants and venomous animals have found scores of similar ways to edge highly active substances, often enzyme inhibitors, into vital chemical chain processes of their enemies.

Earthlings won't come as enemies to the mushrooms of Mars; we are completely unexciting to those limonite-munching fungi. Thus they could be quite harmless to us, it is indeed unlikely that any selective forces would have made Martian plants develop a chemical defense against even remotely mammalian-like predators. Terrestrial plants often add much to their survival chances when they acquire, through a long procedure of selection, a chemical defense against grazing animals. Cattle have learned to avoid such plants as milkweeds which produce heart poisons resembling digitalis, the glycoside of the foxglove. Now and then it still happens a mutual accident to cow and plant, but surviving animals rarely repeat their mistake. Also by that mighty instructor to a species, elimination of the unfit, the milkweed—or monarch—butterfly has been taught to have its larvae feed upon the poisonous plants. As some advanced measure of family planning? No, to teach in turn a lesson to their enemies; blue jays nibbling milkweed-fed monarch larvae throw them up within minutes. Plant poisons of many different kinds, and of powerful killing capacity, are often used, directly and indirectly, as weapons in the struggle for survival.

So that absence of enmity means absence of poison? We cannot be too sure, because organisms may be poisons to each other quite "unintentionally." Many of us have, to our

sneezing and wheezing disgust, private poisons acting in this way, meaning no harm. We shall not forget such evildoers when expanding our living room in space, but the first thing to remember is that our poisons are useful substances integrated into vital processes of living organisms. The plant or animal may, or may not, through uncounted generations have developed the poison production from such vital processes, forging it into a weapon. We may well come upon entirely alien life forms which happen to produce organic compounds that "fit" into our own metabolic patterns in a weird way, acting, for instance, as enzyme inhibitors.

To unintentional killers belonged some foxglove plants, which happened to be more toxic than others depending upon soil and exposure to sunlight; the heart drug prepared from foxglove leaves had to be carefully standardized. Could such extrinsic variability add to the unpredictable hazards from Martian plant poisons?

The answer to this question comes close enough to the future some of us will help build. One of the first things Martian pioneers will do is erect greenhouses for terrestrial plants. Now sunlight on Mars contains a formidable amount of ultraviolet radiation, blue haze will reduce very little of its impact, at least in the 2,400-2,900 range, and  $2 \times 10^{-4}$  watt per square centimeter hitting the Martian surface is too much for

imported food plants. Most terrestrial plants are killed at that intensity. Screening will probably constitute no major problem, but let's say it will be quite sufficient to let plants live and produce needed O<sub>2</sub> and food, but still inadequate in some respects. It could let through enough ultraviolet radiation, perhaps in spots, to start photochemical reactions harmful to harvesters if not to the plants. Electronically excited molecules are highly reactive and irradiation with ultraviolet light is a laboratory method to produce, among other things, mutagenic photoproducts via excited states.

So "unpredictable" is true enough about such hazards, but given time and adequate manpower—some youthful energy directed towards photobiology and photochemistry would sooner or later catch considerable rewards—hazards from plants brought to Mars from here could almost certainly be eliminated. As for autochthonous Martian plants—would they not have been killed long ago by those sterilizing doses of U V irradiation?

They possibly would; the ultraviolet radiation exposure could be presented as *the* argument against the possibility of life on Mars. But terrestrial mushrooms have been canny enough to go underground—what we usually call mushrooms and sometimes eat is, in fact, their reproduction organs. It seems likely that Martian plants have come upon this simple trick of protection, or, more

accurately, have developed from soil-living, simple organisms and continued to lead a soil-protected life. With some precaution it would be possible to avoid mushroom-poisoning on Mars, but extreme conditions of temperature and radiation together with the possibility of an ecological variation of which we know so far very little could have produced mushrooms with a variety of nasty properties. Their antifreezes might, for instance, not go well with our digestion. Once established in a suitable surrounding, Martian plants have had a lot of time to develop all sorts of trickery.

Poison means different things to different people: the nuclear physicist may talk about fission poisons, a chemist about catalyst poisons, they inhibit fission processes and catalytic action, respectively. Arsenic, for instance, poisons platinum catalysts as well as people. But usually we think of a poison as a substance acting chemically, in small quantities, with serious effects—death, grave injury—in anybody exposed to it. A microbe, *Clostridium botulinum*, prevalent in soil all over this planet, produces a poison killing in microgram quantities, tetanus and diphtheria are other potent producers of organic poisons capable of killing everybody exposed to them. When discussing the possibility of life in Martian environs microbiologists tell us that their pets could survive there. Bacteria isolated from hot volcanic soil

in fact have been grown at Martian low temperatures. Bacteria will certainly resist the cosmic radiation—about two hundred times as large as here because of the very weak magnetic field on Mars—in so far as not being killed, spores are likely to survive even the ultraviolet radiation. Thus you had better be careful about Martian microbes, if nothing else is there resembling life on this planet; they may be fairly harmless, but also quite capable of producing extremely potent poisons.

Though microbiologists certainly have every right to claim a place on Mars and beyond for their protégés we have some sound reason to consider the possibility of evolved life forms on our next major space target. One of several factors capable of producing variability among what we could keep calling fungi, or mushrooms, is the relatively high intensity of cosmic radiation, about seven rads per year. To Earthlings this constitutes a health hazard, especially to future generations. Radiation doses of this magnitude increase the rate of mutations, changes in the key molecules of inheritance, and space pioneers have to be protected against cosmic irradiation. It is quite possible that primitive Martian organisms have got a flying start by changing at a fairly high rate, they may keep a somewhat higher mutation rate than tellurian organisms or evolved, at some intermediate step to their present forms, protective mechanisms against muta-

genic radiation. In either case we could meet a considerable variation among Martian organisms.

This, of course, would increase the possibility of poison production by some organisms, by mere chance, but also in defense of prey fungus against predator fungus. Call it chance when a Martian organism happens to produce a substance that is reactive and capable of insinuating itself into the human body, that chance will increase with the diversity of Martian life forms. When selective processes make a fungus of the red soil produce poison against its enemies this may lame a specific enzyme, needed at one step of a biosynthetic process in the target organism. But the economy of life, anywhere we have been able to trace its ways, favors the repetition of one pattern in widely different organisms. Thus the biosynthesis of aromatic amino acids, necessary building stones of all terrene organisms, is *partly* identical in bacteria, fungi, higher plants, insects and human beings. Of course we don't know, but it would not be wildly fanciful to surmise that Martian organisms would have come upon synthetic pathways *partly* identical with those of peas and people. So that a Martian mushroom poison directed against a specific enzyme in a Martian predator plant, or competitor for soil, could lame exactly that enzyme in human mushroom eaters, in other words: poison them.

This would be a true poison by



strict definition, a disabling or killing toxin, a public poison. The last qualification is quite unnecessary when talking about more or less accidental poisoning here and now, people are careless of medicaments, pesticides and technical solvents capable of killing anybody and thus poisons, period. But there are two entirely different types of more or less private poisons which are serious hazards to human beings on this planet. Such poisons are capable of killing and injuring people when present in small, sometimes infinitesimal quantities, but by far not all people. Could one or the other type of such private poisons affect our Martian future?

At each step from now we shall try to be especially cautious in setting apart knowledge and extrapolation. We don't know whether some people would encounter special poison problems on Mars and beyond, we have no formula for preadaptive fitness for a Martian life. The consequence of positive and negative selective forces working strongly upon groups of space migrants could be an immediate if unapparent step towards permanent change in pioneering populations, but that's another story. We are concerned with individuals and their poisons.

The first type of private poison, known by almost everyday experience, is the allergen: a substance that induces a hypersensitive reaction. Allergic rhinitis, hay fever,

bronchial asthma, hives or urticaria as well as eczema are all manifestations of hypersensitivity, caused by various allergens or personal poisons. Taken together such ailments are far from rare, they torture some 20 million Americans right now.

This is fairly common knowledge, but what about definitions? A substance acting in small quantities—yes, so far ragweed pollen meets the definitional requirements. It is a poison all right, though only to sensitive people. Serious effects? Sure, some people have established a mode of living with their allergic ailment, but every allergic state constitutes a potential danger: of limited capacity for work and other activity and often of severe complications. One type of allergic reaction, known as anaphylactic shock, illustrates the minute quantity required and the dramatically sudden and often deadly effect attained in some instances of repeated exposure to an allergen.

Thus we have, first, true if private poisons with disabling effects in people who have been made hypersensitive to various substances. Next, we may ask if we are likely to meet such substances, allergens, on alien planets. So far every clinical experience tells us that it would be a strange planet, indeed, that would be free from allergens; molecules of almost incredibly different shapes can act as hypersensitizing agents. There will be no ragweed pollen on Mars and we can put it down as a fact that we will find no canals there to catch

lobsters or other water denizens capable of causing food allergy. A reduced number of industrial products with potential allergenic activity will be beneficially absent and some allergy sufferers could certainly profit by a somewhat modified Martian environment. But bacteria, molds and their spores are well-known allergens and every evolutionary step is likely to increase the number of possible antigens. At our present stage of ignorance we may conclude that anywhere in our future planetary dominion private poisons may lurk in the shape of unknown or fairly familiar allergens.

Speaking of ignorance, we own an immense fund of that when it comes to explaining such familiar facts as the occurrence of stuffs capable of producing allergy in almost everybody exposed to them, and also the facility with which some sufferers become sensitive to a great number of different agents. It is rather obvious that an increased tendency in some persons, as compared with average persons of the same age and sex, to develop various kinds of allergies enters the computation of possible hazards in an entirely new environment, but the simple "explanation" of allergic susceptibility as heritable requires some recalculation when we know who is not susceptible. Part of the pertinent answer will be found on Mars.

Though this first type of personal poisons may be of great importance to planetary and asteroid colonists,

another kind of private poisons may be of greater importance in molding *Homo transmundanus*. To illustrate, the broad bean contains no public poison, but it has been known since the days of the Romans to be dangerous to some people. Today we know that the fatal or disabling decay of red blood cells caused by the broad bean is limited to people deficient of a certain enzyme—called glucose-6-phosphate dehydrogenase, or G6PD. Characteristically, crises of red cell decay are provoked not only by exposure to beans but also by certain peas and other vegetables as well as by a number of drugs.

Some people have thin skulls and should avoid street brawls, what's so special about a biochemical Achilles' heel? First thing, the enzyme defect is regularly inherited. Most sufferers from favism, or bean fever, are boys and men, the changed gene is situated on the X chromosome. Female carriers of this gene usually have a normal gene on their other X chromosome, directing sufficient enzyme production. Males have only one X chromosome and lack this possibility of compensation when carrying the deficiency gene.

Second, other regularly inherited enzyme defects have been observed, increasing the range of private poisons. It could be objected that the X-chromosomal enzyme defect is not so private after all, as it occurs, in one variant or the other, in millions of people in African and Mediterranean regions. But let us keep in

mind the first thin line of voortrekkers—they could have among them, perhaps, a woman with the gene for G6PD-deficiency, and what more in the way of susceptibility to individual poisons?

The haphazard way in which knowledge has been acquired in this field points to the possibility of many so far undetected enzyme deficiencies. But several scores of simply inherited defects of this kind are known—and most of them are unlikely to occur among space pioneers because people susceptible to the corresponding poisons—such as milk—are recognized as disabled. Then again, if asked about your sensitivity to succinylcholine you would be likely to know as much as you now know of your susceptibility to Martian mushroom poison. Succinylcholine could be very dangerous to you, but why should you know? And how?

In its way this scrap of stray knowledge is illuminating, not only of the problems meeting the first Martian settlers, but their health hazards. We are concerned with those hazards now and the situation to be described illustrates the possibility that some of the settlers can be exposed to completely unforeseeable poison problems.

Succinylcholine is a substitute for curare, a South American arrow poison. Around 1932 purified curare fractions came into use to treat muscle spasms in tetanus and cere-

bral palsy, sometimes with good results. But witch doctors concocting the drug—tube curare sold in bamboo tubes and pot curare in earthenware jars—from various plants of the moonseed family and certain climbing vines, were beginning to slip and when curare preparations came into use as adjuvants to abdominal surgery some doctors thought they could do better without the somewhat erratic witchcraft of their Orinoco basin colleagues. They asked chemists for a substitute and got succinylcholine, with curarelike action and free from side effects. It was certainly a potent reactive agent, but completely harmless in the therapeutic doses of 10 to 30 milligrams used to produce muscle relaxation. After four or five minutes normal muscular tone returned. This vanishing action proved ideal for surgical procedures requiring brief and complete muscular laxity. But when succinylcholine came into extensive use, not only in surgery but above all as a safeguard against dislocations and fractures in shock treatment of mental disorders, trouble cropped up. Some patients reacted as if hit by a curare-dipped arrowhead, their breathing was suspended for hours.

This was an instance of a completely unsuspected, biochemical soft spot. It was observed in people who were not well as they had to undergo abdominal or thoracic surgery or treatment of mental depression, but their ailments had nothing to do with the enzyme defect that turned

out to be at the root of the abnormal reaction. Most of us have an enzyme capable of hydrolyzing succinylcholine, patients with an inactive variant of this enzyme are susceptible to a poison that is public enough by a wide definition, it can kill anybody. But the prolonged and dangerous effects of succinylcholine in about one person in two thousand make the drug a private poison to people with a low enzyme activity. In this case normal activity is present in people with a double dose of a specific gene, not carried by an X chromosome. Its changed partner gene causes, when present in both of the critical chromosomes, enzymic failure and susceptibility to succinylcholine poisoning, and one gene of each kind occurs in persons with about half the optimal enzyme activity. There is really no reason for any of us to know what genes we carry at the site related to the handling of succinylcholine, under ordinary circumstances.

We could try a tentative conclusion at this point: people with this unsuspected enzyme failure could find themselves at a disadvantage when exposed to xenotoxins similar to succinylcholine. One additional example will, however, illustrate the wider aspect of this quite reasonable idea.

People vary in their reactions to drugs and one source of variation is different ability to acetylate them, i.e. handcuff the drug with the acetyl radical,  $\text{CH}_3\text{CO}-$ . People carrying a

pair of genes for retarded acetylation are slow inactivators of such drugs as isoniazid, used against tuberculosis. Sometimes slow inactivators have toxic manifestations from the nervous system when treated with isoniazid, possible to forestall through a sufficient supply of pyridoxine (vitamin  $\text{B}_6$ ). Rapid inactivators have a high activity of the acetylating enzyme and carry a different gene at the specific site in both partner chromosomes involved, intermediate acetylators have one gene of each kind.

Now the meaning of the haphazard way of detecting such enzyme deviations, via supply of artificial compounds, can be traced. It seems to be that we have reason to assume that the variability of "quiet" enzymes, usually not revealed by some toxic manifestation when lacking in some persons, is greater than so far observed. There is in fact a series of additional evidence pointing in the same direction. Then it would be reasonable to think of private poison hazards on alien planets, not in terms of this or that specific enzyme deficiency testable in advance, but rather as the threat of the unknown to an organism not sufficiently well known in its enzymatic intricacies. The private poison you have escaped here you may meet on Mars.

This is one side of the coin. Of course research workers keep asking how such peculiar variations in enzyme activity arise—that they are

heritable is only a partial answer—and how they can establish themselves in human populations on Earth. At least some of them are not limited to human beings, rapid and slow acetylators have been found among rabbits and longtailed African monkeys. Incidentally, the gene responsible for slow acetylation is “normal” in Africans and Caucasians, with a frequency of about seventy-five per cent. In Asia and among Eskimos the gene frequencies are about reversed, slow inactivators forming the minority.

This problem complex borders on a topic not treated here: how the increasing Martian population will fare. Briefly, changes, mutations, occurring at a somewhat higher rate on the red planet if the protection against cosmic radiation fails, are tried again and again, here and now. Our key molecules of inheritance change, the new genes are tried in children of well carriers, together with various other genes, in different geographic surroundings, tried and fitted and rejected, almost always rejected sooner or later because our species has been through its crucible of selection. Our genes, of protozoan, vertebrate and mammalian origin, have long been fused to sets of information which are certainly not perfect, but the best available on this planet right now. For a major mutation to establish itself as norm we might have to pay some three gigadeaths.

We are paying now, fairly recent

mutations failing for instance in northern Europe are partly successful in Africa, where their carriers pay, however, a tremendous toll in high infant mortality for malaria protection by genes changing the red blood pigment. There is good reason to think that the unexplained enzyme variations are of some advantage, in certain settings, but have to be paid for by the slightly reduced fertility of some carriers of the new genes.

Soon such gene constellations will be tried in alien surroundings, by parents of new generations on other planets. Then genetic variability may not be solely a number of different weak spots exposed to new poisons; in several instances people with a “slow” variant of an enzyme could find themselves resistant against plant-produced enzyme inhibitors acting as strong poison in people dependent upon the more active enzyme variant. Once *Homo sapiens* conquered inhospitable regions of this planet headed by men and women who found themselves strangely at home on the open savanna, in the tropical rain forest, on Arctic snowfields. Since then the same unseen preparations for new great exploits have gone on and on and always failed; gene mutations have been tried in new and always inferior combinations, until pioneers of our kind once may find themselves, in a hostile and poisonous alien world, astray, forlorn, yet unexpectedly preadapted. ■

# The Lion Game

Conclusion. There are times when not even a telepath can be sure who she could trust—and Telzey was trapped in a maze of high-power professional double-dealers. Fortunately, Telzey was a first-class liar herself.

BY JAMES H. SCHMITZ

ILLUSTRATED BY KELLY FREAS





## SYNOPSIS

Fifteen-year-old Telzey Amberdon learns that the use of a developing psi talent can produce its own class of problems and perils. It's brought her to the attention of other psis—secretive hostile mentalities which seem to be human but are different from any human minds she's touched before. They set a savage animal of unknown type on her trail, a beast which locates its victims by their mental impulses, then teleports through space to materialize beside them.

Telzey tricks the creature into destroying itself and is safe for the moment. But she realizes its masters will continue to look for her and should be able to identify her eventually. She reports her experience to the Federation's Psychology Service, and agrees to act as bait for the Service while ostensibly going ahead with her normal activities at college. There is no recent record of a psi organization such as she has described, but probability computers indicate she may have encountered descendants of the Elaigar, an artificially produced ogrelike giant human mutant strain, believed to have been nearly exterminated centuries before.

Presently there is a report that several members of the ruling caste on the world of Tinokti have been killed under mysterious circumstances and in a manner suggesting that a beast of the kind set on Telzey's trail brought about their death. The Service shifts its search for the secret psi organization to Tinokti, and Telzey, under the

pretext of gathering material for a college paper, goes there to help hunt for traces of the psis and their activities. Tinokti has a highly developed portal technology—a system of instant transmission from one point of the planetary surface to another—and a good part of its population lives in closed portal circuits, frequently shielded against both physical intrusion and psi probes. This creates an ideal setting for psis intent on operating in concealment.

Telzey promptly picks up impressions of psi minds of the type being sought. However, before the Service can develop this lead, she finds herself switched out of one portal circuit and trapped in another one. Her contacts with Service personnel have been cut off, and she is the prisoner of four psis, three men and a woman, who are giants by ordinary human standards but lack the bulk and the frightening appearance of the legendary Elaigar. The woman gives her name as Kolki Ming, saying that Telzey will remain for the present in the custody of Tscharen, one of her male companions, and that explanations will be made later. Tscharen and Telzey set off through the strange circuit and almost immediately are ambushed by another group of giants, some of whom resemble Tscharen and his associates, while others are unmistakably the ogrelike Elaigar. Tscharen is taken away, and Telzey finds herself confronting Stiltik, a female High Commander of the Elaigar. When she refuses to open her mind for



Stiltik's inspection, the giantess mauls her savagely into unconsciousness.

Awakening under the expert ministrations of an alien physician, Telzey cautiously taps various minds in her vicinity, learns that she is under guard in an isolated section of a great portal circuit occupied by the Elaigar and their alien serfs, and that Stiltik, engaged with Tscharen at the moment, intends to send for her presently to interrogate her. This gives Telzey a limited amount of time to make her own preparations. Physically restored by the physician, she has a narrow escape from a deranged old Elaigar being held in isolation, then takes Essu, her humanoid guard, under mental control and sends him off to get map diagrams of the circuit. She knows by now that the ogrelike giants, called Sattarams, are the mature form of the Elaigar, and that their life span, as compared to the normal human one, is very short. The lesser giants, called Otessans, are adolescent Elaigar. Finally, Tscharen, Kolki Ming, and the other two who switched Telzey into the circuit, are Alattas, a mutated Elaigar strain which retains the adolescent aspect throughout life. Telzey's informants know little about the Alattas beyond the fact that they and the true Elaigar are enemies. Kolki Ming and her two remaining companions, now known to be Alatta agents masquerading as Otessans, have withdrawn into a section of the circuit they've made impassable to pursuers by scrambling portal patterns. Disposing of them has become a point of

honor both for Stiltik and for her fellow High Commander, Boragost, with whom she is engaged in a ruthless struggle for power.

Telzey has been joined meanwhile by two "wild" humans, Thrakell Dees and Neto Nayne-Mel, who have managed to survive independently in the Elaigar circuit. Telzey is suspicious of Thrakell, who has the psi ability to block awareness of his presence from the minds of those he encounters and who has used the ability in an apparent attempt to take her by surprise. When Essu returns with the maps, she has him disarm Thrakell. Then the four of them set off together to obtain another item they need to be able to move freely about the great circuit: a complete set of portal keys. They are to be had in Stiltik's headquarters. The undertaking is dangerous not only because of the possibility of being detected by the Elaigar but because the headquarters area is guarded by a teleporting beast such as the one that nearly destroyed Telzey. Uncontrolled, the creatures, known as dagens or mind hounds, are as dangerous to the Elaigar as to anyone else. This specimen, however, is Stiltik's personal dagen and held under rigid mental controls by her.

They reach the headquarters area without incident, and Essu manages to obtain several sets of portal keys. Telzey meanwhile has been studying the psi controls which keep the dagen subservient to Stiltik. When they're ready to leave, she shears abruptly through the controls, and they get out of the

area as quickly as possible then. They head next for the section of the circuit where Telzey had her encounter with the deranged old Elaigar. She's decided to turn him into an assistant.

## Part 2

### VIII

The Third Planetary Exit control room was quiet. Telzey was at the instrument stand, watching the view-screen. Thrakell Dees sat on the floor off to her left, with his back to the wall. He was getting some of her attention. A Sattaram giant was near the door behind her. He needed no attention—he was lying on his back and very dead.

In a room on the level below them, Neto and Korm, one-time Suan Uwin of the Elaigar, waited behind a locked door. Some attention from Telzey was required there from moment to moment, mainly to make sure Korm kept his mind shield tight. He'd been out of practice too long in that matter. Otherwise, he seemed ready to go. Neto was completely ready to go.

The viewscreen showed the circuit exit area on the other side of the locked door. The portal which opened on Tinokti was within a shielded vaultlike recess of a massive square structure a hundred yards across—mainly, it seemed, as a precaution against an Alatta attempt to invade the circuit at this point. The controls of the shielding and of the

portal itself were on the instrument stand, and Telzey was ready to use them. She was also ready to unlock the door for Neto and Korm.

She couldn't do it at the moment. Something like a dozen Elaigar stood or moved around the exit structure. They were never all in sight at the same time, so she wasn't sure of the number. It was approximately a dozen. Most of them were Otessans; but at least three Sattarams were among them. Technically, they were on guard duty. Telzey had gathered from occasional washes of Elaigar thought that the duty was chiefly a disciplinary measure; these were members of visiting teams who'd got into trouble in the circuit. They weren't taking the assignment very seriously, but all wore guns. About half of them might be in view along the front of the structure at any one time. At present, only four were there.

Four were still too many. Essu would have been useful now, but Essu was dead. Korm had been leading them through a section like a giant greenhouse, long untended, when they spotted a Boragost patrol coming toward them and realized an encounter couldn't be avoided. The troops handled it well. Telzey and Thrakell didn't take part in the action, and weren't needed. The patrol—a Sattaram, an Otessian, six or seven Tolants—was ambushed in dense vegetation, wiped out in moments. Korm gained a Sattaram uniform in Boragost's black and silver,

which was better cover for him than what he was wearing. And Telzey lost Essu.

She spared a momentary glance for Thrakell Dees. He was watching her, face expressionless.

When they'd taken the control room, looked at the situation in the exit area, she'd said to him, "You realize we can only get Neto through here. You and I'll have to get away and do something else."

Korm wouldn't accompany them—that was understood by everyone in the room but Korm.

Thrakell hadn't argued, and Telzey wasn't surprised. She'd been studying him as she'd studied Korm on the way, trying to draw in as much last-minute information on a number of matters as she could. It had seemed to her presently that Thrakell Dees didn't really intend to leave the Elaigar circuit. Why he'd approached her originally remained unclear. What he mainly wanted now was one of the portal omnipacks she carried, the one Essu had assembled for her, or the one she'd taken from Essu after he was killed.

Thrakell had mentioned it, as a practical matter, after Korm and Neto took up their stations on the lower level, and they were alone in the control room.

"Thrakell," she'd said, "I need *you* as a guide now. There's a place I want to go to next, and it seems to be about as far from this part of the circuit as one can get. I might find it by myself with the maps, but it'll be

faster with you. We've already spent too much time. I want to be there before anyone starts hunting for me."

Thrakell blinked slowly.

"What's the significance of the place?"

"The Alattas switched me into the circuit by a portal," Telzey said. "It may still be there and operational. If it is, you can get back to Tinokti, if you like. Or you can have one of the omnipacks—after you've let me look into your mind. That's still a condition. We can split up at that point. Not yet."

Thrakell stared at her a moment.

"I had the curious impression," he remarked, "that you'd decided before we got here you wouldn't be using this exit yourself to leave the circuit. The degree of control you've been exercising over Korm and Neto Nayne-Mel shows you could have arranged to do it, of course. I'm wondering about your motivation."

She smiled. "That makes us even. I've wondered a bit about yours."

But it had startled her. So he'd been studying her, too. She'd tried to be careful, but tensions were heavy now and she'd been preoccupied. She wasn't sure how much she might have revealed.

It was true she couldn't afford to leave yet. There were possibilities in the overall situation no one could have suspected, and her information wasn't definite enough. A faulty or incomplete report might do more harm than none; she simply wasn't

sure. Through Neto she could see to it that the Service would at least know everything she was able to guess at present. So Neto would be maneuvered safely out of the circuit here—if possible.

But Neto wouldn't report immediately. The planetary exit opened into an old, unused Phon villa. Neto would find money and aircars there. She'd get out of her Fossily disguise, move on and lie low in one of Tinkoti's cities for the next ten days. If Telzey hadn't showed up by that time, Neto would contact the Psychology Service.

Telzey leaned forward suddenly, hands shifting toward the controls she'd marked. Thrakell stirred in his corner.

"Stay where you are!" she told him, without taking her eyes from the screen. Essu's gun lay on the stand beside her. With neither Essu nor Neto to watch him, Thrakell was going to take careful handling.

She nudged Neto, Korm. *Alert!* Neto responded. Korm didn't. He hadn't felt the nudge consciously, but he was now aware that the action might be about to begin. He was eager for it. Telzey had spent forty minutes working on him before he led them out of the hospital area. It was a patchwork job, but it would hold up as long as it had to. Korm's fears and hesitations had been blocked away; in his mind, he was the lordly Suan Uwin of a few years ago. Insult had been offered him, and there was a raging thirst for

vengeance simmering just below the surface, ready to be triggered. His great knife hung from his belt along with two Elaigar guns.

Two of the four Otessans who'd been in view in the screen still stood near the shielded portal recess. The other pair had moved toward the corner of the structure, and a Sattaram now had appeared there and was speaking to them. Telzey's finger rested on the door's lock switch. She watched the three, biting her lip.

The Sattaram turned, went around the side of the structure. The two Otessans followed. As they vanished, she unlocked the door in the room below. Whisper of acknowledgment from Neto.

And now to keep Korm's shield tight—tight . . .

He came into view below. The two remaining Otessans turned to look at him. He strode toward them, the fake Fossily mechanic trotting nimbly at his heels, keeping Korm between herself and the Otessans. Korm was huge, even among Sattarams. He was in the uniform of an officer of Boragost's command, and his age-ravaged face was half hidden by black rank markings which identified him as one of Boragost's temporary deputies. The two might be curious about what special duty brought him here, but no more than that.

He came up to them. His knife was abruptly deep in an Otessan chest.

They had flash reactions. The other had leaped sideways and back,

and his gun was in his hand. It wasn't Korm but the gun already waiting in Neto's hand which brought that one down. She darted past him as the recess shield opened and the exit portal woke into gleaming life behind it. Through recess and portal—gone! The recess shield closed.

Korm's guns and his fury erupted together. Turning from the screen, Telzey had a glimpse of Elaigar shapes appearing at the side of the structure, of two or three going down. Korm roared in savage triumph. He wouldn't last long, but she'd locked the door on the lower level again. Survivors couldn't get out until someone came to let them out . . .

That, however, might happen at any time.

She was seen twice on the way to the brightly lit big room where she and Tscharen had been captured, but nobody paid the purposefully moving mechanic any attention; and, of course, nobody saw Thrakell Dees. Another time they spotted an approaching Fossily work party led by a pair of Otessans, and got out of sight. They had to stay out of sight a while then—the mechanics were busy not far from their hiding place. Telzey drifted mentally about the Otessans, presently was following much of their talk.

There were interesting rumors going around about the accident in the headquarters compound of Stiltik's

command. The two had heard different versions. It was clear that the Suan Uwin's mind hound had slipped its controls and made a shambles of the place. Stiltik's carelessness . . . or could wily old Boragost have had a hand in that slipping? They argued the point. The mind hound was dead; so were an unspecified number of Stiltik's top officers. Neither fact would *hurt* Boragost! But how could he have gone about it?

Stiltik, unfortunately, wasn't among the casualties. She'd killed the dagen herself. Telzey thought it might at least keep her mind off the human psi for a while, though that wasn't certain. The ambushed Boragost patrol apparently hadn't been missed yet; nor was there mention of a maniac Sattaram who'd tried to wipe out the guards at Planetary Exit Three. The circuit should be simmering with rumors and speculations presently.

They reached the big room at last. Telzey motioned Thrakell to stand off to one side, then went toward the paneled wall through which she'd stepped with Tscharen, trying to remember the exact location of the portal. Not far from the center line of the room . . . She came to that point, and no dim portal outline appeared in the wall. She turned right, moved along the wall, left hand sliding across the panels. Eight steps on, her hand dipped into the wall. Now the portal was there in ghostly semi-visibility.

She turned, beckoned to Thrakell Dees.

She'd memorized the route along which Tscharen had taken her, almost automatically, but thinking even then it wasn't impossible she'd be returning over it by herself. She found now she had very little searching to do. It helped that these were small circuit sections, a few rooms cut here and there out of Tinokti's buildings. It helped, too, that Thrakell remained on his best behavior. When they passed through the glimmering of a portal into another dim hall or room, he was closer to her than she liked, but that couldn't be avoided. Essu's gun was in a pocket on the side she kept turned away from him. Between portals he walked ahead of her without waiting to be told.

He knew they'd entered a sealed area and should know they were getting close to the place where she'd been brought into the circuit. Neither of them mentioned it. Telzey felt sure he didn't have the slightest intention of letting her look into his mind, couldn't afford to do it. What he did intend, beyond getting one of the key packs, remained obscure. Not a trickle of comprehensible thought had come through the blur of reproduced alien patterns, which now seemed to change from moment to moment as if Thrakell were mimicking first one species, then another. He might be trying to distract her. She had no further need of him as a guide; in fact, he soon could become

a liability. The question was what to do with him.

She located the eight portals along the route in twice as many minutes. Then, at the end of a passage, there was a door. She motioned Thrakell aside again, tried the handle, drew the door back, and was looking down one side of the ell-shaped room into which she'd been transported from the Luerral Circuit. The other door, the one by which the three Alattas had entered, stood open. The big wall closet they'd used for storage was also open. A stink of burned materials came from it. So Stiltik's searchers had been here.

She glanced at Thrakell. His intent little eyes met hers for an instant. She indicated the room. "Stand over there against the wall! I want to look around. And keep quiet—Stiltik had gadgets installed here. They still might be operating."

He nodded, entered the room and stopped by the wall. Telzey went past him, to the corner of the ell. There were no signs of damage in the other part of the room. The portal which had brought her into the circuit might still be there, undetected, and one of the keys Tscharen had carried might activate it.

She'd wanted to find out about that. In an emergency, it could be the last remaining way of escape.

There was an abrupt crashing sound high above her, to her left. Startled, she spun around, looking up.

Something whipped about her an-

kles and drew her legs together in a sudden violent jerk, throwing her off balance.

## IX

She went down, turning, as the metal ring Thrakell had pitched against the overhead window strip to deflect her attention clattered to the floor. The Fossily bag on her back padded her fall. Thrakell, plunging toward her, came to an abrupt stop five feet away.

"You almost made it!" Telzey said softly. "But don't you dare move now!"

He looked at the gun pointed at his middle. His face whitened. "I meant no harm! I—"

"Don't talk either, Thrakell. You know I may have to kill you. So be careful!"

Thrakell was silent then. Telzey got into a sitting position, drew her legs up, looked at her ankles and back at Thrakell. The thing that clamped her legs together, held them locked tightly enough to be painful, was the round white cord which had been wrapped about his waist as a belt. No belt—a weapon, and one which had fooled Essu and his search instruments.

"How do you make it stop squeezing and come loose?" she asked.

It seemed there were controls installed in each tapered end of the slick white rope. Telzey told Thrakell to get down on hands and knees, stretched her legs out toward him,

and had him crawl up until he could reach her ankles and free her. Then she edged back, got to her feet. The gun had remained pointed at Thrakell throughout. "Show me how to work it," she said.

Thrakell looked glum, but showed her. It was simple enough. Hold the thing by one end, press the setting that prepared it to coil with the degree of force desired. Whatever it touched next was instantly wrapped up.

Telzey put the information to use, and the device soon held Thrakell's wrists pinned together behind him.

"Now let me explain," he said. He cleared his throat. "I realized the circuit exit of which you spoke must be somewhere nearby—probably in this room! I was afraid you might have decided to use it and leave me here. I only wanted to be certain you didn't. Surely, you understand that!"

"Just stay where you are," Telzey said.

The key packs she carried evoked no portal glimmer anywhere in the big room. The one which had transported her here probably had been destructured immediately afterwards. So there'd be no emergency escape open to her now by that route. Part of one of the walls of the adjoining room had been blasted away, down to the point where its materials were turned into unyielding slickness by the force field net pressing against them.

Telzey looked at the spot a moment. There had been a portal there,

the one by which the three Atlantas had entered. But Stiltik's search party had located it, and made sure it wouldn't be used again. No other portal led away from the room.

She went back into the big room, told Thrakell, "Go stand against the wall over there, facing me."

"Why?" he asked warily.

"Go ahead. We have to settle something."

Thrakell moved over to the wall with obvious reluctance. "You haven't accepted my explanation?"

"No," Telzey said.

"If I'd wanted to hurt you, I could have set the cord as easily to break your legs!"

"Or my neck," Telzey agreed. "I know you weren't trying to do that. But I have to find out what you were trying to do. So get rid of that blur over your mind, and open your screens."

"I'm afraid that's impossible," Thrakell said.

"You won't do it?"

"I'm unable to do it. I can dispel one pattern only by forming another." Thrakell shrugged, smiled. "I have no psi screen otherwise, and my mind evidently refuses to expose itself! I can do nothing about it consciously."

"That's about what I told Stiltik when she wanted me to open my screens," Telzey said thoughtfully. "She didn't believe me. I don't believe you either." She took Essu's gun from her pocket.

Thrakell looked at the gun, at her face. He shook his head.

"No," he said. "You might have killed me after I tripped you up. You felt threatened. But you won't kill someone who's helpless and can't endanger you."

"Don't count on it," Telzey said. "Right now, I'll be trying not to kill you—but I probably will, anyway."

Alarm showed in Thrakell's face. "What do you mean?"

"I'm going to shoot as close to you as I can without hitting you," Telzey explained. "But I'm not really that good a shot. Sooner or later, you'll get hit."

She lifted the gun, pointed it, pressed the trigger button. There was a thudding sound, and a blazing patch twice the size of her palm appeared on the wall four inches from Thrakell's left ear. He cried out in fright, jerked away from it.

Telzey said, somewhat shakily, "That wasn't where I was aiming! And you'd better not move again because I'll be shooting on both sides . . . like this!"

She didn't come quite as close to him this time, but Thrakell yelled and dropped to his knees.

"Above your head!" Telzey told him.

The concealing blur of mind patterns vanished. Thrakell was making harsh sobbing noises. Telzey placed the gun back in her pocket. Her hands were trembling. She drew in a slow breath.

"Keep it open," she said.



Presently, she added, "I've got what I wanted—and I see you're somebody I can't control. You can blur up again. And stand up. We're leaving. How long have you been working for Boragost?"

Thrakell swallowed. "Two years. I had no choice. I faced torture and death!"

"I saw that," Telzey said. "Come along."

She led the way from the room toward the portaled sections. She'd seen more than that. Thrakell Dees, as she'd suspected, hadn't joined her with the intention of getting out of the Elaigar circuit. He couldn't afford being investigated on Tinokti, particularly not by the Psychology Service; and if the Service learned about him from Neto or Telzey, he'd have no chance of avoiding an investigation. Besides, he'd made a rather good thing out of being a secret operator for Boragost. As he judged it, the Elaigar would remain securely entrenched on Tinokti and elsewhere in the Hub for a considerable time. There was no immediate reason to think of changing his way of life. However, he should be prepared to shift allegiance in case the showdown between Boragost and Stiltik left Stiltik on top, as it probably would. The return of Telzey alive was an offering which would smooth his way with Stiltik. He'd hoped to be able to add to it the report of an undiscovered portal used by Alattas.

Under its blurring patterns, Thrakell's mind was wide open and unprotected. But Telzey couldn't simply take control of him as she'd intended. She'd heard there were psi minds like that; Thrakell's was the first she'd encountered. There seemed to be none of the standard control points by which a mind could be secured, and she didn't have time for experimentation. Boragost hadn't found a way to control Thrakell directly. It wasn't likely she would.

She said over her shoulder, "I'm taking you along because the only other thing I can do at the moment is kill you, and I'd still rather not. Don't ask questions—I'm not telling you anything. You'll just be there. Don't interfere or try to get away! If I shoot at you again, I won't be trying to miss."

There were portals in the string of sections she'd come through which led deeper into the circuit's sealed areas. At least, there had to be one such portal. The three Alattas had used it in effecting their withdrawal; so had Stiltik's hunters in following them. It should open to one of the keys that had been part of Tscharen's pack.

Telzey found the portal in the second section up from the big room, passed through it with Thrakell Dees into another nondescript place, dingy and windowless. A portal presently awoke to glimmering life in one of the walls. They went on.

The next section was very dimly lit and apparently extensive. Telzey stationed Thrakell in the main passage, went into a room, checked it and an adjoining room out, returned to the passage, started along it—

Slight creak of the neglected flooring—and abrupt blazing awareness of something overlooked! She dropped to her knees, bent forward, clawing out Essu's gun.

Thrakell's strangle rope slapped against the passage wall above her. She rolled away from it as it fell, and Thrakell pounced on her, pinning her to the floor on her side, the gun beneath her. She forced it out, twisted the muzzle up, pressed the trigger blindly. There was the thudding sound of the charge, and a yell of alarm from Thrakell. Something ripped at the Fossily suit. Then his weight was abruptly off her. She rolled over, saw him darting along the passage toward the portal through which they'd come, knew he'd got one or both of her key packs.

She pointed the gun at the moving figure, pressed the trigger five or six times as quickly as she could. She missed Thrakell. But the charges formed a sudden blazing pattern on the portal wall ahead of him, and he veered aside out of the line of fire and vanished through a doorspace that opened on the passage.

Breathing hard, Telzey came up on her knees, saw one of the key packs lying beside her, picked it up, looked at it and put it in her left suit

pocket. The pocket on the right side had been almost torn off, and Thrakell had got away with the other pack. Something stirred behind her. She glanced around, saw the white rope lying against the wall a few feet away—stretched out, shifting, turning with stiff springy motions, unable to grip what it had touched. She stood up on shaky legs, reached down until the gun almost touched the thing, and blasted it apart. Thrakell wasn't going to be able to use that device against her again—this time it *had* been aimed at her neck.

She started quietly down the passage toward the doorspace, gun held ready to fire. No sounds came from anywhere in the section, and she could pick up no trace of Thrakell's camouflage patterns. She didn't like that. He might have tricks he hadn't revealed so far.

She stepped out before the doorspace, gun pointing into the room behind it.

It was a rather small room, as dimly lit as the rest of the section, and empty. Not-there effect or not, Thrakell wasn't in it; after a moment, Telzey felt sure of that. There was another doorway on one side. She couldn't see what lay beyond it. But if it was a dead end, if it didn't lead to a portal, she had Thrakell boxed in.

She started cautiously into the room.

Her foot went on down through the floor as if nothing were there. She caught at the doorjamb with her

free hand, discovered it had become as insubstantial as the floor. Falling, she twisted backward, landed on her back in the passage, legs dangling from the knees down through the nothingness of the room's floor . . . through a portal.

She discovered then that she'd hung on to the gun. She let go of it, squirmed back from the trap, completely unnerved.

## X

No need to look farther for Thrakell Dees! When Telzey felt steady enough to stand up, she went back to the two rooms she'd checked. A partly disassembled piece of machinery stood in one of them. She looked it over, discovered a twelve-foot section of thin, light piping she could remove, detached it and straightened it out. She took that to the room with the portal flooring, reached down through the portal with it. The tip didn't touch anything even when she knelt in the doorway, her hand a few inches above the floor, and when she twisted the piping about horizontally, she didn't reach the sides of whatever was below there either.

She drew the piping out again. It was cold to the touch now, showed spots of frosting. The portal trap extended about twelve feet into the room. It had been activated by her key pack, as it had been activated by the pack Thrakell had taken from her. Wherever he'd gone, he wasn't likely to be back.

Essu and Thrakell had heard that the group Stiltik sent into the sealed areas after the Alattas had run into difficulties and returned. If this was a sample of the difficulties they'd run into, it wasn't surprising that Stiltik seemed to have been in no great hurry to continue her efforts to dig the three out of hiding.

When Telzey started off again to look for the portal which would take her on to the next section, her key pack was fastened to the tip of the piping, and she didn't put her foot anywhere the pack hadn't touched and found solid first. Her diagram maps didn't tell her at all definitely where she was, but did indicate that she'd moved beyond the possibility of being picked up in scanning systems installed by Stiltik's technicians. What lay ahead was, temporarily at least, Alatta territory. And the Alattas had set up their own scan systems. Presently she should be registering in them.

She uncovered a number of other portal traps. One of them, rather shockingly, was a wall portal indistinguishable from all the others she'd passed through. If she hadn't been put on guard, there would have been no reason to assume it wasn't the section exit she was trying to find. But a probe with the piping revealed there was a sheer drop beyond. The actual exit was a few yards farther on along the wall. She passed through a few larger sections of the type she'd had in mind as a

place to get rid of Thrakell Dees, stocked with provisions sufficient to have kept him going for years, or until someone came to get him out. She stopped in one of them long enough to wash the Fossily tiger striping from her face.

And then she was in a section where it seemed she couldn't go on. She'd been around the walls and come back to the portal by which she'd entered. She stood still, reflecting. She'd expected to reach a place like this eventually. What it would mean was that she had come to the limit of the area made open to Tscharen's portal keys. There should be a second portal here—one newly provided with settings which could be activated only by keys carried now by the other three Alattas.

But she hadn't expected to get to that point so soon.

Her gaze shifted to an area of flooring thirty feet away. There was a portal there. A trap. An invisible rectangle some eight feet long by six wide, lying almost against the wall. She'd discovered it as she moved along the wall, established its contours, gone around it.

She went back there now, tapping the floor ahead of her with the key pack until it sank out of sight. She drew it back, defined the outline of the portal with it again, moved up to the edge. She hadn't stopped to probe the trap before; there'd been no reason for it. Now she reversed the piping, gripped it by the pack, let the other end down through the portal.

There was a pull on the piping. She allowed it to follow the pull. It swung to her left as if drawn by a magnet on the far side of the portal, until its unseen tip touched a solid surface. It stayed there. Telzey's eyelids flickered. She moved quickly around to that end of the portal, knelt down beside it, already sure of what she'd found.

She pulled out the piping, reached through the portal with her arm, touched a smooth solid surface seemingly set at right angles to the one on which she knelt. She patted it probingly, lifted her hand away and let it drop back—pulled by gravity which also seemed set at right angles to the pull of gravity on this side of the portal. She shoved the piping through then, bent forward and came crawling out of the lower end of a wall portal into a new section.

Something like two hours after setting out from the big room with Thrakell Dees, she knew she'd reached the end of her route. She was now on the perimeter of the area the Alattas had made inaccessible to all others. She'd checked the section carefully. The only portal she could use here was the one by which she'd entered. Her key pack would take her no farther.

There was nothing to indicate what purpose this section originally had served. It was a sizable complex with a large central area, smaller rooms and passages along the sides. It was completely empty, a blank,

lifeless place in which her footsteps raised hollow echoes. She laid the piping down by a wall of the central area, got her Tinokti street clothes out of the Fossily tool bag, changed to them, and sat down with her back to the wall.

A waiting game now. She leaned her head against the wall, closed her eyes. Mind screens thinned almost to the point of nonexistence, permitting ultimate sensitivity of perception. Meanwhile she rested physically.

Time passed. At last, her screens tightened in abrupt warning. She thinned them again, waited again.

Somewhere something stirred.

It was the least, most momentary of stirrings. As if ears had pricked quietly, or sharp eyes had turned to peer in her direction, not seeing her yet but aware there was something to be seen.

A thought touched her suddenly, like a thin cold whisper:

"If you move, make a sound, or think a warning, you'll die!"

There was a shivering in the air. Then a great dagen crouched on the floor fifteen feet away, squatted back on its haunches, staring at Telzey. Swift electric thrills ran up and down her spine. This was a huge beast, bigger and heavier than the other two she'd seen, lighter in color. The small red eyes in the massive head had murder in them.

Her screens had locked instantly into a defensive shield. She made no physical motion at all.

The mind hound vanished.

Telzey's gaze shifted to the left. A tall figure stood in a passage entrance, the Alatta woman Kolki Ming. For a moment, she studied Telzey, the Fossily bag, the length of piping with the attached key pack.

"This is a surprise!" she said. "We didn't expect you here, though there was some reason to believe you were no longer Stiltik's captive. You came alone?"

"Yes."

The Alatta nodded. "We'll see."

She remained silent a minute or two, eyes fixed expressionlessly on Telzey. Telzey guessed the dagen was scouting through adjoining sections.

Kolki Ming said suddenly, "It seems you did come alone. How did you escape?"

"Stiltik put a Tolant in charge of me. Essu. We were off by ourselves."

"And you took Essu under control?"

"Yes."

"Where is he now?"

"He got killed. We ran into some of Boragost's people."

"A patrol in the ninety-sixth sector?"

"A big greenhouse."

"You've been busy today!" Kolki Ming remarked. "That patrol was reported wiped out by gunfire. Tell me the rest of it."

Neto Nayne-Mel wouldn't be mentioned. Telzey gave a brief and fairly truthful account of her activities otherwise. She'd planned to get back to Tinokti at once, had real-

ized by the time she reached the planetary exit why she couldn't—that she didn't know enough about the role the Alattas were playing in connection with the Tinokti circuit and in the Hub. She found then she'd worked Korm up too far to restrain him sufficiently. She and Thrakell Dees left for the sealed areas, while Korm went after the exit guards.

"Where is Boragost's strangler now?" the Alatta asked.

"We had a disagreement. He fell through one of your portal traps."

Kolki Ming shook her head slightly.

"And you're here to find out what we're doing," she said. "The Elaigar have one dagen less at their disposal, which is no small advantage to us. We might seem to owe you the information. But we can't let you take it to the Psychology Service. Essu's body, incidentally, wasn't found with the dead of the patrol."

"We took him along and hid him somewhere else," Telzey said. "I thought Stiltik mightn't know yet that I'd got away."

"She may not." The Alatta considered. "We're involved in an operation of extreme importance. Tscharen's capture has forced us to modify it and made it much more difficult than it should have been. It will have to be concluded quickly if it's to succeed. I'm not sure we can fit you in, but for the moment, at least, you're coming with me. Let me have your gun."

They emerged from a portal into a dark narrow street a few minutes later. The only light came from dim overhead globes. Looking back as they walked on, Telzey saw a dilapidated wall looming behind them. They'd stepped out of that. To right and left were small shabby houses, pressed close together. The cracked pavement was covered here and there by piles of litter. There was a stale smell in the air, and from somewhere arose a vague rumbling, so indistinct it seemed a tactile sensation rather than something heard.

"This section was some Phon's private experimental project," Kolki Ming said. "It doesn't appear on any regular circuit map and the Elaigar never found it, so we're using it as a temporary operations base." She glanced about. "Some two hundred people were trapped here when the Elaigar came. They escaped the general killing but were unable to leave the section and died when their supplies gave out."

She broke off. Something flicked abruptly through Telzey's awareness—a brief savage flash of psi. There was a gurgling howl, and the dagen materialized across the street from them.

"Scag was waiting for us, hoping to remain unnoticed," Kolki Ming said.

"He was going to attack?"

"If he got the chance. When he's under light working controls, as at present, he needs careful watching." They'd turned into another street,

somewhat wider than the first, otherwise no different from it. On either side was the same ugly huddle of houses, lightless and silent. The mind hound was striding soundlessly along with them now, thirty feet away. The Alatta turned in toward one of the larger houses. "Here's my watchpost."

The ground floor of the house had been cleared of whatever it might have contained. Two portal outlines flickered on the walls, and a variety of instruments stood about, apparently hastily assembled. Kolki Ming said, "Ellorad and Sartes won't be back for a while. Sit down while I check on my duties."

"There's one thing I'd like to know," Telzey said.

"Yes?"

"How old are you?"

The Alatta glanced over at her.

"So you've learned about that," she said. "I'm twenty-seven of your standard years. As for the rest of it, there may be time to talk later."

Telzey sat down on an empty instrument case, while Kolki Ming spoke briefly into a communicator. She seemed to listen then to a reply which remained inaudible to Telzey, and turned to a panel of scanning devices.

Presently they had time to talk.

The Elaigar's transition to the Sattaram form at maturity was connected with a death gene the Grisand cult on Nalakia had designed to help keep the mutation under con-

trol. The Elaigar didn't know it. After they destroyed the Grisands, they developed no biological science of their own, and to allow serf scientists to experiment physically with the masters was unthinkable under their code system.

But an early group had broken that rule. They set alien researchers the task of finding a method of prolonging their lives. They were told that for them as individuals there was no method, but that the gene could be deleted for their offspring. They settled for that—the Alattas came into existence. They remained Otessans in physical structure and had regained a normal human life span. With it, they presently regained lost interests and goals. They had time to learn, and learned very quickly because they could draw in the Elaigar manner on alien science and technology. Now they began making both their own.

Most of the Elaigar despised them equally for having abandoned the majestic structure of the mature Lion People and for degrading themselves with serf labor. They did their best to wipe out the new strain, but the Alattas drew ahead from the start.

"That was centuries ago, of course," said Kolki Ming. "We have our own civilization now and no longer need to borrow from others—though the Federation of the Hub was still one of our teachers on occasion as little as eighty yeers ago. The Elaigar remain dependent on their slave people and are no longer a

match for us. And their codes limit them mentally. Some join us of their own accord, and while we can do nothing for them, their children acquire our life span. Otherwise, we collect the Elaigar at every opportunity, and whether they want it or not, any children of those we collect are also born as Alattas. They hate us for that, but they've become divided among themselves. In part, that's what led them to risk everything on this operation in the Hub. Bringing the old human enemy under control seemed a project great enough to unite them again. When we discovered what they were doing, we came back to the Federation ourselves."

Telzey said, "You've been trying to get them out of the Federation before we found out they were around?"

"That was the plan. We want no revival of that ancient trouble. It hasn't been a simple undertaking, but we've worked very carefully, and our preparations are complete. We three had the assignment to secure the central control section of the Tinokti circuit at a given moment. If we can do it now, most of the Sattaram leadership in the Hub will be trapped. We've waited months for the opportunity. We're prepared to move simultaneously against all other Elaigar positions in the Federation. So there's a great deal at stake. If we can't get the Elaigar out unnoticed before human forces contact them, it may become disastrous

enough for all sides. To expect Federation warships to distinguish neatly between Alattas and Elaigar after the shooting begins would be expecting too much. And it would be no one-sided matter. We have heavy armament, as do the Elaigar."

She added, "The Elaigar are essentially our problem, not that of the Federation. We're still too close to them to regard them as enemies. My parents were of their kind and didn't elect to have their gene patterns modified. If they hadn't been captured and forced to it, I might have fought for Suan Uwin rank in my time as ruthlessly as Boragost or Stiltik—and, as I judge you now, so might you if your ancestors had happened to be Grisand research subjects on Nalakia. But we're gaining control of the Elaigar everywhere. If we succeed here, the last Sattaram will be dead less than thirty years from now."

She broke off, studied a set of indicators for a moment, picked up the communicator. Voice murmuring reached Telzey. It went on for perhaps two minutes. Kolki Ming set the communicator aside without replying. One of the other Alattas evidently had recorded a message for her.

She stood up, face thoughtful, fastened on a gun belt.

"We've been trying to force Boragost and Stiltik to open the Lion Game with us," she said. "It'll be the quickest way to accomplish our purpose. Perhaps the only way left at



present! It seems we've succeeded." She indicated the street door. "We'll go outside. The first move should be made shortly. I must call in Scag."

Telzey came to her feet. "What's the Lion Game?"

"The one you're playing, I think," said Kolki Ming. "I don't believe you've been entirely candid with me. But whether it was your purpose or not, it seems you're involved in the Game now."

## XI

Kolki Ming had set up a light outside the house which brought full visibility to a hundred yard stretch of the dismal street and its house fronts. She and Telzey remained near the entrance. Scag now appeared abruptly in the illuminated area, stared coldly at them, glanced back bristling over his shoulder and was gone again.

Telzey had done the Alattas a greater favor than she knew in eliminating Stiltik's dagen. When they learned of it, they'd been able to go about their work more freely. A situation involving the possible use of dagen became so dangerously complicated that those threatened by them had to direct their primary efforts to getting the beasts out of the way. Scag had killed several of Stiltik's people during their surprise attack in the sealed areas; so it was known the three Alattas had brought a mind hound in with them.

There were two other dagen at

present in the circuit, Boragost's and one whose handler was a Sattaram leader who had arrived with his beast during the week. Predictably, if Boragost was to take action against the Alattas, as it now seemed he would, his first step would be to use the pair to get rid of Scag. If the Elaigar dagen could be finished off at the same time, it would be worth the loss of Scag to the Alattas. They could go ahead immediately then with their plans.

That was the part of the game being played at present. Scag came and went. His kind could sense and track each other—he knew he was being sought by hunters as savage as he was. He wasn't trying to evade them. His role simply was to make sure the encounter took place here. The gun Kolki Ming held had been designed for use against dagen, who weren't easy creatures to kill.

Now Scag was back, and remained, half crouched, great head turning from side to side.

"They're coming!" Kolki Ming started forward. "Stay here and don't move!"

Abruptly, two other dagen appeared, to right and left of Scag. He hurled himself on the nearest one.

It became a wild blur of noise and motion. The street filled with the deep howling voices of the mind hounds, sounding like peals of insane laughter. They grappled and slashed, flicked in and out of sight, seeking advantage. Yellow blood

smears began to appear on the paving behind them. Scag seemed not at all daunted by the fact that he was fighting two. For moments, it looked to Telzey as if he might kill them unaided. But he was getting help. Kolki Ming shifted this way and that about the spinning tangle, gun in sporadic action, perilously close to the struggle. But the dagens ignored her.

Then one of Scag's opponents lay on the paving, neck twisted back, unmoving. Scag and the other rolled, locked together, across the street toward Telzey; she watched yellow blood pumping from the side of Scag's neck and through his jaws. The Alatta followed, gun muzzle now almost touching the back of the other dagen. The beast jerked around toward her, jaws gaping. Scag came to his feet, stood swaying a moment, head lowered, made a gurgling noise, fell.

The other, braced up on its forelegs, paralyzed hindquarters dragging, was trying to reach Kolki Ming. She stepped aside from its lunge. The gun blazed again at its flank. It howled and vanished.

She waited perhaps a minute, gun half lifted. Then she lowered it, turned back to Telzey.

"Gone back to its handler!" She was breathing deeply but easily. "They won't use that one again! But they'll learn from its mind before they destroy it that Scag and the other are dead. Now the codes take over!"

Both in practice and theory, the maximum range of a portal shift was considered definitely established. The security of the Elaigar circuit's control center was based on that. Sections within potential shift range of the center were heavily guarded; a threat to them would bring overall defense systems into instant action.

Alatta scientists had managed to extend the shift range. For ordinary purposes the increase was insignificant. But here specifically, it could allow Alatta agents to bypass guarded sections and reach the control center without alerting defenders. The four agents planted in the center had set up a series of camouflaged portal contacts which led for the most part through sealed areas and ended at the center. The chief responsibility for this part of the operation had been Tscharen's.

After the work was completed, it became a matter of waiting for the next of the periodic gatherings of Elaigar leaders. Tscharen's duties as a member of Stiltik's staff kept him in the circuit; the other three were sent off presently on various assignments. Tscharen evidently decided to add to his security measures and was observed at it. As a result, he and Telzey were picked up by Stiltik when his associates returned to the circuit to carry out the planned operation, and the others were revealed as Alatta agents.

The original scheme had to be abandoned. Stiltik had forced Tscharen to face her in formal combat and

outmatched him easily. That made him her personal captive; she could use any information she was able to wring from him to her own advantage. It wasn't an immediate threat; it should be many hours before she broke down his defenses. But the Elaigar, in general, had been alerted. A direct approach to the control center section would almost certainly be detected.

The Alattas decided to play on the tensions between the Suan Uwin, considerably heightened at the moment because no one was sure of the significance of the events for which Telzey and her group were responsible. Ellorad and Sartes, the other two agents, controlled a number of minds in Boragost's command. Through them, the feeling spread among both Boragost's supporters and opponents that since Stiltik had walked the Lion Way in allowing the captured Alatta his chance in ritual combat, Boragost could do no less. He must give personal challenge to the three trapped in the sealed areas—which in turn would draw Stiltik back into the matter.

"You *want* to fight those monsters?" Telzey had asked, somewhat incredulously.

"I'd sooner not have to face either of them," said Kolki Ming. "Stiltik, in particular. But that won't be my part here. With Sartes and Ellorad openly committed, it will seem we've accepted defeat and are seeking combat death in preference to capture. That should draw the attention

of the Elaigar temporarily off me and give me a chance to get to the control center unnoticed."

She added, "The fighting will be less uneven than you think. Tscharen had no special combat skills, but we others were trained to be collectors of the Elaigar and are as practiced in the weapon types allowed under their codes as any of them. Boragost might prefer to hunt us down with a sufficient force of Elaigar and Tolants, but his prestige is at stake. He's issued his challenge by sending his dagens in against ours, and that part is now concluded, with neither side retaining an advantage. We'll accept the challenge shortly by showing ourselves. Boragost is bound then by the codes."

She'd cut an opening in the heel of one of Telzey's shoes and was assembling a miniature pack of portal keys to fit into it. Each of the Alattas carried such a concealed set, and, in case of accidents, a more obvious but less complete pack of standard size such as the one taken from Tscharen. That was what had enabled them to withdraw so quickly from Stiltik's initial attack.

Telzey said, "It was the Alattas who were watching me on Orado, wasn't it?"

"I was," said Kolki Ming.

"Why? After you switched me into the circuit, you said there were people who wanted to see me."

"There are. We haven't as much information as we want about the type of p<sub>sis</sub> currently in the Feder-

ation. We've avoided contact with them here, and even the Elaigar have had the sense to keep away from the institutions of the Psychology Service. But some now believe that the power of the Psychology Service is based chiefly on its use of psi machines rather than on its members' ability as psis—in fact, that psis of the original human strain simply don't develop a degree of ability that can compare with our own. And that can become dangerous thinking. We have our fools, as you do. Some of them might begin to assume that the Federation could be challenged with impunity."

"You don't think so then?" Telzey said.

"I happen to know better. But we wanted to be able to establish the fact beyond question. I learned on Orado that a Sattaram handler had set his dagen on a prying human psi and that the dagen then had inexplicably disappeared. That psi seemed worth further study, particularly after I'd identified you and discovered you hadn't yet attained your physical maturity. There also seemed to be a connection between you and the Psychology Service. It was decided to pick you up for analysis by experts, if it could be done safely. Then the Tinokti matter came up and you transferred here. That gave me the opportunity to bring you into the circuit. We expected to conclude our operation quickly, and take you along."

She added, "A lifetime of exile

among us wasn't planned for you. You'd have remained unconscious throughout most of the analysis and presently have found yourself on Orado again, with nothing of significance concerning us to relate. I don't know what the arrangement will be now, assuming we survive the next hour or two."

Ellorad and Sartes arrived soon afterwards. They'd been checking on developments through their mind contacts. Boragost had expressed doubts publicly that the Alatta agents would choose combat. However, if they did, he'd be pleased to meet them in the Hall of Challenge and add their heads to his minor trophies. Stiltik wouldn't involve herself until Boragost had fought at least once.

"Boragost will have a witness?" Kolki Ming asked.

"Yes. Lishon, the Adjutant, as usual," said Sartes. "Stiltik, also as usual, will fight without witness—a hunt in the Kaht Chasm."

Ellorad added, "Sartes will face Boragost. I'll be his witness there. We don't want to bring Stiltik into it too quickly." He glanced at Telzey. "When we show ourselves, she may learn for the first time that she's lost her human captive and grow hungry for action. But a Chasm hunt can be extended, and I'll make it thoroughly extensive. You should have the time to do what's necessary."

Kolki Ming nodded. "Yes, I should."

"Then let's determine our route! When we're seen, we should be within a few minutes of the Hall of Challenge, then out of sight again until Sartes and I actually enter the Hall. That will leave Stiltik no time to interfere with the present arrangement."

When they set off, the Alattas wore the short-sleeved shirts, trunks and boots which had been concealed by their Sparan garments. Long knives hung from their belts next to guns. Combat under code conditions allowed only weapons depending on physical dexterity and strength, and the weapons of psi. Guns were worn by witnesses as a formal guarantee that the codes would be observed. Principals didn't carry them.

Ellorad and Sartes strode ahead, moving with relaxed ease. They looked formidable enough, and if, to Telzey, even those long powerful bodies appeared no real match for the Sattaram giants, they should know what they were attempting—which might be only to give Kolki Ming time to conclude the operation.

Boragost's technicians had been at work in fringe sections of the sealed areas they'd been able to penetrate, setting up a scanning system. Kolki Ming had followed their progress on her instruments. The route she'd outlined would take them through such a section. Telzey didn't know they'd reached it until a Sattaram voice abruptly addressed them in the Elai-gar language. They stopped.

The deep harsh voice went on, speaking slowly and with emphasis. When it finished, Ellorad replied, then started toward the end of the section. The others followed; and as soon as they'd left the section, they moved quickly. Kolki Ming said to Telzey, "That was Boragost's witness! The challenge has been acknowledged by both sides, and we've been told to select the one who is to face Boragost first and have him come at once with his witness to the Hall. It's the situation we wanted!"

They hurried after the men, came after another three sections into a room where the two had turned on a viewscreen. The screen showed a wide hall with black and silver walls. Two Sattarams stood there unmoving. The one farthest from the screen wore a gun belt. The other balanced a huge ax on his shoulder.

"They entered just now," Ellorad said. "Sartes is pleased to see Boragost has selected the long ax. He thinks he can spin out that fight until the Suan Uwin is falling over his own feet!"

The two left immediately. Sartes had removed his gun, but Ellorad retained his.

## XII

Kolki Ming said, "That hall is only two portals from here, but the Elaigar haven't been able to establish access to these sections. Boragost doesn't know we can see him. We'll

wait till the combat begins, then be off on our route at once."

Telzey nodded mutely. Boragost looked almost as huge as Korm and seemed to her to show no indications of aging. The handle of the ax he held must be at least five feet long.

Ellorad and Sartes appeared suddenly in the screen, moving toward the center of the hall. Sartes walked ahead; Ellorad followed a dozen steps behind him and to the right. The two Sattarams stood motionless, watching them. A third of the way down the hall, Sartes and Ellorad stopped. Ellorad spoke briefly. Lishon rumbled a reply. Then Sartes drew his knife, and Boragost grinned, took the ax in both hands and started unhurriedly forward—

Kolki Ming sucked in her breath, sprang back from the screen, darted from the room. Telzey sprinted after her, mind in a whirl, not quite sure of what she'd seen. There'd been the plum-colored shapes of Tolants suddenly on either side of the great hall. Three, it seemed, on each side—yes, six in all! As she saw them, each had an arm drawn back, was swinging it forward, down. They appeared to be holding short sticks. She'd had a blurred glimpse of Ellorad snatching his gun from its holster, then falling forwards, of Sartes already on the floor—

Kolki Ming was thirty feet ahead of her, racing down a passage, then disappeared through a portal at the end. Telzey passed through the portal moments later, saw the Alatta

had nearly doubled the distance between them, was holding her gun. Kolki Ming checked suddenly then, vanished through the wall on her right.

That portal brought Telzey out into the great hall they'd been watching.

There, Kolki Ming's gun snarled and snarled.

Lishon was on his side, kicking, bellowing. Boragost had dropped to hands and knees, his great head covered with blood, shaking it slowly as if dazed. Smaller plum-colored bodies lay and rolled here and there on the floor. Two still darted squealing along the right side of the hall. The gun found one, flung him twisting through the air. The other turned abruptly, disappeared through the wall—

Portals. The Tolant troop had received some signal, stepped simultaneously into the hall through a string of concealed portals lining its sides . . .

Boragost collapsed forward on his face, lay still.

Kolki Ming glanced around at Telzey, eyes glaring from a dead-white face, then hurried past Boragost toward Lishon. Telzey ran after her, skirting Sartes on the floor, saw something small, black and bushy planted in Sartes's shoulder . . . Throwing sticks, poisoned darts.

Kolki Ming's gun spoke again. Lishon roared, in pain or rage. The Alatta reached him, bent over him, straightened, and now his gun was in

her other hand. She thrust it under her belt, started back to Boragost, Telzey trailing her, stood looking down at the giant, prodded his ribs with her boot. "Dead," she said in a flat voice.

She looked about the hall, wiped the back of her hand across her forehead. "All dead but Lishon, who shares Boragost's dishonor, and a frightened Tolant. Now we wait. Not long, I think! The Tolant will run in his panic to the Elaigar." She glanced down at Telzey. "Tolant poison—our two died as they fell. Three darts in each. Boragost didn't like the look of the Lion Way today! If we hadn't been watching, his scheme would have worked. The Tolants and their darts would have been gone, the punctures covered by ax strokes. We—"

She broke off.

A wide flight of stairs rose up to the rear of the hall beyond the point where Lishon lay. It had appeared to end against a blank wall. Now a great slab in that wall was sliding sideways—an opening door linked to an opening portal. A storm of deep voices and furious emotion burst through it simultaneously; then, as the opening widened, the Elaigar poured through in a crowd. The ones in the front ranks checked as they caught sight of Kolki Ming and Telzey and turned, outbellowing the others. The motion slowed; abruptly there was silence.

Kolki Ming, eyes blazing, flung up her arms, knife in one hand, gun in

the other, shouted a dozen words at them.

One of the Sattarams roared back, tossing his head. The pack poured down the steps into the hall. The first to reach Sartes's body bent, plucked the dart from Sartes's shoulder, another from his side, held them up.

At that, there was stillness again. The faces showed shocked fury. The Sattaram who had replied to Kolki Ming growled something. A minor disturbance in the dense ranks followed. An Otessan emerged, holding a Tolant by the neck. The Tolant began to squeal. The Elaigar lifted him, clamped the Tolant's ankles together in one hand, swung the squirming creature around and up in a long single-armed sweep, down again. The squeals stopped as the body slapped against the flooring and broke.

The Sattaram looked over at Lishon, rumbled again. Three others moved quickly toward Lishon. His eyes were wide and staring as two hauled him to his feet, held him upright by the arms. The third drew a short knife, shoved Lishon's chin back with the heel of his hand, sank the knife deep into Lishon's throat, drew it sideways.

Dead Boragost didn't feel it, but he got his throat cut next.

They were elsewhere then in a room, Kolki Ming and Telzey, with something more than a dozen Sattarams. They didn't appear to be exactly prisoners at present. Their key

packs had been taken from them—the obvious ones—but Kolki Ming retained her weapons. The Elaigar codes were involved; and from the loud and heated exchange going on, it appeared the codes rarely had been called upon to deal with so complicated a situation. Shields were tight all around. Telzey could pick up no specific impressions, but the general trend of the talk was obvious. Kolki Ming spoke incisively now and then. When she did, the giants listened—with black scowls, most of them; but they listened. She was an enemy, but her ancestors had been Elaigar, and she and her associates had shown they would abide by the codes. Whereupon a Suan Uwin of the Lion People, aided by his witness, shamefully broke the codes to avoid facing Alattas in combat!

A damnable state of affairs! There was much scratching of shaggy scalps. Then Kolki Ming spoke again, now at some length. The group began turning their heads to stare at Telzey, standing off by the wall with a Sattaram who seemed to have put himself in charge of her. This monster addressed Telzey when Kolki Ming stopped speaking.

“The Alatta,” he rumbled, “says you’re an agent of the Psychology Service. Is that true?”

Telzey looked up at him, startled by his fluent use of translingue. She reminded herself then that in spite of his appearance he might be barely older than she—could, not much more than a year ago, have been an

Otessan moving about among the people of the Hub in something like Sparan disguise.

“Yes, it’s true,” she said carefully.

There was muttering among the others. Apparently more than a few knew translingue.

“The Alatta further says,” Telzey’s Sattaram resumed, “that it was you who turned Stiltik’s dagen on her in her headquarters, that you also stole her omnipacks and made yourself mind master of her chief Tolant as well as of Korm Nyokee, the disgraced one. And that it was you and your slaves who drew Boragost’s patrol into ambush and killed them. Finally, that you chose to restore to Korm Nyokee the honor he’d lost by letting him seek combat death. Are all these things true?”

“Yes.”

“Ho!” His tangled eyebrows lifted. “You then joined the Alatta agents to help them against us?”

“Yes.”

“Ho-ho!” The broad ogre face split in a slow grin. He dug at his chin with a thumb nail, staring down at her. Grunts came from the group where one of them was speaking, apparently repeating what had been said for nonlinguists. Telzey collected more stares. Her guard clamped a crushing hand on her shoulder.

“I’ve told them before this,” he remarked, “that there are humans who must be called codeworthy!” His face darkened. “More so certainly than Boragost and Lishon! no one



believes now that was the first treachery committed by those two." He shook his great head glumly. "These are sorry times!"

The general discussion had resumed meanwhile, soon grew as heated as before. One of the Sattarams abruptly left the room. Telzey's giant told her, "He's to find out what Stiltik wants, since she alone is now Suan Uwin. But whatever she wants, we are the chiefs who will determine what the codes demand."

The Elaigar who'd left came back shortly, made his report. More talk, Kolki Ming joining in. The guard said to Telzey, "Stiltik claims it's her right to have the Alatta who was of her command face her in the Kaht Chasm. It's agreed this is proper under the codes, and Kolki Ming has accepted. Stiltik also says, however, that you should be returned to her at once as her prisoner. I think she feels you've brought ridicule on her, as you have. This is now being discussed."

Telzey didn't reply. She felt chilled. The talk went on. Her Sattaram broke in several times, presently began to grin. One of the giants in the group addressed her in translingue.

"Is it your choice," he asked, "to face Stiltik in the Kaht Chasm beside the Alatta Kolki Ming?"

Telzey didn't hesitate. "Yes, it is."

He translated. Nods from the group. Telzey's Sattaram said something in their language. A few of them laughed. He said to Telzey,

holding out his huge hand, "Give me your belt!"

She looked up at him, took off her jacket belt and gave it to him. He reached inside his vestlike upper garment, brought out a knife in a narrow metal sheath, fastened the sheath on the belt, handed the belt back. "You were Stiltik's prisoner and freed yourself fairly!" he rumbled. "I say you're codeworthy and have told them so. You won't face Stiltik in the Kaht Chasm unarmed!" His toothy grin reappeared. "Who knows? You may claim Suan Uwin rank among us before you're done!"

He translated that for the group. There was a roar of laughter. Telzey's giant laughed with the others, but then looked down at her and shook his head.

"No," he said. "Stiltik will eat your heart and that of Kolki Ming. But, if we find then that you were able to redden your knife before it happened, I shall be pleased!"

### XIII

The portal to which Kolki Ming and Telzey were taken let them out into a sloping mountain area. When Telzey glanced back, a sheer cliff towered behind them. Tinokti's sun shone through invisible circuit barriers overhead.

Kolki Ming turned toward a small building a hundred yards away. "Come quickly! Stiltik may not wait long before following."

Telzey hurried after her. Behind the building, the rock-studded slope curved down out of sight. Perhaps half a mile away was another steep cliff face. Dark narrow lines of trees climbed along it; some sections were covered by tangles of vines. The great wall curved in to left and right until it nearly met the mountain front out of which they'd stepped. On the right, at the point where the two rock masses came closest, water streamed through, dropping in long cascades toward the hidden floor of the Kaht Chasm. Far to the left, the stream foamed away through another break in the mountains.

*If water—*

Telzey brushed the thought aside. Whatever applications of portal technology were involved, the fact that water appeared to flow freely through the force barriers about this vast section didn't mean there were possible exit or entry points there.

She followed Kolki Ming into the building. The interior was a single large room. Mountaineering equipment, geared to Elaigar proportions, hung from walls and posts. Ropes, clamps, hooks . . . Kolki Ming selected a coil of transparent rope, stripped hooks from it, attached it to her belt beside the long knife which was now her only weapon. Outside the building, she stooped, legs bent. "Up on my back; hang on! We want to put distance between ourselves and this place."

Telzey scrambled up, clamped her legs around the Alatta's waist, locked

her hands on the tough shirt material. Kolki Ming started down the slope.

"This is an exercise area for general use when it isn't serving as Stiltik's hunting ground," she said. "As a rule, the Suan Uwin likes a long chase, but today she may be impatient. She's tireless, almost as fast as I am, twice as strong, and as skilled a fighter on the rocks as in the water below. The only exit is at the end of the Chasm near the foot of the falls, and it will open now only to Stiltik's key. Beyond it is her Hall of Triumph where the Elaigar will wait to see her display her new trophies to them."

The slope suddenly dropped off. Kolki Ming turned her face to the rock, climbed on down, using hands and feet and moving almost as quickly as before. Telzey tightened her grip. She'd done some rock work for sport, but that had been a different matter from this wild, swaying ride along what was turning into a precipitous cliff.

A minute or two later, Kolki Ming glanced sideways and down, said "Hold on hard!" and pushed away from the rock. They dropped. Telzey clutched convulsively. The drop ended not much more than twelve feet below, almost without a jar. Kolki Ming went on along a path some three feet wide, leading around a curve of the cliff.

Telzey swallowed. "How will Stiltik find us?" she asked.

"By following our scent trail until

she has us in sight. She's a mind hunter, too, so keep your screens locked." Kolki Ming's breathing still seemed relaxed and unhurried. "This may look like an uneven game to the Elaigar, but since there always was a chance I would have to face Stiltik here some day, I've made the Chasm my exercise area whenever I was in the circuit . . . and they don't know that of the three of us I was the dagen handler."

The rumble of rushing water was audible now, and growing louder. The stream must pass almost directly beneath them, some three hundred yards down. They moved into shadow. The path narrowed, narrowed further. There came a place where the Alatta turned sideways and edged along where Telzey could barely make out footholds, never seeming to give a thought to the long drop below. Very gradually, the path began to widen again as the curve of the cliff reversed itself, leading them back into sunlight. And presently back into shadow.

Then, as they rounded another bulge, Telzey saw a point ahead where the path forked, one arm leading up through a narrow crevice, the other descending along the cliff. An instant later, a thought tendril touched her screens, coldly alert, searching. It lingered, faded.

"Yes, Stiltik's in the Chasm," Kolki Ming said. "She'll be on our trail in moments."

She took the downward fork. It

curved in and out, dipped steeply, rose again. Kolki Ming checked at an opening in the rock, a narrow high cave mouth. Dirt had collected within it, and cliff vines had taken root and grown, forming a tangle which almost filled the opening.

Kolki Ming glanced back, parted the tangle, edged inside. "You can get down."

Telzey slid to the ground, stood on unsteady legs, drew a long breath. "And now?" she asked.

"Now," said Kolki Ming, voice and face expressionless, "I leave you. Don't think of me. Wait here behind the vines. You'll see Stiltik coming long before she sees you. Then be ready to do whatever seems required."

She turned, moved back into the dimness of the cave, seemed to vanish behind a corner. Completely disconcerted for the moment, Telzey stared after her. There came faint sounds, a scraping, the clattering of a dislodged rock. Then silence.

Telzey went to the cave opening, looked back along the path that wound in and out along the curves of the cliff. Stiltik would be in sight on it minutes before she got this far—and surely she couldn't be very close yet! Telzey moved into the cave, came to the corner around which Kolki Ming had disappeared. Almost pitch-darkness there. After a dozen groping steps, she came to a stop. There was rock before her. On either side, not much more than two and a half feet apart, was also rock.

Water trickled slowly down the wall on the right, seeping into the dust about her shoes.

She looked up into darkness, reached on tiptoe, arms stretching, touched nothing. A draft moved past her face. So here the cave turned upward, became a narrow tunnel; and up that black hole Kolki Ming had gone. Telzey wondered whether she would be able to follow, stood a moment reflecting, then returned to the cave opening. She sat down where she could watch their trail, drew the vines into a thicker tangle before her. Pieces of rock lay around, and her hands went out, began gathering them into a pile, while her eyes remained fastened on the path.

On the path, presently, Stiltik appeared, coming around a distant turn. Telzey's breath caught. Stiltik's bulk looked misshapen and awkward at that range, but she moved with swift assurance, like a creature born to mountain heights, along a thread of shelf almost indiscernible from the cave. She went out of sight behind the thrust of the mountain, emerged again, closer.

Telzey let a trickle of fear escape through her screens, then drew them into a tight shield. She saw Stiltik lift her head without checking her stride. Thought probed alertly about, slid away. But not entirely. She sensed a waiting watchfulness now as Stiltik continued to vanish and reappear along the winding path.

Presently Telzey could begin to



distinguish the features of the heavy-jawed face. A short-handled double-headed hatchet hung from Stiltik's belt, along with a knife and a coil of rope. She came to the point where the path forked, paused, measuring the branch which led up through the crevice, stooped abruptly, half crouched, bringing her head close to the ground, face shifting back and forth, almost nosing the path like a dog. Telzey saw the bunching of heavy back muscles through the material of the sleeveless shirt. For a moment, it seemed wholly the posture of an animal. The giantess straightened, again looked up along the crevice. Telzey's head moved forward. The pile of rocks she'd gathered rattled through the vines to the path below the cave opening. A brief hot gust of terror burst from the shield.

Stiltik's head turned. Then, swiftly, she started along the path toward the cave.

Telzey sat still, breathing so shallow it might almost have stopped. Stiltik's mouth hung open; her eyes stared, seeming to probe through the vines. Around a curve she came, loosening the hatchet at her belt, cold mind impulses searching.

A psi bolt slammed, hard, heavy, fast, jarring Telzey through her shield. It hadn't been directed at her.

Stiltik swayed on the path, gave a grunting exhalation of surprise, and something flicked down out of the air above her like a thin glassy snake. The looped end of Kolki Ming's

rope drooped around her neck, jerked tight.

One of her great hands caught at the rope, the other struck up with the hatchet. But she was stumbling backward, being hauled off the path. Two minds slashed at each other, indistinguishable in fury. Then Stiltik's massive body plunged down along the side of the cliff with a clatter of rocks, dropped below Telzey's line of sight. The rope jerked tight again; there was a crack like the snapping of a thick tree branch. The end of the rope flicked down past the path, following the falling body. From above came a yell, savage and triumphant. From below, seconds later, came the sound of impact.

Abruptly, there was stillness. Telzey drew a deep, sighing breath, stood up, pushed her way out through the vine tangles to the cave opening. She waited there a minute or two. Then Kolki Ming, smeared with the dark slime of the winding tunnel through which she'd crept to the cliff top, came down along the crevice to the fork of the path, and turned back toward the cave.

They reached the floor of the Kaht Chasm presently, found Stiltik's broken body. Kolki Ming drew her knife and was busy for a time, while Telzey sat on a rock and looked up the Chasm to the point where the foaming stream tumbled through a narrow break in the mountain. She thought she could make out a pale shimmer on the rocks. It should be

the Chasm's exit portal, not far from the falls, and not very far from them now. Tinokti's sun had moved beyond the crest of the cliff. All the lower part of the Chasm lay in deep shadow.

Then Kolki Ming finished, came to Telzey and held up dripping fingers. "Blood of a Suan Uwin!" she said. "The Elaigar will see your knife reddened. I wonder if they'll be pleased! Didn't you know I sensed you draw Stiltik's attention toward you when her suspicions awoke? If you hadn't, I'm not at all sure the matter could have ended well for either of us." She drew the knife from Telzey's belt, ran fingers over blade, hilt and sheath, replaced the knife. A knuckle tilted Telzey's chin up; a hand smeared wetness across her face. "Don't be too dainty!" Kolki Ming told her. "They're to see you took a full share in their Suan Uwin's defeat."

They walked along the floor of the Chasm, beside the cold rush of water, toward the portal shimmer, Stiltik's blood painting them, Stiltik's severed head swinging by its hair from Kolki Ming's right hand. The portal brightened as they reached it, and they went through.

The Elaigar stood waiting, filling the long hall. They walked forward, toward those nearest the portal. The giants stared, jaws dropping. A rumble of voices began here and there, ended quickly. The Elaigar standing before them started to move aside, clearing the way. The

motion spread, and a wide lane opened through the ranks as they came on. Beyond, Telzey saw a ramp leading to a raised section at the end of the hall. They reached the ramp, went up it, and at the top Kolki Ming turned. Telzey turned with her.

Below stood the Lion People, unmoving, silent, broad faces lifted and watching. Kolki Ming's arm swung far back, came forward. She hurled Stiltik's head back at them. It bounced and rolled along the ramp, black hair whipping about, blood spattering. It rolled on into the hall, the giants giving way before it. Then a roar of voices arose.

"This way!" said Kolki Ming.

They were at the wall, passed through a portal, the noise cutting off behind them.

"Now quickly!"

They ran. None of the sections they went through in the next minutes looked familiar to Telzey, but Kolki Ming didn't hesitate. Telzey realized suddenly they were back in sealed areas again; the portals here were of the disguised variety. She was gasping for breath, vision blurring with exhaustion. The Alatta was setting a pace she couldn't possibly keep up with much longer.

Then they were in a room with a viewscreen stand in one corner. Here Kolki Ming stopped. "Get your breath back," she told Telzey. "One more move only, and we have time for that—though perhaps no more time than it takes Stiltik's blood to dry on us." She was activating the

screen as she spoke, spinning dials. Stiltik's Hall of Triumph swam into view, with a burst of Elaigar voices. Churning groups of the giants filled the hall; more had come in since they left, and others were still arriving. Most of them appeared to be talking at once; and much of the talk seemed furious argument.

"Now they debate!" said Kolki Ming. "What do the codes demand? Whatever conclusion they come to, it will involve our death. That's necessary. But first they must decide how to kill us with honor—to us and themselves. Then they'll start asking where we've gone."

She turned away. Telzey watched the screen a moment longer, her breathing beginning to ease. When she looked around, Kolki Ming had opened a closet in the wall, was fastening a gun she'd taken from it to her belt. She removed two small flat slabs of plastic and metal from a closet shelf, closed the closet, laid the slabs on a table. She came back to the screen, dialed to another view.

"The control section," she said. "Our goal now!"

The control section was a large place. Telzey looked out at a curving wall crowded with instrument stands. On the right was a great black square in the wall—a blackness which seemed to draw the mind down into vast depths. "The Vingarran Gate," said Kolki Ming. Two Sattarams stood at one end of the section, watching the technicians.

They wore guns. The technicians, perhaps two dozen in all, represented three life forms, two of which suggested the humanoid type, though no more so than Couse's people. The third was a lumpy disk covered with yellow scales and equipped with a variety of flexible limbs.

"Those two must die," Kolki Ming said, indicating the Sattarams. "They're controlled servants of the Suan Uwin, jointly conditioned by Boragost and Stiltik as safeguards against surprises by either. The instrument handlers are conditioned, too, but they'll be no problem." She switched off the screen. "Now come." She took the two slabs from the table.

There was no more running, though Kolki Ming still moved swiftly. Five sections on, she stopped before a blank wall. "There's a portal here, left incomplete to prevent discovery," she said. "The section's on one of the potential approaches to the control area, so it's inspected frequently and thoroughly. Now I'll close the field."

She searched along the wall, placed one of the slabs carefully against it. It adhered. She opened the back of the slab, adjusted settings, pressed the cover shut. "Come through immediately behind me," she told Telzey. "And be very quiet! On these last fifty steps, things still might go wrong."

They came out into semidarkness, went down a flight of stairs. Below,

Kolki Ming halted, head turned. Telzey listened from behind her. There were faint distant sounds, which might be voices but not Elaigar voices. After some moments they faded. Kolki Ming moved on silently, Telzey following.

The remaining slab went against a wall. Peering through the dark, Kolki Ming made final adjustments. She paused then, stepped back. Her face turned toward Telzey.

"We weren't able to test this one," she whispered. "When I close the last switch, it will trigger alarms—here, in an adjoining guarded section, and in the control area. Be ready!"

Her left hand reached out to the slab. Sound blared in the darkness about them, and Kolki Ming had vanished through the portal. Telzey followed at once.

The two Sattarams on guard had no chance. Kolki Ming had emerged from the wall behind them, gun blazing. By then, there were guns in their hands, too; but they died before they saw her. She ran past the bodies toward the technicians at the instrument banks, shouting Elaigar orders above the clanging alarm din in the air. The technicians didn't hesitate. For a moment, there was a wild scramble of variously shaped bodies at an exit at the far end of the big room. Then the last of them disappeared.

Kolki Ming was at the instrument stands, gun back in its holster, hands flicking about. Series of buttons

stabbed down. Two massive switches above her swung over, snapped shut. The alarm signal ended.

In the sudden silence, she looked at Telzey who had followed her across the room.

"And now," she said, drawing a deep breath, "it's done! Every section in the circuit has been sealed. No portal can open until it's released from this room. Wherever the Elaigar were a moment ago, there they'll stay." She smiled without mirth. "How they'll rage! But not for long. Now I'll reset the Vingarran, and the Gate will open and my people will come through to remove our captives from section after section, and take them and their servants to our transports."

She went to another instrument console, unlocked it, bent over it. Telzey stood watching. The Alatta's hand moved to a group of controls, hesitated. She frowned. The hand shifted uncertainly.

Kolki Ming stiffened. Her hand jerked toward the gun at her belt. The motion wasn't completed.

She straightened then, turned to stare at Telzey. And Telzey felt the Alatta's mind turning also, wonderingly, incredulously, seeking a way to escape the intangible web of holds that had fastened on it, and realizing there was no way—that it was unable now even to understand how it was held.

"You?" Kolki Ming said heavily at last. "How could—"

"When you killed Stiltik."



A mind blazingly open, telepathically vulnerable, powers and attention wholly committed. Only for instants; but in those instants, Telzey, waiting and watching, had flowed inside.

"I sensed nothing." Kolki Ming shook her head. "Of course—that was the first awareness you blocked."

"Yes," Telzey said. "It was. I had plenty of time afterwards for the rest of it."

"And now?"

"Now we're going to a planetary exit." Telzey touched a point in the captive mind. "That hidden one you people installed . . . Set up a route through empty sections, and unseal that series of portals."

The planetary exit portal opened on an enclosed courtyard. Four air-cars stood in a row along one wall. Telzey paused at the exit beside Kolki Ming, looking around. It appeared to be early morning in that part of Tinokti. They were on the fringes of a city; buildings stretched away in the distance.

She glanced down at herself. She'd washed hands, face and hair on the way, but hadn't been able to get her clothing clean. It didn't show; she'd fastened a wide shawl of bright-colored fabric around herself, a strip they'd cut from tapestry in one of the circuit sections. It concealed the blood and dirt stains on her clothes and the Elaigar knife at her belt.

She adjusted the shawl, looked up

at the immensely formidable creature beside her. The Alatta's eyes returned her gaze without expression. Telzey started forward toward the cars. Koki Ming stayed where she was. Telzey climbed into the nearest of the cars, checked the controls. The interior was designed to Sparan proportions; otherwise this was standard equipment. She could handle it. She unlocked the engine, turned it on. A red alert light appeared, then faded as the invisible energy field above the court dissolved to let her through.

She swung the car about, lifted it from the ground, moved up out of the court. Two hundred yards away, she spun the viewscreen dial to focus on the motionless figure by the portal. The car drove up and on in a straight line. When the figure began to dwindle in the screen, Telzey abruptly withdrew her holds from Kolki Ming's mind, slammed her own shield tight, remembering their lightning reflexes.

But nothing happened. Kolki Ming remained where she was for a moment, seemed to be looking after her. Then she turned aside, disappeared through the portal.

Five minutes later, Telzey brought the car down in a public parking area, left it there with locked engine and doors. The entrance to a general transportation circuit fronted on the parking space. She went inside, oriented herself on the circuit maps, and set out. Not long afterwards, she exited near a large freight spaceport.

The freight port adjoined a run-down city area with a population which lived in the main on Tongi Phon handouts. It had few attractions and an oversupply of predators. Otherwise, it was a good place for somebody who wanted to drop out of sight.

Telzey let a thoroughly vicious pair of predators, one of them a young woman of about her size, trail her along the main streets for a while. They were uncomplicated mentalities, readily accessible. She turned at last into a narrow alley, and when they caught up with her there, they were her robots. She exchanged street clothes with the woman in a deserted backyard, left the alley with the Elaigar knife wrapped in a cloth she'd taken from a trash pile. The two went on in the opposite direction, the woman carrying the folded length of tapestry she'd coveted. Their minds had been provided with a grim but plausible account of how she'd come by it and the blood-stained expensive clothing she now wore.

Telzey stopped at a nearby store she'd learned about from them. The store paid cash for anything salable; and when she left it a few minutes later, it had the Elaigar knife and she had a pocketful of Tinokti coins. It wasn't much money but enough for her immediate needs. An hour later, she'd rented a room above a small store for a week, locked the door,

and unpacked the few items she'd picked up. One of them was a recorder. She turned it on, stretched out on the narrow bed.

It was high time. Part of her mind had been called upon to do more than was healthy for it in these hours, and it was now under noticeable strain. There were flickerings of distorted thought, emotional surges, impulses born in other minds and reproduced in her own. She'd been keeping it under control because she had to. Tolant and Tanven, Elaigar and Alatta, Thrakell Dees—Phon Dees once, a lord of the circuit, and, in the end, its last human survivor—they'd all been packed in under her recent personal experiences which were crammed and jolting enough. She'd lived something of the life of each in their memories, and she had to get untangled from that before there were permanent effects.

She let the stream of borrowed impressions start boiling through into consciousness, sorting them over as they came, drained off emotional poisons. Now and then, she spoke into the recorder. That was for the Psychology Service; there were things they should know. Other things might be useful for her to remember privately. They went back now into mental storage, turned into neat, neutral facts—knowledge. Much of the rest was valueless, had been picked up incidentally. It could be sponged from her mind at once, and was, became nonexistent.

The process continued; pressures

began to reduce. The first two days she had nightmares when she slept, felt depressed while awake. Then her mood lightened. She ate when hungry, exercised when she felt like it, went on putting her mental house back in order. By the sixth day, as recorded by the little calendar watch she'd bought, she was done. Her experiences with the Elaigar, from the first contact in Melna Park on, were put in perspective, had become a thing of the past, no longer to concern her.

Back to normal . . .

She spent the last few hours of the day working over her report to the Psychology Service, and had her first night of unbroken sleep in a week. Early next morning, she slipped the recorder into her pocket, unlocked the door, went whistling softly down to the store. The storekeeper, who had just opened up, gave her a puzzled look and scratched his chin. He was wondering how it could have completely slipped his mind all week that he had a renter upstairs. Telzey smiled amiably at him, went out into the street. He stared after her a moment, then turned away and forgot the renter again, this time for good.

Telzey walked on half a block, relaxed her screens and sent an identification thought to her Service contacts. A Service squad was there four minutes later to pick her up.

"There's somebody else," Klayung told her eventually, "who'd like to speak to you about your report."

This was two days later, and they were in a Service ship standing off Tinokti.

"Who is it this time?" Telzey inquired warily. She'd had a number of talks with Klayung and a few other Service people about her experiences in the Elaigar circuit. Within limits, she hadn't minded giving them more detailed information than the report provided, but she was beginning to feel that for the moment she'd been pumped enough.

"He's a ranking official of a department which had a supporting role in the operation," Klayung said. "For security reasons, he doesn't want his identity to be known."

"I see. What about my identity?" Klayung had been very careful to keep Telzey unidentified so far. The role she'd played on Tinokti was known, in varying degrees, only to a few dozen members of the Service, to Neto Nayne-Mel who was at present in Service therapy, and to the Alattas, who no longer mattered.

"We'll have you well camouflaged during the discussion," Klayung said. "You'll talk by viewscreen."

"I suppose he isn't satisfied with the report?" Telzey said.

"No. He feels it doesn't go far enough and suspects you're holding things back deliberately. He's also unhappy about your timing."

She considered. It made no difference now. "He doesn't know about the part with Neto, does he?"

"No. Except for you and the therapists and a few others like myself,

there was no Neto Nayne-Mel in the circuit.”

“Shall I be frank with him otherwise?”

“Within reason,” said Klayung.

She found herself sitting shortly before a viewscreen, with Klayung in the room behind her. The official at the other screen wore a full face mask. He might as well have left it off. She knew who he was as soon as he started to speak. They’d met on Orado.

She wasn’t wearing a mask. Klayung’s make-up people had put in half an hour preparing her for the meeting. What the official saw and heard was an undersized middle-aged man with a twang to his voice.

The discussion began on a polite if cool note. Telzey was informed that the circuit she’d described had been located that morning. The force fields about the individual sections had all cut off simultaneously. After an entry into one of the sections was effected, it was discovered there was no need for the special portal keys with which she’d provided the Service. The entire system was now as open as any general circuit on Tinokti. Exploration remained cautious until it became obvious that the portal traps of which she’d spoken had been destructured. Nor was anything left which might have provided a clue to the device referred to in the report as the Vingarran Gate. “And, needless to say,” said the official, “no one was found in the circuit.”

Telzey nodded. “They’ve been gone for a week now. They set the force fields to shut off after it was safe, so you could stop looking for them.”

“Meanwhile,” the official went on, “we’ve had verification enough for your statement that groups of these aliens, both the Alattas and the Elai-gar, were masquerading as human giants throughout the Federation. They’ve even owned considerable property. One well-known shipping line ostensibly was bought up by a Sparan organization three years ago and thereafter operated exclusively by Sparans. We know now that’s not what they were. All these groups have vanished. Every positive lead we’ve traced reveals the same story. They disappeared within less than a standard day of one another, leaving nothing behind to indicate where they came from or where they’ve gone.”

“That was the Alatta plan,” Telzey acknowledged. “They wanted it to be a fast, clean, complete break.”

“It seems,” the official said, “you had this information in your possession a week before you chose to reveal it. I’m wondering, of course, what made you assume the responsibility of allowing the aliens to escape.”

“For one thing, there wasn’t much time,” Telzey said. “If the Alatta operation was delayed, the situation would change—they wouldn’t be able to carry out their plan as they’d intended. For another, I wasn’t sure

everyone here would understand what the situation was. I wanted them to be out of the Hub with the Elaigar before somebody made the wrong decision."

"And what makes you sure you made the right one?" the official demanded. "You may have saved us trouble at the moment while setting us up for much more serious trouble in the future."

She shook her head.

"They're not coming back," she said. "If they did, we'd spot them, now that we know about them. But the Elaigar won't be able to come back, and the Alattas don't want to. They think it will be better if there's no further contact at all between them and the Federation for a good long time to come."

"How do you know?"

"I looked through the mind of one of them," Telzey said. "That was one of the things I had to know, of course."

The official regarded her a moment.

"In looking through that Alatta's mind, you must have picked up some impression of their galactic location . . ."

"No, I didn't," Telzey said. "I was careful not to. I didn't want to know that."

"Why not?" There was an edge of exasperation to his voice.

"Because I think it will be much better if there's no further contact between us for a long, long time—from either side."

The face mask shifted slightly, turning in Klayung's direction.

"Dr. Klayung," said the official, "with all the devices at the Service's disposal, there must be some way of determining whether this man has told us the full truth!"

Klayung scratched his chin.

"Knowing him as I do," he said, "I'm sure that if he felt he might be forced to reveal something he didn't wish to reveal, he'd simply wipe the matter from his mind. And we'd get nothing. So we might as well accept his statement. The Service is quite willing to do it."

"In that case," the official said, "there seems to be no point in continuing this talk."

"I had the impression," Klayung remarked, as he left the communication room with Telzey, "that you knew who he was."

Telzey nodded. "I do. Ramadoon. How'd he get involved in this? I thought he was only a Council Deputy."

"He fills a number of roles, depending on circumstances," Klayung told her. "A valuable man. Excellent organizer, highly intelligent, with a total loyalty to the Federation."

"And very stubborn," Telzey added. "I think he plans to put in a lot of effort now to get that psi in the Tinokti circuit identified."

"No doubt," said Klayung. "But it won't be long before that slips from his mind again."

"It will? Well, good! Then I won't have to worry about it. I can see why

he might feel I've put the Federation at a disadvantage."

"Haven't you?"

"You didn't believe I don't know where the Alatta territories are, did you?"

"No," Klayung said. "We assumed you'd bring up that subject eventually."

"Well, I'm telling the Service, of course. But I thought we'd wait until things settle down again all around. I got a good general impression, but it will take mapping specialists and plenty of time to pinpoint it. They must be way off our charts. And that," Telzey added, "technically will put the Alattas at a disadvantage."

"I'm not sure I follow you," Klayung said.

"The way the Alattas have worked it out, the human psis of the time, and especially the variations in them, had a good deal to do with defeating the Elaigar at Nalakia."

"Hm-m-m!" Klayung rubbed his jaw. "We've no record of that—but there would be none on our side, of course. An interesting speculation!"

"They don't think it's speculation. They're all psis, but they're all the same general kind of psi. They're born that way; it's part of the mutation. They don't change. They know we vary a lot and that we do change. That's why they wanted to take me along and analyze me. I'm pretty close to the Elaigar type of psi myself at present, but they figured there was more to it than that."

"Well," Klayung said, "you may

have proved the point to their satisfaction now. The disadvantage, incidentally, will remain a technical one. The Service also feels contacts between the Federation and the Alattas would be quite undesirable in any foreseeable future."

They were passing a reflecting bulkhead as he spoke, and Telzey caught a sudden glimpse of herself. The middle-aged little man in the bulkhead grimaced distastefully at her. Her gaze shifted to a big wall clock at the end of the passageway, showing Tongi Phon and standard time and dates.

She calculated a moment.

"Klayung," she said, "does the Service owe me a favor?"

Klayung's expression became a trifle cautious. "Why, I'd say we're under considerable obligation to you. What favor did you have in mind?"

"Will you have Makeup turn me back like I was right away?"

"Of course. And?"

"Can you put me on a ship that's fast though to get me to Orado City this evening, local time?"

Klayung glanced at the clock, calculated briefly in turn.

"I'm sure that can be arranged," he said then. He looked curiously at her. "Is there some special significance to the time you arrive there?"

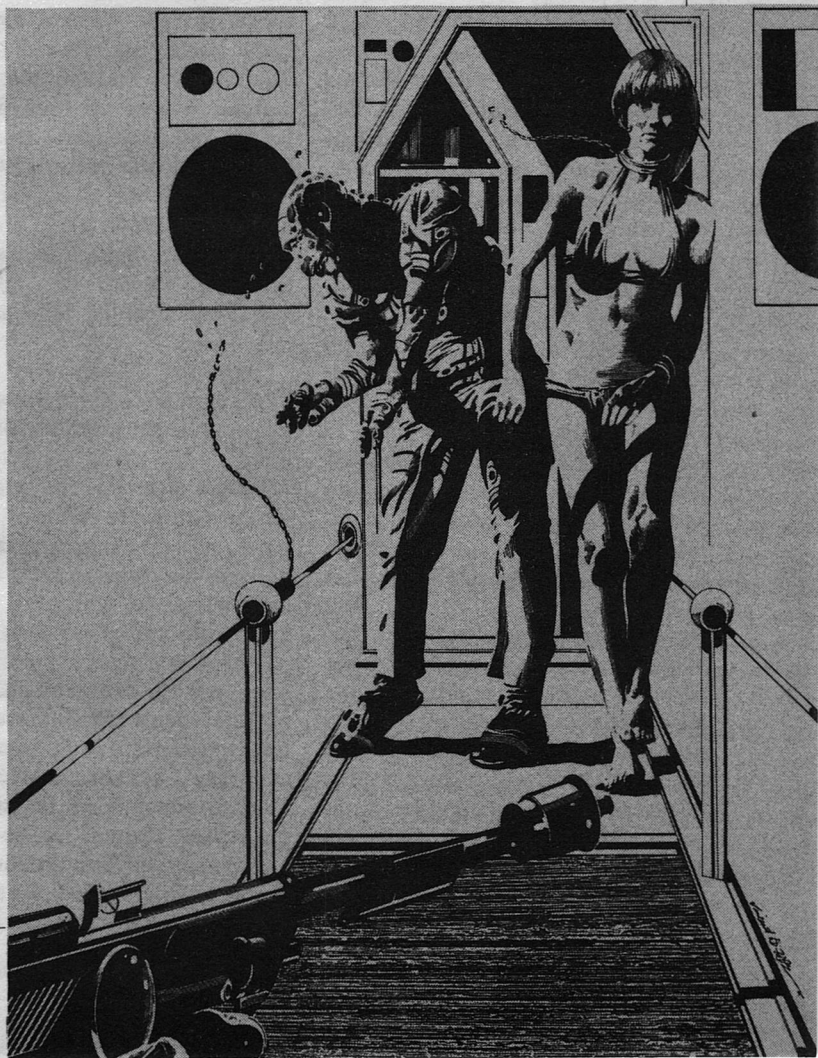
"Not to me so much," Telzey said. "But I just remembered—today's my birthday. I'm sixteen, and the family wants me to be home for the party." ■

# The Fine Print

Some things any man can understand at a glance.  
And some things are perfectly obvious—as obvious as the  
pool of water on the road ahead on a summer day . . .

BY JOHN T. PHILLIFENT

ILLUSTRATED BY VINCENT DIFATE



Moving only his eyes, Braid pretended to attend to the document on his desk, but watched the sleek blue-point Siamese on the carpet, saw the tail now motionless except for its tip, saw the whole coffee-cream body subtly gather poise. Then, launching up and forward, the cat floated, ears flat, spread its paws to make a perfect four-point landing, and slid a little way on the glass top. *You enjoy Mars*, he thought. *You've adapted perfectly to the gentler strain.* The thought covered his own constant dread. Someday they were going to retire him from this quiet sinecure, and out of the Service. No longer would he be Rear Admiral Braid, C-in-C Trade Station, Mars, but a civilian, covered with thin glory perhaps, but condemned to return to live on Earth. And that would be hell.

But he pushed the thought away even as he stretched out a hand to stroke the pet on his desk, feeling the firm spine arch against his palm, hearing the throaty growl of anticipation as his hand met resistance from the erected tail. He knew what he was supposed to do now. Restraining his papers with his left hand, he bore down slightly with the other, then shoved briskly, and the cat skidded across the glass, claws scrabbling vainly, until it reached the far edge. There, with superb timing, it launched again, twisting and turning in the air to a solid, graceful thump on the carpet again. Braid grinned on the inside and wondered, not for the first time, just who had

taught what to whom. That small game had been a morning routine for a long time now.

There were other routines. A rap on his door and the appearance of his aide, Lieutenant Sutton, for one. "Time for inspection parade, sir. When you're ready." That was formula. Then Sutton saw the cat and spoke sharply. "Ming! Out! You know you're not allowed in here!" That was pretty regular, too.

Braid levered up from his chair, feeling his sixty years, reached for his cap and nose piece, advanced to and through the door that Sutton held wide. "When I hear you talk to that animal, Sutton, I can't help thinking you'd be the most astonished man on Mars if it ever talked back!"

"Yes, sir." Sutton was wooden. "I'm sorry, sir. I don't know how he manages to get into your office like that."

Braid's sigh, like his grin, stayed on the inside. He followed, through outer office, along corridors and down to the outer air lock, adjusting his nose piece, shrugging into the warm coat and glossy harness-with-side-arm that Sutton held for him. Then into the brisk and chill breeze of what could have passed for a bright summer day at high altitude anywhere on Earth, apart from the reduced gravity load. On his way to the waiting cushion car, he took the opportunity to look around, taking in the growing sprawl of new buildings, more offices, a bright new resi-



dential block, the first valiant shoots of green in grass and fragile flower bushes. Fine buildings tastefully designed and placed, all in the warm red of stone created from local materials.

Thirty years, just to make a little grass and a few flowers grow. But it was more than that. For thirty long and tedious years the chunky, hard-working, unlovely ships had climbed up and away from here to mine the asteroid belt for life-support chemicals, and Saturn's rings for ice, by the million-ton lot. Braid knew the project well, had been in on the start of it. Find your lump, identify and analyze, if it was in the Belt. For ice you went farther but took it just as it came. Then it was haul and steer, juggle and shove into the proper inspiral orbit, with a precisely-timed explosive charge that would, at the right time, burst it into a benevolent rain. And you did it again, and again, along with a score of others, and it very quickly became dull routine. But, in thirty years, this small area of Mars at least was beginning to bloom.

Braid settled into the rear of the car, waited for Sutton to run around to get in the other side. He had been and seen and done a hell of a lot of things since those days. Maybe too many. Too many for humanity. "Opening up the Galaxy" sounded fine and brave, sounded even better after contact with one or two "alien" humanoid cultures, some discreet

swapping of know-how, and the elimination of the time-and-distance factor. But it hadn't been that simple, after all. It wasn't that the galaxy was too big, in that sense, just that there was too damned much of it, and there was a limit to how much novelty the human culture-mind could take.

"It's a fine day." Sutton sat, making conversation, settling himself.

"Give it another thirty years and this will be a fine place. A regular little city with all the amenities." He tapped his nose piece, where it lay like a bar across his cheekbones. "Won't need these things by then."

"There can't be a city," Sutton corrected gently, "while the Culture Preservation regulations hold. And that isn't likely. Abrogating them, I mean."

"I know what you mean. Preservation. Protection. Segregation. Same old pattern. Pretend it isn't there and hope that it will go away. When will we ever learn?"

"Sir?" Sutton sounded mildly shocked.

Braid let it go, nodded his readiness to proceed. The car slid away from the base offices towards the docking area. That was another thing, he mused. There was something about being many light-years from Earth that made a man realize *he* was the alien wherever he went. And "spacers" were the type of men who could adjust to that better than the vastly-superior-in-numbers rest who stayed at home. So you had to

have some kind of culture-protection rules. That was the argument, and those in favor of it could point to humanity's blood-spattered past for evidence. It was the weight of that evidence that had brought this base into being.

Mars the bleak and barren had much in its favor as an Interstellar Trade Base. Its very barrenness, for one. Its lesser gravity-sink, and favorable atmospheric conditions. Ready availability of constructional materials. And, by no means least, it was a long way from Earth. What little alien culture there was admitted came in a carefully filtered trickle. Only the "good" stuff, like rare gems, exotic skins, furs and art works, precious chemicals and biologicals. And a very little know-how, carefully monitored so as not to disrupt any great financial interests. But it was all wrong. Braid felt it in his bones, even those bones that were grateful for the relief from weight. Never in all his life had he been a man for dodging issues.

"Anything new?" he asked, pushing away his irritation and relapsing into routine. Sutton had a clipboard ready, passed it across.

"One new arrival," he said, aiming a finger. "Came in late yesterday. Pit Eighteen. I can't possibly pronounce the name, but it's a Haddag ship. I've never seen one . . ."

"I have." Braid was suddenly intent, lifting his gaze a moment in a vain attempt to see the ship itself among all the others, then back to

the list. And then to Sutton. "What's she here for?"

"Sir?" Sutton took back the board, riffled sheets, found his reference and passed it back. "She isn't a trader. A privately owned ship, requesting permit to dockdown for fuel, water and essential stores. The credit is good."

"Damn the credit. Did you post the regulation segregation warnings? No, I can see you didn't. Hell! When you get a moment, Sutton, read Section Twenty-eight, Sub-section 'H' of the Interstellar Trading Handbook . . . but not now, no time for that. Driver, Pit Eighteen, and move!"

"I don't understand, sir!" Sutton was shrill as the forward thrust put him back against the cushions. "The Haddag are within the ten-point hominid scale. We trade with them!"

"Not face-to-face, we don't. Not ever. That's what that sub-section is all about. *You* should have been familiar with it."

"Nobody can possibly remember *all* the Interstellar Handbook! Sir!" Sutton was indignant, then curious. "Why don't we trade directly with them?"

"That's not for me to say. And you better hope you never find out. You won't, if we're in time. Keep your fingers crossed."

The dock area came closer rapidly. Once, before Man, this whole region had been a crater, just one of the many giant pockmarks in the side of the planet. Now, with effort, labor

and skill, a vast hole had been scooped out, walled, roofed and pilared to support a flat and circular plain five miles in diameter. In that new floor had been cut pits, circular holes big enough to hold the ships that came to sit down in them. Chocks held them upright and stable while their machinery rested and was overhauled. In the caverns below, with the blast-shields rolled back, busy machinery grabbed out their various loads and brought replacements.

*Two worlds*, Braid thought, as the car swooped into the first pass around an outer pit. Down there the power gang were busy with all the things that couldn't be done in space, and shore crews labored with canisters and crates. Up here in the chill sunlight deckhands passed the time at paint and polish, and fraternizing . . . and it was that last that Braid worried about. Any other morning he could enjoy this brief chance to recapture the sights and sounds of his past, the kaleidoscope of uniforms and blazons, many familiar, a few strange, even to him. But not now. No time, even, to return the snapped salutes from the occasional pairs of dock police on their random patrols.

The car swung and tilted as it rounded the route between pits, dodging strollers and slow-moving haulers alike. Now, between the shifting outlines of ships, Braid saw the Haddag. Long, lean and racy, startlingly different from the cargo

ships, with their emphasis on bulk and capacity, she was a beauty. Braid tried to get his mind in order. A privately owned ship, even for the Haddag system, away the other side of Rigel, argued a somebody, a Lord, or even a High Lord. And there were certain ceremonial forms of address, and a difficult, angular language to drag up out of old memory storage.

"They're lizards, aren't they, sir?" Sutton's memory had been working, too. "Lizardlike, I mean, of course."

"Saurian ancestry, yes." Braid murmured. "There's a lot of turtle to them. Not pretty, maybe, by our standards. But they're nice people. Driver, hold it a moment. Pull in here and wait."

Braid shoved open his door and strode for the ship in Pit Seventeen as briskly as his legs would let him. He saw, at the inboard end of the bridging gangway, the sudden alertness of the quartermaster, and found room among his concerns to approve it. *S.S. Cassini* had once been his own ship, and her present master was a friend, one of the old school.

Commander Hall met him before he had completed three-fourths of the crossing. His salute was crisp but his tone was quietly jocular as he said, "Surprise inspection? That old gambit? You're welcome, of course."

"I'm not playing games, Jim. Not that kind. See your neighbor there?"

"A Haddag, private. Came in late yesterday. First one, for me, and my crew, too. A beauty, isn't she?"

"You, too?" Braid growled.

"Doesn't anybody read the fine print anymore? Section Twenty-eight, sub 'H' . . . later. Right now, get your men away from that ship. Immediately! That's an order, Jim!"

Hall, a long, lean, well-preserved forty, stared down at him for just one breath, then touched his cap briskly. "Right!" he said, wheeled about and went back inboard at the run. Braid couldn't manage a trot, but he got back to his car fast, yapping at the few *Cassini* men who lounged nearby as he went.

"Get back inboard, all of you. Inboard. Now!"

Urgency had communicated itself to his driver, who got moving before he was properly settled. The car swooped away around *Cassini*, straightened, began the arc around the Haddag ship, and Braid leaned over the car side to bawl at the gawking crewmen who were leaning on the guard rail, swapping opinions, "You men there! Back to your ship! Get back to your ship!"

As a performance it lacked dignity and he knew it. His voice didn't carry all that well, and the extra oxygen he had to gasp in stung his nose. But it had to be done. The Haddag's slimness had necessitated an extra-long bridging gangway, all of thirty feet, and looking fragile. And there were two men from the *Cassini* strolling towards the outboard extremity, obviously intent on getting a look into the strange ship, if only that part of it that was exposed as a covered-way for the quartermaster.

Braid drew breath to bawl at them as the car drew level, but was cut short by Sutton's gasp, and grip on his arm. "My God, sir! Look there!"

Braid looked, and saw all his worst fears fully realized. There, in that ten feet by four area at the inboard end of the gangway, was a woman. The first impressions that leaped to mind at sight of her began with "magnificent" and went on up from there into incoherence. She was tall, superbly shaped, honey-gold all over, except for a glossy mane of daffodil-yellow hair and bright eyes as green as emerald. A strip-leather harness studded with gems concealed very little of her figure, gave her a barbaric splendor. But what had made Sutton cry out was the stout leather strap about her neck, and the slim, glittering chain that linked it to a sturdy upright in the guard rail.

For just that one moment Braid felt defeated. Then, desperately, he kicked the car door open, growled at Sutton. "Stay there! Do not interfere!" Then he ran, heavily and painfully, but fast, determined to head off the two *Cassini* men, who had seen the shocking tableau and were just beginning to react to it. "You men!" he shouted. "Stop!" and the slower of the two, looking over his shoulder, did stop. But the other, quicker of reflex, had seen something else. Braid saw it now, the squat and stumpy figure of the Haddag quartermaster, snugged away to one side, seemingly watching and

enjoying the furore. *Fuel to the emotional flame*, he thought, flogging his legs into greater effort, reaching the gangway neck-and-neck with the Cassini man.

"Stop right there!" he gasped, breath burning his throat. "You hear me? Stop! Stand fast, damn it!"

"Sir?" the crewman stared down at Braid from the advantage of six feet three. "They have a woman there, chained up like a dog!"

"I've got eyes. What were you going to do about it?"

"Not was. I am . . . going to turn her loose, first . . . and then—"

"Now hear this, Yeoman . . . ?" Braid struggled for calm.

"Gregory, sir. Yeoman Gregory. You're . . . Rear Admiral Braid!"

"That's right." Braid inserted himself between the crewman and the gangway, stood on it with his back to the ship. "It's an order, Yeoman. You turn right round and proceed back to your ship. You hear me?"

"Sir?" Gregory darkened grimly. "I don't want to lay hands on you, sir, but you can't order me to turn around and walk away from that. Sir, not you or anybody else—" He swallowed as a full-throated baying scream came from the other end of the gangway. "I'm asking you, sir . . . last time . . . to step aside!"

"And I'm telling you, Gregory, that this is none of your business. This is an alien ship. You know damned well you're not allowed over this gangway except by express permit—" Braid cringed as that echoing

scream came again, along with the furious rattle of the chain. Then there was an abrupt "crack" and a sudden stare of astonishment on the angry young face opposite, as Gregory saw over his shoulder.

Braid whipped around, knowing what he was about to see, feeling the chills deep down in his stomach. The yellow-haired fury, dangling a broken length of chain, came leaping along the gangway, teeth bared, hands out and clawing in anticipation. There was no more time. He dragged out his ceremonial side arm, dropped to a knee, steadied, aimed, and fired.

The pistol kicked in his hand. He saw the expanding slug take her in the throat, heard the screech as she came reeling on. His second shot was better, struck full on the smooth concavity below the rib-arch, shocked her to a standstill. Then a slow, staggering side fall on to the handrail, to hang there a moment, and then over and down, twisting and turning, into the gloom, the dark, the stone-solid bottom.

Braid drew a long and painful breath. He was shaking all over, so much so that it took three tries to get the weapon back in its holster, and a strain on the guard rail to get back to his feet again. He turned to Gregory, who looked as stunned as if that second shot had hit him. "Stay right here," he said wearily. "Don't let anybody, no matter who, over this gangway until I return."

He turned and tramped along the frail gangway on legs that felt like rubber filled with pins. He was too spent to feel anything but determination to go through with the formalities. Too late. All along he had been too late. But there were the rituals to be done. He paused at the gangway-head to finger the remaining length of chain and shake his head at it, then on to the Haddag quartermaster, ordering his legs to behave, his breath to come steady. He made the careful ritual gesture that was both salute and friendly greeting, had it properly returned, then, working his tongue and jaws around the sounds, he said, "I am Rear Admiral Braid, senior officer in command of this base. Please inform your commanding officer what has happened and ask if I may have the honor to speak with him immediately."

The quartermaster signaled understanding and moved to a communicator. It wasn't easy to read expression into those lipless, noseless, scaly features, but the tinge of green that showed in the wattle crest over the eyebrow ridges indicated respect. For what it was worth. Braid tried not to sag, internally. *All the King's horses . . .* he thought, and felt a momentary rage at the fool, whoever he was, who had precipitated this calamity.

A female came, silently, to lead him away into the ship, up and around, to a luxury suite, to leave

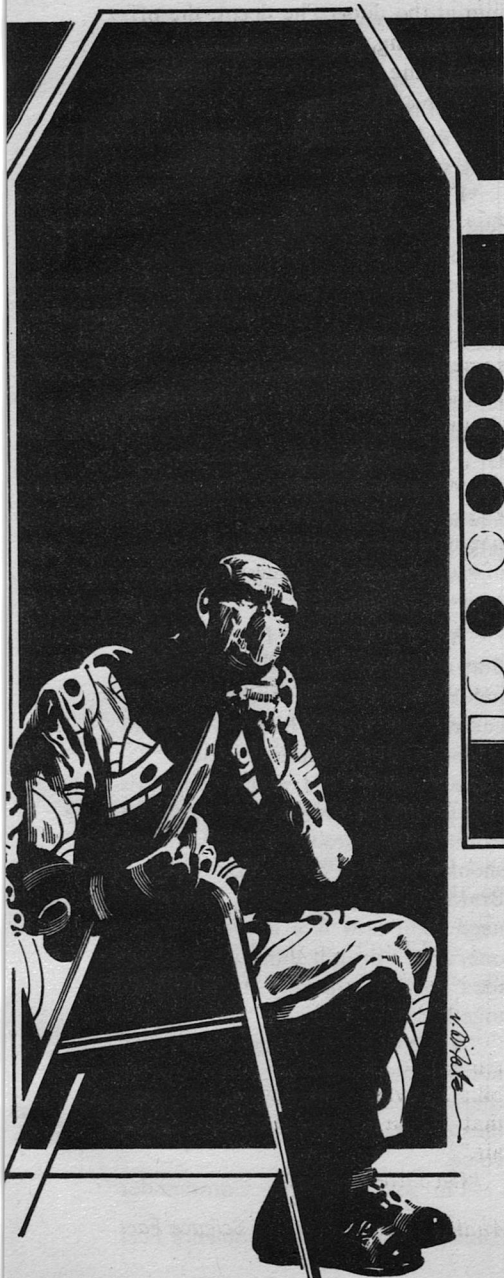
him at the door. The decor, the off-key lighting, the faint ammoniacal tang of the atmosphere as he unfastened his nose piece, all served to awake memories of long ago. This was no captain's cabin, for sure.

The Haddag who waited for him inside made that guess certainty at once. "I am Taxul Taxul-Krull," he said, in passable if careful Anglic. "We meet regretfully, but in respect?" He was a fine specimen, some three inches taller than Braid, and the horny plates of his torso and shoulders were thick with gems and filigree gold. The decorations, and the title, told Braid that this was a High Lord, the senior of a brood-name. He made the appropriate sign of greeting, spoke his name and rank and went on gravely.

"You are the owner. It was my wish to speak to the officer in command, as this is primarily a matter of broken regulations. I am deeply sensible of the honor of this meeting, and remember with gratitude the many benefits and warm friendship I have received from members of your race in the past, but it is necessary to point out that my present business is official."

Taxul-Krull inclined his head gracefully. As far as it was possible, his slit-pupiled eyes glowed with surprise and respect. "The error was mine," he said. "Thus the responsibility. It was I who gave instructions that Beshu be given sunlight and air."

"On a dress chain?"



"It would have been sufficient had she not been provoked. She was well-behaved always, and her loss is serious. One of a matched pair, extremely valuable. Compensation will be requested, but in view of the circumstances, and your agreeable act in coming to me, it will not be excessive."

Braid sighed, braced himself. "It is with deep regret," he said, "that I have to remind the High Lord of certain things. One, that I am the supreme authority here. Two, that this is Terran territory. Three, that you have by landing here breached the relevant sections of Interstellar Law which apply, and which I must advise you to consult. I must ask that you hold yourself available for the official inquiry which will surely follow, and meanwhile that you do not, under any circumstances whatever, allow to be publicly exhibited any other akkans you may have aboard. I leave you now. Again, soon."

"Again, soon." Taxul-Krull echoed, his geniality withering.

The female came to conduct Braid back to the gangway. Somehow the walk seemed longer this time. Despair had congealed in his legs. Yeoman Gregory was still by the gangway, stiff and angry. With him were a sergeant and trooper of the dock police. Braid spoke to Gregory first.

"You can return to your ship now, Yeoman. You will say nothing of what has happened, nothing, you understand? Not to anyone, until you hear further. From me. All right?"

"Yes, sir." Gregory saluted stiffly and went away, his face a mask. It wasn't hard to guess what went on under it. The sergeant made a sketchy salute.

"Excuse me, sir," he said, "but there's got to be more to it than that. The way I heard it . . ."

"What you heard you'll keep to yourself until you're asked for it. I will make a full report of this to your superior myself. Meanwhile, you'll see there's a permanent watch kept on this gangway, and that no one crosses it without orders from my office. Understood?"

The sergeant's face made it plain that he understood, but didn't approve. Braid trudged back to the car, eyed Sutton's rigid face, climbed in, settled back and said, "Back to the office. And don't talk. I've got thinking to do."

It was easy to say. Back in the quiet of his office, in the comfort of his chair, it should have been easy to do, but the thoughts just wouldn't hold still. Braid was almost relieved when Police Chief Kessler bulled his way past Sutton's token resistance and on into the inner office. If Kessler, a six-foot-six colossus of a man, had respect for anything at all, it was a set of hard-and-fast rules that he could understand, and the one thing sure to make him angry was a circumstance for which the rule book didn't provide. He was angry now as he glared down at Braid.

"If what I hear is right," he said,

without preamble, "and you're going to tell me, yes or no, then this is one hell of a mess you've got into. Or am I out of my mind?"

"You're out of line anyway. I outrank you, Kessler."

"I don't think so." Kessler set his feet apart, braced his shoulders. "Not this time, Rear Admiral, C-in-C of the base—naval, ship-wise, trade-wise, granted. But when it comes to crimes like homicide, or maybe murder, and the unlawful detention of a human on an alien vessel, that's different. That's my meat. Or do you have a different story?"

"You seem to know a lot about it already. I gave orders no one was to talk, to discuss . . ."

"You can't *give* that kind of order!"

"Will you let me finish? Orders that no one was to talk until I had made a full report to you and discussed the affair—which I was about to do. Now, will you please sit?"

Kessler brooded a moment. His heavy features were almost as hard to read as a Haddag's. At length he shook his head. "I don't think I will, Braid. It's my guess that what you need right now is a lawyer, a good one. And I do not think it is a good idea for us to do any more talking together. Not now."

"A lawyer!" Braid snorted. "Let's not borrow trouble . . . What?" he snapped, angrily, as his intercom bleated at him and gave Sutton's voice.

"I'm sorry, sir. It's Commander



Hall. He insists the matter is urgent.”

Hall's face showed grim on the small screen. "I'm sorry about this, Jack. My fault, but he was so fast I never had the chance to stop him before . . ."

"Stop who?"

"Grabowski. The deckman who was with Gregory. He's a nose. A newsman. He has one of those portable video-tapers. And he had it with him!"

Braid sagged. Contrary to what he had thought, it could get worse. It just had. Before he could think of words worth saying, Kessler had swooped around the desk and into range of the intercom.

"Commander Hall, this is Chief of Police Kessler. I heard that. As of now your ship and crew are under restraint. I'm holding you personally responsible for Grabowski *and* that tape. You will be ready to produce both when called on to do so. Check?"

Hall took a moment, then shrugged. "I can accept responsibility for my ship and crew, but I do not have the authority to muzzle the press. You know better than that, Chief. If I tried anything like that, Grabowski would scream bloody murder!"

"He better not try it. That tape is material evidence on a capital crime. You tell him I said so, and let him argue *that* with his favorite editor. He can sell the story if he wants, but that tape better stay put!"

"No, no!" Braid muttered vainly

as Kessler cut the connection. "If that story goes out . . . Kessler, you bloody fool!"

"That won't do you any good, either." Kessler marched back around to the front of the desk. "I'll take charge of the weapon you used. . .!"

"Sutton will give it to you. It's out there somewhere."

"It had better be. You can consider yourself under house arrest as of now. I'll accept your parole."

"Thank you." Braid shook his head sadly. "Nothing else you can do, I suppose. I'd better get a signal off to Earth, ask them to replace me." He eyed Kessler, who seemed unsure what to do next. "Shouldn't you impound that Haddag ship? I told her owner to hold himself available, but you'd better reconfirm that. And there's a question of compensation."

"Right! That ship won't be going anywhere for a long while. Compensation? They'll find out what that word means before they're much older." Kessler strode violently away, leaving Braid feeling old and empty. After a while he touched his intercom.

"Lieutenant Sutton. Send the following signal, please. Space Service H.Q., Earth . . ."

The Service moved fast. It had to. With *S.S. Cassini* grounded there were considerable financial interests under stress. With the Haddag ship held and under suspicion there was an entire system-trading empire at

risk . . . the goodwill, if nothing else. By the evening of the following day Braid had two guests in his private quarters. One, the Staff Commodore from Space Service H.Q. who had been appointed to take over, was a stern-faced forty-year-old career-officer named Patterson, efficient, precise and respectful.

"I've heard of you, sir. And a little about this affair. Couldn't help hearing that. But it's none of my business. I'm out of it."

"Can you do that?" Braid wondered.

"I can try. I am instructed to take over, but I have no intention of bumping you out of your private quarters as long as you need them. I am also instructed to see you have everything you need, anything the Service can do, you've only to ask. For the rest, that's between you and Captain Moore, here."

Moore was the legal aide, and Braid took a faint dislike to him on sight. His young, dark, self-assurance had an uneasy familiarity about it.

"Don't," Braid pleaded, "give me that look, like a professional nurse with a terminally ill patient; the 'everything is going to be all right' line."

"I didn't say that," Moore objected.

"Just as well. You'd be wrong. This one you're going to lose."

"Let's not start by being defeatist, sir."

"There you go!" Braid snorted. "Defeatist? This case was a dead

duck from the moment that Haddag ship grounded out there. Better face it."

"I'm not sure I understand," Moore frowned. "There are two cases. You seem to have them confused. Your case . . . my case . . . the charge will be that you did kill by shooting one person, a woman, identity not yet established, in the act of attempting to escape from captivity on a ship of the Haddag Federation. The other case is quite different, is being handled by a judge advocate of the Interstellar Bureau. That charge is that one Haddag ship owner, by name Taxul Taxul-Krull, did unlawfully and against her will keep and restrain on his ship one person, a woman . . ."

". . . Identity as yet not established." Braid completed for him acidly. "Kessler rides again! If ever there was a man who bumped the ceiling of his own incompetence, he's it. Take away his rule book and he would fall flat on his face!" Moore's easy expression hardened a little.

"I understand that both charges are amply substantiated by eyewitness and visual record evidence, sir. In the circumstances Chief Kessler acted quite properly. Nothing else he could do!"

"Now you have your finger right on the point, Moore." Braid grew intense. "If everybody does the right thing here, the proper thing, it is not going to work out and there is going to be the most horrible mess you ever saw. I am telling you. So . . ."

I'm willing to co-operate all the way with any story you care to cook up. I've a fair-to-middling record, long service and no bad marks to speak of. I'm old. My health isn't what it was. Make what you like out of that. Momentary aberration. Blackout. Mental seizure . . . whatever you like, whatever sounds best—"

"But . . . that's pleading guilty but insane!" Moore sounded horrified. "You can't do that! My God, sir . . . do you know what would happen?"

"Moore . . . you've briefed up on this thing, on the way here, haven't you? Read all the details, seen the visual even, yes? Or heard about it anyway. Well now, I'm telling you . . . I did it, all of it, exactly the way you heard. Nothing is going to alter that. But if you push it to the point . . . no, let me put it this way. What happens to me is a small matter compared with what will happen if your judge advocate digs down too far and finds out just why I did . . . what I had to do. Believe me, that mustn't happen. So my advice to you is to go get your head together with your learned colleague, study the issues . . . say, for one, the total loss of all trade between us and the Haddag Federation . . . and work out some way of smothering that inquiry. I don't care how you fudge it, that's your field. But you can pile it on me all you like. I'm through anyway, now, so it can't hurt."

Moore rose to his feet, his face a confusion of emotions. "I'm sorry to have wasted your time, sir. I'm

afraid I cannot be a party to a deliberate—"

"Oh, not you, too? Captain Moore, do you know what we get from the Haddag in trade? We get biological materials and supplies. Plasma. Antibodysera. Antiviral sera. Youth hormone preparations. Immuno-suppressant drugs. A whole range of what the popular press likes to call miracle drugs. Things we just can't get anywhere else. Things, for instance, that help to make life a bit more tolerable for an old crock like me. Think of that. And now think of this. There's one question you haven't asked me, but that someone is sure to ask me, if I'm ever put on a stand the way you want it. A question I will have to answer. And I'm a rotten liar, Moore. Always was."

"What question is that?" Moore couldn't resist asking.

"You ask me now. Why did I do it? Why did I shoot that woman?"

Moore asked the question. Braid told him, in a few brief sentences. And then, while the legal man was still shaking his head blankly, he said, "You keep that under your hat. Think about it. Then go talk to your colleague. Tell him, if you have to. And then come back and see me and we'll work out a story of some kind."

Braid spent a bad night. It was one thing to be coldly rational with Moore for audience, but something quite different in solitude, facing the prospect of dragging out weary years on Earth. The stigma, the disgrace,

even the incarceration in a "home" were minor terrors. What scared him was the everpresent and inescapable gravity that would lie on him, every minute of every day for the rest of his miserable life. As yet even the Haddag genius hadn't produced a drug against that awful burden. He was almost glad when morning came, and brought with it, bright and early, a much-chastened Captain Moore. With him came a dark-haired, sturdy, pleasantly homely woman with a warm smile and firm handshake. She was neat and sober in a black pants-suit, with just a discreet gilt blazon to warn him as Moore introduced her as Judge Advocate Hudson.

"I'm very glad to meet you," she declared and made it sound sincere. "I've my doctorate in Interstellar Law and I thought I knew my way around most of the curves, but something tells me you're going to throw a new one at us this morning. I think Captain Moore wants to apologize."

"That's all right," Braid hushed him quickly. "I was one of those who helped bury the whole affair in a screen of technicalities. Had to. I'll bet there isn't one 'spacer' in a thousand who knows the real reason why we do not trade face-to-face with the Haddag. The point is, it has to stay buried."

"I doubt if that's possible." Miss Hudson said. "We spent hours chasing our way through your screen, and what we got were just bones. This morning I want to hear the flesh

of it. The key man, all the way through, seems to have been one 'Jack' Braid. You. So let's have the story."

"You have time to listen to the mumblings of an old man?" Braid felt embarrassed, but she smiled gently and showed willingness to sit and wait.

"I can make time. I have that kind of authority. And the more I see and hear of it, the less I see you in the role of sacrificial lamb. I'm not letting that happen if it can possibly be avoided."

Moore shook his head. "I still can't take it in," he murmured. "All these years it's been hushed up. That the Haddag keep humans as pets!"

"You haven't taken it in," Braid told him kindly, "but you've made my main point for me. You see the reaction, Judge Advocate? And Captain Moore is a lawyer! Trained to be objective?"

"But I've seen that visual record, sir. Prints have been made. Millions of people will see it, and see what I saw. A woman. An extremely beautiful and attractive human woman!"

"And you have to believe your eyes. You, Gregory, Grabowski, Lieutenant Sutton, my driver . . . just as I did, the first time. And it very nearly cost me my life. That's a hard way to learn."

"That was when you crash-landed on their home planet, wasn't it?" Miss Hudson assumed, and he grinned in memory.

"That's in the record. Fact is, I was

shot down. And my own fault, too. You see, ever since I climbed into a uniform and started jaunting to far-away places, I've resented just one thing. It's old. It used to apply just as much in windjammer days. One dock, one harbor, one port . . . is very much like another, and a voyager in a uniform is in a slot. Almost all he ever sees or knows of foreign parts is the immediate dockside area and the type of people and recreation that are laid on for him. And all he knows is swapped scuttlebutt from other voyagers in the same fix. But I always wanted to meet the real people, see the strange places, wherever I went. And that's what happened when I had the chance to go to the Haddag home-world.

"We'd been trading with them for some time then. Nothing big, but very valuable stuff from our point of view. We did most of our dickering by radio, most of our physical swap in orbit, by a space-platform, or on an out-system base. Just like here. Other cultures have their culture-protection problems too, just like us. Still do."

"I've never been happy about that," Miss Hudson declared. "I don't believe the problem is all that intractable, or that the average person is that stupid, either. It's just been handled wrongly, that's all."

"I hope you're right, but I doubt it." Braid sighed. "It's not that long ago that we were persecuting each other over a mere matter of skin color. As if that mattered. So what

chance is there of accepting a creature that is as different as a dog is from a horse? Could you get the 'average' person to say that's a human being, just like me?"

"But that was a fully human woman, sir!" Moore insisted.

"I'll get to you in a minute." Braid sat back. "Where was I? Oh yes, the trade. That was curious, too. Biological materials that were not only valuable, on test, but valuable to *us*. And we knew the Haddag were saurian in ancestry. Then, to start with, they didn't have the materials in any great quantity at all, seemed surprised that we needed such a lot. They would've much rather traded gem-stones, but we can get them by the ton-lot other places. Odd angles like that. And, of course, this was the time when Interstellar Trade was spreading in a hundred different directions at the same time, and our resources were getting a bit thin. So, when it became necessary to send an official delegation to their home planet to conclude the trade treaty, a lot of scientific interests were keen to get in on it. But, as it happened, it was also possible, at that time, to bury the subsequent details in a flood of similar treaties so that it would stay buried. Until now.

"Anyway, I was on that trip. I was just as curious as anybody else, and I had the small advantage that I was logistics officer—in charge of the transport down to the surface and about their capital city. Me and my curiosity. I didn't request any per-

mission. I would have bogged down in the usual red tape if I'd tried it. I just wrote out my own permit, broke out a jet-copter, and went looking, the idea being to see something of the country, and maybe land if I saw anywhere that looked interesting enough. And I got shot down."

"You mean they were hostile?"

"Not in that sense, no. The Haddag had, probably still have, a very efficient traffic-control system. I didn't know about it until it happened. Some kind of high-powered microwave generator, I think. They had them spotted strategically all over the place. Any aircraft anywhere in the air where it had no right to be, they just took aim, the motors died permanently, the aircraft had to either 'plane or parachute down . . . and the patrol would be along, promptly afterwards, to ask awkward questions. My trouble was I didn't expect anything like that, and my craft wasn't the best design for a dead landing. But I got down, after a fashion. I was too damned busy getting down to pay much heed to the local scenery—until immediately afterwards. Scrub country, bushes, scraggy trees—and a herd of wild akkan."

He eyed Moore speculatively. "To you, about twenty fine, fit, healthy young women, skin naked and foraging over the region as if looking for something. They were. For food. Berries, shoots, small game, insects, worms . . . like that. I'd hate to say which was the more surprised, me or

the akkan. But you need to get one thing very clear. I was fit, in those days. That's not a brag, but a very significant fact. Just as soon as they picked up signals from me, signals I didn't know anything about, they started for me." Braid shut his eyes and for a moment thought back to then. "I wouldn't wish a half hour like that on any man, believe me. I wasn't expecting to be attacked. I didn't expect to have to fight them off, for my life. By the time I'd adjusted to that, most of the damage was done. But I managed to run. And they caught me. And if the Haddag patrol hadn't been very efficient, and fast, I wouldn't be here telling you. I was in intensive care for three weeks, and there were times when nobody thought I was going to make it, times when I didn't *want* to make it. You have to live through a thing like that to get the full flavor.

"Moore, I owe my life to the Haddag, especially the High Lord on whose estate I had unwillingly trespassed. He and his staff made the switch a lot faster than we did. It didn't take them all that long to realize I was human, and to treat me accordingly. It took us a hell of a lot longer to realize the akkan were not."

"You're splitting hairs!" Moore protested angrily. "You can call them akkan as much as you like, and all right the Haddag keep them as pets, treat them like animals. But isn't that just a matter of opportu-

nity, education and development? You have to face it, sir, they are being kept down!"

"I know how you feel. I went through all that. I told you we had a scientific group along. I have to be eternally grateful to one of them, a man I'll never forget. Stefan Roche. If there's any credit to be handed out, Judge Advocate, it should go to him, if he's still alive. Tell you what, Moore, you just step along to my ex-office and collar Sutton, ask him to spare a moment . . . and to bring Ming. Got that? Bring Ming!"

Miss Hudson smiled as the door closed. "You forget my titles and just call me Anna," she suggested, "and I'll call you Jack, and then you'll tell me how it came about that you, in disgrace and severely injured, came to dominate the whole trade treaty conference the way you did."

"It just happened. I was in bed, being cared for by the Haddag, and they sort of took to me, and me to them. They're nice people. I got to know their language and customs, and when the crop of problems started to get real sticky, my C.O. decided to put me up as the chairman, to take charge. That's why my name is plastered all over the records. Ah! Thank you, Sutton. Ming, come and meet some new people." The Siamese stalked into the middle of the carpet and surveyed the assembly with disdain. Braid grinned, looked up at his ex-aide. "I won't keep you. Just one question. Roughly how long

have we humans been trying to domesticate the cat?"

"It is at least five thousand years, sir, judging by the archaeological records. Do you want it in more precise detail?"

"No, that's fine. You can leave Ming." The door closed again. Moore sat, eyed the cat thoughtfully, shook his head.

"I don't see the connection, sir."

"You're not looking. Five thousand years we have been living with the cat. We've pampered it, worshiped it, talked to it, tried to train it. And after all that, a cat is a very smart, highly intelligent animal . . . but still an animal. The Haddag were keeping akkan as pets before our ancestors came down from the trees, keeping them for pretty much the same reason that we, some of us, like to have cats around, and pampering them in pretty much the same way. And they are still animals."

Moore watched the beast stalk sleekly across to investigate Miss Hudson, and scowled. "It's not the same. Why keep them like pets? Why the jeweled trappings and all the rest of it?"

"If you have the eyes for it, a cat is a beautiful creature. Glossy fur, grace, suppleness . . . it can move in ways we can never hope to match. So . . . I ask you to imagine . . . you're a Haddag. Turtlelike. A squat and chunky body, stumpy legs, a load of body-armor, scaly skin. No fur, no gloss, no grace. So you get pleasure just from having a pet that epitomizes

mizes all the things you haven't got. It's that simple."

Ming investigated the hand that Miss Hudson offered, approved, leaped into her lap. She looked up. "Dr. Roche was very thorough, wasn't he?"

"He had to be. We had a very unhappy situation there for a while. He had to convince me, and the rest of the delegation. And then we had to work it out that the only way to keep this thing from exploding in our faces was to lay it down that there was to be no face-to-face trading with Haddag, not ever. There had to be a middleman. I mean, now that we knew where those biological materials were coming from. . . ! And now that Taxul-Krull has blown the thing, not intentionally, we have to screw the lid back on somehow."

Miss Hudson looked thoughtful. "And your idea is that we should all get together and crucify you, and obscure everything else in the process?"

"You have a better idea?" he demanded. "Look, I'm not being noble. I know that whatever happens I'm through, here. This little backwater sinecure was practically created for my benefit, and I'm grateful for that. I've had a good run. I'm an old man. I'll get sent back to Earth in any event, and that will finish me off. So what's there to lose? Except goodwill and trade with Haddag, and can we afford to lose that?"

She smiled gently. "Nice try, Jack, but it isn't going to be like that. Not if I can help it. And I think I can.

You"—he eyed her colleague—"have no case, you realize that? So I'm co-opting you. And we have work to do, so let's not waste any time getting at it." She lifted Ming from her lap and rose. Braid made the preliminary effort to rise and she waved him down. "Don't bother. Don't you worry about a thing. I'm in charge now. You'll be informed when I need to call you. Just by the way," she frowned a little, "how long since you saw a doctor?"

"Eh? Oh, the base sawbones runs the rule over me once every three months or so. Nothing he can do. I'm just old. Old and weary. I think you're going about this the wrong way, you know, but I wish you luck."

"And I think *you're* wrong," she smiled. "We'll see, won't we?"

Braid did a lot of thinking in the forty-eight hours that followed, going over the affair from every angle he could devise, and seeing nothing but bleak disaster at the end of every ploy. But there was something about Anna Hudson that stayed with him all that time. Warmth? Sureness? Something. He had never had much contact with women in his youth, being far too curious about what might lie at the distant end of each jaunt. And, after that near-death encounter with the wild akkan, he had never been able to look at a pretty woman without an involuntary chill. And he was too old now, anyway.

He had never before attended an Interstellar Court of Inquiry, and



knew of the formal procedure only vaguely and by hearsay. For a venue one of the smaller warehouses had been cleared and hastily furnished, the big cargo doors sealed, and the one small personnel door guarded by a dock policeman. Inside curtains had been slung to provide chambers, and rough barriers and benches marked out the various enclosures, with the whole middle of the floor clear. As Braid marched the length of the floor accompanied by his ex-driver and Lieutenant Sutton, he saw there were many others there before him. To his right was what he immediately thought of as the "press gallery," and it was packed. No possible mistaking that worldly-wise look of the professional newsman . . . but the others were a different caliber altogether, were too well-fed and well-kept to be just any old citizens.

Opposite them, and on his left, was the enclosure for the panel of judges, and the sight of it stirred a faint memory of formal words. "There shall be equivalent numbers, two or more, of the race complaining and the race defending, and there shall be a greater number than either of these of such other races as shall be neutral in interest, the whole to constitute an odd number . . ."

The enclosure was vacant at the moment, and he flicked another glance at the press gallery in curiosity, wondering how many there, newsmen or those "others" had ever seen an alien in the flesh. It wouldn't be many, for sure. He tramped on to

the far end and took his seat thankfully among the other witnesses. He could identify Yeoman Gregory, guess at Grabowski, and remember the sergeant of police and his companion. The two Haddag, who sat awkwardly a little apart, were the quartermaster and the female guide. All very proper, and somehow all futile. Anna Hudson had seemed a sensible, astute woman, but it looked as if she was going to let the rule book ruin the whole business. Sitting now, he had the press gallery on his left, and down the far end from him were the tables and benches where the learned ones would sit and perform. All at once he felt like a spectator at a farce that was the preliminary to a tragedy to be played elsewhere. And then there was no more time to wonder about those well-fed, prosperous looking people in the press box, as the judges started filing in from behind the curtains.

First to show were the Captain and First Officer of the Haddag ship, all ablaze in jeweled ceremonials and paint. *Two on their side*, Braid thought, *so at least two on our side, and at least three neutrals. Who?* That wonder was answered in the spectacular entry of three ursinoid Thropan, from a three-sun system out Spica way. Braid heard smothered murmurs and shufflings from the observers, and didn't blame them at all. A bearlike man . . . or a manlike bear . . . was something to catch the eye. Three of them, each well over

eight feet tall and trapped in stare-white leather and silver, were something to catch the breath of the inexperienced. But then it was Braid's own turn to catch his breath as Commander Hall strode in, very formal, and after him trotted a little bald head in scholarly untidiness, sharp eyes darting everywhere to take in the scene. It took a moment for the fingers of memory to fasten on the proper picture, but once it came there was no doubt, and Braid doffed a mental hat to Anna Hudson. The years had been kind to Stefan Roche. He didn't look all that much older than when Braid had last seen him, more than twenty-five years ago. *Lord!* he mused, *the old man must be at least ninety!* He began to feel an unreasonable stir of optimism.

But here now came the learned ones, the inquirers, and led by Chief of Police Kessler, with two of his office staff close at his heels! Braid frowned. That didn't fit any picture he could make. Captain Moore, all glittering in full dress. Judge Advocate Hudson, exactly as when he had last seen her, but plus a long formal cloak that gave her dignity. Then another Haddag officer . . . Braid read his markings . . . medical man . . . accompanied by the tall, pantherlike form of a Gorden, all glossy golden fur and the gleaming chain mail of his uniform. A purser. Braid nodded approval. Scuttlebutt classed the Gorden as fussy, and hard to get along with, but Braid knew them as

clever, catlike and resourceful, one of the smartest of the races so far encountered by Man, within the ten-point humanoid parameters. The Haddag had done well to co-opt him as their spokesman. There was a moment of unease, everyone waiting for everyone else, then Kessler, looking thoroughly bad-tempered, rose to his feet, holding a clipboard.

"In accordance with the provisions of Interstellar Law, I, William Austin Kessler, Chief of Police of Trade Base, Mars, do declare this Court of Inquiry in session." He read it from the script angrily. "I declare that I have no personal interest, or bias, in these proceedings, that my sole duty is to maintain order, to ensure that all official persons here present shall be allowed to speak and be heard, and to register the majority verdict of the judges attending, which shall be final and conclusive."

Braid held on to his internal grin as Kessler had to stand, and get more and more irritable, while the panel solemnly identified themselves. The chief of police wasn't enjoying this at all, but by putting him in the chair Miss Hudson had tied him hand and foot. A smart woman, even in a lost cause.

It came time to call Taxul Taxul-Krull to take the stand, a small goal-post frame in the middle of the floor. Braid felt sorry for him. Kessler didn't. With visible difficulty he controlled his voice to be able to say, "You're entitled to legal representation."

The Gorden surged to his feet promptly. "Consar Danus. I have been asked to speak for the High Lord." The combination of flawless Anglic and that rich rolling voice brought appreciative gasps from the observers. Braid sighed. He had once heard an impromptu Gorden choir learning a bawdy ditty from a crowd of Earth crewmen, and the incongruous magnificence of the sound was something he would never forget. There was another price to pay for culture protection.

Kessler scowled. "The chair recognizes Consar Danus. Who speaks for Earth?"

Miss Hudson stood. "I do." she said quietly. "I am assisted by Captain Moore."

"The chair recognizes Judge Advocate Hudson." Kessler muttered the words, then stood there, glaring at the board in his hand, until Miss Hudson's aside murmur came clearly to every ear:

"Sit down, man! You've done your bit. I'm waiting to read the charge!" Kessler thumped down amid a smothered stir of amusement.

Miss Hudson rose again, holding a paper, but not bothering to look at it. "High Lord Taxul Taxul-Krull," she said quietly, "you are charged that, on the morning of three-day, eight-month, twenty twenty-four in the Terran calendar, you did permit and allow a dangerous pet animal, one female akkan, in your possession, to be kept under insecure restraint at the access area of your ship, from

which place and restraint it broke free, attempted to escape, and thereby endangered the lives of several non-involved bystanders before it could be destroyed. You are further charged that you had made no adequate provision for such a contingency. Further and final, that this was done in full knowledge and awareness of the regulations pertaining to such matters, in Section Twenty-eight of the Interstellar Code. You are now asked to declare whether or not you fully understand the nature of these charges, and then to declare how you plead with regard to their substance."

Taxul-Krull moved his head once, spoke carefully but distinctly. "I know the meanings of these words. For my reply, Consar Danus will speak. He has my voice and my mind in this."

Consar Danus was on his feet again immediately, towering over Miss Hudson, bowing to her, then to the panel. "For the High Lord," he said smoothly, "I say only this, and only with reference to the third and final charge, that he denies the suggestion of any deliberate attempt to contravene any such regulation. Evidence is available, if required, from ship's records and crew, that landfall was made here only under the pressure of necessity due to miscalculation and the urgent need for fuel, water, and vital stores. Whilst it is not to be maintained that ignorance is a total excuse, it is submitted that the stated qualification 'in full

knowledge and awareness' does not apply. The High Lord was not aware of the regulations mentioned. The High Lord is not a trader."

As he sat, giving Miss Hudson the floor, Braid frowned to himself. This had all the air of a put-up job. It was too easy. She looked thoughtfully at the panel, pretended to be studying the paper in her hand. "We have no wish to be severe," she said, still quietly, "and we understand that it is possible for a private person to be unfamiliar with the fine provisions of the Interstellar Code. On the other hand, as Consar Danus has said, ignorance cannot be taken as a full excuse, only a mitigating circumstance. If we are prepared to accept the plea of ignorance in the third part, this must not be taken as excuse in any way for the previous charges—that the animal in question was improperly secured, and that innocent lives were endangered."

Down she went and up came Consar Danus again, polite as ever. "As already declared," he said, "we say nothing about the first two charges, except to make the point that the circumstances arose and were the outcome of the ignorance as already mentioned. We are prepared to accept the ruling of the learned judges on that matter. It was originally the High Lord's intention to seek compensation for the loss of a valuable animal, but in view of the circumstances and on studying the relevant sections of the aforementioned

Code, that is withdrawn and we are content to accept the ruling of the panel, as stated."

*Rigmarole* Braid thought. *They are trying to brush this off fast, and straight under the rug. Crazy. The press gallery will never stand for it!*

The press gallery weren't the only ones. As Miss Hudson rose, quite obviously all set to make her final address to the panel, Kessler slammed the table in front of him with a hammering hand.

"Now hold it!" he growled. "Hold it!" He reared to his feet. "Just everybody hold on a minute!" Miss Hudson turned to glare at him.

"You're out of order, Chief Kessler. Be quiet!"

"Out of order?" Kessler bawled. "This whole double-talk runaround of an inquiry is away out of order, if you ask me. No, I will not sit down! Dangerous pet animal, my eye! That cold-blooded skunk there"—he aimed a condemnatory finger at Taxul-Krull—"had a fine and beautiful Earth woman on his ship, a prisoner. Chained by the neck like a dog. That's one charge, a *real* one! And when she broke her chains at sight of fellow humans, and tried to escape to safety"—Kessler shifted his spearing finger dramatically—"that other skunk that calls himself a man shot her down. Rear Admiral Braid, I name you. I demand that you stand trial along with this . . . this Taxul-Krull." He spun around on Miss Hudson. "Those are the charges, Judge Advocate Hudson. Real

charges. And I can make them stick, too. Out of order, am I? We'll see just who is out of order here!"

For several minutes the inquiry room was a buzzing ferment of intrigue and outrage, of head-together comments and stirrings. Kessler had flopped back into his seat again, breathing hard. Miss Hudson remained standing, patiently waiting for quiet.

"This is completely out of order," she repeated, when she could be heard, "but since our appointed chairman has seen fit to introduce charges of his own, and since it is the declared purpose of this inquiry that concerned people shall be free to speak and be heard, I put it to the judges: Is it your wish that the new charges be heard and investigated at this time?"

Braid watched the judges craning and conferring, heard Stefan Roche as their spokesman declare in a shrill but determined voice: "We wish the charges to be properly investigated at this time." And he wondered inwardly. *What now?* Miss Hudson was too calm, too pat. She bowed, turned to Taxul-Krull.

"High Lord Taxul-Krull, I put the question direct to you. Have you at any time had aboard your ship, under restraint or otherwise, an Earth human?"

Taxul-Krull hissed affirmative, added, "Once only."

She looked surprised. "Will you name that person?"

The Haddag hissed again and said,

"The Rear Admiral Braid. Who came to my quarters to make complaint and to explain about Besh—"

"No, no!" she hushed him hurriedly. "Just the name. The other things can come later. For now, you so state that, apart from Rear Admiral Braid, no Earth human has ever been on board your ship at any time."

"I so state, yes."

"So much for your first charge, Chief Kessler." She turned to him and he growled but sat fast. One of his staff men rose, brisk and competent, to face the panel. "Charles Dunant, attorney attached to the Bureau of Police of this base. I will ask the defendant to stand to one side for a moment. I call Deckman Grabowski to the stand."

*Here we all go down the chute,* Braid mused, as the *Cassini* man avowed he was indeed Andres Grabowski, that the video-cassette handed to him was his, that it bore his mark, and that he had taken the material thereon. The lights dimmed as the tape was dropped into a projector and the picture came up on the far wall so that the learned counsel had to swivel to watch it. Braid felt foolish watching himself pounding ungracefully to intercept Gregory. Like a spavined camel, he judged, seeing the furious gestures, gasping, the unsubtle maneuvering to get past Gregory and block the gangway. Then the blur as the cameraman shifted and caught the new-

comer. There she was, going like a fury, broken chain glittering, golden hair streaming in the breeze. There *he* was, on one knee, firing. Dunant let it run to the last dark, semivisible image of the falling body into the gloom of the pit, then cut it and raised the lights. He faced the panel dramatically.

"Can there be any doubt, gentlemen?" He revolved to his witness. "Deckman Grabowski, in your opinion—"

"Objection!" Moore made his first contribution to the proceedings loud and firm, and Dunant hunched his shoulders.

"I'll rephrase it. Grabowski, did you see anything of the woman shown in that recording before—?"

"I'll object to that, too!" Moore cut him short. "Strike the word 'woman'. That is to assume what this charge is all about."

"That was a woman on that gangway!" Dunant snapped.

"That's your opinion, and is no more admissible here than is Grabowski's, and you know it."

"Are you trying to tell me I don't know a woman when I see one?"

"I'm telling you something you ought to know. That your opinion is not evidence. That you're not here to give evidence, but to get it and produce it. That's your job. So long as you keep asking for and trying to offer opinions instead of evidence, so long will I raise objections. That's my job." Moore was visibly enjoying himself.

Dunant breathed hard, achieved control, tried to be icily sarcastic. "You realize that you're committing yourself to produce evidence to the contrary, to prove that that was not a woman?"

"I do, and we will. Expert testimony. In due course."

Dunant stooped and conferred with Kessler, who was glowering. He came upright again to shrug and say, "In view of the complete irregularity of these proceedings we wish to suspend our line of questioning and allow you to go on with yours. Is that in order?"

"We'll accept it."

Miss Hudson rose briskly: "Deckman Grabowski, that machine of yours records sound as well as pictures. To the best of your knowledge, has it been edited?" On his assurance that it had not she went to the projector, the chamber lights dimmed again, and this time the place was full of sound. Vestigial hairs erected on Braid's spine at the recording of that baying scream, the insensate fury of it. The snapping of the chain, too, was very clearly audible. Miss Hudson cut off the display quickly at that point, checked with Grabowski that everything was as he remembered, and dismissed him.

She called Yeoman Gregory, and Braid watched him, bulky and indignant, take the stand and observe the formalities. She was very gentle with him, at first. "I will ask you to recall just one particular point, Yeoman"

man, that moment when you were looking past Rear Admiral Braid, when you saw the chain broken. You did see it happen, I believe?"

"That's right, I did. She just snapped that chain and came running . . ."

"A moment. Would you show me, in pantomime, just how? The break?"

Gregory hesitated a moment, then made exaggerated motions of seizing and pulling apart. She made him repeat them. She stepped to Moore and came back with a length of glittering chain in her hand, offered it to Gregory.

"A chain like this?"

"Objection!" Dunant complained. "The witness cannot possibly identify . . ."

"He is not being asked to identify," Miss Hudson retorted. "Just to say whether or not it is similar. I can bring expert testimony, if required, that this is in fact the same chain. Close inspection will reveal that every link is engraved with the Haddag ship-symbol. It is a dress-chain, and valuable. All that can be proved, if you want it. What I want from Yeoman Gregory is something quite different. Yeoman, you're a big man. Strong above average, would you say? Let's see you break this chain in the manner described!"

Gregory tried and failed. She offered the test to Kessler, easily the biggest and strongest man present, but he wouldn't be drawn.

Dunant argued. "This is irrele-

vant," he declared. "It is a well-attested fact that a person can have abnormal strength under extreme emotional upset."

"Quite so," she agreed swiftly. "Thank you. That is a very important point. Extreme emotional upset indeed."

Consar Danus bobbed up now. "It was to have been a point for us, too," he stated. "The High Lord has maintained throughout that none of this would have happened had not the creature in question been under extreme provocation."

"Of course she was!"

Dunant was on his feet, shouting. "She saw some fellow humans, and the hope of rescue from bestial captivity—"

"And so"—Miss Hudson raised her voice to cut him,—"she screamed like an animal, snapped her chain with superhuman strength, and ran furiously towards the two men who were, for all she knew, discussing ways and means of securing her freedom? Are we not merely exchanging opinions again, Attorney Dunant? The creature was indeed under extreme provocation, as we will now show, but not the kind you mean. You can step down, Yeoman. I call Professor Stefan Roche to the stand."

Now there really was a buzz as the little bald head bobbed up from the judges' panel and trotted across the floor. Braid watched Kessler, saw him go crimson and furious as he

reared up and hammered the table.

"Hold on there a minute!" he roared. "You can't do that. He's one of the judges, damn it!"

"To ensure that all official persons here present shall be allowed to speak and be heard." Miss Hudson quoted at him. "You undertook that in your opening address, Chief Kessler." Dunant rose, fumed for a moment or two, then sat again. She smiled on him then welcomed Roche, extracted patiently from him his identity and qualifications, and made a final point following his biological qualifications. "In addition to your scientific standing, Professor, it is also true, is it not, that you were intimately involved in the precise terms of the trade treaty between Terra and the Haddag Federation?"

"That is so. There were biological considerations to think of."

"Quite so. Now, you saw the visual replay just now, and heard it. In your own mind is there any doubt whatever that what you saw was indeed a pet animal, an akkan?"

"No doubt whatever. A very fine specimen."

"And can you tell us, briefly . . . to save my learned opponent asking the same question . . . briefly, *how* do you know that?"

"Not briefly, no. I can mention points, but to back them up would take a deal of time." Roche smoothed a palm over his baldness. "Points. The scream is very characteristic. The abnormal strength, by our standards. The attack behavior.

The circumstances, too, of course. Chain, trappings, the Haddag ship. And other things. You want more?"

"Not now. My next question is crucial, and I want you to be as precise as possible. In your opinion, what caused the extreme emotional upset that has been quoted and adduced?"

Again Roche palmed his head. "No doubt about that, either, but it will take some background. The akkan are seasonal animals. By that I mean that the female comes on heat at a certain time of year, for about five-six weeks. And only at that time will she entertain the male. At all other times the two sexes avoid each other, keep their own territories. If, as sometimes happens, a male comes too near a female out of season, he is driven off. If, as happens very rarely indeed, a male gets his chemistry mixed up and approaches a female with mating intentions in mind . . . out of season . . . she will attack and destroy him, or try to."

*Here it comes!* Braid sighed mentally as several factions arose loudly and angrily to dispute this. Kessler bellowing, Dunant trying to be heard over him, and Consar Danus looking for an opening to insert his comments. In the middle of it all, little Stefan Roche stood quite patiently with Miss Hudson, his eyes darting from one to another in great interest.

Dunant finally won the floor, and chose his words with heat and care, aiming them at Roche. "If I understand you, sir," he said, "this is both



obscene and absolutely ridiculous. How can you possibly maintain that Yeoman Gregory, or Deckman Grabowski, or indeed any other man present at that tragic scene . . . made sexual advances to that unfortunate woman?"

Consar Danus had his turn. "We are with Earth counsel in this," he said. "It is incredible. Impossible! It does not happen!"

Roche was unmoved. He looked to Miss Hudson. "Can I ask him a question? And the High Lord, through him? I could ask direct, but I gather this has to be in Angelic. Right?" He eyed Consar Danus. "Ask the High Lord . . . has he ever had anything to do with akkan in the wild? Has he tried breeding them? Does he know anything about them from a professional point of view? Or does he just keep one or two as pets?"

The reply made all Roche's points for him perfectly. Taxul-Krull was not a professional person at all, knew nothing about akkan apart from their pet quality and their cost, and a little about their upkeep.

"That's it," Roche turned his gaze on Dunant and Kessler. "They don't know a great deal more about akkan than you do. I've studied them. I didn't say anybody made any sexual advances to any woman. I do say that akkan and human have a lot in common—body structure, chemistry . . . and sweat glands. We are 'seasonal' all the year around. I'm telling you that the air around that ship,

thin as it was, was loaded with the scent of healthy young males, from the ship nearby, the *Cassini*. External chemical secretions, signals . . . pheromones. That alone was enough to upset any female akkan. That, plus the sight, and the undoubted subtle change in the pheromone signals once those men sighted what was to them a fine and attractive young woman . . . was quite enough to produce all the behavior we saw on that record."

Miss Hudson got in fast. "You knew this, of course, from your studies. And it was for that reason, and others, that you were one of the parties instrumental in framing the particular provisions of the trade treaty already mentioned between Terra and the Haddag Federation. Not just simply to avoid face-to-face confrontation, but to avoid incidents similar to what we have just seen."

"That is so. As you saw, a healthy female akkan is extremely powerful, and would undoubtedly have done considerable harm had it not been—"

"I'll object to that!" Kessler belated, and Miss Hudson raised her hand.

"You mustn't try to tell us what might have been, Professor. Just one more question, for the moment. You've established that this particular area of knowledge is not common. Indeed, it has obviously come as a surprise to the members of the Haddag here present. Which must be allowed to count in favor of their claim that they were ignorant, una-

ware of creating any dangerous kind of situation. Would you confirm that, that it is credible that such a state of ignorance could exist?"

"Yes, indeed. I have previous experience of it, during the researches I was able to perform on their home planet, immediately prior to the treaty discussions. This is specialist knowledge."

"I see. Then my question follows. Is there any other person here present whom you could expect to be familiar with this particular information?"

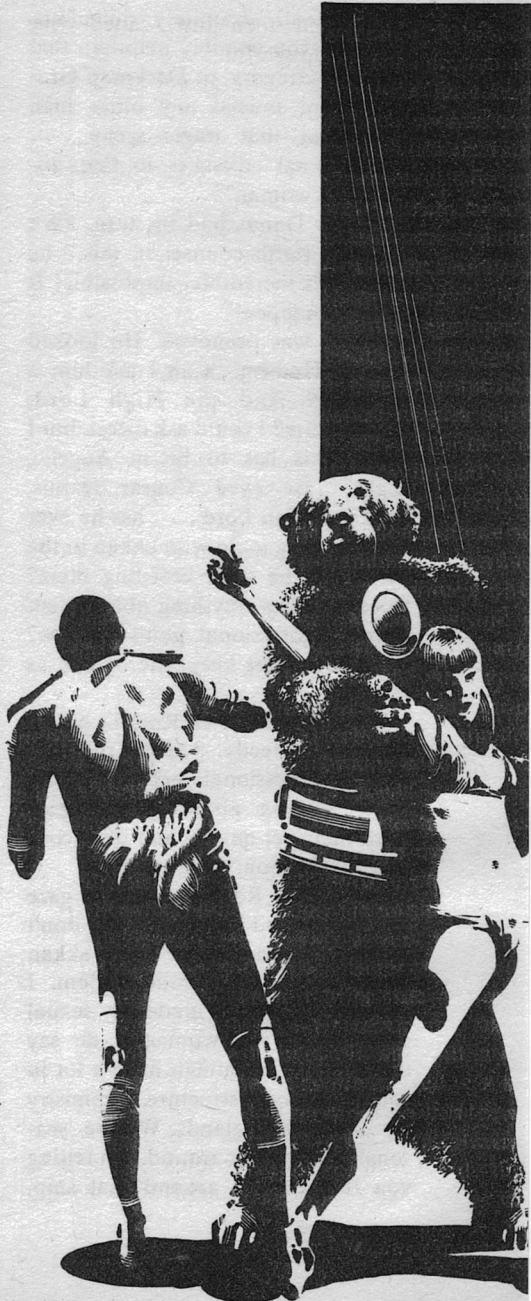
"Yes indeed!" Roche got it in quickly, before Dunant could catch him. "I can name him. Rear Admiral Jack Braid knows the akkan phenomenon every bit as well as I do!"

Miss Hudson smiled. "Thank you." She turned to Dunant. "Your witness."

Dunant was completely stopped. Braid, watching, felt sympathy for him, waited for him to gather his scattered resources. To have Kessler grumbling at him didn't help. At last he said, abruptly, "No questions, Professor Roche. We reserve the right to recall you later if necessary."

Roche bobbed, went away, and Miss Hudson rose. "I call Rear Admiral Braid to the stand."

It was a long walk, and a dreary one. The fat was well and truly in the fire now and there was no way of rescuing it. Braid felt empty as he stood, recited the routine details, wondering what was going on in her



mind, and then just waited. She looked thoughtful.

"We can make this brief," she began, "by assuming certain things. We can get from other witnesses exactly what you did, your urgency on learning that a Haddag ship was present, and what you did subsequently. I will ask you now . . . why were you so keen to place yourself between Yeoman Gregory and the gangway, to obstruct him."

"I tried calling him. It didn't work. I had to let him see me, to hope that my uniform and authority might stop him. And . . . I'm an old man. I don't have that kind of smell any more—which might have made a difference. It was worth trying, so I did it."

"So you deliberately turned your back on what you knew to be a very dangerous animal in a state of frenzy. But then, as we saw, you turned and shot, deliberately to kill, once the animal was free. Will you say why?"

"Because there wasn't any other way. I've been chased by those things, mauled by them, damned near killed by them. I know what they can do. I knew what would surely happen to Gregory . . . and others. I had to stop that."

There came an immediate and furious objection from Kessler, who stood despite Dunant's efforts to hold him down. "I challenge that!" he roared. "Braid is trying to tell us that one defenseless, unarmed, naked woman would have been a

physical threat to Gregory, or Grabowski, or my dock police, that there was nothing else to be done but to shoot her down like a dog! And I challenge that. I submit that Braid is suffering from some personal experience in his past. That he lost his head, in panic, or fear—"

Braid sighed as Dunant managed to draw Kessler down and silence him. "I don't blame you," he said. "The only way you'd ever be convinced would be for it to happen to you, and I wouldn't wish that on anybody."

"The point is taken," Miss Hudson broke in swiftly. "The question of credibility is very important, and was foreseen. We are grateful to the High Lord Taxul Taxul-Krull for a measure of co-operation in this instance. The animal in question was one of a matched pair. I now wish to present in evidence, the other one. Bring it on, please!"

Braid chilled, half-turned to stare as a Haddag crewman appeared from a curtained recess, leading by a chain a carbon copy of the creature so recently seen in the visual replay. There were the same jeweled trappings, the same broad neck-collar and chain, and, when the scarlet velvet-stuff hood had been dragged clear, there was the same daffodil-yellow hair, the same jewel-green eyes, now narrowed and blinking against the sudden glare. The classic features were momentarily still in blank surprise, then suddenly alert, the eyes widening and taking on a

feral glow, darting from side to side, that honey-tanned supple body tensing and gathering as if to spring. The immediate aura of explosive violence was shocking in itself. Braid saw the way the head came up, nostrils flaring, the way those emerald eyes locked on the three men at the table, Kessler, and Dunant, and Moore. He saw that they were as paralyzed as he was at the apparition. It was a moment to burst the nerves.

Then came that baying scream and a sudden, savage lunge forward, making the Haddag attendant stagger and strain to hold back. The painful jerk at the neck, another scream and lunge, hands out and clawed ready—the clink and creak of the chain, snorting fury. Kessler half-risen, eyes popping. Braid wanted to shout but his throat was sand-dry. The Haddag man hauled in on the chain. The yellow-haired fury snarled, drew back, seized the glittering links . . . it was done in a flash . . . the brittle crack of a broken link . . . the pouncing fury hurled itself straight at Kessler.

In the same second one of the Thropan judges launched his gigantic ursinoid bulk over the enclosure wall, came catlike on his feet and grabbed, powerfully and efficiently, his eight-foot bulk swaying as he dragged the akkan bodily off Kessler and held it helpless but screeching. Everybody else seemed to wake up and get into the fray after that, and for several moments there was mill-

ing confusion and uproar, out of which the akkan emerged once again hooded, and securely restrained hand and foot by donated strips of white-leather harness from the Thropan.

Braid was able to breathe again, shivering and damp with sweat all over. He looked to Anna Hudson, who hadn't moved an inch in all of it, shook his head, shifted his stare to Kessler. The police chief was slumped in his chair, his face gray where it wasn't scarlet with ooze from flashing nails. Braid felt for him. "Believe me now?" he demanded. But Kessler was beyond words, his eyes glazed on the still-plunging akkan. Braid turned back to Miss Hudson. "You realize what you've done, don't you? Look at the shock here"—he gestured to Dunant and Moore, further around to the press gallery—"and ask yourself what happens when the news gets back to Earth. We haven't just lost the Haddag trade, we will be damned lucky if some hot-heads don't start up a war of liberation! And for what? All that, to save my skin?"

"Now don't you worry," she patted his hand and smiled gently. "You go and sit. In a moment I'll get Professor Roche to give us a little lecture on the anatomical differences, just to give the others time to adjust. Then we will let Taxul-Krull off with a different kind of lecture and a reprimand, and it will be all over. And it's going to be all right. You'll go back to your quarters and wait for me. I

think I may have a little surprise, or two, for you."

Sure enough, through the fatigue that swamped him, Braid saw it all happen just as she had predicted. And then he was driven back to his rooms, to wait, and wonder, and despair. No matter how smart Anna Hudson was, she couldn't stop the recoil that was bound to happen. Or his dismissal, and return to Earth. She wasn't that smart. Nobody was. But, when she did join him, almost an hour later, she looked pleased with herself.

"It went off very well. Our High Lord took his reprimand like the gentleman he is. As you say, they're nice people. And Chief Kessler is absolutely converted. In fact he and Taxul-Krull are cosignatories with a lot more for an order of commendation, for you, for your prompt and efficient action in averting a major disaster."

"A commendation? For me?"

"Which you earned, and I suggested. Also, this evening, you and I are invited to a special thank-you dinner as guests of Taxul-Krull—"

"I don't want any thank-you dinner!" he interrupted hurriedly. "All that fuss! What about the pressmen? What's going to happen when this story breaks back on Earth?"

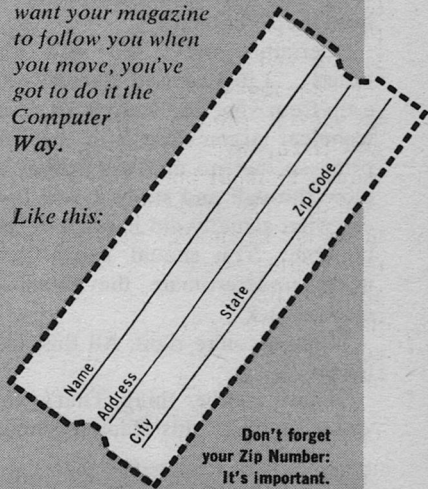
"Ah!" she murmured, and looked even more pleased with herself. "Some of them were press, yes. The best. The responsible, clever ones. Hand-picked, by me. I invited them.

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I also invited the others, who were the business representatives of all the major pharmaceutical and medical chain enterprises on Earth. The top men. I had a little talk with them, afterwards, pointing out what they already knew, reminding them just what could happen if this affair was played up the wrong way. All the medical supplies, materials, drugs . . . and know-how . . . that we would lose. The subsequent misery. And the enormous financial losses. I think they got the message."

"You mean"—Braid gawked at her—"that you've advised them to hush it up? Sit on it?"

"Certainly not!" she said virtuously. "I just advised them to take a tip from you, and wrap it all up in technical jargon, lose it in the fine print, so that no one will bother to plow through and study it and find out what actually did happen. It can be done. You should know. And never underestimate the financial motive, Jack."

"I hope you're right. All this, just for me?"

"That's another thing. That's why you're going to this Haddag dinner

tonight, with me. You'll have to educate me on the ceremonial—"

"I'm too old for that kind of nonsense!" he protested.

"Old? You're not old. Except in the head," she snorted.

"Sixty-one next time around!"

"So?" she challenged. "I shall be fifty-nine in two months myself. I think you've been in this quiet little backwater a bit too long. You, of all people, seem to have missed out on all the advances we've made with Haddag aid. But you're going to find out. The Haddag medical officer will be there tonight, and he is going to give you a thorough check-over and some advice."

"Just what are you up to?" he wondered, and she smiled.

"There's a project to establish a local office of Interstellar Law, right here. I shall be in charge. I hope to be seeing a lot of you, Jack."

"Now you're going a bit too fast for me."

"You mean my pheromones are showing?" She chuckled easily. "Don't be upset. You don't have to be afraid of me. I'm civilized. And human!" ■

## *The Analytical Laboratory June 1971*

PLACE	TITLE	AUTHOR	POINTS
1.	The Outposter (Pt. 2)	Gordon R. Dickson	2.12
2.	With Friends Like These	Alan Dean Foster	2.75
3.	Glory Day	James H. Schmitz	3.10
4.	The Habitat Manager	S. Kye Boulton	3.12
5.	The Swan Song of Dame Horse	Ted Thomas	3.78

# to make a new Neanderthal

Of this proposition I can only say that recent studies have shown that pasture grass grows best when there's adequate sulfur dioxide in the air. So . . .

W. MACFARLANE

Guert Maury wiped off the last bumper and carefully applied a yellow and black sticker: BAN CARS. He dropped the rag on the parking lot and lit another cigarette.

The long search was over. He had found his quarry, David Langley Noss, a brilliant youngster with a paranoid drive to a "normal" life. He sighed. Aberrations crop up in the best genetic lines. The subversion of your brain was the recurring pattern of unreason in the history of man.

A car turned off the highway and headlights washed the side of the restaurant. Maury stepped over the berm and down the slope out of sight. The car parked, the door slammed, and there was a grumble of conversation about being late for the S.O.S. meeting.

The seductive quality of the long Pacific waves creaming over the rocks, the languid cast of the moon through thin fog, the faint spice scent of geraniums that had escaped cultivation mingled with the pungency of native anise, all these assaults on the senses made it understandable enough that an ill-anchored young man like Noss should drift from reality like a grasshopper caught in a flooded gutter.

Maury coughed quietly and stepped on the butt. He took the magnetic impulse key from his pocket and the door of his own vehicle materialized. When he closed it behind him, he shut away the whole whey-thin atmosphere of the California coast. In the control room he listened a moment at the selective pickup keyed to Noss. “. . . And be my love / And we will all the pleasures prove / That hills and valleys, dale and field / And all the craggy mountains yield . . .” Evidently the first speaker had finished and Noss had the girl off in a corner somewhere, pouring her ear full of Kit Marlowe.

Guert Maury grinned and spoke Raleigh's reply aloud: “. . . Soon break, soon wither, soon forgotten / In folly ripe, in reason rotten.” He adjusted the pickup and heard her reply, “Oh, David.”

Her name was Lunetta Drogen and she was dressed like a gypsy fortune teller in a long skirt, a wild blouse, a jacket with mirrors and bangles and spangles, and a psychedelic fringed shawl over her shoulders. She was the daughter of a road contractor in Pontiac, Michigan. She had turned her back on such grossnesses as a fourteen-room home, a domed swimming pool and her yellow Cadillac convertible. She had a tender intelligence and was given to blinking back tears—which made her spiritual eyes lustrous—when she mourned over thin-shelled

seagull eggs and the plight of the California condor.

Maury thought she was an admirable mate for David Noss. They deserved each other. He adjusted the pickup again and listened to the principal speaker: “. . . We are very close to the point of no return on insecticides, oil and nuclear contamination. Pollution is changing the face of Nature from benignity to rheumy-eyed horror . . .” Maury had heard all this before, but he listened with mild interest to the provocative call to arms. He made a mental note to order more STRIKE A BLOW FOR PEACE bumper stickers when he returned from this mission.

The People's behavioralist had advised, “Toleration of lunacy is emasculating. The appearance of toleration is tolerable only when psychological oil can be applied to reduce internal friction. Such action should be personal implimentation of our cause—and oblique to it. On a totally different level than I recommend for personal stability, was the elegant use of detergents by our English colleagues at the time of the Torrey Canyon oil spill. Between the two, significant action was achieved.”

Maury endorsed the idea. His use of bumper stickers was adroit and double pointed. The car that had arrived late should not be neglected. He turned the audio back to soundless recording and returned through the lock to the Pacific coast south of



Half Moon Bay. He climbed through the low acacias to the parking lot and found the rag where he'd left it. He wiped a bumper clean and smoothed on HATE FUZZ? IN TROUBLE? CALL A HIPPIE!

He sat in the acacias out of sight and lit a cigarette. He took the repeater from his pocket and checked the S.O.S. speaker of the evening. The voice was high and indignant. He should be good for some time yet. Maury stared unseeing at the ocean and considered his preparations. Noss could not escape him now.

He had slipped away from Los Angeles over two years ago and disappeared. He had hidden in the San Fernando valley and found work at a gasoline station. This was clear evidence of his intelligence. The usual tocsin had been sounded and search patterns instituted in rural areas of the west. No sign of him. After six months he had taken equivalency examinations and enrolled at San Jose State, four hundred miles north in another smudge area. He had found work in a plastics plant, which was also first-class camouflage. He had been located among the teeming millions only because Guert Maury had persevered in his computerized membership and subscription lists; the Audubon Society, the Sierra Club, Portola Institute, Environment magazine—habits of mind do not change. Of course Noss had adopted another name, but the temptation to proselytize and associate with his

own reactionary kind had turned him up.

Self-congratulation is an idle pleasure. Maury lit another cigarette. Were there any terminal spasms he had not anticipated? Noss and the girl had come to the meeting in a blue Volkswagen. Maury had put a homing button on it, not that it was necessary. He had fixed a distant release gas tube with a magnetic clamp under the dash, and that might be useful.

There was a patter of applause and a scraping of chairs as the Save Our Shores meeting came to an end. A door opened and Noss slipped out with his inamorata. The noisy little Volkswagen started and off they went, south toward Santa Cruz on California 1. Maury was in no hurry. He took his own vehicle into the air above them and monitored the conversation. It was trivial until Noss pulled off the highway to an observation point overlooking the ocean.

"Loo, I can't hide the truth any longer. I'm a fugitive. I've been hiding for thirty months now, hiding from the most dangerous conspiracy mankind has ever known." His voice was thick with sincerity. "It's nothing as honest as robbing banks, or moral as pushing pornography."

She made a sympathetic noise. "Gosh, David, what is it?" The tone of her voice said she could care less, now that he was secure in her arms.

"I was raised in Los Angeles—" he began, and she laughed softly. "Pay attention. Don't do that. This is

serious. I grew up in Los Angeles, but my parents came from Pittsburgh and my grandparents from London."

"Horrible," she said, but she was teasing.

"Now listen, Loo, this is important. I was born into a society that calls itself the People. It's a secret cabal behind a smokescreen of science. I mean smokescreen, too. They are the polluters, they're the ones behind the nuclear explosions and the atomic power plants. They pushed hard insecticides and put money into the internal combustion engine instead of steam, and before that, they made synthetic nitrogen in Germany. They're responsible for ammonium sulfate, and that's where our troubles began."

"Oh Dave, can't this wait till later?"

"I've got to warn you. First, they increased the world's food supply with artificial chemicals, and they are the secret intrigue behind the health services, which is the most subtle and deadly weapon in their arsenal. Feed the people, wipe out the good natural diseases, bring in health and you have the ultimate pollution!"

Maury brought his vehicle down by a clump of windbent pines. In a way, it was a pity about the boy. Very few men had the historical perspective to see what happened. Young Noss had somehow discovered the benchmarks from which

the future had been planned and was now being constructed. It was remarkable intuition.

"The People call it phlogiston," Noss continued doggedly. "Loo, are you listening? Phlogiston is supposed to be an imaginary chemical, but the People say that the incredibly complex products of combustion are responsible for mankind's fantastic mutation. In the short space of a million years, the brain capacity has enlarged from 400 to 1,500 ccs. This is unique. It's unparalleled in any species. Man alone has used fire and phlogiston has mutated man."

"Does all this matter, David dear?"

"Yes! They're consciously manipulating mankind! They're polluting the earth, the sea, the atmosphere—and I'll tell you why: to stimulate the acid, prostaglandin and 5-hydroxytryptamine, and all the other chemical thought transmitters in the brain. It's no wonder that the industrial revolution began in England. Germany tried to compete, but could never manufacture enough smog. Look at Tokyo and all of Japan! And Loo, I trace my line to contemporary smog capitals: London, Pittsburgh, Los Angeles! So they clean up London, and England is down the tube! This is why I've been running, Loo. The People have got to be stopped—and if you come with me, you will share the deadly peril!"

"Hold me tight," said Loo.

Guert Maury made a move toward the controls. A pair of head-

lights appeared around a curve of the highway and the car slowed and pulled onto the observation point. Maury leaned back in his chair. He listened to the heavy breathing from the Volks.

He spoke for the record: "It should be noted that David Langley Noss is an excellent example of a conservative. He's a textbook case of the ancient mystique of mankind: it won't work, it can't be done, let's cry over spilt milk, keep the status quo. He also exemplifies the use of articulate verbiage to hold back change. He represents the inertia and stubborn resistance of outmoded thought systems. The majority of men will only shriek outrage and

bellow indignation as they are forced backwards into the future, but such individuals as Noss will fight blindly to protect the past and stifle progress—"

"You were joking with me?" said Loo. "About the conspiracy and all—you were, weren't you darling? It's not true. . . ."

"It's worse than I said. Look at the intellectual centers of this country. Harvard and MIT are rotten polluted. Cal Tech is in Pasadena and you can see the smog at 9,000 feet with the naked eye. Stanford is on the peninsula between industrial San Jose and industrial San Francisco. Cars in Berkeley are so thick that twenty percent have to keep moving

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## in times to come

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*We don't hear from John Phillifent very often, but when we do, it's usually good. Next month his two-part novel, "Hierarchies" leads off. It concerns two security agents who have, officially, been employed by the Royal Princess of Khandalar to escort her pet sorki quasi-doglike creature—in safety on its journey from Khandalar to Earth. Officially, that's what the two agents are doing—but it doesn't quite account for the massed, repeated, fanatic attacks made. . . .*

*There is, of course, that old superstition about the Stones of Khalandar, the "magic jewels" that the Royal family own, relics of an ancient, lost civilization, that are—according to ancient legend—able to control minds.*

*And just sometimes superstitions are not silly nonsense!*

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THE EDITOR

on the roads for lack of parking.”

“You could ban cars,” said Loo hopefully.

Maury nodded approvingly. He had designed his bumper stickers to be paradoxical, to derail uncritical minds. A primary maxim of war is to confuse the enemy and then compound confusion.

Noss snorted. “You might as well hear the worst of it. Phlogiston was so increased by the second world war that mentation . . . that’s what the People call it—cerebration—the mental process . . . increased in a vertical curve. Looloo, they have monopolized research and kept development secret. They are dedicated to smogiforming Earth.”

“The brown pelicans,” she mourned, “the sick fish.”

“They want the whole world a brown ball for the mentation of man,” said David Noss bitterly.

The other car pulled out of the viewpoint. Maury waited no longer. In his present hysterical state, his quarry might do any foolish thing. He released the somnambulant gas in the Volkswagen. The voices stopped.

Maury checked the area. Infrared showed an owl, mice and a bunch of rabbits. He lifted his vehicle down beside the little blue car. He carried Noss and Lunetta Drogen aboard ship into the phlogiston-rich atmosphere. He returned to the control room and grappled the Volks magnetically. He ran it through the

guard rail and cut loose. It bumped downhill and plunged over the cliff into the surf and rocks.

He phased the spaceship to detection transparent and at ten diameters from Earth went into Gonzalan space. There was no racial bias among the People and there were generations of Mexicans in Los Angeles.

Forty-two hours later, Maury put the ship down on a pristine planet of a sun so far from Earth it had never been catalogued by astronomers. He helped the youngsters out and let them lie down under a fern. He lit a cigarette.

“No pollution,” he told the groggy couple. “We’ve brought other fanatical conservatives here and you’ll find them. The gravity is Earthlike but the diameter of this planet is fourteen thousand miles. No nasty heavy metals. The vegetation’s built like a banana tree. No wood. It’ll be a little difficult polluting this place.”

“Immoral force! Coercion!” whispered Noss.

“You are getting what you want, fresh air forever. Maybe your descendants will be a superior breed of silky-hair monkeys. No phlogiston.” He coughed gently. “The People are not passionate shepherds, nor can we foresee the future. Control your own experiment. Here is your Eden. See what you can make of it.”

Guert Maury stepped on the cigarette butt. He climbed back into the ship and left for wonderfully contaminated, richly polluted Earth. ■



Kelly Freas

One of the fundamental facts of reality  
is one people ardently wish to deny—  
the Universe is always full of risk!

JACK WODHAMS

# *knight arrant*

Mongoll adjusted his black eye patch. "For over seventy years they've been sitting snugly under the protection of the Commission, eh?" Again he viewed the globe that was imperceptibly growing. "It will be as easy as taking a leave-pass from a rookie." Mongoll turned away from the screen. "They won't know what hit them."

The gleam in Mongoll's eye, the way his teeth showed through his straggling moustache, and his large hairy hands rubbing together in anticipation—these things sent a shiver of doubt through Glanse. Glanse ran a finger under his own cuff. He wore an officer's uniform of color and medieval cut similar, but much quieter than Mongoll's. "If everything goes according to plan . . ."

Mongoll's laugh was a bray. "These people are not organized, are they? Nothing should go wrong if the location markers have been accurately placed by our FAX boys."

Mongoll stepped to fastidiously re-admire his appearance in the tall mirror. He flicked, but was evidently satisfied with the scarlet-trimmed black velvet of his ensemble. The puffed and ruffled cloth made him look even bigger than he was. He stamped his Cossack boots. "The sweetest planet ever found. No animal or organism bred tough enough to do battle with the sophisticated defense capability of a human constitution. They've had it easy."

"They stand helpless before the first willing to take."

"Cozy and safe, they think." Mongoll's one eye bulged, returned to the screen. "New Eden, bah! We'll make them jump, Mr. Glanse, eh?" And gaining very real pleasure from the thought he said, "We'll surprise the life out of 'em."

Glanse could see that Mongoll was almost gloating. His use of title, his absorption in this coming enterprise, yes, Mongoll looked very much as though he meant business, *real* business. "But if there *is* any resistance," Glanse said, "then . . ."

Mongoll snorted. "A million settlers, mostly in and around the three main so-called cities, they rely entirely upon the SOC to keep them free from interference, no? And we know that they have a Tricourt Link hidden there somewhere." When he grinned, Mongoll reminded Glanse of a reincarnated Attila the Hun.

"Our handful, Captain, is to be as an iron fist that will sink deep into this invitingly exposed soft belly. But there must be no mistakes in aim and purpose. Re-check fleet stations, and run the final test of confirmation to ensure that all ranks are absolutely, but *absolutely*, certain of their targets and duties."

Mongoll critically studied the exactitude of his high collar and head covering. He folded back the wings of his hood, that the shine of his shaven skull might lend emphasis to his solitary eye. "If there are any foul-ups, blunders, stupidity, weakness—I'll have the blood of the men responsible."

Glanse acknowledged the fearsome threat. "Very good. I shall see that the men are so informed." Mongoll had formidably intimidating presence. Glanse saluted and bowed. "If you will excuse me, *Most Mighty*, the time draws near. . . ."

Mongoll spread his lips in a leer most distasteful. "But, of course, Mr. Glanse. . . ."

While yet a thousand meters above the human-habitated area of the planet New Eden, Mongoll's ten armed transports, black, scarlet-scribed, disgorged their assault fliers, twenty-man contingents to seize key installations. With stupefying suddenness Mongoll's advance guard fell upon New Eden's three cities, thirty carriers dividing evenly and with precision to strategically spread a scant six hundred men to best advantage.

These were the troops of Mongoll the Mighty, and they were as an apparition appeared, utterly startling. The New Edenites were stunned. A living flesh-and-blood marauder? It was unthinkable. It had to be fiction, surely? And those mild, comfortable locals directly met could not comprehend the orders they were given, could not quickly grasp the significance of what they saw happening before their eyes.

Into New Eden's quiet and peaceful existence sprang the inconceivable—harshness and brutality, and the loud hard voices of men in black

whose grotesque headgear accentuated their hirsute faces, the hunger and rapine in their eyes. The sheltered New Edenites were unaccustomed to such visitors and were ill-equipped to retaliate. And their adjustment to such radical infliction was painfully slow.

Mongoll's take-over was accomplished ahead of schedule. Nowhere did his men meet resistance, and only in contempt could they find excuse for using their canes and their jolters.

Aircars patrolled the cities and through loudhailers emphasized the orders being given over other communications channels—at a certain hour everybody was to be indoors and watching their screens.

With ample time in hand, Mongoll was pleased to dawdle at the studio, and to be over thirty minutes late in making his announced broadcast.

First the viewers were shown their stupefied High Chancellor. This dazed leader was chained to the other chief dignitaries of his government. All were in states of incomplete dress that testified to the peremptory nature of their swift dawn arrest. When at last he replaced the slogan chanters and the martial thundering of his personal anthem, Mongoll's grim visage brought scant respite from suspense.

"New Eden scum, you will listen to me and to what I have to say." The one eye glowered out at them,

the iris a clear dark circle of malevolence. "We have come for the Tricourt Link. Do you understand? We know that the section is somewhere here. We know! And you shall not continue to keep it concealed from us!"

Mongoll was irritated and barely able to keep his anger in check. He turned, and his itching fingers reached to grasp the Chancellor by his pajama front, his powerful arm to shake the shorter, thicker man and make his teeth clash. "Where is it?"

"I don't know!" the Chancellor bawled. "I don't know! It's not here! It's not! It's not!"

"Liar!" Mongoll hurled the man from him to cannon into his fellows, to have the whole string lurching to counteract his violence. "I will not be cheated, do you hear me?" He turned to blaze at his unseen audience. "This Tricourt Link is here! This I know!" His voice lowered to a deadly hiss. "This part shall be ours, and I do not intend to leave here until we have it. If you people persist in withholding its whereabouts from me, then," he bit out the words, "you shall be made to regret your stubbornness."

Mongoll gave a curt signal, and the scene abruptly switched for an aide to make a tightly smiling invitation.

"Anyone who knows where the Tricourt Link part is hidden, and gives us the information that will lead to its recovery, will be well rewarded—you may name your own

price." The promise was as silky as the pointed beard of the man who made it. "The Lord Mongoll can be generous to those who cooperate—as he may be forced to deal very severely with those who would be so foolish as to try and oppose him. Do not be afraid to come forward. The Lord Mongoll can protect even as he can destroy."

Again the scene switched, now to an officer, who started yelling out instructions from a list that he held in his hand.

"New Eden people! You will gather up what valuables you possess—jewelry, precious metals, cryolware, minicks, objects of art—and you will take them to collection points set up in the Grand Parks. You will take everything of the highest value, do you understand? You will take these goods, and yourselves, and your families, and you will assemble in the Grand Parks as you will be directed.

"Now get moving, all of you! At once! In thirty minutes from now we shall start firing your houses, and anything left behind will be destroyed. Move! Laggards will be shot or burnt."

The people of New Eden spun, not quite knowing which way to turn. Panic started them running. Soon they filled the streets, obeying orders, heading for the Grand Parks.

"Sheep." Mongoll stood on the platform of his flier and overlooked Blisscity, Grand Park. With him he



had three eminent prisoners. It was early yet. On his high perch, in his flowing black robes flecked with scarlet, and now deeply hooded, Mongoll looked, to those below, to be a towering figure of retribution, the very embodiment of an angel of death.

Leisurely his flier passed low over the accumulating throng. Mongoll spat at the upturned faces. "Sheep," he repeated. "Listen to them. To be related to such kind by physical configuration turns my stomach." He flicked a finger at the pilot. "Return me to the cote."

Mongoll stepped down, took his opulent seat to face his unwilling guests. "Gutless." His features writhed with distaste. "You make me ashamed to belong to such a species."

"We are not a warlike people, we only . . ."

"Silence!" Mongoll's nostrils flared. "How dare you address me without permission! Hold your tongues!"

"But what have we done?" one wailed hopelessly. "What do you want from us? What is it that you want us to do?"

Mongoll stared at him with unnerving fixity. His lip curled. "High Chancellor of New Eden." He jeered into the man's face. "You can do nothing for me," he said scornfully. "I wouldn't even begin to think of treating with you, you stupid, obstinate crud, if it were not for the Tricourt Link."

"But we know nothing of this Tricourt Link!" the Chancellor howled, "nothing, I swear! It is not here. We live in peace. We have no . . ."

"Silence!" Mongoll roared, as the guard's corrective baton fell across the luckless man's shoulders. "You lie, you lie to me! You all lie! It is here—this I know! And we shall find out where if I have to grind you all through a mincer to get to the truth."

The Chancellor averted his eyes from this satanic monster, in hope thereby to avoid further arousing this poorly-understood despoiler. What could he say that might appease him? The Tricourt Link? It was insane.

Mongoll sat back, his one eye glittering. "Anything that the Lord Mongoll might want from such as you—he will get. You are so far my inferiors that you should feel honored if I condescend to heap curses upon your heads. Do you hear me?"

His abject victims, eyes to the floor, could only nod their heads.

For the Chancellor it was a nightmare. He had never known such callous handling, such painfully barbaric treatment. It was akin to some of the exaggerated tales in human history, read or heard about, of the raiders of early civilizations. But not these days. The culture was so advanced. This sort of thing could not happen today. It could not really be happening.

It was unthinkable. What thoughts the Chancellor could muster were

merely "Why?" and "What for?"—and his incapacity to apprehend left him with whirling blankness. It was so unreasonable, so unnecessary, so . . . so unhuman . . .

Things had gone so well, opposition had been so negligible, that Mongoll had to revise his plans beyond his previous most optimistic estimate. With a thousand men he had taken three cities, had in one bold stroke taken command of the destiny of one million people. But what people. Mongoll's face reflected his disdain. And his aggravation.

It was still only mid-morning. He stood before the Chancellor's reception table. In front of him had been brought the leading personages of New Eden, one hundred and one. All had spent wretched breakfastless hours, singled out, manhandled, unheeded in their anxious questionings of fate.

Mongoll stalked before them. "Well, *gentlemen*," his voice was a caustic sneer, "have you thought the better of keeping silent?"

They shuffled unhappily, not one wishing to be spokesman. Mongoll's hand shot out to seize one by the collar. "You! Who are you?"

The man gulped. He was large and heavy, but Mongoll's steely fingers held him on tippy-toes. "Me? I'm . . . I'm Shalforth, M . . . Minister of Recreation."

"Recreation? Hah!" Mongoll shoved the man away from him,

hard. "You're all too fat. What games do you play, hah?" And getting no immediate reply he snapped, "Answer me!"

Shalforth flinched. "B . . . Bowls we play, mostly, and . . . and some golf. And bridge, of course. There are over twenty-four clubs in the League, and they . . ."

"Bridge?" The eyebrow over the single eye arched in terrible incredulity. "Bridge, by God." Mongoll freed his lips of wandering hair and asked with chilling politeness, "Is this a favorite pastime?"

"Why, er, yes. It is very popular, and we . . . we have our various divisions, of course. The junior championships are due to . . ."

"Quiet!" Mongoll exploded. "Checkers and paper puzzles! And yet you slobs would defy me?"

They shuddered before his blast.

"Would you play games with me, hah?" Mongoll demanded. "Where . . . is . . . the . . . Tricourt . . . section?"

His captives listened numbly, sinkingly mesmerized. All this was unbelievable. What was happening to them simply did not make sense, was a very, very bad dream. This unnatural way of behaving could not be true—normality could not be so completely departed.

Mongoll stamped and New Eden trembled. "Where is it kept, hey? Where?" He waited. "Where? Tell me, you fat swine!"

Helplessly they looked at one another. The Chancellor ventured,

"Sir, we don't know, truly, believe me, we don't know. Until you came, we thought it was just a legend, a myth from the old . . ."

"It is not a myth!" Mongoll screamed him down in instant rage. "Do not try and fool me, you insolent pig! Shut up! Shut up!"

The New Eden group recoiled.

Mongoll's hands went over themselves as he regained control of his temper. "So. You would try to be clever with me, hah? Very well, we shall see. I have warned you, and now my patience is about at an end." He brusquely gestured his guards. "Take them away . . ."

"Why?" the Chancellor beseeched his friends. "Why? Our land is rich and abundant, and there is plenty for all. There is absolutely no need for this . . . this abuse. It's unwarranted. No man has need to raise his hand against another here—he has no cause to. The earth is kindly, and there is more than enough room for everybody." He held his head. "I . . . I just do not comprehend."

"They are thugs, out-and-out vandals." Shalforth was outraged. "They're picking on us deliberately. There's no need to quarrel. They could have asked without all this . . . this bullying."

"I couldn't reach him." The Chancellor raised his head. "I just couldn't seem to reach him. He doesn't seem to *want* to understand. We have peace here. With a land so big and friendly, why should there

be dispute? Those who may be dissatisfied can always go elsewhere."

"He's a throwback," Shalforth pronounced emphatically. "They're *all* throwbacks. They don't seem to know the meaning of the word 'civilized.'"

"Primitive savages, here, in this age." The Chancellor was awed. "It doesn't seem possible."

"And searching for a section of the Tricourt Link," the Minister of Education said in marveling wonder. "That is tantamount to looking for a cockerel's egg."

"Can we convince him of that?" The Chancellor's voice cracked. "The man is obviously insane. For some reason he thinks that a Tricourt Link might be here."

"And how do we know that it isn't?" a younger member asked.

"How? Because"—the Chancellor's hands fluttered—"such a thing doesn't exist. It's a quest of folly, like some people once looked for the Holy Grail, or for the Fountain of Eternal Youth."

"Something like looking for the Philosopher's Stone?"

"Exactly," the Chancellor nodded. "The Forked Enigma on Corestelle is supposed to be one section, and the two other imaginary missing sections are what crazed hunters have been known to search for like . . . like some fools once went looking for Lilliput. Magic and humbug."

"And that's what this . . . Lord Mongoll is looking for?"

"Apparently." The Chancellor

despaired. "How can we reason with a man who has such a fanciful fixation? What *can* we do about him? We're not fighting people. We have no army—what for?" The Chancellor flapped. "This should never happen, should never have been allowed to happen. Just wait." Tears of grievance came to his eyes. "Just wait—they'll be made to pay for this . . ."

A high percentage of New Eden's population was contained and concentrated in the main parks of the three cities. Well-spaced armed guards found them easy to control. From these gatherings work details were recruited, to mine in suspect places for the sought talisman. A couple hundred would be set to dismantle buildings thought to perhaps cunningly conceal the wanted item, and hundreds more were coerced by cane and jolter to dig upon promising sites, making huge excavations wherever guess suggested secrecy might have been served.

The invaders became ever more frustrated, ever more envenomed taskmasters as the day wore on. The New Edenites labored, sweated, were driven till they could hardly see and were tottering from fatigue. But for them there was no respite. Mongoll raged at being balked and slashingly goaded his men—and his men so spurred relentlessly drove the citizenry to the limit of its endurance.

"The food is there, there is no shortage," the Chancellor pleaded.

"Lord Mongoll, the people must eat."

"Must they?" Mongoll overlooked his subjugated government. "When *I* get what *I* want, then *they* will get what *they* want." His one eye burned fever bright. "I'll see you exterminated," he snarled. "Don't tell *me* what I must do, you groitch! You play dumb with me and I'll see you driven into the ground, do you hear?"

His prisoners listened, impotence filling from their stomachs to their throats. These men were demons, they were in the hands of madmen. And the great one was the most fascinatingly magnetically evil one of all.

Mongoll leaned. "So you think you're being clever, do you? Going along without a spark or a kick, hah? Do you think you can fool me that you're *that* gutless? You *lie* with your servility! But you will not trick me." The one eye rolled. "You will be trapped by your own designs, and we shall see who breaks first."

"But Lord Mongoll—"

"Silence!" Mongoll raved. "Get them out of here! Get them back to work! Get them out of my sight!"

"This is purgatory." The Chancellor ached in every bone, and weariness sat him as if gravity had doubled its strength. "I can't think any more."

The Minister of Medicine gingerly tended the blisters on his feet. "They're sick. They're outlaws and

they have been in space too long. It has turned their brains."

"But why here? Why? And what can we do to satisfy them?"

"He won't be satisfied until he finds the Tricourt Link."

"But it's not here!" the Chancellor cried in baffled anguish. "How can he find something that doesn't exist?"

"*He* thinks it exists."

"And he thinks we have it."

"We must help him look," the Minister of Foreign Commodities said in apprehensive foresight, "because if he gets to believe that it isn't here . . ." He trailed off.

They all paused to speculate upon Lord Mongoll's disappointment. The picture was not cheering.

"I'm hungry."

"They can't really be meaning to starve us, can they?"

"Who knows?" The Chancellor's head shook in bewilderment.

"They're deaf to any argument, they simply won't listen."

"How could such bandits exist? And in this sector? Where is the SOC? How did they ever allow this to happen?"

"It's disgraceful. It's . . . What's that?"

Their leaden limbs were stirred, stabbed. They crowded over to the windows of the hall that had become their dormitory. Fires and flares rudely lit the sky, and to their ears came the crack of explosions. And from not far away came the sounds of screaming.

"The screaming is coming from the park."

"What's happening out there?"

"Oh God, what are they doing?"

If the day had seen the shattering of their idyll, then the night was to be one of uninterrupted disturbance haunted by the phantoms of speculation.

The second day was a bleary one for the populace. Forced to lodge in the open in the parks, and refused food and passage to obtain material comforts, after a night of little sleep they were unrested and already become somewhat haggard. And dawn had scarcely broken before work parties were again forced to fall in to be marched to labor at fresh locations. Protest was met with the dispassionate lash of jolters, lamentations were unfeelingly ignored, and appeals found stony response, were cut short with shouts of "Move, you scum. Move!"

The New Eden people did not know which way to turn. They were accorded no consideration, and their pleas to humanity and for clemency went unheeded. They were being treated like animals.

The influence of Mongoll hung over everything. His was the dark and brooding presence, the tall hooded figure of terrifying import. He appeared as a shrouded specter of doom about the city, to observe from a height the efforts being made to secure him his ambition.

Then at midday came a change. For a while the search for the Tricourt Link was called off. Now the work parties were assigned duty to organized looting. Some to warehouses and stores to gather and cart the most costly goods, and to strip the stocks of what high-class merchandise there was. Others to the museums and galleries, to collect the more worthy items, imported quality and the one great New Eden prize—deManioso's priceless Child And Foot.

"Move, you dogs. Move!" Through distrust, the New Edenites were obliged to convey the plunder manually over much of its path to Mongoll's ships.

Mongoll himself inspected the goods so acquired, passing much to be loaded aboard, but mercurially flying into a rage in rejecting declared inferior products. The presented work of leading New Eden artists he personally kicked to pieces and stomped upon. And in his fulminating ire he ordered the rounding up of the painters and poets and allied New Eden intellectuals and had them pilloried for not providing him with a greater source for profit.

As this second day drew to a close, then in the wordless manner of psychic cognizance the people knew that Mongoll was in a very dangerous mood. It was a mood that his men caught. Orders became more curtly barked, demands more stridently shrill, and a tolerance for hesitancy fell to nothing.

At evening time the people were shepherded back to huddle in the central parks.

"To have to witness this, to be forced to witness this, to be obliged to stand by and watch this cruelty and abuse . . ." The Chancellor was made ill. "And to be unable to do anything about it. They're not humans—they're fiends."

"If only somehow we could fight back." One struck his palm with his fist. "It's so . . . so . . ." His throat worked and he just couldn't find words.

The Minister of Justice was enduringly offended. "We're not a warlike people, everybody knows that. What need is there to fight here? There is the whole world mostly empty, a *good* world. What more can anyone want? We have no cause for military action, goodness—what use for weaponry? There is absolutely no *reason* to make provision against this type of aggression. Logically, patently, there is no requirement here."

"Our whole world is available to them," the Chancellor agreed, his face set in staring gloom. "It is through sheer viciousness and spite that they are degrading us and are deliberately shredding our culture. Only the bedevilment of humans, it seems, can feed their sense of power."

"He's a maniac!"

"How much?" another asked. "How long are they going to inflict themselves upon us?"

"How long are they going to deprive us of food? Keep us hostage?"

Came a whimper. "They're going to kill us. That's what they're going to do—they're going to kill us!"

Silence.

"What," and the body twisted uselessly to mental aid, "what can we do?"

Before dawn there were some isolated attacks against individual soldiers guarding the parks, attempts to break out, to obtain food. These were very amateurish efforts, and a number of the would-be scavengers had their minds changed in a hurry by alert guards who were liberal with their punishing charges. Those who failed to retreat rapidly enough were caught, whipped with jolters and sent to join other malcontents who had acted unwisely at one time or another during the occupation. Such persons were to be reserved for particular attention later.

A scant handful did break through the cordon, so to become fugitives, unable to get food back to their fellows in quantity. Rather in desperation did they seek to try and reopen means to contact the Outside. And to perhaps join free New Edenites on the outskirts, in the country, to perhaps enlist their aid in some as-yet undefined manner.

"You would assault my men, would you?" Mongoll spoke softly—and it was much worse than when he ranted. "I had thought to be gentle

with you, sensitive people, and to avoid bloodshed. But where you would break the head of one of my soldiers, then twenty of you must answer as an example." He paused. "There will be a public hanging tomorrow at noon."

A ripple ran through the assembly. From his elevated position in his flier Mongoll looked down upon them.

"Rabble." *Now* his voice rose. "Counter my wishes, would you? We'll see. Servants you are and servants you shall be!" His voice had a throbbing quality of menace. "One thing that is required of a good servant is humility." Then unexpectedly he laughed, a hacking bray that prickled the skin of all who heard it. "There are some places in the Outworlds where obedient servants fetch high prices. There is always a shortage of women where colonies are established, and here, I think, we may have found a very promising vein to mine."

Mongoll's flier was black, and tubular landing-joints hung from it. With its glazed headlight ports, it took no trick of the imagination to construe him as a demon perched large upon an enormous spider. He raised an arm and brought it down. He gave the order, grating and immutable, "Begin the sorting of our cargo . . ."

Helplessness. Their inability to check, to counter, to challenge these black-clad extorters, soaked the New

Edenites with chilling despair. Their environment was warm and kindly, their customs and way of life settled to enjoy the bounty of their habitat. They had sufficient of the later technology and implements to simplify creation and manufacture. Aptly named, New Eden was a provident and liberal world, arduous toil a personal prerogative and not a necessity. Some Pacific Islanders once lived in conditions of similar natural furnishing, but not to such broad generosity.

New Eden indeed was the greener pasture, without offense and sweet to behold. New Edenites had no incentive towards scheming border maneuver, or martial tactic. The bloody history of humans was hearsay, the old revolutions and struggles upon Earth distant and unreal, ever more losing relevance with the passage of time, a realm of drives and motivations ever more difficult to relate to life in New Eden. Old, old, the stories of armies, of the unending flux of territorial dispute and striving, the state never fully resolved—to those growing in New Eden, such past cause and effect could not feelingly be defined or apprehended, became academic, became of the doubtful stuff of tall tale and colored truth.

Now on their doorstep ancient practice of enslavement became revived, became reality—and it was gogglingly incredible. Pirates—and that was the only name for them—marshaled the local womenfolk,

dragging out this one, and this one, and this one, shoving, rudely casting aside, belaboring to speed the division. There were squeals, screams and shrieks as those filling the category in youthful health and pleasing appearance were bullied into lines to be led away—recent mothers, wives, sweethearts, it made no difference.

Shock upon shock. The menfolk watched, looked at one another. They had nothing. There was nothing they could do. Nothing? Nothing.

Soldiers stood at ease at intervals, daring the sheep to do more than bleat. Hunger, to be so ravenous, and to watch. It wasn't fair. It wasn't right. A young girl was hauled away by her hair. What was happening? What was the meaning of all this? It couldn't be true. It just couldn't be true.

Mongoll spoke. "Excellent flesh. A tendency to a thickness that does not meet general aesthetic standards, but strong. Of its kind a superlative breed. As thoroughbred horses may thrive on lush pasture to become magnificent domestic animals, so you have thrived here in your natural garden. Docile and placid, no other place in the Universe could precondition humans to servitude more admirably. Excellent, excellent."

Mongoll appeared to be in acid good humor. "A human farm, self-sustaining, with no expenses save transport costs." He hovered over



them, shading them, a symbol that eclipsed their freedom. "We have storage space for five thousand, and this capital shall supply half to reward my enterprise.

"I am well pleased with your condition, excellent. You may take pride in the fact that I, your Lord Mongoll, declare you to be the finest specimens of your type to be found anywhere." And here he raised his arms and raucously laughed again, a rending bark that robbed the day of all warmth.

His flier lifted.

On the borders of containment there were restive surges. The cries and wails of the womenfolk continued to assail the air.

From the ranks of New Eden men some broke, incoherently shouting, virtually made demented by their impotence. These were quickly brought down and thumped and thudded to be rendered temporarily physically useless as well. The guards arbitrarily jolted those seeming latent dissidents in the front of the crowd, to cause shifting to avoidance, a backing away.

Everything was under control.

The comman called, "Sir!" He put his hand to his earpiece as if to assist his listening.

Mongoll halted just inside the entrance to the hall and turned his head. "Well?"

"Contact, sir . . . from our scout beacon. Picked up on the third relay."

"What sort of contact, man? Identifiable?"

"Not sure, sir."

Mongoll was exasperated. "Then tell them to *make* sure. Check the charts for periodic advents—do they want me to do their blasted job for them? I don't want to be called for every piece of debris that shows up." He took another step.

The miserably subdued faces of the New Eden government body met him, flanked the floor he was to walk. Their state was sorry. Unwashed, uncombed and unshaved, they were still attired in what costume they wore when they were surprised.

"Sir! there's a pattern! A hexagon, and a center. Forty-four-forty degrees in the Achilles paralax. Preliminary determinants have it approaching fairly closely, sir."

Mongoll scowled. "Speed? Distance? No!" He swung. "Keep watch on these fools." He took his comman by the shoulder, wheeled him back out through the doors. "I shall have to see for myself . . ."

The guards were withdrawn from the parks. Their transports arrived, and in orderly fashion they boarded and were whisked away. Quite quickly the thin black fence dwindled, to a last contingent, to vanish altogether.

The New Eden folk hesitated to conjecture the meaning for this release. It took time for the fact to register.

The people in the parks did not disperse very promptly, their spread was tentative, suspecting a ruse. But there came a *rumor*. And the rumor grew. Some ships from the Standards Observation Commission were coming!

There was some coming and going at the cote. Braver souls who made their way thence did not much heed the caution they had learned. As long as they kept out of the way they were ignored.

Mongoll and his entourage were the last to leave the cote. Glowering frighteningly, he stood in his craft as was his custom, looking down and around with unconcealed venom. Some saw him shake his fists back at the Chancellor's home.

For a while the returned peace was uncanny. The New Eden people could not credit that their depraved visitors were either going, or gone.

There was fire within the cote, and government members fought to put out the flames, salvage and save burning records, prevent the blaze from catching the entire building. Soon they had helpers, and more came, and the fires were brought under control and finally extinguished. An occupying strategem.

At the spaceport the black fleet was ringed with troops while looted goods and supplies were stowed. The already partly-treated initial batch of two hundred fifty young female prisoners had their storage processing

completed. The rest were turned away, received no more attention, were abandoned.

The ones left behind bemusedly watched the preparations for departure, the fliers one by one re-absorbed by the black-and-scarlet hulks. The ships were buttoned up, and the soldiers became fewer and fewer as the mighty vessels seemed to attract them as a sponge attracts water.

The witnesses saw Mongoll arrive, even at a distance shrank from his gaze as he paused to give them his unholy one-eyed stare. Then he spun and was gone.

Shortly all ports were closed and sealed. And there was not one man in black to be seen.

The great craft squatted on the plateau of the spaceport. The watchers waited, hardly daring to believe that these horrible ships were going to depart. And they waited. And their suspense mounted. An hour passed.

Other New Edenites arrived. They were conversant with the pre-flight checks that even scoundrels were bound to observe. They watched. The vessels were not *really* going to leave. It was a trick. To go, please, they wanted them to go. There was anxiety. There was prayer. Please.

Two hours. The people watched, even their hunger subordinated. It was almost unbearable. The vessels sat, silent, huge emblems to indelibly imprint a picture to fear.

Two hours, thirteen minutes. A

craft began to lift. And then another and another.

A collective sigh. And soon the last ship rose, gaining speed, higher, higher. Faces upturned. Higher. Smaller and smaller. Reducing from blobs to dots, from dots . . . till the straining eye could see nothing. They were gone.

"We demand protection," the Chancellor said. Badly shaken up, he was overwrought and would not fully recover for some time. He trembled. "The SOC has a responsibility to us. Our way of life, our condition—our people have no capacity to contend with . . . with such thugs, such vermin."

The Commander of the SOC patrol was as gleamingly polished and correct as his grand silver ships. He said gravely, "We cannot be everywhere at once, sir. Our force is not great, and space is vast, and we have to go where we're needed most."

"You are needed right here!" The Chancellor's hands nervously kneaded a balled kerchief. "We are wide open. We are innocent, peaceful people. We wish for nothing more than to be left in peace. We have a right to expect our wishes to be respected, to manage our society without fear of molestation."

"Sir, the SOC cannot provide you with permanent round-the-clock surveillance just on the off-chance that a renegade like Mongoll will some day appear. This would largely inactivate a part of the service. You must

know we are under-strength now."

"I don't care about that! What about us, eh? We *cannot* defend ourselves. The SOC knows this, is well aware of this. We are well within the SOC sphere of influence, and it has been understood that our safety was assured. It is your *duty* to give us protection."

The Commander was firm. "The SOC is overextended. There are many incidents, occurring far and wide, that require our attention. Sir, we came here in pursuit of Mongoll. He has the diabolical cunning of the paranoiac, and he has given us trouble elsewhere, and doubtless will give us more unless we can apprehend him and bring him to book. He is a threat to this entire sector of space."

"Can you find him? Will you bring him to book? Can you guarantee that we shall never see his like here again?"

The Commander frowned. "You must appreciate how difficult it is to try and anticipate his moves. So far we have been unable to trace his home base—that is, if he *has* a home base. He could have his hiding places literally anywhere, and unless we get a direct lead we have little chance of trapping him. At the moment we are forced to try and out-guess him through growing knowledge of his methods."

"That means he's likely to remain free from some time to come." The Chancellor stuck out his lip. "Which means that he can sneak back here at

any time and create havoc again. The man is a slaver, don't you realize that? Slavery. Our people! My god, don't you know what this means? Slaves! In this age, torn from their loved ones, civilized people. And he swore he would come back, swore an oath! You simply cannot go away again and leave us defenseless."

The Commander rolled his hat in his fingers. "I cannot break up my squadron, sir. I have seven ships, and from your account I am already outnumbered. The whole squadron cannot wait around here indefinitely in the hope that this year, next year, sometime he may return. Likewise, to detach a couple from my fleet would reduce my strength too severely. At the same time, just two ships would be inadequate, would be overwhelmed by the superior force that he has at his disposal."

The Chancellor agitatedly twisted the cloth in his hands. "I'll report you. You must do something. This is a prime planet. The SOC has a vested interest in our welfare. This is a utopian state, an ideal, a living experiment in freedom and human tranquility. After so many years, the SOC surely cannot stand by and allow such work to be violated by any criminal lout from Outside who cares to come and stamp upon our faces, to spit upon us, to"—he could not prevent his eyes filling—"make us dance like idiot puppets to their whim?" His face worked with emotion, and he jerked his head away.

"Sir, you have my sympathy—but you must understand that I . . ."

"Sympathy?" the Chancellor blazed petulantly. "You don't know what it was like! Beaten, tortured. And those that did try to fight them were savagely treated—locked into small cupboards to nearly suffocate! And others tied to be whipped, and some to be hung!" The Chancellor quivered. "A scaffold! They built a scaffold! How many would they have killed if you had not arrived?"

Soberly the Commander rubbed his nose. "You have my sympathy," he repeated. "I am glad that we arrived no later than we did. But we have a job to do, and there are less ideal states that can well do with the encouragement of our presence from time to time. And I would be doing less than my duty if I stood guard here to so give Mongoll unrestricted license to practice his depredations elsewhere without hindrance." Reasonably he said, "This would not be fair to other settlements, would it?"

The Chancellor paced. "What are we to do then?" His hands flew out. "You leave and next time . . . next time might be the end. Even if we could send a message, it could be weeks before you got here, far too late, much too late." He fretted worriedly.

"I can only advise you to form a militia," the Commander said pointedly. "A sturdy home-defense force. I can arrange for suitable supplies to be sent you . . ."

The Chancellor didn't like the

idea, never had. What need of a military force in Paradise? It went against the grain, all that New Eden stood for. Over the last few years he had received a number of interfering Outside suggestions to introduce some more aggressive institutions. It was envy. Such hints had seemed absurd, and had lacked popular support for ready implementation. But now, after this . . .

"We have no familiarity with conflict, or with the ambitions of tyrants." At least, not until now, the Chancellor remembered. Bitterly he said, "We vitally need your help and you refuse. We shall not forget this."

"We shall supply you with literature, et cetera, upon counter-revolutionary measures," the Commander suggested helpfully. "Improvisation, guerrilla tactics, unarmed combat, fitness courses . . ."

"You are shirking your obligations." The Chancellor sounded peevish. "It shouldn't be up to us. Such exercises are foreign here. They do not belong, will spoil the balance, will upset that atmosphere we have labored so hard to maintain."

"Well, sir," the Commander was blunt, "it is either that, or to be unprepared and vulnerable to any ignorant and insensitive egomaniac who might happen along. Intelligent people should have enough initiative to make the going tough for such usurpers, at least for the little while till the SOC can answer your summons. You can take measures to see that . . ."

"We'll take measures," the Chancellor's voice held a vibrant quaver, "you'll see. Thank you, Commander. If that's all you can do for us, then you might as well go. I'm disappointed in you, very disappointed. If the SOC cares so little . . ." He fidgeted on his feet, evidently distressed.

"I'm sorry, sir." The Commander donned his hat. "I wish there was more I could do. I sincerely hope that you will not suffer a repetition of your recent experience, but . . ."

The Chancellor turned his back in dismissal, too full to make civil reply.

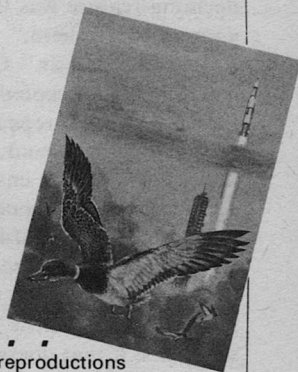
"Unspeakably maltreated by a fiend, and apparently deserted by his friends, the old boy was in a tizzy of

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to  
say . . .**

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reproach and fearful anticipation. A traumatic few days—for all of them.”

“And now we shall have to await the results.”

“Well, if that didn’t stir them up then nothing will.” Commander Glanse scratched his head. “We’ll just have to see, Captain: If the birthrate takes an upcurve, if they start to show some zing, if they start to show some interest in the less fortunate—and if they begin to realize that they belong to the human fraternity, and that privilege and well-being are *not* general and automatic, and that their role of happy insularity cannot be without penalty.”

Glanse shrugged. “Drastic, but they wouldn’t do anything for themselves. Absolute security, it seems, equals apathy. Provincialism carried to its extreme worst. The only redeeming feature was their uncritical appreciation of ham.”

“Thank you, sir.” Captain Mongoll Serraylya accepted dryly. “I look forward to the repeats, the commando raid now and then to liven their memory and ensure that they don’t fall back too quickly.” And his laugh really *was* painful to hear.

“Yes,” Glanse mused. “An imitation to spur, to kick their sense of safety, to wake them up, for God’s sake. Yes, if that doesn’t do it, nothing will. We’ve given them a handful of heroes, and stuck a needle into the uninspired articulate to give them a gee-up.”

“They needed it. The way they stood there, all blank, it was easy to

feel like giving the lot of them a hiding,” Mongoll confessed. “I hate to think what would happen if something *really* murderous lighted on them.”

“Well that’s it,” Glanse said, “they stood to lose the essential ingredient for survival. You know what happened to the dinosaur—it had a good run but finally developed itself out of existence. Where there is not threat or fear, there also is the path of extinction. Look at the dodo and the moa. Remove challenge and the laws of natural selection cease to operate—and the trusting nature gets overdone.”

“Not to know fear of loss, of suffering, of getting killed, is to be deprived of a vital accouterment of life,” Mongoll observed sagely. “From security to complacency, to slackening drive, to lead to irrecoverable loss of tone.”

“Exactly, Captain,” Glanse said. “Nothing regresses like an excess of success.”

“Very well put, sir, if I may say so.”

There was that about Mongoll that made Glanse suspicious of his approbation. But Mongoll rubbed his eye. “Man, am I glad to get rid of that eye patch.” He grinned devilishly. “We should be able to pay our expenses without selling the girls, hah? I’ve been thinking—mightn’t it be a good idea to recruit some of the locals, to take them along and get them involved when you rescue the damsels from me?” ■

# ON THE NATURE OF ANGELS

When the International Theophysical Year (ITY) started, I pooh-poohed it as just another sink for Federal funds. But the fellows in charge announced some discoveries which will influence not only our lives, but our reactor designs as well.

For example, those surprise scrams and those instrument hiccups have nothing to do with circuit malfunctions. They're the work of poltergeists. And that extra month of lifetime, or that added 0.0001 of breeding performance weren't miscalculations. They were boons from resonant archangels.

Angels, devils, and human souls, it seems, behave as electromagnetic radiations in four-dimensional space. And with appropriate boundary conditions, their properties obey the Schroedinger Wave Equation,

$$i\hbar\partial = H\psi.$$

Each solution represents a different kind of spirit, and is characterized by a unique eigenvalue. Solutions are possible only for certain specific eigenvalues, which have been identified mathematically and named by correlating the corresponding wave functions with Biblical data. For example:

7.3206	Archangels
3.7684	Seraphim
1.0097	Cherubim
-0.1121	Demons
-2.9175	Gremlins
-6.4302	Poltergeists

The eigenvalues of "good" or "free" spirits are positive, while those of

“evil” or “bound” spirits are negative. The so-called “eternal” spirits—as in the preceding table—have real eigenvalues, while human souls, whose lifetimes as such are finite, have complex eigenvalues of the form  $a + ib$ .

For each human soul, there is a unique, constant value of “a.” The imaginary index “b,” however, is continuously variable. It never vanishes, but it is very small when the soul is in a state of grace, and it increases as the soul’s owner commits various sins. That is,  $b = \sin(t)$ . (To evaluate this function, ITY scientists measured their own b variations during field experiments with professional technicians called b-girls.)

When b is large, the soul’s owner has difficulty receiving power from the Deity, which is broadcast only on real frequencies. (The phenomenon is akin to the fading of, say, KDKA, when the dial drifts away from 1020.) There is evidence, however, that the owner can “tune” his soul periodically to reduce b. Experts disagree on the best method, but practically all experts advocate tuning at least weekly in authorized repair shops, and many suggest that the process be aided by immersing the unit in a chemical solvent early in life.

At end of life, the soul abandons its complex eigenvalue and assumes a new wave form whose eigenvalue is real—that is, whose b component vanishes identically. This change is known to be accomplished by conformal transformation, but again there’s disagreement about the details. Some authorities hold that the change is immediate, while others believe it’s iterative, involving principles of mass balance.

Scientists have proven, however, that if the soul’s end-of-life b component is less than some number, E, the resulting “eternal” wave function will represent a “good” spirit, with a positive eigenvalue. Conversely, if b exceeds E, the soul will become an “evil” spirit.

Attempts to evaluate E have failed so far. In fact, we can never learn E’s exact magnitude, because of the Uncertainty Principle. Work with scintillation detectors and spectral interferometers may someday establish a least upper bound, but the ITY Safeguards Committee urges us meanwhile to keep our soul’s b value as close to zero as possible.

Human souls were especially useful in the early ITY studies, because their physical properties were already well established. Easiest experiments were conducted some 5,000 years ago by Adam, Moses, Solomon, and their followers, and first recording of the Principle of Tunability is generally attributed to Matthew et al. (See, however, the *Soviet Journal of Physics* for May 1917.)

So ITY scientists used the known physical properties of souls to establish the mathematical foundations for spirits in general.

Then they applied their math to reactors, whose affinity for evil spirits has long been suspected. The chief findings so far:



1) Reactor misbehaviors—oscillations, departures from nucleate boiling, and the like—are indeed caused by spirits. When the affected reactor properties are “in tune” with components of four-dimensional spirit waves, the spirits enter the reactor by resonance capture. For example, if the neutron flux distribution at some energy resembles a projection of gremlin waves onto three-space, the reactor will tend to harbor gremlins. Hence,

2) The present reactor-behavior equations—now proven hopelessly inadequate—must be augmented with spirit-effect terms, and solved simultaneously with the Schroedinger Equation to insure against unwanted resonances. (“Good Spirit” resonances are acceptable, and may be the sole reason why the designed-in-ignorance reactors of today can even go critical.)

There are many unanswered questions, of course, particularly in the area of how to minimize the effect of evil spirits on reactors designed without benefit of the new discoveries. (Currently accepted theory: exorcise the control rods.)

So work will continue. Meanwhile, all ANS members are invited to a mass heresy trial of the ITY scientists, a week from Tuesday at the Cathedral in Florence (Galileo Memorial Chapel). Coffee and Martyrs Flambés will be served. ■

## DEPARTMENT OF DIVERSE DATA

*THE VRILL or  
“FIRE SPIDER”.*

*E.T. from Gamma An-  
dromeda. A parasite  
made of pure energy,  
which feeds on the elec-  
trical potential from  
brains and nervous sys-  
tems of all organized  
forms of life.*

D. PATTEE



# the reference library *P. Schuyler Miller*

## THROUGH THE CURTAIN

We are currently fortunate in having an authority on the science fiction of the socialist countries in Eastern Europe with us on our side of the Iron Curtain. Professor Darko Suvin, a Yugoslav who has published a comprehensive survey of world science fiction in his native land, has taught in the English Department of the University of Massachusetts and is now at McGill, in Montreal. (Perhaps he can discover—or launch—a French Canadian SF movement . . . though McGill is not exactly a symbol of French Canada.)

In the last few years we have had a number of anthologies of Soviet Russian science fiction, first in the two unacknowledged Collier paperback reprints of Soviet English-language publications, then in the annual series of rather drab selections from New York University, and later in a collection edited by Judith Merrill and the much better ones translated and edited by Mirra Ginsberg. The Polish writer, Stanislaw Lem, who in Professor Suvin's opinion is

the outstanding SF writer in the socialist countries—at least, outside of Russia—has made the American scene with a Walker edition of his science-fictional mystery, "Solaris." However, the best comprehensive selection of stories from east of the Curtain is the anthology entitled "Other Worlds, Other Seas" (Random House; 1970; 217 pp.; \$6.95).

Missing from the anthology are Hungary and East Germany (the good stories are too long), Albania (none known), and Yugoslavia (permission to reprint refused). We get Poland (four by Lem), Rumania, Czechoslovakia and\* Bulgaria (one story each), and the U.S.S.R. (nine offerings, two of them also published in other anthologies).

The prolific Mr. Lem has at least two popular series of short stories winding in and out of a number of his books. Pilot Pirk, the hero of a more-or-less "straight" series, appears in an excellent puzzle story of the sort we used to get here from George O. Smith and Ross Rock-

lynn, "The Patrol." There is a good technical reason why lone pilots on patrol in deep space have been vanishing, and Pilot Pirk discovers what it is. Ion Tichy is a kind of future Gulliver whose "journeys" into the far corners of the universe develop into some bizarre adventures with peculiar races and societies. We get two here: one in which he is involved with the tangled political structure of the world known as Superphenomia, and one in which he finds out what happened to the race of Idiots who entrusted their fate to a machine. The fourth story, "The Computer That Fought a Dragon," is a cybernetic farce crossed with a fable. Lem evidently delights in working over a broad range.

The Rumanian story, Vladimir Colin's "The Contact," is a rather simple adventure in which a space explorer gradually realizes that the weird life of another world is intelligent—but in a very strange way. Josef Nesvadba, a Czech physician and psychiatrist, has the most original story in the book in "Vampire Ltd." The vampires are automobiles. (One of Nesvadba's novels is said to be scheduled for U.S. publication soon.) Another physician, Bulgarian Anton Donev, has the tongue-in-cheek "Why Atlantis Sank."

There are two unusual items in the Russian portion of the book: "A Debate on SF—Moscow, 1965," by Nikolay Toman, and "Lectures on Parapsychology," by Ilya Varshavsky. Toman's selection is an ex-

cerpt from one of his novels. It purports to be a report on a serious discussion of the philosophical concepts involved in modern science fiction, and sounds quite like arguments you may hear at American SF conferences. Varshavsky's "review" may be tongue-in-cheek.

Varshavsky, who has four of the nine Russian contributions, is one of the "big names" you will recognize from other anthologies of Soviet science fiction. "Biocurrents, Biocurrents . . ." is a broad farce involving future medicine, rather like some of the zany yarns Hugo Gernsback ran in *Science & Invention* and the early issues of *Amazing Stories*. "SOMP" (Selector of Mental Potentials) is a more Swiftian device which enables ten imbeciles to make more important contributions than one genius. "The Noneatrins" comes from the same old spacemen's bar where Ion Tichy, Mr. Joseph Jorkens, and various frequenters of Gavagan's bistro must get together. Contact with human explorers wreaks havoc with the delicately balanced symbiotic society of the Noneatrins.

Anatoliy Dneprov—actually the Russian physicist Anatoliy Mitskevich—is the other name you'll recognize, and you have seen his "Island of the Crabs" at least twice before. We are told that it was one of the first modern robotic stories published in the Soviet Union. "Interview with a Traffic Policeman" is a bit of comedy in which a smooth-tongued scientist talks himself out of

a ticket, and "The S\*T\*A\*P\*L\*E Farm" provides a good American setting for a story of the replication of Standard People. Like a number of other Soviet SF writers, Dneprov does not hesitate to take their protagonists from other countries . . . and not just in order to show us to our disadvantage. They are less parochial than most American writers.

Romain Yarov's "The Founding of Civilization" is another story you have seen before. It uses the thoroughly original gimmick of time travel as a sport and I believe that this translation corrects some ridiculous archeological flaws that I complained of in the other version. I don't know whether the translator or the editor caught them; the author certainly didn't concern himself with my comments.

Finally, "The Master Builder," by Genrikh Altov, is one of the author's "legends of the Star Captains"—a poetic story about a man who made himself part of the starships he built and tested. The mood and style are totally different from the other Russian selections.

Clearly, science-fiction writers behind the Iron Curtain have seen and are using the same opportunities that Western writers have seized, to criticize certain trends in present society by ridiculing them in the bizarrely exaggerated societies of other beings on other worlds. In a few cases, the purpose has been too obvious and too direct, and the author wound up

in Siberia. In stories like these, the comedy is so farcical and the situations so fantastic that the censors could hardly take them seriously. Still, the Slavs have a deep tradition of peasant humor and rich fantasy as part of their everyday life (look at Ukrainian Easter eggs—gems of the everyday). It may just be that being too obvious is one way to be subtle. Dogpatch, anyone? Or Subeatrins?

### THE PRINCE IN WAITING

*By John Christopher • Macmillan, New York • 1970 • 182 pp. • \$4.95*

Though the publisher doesn't say so, John Christopher has evidently launched a new series of juvenile science-fiction yarns for the pre-teen and early-teen crowd. This one is less imaginative, perhaps, than his "City of Gold and Lead" trilogy, but I like it better.

The situation is no novelty. The world has fought itself to a standstill, releasing various calamities in the process, and some centuries in the future England has returned to a society of feudal city-states in which science has become anathema. True-breeding dwarves are each city's metal-workers (perhaps in folk-memory of Anglo-Saxon myths), and polymorphs—shapeless mutants, man and animal—form a caste of servants and outlaws. The cities have their hereditary princes, who meet each other in ritual combat waged according to traditional rules.

But a Prince's son must still prove himself in combat, and our hero

does. Once that might have been enough to keep the story going, but you can trust John Christopher to probe the nuances and intricacies of the society he has built. As the book ends, young Luke is no longer Prince in Waiting. He has seen his father's head on a pike over the gates of a captured Winchester, and he is a refugee among the High Seers who preserve—and use—some of the forbidden science of the past. He will one day be Prince of Princes over all England . . . and that is why this is only the beginning of a good series in which youngsters can watch some of the stereotypes of adult science fiction skillfully employed.

### CRIME PREVENTION IN THE 30th CENTURY

*Edited by Hans Stefan Santesson • Walker and Co., New York • 1969 • 175 pp. • \$5.95*

I came to this anthology rather late, because for some reason Walker began to send me its hardback reprints of paperback science fiction, but not its original books. This is why I missed the hardback of Anne McCaffrey's "The Ship Who Sang," and a few others.

These are ten stories about crime and detection in the future—not necessarily the 30th Century, and not by any means all crime prevention. Most are by "hard core" science-fiction writers, but a few are by writers like Miriam Allen de Ford and Edward D. Hoch who are even better known in the mystery field. Isaac

Asimov's future crime yarns, I presume, were unavailable since they had been collected in a book of his own. Three of the ten were written for the book. One, Tom Purdom's "Toys," was here in *Analog* in 1967.

John Brunner opens the book with "Jack Fell Down," a story appearing for the first time west of the Atlantic. It's a beaut, crime or no crime. Human society is expanding into the Galaxy, and engineers from old Earth are able and ready to build—terraform—habitable worlds for planets that have reached the limit of their resources. Yet not all the "have not" planets want Builderworlds, and in the midst of such a debate one of the Morthian delegation turns up murdered. What crime is prevented by solving the murder is the real problem of the story.

Miriam Allen de Ford's "The Eel" is a crook story, amusing but slight. She's done better. Stephen Dentinger's "The Future is Ours," written for this anthology, is a time-travel short-short with a trick ending. It exists only for its ending. Compare its thin 2259 with the solid structure of Brunner's world, or even the mockingly skeletonesque one sketched by de Ford.

Harry Harrison's "Velvet Glove" is another with lots of nitty-gritty. Jon Venex, an experimental robot, has allowed himself to be maneuvered into slavery, but he uses his good robotic brain and specialized body to get him out of trouble.

Morris Hershman has another

gimmicky short-short in "Let There Be Night!," an ironic story about future values and future crime. Edward D. Hoch, in "Computer Cops," is a puzzle story about a seemingly impossible theft from the memory of an unbuggable computer. It's another written for the book.

"Apple," by Anne McCaffrey, is the book's third original story. Parapsychics, fighting for civil rights, find that there is a bad apple in their barrel—a teleporting thief. Daffyd op Owen and his Talented colleagues hunt for the wild one. This and Brunner's story are the best in the book.

Judith Merrill has a thoroughly off-beat story in "Rain Check." Her protean Martian can take any form. The one that seems most successful is that of a beautiful blonde . . .

Tom Purdom's "Toys" is a shivery story that should have been reprinted long before. It mixes the ruthlessness of kids with the powers of future toys in a frightening way. Put it with the Brunner and McCaffrey stories as the main reasons for reading the book.

Finally, William Tenn's "Party of the Two Parts" is the hilarious account—not unlike "The Eel"—of the Law's problems in putting down pornographic enterprises in a system full of nonhuman races with bizarre sexual and social customs.

### BEASTCHILD

By Dean R. Koontz • Lancer Books,  
New York • No. 74719 • 189 pp. • 75¢

Dean Koontz is one of the new generation of SF writers who is carrying the field back toward the character of the pre-Gernsback days, but with much more literary flair than any popular writer showed then. He is a college English instructor, with an academic rather than a technical background, and in the books I have read so far he tends to use "science" for its cosmetic value, or as a stage effect, rather than as an integral part of the plot.

A shorter version of the book appeared in *Venture* during that magazine's brief resurrection last year. Strictly on the level of plot and action, it is a chase story. An alien archeologist, one of the reptilian *naoli* who have dedicated themselves to stamping out mankind, encounters a human boy and for not quite clear reasons—except that they are both archetypical "beings of good will"—befriends him. As a result, they are soon in flight across the remains of the United States, in the dead of winter, with a *naoli* Hunter on their trail. The chase is the body of the plot.

A level deeper, the book has a theme that Edmund Hamilton preached more than forty years ago in his *Weird Tales* stories, and that E. E. Smith took up again in the "Lensman" books—that different races need not be inherently hostile, that thinking beings of any description can cooperate. A long line of other writers have pointed out, bluntly or subtly according to their

nature, that such races will learn from each other and that both will gain—though some American Indians will question that. Of course, this is a highly pertinent theme now.

I complained about the author's science. For the purposes of his plot he has grown a range of high and snowy mountains along the Pennsylvania-Ohio border, but perhaps they will appear some time in the future, after we have gone into Space, encountered the *naoli*, and been crushed by them. I can't envisage future chemists using sand to make protein, and I find it hard to understand how droplets of liquid oxygen can be "stored" in the muscles of a Hunter's arm until he needs them as weapons. But in our time "SF" is becoming speculative fiction rather than science fiction. At least, Dean Koontz's stories are.

### MECHASM

By John T. Sladek • Ace Books, New York. • Special No. 71435. • 222 pp. • 75¢

From time to time—not often enough, in my book—some of the smaller theaters around town run a bill made up of glued-together bits from the old, old film comedies that our parents called "trashy." It does me a great deal of good to find that people—young people—still laugh at them. Critics assure me that they laugh for all the wrong reasons—reasons they should be ashamed of. Because the old comedies built, and built, and built until the whole thing

blew up. They were logical when they were the most ridiculous. The audience could see the traps being set, the calamities taking shape, though the victims couldn't. In their—our—safe omniscience and infinite superiority, we watched the poor fools walk unaware into mayhem.

This doesn't happen in modern comedy; it isn't supposed to. The point of modern comedy is that there is no point—no logic in the world. We know that it is wrong to feel superior to some innocent idiot. We know that we are simply reinforcing our sadism and undoing all our analysts have spent months to do, when we laugh at such things.

"Mechasm"—called "The Reproductive System" in England, where it appeared two or three years ago, and where they thought it was hilarious (but you know English humor!)—is hopelessly old-fashioned. There's this company with the ridiculous name of Wompler Toy Company in a small—3,810 and shrinking—town somewhere in Utah. It's going broke, so it decides to get some of that government money that is keeping Utah, and Nevada, and everything west of the Atlantic coastline strong, healthy and productive. Its *modus operandi* is a machine to make more machines, including more like itself . . . and before you can say "Sorcerer's Apprentice" the world is waist deep in little gray boxes that make more little gray boxes that . . .

Camp. Corn. Classic.

Dear John:

I don't like to nit-pick, particularly about as good a painting as Freas' cover for the February issue, but it might be helpful to future illustrators to note that Mach diamonds do *not* appear in a rocket jet exhausting into space. You need an atmosphere to interact with the jet to produce them. No atmosphere, no recompression, no Mach diamonds.

JOHN D. CLARK

Newfoundland, N. J.

*Hm-m-m . . . well, you see it's a pulse-jet type rocket. The Mach diamonds are actually pulse discharges, huh?*

Dear Mr. Campbell:

Congratulations!

I just finished reading the editorial in the September edition of Analog and I am glad to see in print what I have been voicing for months.

It's a shame that this editorial has not hit the press wires for national distribution. It should.

I have worked for the last ten years for the simplest survival since I could not afford college when I graduated. I lived in Maryland until very recently and was there when there was trouble at the University of Maryland. I was ashamed of these children—I call them children be-

cause they, in fact, act like my four-year-old daughter did two years ago—and their actions and the reactions of press, parents and the like.

Perhaps some day when these children grow up there may be some hope for them; but what chance do they have to grow—mature—when they are not held responsible for their actions?

It is evident that they have never been held responsible for anything and since they are going to college—and now even have the right to vote—how will they ever grow up? What kind of voters will they make when they are so immature? They need a great deal of discipline. Where will they get it? In the home? There, it's a little late for that.

Anyway, congratulations, take care, and keep writing such excellent editorials.

ELIZABETH A. HOLLORAN

P.O. Box 36

Gilberts, Illinois 60136

*One wonders how they'll go about raising their children!*

Dear Sir:

Having noticed your little piece on computer languages in the October issue, I thought that you might enjoy seeing the following, which is a notice in the Computer Centre at the University of Windsor.

ACHTUNG!

“Alles touristen und nontechnischen lookenspeepers. Das machinen-control is nicht fur gefingerpoken und mittengrabben. Oderweise, is



easy schnappen der springenwerk, blowenfusen, und poppencorken mit spritzensparken. Der machine is diggen by experten only, is nicht fur ge-verken by das dummkopfen. Das rubbernecken sightseeren keepen das cotton picken hands in das pock-ets. So relaxen und watchen das blin-kenlights.”

—Computer Centre, University of Windsor; Windsor, Ontario, Canada  
You can see that it is not exactly German, but it manages to convey the required message in a painless way.

Perhaps you might find room one of these times to print this in one of your issues. I'm sure the readers would enjoy.

BRIAN ROUNTRED

3816 Blackburn Court

Windsor 10, Ontario, Canada

*This sort of language is not Platdeutsch so much as gesplattered Deutsch. But it works because to read it at all is a challenge—and the reader learns because he thinks about it!*

Dear John:

I don't often get a chance to write "Dear John" letters . . . However, you once mentioned that Army CBR research was not necessarily all nasty murderous stuff. The Army is closing out a lot of its Fort Detrick operations in response to the public clamor of a few senators who are hard to please, and their friends, if any.

They had to set up safety standards, among other things. One re-

sult was that in 27 years they had 422 cases of lab-acquired infection, 3 fatal. Other labs reported a rate of 4.2% against this 0.71% rate . . . for 3178 cases elsewhere . . .

They established what operations in labs were the dangerous ones from standpoints of hazard, and how to control same.

Pioneered in use of gaseous sterilants—used on labs, hospital wards and operating rooms, and even a contaminated commercial airliner in which a shipment of live polio vaccine had broken.

Developed time and temperature standards for disposal of contaminated trash, air, and sewage.

And a lot of other things, including work on diseases like inhalation anthrax, a disease caught by some workers in fur and wool, highly fatal.

References you might look into: "Microbiological Safety in US and Foreign Labs" AD 268 635(\$3/.65) "Causal Factors in Microbiological Lab Accidents and Infections" AD 615 014 price not known. Source: Storage and Dissemination Section Clearinghouse for Federal Scientific and Technical Information, 6285 Port Royal Road, Springfield, Va. 22151. \$3 hard copy; 65¢ microfiche, whatever that is.

Above infor from a series on CBR Defense printed in recent copies of *Ordnance*.

Senator Edward Kennedy announced that he would put in a bill which would do all sorts of wonders

in the saving of lives and prevention of crime, namely a total Federal registration of firearms and owners, which would do many wonders for the nation.

Most European nations have such a deal, which has worked wonders in Ireland, notably in Belfast, where the IRA recently surfaced with Sterling SMGs and various bombs. France has Good Tight Laws of this nature, also private arsenals of illegal arms dating from the 1940-45 period. I have heard that some Frenchmen even hunt deer with Schmeisser MP40s . . .

Italy had the same troubles and results. A little of it got down in Guareschi's series on "Don Camillo," a pugnacious priest in a heavily Communist area, fiction based on real life and very enjoyable as well. Don Camillo had a few war souvenirs around and didn't hesitate to use them at times, as did his opponents.

Oddly enough, Norway, which has a fair sized Home Guard force, is said to do little fancy accounting on this force's weapons. It happened in 1940 that reservists reporting to the local armory for their gear and guns found Quislings or Germans ahead of them. The Home Guard keeps theirs at home and doesn't have too much data down on paper. After all, when the German Town Commandant asked for all the guns in the place, he could get the list out and check it. Later in the game it could mean death for noncompliance . . .

Could we use such a law as a

foundation for a general Federal Control Bill? Not only guns, but cars, snowmobiles, dangerous instruments, mimeographs, when used by Subversive Elements, and so forth. After all, we once had a series of laws which for 13 years saved us from the terrors of legal beer and booze. The salvation turned out to be worse than the booze did.

JOHN P. CONLON

52 Columbia Street  
Newark, Ohio 43055

*As any adolescent knows, all those problems are simple if looked at simply, logically, and clear-eyed. And they all have nice, clear, simple-minded answers that ought to work, as the WCTU knew.*

Dear Sir:

Each mission to the Moon has left material there, some official, some not. Alan Shepard even left a couple of golf balls, hit far out into the Moondocks.

I am not against this, as it raises the speculation of great prizes for future souvenir hunters.

I hope the things are well identified, though. Otherwise I feel there will be more "authentic" Shepard golf balls, et cetera, abounding than there were pieces of the True Cross after the Crusades.

DOUGLAS A. KING

803 W. Hacienda Drive  
Corona, California 91720

*They'll probably claim that the golf balls reproduced under Lunar conditions!*

Dear Mr. Campbell:

I read with interest the article by K. C. Keefe, entitled "Alpha-wave Conditioning," in the June 1971 issue of *Analog*. The article contained a few inaccuracies which would be worth revealing to your readership.

The chart recording (Fig. 1) on page 61 has apparently been mislabeled. The segment labeled "0-4" looks more like 13-20 Hz, and "13-20" more like 0-4 Hz. Reducing the many complex cerebral waveforms into four categories is so grossly simplistic as to be almost completely unusable. While the terms, 'beta', 'alpha', 'theta' and 'delta' are in common use among researchers, the limitations of this simplism are assumed. In more popular articles, it should be stated that the description is a loose one.

The most important qualification is that there are many states of consciousness that are typified by alpha-wave activity. These include meditation of most varieties, marijuana intoxication, the hypnagogic state (wake/sleep transition), et cetera. It is also important to point out that alpha-wave activity is only one parameter of meditation.

The article seems to suggest that Dr. J. Kamiya was the first, or at least among the first, to experiment with operant conditioning of alpha-wave activity. While his work has been important, especially in the light of Kasamatsu & Hirai's study, it was by no means the first. In the early forties, Jasper & Shagass pub-

lished several papers (1) revealing experiments with operant conditioning of alpha wave activity.

The "fascinating potentials" that Mr. Keefe mentions are already fact, though they may admittedly be potentials still for his company, Phenomenological Systems, Inc. David Rosenboom recently gave a biofeedback concert at Automation House in New York by feeding alpha activity into a computer and an ARP Synthesizer (2). The Department of Defense financed a study in which subjects learned to control their alpha rhythm well enough to "send" Morse code (3). The ALPHAPHONE headset—made by Aquarius Electronics, the company for which Mr. Keefe was once a distributor—has a standard provision for "jumper cables" that allow two people to hear each other's brainwaves, and possibly—depending on the individuals—to synchronize them.

The potentials are much farther out. But first let me qualify my statements about Mr. Keefe's relation to Phenomenological Systems Incorporated, and Aquarius Electronics. Aquarius Electronics was incorporated on December 19, 1969. T. Scully and F. Bakerich filed a United States Patent Application on January 18, 1971, entitled "Electroencephalophone and Feedback System." This patent application disclosed an instrument which E. A. Estribou and K. C. Keefe, et al., were handling as distributors, under con-

tract to Aquarius Electronics—as signee of the patent application and manufacturer of the ALPHA-PHONE headset.

For a variety of reasons, which included grossly simplistic and somewhat misleading advertising practices, use of the Aquarius Electronics name and logo (without permission), and others (available upon request), Aquarius Electronics canceled its distribution contract with Keefe, Estribou, et al. Shortly thereafter, (early in 1971), they formed Phenomenological Systems Incorporated, and began production on a device similar to the ALPHA-PHONE headset, called the “Model 360”. It is interesting to note that the Model 360 costs \$190—\$50 more than the ALPHAPHONE headset.

There are many fascinating potentials for bio-feedback which were not touched upon in the Keefe article. Aquarius Electronics is building a sensory bombardment feedback system for research use by Dr. Stanley Krippner, Director of the William Menninger Dream Laboratory, Department of Psychiatry, Maimonides Medical Center, Brooklyn, New York. This tool will monitor the brain, heart and respiratory systems to program a light show and electronic music system. Initial experiments with a non-brainwave-correlated sensory bombardment system caused statistically significant improvements in subjects ESP scores.

Dr. Krippner, et al., have run pre-

liminary experiments which may show a positive correlation between ESP scores and alpha production. Already he has found that subjects with poor scores on ESP tests improved after alpha control training. We can look for some interesting articles from Dr. Krippner in this regard in the near future.

Testing by Engstrom, London, Hart, Leibovitz, Galbraith, et al., has indicated that while there is no apparent correlate to hypnosis, susceptibility to hypnosis is closely related to alpha wave production. If one were in control of his cerebral electricity, it is quite possible that he could choose whether or not to avail himself to suggestion.

As mentioned above, two people may hook up together using ALPHAPHONE headsets in tandem. This unit has four output jacks. Two of them transfer the sound heard in the headphones—one of which cuts off the feedback to the subject—to external headphones, speaker-amplifier systems—with isolating circuit—inexpensive battery operated tape recorders, et cetera. There is also an EEG output for use with oscilloscopes, chart recorders, light shows, other feedback systems, et cetera. Finally, there is an FM output for recording and telemetry applications. Aquarius is in preparation of a Photon Coupler—isolating circuit—which makes plugging into line operated equipment safe, and a tuned filter computer which sorts brainwaves into frequency ranges, turns on lights

accordingly, and offers both digital and analog audio feedback. This unit has already been ordered by prominent researchers.

Attention span lengthening is one of the more exciting possibilities of alpha conditioning. By learning to vigorously hold off alpha waves, with the eyes closed, it is quite possible that one could increase his attention span to double its former potential in a matter of weeks, or even less. I say "quite possible" because there is currently no research paper to which I can refer. To me, it is a verity because I have experienced it.

DON DOUGLAS

Aquarius Electronics

P.O. Box 627

Mendocino, California 95460

*We received a lot of inquiries on that alpha-feedback article requesting information on the device.*

*Here's where you can write for it!*

Dear Mr. Campbell:

I have just finished Gordon Dickson's "The Tactics of Mistake." Tremendous! Best story to come down the pike since "Demon Breed"—and that's saying a lot.

What I want to know now is: How do we get Dickson a seat on our Joint Chiefs of Staff? This country needs him!

CHARLES H. CHANDLER

311 North New Street

Staunton, Virginia 24401

*An author's job is to tell an interesting tale—not to win wars against a cunning enemy. So an author takes a*

*sneaky advantage—he runs both sides of the war, and has "the enemy" make exactly the mistakes he wants.*

*Hitler's great mistake was to think he could plan both sides of the war and have it come out his way.*

Dear Mr. Campbell:

Could you be kind enough to run the following in the "Brass Tacks" letter column?

I am preparing an annotated bibliography of works about the Nineteenth Century English poet Samuel Taylor Coleridge. Because of Coleridge's use of fantasy and the weird in such poems as "The Rime of the Ancient Mariner," "Kubla Khan," and "Christobel," Coleridge seems to appeal to writers of fantasy, SF and weird tales. Various writers in these genres like R. L. Fanthrope, Malcolm Ferguson, Robert Heinlein, M. R. James, Fritz Leiber, and Lan Wright allude to, or quote from, Coleridge in their fiction. I would like to include as many references of this kind to Coleridge as possible, and I would like to hear from anyone who knows of or comes across such material in fantasy, SF or supernatural horror stories.

EDWARD S. LAUTERBACH

Associate Professor

English Department

Purdue University

Lafayette, Indiana 47907

*L. Sprague de Camp and Fletcher Pratt, in their story "The Castle of Iron" misdirected their heroes to Kubla Khan's Pleasure Dome.*

## ECOLOGICAL NOTES

*continued from page 7*

So . . . the new low-lead or no-lead gasolines were developed. If you stick to the no-lead gasolines, and invest from \$200 to \$600 in platinum catalytic anti-pollution devices, you can have your car equipped for low-pollution exhaust. (For a while. Other things gradually poison the platinum, so the devices have to be replaced after some 6,000 to 10,000 miles. At \$200 to \$600 depending on the size and number your car needs.)

However, it now turns out that there's another bug in this scheme.

To get a gasoline modern high-compression engines need (remaining Model T and Model A Fords, for instance, don't need high-octane gas, and can get along fine on plain old-fashioned "white gas"—ordinary gasoline with no lead.) it's necessary to use an inherently high-octane rating gasoline. Actually, straight octane itself would practically blow the heads off of a modern high-compression engine!

The way to achieve that is to use aromatic hydrocarbons, instead of all-straight-chain hydrocarbons. Benzene, the fundamental aromatic compound, is a magnificent, very-high-octane fuel. A darn sight more expensive than the straight-chain hydrocarbons that dominate in ordinary crude oil, these aromatics have

to be synthesized in large, complex, expensive catalytic processing reactors.

But because of the "Ecology Now!" howls from the Instant Experts and the Caring Ecologists, the oil companies undertook the production of the new fuels—which was neither easy nor cheap.

Now the present situation is that catalytic exhaust afterburners simply aren't around—oh, you *can* get one, if you've got the money, and try hard, and can find some mechanic with knowledge enough to install it—and the new, up-to-50%-aromatic low-lead or no-lead gasolines are around and are being used.

And it's now found that the partially burned hydrocarbons coming out the exhaust aren't the simple straight-carbon-atom-chain acids, aldehydes, ketones and alcohols of the old gasolines—they contain a lot of complex aromatic semi-oxidized substances.

Among which are at least four of the most intensely carcinogenic compounds known.

So now, instead of the lead poisoning—which we can treat very effectively with chelates—of the old gasolines, we get cancer-causers. Cancer we can't treat very well.

Hail the great victory of the Instant Ecology Experts! They made those uncaring manufacturers do what they should! No more stalling—no more holding back on Important Things for mere dilly-dallying research to investigate consequences!

“Do it! Do it *now*, like we say!”

In California, the Instant Ecology Experts have scored another triumph.

One of the Edison companies had built a new natural-gas-fired power plant well out of the city. The organized “Do what we say *now!*” ecologists launched a campaign, and forced the Edison Company to agree *not* to use their new plant—equipped with modern stack-gas filters—at its designed power, and thus forced the company to run the old, oil-fueled power plant, with inadequate stack-gas filters (it wasn’t originally designed for filtering) *in* the city. The old plant is inefficient both because of antiquated design, and because of age; the company’s plan had been to eliminate the plant entirely.

Hail the triumph of the Concerned Ecologists!

All across the country, Concerned Ecologists have been fighting and winning their battles to prevent the use or construction of nuclear power plants. Already completed and ready-to-go power plants have been stopped by legal injunctions thanks to the wise Caring Ecologists.

Who don’t have the foggiest notion what the hell they’re talking about, of course.

Those oh-so-concerned “ecologists” aren’t ecologists, never have been, and apparently never will be. The essence of ecology is an extremely complex interactive web of

multiple forces; to *start* to be a genuine ecologist, you’d have to start with a full course in the technology of system analysis, add some higher matrix mathematical analysis, a year or two of physics, another couple of years of biochemistry, and then get some experience with real life-system patterns, and learn to truly understand why wolves are so necessary for healthy, vigorous and contented deer.

You can *not* get any simple, sure, certain answers from any genuine ecologist—he’ll give you tentative answers full of words no slogan-writer would ever use such as “possibly,” “probably,” and “so far as is known” and “of course it’s never been adequately studied” and even “we just don’t know.”

It takes the Instant Experts and the Caring Ecologists who don’t have the slightest idea of the real complexity of problems—and are too arrogant to admit the possibility of their ignorance—to have sure, simple, certain answers.

With respect to nuclear power plants, the Instant Experts exert their powerful emotional reasoning, and their minute understanding to the utmost.

In New York City they’ve blocked the use of a nuclear reactor intended solely for research studies; Columbia University built it so that courses in modern physics would be possible.

Here the ecology freaks joined forces with other anti-technology groups to suppress something neces-

sary to an adequate study course in physics.

Since these Caring Ecologists are not to be influenced by mere facts ("Don't try to give me all those facts! You know I've made up my mind and you're just trying to confuse me!"), they can't be argued with. Typically, they have "non-negotiable demands."

For one thing, they keep talking about the awful danger of the power reactor going out of control and becoming an atomic bomb, devastating everything for miles around, and spreading deadly fallout all over the state.

The fact is that the Sun is a lot more apt to go Nova next January 1st than that a power reactor would detonate in an atomic explosion. You know that TNT is made from coal, and you know all those tons and tons of coal the local coal-burning power plant has in its reserve pile? Just think what an awful explosion that's going to make . . .

Well—TNT *is* made from coal, isn't it? So that coal pile can explode, can't it, because it's got TNT in it, hasn't it?

No, Junior, it won't explode, because it takes a damn complex and difficult procedure to get the toluene out of coal-tar, purify it, tri-nitrate it, and get TNT from coal.

Your local granite mountain is full of uranium; Manhattan Island must contain tens of thousands of tons of U-235 in its stupendous tonnage of granite, so obviously Manhattan Is-

land must be in imminent danger of blowing the State of New York off the map, huh?

Two years of intense research, plus two billion dollars worth of enormous industrial complexes, were necessary to extract the necessary U-235 and Pu-239, and to build the delicate mechanism to shape those whimsical metals into bombs. The stuff is nearly impossible to machine—it undergoes changes of crystalline form, volume and density by the mere fact of trying to machine it! It took years and tremendous effort to make the stuff go off at all.

Because of the enormous amounts of heat released when uranium starts reacting in nuclear chain reaction, unless exceedingly tricky special conditions are contrived—driving subcritical amounts into a super-critical configuration—in microseconds, no explosion occurs. The stuff simply gets hot, melts, and runs away from the place. And as soon as the *exact* geometrical arrangement of the super-purified, impurity-free metal is destroyed—the chain reaction dies out.

If it takes more than a millionth of a second to get the pieces into the correct arrangement—they never do get together, because they've melted, changed form, and don't fit.

A nuclear power reactor can not, by any wildest possible stretch of the imagination, detonate.

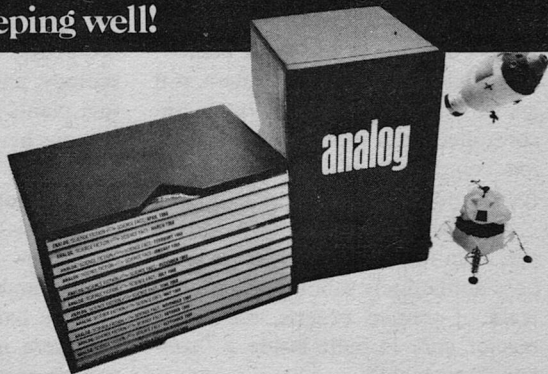
That is flatly as impossible as having a pile of coal explode because "it



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contains TNT, don't it?"

A nuclear reactor *can* "slag down"—which means that if by some incredible concatenation of highly improbable accidents, *none* of the safeguards designed into it functioned, and it really ran completely wild—completely unrestrained by *any* of the dozen or so independent safety systems—it would generate heat so great the entire reactor core would melt down into a bubbling pool of lava.

Which would promptly start cooling off, because the reactive uranium would no longer be pure enough to react—all the inert or neutron-absorbing substances in the reactor

core structure would be mixed in with it, making it about as dangerous as those hundreds of thousands of tons of uranium in the granite of Manhattan Island. Which doesn't react solely because it's a cooled-down lava containing uranium and a lot of inert and/or neutron-absorbing impurities.

The fact that every granite mountain is a mass of low-grade uranium ore, and they do not react, is the ultimate proof that it takes a *highly special arrangement* of uranium to get a reaction going.

As soon as a reactor core overheats—it goes back to being a small mountain of low-grade uranium ore

that doesn't have the right arrangement. End of reaction.

A nuclear reactor plant absolutely *can not* explode as an atomic bomb.

A nuclear reactor power plant, if it goes completely wild—absolutely uncontrolled—will destroy its functioning completely. And that prevents further nuclear reaction.

To prevent any possibility of danger, even if the reactor does go wild, or is deliberately sabotaged by a full team of trained experts, the entire reactor core is built inside a "containment shield".

The exact design of containment shields differ, but typically they consist of a sphere of *eighteen-inch thick* stainless steel—they had to develop a whole new technology to produce such massive castings!—inside a couple of feet of high-strength high-density concrete.

Several nuclear reactors, in various countries all over the Earth, have been operating quietly, successfully, and usefully for years. The only injuries yet recorded in power reactor operation have been of the ordinary industrial type—Joe slips and drops his hammer on Bill's left foot, and Bill's in the hospital a couple days while the doctors assort the broken bones and put them back where they belong.

But you can't convince an Ecology Freak. He's already made up his mind, and he's not going to let a few facts confuse The Cause.

So again and again, the Instant Experts have stopped the construc-

tion and operation of power plants an area badly needs, a nuclear plant that produces no pollutants in the biosphere, that does *not* upset the ecology, and forced the use of fossil fuel plants that inescapably produce noxious by-products.

Thermal "pollution" does *not* destroy ecology; the greatest effect it can have is to cause a shift of ecology from low-temperature species to slightly higher-temperature types.

If we had enough thermal pollution here in the New York metropolitan area, for instance, we might cause a shift of ecology such that the Juncos and Chickadees no longer came to winter in this area—and we got mocking birds in our magnolia trees instead.

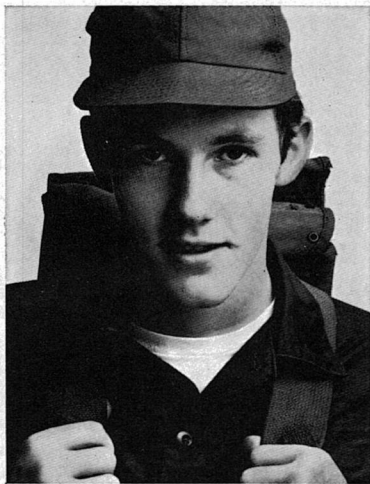
This would be a terrible, awful devastation?

Recent studies by General Electric have shown that cooling towers for power plants can be so designed that they produce a huge vertical jet of hot air that drives upwards for thousands of feet, entraining vast volumes of the surrounding air with it. These jets, on a large scale, are capable of piercing and thus breaking up the kind of thermal inversions in the atmosphere that cause the severe smog days in Los Angeles, New York, and other large city areas.

Thermal "pollution" of this type may turn out to be the best cure for city-pollution.

If, that is, the Instant Expert Ecologists will let scientists do something rational. ■ The Editor.

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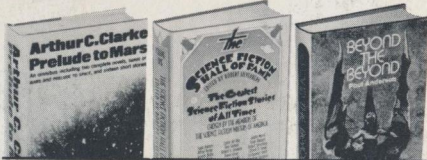
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