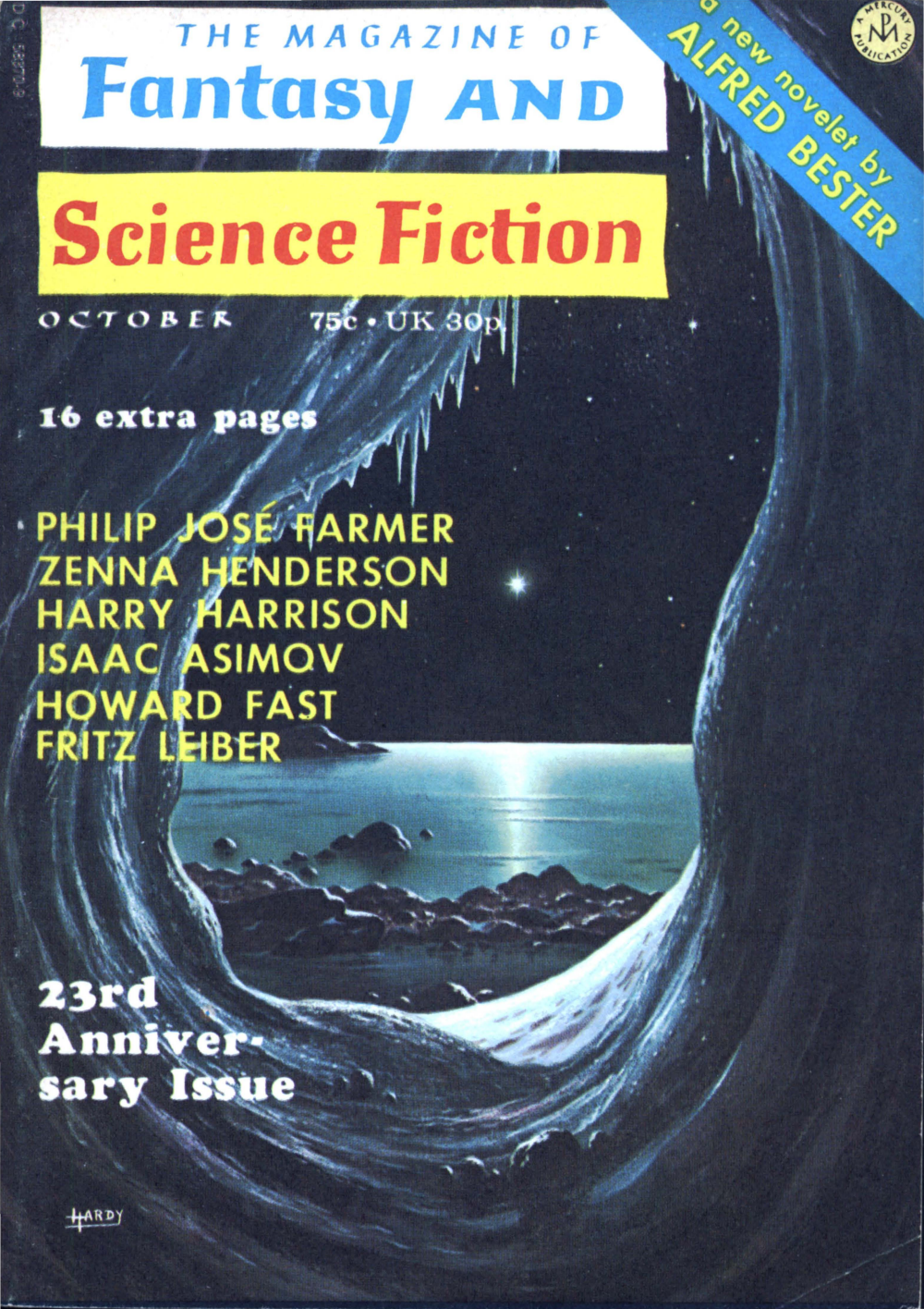
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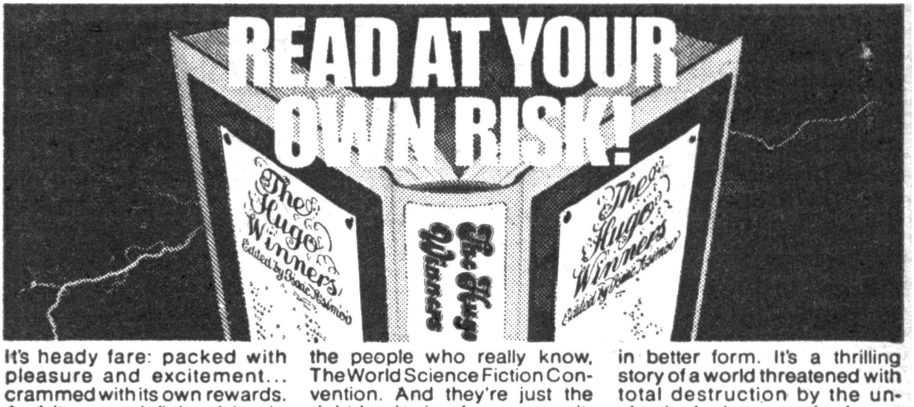

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About nine years ago, Alfred Bester stopped writing fantasy and sf to become an editor at *Holiday* Magazine. He didn't cut down; he just stopped. Thus we were both surprised and delighted to get a recent letter from Mr. Bester that began: "*Holiday* has moved to Indianapolis, and after one look at that mighty metrop. I politely refused to go along as Senior Editor. So I've gone back to honest fiction writing. . ." Indianapolis, we love you.

The Animal Fair

by ALFRED BESTER

I went to the animal fair.
The birds and the beasts were there.
By the light of the moon,
The big baboon,
Was combing his golden hair.

The monkey he got drunk,
And climbed up the elephant's trunk.
The elephant sneezed
And fell on his knees,
But what became of the monk?

Traditional nursery song

THERE IS A HIGH HILL IN Bucks County, Pennsylvania, that is called Red Hill because it is formed of red shale. There is an abandoned farm on top of the hill which is called Red Hill farm. It was deserted many years ago when the children of farmers decided that there was more excitement and entertainment in the cities.

Red Hill farm has an old stone house with thick walls, oaken floors and the enormous fireplaces in which the cooking was done two hundred years ago. There is a slate-roofed smokehouse behind it in which hams should be hung. There is a small red barn cluttered with forgotten things like children's sleighs and pieces of horses'

harness, and there is a big red barn which is the Big Red Schoolhouse.

Here the ladies and gentlemen who possess the farm in fact, if not in fee simple absolute, hold meetings by day and night to discuss problems of portent and to educate their children. But you must understand that they speak the language of creatures which few humans can hear or understand. Most of us learned it when we were young but lost it as it was replaced by human speech. A rare few can still speak both, and this is our story.

The meetings in the Big Red Schoolhouse are governed by the Chairman, a ring-necked cock pheasant who is all pomp and strut. He is secretly referred to as "The Sex Maniac" because he maintains a harem of five hens. The Professor is a white rat who escaped from the Rutgers University laboratories after three years of intensive education. He believes that he is qualified for a Ph.D. and is considering doing his dissertation "On The Relevance of Hot Water to Science."

George Washington Woodchuck is the peerless surveyor of Red Hill farm. He knows every inch of its forty acres and is the arbiter of all territorial disputes. The Senior Rabbit, who is occasionally called "The Scoutmaster," is the mentor of morality and much alarmed by the freedom and excesses of the Red Hill young. "I will not," he says, "permit Red Hill to become another Woodstock." He also deplores modern music.

There are many other members of the Big Red Schoolhouse—deer, who have darling manners but are really awfully dumb. The intellectuals call them "The Debutantes." Moses Mole, who is virtually blind, as all moles are, is pestering the Professor to teach him astronomy. "But how can I teach you astronomy when you can't even see the stars?" "I don't want to be an observing astronomer. I want to be a mathematical astronomer like Einstein." It looks as though the Professor will have to introduce a course in the New Math.

There are a Cardinal and a Brown Thrasher who have mean tempers and are always picking fights. The Cardinal is called "His Eminence," of course, and the Brown Thrasher is nicknamed "Jack Johnson." It's true that Jack Johnson has a rotten disposition, but he sings beautifully and conducts regular vocal classes. On the other hand the voice of His Eminence can only be called painful.

The Chaldean Chicken is a runaway from a hatchery down the road, and she's a real mixed-up girl. She's a White

Leghorn and had the misfortune at an early age to discover that Leghorn is a place in Italy. Consequently she speaks a gibberish which she believes is fluent Italian. "Ah, *caro mio, come est? Benny*, I hope. *Grazie.* And with *meeyo* is *benny* too." She's called the Chaldean because she's spaced out on astrology, which infuriates the Professor. "Ah, you will never be *sympathetico* with him. You are Gasitorius and he is Zapricorn."

The cleverest members of the Big Red Schoolhouse are the crows, who are witty and talkative and sound like an opening night party at a theatrical restaurant. Unfortunately they are not respected by the Establishment, which regards them as "mere mummers" who are likely to try to borrow something (never returned) and who turn serious discussions into a minstrel show. It must be admitted that when two crows get together they begin to behave like end men in search of an interlocutor, convulsing themselves with ancient gags.

"Which do you like, the old writers or the new writers?"

"My brother's got that."

"Got what?"

"Neuritis."

Caw! Caw! Caw!

"How many children do you have?"

"I have five, thank you."

"Don't thank me, friend. Don't thank me."

Caw! Caw! Caw!

It was on an evening in May when the light is long and the shadows even longer that the Chairman entered the Big Red Schoolhouse attended by his harem. Everyone was there and deeply involved in a discussion of a proposal by the Professor. It was that they should establish an Underground Railroad, something like the Abolitionists, to enable other escapees to reach freedom. Moe Mole, who is rather literal-minded, was pointing out that it would be extremely difficult for him to dig tunnels big enough to accommodate railroad cars. "I saw one once. They're as big as houses." Jack Johnson was needling His Eminence to give flying lessons to all refugees, regardless of race, creed or species. Two black crows were cawing it up. In short, it was a typical Red Barn gathering.

"I call this meeting to order with important news," the Chairman said. "I say, Kaff Kaff, with vital intelligence. Flora, do sit down. Oh, sorry. Frances, do sit—Felicia? Oh; Phyllis. Yes. Quite. Kaff Kaff. Do sit down, Phyllis. This morning a Cadillac drove up the lane leading to Red Hill farm—"

"Two hundred and thirty-five-point-nine yards," Geo. W. Woodchuck said, "bearing-east-southeast. Latitude—"

"Yes, yes, my dear George. It was followed by a Volvo containing—"

"Which do you like, a Cadillac or a Volvo?"

"My father's got that."

"Got what?"

"A cadillac condition."

Caw! Caw! Caw!

"Gentlemen! Gentlemen! Please! This is serious. The Cadillac contained a real estate agent. The foreign vehicle contained a man, a woman and an extremely small child, sex as yet undetermined. It is my judgment, Kaff Kaff, I say, my measured opinion that our farm is being shown for sale."

"May is a bad month for buying," the Chaldean Chicken declared. "*Importanto* decisions should be *reservato* for the Sign of Jemimah."

"The word is Gemini," the Professor shouted. "The least you can do is get your superstitions straight."

"You are a male chauvinist rat," Miss Leghorn retorted, "And I am going to form a Chickens' Lib."

"Yes, yes, my dear. And I will be the first to contribute to your worthy cause. Never mind that look, Frances—Oh, Fifi? There is no need for a Pheasants' Lib movement. You are already liberated. Kaff Kaff. Now, ladies and gentlemen, we are involved in, I say, we are committed to a struggle for the preservation of our property. We must not permit any strangers (I might almost call them squatters) to invade us. We must make the land as unattractive as possible, and this will demand sacrifices."

"Name one that you'll make," the Professor said.

"I will name several. Ladies," here the Chairman addressed himself to the does. "Please do not permit yourselves to be seen. The human animal is always enchanted by your beauty and glamor."

The Debutantes giggled prettily.

"My dear Scoutmaster," the Chairman went on to the Senior Rabbit, "the same holds true for yourself and your entire troop. Please disappear until further notice. No more jamborees on the lawns. I, of course, will make a similar sacrifice. I shall conceal my blazing magnificence. Kaff Kaff."

Moe Mole said, "I'm always concealed."

"To be sure. To be sure. But Moses, would it be possible for you to tunnel all the grounds, raising those unsightly mounds? You will have to double your efforts, but it would be most helpful."

"I'll get the brothers from Moles Anonymous to lend a hand."

"Splendid. Splendid. Now, George W., I ask this as a special favor. Would you be kind enough to give up your invaluable surveying for the nonce, I say, Kaff Kaff, temporarily, and eat the daffodils?"

"I hate the taste."

"I don't blame him," the Senior Rabbit said. "They're disgusting."

"But so appealing visually to the human eye. You don't have to actually devour them, George; just cut them down and chew a little. I will do the same for the lilacs, under cover of darkness, of course, and my dear ladies will assist."

Jack Johnson said, "What about me and his immanence?"

"His Eminence will remain out of sight but will sing. You will remain in sight but will not sing."

"I'm as pretty as that Jesuit."

"Yeah? You want to prove it? Step outside."

"Gentlemen. Gentlemen. Please! We are concerting an all-out attack. Now our members of Actors Equity will continue their customary depredations, concentrating on the apple, pear and peach trees."

"We ought to eat the corn, too."

"I'm not going to eat you, friend."

Caw! Caw! Caw!

"Miss Leghorn will remain out of sight. There is nothing more appealing to the human animal than a chicken meditating on a summer day. Oh, and Jack, dear boy, will you try to dispossess the Mockingbird? There is nothing more appealing than a mockingbird serenading on a summer night."

"Why don't he ever join up?"

"I have solicited him many times, and he has always refused. I'm afraid he'll refuse to be drafted now."

"I'll chase him all the way to Canada."

"I shall continue to supervise the campaign from my command post in Freda's—ah, Francie's—ah, from my command post under the lilac bush. I assure you, ladies and gentlemen, we cannot fail. Meeting adjourned."

They failed, of course. Those losers from the Big City took two looks at Red Hill farm and fell in love with it. They saw the miniature hogbacks that Moe Mole had dug and loved them. "Moles have their rights," the husband said. They saw George W. decimating the daffodils. "Woodchucks have their rights," the wife said. "Next year we'll plant enough

for us and him." The Kaff Kaff of the Chairman doing his best to destroy the lilacs put them in ecstasies. Flashing glimpses of the does and their fawns hiding in the woods enchanted them. "Do you think they'll all let us live here with them?" the wife asked.

They bought the farm at a high price ($1,000 an acre) with the help of a mortgage, moved in all their possessions and took up residence. Almost immediately there were hammerings and sawings inside the house and flutters of wash outside, hung on a line strung between a couple of oak trees.

They were a family of four. The head of the house was a Burmese cat, all tan and brown with golden eyes, who ruled with an imperious hand. Then there came the husband and wife, and a small boy aged two years who ruled the Burmese. The news of the cat rather disturbed the Big Red Schoolhouse, which is not fond of predators. They are all vegetarians, and the Chaldean Chicken has formed an association called OFFO, which stands for Organic Foods For Oll. In the opinion of the Professor, Miss Leghorn is ineducable.

"No, it's nothing to worry about," George W. assured the assembled. "She's a right royalty."

"Royalty?"

"I had a long talk with her through the screen door. She's some kind of Burmese Princess, and if the Burmese were ever hunters, it's been bred out of her."

"She says. Behind a door."

"No. I helped her get it open, and we had a real friendly time until the lady ran out and grabbed her and put her back in the house. She was mad."

"Why?"

"Well, it seems that these Burmese types are very high-class, and they don't let them out. They're afraid she'll catch hemophilia or something. The Princess is kind of lonely. We ought to do something for her."

"Hemophilia is not contagious," the Professor said. "It is a congenital characteristic transmitted through the female chromosome."

"So, all right. Leukemia or something."

"What about the family?"

"The Princess says they're a little loose. The name is Dupree. He's Constantine and she's Constance, so they call each other Connie and the Princess never knows where she's at."

"And the kid?"

"He's a boy and he's got six names."

"Six?"

"They call him after some kind of poem, which I think is a pretty rotten scene: James

James Morrison Morrison Weatherby George."

"That's four names," the Professor objected.

"But mathematically speaking," Moe Mole began, "it really counts up to—"

"All right. All right. Six. How old is he?"

"Two."

"What does he do?"

"Not much. Just crawls around."

"At two? Arrested. What does the father do?"

"He's an editor."

"What's that?"

"You know those pieces of paper we see sometimes with print on them like Tomato Ketchup, Net Wt. 32 Oz.; or Pall Mall Famous Cigarettes—Wherever Particular People Congregate?"

"Whatever they mean. And?"

"The Princess says somebody has to be in charge of the print. That's an editor."

"What does she do?"

"Who?"

"The other Connie."

"She pastes food on paper."

"She what?"

"That's what the Princess said."

"Pastes food on paper?"

"The Princess says it tastes real good."

"She is not pasting food on paper," the Professor said. "She is making paintings." He turned to Geo. Woodchuck. "In my opinion your friend, the Burmese Princess, is an ass."

"She wants to meet you. Her Connie, the man, went to Rutgers, too"

"Did he, now? Was he Phi Beta Kappa? No matter. Perhaps we can arrange something."

"He doesn't speak our language."

"Too bad. Can he learn? How old is he?"

"Around thirty."

The Professor shook his head. "A senior citizen. Too late."

At this point one of the Endmen said, "A funny thing is happening on its way to the barn."

They all stared at him.

"Something's coming," he explained.

They looked through the slit in the barn door. A curious creature, pink and naked, was crawling across the lawn in their direction.

"Where? Where?" Moe Mole asked.

"Bearing south-southwest," George W. told him.

"What is it?"

"It's a Monster!" Miss Leghorn cried.

The Monster crawled through the slit, stopped, rested and panted. Then he looked at the assembly. The assembly examined him.

"It's James James Morrison Morrison Weatherby George," the Woodchuck said. "I saw him hugging the Princess."

"Da," the Monster said pleasantly.

"An obvious illiterate," the Professor said peevishly. "It can't speak. Let's adjourn."

"I can too speak," James said in the creature tongue. "Why are you so mean to me?"

"My dear Monster," the Professor apologized handsomely, "I had no idea. I beg you to forgive me."

"Da," James said.

"But of course," the White Rat explained. "Science always finds the answer. He can speak to us, but he can't speak to his own kind."

"Da," James said.

"You've got to speak our language, buddy boy," Jack Johnson said.

"We think he's cute in any language," the Debutantes tittered.

"Ladies," the Monster said. "I thank you for the generous compliment. I am but a simple soul, but I am not impervious to flattery from such glorious females as you. In this hurly-burly world of conflict and confrontation it is a comfort for a lonely creature like myself to know that there are yet a few who are capable of relating and communicating."

"His primitive eloquence goes to the heart," said a fawn, batting her eyes at James.

"Where the hell did you get that fancy spiel?" one of the Endmen demanded.

"From my father's editorials," James grinned. "He reads them out loud to my mother."

"Honest and modest," the Scoutmaster said. "I approve of that."

"Hey, Monster, what's it like living with human types? Is it different?"

"I don't know, sir. I've never lived with anything else."

"What about that Princess? The Burmese type."

"Oh, she's just a flirt. She's viscerotonic; that is, she operates from instinctive rather than intellectual motivation."

"Jeez!" Jack Johnson exclaimed.

"One of them editorials?" an Endmen asked.

"Yes, sir. What I mean, ladies and gentlemen, is that this is the first chance I've ever had to carry on a rational conversation with anyone."

"Don't your parents talk to you?"

"Oh, yes, but when I answer they don't listen."

"That's because you talk Us and they talk Them."

"You know," the Professor said, "I believe this simplistic Monster may have some potential. I think I'll take him on as

one of my students in Arts & Sciences I."

"Here comes one of the two Connies," His Eminence warned.

"Right. Out, Monster. We'll see you tomorrow. Push him through the door, somebody."

James' mother picked him up and started back to the house. "Darling, you had a wonderful exploration. How nice that we don't have to worry about cars. Did you discover anything?"

"As a matter of fact I did," James answered. "There's a brilliant sodality of birds and beasts in the Big Red Barn who made me welcome and have very kindly volunteered to begin my education. They're all characters and most amusing. They call me Monster."

Alas, he was speaking creature language which his mother couldn't hear or understand. So he settled for "Da" in human, but he was extremely annoyed by his mother's failure to hear him, and this is the terrible conflict of our true story.

And so the education of James Dupree began in and around the Big Red Schoolhouse.

"Music achieved its peak in the Baroque Era," Jack Johnson said. "Telemann, Bach, Mozart. The greatest, the guy I dig the most, was Vivaldi. He had muscle. You understand? Right. Now what you have to keep in mind is that these cats made statements. And you have to realize that you just don't listen to music; you have to make it, which means that you have to conduct a conversation with the artists. Right? You hear their statement and then you answer them back. You agree with them or you argue with them. That's what it's all about."

"Thank you, sir."

"That's all right. Now let's hear you sound your A."

"As we dig deeper and deeper," Moe Mole said, "we find that, mathematically speaking, the temperature increases one degree Fahrenheit per foot. But the brothers from the north tell me that they strike a permafrost layer which is left over from the Glacial Epoch. This is very interesting. It means that the last glaciation is not yet finished in the mathematical sense. Have you ever seen an iceberg?"

"No, sir."

"I would like to dig down to the bottom of an iceberg to check the temperature."

"But wouldn't it be cold, sir?"

"Cold? Cold? Pah! Cold is better than pep pills."

"Thank you, sir."

"Let me see your hand," Miss Leghorn said. "*Benny. Benny.* The line of life is strong. Ah, but the line of Venus, of *amourismo*, is broken in *multo* places. I'm afraid you will have an unhappy love life, *caro mio.*"

"Repeat after me," the Senior Rabbit said. "On my honor."

"On my honor."

"I will do my best to do my duty."

"I will do my best to do my duty."

"For God and my country."

"For God and my country."

"And to obey the scout law."

"And to obey the scout law."

"I will help other people at all times."

"I will help other people at all times."

"And keep myself physically strong."

"And keep myself physically strong."

"Mentally awake."

"Mentally awake."

"And morally straight."

"And morally straight."

"Good. You are now an official Tenderfoot. We'll start knot tying tomorrow."

"Excuse me, sir. What does morally straight mean?"

"Now watch me," the Debutante said. "First you take a step/And then you take another/And then you take a step/And then you take another/And then, you're doing the Gazpacho. Now you try it."

"But I can't even walk, Ma'am."

"That's right," the Debutante said brightly. "So how can you dance? Shall we sit this one out? Tell me, have you read any good books lately?"

"My professor at Rutgers," the White Rat said, "taught me everything I know. He was a Phi Beta Kappa. He said that we are always faced with problems in the humanities and scientific disciplines and that the most important step is to first decide whether it's a problem of complexity or perplexity. Now, do you know the difference?"

"No, sir. I'm afraid I don't."

"Hmp! Arrested!"

"Sir, what is the difference?"

"George Woodchuck wants to tell you about surveying."

"I can't understand why the Professor said that," Geo. W. said. "Surveying can be an awfully dull line of work. I wouldn't want to wish it on my worst enemy."

"Then why do you do it, sir?"

"I don't know. Maybe, I suppose, because I'm the dull

type that enjoys it. But you're not a dull boy; you're very bright."

"Thank you, sir. Why don't you try me and see if I like it, too?"

"Well, all right, provided it's understood that I'm not trying to lay this on you."

"Understood, sir."

"Fair enough. Now, a proper surveying job can't be done unless you've got a fix on latitude and longitude. The altitude of the sun gives you your latitude, and time gives you your longitude. Got that?"

"But I can't tell time."

"Of course you can, my boy. You have your biological clock."

"I don't know what that is, sir."

"We all have it. Quick, now. What time is it?"

"Just before supper."

"No! No! How long since the sun culminated, that is, reached its highest altitude in the sky at noon? Quick, now! In hours, minutes and seconds. Off the top of your head."

"Six hours, seventeen minutes and five seconds."

"It should be three seconds. You'd be out by eight hundred yards." The Peerless Surveyor patted James generously. "You're a brilliant boy and you have your biological clock. Tomorrow we will beat the bounds of the farm."

"Ladies, I say, Kaff Kaff, women are changeable. Never forget that. We can't live with them and we can't live without them. As the great poet wrote: Whenas in silks my pheasant goes, then, then, methinks, how sweetly flows the liquefaction of her clothes. You are, I am afraid, a little too young for the second stanza, which is, to say the least, a trifle bawdy."

"Yes, sir."

"Now we come to the matter of the moment," the Chairman said. "I hope you're not colorblind."

"I don't know, sir."

"Color perception is essential for survival. Very well, we'll test you. What is the color of that flower?"

"It's the color of an iris."

"I know that, but what color? The name? The name?"

"Blue?" James said at a venture.

"It is marine purple navy. And that tulip?"

"Red?"

"It is cerise. Really, my young friend! Survival! Survival! And the lilacs?"

"Lilac, sir."

"Ah! Now you're exhibiting some perception. Very good. Tomorrow we will study ROYGBIV."

"I don't know what that is, sir."

"They are the initial letters of the colors of the spectrum,"

the Chairman said severely, and stalked off in a marked manner.

"Hey, kid."

"Yes, your Eminence?"

"Which one is your father?"

"The tall one, sir."

"What does he do?"

"Well, he talks a lot, your Eminence, and I listen a lot."

"What's he talk about?"

"Practically everything. Science and the state of the nation. Society. Ecology. Books. Ideas. The theater."

"What's that?"

"I don't know, sir. He also does a lot of cooking when he's home, mostly in a foreign language."

"He does, huh? Say, kid, any chance of him putting out some suet for me? I'm queer for suet."

All was not perpetual sweetness and light in the Big Red Schoolhouse; there were unpleasant moments occasionally.

There was the time that James crawled in cranky. He'd had a bad night owing to a surfeit of chocolate pudding w. whipped cream at supper, and he was tired and sullen. He rejected the gracious advances of the Debutantes. He made faces while the Professor was lecturing. He was quite impossible. He spoke just one word. It wasn't creature, it was human, and it wasn't "Da," it was "Damn!" Then he began to sob. The creatures, who never cry, gazed at him perplexedly.

"What's he doing?"

"He's crying," the voice of the Burmese Princess explained. She entered the barn. "I hope you'll forgive the intrusion, but I managed to get out and came after him. Hello, George. You're looking handsome today. This must be the Professor. James never told me you were so distinguished. The Chairman and His Eminence are magnificent, as usual. I can't tell you how many times I've admired you through the windows."

"Kaff Kaff. I thank your highness."

"You ain't so bad-looking yourself, baby."

"Come on, James, we'll go back to the house."

"But is he sick?" the Professor asked.

"No, just out of sorts. He has a temper, you know, inherited from his mother, who is rather Bohemian. Come along, James. Back to the house."

The Princess began to vamp James, tickling him with her cuddly fur but moving off a few steps each time he tried to embrace her for comfort. He crawled after her, out of the Schoolhouse and through the grass toward the house.

"He'll be all right tomorrow," she called. "Charming

place you have here. 'Bye, all."

"I told you she was a right royalty," George W. said.

And there was the time when one of the Endmen reeled into the Schoolhouse singing, "How you gonna keep 'em down on the farm after they seen Paree?" He examined the assembly with a bleary eye, rocking slightly. "You're all plastered," he informed them. "You're stoned." Then he was sick.

"What's the matter with our entertaining, I say, thespian friend?" the Chairman inquired.

"The berries on one of the bushes fermented," the other Endman explained, "and I couldn't stop him from eating them. He's blind drunk."

"Actors!" the Senior Rabbit burst out. "Let this be a lesson to you, James. Well, just don't stand there. Somebody get him out of here and walk him around."

"Sir?"

"Yes?"

"The hose is spraying the rose bushes. If we put him under the cold spray. . .?"

"That is keeping yourself mentally awake. By all means put this clown under the hose. I only hope he sits on a thorn."

"Connie," Constance said to Constantine, "I'm worried about Jamie."

"Why?"

"Shouldn't he be going to preschool?"

"Why?"

"He seems to be arrested."

"He isn't three yet. What do you want, Connie, some sort of prodigy entering Harvard aged ten and blighted for life? I want James to grow up a healthy normal boy without having his mind forced prematurely."

"If you will permit me, Professor," James said, "I would like to disagree with my learned colleague, Moe Mole, on the Big Bang Theory of cosmology."

"Cosmogony," the White Rat corrected shortly.

"Thank you, sir. The idea of a giant proto-atom exploding to produce the expanding universe as we know it today is most attractive, but in my opinion it is pure romance. I believe in the Steady State Theory—that our universe is constantly renewing itself with the birth of new stars and galaxies from the primordial hydrogen."

"But what is your proof?" Moses Mole asked.

"The eternal equation," James answered. "Energy is equal to mass multiplied by the speed of light raised to the second power."

A voice called in human, "James? Jamie? Where are you?"

"Excuse me, Professor," James said politely. "I'm wanted."

He crawled to the crack in the barn door and squirmed through with difficulty. "Da!" he cried in human.

"We'll have to open that door more," the Professor said irritably. "He's grown. Why in the world hasn't he learned how to walk? He's old enough. When I was his age, I had grandchildren."

The rabbits and fawns tittered.

"Class dismissed," the Professor said. He glared at Moses Mole. "You and your Big Bang Theory! Why can't you help me get microscopes for my biology seminar?"

"I haven't come across any underground," Moe said reasonably. "As a matter of fact, I wouldn't know one if I saw it. Could you describe a microscope mathematically?"

"$E=Mc^2$," the Professor snapped and marched off. He was in a terrible state of mind, and his classes were fortunate that they weren't taking examinations just now. He would have flunked every one of his students.

The Professor was deeply concerned about James James Morrison Morrison, who was past two years old and should be walking and talking human by now. He felt a sense of impending guilt and went to the duck pond for a searching self-examination.

"Now I am alone," the White Rat said. The mallard ducks paddled up to have a look at him, but he ignored them. Everybody knows that ducks are incapable of appreciating a solemn soliloquy.

"The quality of wisdom is not strained. It droppeth as the gentle rain from heaven; so who are we mere fardels to do battle with the angels? All I ask, James, is that ye remember me. This day is called Father's Day. He who shall outlive this day will stand a tiptoe when this day is named and yearly feast his neighbors. Old men forget, but is it not better to bear the slings and arrows of outrageous fortune?"

Then he began something between a growl and a song:

On the banks of the Old Raritan, my boys,
Where Old Rutgers evermore shall stand,
For has she not stood since the time of the flood
On the banks of the Old Raritan.

Feeling much better, the Professor returned to the Big Red Schoolhouse to prepare his first lecture on the New Math. "Zero," he said to himself. "One. Ten. Eleven. One hundred. One hundred and one. . ." He was counting in binary arithmetic.

Meanwhile, James James Morrison Morrison had finished his lunch (chicken salad, 1 slice bread w. butter, applesauce and milk) and was upstairs in his cot theoretically having a nap, actually in drowsy conversation with the Princess, who had made herself comfortable on his chest.

"I do love you," James said, "but you take me for granted. All you women are alike."

"That's because you love everything, James."

"Shouldn't everybody?"

"Certainly not. Everybody should love me, of course, but not everything. It reduces my rank."

"Princess, are you really a Burmese Princess?"

"I thought you said you loved me."

"But I happen to know you were born in Brooklyn."

"Politics, James. Politics. Daddy, who was also an admiral, was forced to flee Burma at a moment's notice. He barely had time to throw a few rubies into a flight bag and then came to Brooklyn."

"Why Brooklyn?"

"The plane was hijacked."

"What's a ruby?"

"Ask your Professor," the Princess snapped.

"Ah-ha! Jealous. Jealous. I knew I'd get you."

"Now who's taking who for granted?"

"Me. Shift up to my neck, Princess. I can't breathe."

"You are a male chauvinist pig," the Princess said as she obliged. "I'm merely your sex symbol."

"Say, why don't you join Miss Leghorn's Chickens' Lib movement?"

"Me, sir? What have I to do with chickens?"

"I notice you did all right with my chicken salad. Don't pretend you don't don't know what I'm talking about. I saw you up on the table when mamma was loading the dishwasher. I thought the mayonnaise was awful."

"Commercial."

"Can't you teach mamma how to make homemade mayo?"

"Me, sir? What have I to do with kitchens? I leave that to the help."

"Ah-ha! Gotcha again."

"I hate you," the Princess said. "I loathe and execrate you."

"You love me," James James said comfortably. "You love me and you're stuck with me. I've got you in my power."

"Are there any cats in the Red Barn?"

"No," James laughed. "You're the one and only Princess on Red Hill."

There was an outlandish noise outside, a snarling and screaming in creature voices.

"What's that?" James exclaimed.

The Princess got to the window in a scamper and returned. "Just a couple of farm dogs playing with George Woodchuck," she reported lazily. "Now, as we were saying about me—"

"Playing? That doesn't sound like playing to me. I'd better see for myself."

"James, you know you can't walk."

"I'm damn well going to walk now."

James James hove himself over the edge of the cot and fell to the floor. He gripped the edge of the bed and pulled himself upright. Then he tottered to the window.

"They aren't playing with George. He's in bad trouble."

James made his way out of the room, clutching at walls and door frames, managed the stairs by sitting down on every tread, butted the screen door open with his head, and was out on the soft meadow, trotting, tottering, falling, picking himself up, and driving himself toward the Peerless Surveyor who was being torn by two savage mongrels.

They snarled and snapped as James threw himself over George W. and were quite prepared to come in after both of them. James kicked and flailed at them. He also challenged and cursed them in the creature tongue, using language so frightful that it cannot be reported. The display of courage and determination discouraged the mongrels, who at last turned and made off jauntily as thought it had only been a game all along. James pulled himself to his knees, picked up George, lurched to his feet and began tottering toward the Big Red Barn.

"Thank you," George said.

"Aw, shut up," James replied.

When they reached the Schoolhouse, everyone was there. Nothing escapes attention on Red Hill. James James sat down on his fat bottom with the Surveyor still cradled in his arms. The Debutantes made sympathetic sounds.

"Hunters! Hoodlums!" the Senior Rabbit growled. "No one is safe from them. It's all the fault of the Bleeding Hearts. Understand them. Be kind to them. Help them. Help them do what? Kill."

"There is a triangle of Red Hill farm," Geo. W. said faintly, "measuring exactly one point six acres. It extends into the property next door where Paula, the pig, lives. Tell Paula she must respect our—She must—our boundar—"

"I'll tell her," James said, and began to cry.

They took the body of the

woodchuck from his arms and carried it to the woods where they left George exposed to the weather and nature. Creatures do not bury their dead. James was still sitting in the Big Red Schoolhouse, silently weeping.

"The kid's a right guy," one of the Endmen said.

"Yeah, he's got moxie. You see the way he fight them dogs to a Mexican stand-off? Two to one against, it was."

"Yeah. Hey, kid. Kid. It's all over now. Kid, you ever hear the one about the guy who goes into a butcher store, you should excuse the expression?" The Endman poked his partner.

"I'd like a pound of kidleys, please."

"You mean kidneys, don't you?"

"Well, I said kidleys, diddle I?"

"Oh, funny! Fun-nee! Huh, kid?"

"He will have to fall into the pond, Kaff Kaff, I say be immersed," the Chairman said. "He is covered with George's blood, and the two Commies will ask questions."

"That's Connies."

"No matter. Will our lovely young Debutantes be kind enough to convey our valiant friend to the pond and—"

"I can walk now," James said.

"To be sure. To be sure. And push him in. Kaff Kaff. And my apologies to the Mallards, who may resent the trespass. May I say, my dear boy, I say, may I state on behalf of us all that we welcome you as a fully accepted member of our commune. It is a privilege to have a specimen of your species, Kaff Kaff, among us. I'm sure my valued friend, the Professor, will agree."

"He's my best pupil," the White Rat admitted grudgingly, "but I'm going to have to work him over if he ever hopes to get into Rutgers."

"Oh, Jamie! You fell into the pond again."

"Da," the hero said.

That night was another bad night for James. He was terribly upset over the murder of George. He was in a quandary about the Scoutmaster's denunciation of dogs because he was as fond of dogs as he was of all creatures.

"There are good dogs and bad dogs," he kept insisting to himself, "and we mustn't judge the good by the bad. I think the Senior Rabbit was wrong, but how can a Scoutmaster be wrong?

"It's a question of the Categorical Imperative. Good acts lead to good results. Bad acts lead to bad results. But can good lead to bad or bad to good? My father could answer that question, but I'm damned

if I'll ask him in his language. He won't speak ours."

Here, the deep rumbling of the bats began to irritate him. Creature voices are pitched so much higher than human voices that what sounds like a bat squeak to the human ear sounds like a bass boom to the creature ear. This is another reason why most humans can't speak creature. James went to the window.

"All right! All right!" he called. "Break it up and move it out."

One of the bats fluttered to the window screen and hooked on. "What's bugging you, old buddy boy?" he rumbled.

"Keep it down to a roar, will you? You want to wake up the whole house?"

"They can't hear us."

"I can hear you."

"How come? Not many human types can."

"I don't know, but I can, and you're making so much noise I can't sleep."

"Sorry, old buddy, but we got to."

"Why?"

"Well, in the first place we're night people, you know?"

"Yes. And?"

"In the second place we don't see so good."

"Moe Mole doesn't see either, but he doesn't make a racket."

"Yeah, but Moe is working underground, old buddy. He hasn't got like trees and barns and buildings to worry about. You know? Now the last thing we want to do is crash into something. There'd be a CAB investigation, and somebody would lose his license for sure."

"But what's the noise got to do with it?"

"That's our sonar."

"What's sonar?"

"Radar you know about?"

"Yes."

"Sonar is radar by sound. You let out a yell and the echoes come back and you know where everything is."

"Just from the echo?"

"Right on. You want to try it? Go ahead. Wait a minute; no cheating. Close your eyes. Now make with the sonar."

"What should I yell?"

"Anything you feel like."

"WEEHAWKEN!" James shouted. The bat winced.

"I heard three echoes," James said.

"What were they?"

"Weehawken."

"That was the big barn."

"Whyhawken."

"The smoke house."

"Weehawkee."

"The oak tree. You're getting the hang, old buddy. Now why don't you practice a little? It won't bother us. None of us use place names except one cracker from the south who keeps hollering Carlsbad."

And then James fell in love. It was a mad, consuming passion for the least likely candidate. Obeying George Woodchuck's dying admonition, he went down to the traingle to request Paula, the pig, to respect the boundaries, and it was love at first sight. Paula was white with black patches or black with white patches (Poland China was her type), and she was grossly overweight. Nevertheless, James adored her. He brought her armfuls of apples from the orchard, which she ate methodically and without thanks. Nevertheless, James loved her. He was the despair of the Big Red Schoolhouse.

"Puppy love," the Professor snorted.

"He's a setup for a my-wife-is-so-fat-that joke," one of the Endmen said.

"Marriage is out of the question," the Senior Rabbit said. "She's twice his age."

"And twice his weight."

Caw! Caw! Caw!

"If he dares to bring that woman here," the Debutantes said, "we'll never speak to him again."

James dreamed into the barn. "Ready for the biology seminar," he said.

"Mathematics today," the Professor rapped.

"Yes, Paula."

"I am the Professor."

"Sorry, sir."

"We will begin with a review of binary arithmetic. I trust you all remember that the decimal system uses the base of ten. We count from one to ten, ten to twenty, twenty to thirty, and so on. The binary system is based on zero and one. Zero is zero. One is one, but two is ten. Three is eleven. Four is one hundred. What is five, James?"

"One hundred and Paula."

"Class dismissed."

And then James began to skip classes.

"We were supposed to start a dig yesterday," Moe Mole reported, "and he never showed up."

"He cut my oratorio session," Jack Johnson said.

"That boy is turning into a dropout."

"Have you noticed how he's brushing his hair?" the Debutantes inquired.

"Oh, come on!" His Eminence said. "If the kid's got hot pants, why can't we—"

"The boy is morally straight," the Scoutmaster interrupted sternly.

"It can't be solved on simplistic terms," the Professor said. "Emotions are involved, and the cerebrum is never on speaking terms with the cerebellum."

Alas, the situation resolved itself on an afternoon when James, carefully combed and

brushed, brought another armful of apples to his love. Paula devoured them as stolidly as ever while James sat and watched devotedly. Apparently Paula was extrahungry this afternoon because when James started to embrace her she started to eat him. James pulled his arm out of her mouth and recoiled in horror and disillusionment.

"Paula!" he exclaimed. "You only love me for myself."

"*Khonyetchna*," Paula grunted in Cyrillic.

James returned to the Big Red Schoolhouse in a gloomy mood. Of course everybody had seen the sad incident, and all of them did their best to be tactful.

"Physiology tomorrow," the Professor said. "We will discuss the hydrogen-ion balance in the blood."

"Yes, sir."

"We got to get on to the modern composers, kid."

"Yes, sir."

"You know, shale is an oil-bearing rock," Moses Mole said. "But why isn't there any oil in red shale? There must be a mathematical reason."

"We'll try to find it, sir."

"Stick out your chest and be a man," the Scoutmaster said.

"I'm trying, sir."

"It is better to have loved and lost than never to have loved at all," the Chairman said.

Then a fawn nestled alongside James and whispered, "It's all right. We're sorry you picked the wrong girl, but it has to happen to every man at least once. That's how you find the right girl."

James burst into tears and cried and cried for his lost love while the fawn petted him, but in the end he felt curiously relieved.

"James," the Professor said, "we must have a serious talk."

"Yes, sir. Here?"

"No. Come to the willow grove." They went to the willow grove. "Now we are alone," the Professor said. "James, you must start speaking to your mother and father. I know you can. Why don't you?"

"I'm damned if I will, sir. They won't speak Us. Why should I speak Them?"

"James, they don't know how to speak Us. Aren't you being unfair?"

"They could try."

"And I'm sure they would if they had a clue, but they haven't. Now listen to me. You're our only link between Us and Them. We need you, James, as a diplomatist. Your mother and father are very nice people; no hunting or killing on Red Hill, and they're planting many things. We all live together very pleasantly. I

admit your mother loses her temper with the Scoutmaster and his troop because they won't get out of her way when she comes out to hang the laundry on the line, but that's because she has a Bohemian disposition. We know what artists are like, unpredictable."

"I won't talk to her," James said.

"Your father is an intellectual of top caliber, and he went to Rutgers. You've brought many of his ideas and speculations to the Schoolhouse, which are stimulating and appreciated. In all fairness you should let him know how grateful we are to him."

"He wouldn't believe me."

"But at least you could speak to him."

"I won't speak to him. He's old, old, old and hidebound. He's a cube. He's trapped in a structured society."

"Where did you get that?"

"From my father."

"Well, then. You see?"

"No, I don't," James said stubbornly. "I won't talk their language to them. They have to try Us first."

"In other words, you have opted for Us?"

"Yes, sir."

"To the exclusion of Them?"

"Yes, sir."

"Then there's nothing more to say."

"Connie," Constance said to Constantine, "we must have a serious talk."

"Now?"

"Yes."

"What about?"

"Jamie."

"What about Jamie?"

"He's a problem child."

"What's his problem?"

"He's arrested."

"Are you starting that again? Now come on, Connie. He's learned to walk. What more do you want?"

"But he hasn't learned to talk."

"Talk! Talk! Talk!" Constantine sounded as though he was cursing. "Words! Words! Words! I've lived my whole life with them, and I hate them. Do you know what most words are? They're bullets people use to shoot each other down with. Words are weapons for killers. Language should be the beautiful poetry of communication, but we've debased it, poisoned it, corrupted it into hostility, into competition, into a contest between winners and losers. And the winner is never the man with something to say; the winner is always the fastest gun in the West. These are the few simple words I have to say about words."

"Yes, dear," Constance said, "but our son should be shooting words by now, and he isn't."

"I hope he never does."

"He must, and we'll have to take him to a clinic. He's autistic."

"Autism," the Professor said, "is an abnormal absorption in fantasy to the exclusion of external reality. I have known many laboratory victims who have been driven to this deplorable state by fiendish experiments."

"Could you put that in mathematical terms?" Moe asked. "I can't follow your words."

"Ah, yes. Kaff Kaff. I'm having some slight difficulty myself. I'm sure our valued friend will be good enough to simplify."

"All right," the White Rat said. "He won't talk."

"Won't talk? Good heavens! We can't shut him up. Only yesterday he engaged me in a two-hour dispute over Robert's Rules of Order, and—"

"He won't talk human."

"Oh. Ah."

"The *questo* is can he?" the Chaldean Chicken said. "Many who are born under the Sign of Torso find it *difficulto* to—"

"Taurus! Taurus! And will you be quiet. He can talk; he just won't."

"What's a fantasy?" Moe asked.

"A hallucination."

"What's that?"

"Something unreal."

"You mean he's not real? But I only saw him yesterday, and he—"

"I have no intention of discussing the metaphysics of reality. Those of you who are interested may take my course in Thesis, Synthesis and Antithesis. The situation with James is simple. He talks to us in our language; he refuses to talk to his parents in their language; they are alarmed."

"Why are they alarmed?"

"They think he's autistic."

"They think he's unreal?"

"No, Moe," the Professor said patiently. "They know he's real. They think he has a psychological hang-up which prevents him from talking human."

"Do they know he talks Us?"

"No."

"Then why don't we tell them? Then everything will be all right."

"Why don't you tell them?"

"I don't know how to talk Them."

"Does anybody here know how? Anybody?"

No answer.

"So much for that brilliant suggestion," the Professor said. "Now we come to the crux of the situation. They're going to send him to a remedial school."

"What's the matter with our school?"

"They don't know about our school, you imbecile! They want him to go to a school where he can learn to speak English."

"What's that?"

"Them talk."

"Oh."

"Well, Kaff Kaff, as our most esteemed and valued scholar, surely you can have no objections to that program, my dear Professor."

"There's a dilemma," the White Rat said sourly.

"Name it, sir. I say, describe it and we shall, Kaff Kaff, we shall cope."

"He's so used to speaking Us that I'm afraid he won't learn to speak Them."

"But why should he want to, my learned friend?"

"Because he's got Rutgers before him."

"Ah, yes. To be sure. Your beloved alma mater. But I still can't quite fathom, I say, perceive the basic difficulty."

"We've got to turn him off."

"I beg your pardon?"

"We've got to stop speaking to him. We've got to break his Us habit so he can learn Them. Nobody can speak both."

"You can't mean Coventry, Professor?"

"I do. Don't you understand? No matter where he goes, there will be others of us around. We must break the habit. Now. For his sake." The Professor began to pace angrily. "He will forget how to speak Us. We'll lose him. That's the price. My best pupil. My favorite. Now he may never make Phi Beta Kappa."

The Debutantes looked despairing. "We love that boy," they said. "He's a real swinger."

"He is not," the Senior Rabbit stated. "He is trustworthy, loyal, helpful, friendly, courteous, kind, obedient, cheerful, thrifty, brave, clean and reverent."

"He told me all about E equals MC two," Moe said. "It gave me an insight. It will change the world."

"Aquarium," Miss Leghorn said profoundly.

"He is a pest, a bore, a nuisance, a—a human," the Professor shouted. "He doesn't belong in our Schoolhouse. We want nothing to do with him; he'll sell us out sooner or later. Coventry! Coventry!" Then he broke down completely. "I love him, too, but we must be brave. We're going to lose him, but we must be brave for his sake. And somebody better warn the Princess."

James James Morrison Morrison shoved the barn door a little wider and swaggered into the Schoolhouse. There was no mistaking his pride in his walk. In an odd way it was a reflection of the Chairman's strut.

"Ladies and gentlemen, good evening," he said, as courteous as ever.

The Debutantes sniffled and departed.

"What's the matter with them?" James asked curiously. He turned to the mole. "Uncle Moe, I just heard something up at the house that'll interest you. It seems that Newton's model of the universe may break down. Time is not reversible from the mathematical standpoint, and—"

Here Moe broke down and went underground.

"What's the matter with him?" James asked.

There was no answer. Everybody else had disappeared, too. The long sad silence had begun.

The pheasant strutted, accompanied by his harem, and he ignored James. Martha W. Woodchuck, who had taken on George's surveying duties (she was his daughter-in-law), ignored James. Neither the Professor nor the Scoutmaster were to be seen. The does and the fawns hid in the woods. Moe Mole decided on an early hibernation. Jack Johnson went south for the winter, and His Eminence suddenly moved his residence to Paula's territory. The crows could not resist the challenge of an *art nouveau* scarecrow on a farm a mile off and left. James James was abandoned.

"Would you like to read my palm?" he asked Miss Leghorn.

"Cluck," she replied.

"Princess," he said, "why doesn't anybody want to talk to me?"

"Aeiou," she replied.

James was abandoned.

"Well, at least he's learned how to walk," Dr. Rapp said, "and that's a favorable prognosis. What beats me is how he can be autistic in such an articulate home. One would think that— Stop. An idea. Is it possible that the home is too articulate, that his autism is a refusal to compete with his betters?"

"But there's no competition in our home," one of the two Connies said.

"You don't grasp the potential of the idea. In our society, if you don't win, you have failed. This is our contemporary delusion. James may well be afraid of failure."

"But he's only three years old."

"My dear Mrs. Dupree, competition begins in the womb."

"Not in mine," Connie said indignantly. "I've got the fastest womb in the West."

"Yes. And now if you will excuse me, the first lesson will begin. That door out. Thank you." Dr. Rapp buzzed the intercom. "Sherbet," he said. A

chalice of orange sherbet was brought to him.

"James," he said, "would you like some orange ice? Here." He proffered a spoonful. James engulfed it. "Good. Would you like some more? Then tell me what this is." Dr. Rapp held up a striped ball. "It's a ball, James. Repeat after me. Ball."

"Da," James said.

"No more orange ice, James, until you've spoken. Ball. Ball. Ball. And then the goody."

"Da."

"Perhaps he prefers the lemon flavor," Dr. Rapp said the next week. He buzzed the intercom. "Lemon sherbet, please." He was served. "James, would you like some lemon ice?" He proffered a spoonful which was absorbed. "Good. Would you like some more? Then tell me what this is. It's a ball, James. Repeat after me. Ball. Ball. Ball."

"Da," James said.

"We'll try ice cream," Dr. Rapp said a week later. "We can't permit him to fall into a pattern of familiarized societal behavior. He must be challenged." He buzzed the intercom. "Chocolate ice cream, please."

James relished the chocolate ice cream but refused to identify the striped ball by name.

"Da," he said.

"I'm beginning to dream that confounded expression," Dr. Rapp complained. "A Roman centurion comes at me, draws his sword, and says, 'Da.' Stop. An idea. Is it a phallic symbol? Sexuality begins with conception. Is the child rejecting the facts of life?"

He buzzed the intercom.

"James, here is a banana. Would you like a bite? Feel free. Good. Good. Would you like another? Then tell me what this is. A ball. Ball. Ball. Ball."

"Da."

"I am failing," Dr. Rapp said despondently. "Perhaps I had better go back to Dr. Da for a refresher—What am I saying? It's Dr. Damon. Stop. An idea. Damon and Pythias. A friendship. Can it be that I have been too clinical with James. I shall establish fraternality."

"Good morning, James. It's a beautiful October day. The autumn leaves are glorious. Would you like to go for a drive with me?"

"Da," James said.

"Good. Good. Where would you like to go?"

"To Rutgers," James said, quite distinctly.

"What did you say?"

"I said I would like to go to Rutgers."

"But—good gracious—you're talking."

"Yes, sir."

"Why haven't you talked before?"

"Because I damn well didn't want to."

"Why are you talking now?"

"Because I want to see the banks of the Old Raritan."

"Yes, yes. I see. Or do I?" Dr. Rapp buzzed the intercom. "Please get me Dr. Da, I mean Dr. Damon, on the phone. Tell him I think I've made an important discovery."

"Discovery," James said, "is seeing what everybody else sees but thinking what no one else has thought. What's your opinion? Shall we discuss it on the way to Rutgers?"

So the second summer came. James and his father were strolling the lawns in a hot debate over the bearded irises which, alas, James pronounced iritheth. He had developed a human lisp. The issue was whether they should be picked and vased or left alone. James took the position that they were delicate ladies who should not be molested. His father, always pragmatic, declared that flowers had to justify their existence by decorating the house. Father and son parted on a note of exasperation, and the senior Dupree went to inspect the peach trees. James James Morrison Morrison stood quietly on the lawn and looked around. Presently he heard a familiar Kaff Kaff, and the Chairman appeared from under the lilac bush.

"Well, if it isn't my old friend, the Sex Maniac. How are you, sir?"

The cock pheasant glared at him.

"And how are Phyllis and Frances and Felice and all the rest, Mr. Chairman?"

"Their names are, I say, the nomenclature is, Kaff Kaff, Gloria, Glenda, Gertrude, Godiva, and—" Here the Chairman stopped short and looked hard at James. "But you're the Monster."

"Yes, sir."

"My, how you've grown."

"Thank you, sir."

"Have you learned how to speak Them?"

"Not very well, sir."

"Why not?"

"I've got a lisp. They say it's because I have a lazy tongue."

"But you still speak Us."

"Yes, sir."

"Amazing! I say, unheard of!"

"Did you all think I'd ever forget? I'm the Professor's best pupil, and I'd die for dear old Rutgers. Can we have an emergency meeting right away in the Big Red Schoolhouse, Mr. Chairman? I've got a lot to tell you about the crazy,

mixed-up human creatures."

* * *

The meeting was attended by most of the regulars, plus a few newcomers. There was a Plymouth Rock hen who had become close friends with Miss Leghorn, perhaps because her only reply to the Chaldean harangues was, "Ayeh." The holdout mockingbird had at last joined up now that Jack Johnson seemed to be remaining in the Florida keys... his (the mockingbird's) name was Milton. There was one most exotic new member, a little Barbary ape who was very friendly but extremely shy. James shook hands and asked his name.

"They called me...well, they called me The Great Zunia. Knows All. Does All."

"Who's 'they,' Zunia?"

"The Reeson & Tickel Circus."

"You were in the circus?"

"Well... yes. I... I did tricks. Knows All. Does All. I was what they... what they call a headliner. You know. Rode a motorcycle with the lights on. But I... I..."

"Yes?"

"But I cracked up when we... when we were playing Princeton. Totaled the bike. I got... well... I split when they were picking up the pieces."

"Why did you run away, Zunia?"

"I... I hate to say this... never blow the whistle on another man's act... but... well... I hate show business."

"Zunia, we're all delighted that you're here, and you know you're more than welcome, but there's a problem."

"Well... gee... just a little fruit now and then, apples and—"

"Not food. The weather. Winters can be damn cold on Red Hill farm. Don't you think you might be more comfortable farther south?"

"Well...if it's all the same to... well, I'd rather stay here. Nice folks."

"If that's what you want, great for us. My parents are going to have fits if they ever see you, so stay under cover."

"I'm a night-type anyway."

"Good. Now stand up, please. All the way up, and we'll stand back to back. Professor, are we the same size?"

No answer.

"Professor?"

Moe Mole said, "The Professor is indisposed."

"What?"

"He couldn't come."

"Why not?"

"He's not feeling so good."

"Where is he?"

"Up in his study."

"I'd better go and— No,

wait. Are we the same size, Zunia and me? Anybody? Everybody."

It was agreed that James and Zunia were an approximate match. James promised to pinch some of his sweaters and wooly underwear for Zunia to wear during the winter months.

"If you... well, I'm not asking... but I'd love a sweater with Boston on it."

"Boston! Why Boston?"

"Because they hate show business."

James shinnied up one of the rough oak columns that supported the barn roof, walked across the heavy beam above the empty hay loft as casually as a steelworker (his mother would have screamed at the sight), came to a small break in the loft wall and knocked politely.

A faint voice said, "Who is it?"

"It's the Monster, sir. I've come back."

"No! Really? Come in. Come in."

James poked his head through the break. The Professor's study was lined with moss. There were fronds of dried grass and mint leaves on the floor on which the Professor lay. He looked very ill and weak, but his albino red eyes were as fierce as ever.

"Well, James, you've come back," he panted. "I never thought— Do you speak Them?"

"Yes, sir."

"And you still speak Us. I would never— Phi Beta Kappa and cum laude for you. No doubt of it."

"I visited Rutgers, sir."

"Did you. Did you, now. And?"

"It's beautiful, just like you said," James lied. "And they still remember you."

"No!"

"Yes, sir. They can't understand how you escaped. They think you probably bribed the lab attendant, but a few claim you had something on him. Blackmail."

The Professor chuckled, but it turned into a painful hacking.

After the spasm subsided James asked, "What's wrong, sir?"

"Nothing. Nothing. Probably a touch of the Asiatic flu. Nothing serious."

"Please tell me."

The Professor looked at him. "Science is devotion to truth," he said. "I'll be truthful. I'm badly wounded."

"Oh, sir! How?"

"An air rifle. A couple of farm boys."

"Who are they? From the Rich place? I'll—"

"James! James! There is no room for revenge in science. Did Darwin retaliate when he was ridiculed?"

"No, sir."

"Did Pasteur?"

"N-no, sir."

"Will you be true to what I've taught you?"

"I'll try, sir, b-but those damn boys. . ."

"No anger. Reason always; anger never. And no crying, James. I need your courage now."

"If I have any, sir."

"You have it. I remember George. Now I want you to take my place and continue my classes."

"Oh, Professor, you'll be—"

"I take it you're on speaking terms with your father now. Learn all you can from him and pass it on to Us. That's an order, James."

"Yes, sir. It won't be easy."

"Nothing is ever easy. Now I'm going to ask for an act of great courage."

"Sir?"

"I can't linger like this. It's too painful and it's useless."

"Professor, maybe we can—"

"No, no. I'm hopeless. If you hadn't cut my anatomy classes when you fell in love with Paula, you'd—" He hacked again, even more painfully. At last he said, "James, end this for me, as quickly as possible. You know what I mean."

James was stupefied. At last he managed to whisper, "S-sir. . ."

"Yes. I see you understand."

"Sir, I c-couldn't."

"Yes you can."

"B-but I wouldn't know how."

"Science always finds a way."

"At least let me ask my—"

"You will ask no one. You will tell no one."

"But you leave me all alone with this."

"Yes, I do. That's how we grow up."

"Sir, I have to refuse. I can't do it."

"No. You just need time to make up your mind. Isn't there a meeting on the floor?"

"Yes, sir. I asked for it."

"Then go to your meeting. Give them my best. Come back quickly. Quickly." The Professor began to tremble and rustle on the dried grass.

"Have you had anything to eat, sir? I'll bring you something, and then we'll talk it over. You have to advise me."

"No dependence," the White Rat said. "You must decide for yourself."

The Chairman was in the full flood of oratory when James climbed down from the loft and seated himself with his friends, the birds and the beasts, but he came to a close fairly promptly and gave the floor to James James, who stood up and looked around.

"I'm going to tell you about Them," James began quietly.

"I've met Them and lived with Them, and I'm beginning to understand Them. We must, too. Many of Them are damned destroyers—we all know that—but what we don't know is that a new breed of Them is rising in revolt against destruction. They're our kind. They live in peace and harmony with the earth; whatever they take from it they return; they do not kill and they fight those who do. But they're young and weak and outnumbered, and they need our help. We must help them. We must!

"Now up to now we've done nothing. We hide from the destroyers and use our intelligence to outwit them. We've just been passive victims. Now we must become activists, militant activists. The Professor won't like this; that great scholar still believes in reason and light. So do I, but I reserve reason and light only for those who also are guided by reason and light. For the rest, militant action. Militant!

"I heard my father once tell a story about Confucius, a very wise sage of many years ago. Although he was one of Them, he was much like our Professor and may have been almost as wise. One of his students came to him and said, 'Master, a new wise man named Christ has appeared in the West. He teaches that we must return good for evil. What is your opinion?' Confucius thought and answered, 'No. If we return good for evil, what then will we return for good? Return good for good; for evil return justice.' "

James' voice began to shake. "They shot the Professor. You knew that, didn't you. They shot him. He's not indisposed. He's up there and he's hurting. They—We must learn to return militant justice for evil. We can't use this barn as a sanctuary any more. We must leave it when we graduate and travel and teach. There is a desperate battle being fought for what little remains of our earth. We must all join the fight."

"But how?" Moe Mole asked reasonably.

"That will be the subject of my first lesson tomorrow," James answered. "And now, with the permission of our distinguished Chairman, I would like to move that this meeting be adjourned. I have the Professor to look after."

"So moved," the cock pheasant said. "Seconded? Thank you, Miss Plymouth. Moved and seconded. This meeting is adjourned."

"Zunia," James said, "wait here for me, please. I'll need your help. Back in a little while."

James walked to the nearest

apple tree, began picking up fallen apples and hurling them into space. His mother glanced out of the kitchen window and smiled at the sight of a small boy happily lazing away a summer afternoon.

"If I do what the Professor asks, it'll be murder," James thought. "They call it mercy killing, but I've heard my father say it's murder all the same. He says some doctors do it by deliberately neglecting to give certain medicines. He says that's murder all the same, and he doesn't approve. He says religion is against it, and if you do it you go to hell, wherever that is. He says life is sacred.

"But the Professor hurts. He hurts bad and he says there's no hope. I don't want him to hurt any more. I want the boys who shot him to hurt, but not the Professor. I could just bring him a little milk and let him die all by himself, but that could take a long time. It wouldn't be fair to him. So— All right—I'll go to hell."

James returned to the house, lisped courteously to his mother and asked for a small cup of warm milk to hold him until dinner time. He received it, climbed upstairs to his room and put the cup down. Then he went to his parents' bathroom. He climbed up on the washstand, opened the medicine cabinet, which had been declared off-limits for him on pain of frightful punishment, and took a small vial off one of the shelves. It was labeled "Seconal" and was filled with bright orange capsules. James James removed a capsule, returned the vial, closed the cabinet and climbed down from the sink.

"What are you stealing?" the Burmese princess asked.

"Medicine," James answered shortly and returned to his room. He pulled the capsule open and shook its contents into the cup of milk. He stirred gently with his forefinger.

"Mercy, James, you'll have to put your humor on a diet. It's gaining weight."

"I'm sorry. I'm not feeling funny right now, Princess. In fact I feel damn rotten lousy."

"Why? What's wrong?"

"I can't tell you. I can't tell anybody. Excuse me."

He carried the cup of milk to the Big Red Barn where the Great Zunia was patiently waiting. "Thanks," James said. "Now look, I've got to shinny up that column, and I can't do it and carry this cup. You can, easy. Go up with the cup. Don't spill it. I'll meet you on the beam."

They met on the beam and James received the cup.

"It looks like milk but it tastes funny," Zunia said.

"You didn't drink any!"

"Well, no... just stuck my

tongue in... you know. Curious. It's... well, traditional with us."

"Oh. That's all right. It's medicine for the Professor."

"Sure. Tell him... tell him get well soon."

"He'll be well soon," James promised. Zunia flipflopped and catapulted himself to another empty loft. James crossed the beam and knocked at the Professor's study. "It's James again, sir."

He could barely hear the "Come in." He poked his head in. The Professor was trembling. "I brought you a little something, sir. Warm milk." James placed the cup close to the Professor's head. "Please drink a little. It'll give you strength."

"Impossible."

"For me, sir. You owe that much to your best pupil. And then we'll discuss your proposal." James waited until he saw the White Rat begin to drink. He withdrew his head, sat down on the beam and began to chat lightly while tears blurred his eyes.

"Your proposal, Professor, raises an interesting dilemma in the relationship between teacher and pupil. Let me tell you about my lunatic teacher at the remedial school, Dr. Rapp, and my relations with him. I'd value your opinion. How is the milk, sir?"

"Terrible. Did you say lunatic?"

"Drink it anyway. Yes, lunatic. He's a psychiatrist, excessively educated, and—"

"There is no such thing."

"Not for a genius like yourself, sir, but in lesser people too much education produces alienation from reality. That was Dr. Rapp."

"You must be specific," the White Rat said severely.

"Well, sir, let me contrast him with yourself. You always understand the capacity and potential of your students and treat them accordingly. Dr. Rapp was so crammed with education that he never bothered to understand us; he simply tried to fit us into the textbook cases he'd read."

"Hmmm. What was his school?"

"I was afraid you'd ask that, sir. You won't like the answer. Abigail College."

"What? What?"

"Abigail College, sir. Finished your milk?"

"Yes, and it was disgusting."

"But you sound stronger already, sir."

"Where is Abigail College?"

"In a state called Kansas."

"Hmp! Fresh-water college. No wonder." The Professor's speech began to slur. James began to rock back and forth in agony.

"What would you do if

this. . . this Abigail made same proposal to you, James?"

"Oh, sir, that's not a fair question. I don't like or respect Dr. Rapp. I love you."

"No place—f'love—in science."

"No, sir. Always be objective. That's what you taught me."

"Gett'n sleepy. . .James. . . 'bout Zunia."

"What about Zunia, sir?"

"Like him?"

"Very much, sir. You'll enjoy teaching him."

"Don't. . . d'not le'him. . . came to us f'm Princeton, you know. . . d'nt let'm talk you into going Princeton. Yes?"

"Never, sir. Rutgers forever."

There was a long, long pause. The painful rustling in the study stopped. James poked his head in. The cup of milk was empty. The Professor was peacefully dead. James reached in, picked him up, carried him across the beam and skinned down the oak column with the body in one hand. On the main floor he stamped his foot hard, three times. He repeated the signal three times. At last Moe Mole appeared from the depths.

"That you, James?"

"Yes. Please come with me, Uncle Moe. I need your help."

Moe shuffled alongside James James, blinking in the twilight. "Trouble, James?"

"The Professor's dead. We've got to bury him."

"Now that's a shame. And we never started my astronomy lessons. Where's the body?"

"Right here. I'm carrying him." James led Moe to the sundial on the south lawn. "Dig here, Uncle Moe. I want to bury the Professor under the center of the pedestal."

"Easy," Moe said. He tunneled down and disappeared, little flurries of earth sprayed out of the tunnel mouth. Presently Moe reappeared. "All set. Got a nice little chamber dead center. Where is he now?"

James placed the body at the mouth of the tunnel. Moe pushed it before him and was again lost from sight. He reappeared in another flurry of soil. "Just filling in," he explained apologetically. "Got to pack it solid. Don't want any grave robbers nosing around, do we?"

"No," James said. "Bury him for keeps."

Moe finished the job, mumbled a few words of condolence and shambled off. James stared hard at the sundial. "Militant," he said at last and turned away. The weathered bronze plate of the sundial was engraved with a line from the immortal Thomas Henry Huxley: "The great end of life is not knowledge but action." ■

IF YOU WANT TO MAKE A million dollars with science fiction, what you have to do is add pictures. It wouldn't hurt, also, to keep it simple. The most impressive successes, financially, in the fields of fantasy and science fiction have been not on the printed page but on the movie screen and in the funny papers.

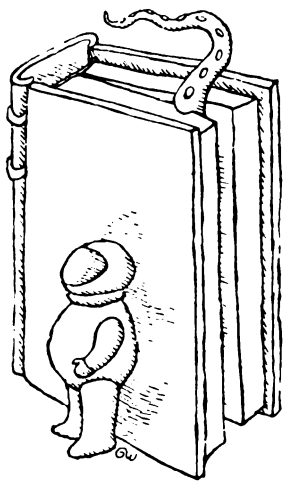
Movies as a popular culture category have been inspiring lots of books for some years, but it is only in the Seventies that attention is being paid to comic strips and comic books by book publishers. Assuming that science fiction readers are also interested in looking at science fiction drawings, and maybe just funnies in general, F&SF has asked me to now and then review some of the new books devoted to comic books and strips.

Everybody has grown a lot since 1938. National Periodicals has grown from a hole-in-the-wall operation into the giant publishing arm of an even more giant conglomerate. Superman has grown from a middle-sized alien who could jump over middle-sized buildings to the huge muscle-bound "hip, committed Superman of the Seventies." E. Nelson Bridwell has grown, as he tells us in his breathless introduction, to SU-

RON GOULART

BOOKS

SUPERMAN: From The 30s to the 70s, E. Nelson Bridwell, Ed., Crown, $10.00
POPEYE, E. C. Segar, Nostalgia Press, $7.95
COMIX, Les Daniels, Outerbridge & Dienstrey, $7.95
COMICS AND THEIR CREATORS, Martin Sheridan, Luna Press (Box 1049, Brooklyn, N. Y. 11202), $4.00



PERMAN: FROM THE 30S TO THE 70S, from a 6½-year-old Mickey Mouse fan into a hip committed comic book editor of the Seventies.

In the earliest episodes reprinted in this compilation, Superman uses his miraculous powers on a small scale, even having the time to drop in at 211 Court Ave. to reprimand a wife beater. He seems to enjoy his abilities. He shows off, lifting hoods' streamlined 1938 cars over his head, wisecracking as he leaves a thug on top of a telephone pole. The early Superman was a pacifist, too. In his second adventure he convinces two warring nations that "it's obvious you've been fighting only to promote the sale of munitions!" Gradually, however, he takes to fighting bigger and better villains, such as Luthor, "the mad scientist who plots to dominate the earth," and to going up against the Axis nations during World War II.

Today's Superman is indeed hip (even Clark Kent is hip and wears purple suits, yellow shirts and wide ties). He has long shaggy hair and spends a good deal of his time at rock concerts and rapping with cause-oriented youths. There are still mad scientists, but they are more interested in causing campus unrest and committing vast acts of pollution. What's happened over the three decades represented in this book is that Superman has become more aware of his young audience. Back in 1938 E. Nelson Bridwell and thousands like him didn't care about munitions makers and wife beaters, but Superman went after them anyway.

Since this collection was put together under the eye of the people who control the Superman copyright and is edited by a man who is still employed by them, it is silent on certain aspects of Superman history. For instance, in his nine page introduction Bridwell manages not to mention by name Jerry Siegel and Joe Shuster, the two Cleveland science fiction fans who created Superman in the early Thirties and spent years trying to sell it. But at least the Siegel & Shuster names have been left on some of the early stories. Wayne Boring, whose work makes up nearly a third of the book (commencing with page 198) and whose drawing of Superman appears on the cover, is not mentioned at all. These omissions are nearly as interesting as what's been included in the collection, and I look forward to a Superman history some day that goes beyond nostalgia.

Meanwhile, if you just want to look at pictures, and ignore the sociological and financial implications, this is a fair

sampling of the high spots of the man of steel's long career.

Those who know Popeye only from early morning animated cartoons may not realize he was a pioneer super hero or that many of his early adventures had a good deal of science fiction and fantasy to them. The newspaper strips reprinted in POPEYE, a complete year's run from the middle 1930s, involve the indestructible sailor with invisibility, ESP, witchcraft, magic and the fourth dimension.

Technically E.C. Segar was probably the worst cartoonist to work for Hearst in the 20s and 30s (the things fellow Hearst artists like Herriman, DeBeck and McManus could do are much beyond Segar), but he was a highly quirky and individual man. He also had a peculiar and eccentric sense of humor. These strips, devoted to Popeye's encounters with the mythical little animal known as a jeep, with the Sea Hag and with sundry lowlifes and crooks, are funny. Funny like no one else's strips. Though Segar could use old burlesque gags, he also had the ability to make humor out of his own materials. He also had a highly personal sense of timing. One simple sequence here, where the villain tries to steal the magic jeep from Popeye, goes on for almost a month, with a new jeep-stealing gag every day.

All in all, this is an entertaining book of lowbrow fantasy. Bill Blackbeard's introduction is informative, though a little overzealous.

Les Daniels' COMIX is a well-intentioned attempt to present not only a history of the comic book but a history of the comic strip as well. In a 200 page book which is half illustrations this means he has to talk fast and telescope a good deal of information. Fortunately there is a bibliography, so readers can use it to check the full texts from which Daniels has clipped his bits of history, insight and sociological comment. The only chapter he seems to have thought up on his own is the one wherein he attacks, at high pitch and great length, psychiatrist Frederick Wertham. Wertham had the temerity, nearly two decades ago, to suggest that some of the eye-jabbing, face-stomping and disemboweling then in some comic books was a little excessive.

On the positive side, a good deal of interesting old comic book pages are reprinted, including a complete Donald Duck episode by long-unsung Disney artist Carl Barks. Daniels, though, seems to suffer from whatever the visual

equivalent of a tin ear is, maybe a glass eye. He will write glowingly in the text of the splendid work of a specific artist on a specific feature. When you turn to the section illustrating that specific feature, you will find a sample done by an artist not mentioned at all. It's not clear whether Daniels couldn't get the samples he hoped for, or whether he simply doesn't recognize the work of the cartoonists he's talking about. Anybody who can confuse the late Lou Fine with a second-rate girlie artist like Bill Ward, as Daniels does in his section on *Blackhawk*, is not the most perceptive of graphic historians.

COMICS AND THEIR CREATORS first appeared thirty years ago. Back then not too many people were concerned with the funnies as an American idiom or an important manifestation of popular culture. Sheridan was content with presenting quick magazine-style profiles of several dozen of the comic artists then active and illustrating them with pictures of the cartoonists and samples of their strips.

He is no great prose stylist, and his history is fuzzy in spots, but Sheridan had the advantage of questioning most of his subjects first hand. At the time he did the book this meant he could talk to George McManus, Rudolph Dirks, George Herriman, Milt Gross, Bud Fisher, Alex Raymond, Ed Wheelan and several other major figures. Sheridan covers adventure strips, science fiction strips, humor strips and even gag panels. An enjoyable book and a welcome paperback reprint.

"Skinburn," as you'll soon see, is not your usual espionage story, as might be expected from Philip Farmer, long one of the most original and inventive thinkers in the sf field (or out of it, as evidenced by his latest book, TARZAN ALIVE, Doubleday, a definitive biography of Lord Greystoke that establishes, among many other things, that Tarzan lives!)

Skinburn

by PHILIP JOSÉ FARMER

"YOUR SKIN TINGLES every time you step outdoors?" Doctor Mills said. "And when you stand under the skylight in your apartment? But only now and then when you're standing in front of a window, even if the sunlight falls on you?"

"Yes," Kent Lane said. "It doesn't matter whether or not it's night or day, the skies are cloudy or clear, or the skylight is open or closed. The tingling is strongest on the exposed parts of my body, my face and hands or whatever. But the tingling spreads from the exposed skin to all over my body, though it's much weaker under my clothes. And the tingling eventually arouses vaguely erotic feelings."

The dermatologist walked around him. When he had completed his circuit, he said, "Don't you ever tan?"

"No, I just peel and blister. I usually avoid burning by staying out of the sun as much as possible. But that isn't doing me any good now, as you can see. I look as if I'd been on the beach all day. That makes me rather conspicuous, you know. In my work, you can't afford to be conspicuous."

The doctor said, "I know."

He meant that he was aware that Lane was a private detective. What he did not know was that Lane was working on a case for a federal government agency. CACO—Coordinating Authority for Cathedric Organizations—was short of competent help. It had hired, after suitable security checks, a number of civilian agents. CACO would have hired only the best, of course, and Lane was among these.

Lane hesitated and then said, "I keep getting these phone calls."

The doctor said nothing. Lane said, "There's nobody at the other end. He, or she, hangs up just as soon as I pick the phone up."

"You think the skinburn and the phone calls are related?"

"I don't know. But I'm putting all unusual phenomena into one box. The calls started a week after I'd had a final talk with a lady who'd been chasing me and wouldn't quit. She has a Ph.D. in bioelectronics and is a big shot in the astronautics industry. She's brilliant, charming, and witty, when she wants to be, but very plain in face and plane in body and very nasty when frustrated. And so. . ."

He was, he realized, talking too much about someone who worked in a top-secret field. Moreover, why would Mills want to hear the sad story of Dr. Sue Brackwell's unrequited love for Kent Lane, private eye? She had been hung up on him for some obscure psychological reason and, in her more rational moments, had admitted that they could never make it as man and wife, or even as man and lover, for more than a month, if that. But she was not, outside of the laboratory, always rational, and she would not take no from her own good sense or from him. Not until he had gotten downright vicious over the phone two years ago.

Three weeks ago, she had called him again. But she had said nothing to disturb him. After about five minutes of light chitchat about this and that, including reports on their health, she had said good-by, making it sound like an *ave atque vale*, and had hung up. Perhaps she had wanted to find out for herself if the sound of his voice still thrilled her. Who knew?

Lane became aware that the doctor was waiting for him to finish the sentence. He said, "The thing is, these phone calls occurred at first when I was under the skylight and making love. So I moved the bed to a corner where nobody could possibly see it from the upper stories of the Parmenter Building next door.

"After that, the phone started ringing whenever I took a woman into my apartment, even if it was just for a cup of coffee. It'd be ringing before I'd get the door open, and it'd ring at approximately three-minute intervals thereafter. I changed my phone number twice, but it didn't do any good. And if I went to the woman's apartment instead, her phone started ringing."

"You think this lady scientist is making these calls?"

"Never! It's not her style. It must be a coincidence that the calls started so soon after our final conversation."

"Did your women also hear the phone?"

Lane smiled and said, "Audiohallucinations? No. They heard the phone ringing, too. One of them solved the problem by tearing her phone out. But I solved mine by putting in a phone jack and disconnecting the phone when I had in mind another sort of connection."

"That's all very interesting, but I fail to see what it has to do with your skin problem."

"Phone calls aside," Lane said, "could the tingling, the peeling and blistering, and the mild erotic reactions be psychosomatic?"

"I'm not qualified to say," Mills said. "I can, however, give you the name of a doctor whose specialty is recommending various specialists."

Lane looked at his wristwatch. Rhoda should be about done with her hairdresser. He said, "So far, I'm convinced I need a dermatologist, not a shrink. I was told you're the best skin doctor in Washington and perhaps the best on the east coast."

"The world, actually," Doctor Mills said. "I'm sorry. I can do nothing for you at this time. But I do hope you'll inform me of new developments. I've never had such a puzzling, and, therefore, interesting, case."

Lane used the phone in the ground-floor lobby to call his fiancee's hairdresser. He was told that Rhoda had just left but that she would pick him up across the street from the doctor's building.

He got out of the building just in time to see Rhoda drive his MG around the corner, through a stoplight, and into the path of a pickup truck. Rhoda, thrown out by the impact (she was careless about using her safety belt), landed in front of a Cadillac. Despite its locked brakes, it slid on over her stomach.

Lane had seen much as an adviser in Vietnam and as a member of the San Francisco and Brooklyn police departments. He thought he was tough, but the violent and bloody deaths of Leona and Rhoda within four months was too much. He stood motionless, noting only that the tingling was getting warmer and spreading over his body. There was no erotic reaction, or, if there were, he was too numb to feel it. He stood there until a policeman got the nearest doctor, who happened to be Mills, to come out and look at him. Mills gave Lane a mild sedative, and the cop sent him home in a taxi. But Lane was at the morgue an hour later, identified Rhoda, and then went to the precinct station to answer some questions.

He went home prepared to drink himself to sleep, but he found two CACO agents, Daniels and Lyons, waiting for him. They seemed to have known about Rhoda's death almost as quickly as he, and so he knew that they had been shadowing him or Rhoda. He answered some of their questions and then told them that the idea that Leona and Rhoda might be spies was not worth a second's consideration. Besides, if they were working for SKIZO, or some other outfit, why would SKIZO, or whoever, kill their own agents?

"Or did CACO kill them?" Lane said.

The two looked at him as if he were unspeakably stupid.

"All right," Lane said. "But there's absolutely no evidence to indicate that their deaths were caused by anything but pure accident. I know it's quite a coincidence. . ."

Daniels said, "CACO had both under surveillance, of course. But CACO saw nothing significant in the two women's behavior. However, that in itself is suspicious, you know. Negative evidence demands a positive inquiry."

"That maxim demands the investigation of the entire world," Lane said.

"Nevertheless," Lyons said, "SKIZO must've spotted you by now. They'd have to be blind not to. Why in hell don't you stay out from under sunlamps?"

"It's a skin problem," Lane said. "As you must know, since you've undoubtedly bugged Doctor Mills' office."

"Yeah, we know," Daniel said. "Frankly, Lane, we got two tough alternatives to consider. Either you're going psycho, or else SKIZO is on to you. Either way. . ."

"You're thinking in two-valued terms only," Lane said. "Have you considered that a third party, one with no connection at all with SKIZO, has entered the picture?"

Daniels cracked his huge knuckles and said, "Like who?"

"Like whom, you mean. How would I know? But you'll have to admit that it's not only possible but highly probable."

Daniels stood up. Lyons jumped up. Daniels said, "We don't have to admit anything. Come along with us, Lane."

If CACO thought he was lying, CACO would see to it that he was never seen again. CACO was mistaken about him, of course, but CACO, like doctors, buried mistakes.

On leaving the apartment building, Lane immediately felt the warm tingling on his face and hands and, a few seconds later, the spreading of the warmth to his crotch. He forgot about that a moment later

when Daniels shoved him as he started to get into the back seat of the CACO automobile. He turned and said, "Keep your dirty hands off me, Daniels! Push me, and I may just walk off. You might have to shoot me to stop me, and you wouldn't want to do that in broad daylight, would you?"

"Try it and find out," Daniels said. "Now shut up and get in or get knocked in. You know we're being observed. Maybe that's why you're making a scene."

Lane got into the back seat with Lyons, and Daniels drove them away. It was a hot June afternoon, and evidently the CACO budget did not provide for cars with air conditioning. They rode with the windows down while Lyons and Daniels asked him questions. Lane answered all truthfully, if not fully, but he was not concentrating on his replies. He noticed that when he hung his hand out of the window, it felt warm and tingling.

Fifteen minutes later, the big steel doors of an underground garage clanged shut behind him. He was interrogated in a small room below the garage. Electrodes were attached to his head and body, and various machines with large staring lenses were fixed on him while he was asked a series of questions. He never found out what the interpreters of the machines' graphs and meters thought about his reactions to the questions. Just as the electrodes were being detached, Smith, the man who had hired Lane for CACO, entered. Smith had a peculiar expression. He called the interrogators to one side and spoke to them in a low voice. Lane caught something about "a telephone call." A minute later, he was told he could go home. But he was to keep in touch, or, rather, keep himself available for CACO. For the time being, he was suspended from service.

Lane wanted to tell Smith that he was quitting CACO, but he had no desire to be "detained" again. Nobody quit CACO; it let its employees go only when it felt like it.

Lane went home in a taxi and had just started to pour himself a drink when the doorman called up.

"Feds, Mr. Lane. They got proper ID's."

Lane sighed, downed his Scotch and, a few minutes later, opened the door. Lyons and two others, all holding .45 automatic pistols, were in the hall.

Lyons had a bandage around his head and some Band-Aids on one cheek and his chin. Both eyes were bloodshot.

"You're under arrest, Lane," Lyons said.

In the chair in the interrogation room, attached once again to various machines, Lane answered everything a dozen times over. Smith personally conducted the questioning, perhaps because he wanted to make sure that Lyons did not attack Lane.

It took Lane ten hours to piece together what had happened from occasional comments by Smith and Lyons. Daniels and Lyons had followed Lane when he had been released from CACO HQ. Trailing Lane by a block, Daniels had driven through a stoplight and into the path of a hot rod doing fifty miles an hour. Daniels had been killed. Lyons had escaped with minor injuries to the body but a large one to the psyche. For no logical reason, he blamed Lane for the accident.

After the interrogation, Lane was taken to a small padded room, given a TV dinner, and locked in. Naked, he lay down on the padded floor and slept. Three hours later, two men woke him up and handed him his clothes and then conducted him to Smith's office.

"I don't know what to do with you," Smith said. "Apparently, you're not lying. Or else you've been conditioned somehow to give the proper—or perhaps I should say, improper—responses and reactions. It's possible, you know, to fool the machines, what with all this conscious control of brainwaves, blood pressure, and so on being taught at universities and by private individuals."

"Yes, but you know that I haven't had any such training," Lane said. "Your security checks show that."

Smith grunted and looked sour.

"I can only conclude," he said, "from the data that I have, that you are involved in counterespionage activity."

Lane opened his mouth to protest, but Smith continued, "Innocently, however. For some reason, you have become the object of interest, perhaps even concern, to some foreign outfit, probably Commie, most probably SKIZO, CACO's worst enemy. Or else you are the focus of some wildly improbable coincidences."

Lane couldn't think of anything to say to that. Smith said, "You were released the first time because I got a phone call from a high authority, a very high authority, telling me to let you go. By telling, I mean ordering. No reasons given. That authority doesn't have to give reasons.

"But I made the routine checkback, and I found out that the authority was fake. Somebody had pretended to be him. And the code words and the voice were exactly right. So,

somehow, somebody, probably SKIZO, has cracked our code and can duplicate voices so exactly that even a voiceprint check can't tell the difference between the fake and the genuine That's scary, Lane."

Lane nodded to indicate that he agreed it was scary. He said, "Whoever is doing this must have a damn good reason to reveal that he knows all this stuff. Why would a foreign agent show such a good hand just to get me out of your clutches, uh, custody? I can't do anyone, foreign agent or not, any good. And by revealing that they know the code words and can duplicate voices, they lose a lot. Now the code words will be changed, and the voices will be double-checked."

Smith drummed his fingers on the desktop and then said, "Yes, we know. But this extraordinary dermal sensitivity. . .these automobile accidents. . ."

"What did Lyons report about his accident?"

"He was unaware of anything wrong until Daniels failed to slow down on approaching the stoplight. He hesitated to say anything, because Daniels did not like back-seat drivers, although Lyons was, as a matter of fact, in the front seat. Finally, he was unable to keep silent, but it was too late. Daniels looked up at the signal and said, 'What in hell you talking about?' and then the other car hit them."

Lane said, "Apparently Daniels thought the signal was green."

"Possibly. But I believe that there is some connection between the phone calls you got while with your women and the one I got from the supposed high authority."

"How could there be?" Lane said. "Why would this, this person, call me up just to ruin my love making?"

Smith's face was as smooth as the face on a painting, but his fingers drummed a tattoo of desperation. No wonder. A case which could not even give birth to a hypothesis, let alone a theory, was the ultimate in frustration.

"I'm letting you go again, only this time you'll be covered with my agents like the North Pole is with snow in January," Smith said.

Lane did not thank him. He took a taxi back to his apartment, again feeling the tingling and warmth and mildly erotic sensations on the way to the taxi and on the way out of it.

In his rooms, he contemplated his future. He was no longer drawing pay from CACO, and CACO would not permit him to go to work for anybody else until this case was cleared up.

In fact, Smith did not want him to leave his apartment unless it was absolutely necessary. Lane was to stay in it and force the unknown agency to come to him. So how was he to support himself? He had enough money to pay the rent for another month and buy food for two weeks. Then he would be eligible for welfare. He could defy Smith and get a job at nondetective work, say, a carryout boy at a grocery store or a car salesman. He had experience in both fields. But times were bad, and jobs of any kind were scarce.

Lane became angry. If CACO was keeping him from working, then it should be paying him. He phoned Smith, and, after a twelve-minute delay, during which Smith was undoubtedly checking back that it was really Lane phoning, Smith answered.

"I should pay you for doing nothing? How could I justify that on the budget I got?"

"That's your problem."

Lane looked up, because he had carried the phone under the skylight and his neck had started tingling. Whoever was observing him at this moment had to be doing it from the Parmenter Building. He called Smith back and, after a ten-minute delay, got him.

"Whoever's laying a tap-in beam on me is doing it from any of the floors above the tenth. I don't think he could angle in from a lower floor."

"I know," Smith said. "I've had men in the Parmenter Building since yesterday. I don't overlook anything, Lane."

Lane had intended to ask him why he had overlooked the fact that they were undoubtedly being overheard at this moment. He did not do so because it struck him that Smith wanted their conversations to be bugged. He was keen to appear overconfident so that SKIZO, or whoever it was, would move again. Lane was the cheese in the trap. However, anybody who threatened Lane seemed to get hurt or killed, and Smith, from Lane's viewpoint, was threatening him.

During the next four days, Lane read Volume IV of the Durants' *The Story Of Civilization*, drank more than he should have, exercised, and spent a half hour each day, nude, under the skylight. The result of this exposure was that the skin burned and peeled all over his body. But the sexual titillation accompanying the dermal heat made the pain worth it. If the sensations got stronger each day, he'd be embarrassing himself, and possibly his observers, within a week.

He wondered if the men at

the other end of the beam (or beams) had any idea of the gratuitous sexuality their subject felt. They probably thought that he was just a horny man with horny thoughts. But he knew that his reaction was unique, a result of something peculiar in his metabolism or his pgiment or his whatever. Others, including Smith, had been under the skylight, and none had felt anything unusual.

The men investigating the Parmenter Building had detected nothing suspicious beyond the fact that there was nothing suspicious.

On the seventh day, Lane phoned Smith. "I can't take this submarine existence any longer. And I have to get a job or starve. So, I'm leaving. If your storm troopers try to stop me, I'll resist. And you can't afford to have a big stink raised."

In the struggle that followed, Lane and the two CACO agents staggered into the area beneath the skylight. Lane went down, as he knew he would, but he felt that he had to make some resistance or lose his right to call himself a man. He stared up into the skylight while his hands were cuffed He was not surprised when the phone rang, though he could not have given a reasonable explanation of why he expected it.

A third agent, just entering, answered. He talked for a moment, then turned and said, "Smith says to let him go. And we're to come on home. Something sure made him change his mind."

Lane started for the door after his handcuffs were unlocked. The phone rang again. The same man as before answered it. Then he shouted at Lane to stop, but Lane kept on going, only to be halted by two men stationed at the elevator.

Lane's phone was being monitored by CACO agents in the basement of the apartment building. They had called up to report that Smith had not given that order. In fact, no one had actually called in from outside the building. The call had come from somewhere within the building.

Smith showed up fifteen minutes later to conduct the search throughout the building. Two hours later, the agents were told to quit looking. Whoever had made that call imitating Smith's voice and giving the new code words had managed, somehow, to get out of the building unobserved.

"SKIZO, or whoever it is, must be using a machine to simulate my voice," Smith said. "No human throat could do it well enough to match voiceprints."

Voices!

Lane straightened up so swiftly that the men on each side of him grabbed his arms.

Doctor Sue Brackwell!

Had he really talked to her that last time, or was someone imitating her voice, too? He could not guess why; the mysterious Whoever could be using her voice to advance whatever plans he had. Sue had said that she just wanted to talk for old time's sake. Whoever was imitating her might have been trying to get something out of him, something that would be a clue to. . .to what? He just did not know.

And it was possible that this Whoever had talked to Sue Brackwell, imitating his, Lane's, voice.

Lane did not want to get her into trouble, but he could not afford to leave any possible avenue of investigation closed. He spoke to Smith about it as they went down the elevator. Smith listened intently, but he only said, "We'll see."

Glumly, Lane sat on the back seat between two men, also glum, as the car traveled through the streets of Washington. He looked out the window and through the smog saw a billboard advertising a rerun of *The Egg and I.* A block later, he saw another billboard, advertising a well-known brand of beer. "SKY-BLUE WATERS," the sign said, and he wished he were in the land of sky-blue waters, fishing and drinking beer.

Again, he straightened up so swiftly that the two men grabbed him.

"Take it easy," he said. He slumped back down, and they removed their hands. The two advertisements had been a sort of free association test, provided only because the car had driven down this route and not some other it might easily have taken. The result of the conjunction of the two billboards might or might not be validly linked up with the other circuits that had been forming in the unconscious part of his mind. But he now had a hypothesis. It could be developed into a theory which could be tested against the facts. That is, it could be if he were given a chance to try it.

Smith heard him out, but he had only one comment. "You're thinking of the wildest things you can so you'll throw us off the track."

"What track?" Lane said. He did not argue. He knew that Smith would go down the trail he had opened up. Smith could not afford to ignore anything, even the most farfetched of ideas.

Lane spent a week in the padded cell. Once, Smith entered to talk to him. The conversation was brief.

"I can't find any evidence to

support your theory," Smith said.

"Is that because even CACO can't get access to certain classified documents and projects at Lackalas Astronautics?" Lane said.

"Yeah. I was asked what my need to know was, and I couldn't tell them what I really was trying to find out. The next thing I'd know, I'd be in a padded cell with regular sessions with a shrink."

"And so, because you're afraid of asking questions that might arouse suspicions of your sanity, you'll let the matter drop?"

"There's no way of finding out if your crazy theory has any basis."

"Love will find a way," Lane said.

Smith snorted, spun around, and walked out.

That was at 11 A.M. At 12:03, Lane looked at his wristwatch (since he was no longer compelled to go naked) and noted that lunch was late. A few minutes afterwards, an Air Force jet fighter on a routine flight over Washington suddenly dived down and hit CACO HQ at close to 1000 mph. It struck the massive stone building at the end opposite Lane's cell. Even so, it tore through the fortress-like outer walls and five rooms before stopping.

Lane, in the second subfloor, would not have been hit if the wreck had traveled entirely through the building. However, flames began to sweep through, and guards unlocked his door and got him outside just in time. On orders transmitted via radio, his escorts put him into a car to take him across the city to another CACO base. Lane was stiff with shock, but he reacted quickly enough when the car started to go through a red light. He was down on the floor and braced when the car and the huge Diesel met. The others were not killed. They were not, however, in any condition to stop him. Ten minutes later, he was in his apartment.

Doctor Sue Brackwell was waiting for him under the skylight. She had no clothes on; even her glasses were off. She looked very beautiful; it was not until much later that he remembered that she had never been beautiful or even passably pretty. He could not blame his shock for behaving the way he did, because the tingling and the warmth dissolved that. He became very alive, so much so that he loaned sufficient life to the thing that he pulled down to the floor. Somewhere in him existed the knowledge that "she" had prepared this for him and that no man might ever experience this certain event

again. But the knowledge was so far off that it influenced him not at all.

Besides, as he had told Smith, love would find a way. He was not the one who had fallen in love. Not at first. Now, he felt as if he were in love, but many men, and women, feel that way during this time.

Smith and four others broke into the apartment just in time to rescue Lane. He was lying on the floor and was as naked and red as a new-born baby. Smith yelled at him, but he seemed to be deaf. It was evident that he was galloping with all possible speed in a race between a third-degree burn and an orgasm. He obviously had a partner, but Smith could neither see nor hear her.

The orgasm might have won if Smith had not thrown a big pan of cold water on Lane.

Two days afterwards, Lane's doctor permitted Smith to enter the hospital room to see his much-bandaged and somewhat-sedated patient. Smith handed him a newspaper turned to page two. Lane read the article, which was short and all about EVE. EVE—Ever Vigilant Eye—had been a stationary-orbit surveillance satellite which had been sent up over the east coast two years ago. EVE had exploded for unknown reasons, and the accident was being investigated.

"That's all the public was told," Smith said. "I finally got through to Brackwell and the other bigwigs connected with EVE. But either they were under orders to tell me as little as possible or else they don't have all the facts themselves. In any event, it's more than just a coincidence that she—EVE, I mean—blew up just as we were taking you to the hospital."

Lane said, "I'll answer some of your questions before you ask them. One, you couldn't see the holograph because she must've turned it off just before you got in. I don't know whether it was because she heard you coming or because she knew, somehow, that any more contact would kill me. Or maybe her alarms told her that she had better stop for her own good. But it would seem that she didn't stop or else did try to stop but was too late.

"I had a visitor who told me just enough about EVE so I wouldn't let my curiosity carry me into dangerous areas after I got out of here. And it won't. But I can tell you a few things and know it won't get any further.

"I'd figured out that Brackwell was the master designer of the bioelectronics circuit of a spy satellite. I didn't know that the satellite was called EVE or that she had the capability to beam in on 90,000 individuals

simultaneously. Or that the beams enabled her to follow each visually and tap in on their speech vibrations. Or that she could activate phone circuits with a highly variable electromagnetic field projected via the beam.

"My visitor said that I was not, for an instant, to suppose that EVE had somehow attained self-consciousness. That would be impossible. But I wonder.

"I also wonder if a female designer-engineer-scientist could, unconsciously, of course, design female circuits? Is there some psychic influence that goes along with the physical construction of computers and associated circuits? Can the whole be greater than the parts? Is there such a thing as a female gestalt in a machine?"

"I don't go for that metaphysical crap," Smith said.

"What does Brackwell say?"

"She says that EVE was simply malfunctioning."

"Perhaps man is a malfunctioning ape," Lane said. "But could Sue have built her passion for me into EVE? Or given EVE circuits which could evolve emotion? EVE had self-repairing capabilities, you know, and was part protein. I know it sounds crazy. But who, looking at the first ape-man, would have extrapolated Helen of Troy?

"And why did she get hung up on me, one out of the 90,000 she was watching? I had a dermal supersensitivity to the spy beam. Did this reaction somehow convey to EVE a feeling, or a sense, that we were in rapport? And did she then become jealous? It's obvious that she modulated the beams she'd locked on Leona and Rhoda so that they saw green where the light was really red and did not see oncoming cars at all.

"And she worked her modulated tricks on Daniels and that poor jet pilot, too."

"What about that holograph of Doctor Brackwell?"

"EVE must've been spying on Sue, also, on her own creator, you might say. Or—and I don't want you to look into this, because it won't do any good now—Sue may have set all this up in the machinery, unknown to her colleagues. I don't mean that she put in extra circuits. She couldn't get away with that; they'd be detected immediately, and she'd have to explain them. But she could have put in circuits which had two purposes, the second of which was unknown to her colleagues. I don't know.

"But I do know that it was actually Sue Brackwell who called me that last time and not EVE. And I think that it was this call that put into EVE's mind, if a machine can have a

mind in the human sense, to project the much-glamorized holograph of Sue. Unless, of course, my other theory is correct, and Sue herself was responsible for that."

Smith groaned and then said, "They'll never believe me if I put all this in a report. For one thing, will they believe that it was only free association that enabled you to get *eye in the sky* from 'The egg and I' and 'Sky-blue waters'? I doubt it. They'll think you had knowledge you shouldn't have had and you're concealing it with that incredible story. I wouldn't want to be in your shoes. But then, I don't want to be in my shoes.

"But why did EVE blow up? Lackalas says that she could be exploded if a destruct button at control center was pressed. The button, however, was not pressed."

"You dragged me away just in time to save my life. But EVE must have melted some circuits. She died of frustration—in a way, that is."

"What?"

"She was putting out an enormous amount of energy for such a tight beam. She must have overloaded."

Smith guffawed and said, "She was getting a charge out of it, too? Come on!"

Lane said, "Do you have any other explanation?" ■

Sterling Lanier's British brigadier, Donald Ffellowes, has been a most welcome addition to these pages during the last several years, and the first seven stories in the series (ranging from "Soldier Key," August 1968 to "His Coat So Gay," July 1970) have recently been collected and published by Walker & Co. under the title THE PECULIAR EXPLOITS OF BRIGADIER FFELLOWES. Here is a new one. Enjoy.

And the Voice of the Turtle . . . .

by STERLING E. LANIER

WE HAD A SCIENTIST AT the club on this particular evening. One of the members had brought him as a guest, and he joined us after dinner in the library. He was a museum biologist, from the American Museum of Natural History, I think, but it may have been the Smithsonian. He had a beard, but a neat one, and was civilized in all ways. I forget his name, but he was a reptile expert, a herpetologist, and he was one of those men who are not really happy unless wading in a tropical marsh somewhere, up to the neck in mud and malaria. He spoke with great enthusiasm of his last trip, to some appalling swamp in West Africa, where he had found out that the local crocodiles dug holes rather than building nest mounds, as did some close relatives elsewhere. I never fully grasped the exact importance of this discovery, but it obviously meant a lot to him. He told the story well, too, and could laugh at himself, over his difficulties with the local people, who thought all crocodiles ought to be killed on sight. They could

never grasp what he was trying to do, that is, in simply watching them dig nests. A very interesting fellow, and the talk was only marred by Mason Williams commenting loudly "that it was a relief to hear from a real expert for a change and not have to listen to more of Ffellowes' baloney!"

Ffellowes, our British brigadier (I sometimes think of him as the grenadier, but he always says his commission was in the artillery), was not in the room, at least at the beginning of the story, but I suddenly looked up and saw him standing outside the circle, smoking a cigar. He had just appeared, in that way he has, one minute absent, the next present. He said nothing, but listened quietly, until the visitor happened to get on the subject of turtles. Then, in the next break in the conversation, when Professor Jones, or whatever his name was, had finished a story about sea turtles mating, he asked, "Did you ever know a man named Strudwick? A specialist in your field, I believe." (The name, by the way, was not anything like Strudwick, but some relative might read this account, and I have no desire to be sued for libel).

Our visitor grew pretty excited. "I knew him very well; as a matter of fact, I did some of my graduate work under him. A real genius, but a strange man. He vanished in the Pacific, I believe, some years back, though I forget the details."

"I knew him slightly," said Ffellowes quietly. "And he was certainly strange." He did not elaborate on his remarks, and Williams snorted audibly.

Eventually whoever had brought the scientist took him away and a number of others left also. Williams, alas, was not one of them. He had grown to know Ffellowes well enough to scent a story as well as the rest of us regulars, and though he never tires of denouncing the brigadier's tales as total fabrications, he never missed one if he could manage to get into the circle. As usual, Ffellowes ignored him, or treated him rather with the scrupulous courtesy used for unusually aged and stupid waiters and doormen. Williams, I think, would have disliked him less if he had walked up and belted him with a straight left. But, Ffellowes being Ffellowes, this was impossible.

Ffellowes smiled when we asked if there were a story concerning the missing scientist he had inquired about.

"Indeed there is. I don't mind telling it. But I warn you it is *quite* odd. There are a number of things about the whole thing that were, so to speak, left hanging, loose ends.

A very peculiar business, from beginning to end." I settled back to listen with an audible, or almost audible, sigh of satisfaction, and I noticed others do the same.

"I was on leave from a job in Singapore. Let's see, that would have been in 1940. Things were on fire in Europe; London was burning night and day; the Jerries had France, the Low Countries, Norway and what all. I kept trying for active duty, and kept being shoved back into one odd job after another, like that thing in Kenya that I told you about.*

"At any rate, I was due for a spot of leave, and it was decided by a rather intelligent superior of mine, that one could have some fun *and* still do some work. He knew I liked poking about in the world's backwaters.

"We were not too happy then about the situation in some of the Dutch islands below us. They had Java and Sumatra under firm political control all right, but we kept hearing about trouble in the smaller, less well-patrolled places, some of the old Somerset Maugham settings, you know. It was obvious that Brother Jap, whom I had already met in other areas, was only waiting for a chance to jump us, and we felt that our Dutch neighbors might be neglecting some of the classic soft underbelly. There were reported meetings of Bajau pirates, of whom plenty existed then, and probably still do, with dissident petty rajahs, Moro bandits from up in the Philippines and so on. Our intelligence people in north Borneo and Sarawak were getting edgy, feeling that there might be a widespread uprising at a time when we all needed to concentrate on a northern invasion. It seemed to want looking into.

"When you consider," he added, his smooth, ruddy face putting on a rueful appearance, "how badly we ourselves messed up the actual Jap invasion when it *did* come, it seems we were a bit silly to worry about this other and, as it turned out, minor matter. Still, I make no apologies for my mission. Hindsight makes things only too evident that are invisible at the time. Half or more of any given intelligence mission is ridiculous to begin with, becomes more so as it goes on and usually ends up totally irrelevant. Still, as I say, one never knows, not in advance.

"The scheme we worked out was for me to hire a large *prau*, a native sailboat, in Sandakan, and then noodle down the

*"*His Only Safari* (F & S F, February 1970)

islands on a poor man's yachting cruise, picking up what scraps I could from natives, informers, our local agents (mostly worthless, I may say, the latter), and generally trying to find out what was what. We briefed our Dutch opposite numbers, and they didn't care for it; but since their government and queen were now pensioners in England, they had to agree, like it or not, and keep hands off, too.

"It was a lovely trip, if one doesn't mind trading sunsets for bedbugs and the loveliest seas in the world for appalling grub. Bad Malay cooking is even worse than bad English cooking, but fortunately in those days I had a stomach of proof steel."

"Who said there was any *good* English cooking," mumbled Williams, but he might as well not have spoken for all the attention Ffellowes paid.

"We called at Manado, in the north of Celebes, and then sailed on down through the Molucca Passage. In the middle of the Molucca Sea lie the Sula Islands, lovely places or were then, quite unspoiled and full of white beaches, coco palms and pleasant folk. I used to mourn them privately when the Jap fleet made the waters blood-red later on. And it was there, from a most charming man, a self-exiled Norwegian who had settled as a trader years before, that I heard first of Pulau Tuntong, the Island of the Turtle, and also, incidently, of Dr. and Mrs. Strudwick.

"I shall not attempt to give you my Norwegian chum's accent, but under it, he spoke fairly intelligible if 'American' English, as well as fluent Malay—Buginese, the local talk, into which he would switch when seeking a hard word. I used to speak fairish Malay myself, so we got along well enough.

" 'That's a funny place, Mr. Ffellowes. Only a few natives and they are not liked much either, sort of pariahs, like they have up in India. They seem to have always lived there, and the other peoples in these parts never go there, and they themselves, they never leave, neither. But I can't say they ever give trouble, no killings or nothing. The Dutch Controleur here, he don't never go there, and no ships call, no Chink traders even, and they go anywhere they can for a profit, with them old, beat-up junks. I never been there, but they say there ain't no harm in the place. Anyone *can* go there, if you see what I mean, but no one *does*. Except for the American and his wife. They are there right now, been there six months about. I forward their mail in my own boat once a month.

They're some kind of scientists, studying turtles, they said. It's supposed to be a great place for turtles. Guess that's how it got its name. But the whole thing, by Joe, even looks like a turtle. One maybe three miles long, that is half in the water, with only the point of the head sticking out, which is another little island, maybe a quarter mile from shore, from the big one.

" 'How far? Maybe thirty miles southeast, as the crow is flying from here. Lots of bad reefs and no good anchorage. I wouldn't like to be there in a storm, I tell you. The place is always foggy, too. All kinds of mineral sinks and steams and smokes, so it takes a good wind to give you a view of the whole thing. Must be a capped volcano or something. Lots of these islands are, but I never heard that this one blew or nothing. Just the steams and smokes all the time, like Yellowstone Park in the U. S., or some of our warm springs back in Norway. But it is a kind of place that makes you—well—discomfortable. My boys don't like to go there, never go ashore, and they leave plenty quick, too.'

"He rambled on, but I got to wondering to myself. Who were these Americans and what were they doing there? The Dutch had said nothing of them to us, and this was odd. It may have been that they had forgot, but they kept pretty careful account of traveling Caucasians in their islands. There weren't so many then, you know. Up in Malaya, we had picked up several White Russians already, types who were the most popular with the Japanese for work in areas where they themselves would be a standout. And there were one or two German agents in the Far East, too, men who had dropped out of sight at the beginning of the war in '39. We would dearly have liked to know where they were and what they were doing. I had a radio on my *prau*, and I tried to reach Sandakan and get an enquiry passed to Washington via London. But the damned thing was on the blink, as I have always found these devices to be when most wanted. There were the Dutch authorities in the Celebes of course, but I had been warned to avoid them except in a case of dire emergency, which this was not. What to do was a puzzle.

"I finally decided to go have a look-see myself. Old Ali, my captain, was a Bugi himself and passably familiar with these waters. As a matter of fact, he was a reformed pirate, caught by one of our gunboats robbing a trading junk up in the Anambas some years before. My chief had interviewed him,

got him a suspended sentence and set him up as a handy type, whenever we needed someone for just such an offbeat mission as my present one. His crew were his sons and cousins, a cheerful collection of sea thieves, got by wives from every race in Indonesia, I imagine, since some were dark and some light and all dressed differently. But they jumped when the old man said 'frog,' and he himself had always proved utterly trustworthy in his dealings with us. There were nine of them, as I recall, all hung about with *krises*, *bolos*, *kampilans* and all other known variety of edged weapon found thereabouts. I had a rifle and a Webley auto pistol below, and the crew had guns too, though I had them kept out of sight. This was quite normal, for we could very easily have met pirates, of whom, as I said, plenty were still known to be operating.

"Ali waddled up when I called from my cabin the next morning, a short, rubbery old thing, with a Fu-Manchu mustache, stained red with betel nut, a bald head and an engaging black-stumped grin. But the grin vanished when I told him where I wanted to go.

" 'I have never been there, *Tuan*. No one goes there. I know we look for bad men, men who would plot against the British and the Dutch. You will never find such people there. It is a waste of time. Let us go further south.'

"He was talking the Malay lingua franca of the South Seas, which is used from the China Sea to the Australian coast. One can be quite elaborate in it, and he grew increasingly so, since it was obvious that he did not at all care for the proposed visit. Now this was a really case-hardened scoundrel, who had weathered a dozen typhoons in what amounted to skiffs, as well as a thousand other hair-curling experiences to boot. I grew intrigued as he persisted in trying to change my mind, because I couldn't imagine what could scare him. And he was scared.

"I finally announced that I was going to Pulau Tuntong, alone if necessary, and that if no one of sufficient courage would accompany me, I would rent a one-man boat and go by myself. As I thought, he had far too much pride to take that. I had been entrusted to him, and he said he would go, even if all the djins of Hell (he was some kind of casual Moslem) stood in the way. I got out our maps, and the two of us sat down over a bottle of horrible gutrot, some form of arrack he liked, to work out a course. I already had interviewed the natives who took the mail, and got what they could tell me about the

trip, and between us, we figured it out. The place might have been thirty miles as the crow flies, but it was nearer double that if you didn't want to get wrecked. We were coming from the north, and we had to land on the south shore of the island, which meant a long detour to avoid the very complex reefs. We decided to leave at first light; no place at all for running at night. After a while the spirit, as I had hoped, got to him, and he began to recall what he had heard from his grandmother or someone of that vintage about the Island of the Turtle. It was all very vague.

"There was a curse on the place, that was clear. It had, the curse, I mean, something to do with the turtles themselves, who swarmed there. When I asked if he meant the sea turtles, he said it did, but there were many turtles on land, too. This confused me for a moment, since, as you may or may not know, in England everything *not* a large sea turtle is called, confusingly, a *tortoise*, even if it lives in fresh water. I have since learnt that the rest of the world uses that term for the ones that live exclusively on land. When I got this sorted out, I continued to pump him, but got little more that made any kind of sense. The people of the island were under the curse too, but only if they left the island. Then they died. They had a turtle as a deity, avoided strangers, and though harmless in themselves, were considered unlucky and good to avoid. Mariners who were ship-wrecked there simply never turned up again. Even the toughest Bajau and sea Dayak pirates never went near the place and hadn't for as long as tradition went back.

"Well, he finally reeled out, his sarong or whatever dragging on the deck, and I turned in with my own thoughts. I had hoped to carry some mail to the alleged scientists, but my Norse friend had sent some off only the week before. An evening with a steam kettle might have told me something.

"Our trip down was uneventful and we raised the anchorage we were seeking in the evening. I must say the place was not cheerful looking. A low cliff overgrown with scrub seemed to stretch around the whole island. It was hard to make out details, because the fogs and steams that my chum had mentioned did indeed blanket the landscape. Against the sunset it was a sort of whaleback of a thing, as one could make out when the rifts appeared in the mist, perhaps five or six hundred feet high at the top of the curve. There were patches of dense vegetation and patches of bald rock,

the latter gleaming wetly. Once in a while, lighter areas showed, which looked like sand. We could see no beach, but I remembered hearing that there was a long one on the north coast, which is where the great sea turtles came to lay their eggs.

"But we had found the correct place all right. There was a cluster of lights, perhaps fifty or so, in front of us and quite near to the water, and higher up, and further to the east, one small clump, in what appeared to be a sort of shallow dip or declivity. The Americans were said to have built a real house, which sounded curious, but not wildly so, above the village, and this must be its lights. It could be nothing else, since we had been told that the entire population of the place normally lived in this one village, which lay before us.

"Night fell with the suddenness of the tropics, and the lights became hard to see, since there was no wind once the land breeze had fallen and the fogs from the fumaroles (as I guessed) shrouded the island in a blanket. I decided, with the hearty approval of the crew, to lie to until morning, and go ashore only when we could see our way pretty clearly.

"I was sleeping soundly, my leg over the long bolster known as a 'Dutch wife,' waking only to slap a mosquito which had penetrated my net, when I became conscious of a sound. I can, to this day, think of nothing that quite matches it, but the bellow of an alligator in a Florida swamp is somewhat the same. This was not so throaty nor so long lasting, however. A sustained, almost agonized grunt is not too far off, but in the deep note there was a treble as well, causing a most unpleasant wailing effect. I have seldom heard a noise for which I cared less. I looked at my wristlet watch and it was 3 PM. The noise ceased suddenly, and there was nothing more but the slap of tiny waves on the hull of the *prau*.

"There was a scratching at the sliding panel on my cabin, which served as a door. I opened it and found Ali holding a torch, a flashlight, you'd say, a small one with his hand over the lens.

" 'You heard that, *Tuan?*'

" 'Yes. What do you think? A crocodile?'

" 'Never! I have heard them all my life. I do not know this noise, nor my people either. We are frightened. Let us leave this place!'

"Well, I managed to send him off after a while, feeling a bit better, by pointing out that it was, after all, only an odd noise, perhaps even a night bird with which he was unfamiliar. I

told him to set two of his crew as an anchor watch, and have them relieved every few hours. We would see what morning would bring.

"Morning brought no breeze, a humid stickiness, the dim sun shining through fog wraiths and a distinct smell of sulfur, the latter obviously emanating from the island.

"We launched our small boat, and with Ali at the helm and me in the sterm, pistol under jacket, we rowed in to the place opposite the anchorage, where the village houses, thatched with the usual nipa palms, dimly could be seen. There was a low place in the cliff there, and we soon saw a well-marked path leading down to a place where one could step out of the boat onto a sort of rock platform. A small group of natives were standing on this waiting for us.

"As we drew in, I looked closely at them. They were, to my eye at least, innocuous. They all wore the wraparound skirt, though not with the usual bright colors, and seemed in no way very different physically to any of a thousand other Indo-Malayan types I had seen. That is, they were short, slightly built, had black hair, brown skins and slanted black eyes. They were all male, and all unarmed, not even the usually omnipresent *kris* being tucked in the skirt top. The only thing about them which might be called unusual was a sort of stoop-shouldered appearance, as if they all suffered from the beginnings of a hunchback condition. And one other thing, an air of apathy and disinterest. Most places that see few visitors are very eager to greet new arrivals. But these chaps looked as if we were as interesting as—well, a coconut rind. They stood silently while we moored the boat on a rock projection, and only when I got out did one step forward and address me, in ordinary coast Malay, the same I used with the crew.

"'Be welcome, *Tuan.*' He said it listlessly, as if by rote, or performing a set task of no interest or importance. He was obviously the oldest, for he had the worst stoop, but his thinning hair was still jet black, and he had no facial hair. Up close he and the others had another thing that was new to me. Their skins looked glossy in a strange way, almost as if they were a *rigid* and not a flexible covering, though they moved in the same way as ours and one could see the muscles. Some disease, I thought, seemingly a fungus condition. Perhaps they were inbred.

"I answered politely and asked if one of them could show me to the house of the

other *Tuan* and his *Mem*. They looked blankly at one another, but the elder simply motioned me to follow and turned on his heel. No one of them looked at my men in the boat, but I did. They, even Ali, were not even trying to pretend they weren't frightened. They all looked seasick. I told them to go back to the ship and pick me up around five o'clock that afternoon. I didn't see how the Americans could refuse to give me lunch at least.

"We walked slowly up through the humidity of the steams and vapors, which made me cough a bit. The sulfur stink was very strong now. The path went through the village, laid out in a simple row of big communal houses on stilts, like lots of others I had seen; and then I got my first surprise. I almost stepped on a lot of little turtles which were waddling about on the path, right at the village entrance. I had to skip a bit to avoid them, and I noticed that my guide did so automatically. The little things paid us no attention at all, and most small turtles I have seen are very shy, rush away or into water at the glimpse of a man, you know. A few women and men (I saw no children) watched apathetically as we went by in line, the rest of the lads who had come down to the landing still bringing up the rear. It was a peculiar sensation, this utter lack of any interest at all. Never seen anything like it before or since.

"The fog grew denser on the upslope on the far side of the village, but the path was easy enough to make out as one went uphill. In places, it was actually dark, as big trees and vines leaned over it, and totally windless and dank as well. I heard no birds, no insects, nothing at all but my own and the others' footsteps and water dripping somewhere. Then, in the darkest patch we had hit yet, fog all around, came that Godawful sound I had heard the night before. The island men all stopped, and so did I, fumbling for my gun, I may say, because the sound was very close and very loud.

" 'Muaah, muaah, muaaaaah!' it came, like a colossal and very sick cow, or perhaps a diseased foghorn. Nasty!

"The men didn't seem afraid exactly, but I could feel them tense up, the first show of any feeling of any sort I had noticed. The noise stopped, and they promptly resumed their march, me along with them. In a few moments more, the path opened into a large clearing, and we had arrived.

"The mists were thinner here, and the glow of the sun could be seen in a blurred way through them. In front of us

was a rather large house, made of peeled logs, like a hunter's lodge rather, although the roof was thatched in the island way. It too stood on stilts, or thin logs, right against a shoulder of the hill itself, and had a wide veranda running around the front and one side, up to which broad wooden steps had been laid. It looked quite pretty, or would have save for the unearthly surroundings. There were large pits of what looked to be brown wet sand all about, some with a scum of water on the surface, and the warmth was now almost sickening, like an overdone greenhouse. The path wound to the steps between several of these pits and seemed to be on a spine of rock. And all about were turtles.

"They were of different shapes and sorts, large and small, some black, some brown, some yellowish. One or two had red markings on their shells. Some had blunt heads, others pointed, and one great whacking chap had a leather platter instead of a real shell, one of the so-called 'soft shells,' as I later learnt.

"To my surprise, the fellows who had brought me faced about and without a word turned and marched back down the path again, leaving me to the turtles and the fog. I quickly headed for the house before I heard that most decidedly sick-making noise again.

"I had gone perhaps halfway along the path, treading slowly to avoid the turtles which crawled freely over it and of which the littlest were hard to see, when suddenly I heard steps. A white man in khakis came out of the door onto the veranda and stood looking down at me. You'll never guess what his first words were.

" 'For God's sake! What are you doing here, Ffellowes?'

"Now, the name of Strudwick, while not as common as Smith, is not unknown in England. It simply had never occurred to me to recall this lad at all. He had been a Rhodes Scholar when I was doing my two years at Cambridge, in '21 that would be. An American and a brilliant student, he had lived down the hall from me for two terms, and we had got rather friendly. We had never written when he had left, and I had completely forgotten he had ever existed. And here he was, pumping my hand warmly, in the most isolated island in Australasia. Life is a funny thing.

" 'Hallo, Strudwick,' I said, preserving my British phlegm as best I could. 'As a matter of fact, old boy, I've come to see you, more or less to find out what you're doing here. Pleas-

ant surprise, eh, or I hope so anyway.'

"He was no fool. He looked at me shrewdly and laughed. 'Mysterious Americans attract the attention of His Majesty's Government, hm? Well, I'm glad to see you, though I don't encourage visitors. Haven't had any, as a matter of fact. But I thought the Dutch looked after this part of the world?'

"I lied, though only a bit, and said they had called us in, being short-handed, and that seemed to go down all right. He wasn't really much interested anyway, though he did seem excited about something. By this time we were in the house, which was really very comfortable. All the furniture was obviously handmade and to European specs. I gathered he must have had everything made locally, but it was good work, and there were flowers in bowls and kerosene lamps on the tables. He even gave me an iced drink; had his own portable generator, and that was a treat.

"We filled each other in on the missing years for a bit, and then he started suddenly to talk.

" 'Let me tell you why I'm here,' he said, as quickly as that. 'You may have forgotten I took a 'zoo' First (I had, of course). Well, I'm a reptile specialist. This tiny island is the home of the damnedest collection of turtles that ever existed in the world. I've done more original work here in six months than I ever did in the rest of my life. You can't follow all this, I know, but it's fantastic, and I know this field as well as anyone alive. Why there are types here that don't belong in any family, genus or species any scientist has ever seen before!'

"He went on like a brook in spate, while I relaxed with my drink and tried to follow him as well as I could. It seemed that turtles, tortoises and all the other things, like terrapins, were pretty well mapped out. No new ones had been found in years, and very few save the sea turtles, of course, went much to the east of Java, Sumatra and Borneo; that is, until one struck New Guinea. There was a lot about Wallace's line, sort of a zoological barrier, I gathered, and what did and did not cross it, all mixed up in the lecture. Then came a flood of Latin names, mostly meaningless to anyone but another expert, like the lad who was here at the club earlier. New types of *Emydura*, not supposed to be here at all; a kind of *Geochelone* no one had seen anywhere; something that looked like a cross between *Chelodina*, or a type of it, and an unknown *Geomyda* variety, which was flatly impossible,

but—occurred here. And so on, until I was frankly bewildered.

"But there was one thing which kept my attention pretty well fixed through all this. I just was not hearing the whole story. One cannot do the work I had done and not pick this sort of thing up, you know. It was, my work, I mean, in many ways, not dissimilar to police work, and I must have interrogated hundreds of clever types at one time or another. Strudwick was not lying; his enthusiasm was genuine all right; that's very hard to fake. But he was keeping something back. I could read it in his body, in his rare sidelong glance. Something was not for me to learn.

"Now I had no idea that the chap was a spy. I could have been wrong, but it was simply not in the cards, as I read the man. But he had a secret and I wondered what it was. A very casual remark put me onto something.

"He paused for breath, and I had mentioned the hordes of turtles and how tame they had seemed. He smiled and was about to speak when I added,

" 'And I hope whatever makes that disgusting sound out in the forest is equally tame. Gave me the grue, when I heard it, even out on the boat.'

"He caught his breath and turned pale. He was a big fellow, bigger than I, clean-shaven and with a goodish tan. Now he went almost green.

" 'You heard that?' His question was almost a whisper. It was echoed from the back of the room. I totally forgot he had a wife with him, and now she came in from the back, still muttering.

"Ethel Strudwick was big, too. She was not pretty, a faded blonde with hair stringy from the damp and a hard eye. She was also moderately drunk, and this at about ten in the morning. She wore the same khakis, shirt and 'ratting pants,' as we used to call them, and canvas shoes that he did. Her make-up had run. Not a very attractive sight.

"He mumbled an introduction, and I tried to be polite, but she could not stop staring at me and seemed to hear nothing of what he said, as he tried haltingly to explain who I was and what I was doing there. Not a pleasant woman, in looks or manners, but I felt very sorry for her. Because she was terrified. It was obvious, when one watched her for a minute or two. Something or someone had scared the living Hell out of her, and my former hall mate was equally jumpy, though controlling it far better. She sat down in a bamboo chair, and I tried to pick up the conversation at the point whence it had

departed from the rails, so to speak.

" 'Well, Strudwick, before your wife came in, I mentioned that strange cry in the forest. I heard it last night, and it put the wind up my crew pretty thoroughly. What on earth was it?'

" 'A bird—We don't know—Why did we ever come to this awful place?—Just a bird!' They were both speaking together, he repeating his nonsense about a bird, she lamenting their arrival and stay, neither paying the slightest attention to the other. It was unsettling to watch and listen to.

" 'Look here!' I said loudly. 'May I stay the night? I have to run over your papers and all that. This is an official visit, don't you know. Could I get my things from the boat? It would be a pleasant break for me.' I could think of no place I wanted to stay less, but I was intrigued, and they were obviously in some kind of trouble.

"Mrs. Strudwick was delighted and practically kissed me. He was not nearly so pleased, in fact not pleased at all, but there was little he could say.

"There seemed to be no servants, and Strudwick walked me down through the forest to the landing himself. We heard nothing on the way. The villagers were moving slowly and droopily about as we passed through their street, and we saw small and large turtles the whole journey, though none so many as just about the house itself. My host explained that he had heard rumors about the island for years and had only just been able to get the funds and time to come there. The locals were obliging enough to work quite hard in building the house and furniture and had accepted the money he gave them without haggling. What they did with it, he had no idea. They had no pigs or fowls, save for a few gone wild in the jungle which covered much of the place, and no traders called. They grew rice, he thought, or some crop in fields beyond the village and fished in a desultory way when the mood took them. They refused to live in or near the house, but were perfectly amiable, if not forthgoing. He had never been able to get them to talk about turtles or anything else, for that matter. They provided him fruit and coconuts, as well as rice and even fish on occasion, and did not seem to care whether they got paid or not.

"I mentioned the odd look they all had, the rigid-looking skin and the humped backs, and suggested that some obscure form of elephantiasis, added to prolonged inbreeding might be responsible.

" 'I believe you've hit it. I'm no anthropologist, but I'll bet that's exactly what's wrong with them.'

"His agreement sounded totally hollow to me, and I have a good ear for this. I was sure of one thing, though it made no sense, which was that he had some other theory of his own, concerning which he wished me to remain ignorant. 'Curiouser and curiouser,' I reflected to myself.

"When we got to the landing, the *prau* was in plain view, the fog being mostly burned off at sea level, and the small boat came in when I hailed. I went out, got my gear and a change of clothes, and we walked back up through the miasmatic heat to the house on the hill. I told Ali to keep a strict watch on the landing place and to come in at once if he saw or heard me, or if I signaled with my pocket torch during the night. He agreed promptly, and I thought I could rely on him, so long as he hadn't got to come ashore himself.

"Back in the building, Mrs. Strudwick had taken some pains to make up her face and no longer looked so bedraggled and miserable. She would never be lovely, but she at least looked decent, and she seemed to have sobered up as well. I learnt later that she was very wealthy and that they had not been married long. It must have been her money which allowed Strudwick to make this out-of-the-way trip.

"He brought out all his letters to officials for me to glance over, and he came well-recommended and was, as I had surmised, more than respectable from the scientific standpoint. He had three doctorates, I recall, one being from Yale, and all sorts of 'please aid the bearer' notes, signed by everyone from the American Undersecretary of State down. I solemnly made notes of it all.

"After lunch, which was mostly expensive tinned stuff they had brought with them, plus a little fruit and a lot of gin, I asked Strudwick why he had selected the particular site that he had for the house.

" 'The turtles, man, the turtles. There are more of them right here than anywhere else on the island. These hot springs or seeps seem to attract them, and you soon get used to the sulfur smell."

" '*You* do!' The venom in his wife's voice was naked. 'Why can't we get out of here? You've seen every damned turtle and its bloody grandmother that ever was! Why are we staying here any longer?' Her voice rose to a strident pitch that was almost a scream.

" 'Look, honey, it won't be much longer. I've told you that. I need to get just a little more information.' His tone was soothing, but I caught a nasty glint in his eye. Whatever was keeping them here, it was important to him, and he did not propose to have it interfered with.

" 'Information! On what prowls around this house on dark nights! I'm going crazy—' She got up and stumbled out of the room and disappeared in back somewhere, getting a drink, I expect. Her last sentence, unfinished, hung in the steamy air of the room.

"I saw Strudwick looking at me in a speculative way and felt bound to make some remark.

" 'What was that about something prowling around at night? Your wife seems to have a bad case of the jitters. Is it wise to stay here under the circumstances?'

"He took a long swallow of gin before answering, gathering his thoughts to sound convincing, it appeared.

" 'There *is* something here I haven't worked out yet, Ffellowes. If it's what I think, well, it will be one of the great zoological finds of the age. Hell, of any age! I can't give you the details. First, it's none of your business. Second, you'd think I was nuts. Christ Almighty, I think I *am* nuts, sometimes. Just bear with us, will you? Ethel isn't used to the tropics or my burying myself in my work either. The natives walk about at night, and this makes her nervous, though they're perfectly harmless.' It was then he told me the story of their recent marriage and mentioned that his wife had been both rich and sheltered.

"I retired to the room they had given me for a nap, but I found it hard to sleep. I was turning restlessly, when I caught the sound of voices, not too far away. I pricked up my ears not only because they were talking Malay, but because one voice was Strudwick's deep-chested rumble. I slid off the rattan couch and out of my window. I felt no compunction about eavesdropping. I had no great affection for my host, and I had commenced to have a great curiosity about whatever he was doing. I soon found he had told me a thumping lie in one area at least.

"Behind some dense undergrowth at the corner of the house he was talking to the strange-looking villager, the old one who had led me up to the house that morning. I caught only a snatch of conversation before the native turned and walked away, but it was an intriguing item.

" 'It must be soon, or we will find another, one of our

own. But the Father likes yours. But it must be soon.'

" 'It *will* be soon!' Strudwick's answer was low yet intense. 'But this new *Tuan* has changed things. He must go, first.'

" 'It must be soon,' was the dull-toned answer. 'The strange *Tuan* is your business, not ours. What do we care for *Tuans?* Or the Father, either? Give him to the Father. But he grows impatient. They all do. They *call.*'

"With that remark, the man left, drifting away between the steaming muck holes until he had vanished from sight around a corner of the slope.

"I eeled back into my room, taking care to make no noise. So the locals never spoke about anything, eh? And who was the Father and what was he waiting for and why was I supposed to leave, or possibly be 'given' to him, whoever he was? With all these things chasing themselves through my head, I finally did drift off into an uneasy doze. But my hand gripped my pistol under the pillow. The Island of the Turtle seemed to have sinister overtones all of a sudden.

"Supper, or rather tiffin, that evening was strained. Strudwick was very silent, and I caught him more than once looking at me in an unpleasant and calculating way. He seemed to be suppressing an air of intense excitement. His wife again was two-thirds blotto, and at intervals would rouse herself to relate some incoherent tale of her past, usually involving a dance at Bar Harbor or a society scandal of her dead youth in some exclusive enclave in Pennsylvania, Pittsburgh, I think. The whole thing was both depressing and eerie. I excused myself as soon as I decently could and retired. But I did not undress, and I never had my hand far from the gun. A little nocturnal prowling on my own account seemed to be more than called for.

"The light, such as there was under the sulfurous vapors of the place, became suddenly absent. Tropic sunsets didn't last long, but here there was a dim light one moment, nothing the next. I frankly preferred it to the smoky haze of the day, and I can get about in full dark as well as most so-called savage people that I have met. In addition to my gun, I had a 4-inch, single-bladed, clasp knife, a tool I have often found to be more useful in the dark than any firearm.

"I went out through my open window again. I could hear nothing in the night but water drip and the sound of a faraway frog croaking. I placed my feet carefully, whole foot at a time, testing wherever I set

down before placing my full weight on the foot. I had my torch, but I kept it in my pocket for emergencies. The pallid ghost of a full moon appeared up over the fogs and reeks, and I found I could see quite well, if I concentrated. Eyes need training to see in dim light, and I had had more than just a trifle, since it is a sense I cultivate.

"Around the front of the house I moved, and even with care, I almost trod on a small turtle more than once. They appeared to be even thicker on the ground than at the morning hours, and after a while, I could hear them moving in the silence as my ears also grew attuned, the scrape of tiny claws on the rock path and an occasional squelch as they moved into one of the damper areas.

"Nothing happened to stir my interest for a very long time. I ignored the mosquitoes, which is also a trick and a necessary one, if one is to do any proper stalking. I just kept moving slowly about, resting under a tree at intervals, then going on again. The house was silent. There were no lights, and I gathered my host and hostess were abed. She had taken on enough gin to keep her insensible until morning.

"Once I heard a vast, heaving, sucking noise over to the far side of the clearing, as if a hippo were lurching out of some mud, but it soon ceased. I felt sure it was an internal gas bubble in one of the warm springs, erupting to the surface and throwing the sand about. I have seen the same thing in New Zealand, where such mud geysers are common.

"I must have been spooking around for several hours, with no incident of any kind, when the quiet came to an abrupt end. The house was still silent, and I had reached the lower end of the clearing in front of it, near the base of the path, when I heard a woman scream. The cry was short in length, and I felt sure it had been smothered. There was only one woman on this hill, and without thinking, I drew my gun from my belt and ran straight for where I knew the house to lie, though it was invisible through the mist.

"Now I had forgot those stinking pools of sand and water, and simply ran dead ahead in a straight line. I had cleared only a few yards when my right foot went smack into one and myself after it in a spiral curve, head over heels. But I kept hold of the gun, which, by the way, was heavily oiled and was loaded with greased cartridges. My other arm flailed about and hooked on something hard, the edge of the rock path. I was immersed, for the sand was in suspension,

like quicksand, and seemed to have no bottom, but I had a good grip and began to haul myself out. There was no pull such as one finds in genuine quicksand, and I was soon halfway to the solid ground with only my legs from the knee down in the muck.

"Then—my ankles were seized. There was no mistaking the feeling. Something warm, muscular and very powerful had two death grips on my legs and was exerting a steady pressure to drag me back down into that slop from which I had almost succeeded in freeing myself! I swear that not only was I being gripped but that I could feel *fingers!*"

We all sat silent, while Ffellowes took a long pull on his cigar. In passing, I noticed that Williams had his mouth open and was just as enthralled as the rest of us.

"I froze, but only for a second," resumed Ffellowes. "My first reaction was to try and get up, in other words a panicked one, simply to keep struggling out the same way I had been pulling. My waist was well up on the solid rock, and I dropped the gun and used both hands to try and haul myself forward on my stomach. But it was no go. Whatever had me was at least as strong as I and from the feel probably stronger. I couldn't move an inch, and the pressure to haul, that is to haul *me* back down, never slackened an inch. Then I got the use of my brain back, and tried to twist, so that I was now on my side. This got me a little ground, though not much, and I tried it again, gaining a few more inches. Now I could see the pool, or rather I could see my legs, sunk in something. The fog was so dense that the pool's surface was invisible. I never thought of yelling, you know. Something told me it would be useless, and so the silent struggle continued.

"By now, I was almost sitting, and I shifted my right hand to get a better grip. It was only a few inches, but it was almost the death of me. Whatever had hold of my legs also pulled at just this point, and the yank almost took me the whole way back in!

"But it also saved me. I scrabbled wildly with my right hand seeking a stronger hold, and the hand came down on my pistol. As a wave of sand and water eddied up around my middle, spilled out of the sink by my struggle, I wrenched myself around further, thrust the barrel down as close to my leg as I could, while still keeping it clear of the water, mind you, and fired. I kept firing as fast as I could squeeze the trigger.

"The thing must have come up near the surface to get a better grip on me. There was a great final heave and a flurry in the muck. I dimly could make out something brownish and rounded emerging briefly from the watery slime and ooze, but it was hard enough to see any detail. I could be sure of nothing except that I had seen *something.* Then, the stuff subsided, and I was left with a half empty gun, sprawled over the edge of the pool. The surface was calm again under the mist and vapor.

"I had not forgot that scream. I staggered to my feet and got out my torch. With that in one hand and the gun in the other, I headed for the house as fast as I could. With the light of the torch, the path was easy enough to view, and I carefully avoided the other pools. I made no effort to avoid the turtles, for there were none. For some reason they all had disappeared.

"I lurched up the front step, calling for Strudwick. There was no answer and the house was silent as a tomb. I tried to control my panting breath and listened. Not a sound broke the night. I took the opportunity to reload the automatic with fresh .455 bullets. They had been useful once that night already.

"Barely had this been done when I did hear something. From the higher shoulder of the slope, behind the house and above it, there came a repetition of that appalling cry I had heard twice before. Loud and long, it rang out in the silent, steaming dark. 'Muaah, muaaah!' But this time it sounded —well, different, with almost a note of triumph, or impossible as it sounds—laughter.

"I raced through the house, no longer calling. The time for it seemed past, if it had ever existed. There was a back door and leading from it another path. It suddenly occurred to me that the house had been built *on* the existing path. My light showed that in the mud of the path were many footprints, some of feet shod with canvas tennis shoes, the rubber cross-hatching showing clearly. My host and hostess had come this way, but so had others, many with bare feet. Another path joined this one a few yards higher up the hill, and there the new feet had come in. Some of them, even in that moment, looked strange, as if the feet that made them were blurred and lumpy. Not that I stayed to examine them in detail, mind. For that strange cry was ringing out ahead of me again, and I went on upward, keeping my torch masked in my left fist, which gave me enough vision. The moon was still up as well, and the mists were a trifle thinner up here.

"The track wound around the base buttresses and outthrust roots of monstrous trees, and vines and branches hung over the way, sometimes brushing my face. But I had my wind back and went steadily and softly. And all the while that ghastly sound kept echoing down the path, growing louder and louder as I went on.

"I must have done a good quarter mile, all steadily uphill, when I saw a glimmer of light ahead and slowed down a bit. As I drew near, I saw that another clearing lay ahead and that it opened out under the moon's rays. I crept on and presently found myself looking at something very strange indeed.

"Two steep sides of the island's peak made an angle here, though a shallow one. They, the walls, were rock but covered with mosses and wet growth that hung down over the face. In front of the angled steep, in the V, was a broad, flat place, and here was a much larger replica of the small pools such as lay in front of the house below, a sinkhole two hundred feet across, filled with the same dark water and patches of suspended sand as the ones lower down. Around the wet area was a strip of glistening rock, this perhaps ten yards and a bit in width. And it was full of people. The islanders were there in force, both men and women. Again, I saw no children. They stood silent, facing the pool, and in the center, his back to me, was Strudwick. He was supporting his wife over one arm. She appeared to have fainted, or was, at best, semiconscious.

"Now the light, and I must stress this, was most capricious. That is, the moon would illumine bits very clearly for a second or two, and then the drift of the fog and haze from the great pool would blot things out just as one was trying to concentrate one's gaze on some particular detail.

"But at the back of the crowd there were figures which made my flesh crawl. Whatever disease affected these people, the ones in the last stages, or at least I surmised, were not good to look upon. I could see long *swaying* necks, covered with leathery skin, and high, arched humped backs which looked rounded and *hard*. The terminal stages of the peculiar island blight ought not to have been viewed at all, not by normal people. All of the folk, though, were swaying the same way, their bodies still, but their necks weaving, as if in some ghastly parody of those little girls who do the formal Thai and Javanese dances And all were watching Strudwick and his wife

"Then came that terrible coughing, moaning cry again. And this time I saw, or at least partly saw, whatever made it.

"I had not been watching the pool as I edged closer, since I was looking for possible danger, being noticed by a native or something. Now I saw that the surface, the floating sand and brown scum were moving. And out of the water had come a head.

"To this day, I have trouble convincing myself I saw what I *think* I saw. As the head rose higher on a monstrous, rugose neck. I half noticed the beginning of a great rounded dome of a back, glistening and rigid in the unearthly moon glow. But it was on the head which I concentrated, because it was moving, the whole incredible thing was moving, slowly with hardly a ripple, directly toward where Dr. Sylvanus Strudwick, Ph.D., author of more learned papers than I can remember hearing, stood holding his wife. And I knew what it had come for, as if I somehow had known all along. This was the Father and Ethel Strudwick was what it wanted.

"You may ask what the head resembled. It was high-domed and leathery. Great flaps, or ears, stood out on the side. The *pink*mouth was frankly disgusting as it opened out for its hideous call, for it projected and there were no teeth, giving it the look of a great beaked maw. The eyes, as well as I could make out, were large and bulbous, of an unwinking black. And as I watched, I saw membranes slide across them and lift again. Yet the most awful thing concerning the whole appearance, if I may so describe it, was something not physical at all. The thing was intelligent. Whatever abysmal lair had spawned it had given it the same germ, DNA or whatever they call it now, that had been given *us*. It was not a beast, but somehow a hyena would have looked clean by comparison. Its size? Far larger than a human, but how much I really could not undertake to say.

"It was now very close to the edge of the rock surface. And Strudwick had shifted his grip on his wife. What madness affected the man, I will never know. Whether he hated her anyway, no doubt with some cause, or whether he had simply made some foul bargain in the interest of 'pure science' (I have always distrusted scientists most when they claim to be pure, by the way), I will never know. Certainly she feared him and his purposes. With good reason, since it was perfectly obvious he was about to chuck her into the grip of the

insane-looking form of monstrous life in front of him.

"I had to do something and rather promptly. I tucked my torch in my pocket, opened my clasp knife, walked down to the pack in front of me and simply stabbed the nearest in the back, aiming high for the kidneys as a certain Pathan had once taught me, long before our commandos perfected the technique. I managed to kill three in three strokes, so hypnotized were they, and then there was no one at all between me and my fellow Cantabrigian.

"I had kept my pistol in my left hand. As I got clear of the natives, none of whom seemed capable of moving, I simply called out, 'Strudwick.'

"He turned and let his wife slip to the ground, which was what I had been praying for. Above and behind him, the impossible head rose higher on the vast wrinkled neck, and the great expressionless eyes focused on me. I ignored it for the moment. Everything seemed very plain and logical. There really was no time for parleying or argument.

"Strudwick must have read my eyes, for he tried to put up his hands. The moon was full on his face as I put a bullet through his brain, quite easy at that range. He reeled backward and fell into the muck with a sodden splash. The echo of the shot reverberated off the rock face behind the pool. I had no compunction about what I had done and still do not.

"The Father was now about six feet away and perhaps eight above the surface of the pool. I straddled Ethel Strudwick's body, which lay very still, and raised my pistol. As I did so, the thing's mouth opened and a rumble heralded the start of the cry. I sighted very carefully and fired three rapid shots into the yawning pink gape, resting one arm on the other forearm as I did.

"I watched the death, for my bullets had crashed up into the brain through the roof of the mouth, just as I intended. And as the light went out of those strange eyes and the giant head slumped, I felt a queer pang—well, no doubt you'll think me soft—almost of pity. Who knows how old it was, nor how long it had lived there?

"The great neck collapsed and the vast dome sank back. A wave of sulfurous water and sand sloshed over my shoes as I bent and lifted the woman. I still had four shots, and I still clung to the knife. I turned and saw the beginnings of movement in that circle of rapt faces. They could not yet believe what they had seen, but the death of the Father and the blast of the shots were beginning to have an effect,

even on such very dim and peculiar minds as theirs.

"Then, and thank God for it, the moon went out. Whether a real cloud way up in the far sky had crossed it or whether an unusually heavy waft of the local murk had done so, I neither know nor care. The effect was all I cared for.

"Lifting Mrs. Strudwick, who was damned heavy, I ran right back the way I had come. In thirty very fast paces indeed, I felt a tree bole in front of me and dropped her. I tucked the knife in my belt, still open, and pulled out my torch. Then I bent down and gave her face a good hard slap. I was never going to get down that hill carrying a woman who must have weighed little less than I, and I had to get her on her legs. I jammed the gun into my belt next to the knife and hauled her to her feet. She moaned, but her eyes were open. I slapped her again, hard enough to sting, but not disable, and draped her arm over my shoulder. I could hear movement behind us now, and a grunting, cracking sound that reminded me more of the Father's voice than anything that ought to issue from human lips. The opposition could not be expected to stay quiescent forever.

"I shone the torch about, and there was the entrance to the path, just a few feet away. I ran toward it, forcing her to use her feet at least a touch and thus take some of the weight off me. My light was still the only one, but as we entered the trail and headed down, the moon came out again. The mumbling behind us now swelled into a yell, through which ominous grunts came all too clearly. I got a speedy notion that the village 'elders,' the gentry with the high backs and long necks, might not be too slow in action either.

"Down that slippery, twisting track we went like a couple of good ones. After a brief spurt she seemed to wake up at last and took her arm away. She was still shaky, not surprisingly, but she got along at a pretty fair clip, and I handed her the light at the next bend. She kept it on the path, which was good enough for me and enabled me to get my gun back in my hand. The cries behind us were getting louder, and some of them sounded like echoes of the 'Muaah' thing. Worse, though I said nothing, I thought at one point that I caught an echo of the same cry *ahead* of us. I had hoped the whole population would be up on the hill, indulging in what passed for church services, but it might be a mistaken hope. Well, I still had my weapons.

"Suddenly, sooner than I

had hoped, the house was before us. We tore into it, through the open back door, and into the dark living room. Here I caught her by the arm. The hue and cry was a bit further back now, and I had an idea. I have mentioned that there were kerosene lamps about on the tables.

"I struck a match and grabbed one, which looked full. I lighted it and quickly looked for more. 'Kerosene,' I gasped, 'pour it about as fast as you can.'

"She got the idea finally and began sloshing the lamp contents over the room as fast as I. I smashed the one lighted lamp into the biggest pile of papers I could see, some of her late husband's unpublished discoveries, I expect, and serve him right. The house was full of bamboo stuff, and even in this damp climate that would burn. Also, the house itself was only wet on the outside and had had time to dry out a lot since the months in which it had first been built. The room went up like a bonfire behind us, and I shoved her out the front door and onto the veranda. With any luck, this blaze should delay our pursuers for a moment, and that might be enough. At the very least, they would have to take the other track around, the one that came in higher up the hill.

"We had got halfway across the path which ran between the sinkpools when I saw we were going to need all the luck we could get. All the islanders were *not* behind us. Clearly visible in the light from the burning house behind us, there now stood one of what I shall call for want of a better word, the 'elders.' He was waiting for us on a narrow place between two of the boggy patches, and his whole attitude was more than plain. As we caught sight of him, I pushed Mrs. S. behind me.

"The creature, for it hardly looked human any longer, stood, crooked arms outstretched, his eyes glittering in the light. His visible skin was cracked and leathery, almost like dun-colored scales, and the neck was obscenely long and twisting. He was hairless, and his ears had shrunk or rotted to mere stubs, while the shining dome of his back rose far up behind his shoulders. It seemed to me also that the feet and fingers had nails of extraordinary length and sharpness, but I may have been mistaken in this. He was quite nude, not even the island wraparound, and his whole body looked damp in the firelight. As I advanced slowly, the mouth opened, and I saw that the disease had caused him to lose his teeth as well. There was an

uncanny resemblance to the monster I had dealt with up on the higher reaches. No doubt why they called the thing the 'Father.' No doubt.

"At ten paces, I fired. I shot steadily, and I could see the awful body shake from the impact of the heavy bullets. But though it staggered, it still came on. I shot carefully, for the midbody, not trying out anything fancy. The blank dark eyes never changed expression, though that toothless mouth opened and closed.

"Behind me, I could hear Mrs. Strudwick whimpering. Couldn't say I blamed her.

"At the fourth, and last, shot, I dropped the gun, pulled out my knife and waited. Incredible though it may sound, the man, or perhaps what had once been a man, lurched on and closed with me. The fetid breath of that ghastly mouth came into mine, as I drove the knife home again and again, meeting a queer resistance, as if the skin were actually a sort of armor or something similar.

"But it was dying. There was no strength to its grapple, only a kind of post-mortem will, as if the big nerve centers were actuating the body even after the brain had died. I hurled it aside, and it slid into the nearest muck pool, much as its giant forerunner had a few minutes earlier.

"We could hear the cry of the pack behind us somewhere, even over the roaring of the flames from the house. This was now totally ablaze and sending sparks over the landscape. Curiously, the only physical harm I got on the whole happening (unless you count a possible something I'll get to later) came from one of these, which caught, unnoticed, in my shirt back and gave me a nasty burn.

"Again we ran downhill, this time through the village, which, I am happy to say, was deserted. I was perfectly prepared to swim out to the *prau*, if necessary, towing my lady friend in my wake. The peril of sharks never entered my head, not after what we had just been through, and I feel certain she felt the same way.

"But it was not necessary. The shots and the blaze had got to old Ali, and though I am not sure he actually would have come ashore, he had fought down his fears and at least bully-damned some of his crew of family thugs to bring the small boat in to the landing place. There they were, armed to the teeth, and looking half petrified with fright. No more unsavory lot ever looked better to me. After the good folk of Pulau Tuntong, a squad of *Waffen SS* would have looked reassuring.

"Well, that was that. We got out to the ship, upanchored and were gone, despite night, reefs and all, in less than twenty minutes. By the time dawn came, Pulau Tuntong was not even in sight. I was barely able to note this fact, because I was burning up with a curious fever. Mrs. Strudwick was not only feverish, but totally unconscious in my cabin, shock no doubt playing some part in the matter.

"We made port in the Sulas next day and my old Norwegian trader behaved like a saint. He took us in and nursed us both tenderly, as well as a woman could, that hard-handed old swab. I was well enough to leave in a couple of days, but Mrs. Strudwick was a very sick woman. The old man promised to see that she was shipped to the Celebes in his own vessel, and turned over to the Dutch authorities, for transfer eventually to the States. Looking at her, I was not sure she would make it, since she was out of her head half the time and raving senselessly. I told the old man that she and her husband had provoked a native uprising, which in a certain sense you'll agree was true. I also told him to stop sending any boat whatever to Pulau Tuntong, since the people there were far better utterly avoided. I would file my own (discreetly edited) report with the Dutch. He agreed, and told me that though he had tried to find native women to help nurse us, none would do so, not when they had heard whence we came. He had done wonders, and I sent him a fattish check when I got back to Singapore, along with a gold watch I thought he might fancy. I know he got it because he wrote. Mrs. Strudwick had been shipped out also, and I never heard of her again.

"Now, before you fellows bombard me with questions, let me try to make a few things plain. First, I have never gone back there or checked up on the place, nor even bothered. I had too many other things on my mind until 1945. Never since met anyone who knew the area well enough to put a sensible question to, either. If anyone, either Jap or Allied ever landed there, I never heard of it. You are all welcome to inquire if you care to.

"As to what I ran into, in all its implications, I warned you, in the beginning, it was full of loose ends and unanswered questions. Most of the major things in life are, I find. But I have one thought that I will share, or rather some related thoughts.

"In 1940, beyond knowing vaguely that Madame Curie had died of radium poisoning, while doing experiments, the word

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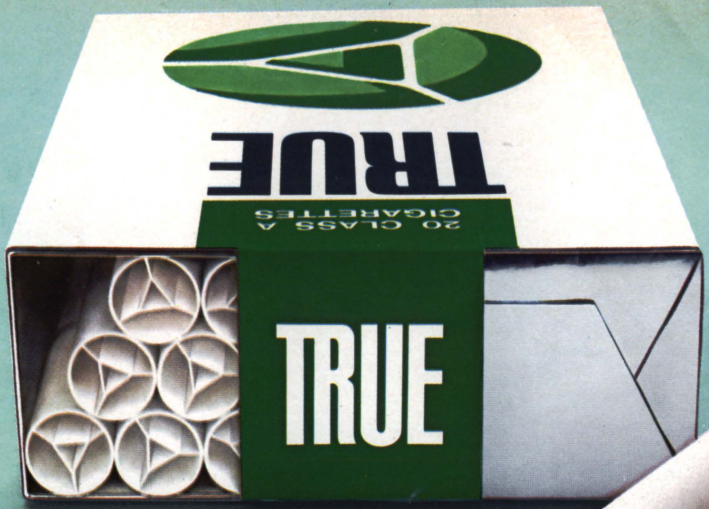

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"radioactivity' meant literally nothing to me. Am I clear? Hiroshima, of course, changed all that. My current thought is this: the whole island, and especially around those seeps and sulfur springs, *could*, I think, have been rich in uranium or some such article. I say 'could,' since I know nothing of these matters, beyond what one reads in the tabloids.

"So, consider a possibility, nothing more. Consider an inbred, isolated fragment of humanity, constantly soaked in this stuff. Would it eventually not cause a mutation among those who survived and managed to breed? I don't know, nor I expect will anyone else, at least for a long time. Only a thought, mind you, and not clear in my own mind. But the turtles, now, according to Strudwick, who may have been loathsome morally, but was at least a good scientist—the turtles were an extraordinarily odd mix, all sorts or strange breeds on one tiny island, to use his words. Another matter is my strange fever, not like malaria at all. And I lost a lot of hair, though it later grew back. Radioactivity? It gives one to think.

"Thus we come to the village 'elders.' They looked awful, but may, just may have been on the road to something new, a new breed, if a most unpleasing one to our eyes. Remember, I saw no children. Could the race have been dying out? Again, I have no idea, no real answers.

"And finally, I suppose you want my ideas on the creature they called the 'Father.' My first thought, and one I clung to for a longish while, was simply that it was an enormous, deformed and very aged turtle, changed perhaps by the radioactive bath in which it had soaked and indeed may have done so for ages, for all that I know."

He paused, then rose and stood behind his chair, staring blankly at the mantelpiece.

Then he turned to leave, but his voice floated back as he went. "There are, naturally, many other possibilities. The eyes, you know, were utterly human in their expression. Many other possibilities." We heard his feet on the stairs.

For once in his life, Mason Williams had nothing to say, not a word. It was an occasion.

In which Mr. Fast invents one Julius Hepplemeyer, who invents a device that bends space, which. . . Read on; it's all good fun. Howard Fast's most recent book is THE HESSIAN (Morrow).

The Hoop

by HOWARD FAST

IN ONE OF THOSE CHARMing expressions of candor—which were to become so well known to the television audience—Dr. Hepplemeyer ascribed his scientific success less to his brilliance than to his name. "Can you imagine being Julius Hepplemeyer, and facing that for the rest of your life? If one is Julius Hepplemeyer, one is forced either to transcend it or perish."

Two Nobel Prizes before he finally perfected the *hoop* attested to the transendence. In acknowledging them, he made liberal use of what the press came to call "Hepplemeyer Jewels," as for instance: "Wisdom obligates a man to perform foolishly." "Education imposes a search for ignorance." "The solution always calls for the problem."

This last was particularly applicable to the hoop. It was never Dr. Hepplemeyer's intention to bend space, and he pinned down the notion as presumptuous. "Only God bends space," he emphasized. "Man can only watch, observe, seek—and sometimes find."

"Do you believe in God?" a reporter asked eagerly.

"In an ironic God, yes. The proof is laughter. A smile is the only expression of eternity."

He talked that way without any particular effort, and acute observers realized it was because he thought that way. His wife was an acute observer, and one morning at breakfast, as he cracked a three-minute egg and peered into it, he specified that everything returns to itself.

It rather chilled his wife, without her knowing why. "Even God?" she asked.

"Most certainly God," he replied, and for the next two years he worked on the *hoop*.

The Dean at Columbia cooperated with him, cutting down his lectures to one a week. Every facility was placed at his disposal; after all, it was the Hepplemeyer age; Einstein was dead, and Hepplemeyer had to remind his admirers that while "Hepplemeyer's Law of Return" had perhaps opened new doors in physics, it nevertheless rested solidly upon the basis of Einstein's work. Yet his modest reminders fell upon deaf ears. and whereas *The New York Times* weekly magazine supplement once ran no less than six features a year on some aspect of Einstein's work, they now reduced the number to three and devoted no less than seven features in as many months to Hepplemeyer. Isaac Asimov, that persistent unraveler of the mysteries of science, devoted six thousand words toward a popular explanation of the "Law of Return," and if few understood, it was nevertheless table conversation for many thousands of intrigued readers. Nor were any egos bruised, for Asimov himself estimated that only a dozen people in the entire world actually understood the Hepplemeyer equations.

Hepplemeyer, meanwhile, was so absorbed in his work that he ceased even to read about himself. The lights in his laboratory burned all night long while, with the assistance of his eager young assistants—more disciples than paid workers—he translated his mathematics into a hoop of shining aluminum, the pipe six inches in diameter, the hoop itself a circle of the six-inch aluminum pipe twelve feet in diameter; and within the six-inch pipe, an intricate coil of gossamer wires. As he told his students, he was in effect building a net in which he would perhaps trap a tiny curl of the endless convolutions of space.

Of course, he immediately denied his images. "We are so limited," He explained. "The universe is filled with endless wonders for which we have no name, no words, no concepts. The hoop? That is different. The hoop is an object, as anyone can see."

There came a fine, sunny, shining spring day in April, when the hoop was finally finished and when the professor and his student assistants bore it triumphantly out onto the campus. It took eight stalwart young men to carry the great hoop, and eight more to carry the iron frame in which it would rest. The press was there, television, about four thousand students, about four hundred cops and various other representatives of the normal and abnormal life of New York City. The Columbia University

quadrangle was indeed so crowded that the police had to clear a path for the hoop. Hepplemeyer begged them to keep the crowd back, since it might be dangerous; and as he hated violence almost as much as he detested stupidity, he begged the students not to get into the kind of rumble that was almost inevitable when cops and students were too many and in too great proximity.

One of the policemen lent the professor a bullhorn, and he declared, in booming electronic tones, "This is only a test. It is almost impossible that it should work. I have calculated that out of any given hundred acres, possibly a hundred square feet will be receptive. So you see how great the odds are against us. You must give us room. You must let us move about."

The students were not only loose and good-natured and full of grass and other congenial substances on that shining April day; they also adored Hepplemeyer as a sort of Bob Dylan of the scientific world. So they cooperated, and finally the professor found a spot that suited him, and the hoop was set up.

Hepplemeyer observed it thoughtfully for a moment, and then began going through his pockets for an object. He found a large gray eraser and tossed it into the hoop. It passed through and fell to the ground on the other side.

The student body—as well as the working press—had no idea of what was supposed to happen to the eraser, but the crestfallen expression on Hepplemeyer's face demonstrated that whatever was supposed to happen had not happened. The students broke into sympathetic and supportive applause, and Hepplemeyer, warming to their love, took them into his confidence and said into the bullhorn:

"We try again, no?"

The sixteen stalwart young men lifted hoop and frame and carried their burden to another part of the quadrangle. The crowd followed with the respect and appreciation of a championship golf audience, and the television camera ground away. Once again, the professor repeated his experiment, this time tossing an old pipe through the hoop. As with the eraser, the pipe fell to earth on the other side of the hoop.

"So we try again," he confided into the bullhorn. "Maybe we never find it. Maybe the whole thing is for nothing. Once science was a predictable mechanical handmaiden. Today, two and two add up maybe to infinity. Anyway, it was a comfortable old pipe and I am glad I have it back."

By now, it had become evident to most of the onlookers that whatever was cast into the hoop was not intended to emerge from the other side, and were it anyone but Hepplemeyer doing the casting, the crowd, cameras, newsmen, cops and all, would have dispersed in disgust. But it was Hepplemyer, and instead of dispersing in disgust, their enchantment with the project simply increased.

Another place in the quadrangle was chosen, and the hoop was set up. This time, Dr. Hepplemeyer selected from his pocket a fountain pen, given to him by the Academy, and inscribed "nil desperandum." Perhaps with full consciousness of the inscription, he flung the pen through the hoop, and instead of falling to the ground on the other side of the hoop, it disappeared. Just like that—just so—it disappeared.

A great silence for a long moment or two, and then one of Hepplemeyer's assistants, young Peabody, took the screwdriver, which he had used to help set up the hoop, and flung it through the hoop. It disappeared. Young Brumberg followed suit with his hammer. It disappeared. Wrench. Clamp. Pliers. All disappeared.

The demonstration was sufficient. A great shout of applause and triumph went up from Morningside Heights and echoed and reechoed from Broadway to St. Nicholas Avenue, and then the contagion set in. A coed began it by sailing her copy of the poetry of e.e. cummings through the hoop. It disappeared. Then enough books to stock a small library. They all disappeared. Then shoes—a veritable rain of shoes—then belts, sweaters, shirts, anything and everything that was at hand was flung through the hoop and anything and everything that was flung through the hoop disappeared.

Vainly did Professor Hepplemeyer attempt to halt the stream of objects through the hoop; even his bullhorn could not be heard above the shouts and laughter of the delighted students, who now had witnessed the collapse of basic reality along with all the other verities and virtues that previous generations had observed. Vainly did Professor Hepplemeyer warn them.

And then, out of the crowd and into history, raced Ernest Silverman, high jumper and honor student and citizen of Philadelphia.

In all the exuberance and thoughtlessness of youth, he flung himself through the hoop—and disappeared. And in a twinkling, the laughter, the shouts, the exuberance turned into a cold, dismal silence. Like

the children who followed the pied piper, Ernest Silverman was gone with all the fancies and hopes; the sun clouded over, and a chill wind blew.

A few bold kids wanted to follow, but Hepplemeyer barred their way and warned them back, pleading through the bullhorn for them to realize the danger involved. As for Silverman, Hepplemeyer could only repeat what he told the police, after the hoop had been roped off, placed under a twenty-four hour guard, and forbidden to everyone.

"But where is he?" summed up the questions.

"I don't know," summed up the answer.

The questions and answers were the same at Centre Street as at the local precinct, but such was the position of Hepplemeyer that the commissioner himself took him into his private office—it was midnight by then—and asked him gently, pleadingly:

"What is on the other side of that hoop, professor?"

"I don't know."

"So you say—so you have said. You made the hoop."

"We build dynamos. Do we know how they work? We make electricity. Do we know what it is?"

"Do we?"

"No, we do not."

"Which is all well and good. Silverman's parents are here from Philadelphia, and they've brought a Philadelphia lawyer with them and maybe sixteen Philadelphia reporters, and they all want to know where the kid is to the tune of God knows how many lawsuits and injunctions."

Hepplemeyer sighed. "I also want to know where he is."

"What do we do?" the commissioner begged him.

"I don't know. Do you think you ought to arrest me?"

"I would need a charge. Negligence, manslaughter, kidnaping—none of them appear to fit the situation exactly, do they?"

"I am not a policeman," Hepplemeyer said. "In any case, it would interfere with my work."

"Is the boy alive?"

"I don't know."

"Can you answer one question?" the commissioner asked with some exasperation. "What is on the other side of the hoop?"

"In a manner of speaking, the campus. In another manner of speaking, something else."

"What?"

"Another part of space. A different time sequence. Eternity. Even Brooklyn. I just don't know."

"Not Brooklyn. Not even Staten Island. The kid would have turned up by now. It's

damn peculiar that you put the thing together and now you can't tell me what it's supposed to do."

"I know what it's supposed to do," Hepplemeyer said apologetically. "It's supposed to bend space."

"Does it?"

"Probably."

"I have four policemen who are willing to go through the hoop—volunteers. Would you agree?"

"No."

"Why?"

"Space is a peculiar thing, or perhaps not a thing at all," the professor replied, with the difficulty a scientist always has when he attempts to verbalize an abstraction to the satisfaction of a layman. "Space is not something we understand."

"We've been to the moon."

"Exactly. It's an uncomfortable place. Suppose the boy is on the moon."

"Is he?"

"I don't know. He could be on Mars. Or he could be a million miles short of Mars. I would not want to subject four policemen to that."

So with the simple ingeniousness or ingenuousness of a people who love animals, they put a dog through the hoop. He disappeared.

For the next few weeks, a police guard was placed around the hoop day and night, while the professor spent most of his days in court and most of his evenings with his lawyers. He found time, however, the meet with the mayor three times.

New York City was blessed with a mayor whose problems were almost matched by his personality, his wit and imagination. If Professor Hepplemeyer dreamed of space and infinity, the mayor dreamed as consistently of ecology, garbage and finances. Thus it is not to be wondered at that the mayor came up with a notion that promised to change history.

"We try it with a single garbage truck," the mayor begged Hepplemeyer. "If it works, it might mean a third Nobel Prize."

"I don't want another Nobel Prize. I didn't deserve the first two. My guilts are sufficient."

"I can persuade the Board of Estimate to pay the damages on the Silverman case."

"Poor boy—will the Board of Estimate take care of my guilt."

"It will make you a millionaire."

"The last thing I want to be."

"It's your obligation to mankind," the mayor insisted.

"The college will never permit it."

"I can fix it with Columbia," the mayor said.

"It's obscene," Hepplemeyer said desperately. And then he

surrendered, and the following day a loaded garbage truck backed up across the campus to the hoop.

It does not take much to make a happening in Fun City, and since it is also asserted that there is nothing so potent as an idea whose time has come, the mayor's brilliant notion spread through the city like wildfire. Not only were the network cameras there, not only the local and national press, not only ten or twelve thousand students and other curious city folk, but the kind of international press that usually turns out only for major international events. Which this was, for certainly the talent for producing garbage was generic to mankind and perhaps the major function of mankind, as G.B.S. had once indelicately remarked; and certainly the disposal of the said garbage was a problem all of mankind shared.

So the eyes stared, the cameras whirred, and fifty million eyes were glued to television screens as the big sanitation truck backed into position. As a historical note, we remember that Ralph Vecchio was the driver and Tony Andamano his assistant. Andamano stood in the iris of history, so as to speak, directing Vecchio calmly and efficiently:

"Come back, Ralphy—a little more—just cut it a little. Nice and easy. Come back. Come back. You got another twelve, fourteen inches. Slow—great. Hold it there. All right."

Professor Hepplemeyer stood by the mayor, muttering under his breath as the dumping mechanism reared the great body back on its haunches—and then the garbage began to pour through the hoop. Not a sound was heard from all the crowd as the first flood of garbage poured through the hoop; but then, when the garbage disappeared into infinity or Mars or space or another galaxy, such a shout of triumph went up as was eminently proper to the salvation of the human race.

Heroes were made that day. The mayor was a hero. Professor Hepplemeyer was a hero. Tony Andamano was a hero. Ralph Vecchio was a hero. But above all, Professor Hepplemeyer, whose fame was matched only by his gloom. How to list his honors? By a special act of Congress, the Congressional Medal of Ecology was created; Hepplemeyer got it. He was made a Kentucky Colonel and an honorary citizen of Japan and Great Britain, Japan immediately offered him ten million dollars for a single hoop, an overall contract of a billion dollars for one hundred hoops. Honorary degrees came from sixteen universities, and the City of Chicago upped

Japan's offer to twelve million dollars for a single hoop. With this, the bidding between and among the cities of the United States became frantic, with Detroit topping the list with an offer of one hundred million dollars for the first—or second, to put it properly—hoop constructed by Hepplemeyer. Germany asked for the principle, not the hoop, only the principle behind it, and for this they were ready to pay half a billion marks, gently reminding the professor that the mark was generally preferred to the dollar.

At breakfast, Hepplemeyer's wife reminded him that the dentist's bill was due, twelve hundred dollars for his new brace.

"We only have seven hundred and twenty-two dollars in the bank," the professor sighed. "Perhaps we should take a loan."

"Oh, no. No, indeed. You are putting me on," his wife said.

The professor, a quarter of a century behind in his slang, observed her with some bewilderment.

"The German offer," she said. "You don't even have to build the wretched thing. All they want is the principle."

"I have often wondered whether it is not ignorance after all, but rather devotion to the principle of duality that is responsible for mankind's aggravation."

"What?"

"Duality."

"Do you like the eggs? I got them at the Pioneer supermarket. They's seven cents cheaper, grade A."

"Very good," the professo said.

"What on earth is duality?'

"Everything—the way we think. Good and bad. Right and wrong. Black and white. My shirt, your shirt. My country your country. It's the way we think. We never think of one, or a whole, of a unit. The universe is outside of us. It never occurs to us that we are it."

"I don't truly follow you," he wife replied patiently, "but does that mean you're not going to build any more hoops?"

"I'm not sure."

"Which means you are sure."

"No, it only means that I am not sure. I have to think about it."

His wife rose from the table and the professor asked her where she was going.

"I'm not sure. I'm either going to have a migraine headache or jump out of the window. I have to think about it too."

The only one who was absolutely and unswervingly sure of himself was the mayor

of New York City. For eight years he had been dealing with unsolvable problems, and there was no group in the city, whether a trade union, neighborhood organization, consumer's group or Boy Scout troop, which had not selected him as the whipping boy. At long last his seared back showed some signs of healing, and his dedication to the hoop was such that he would have armed his citizenry and thrown up barricades if anyone attempted to touch it or interfere with it. Police stood shoulder to shoulder around it, and morning, evening, noon and night, an endless procession of garbage trucks backed across the Columbia College quadrangle to the hoop, emptying their garbage.

So much for the moment. But the lights burned late in the offices of the city planners as they sat over their drawing boards and blueprints, working out a system for all sewers to empty into the hoop. It was a high moment indeed, not blighted one iota by the pleas of the mayors of Yonkers, Jersey City and Hackensack to get into the act.

The mayor stood firm. Hour by hour, there was no one hour in the twenty-four hours of any given day, not one minute in the sixty minutes that comprise an hour, when a garbage truck was not backing up to the hoop and discharging its cargo. Tony Andamano, appointed to the position of inspector, had a permanent position at the hoop, with a staff of assistants to see that the garbage was properly discharged.

Of course, it was only to be expected that there would be a mounting pressure, first local, then nationwide, then worldwide for the hoop to be taken apart and minutely reproduced. The Japanese, so long expert at reproducing and improving anything the West put together, were the first to introduce that motion into the United Nations, and they were followed by half a hundred other nations. But the mayor had already had his quiet talk with Hepplemeyer, more or less as follows, if Hepplemeyer's memoirs are to be trusted:

"I want it straight and simple, professor. If they take it apart, can they reproduce it?"

"No."

"Why not?"

"Because they don't know the mathematics. It's not an automobile transmission, not at all."

"Naturally. Is there any chance that they can reproduce it?"

"Who knows?"

"I presume that you do," the mayor said. "Could you reproduce it?"

"I made it."

"Will you?"

"Perhaps. I have been thinking about it."

"It's a month now."

"I think slowly," the professor said.

Whereupon the mayor issued his historic statement, namely: "Any attempt to interfere with the operation of the hoop will be considered as a basic attack upon the Constitutional property rights of the City of New York, and will be resisted with every device, legal and otherwise, that the city has at its disposal."

The commentators immediately launched into a discussion of what the mayor meant by otherwise, while the governor, never beloved of the mayor, filed suit in the Federal court in behalf of all the municipalities of New York State. NASA, meanwhile, scoffing at the suggestion that there were scientific secrets unsolvable, turned their vast battery of electronic brains onto the problem; and the Russians predicted that they would have their own hoop within sixty days. Only the Chinese appeared to chuckle with amusement, since most of their garbage was recycled into an organic mulch and they were too poor and too thrifty to be overconcerned with the problem. But the Chinese were too far away for their chuckles to mollify Americans, and the tide of anger rose day by day. From hero and eccentric, Professor Hepplemeyer was fast becoming scientific public enemy number one. He was now publicly accused of being a communist, a madman, an egomaniac and a murderer to boot.

"It is uncomfortable," Hepplemeyer admitted to his wife; for since he eschewed press conferences and television appearances, his admissions and anxieties usually took place over the breakfast table.

"I have known for thirty years how stubborn you are. Now, at least, the whole world knows."

"No, it's not stubbornness. As I said, it's a matter of duality."

"Everyone else thinks it's a matter of garbage. You still haven't paid the dentist bill. It's four months due now. Dr Steinman is suing us."

"Come now, dentists don't sue."

"He says that potentially you are the richest man on earth, and that justifies his suit."

The professor was scribbling on his napkin. "Remarkable," he said. "Do you know how much garbage they've poured into the hoop already?"

"Do you know that you could have a royalty on every

pound? A lawyer called today who wants to represent—"

"Over a million tons," he interrupted. "Imagine, over a million tons of garbage. What wonderful creatures we are! For centuries philosophers sought a teleological explanation for mankind, and it never occurred to any of them that we are garbage makers, no more, no less."

"He mentioned a royalty of five cents a ton."

"Over a million tons," the professor said thoughtfully. "I wonder where it is?"

It was three weeks later to the day, at five twenty in the morning, that the first crack appeared in the asphalt paving of Wall Street. It was the sort of ragged fissure that is not uncommon in the miles of city street, nothing to arouse notice, much less alarm, except that in this case it was not static. Between five twenty and eight twenty, it doubled in length, and the asphalt lips of the street had parted a full inch. The escaping smell caught the notice of the crowds hurrying to work, and word went around that there was a gas leak.

By ten o'clock the Con Edison trucks were on the scene, checking the major valves, and by eleven the police had roped off the street, and the lips of the crack, which now extended across the entire street, were at least eight inches apart. There was talk of an earthquake, yet when contacted, Fordham University reported that the seismograph showed nothing unusual, oh, perhaps some very slight tremors but nothing unusual enough to be called an earthquake.

When the streets filled for the noon lunch break, a very distinct and rancid smell filled the narrow cavern, so heavy and unpleasant that half a dozen more sensitive stomachs upchucked; and by one o'clock, the lips of the crack were over a foot wide, water mains had broken, and Con Edison had to cut its high voltage lines. At two ten, the first garbage appeared.

The first garbage just oozed out of the cut, but within the hour the break was three feet wide, buildings had begun to slip and show cracks and shower bricks, and the garbage was pouring into Wall Street like lava from an erupting volcano. The offices closed, the office workers fled, brokers, bankers and secretaries alike wading through the garbage. In spite of all the efforts of the police and the fire department, in spite of the heroic rescues of the police helicopter teams, eight people were lost in the garbage or trapped in one of the buildings; and by five o'clock the garbage was ten stories high

in Wall Street, and pouring into Broadway at one end and onto the East River Drive at the other. Now, like a primal volcano, the dams burst, and for an hour the garbage fell on lower Manhattan as once the ashes had fallen on Pompeii.

And then it was over, very quickly, very suddenly—all of it so sudden that the mayor never left his office at all, but sat staring through the window at the carpet of garbage that surrounded city hall.

He picked up the telephone and found that it still worked. He dialed his personal line, and across the mountain of garbage the electrical impulses flickered, and the telephone rang in Professor Hepplemeyer's study.

"Hepplemeyer here," the professor said.

"The mayor."

"Oh, yes. I heard. I'm terribly sorry. Has it stopped?"

"It appears to have stopped now," the mayor said.

"Ernest Silverman?"

"No sign of him," the mayor said.

"Well, it was thoughtful of you to call me."

"There's all that garbage."

"About two million tons?" the professor asked gently.

"Give or take some. Do you suppose you could move the hoop—"

The professor replaced the phone and went into the kitchen, where his wife was putting together a beef stew. She asked who had called.

"The mayor."

"Oh?"

"He wants the hoop moved."

"I think it's thoughtful of him to consult you."

"Oh, yes—yes, indeed," Professor Hepplemeyer said. "But I'll have to think about it."

"I suppose you will," she said with resignation.

Coming next month

Two unusual items are featured in November: 1) A never before published story by Anthony Boucher, and 2) A new story under the famous Pohl-Kornbluth byline, written by Frederik Pohl and based on notes made while Cyril Kornbluth was alive. John Sladek will be on hand with another parody (of Ray Bradbury), and Phyllis Eisenstein with a good, strong novelet concerning the further adventures of her teleporting minstrel, Alaric ("Born to Exile," August 1971). A good issue, and a good time to subscribe; remember, every issue of F&SF now carries 16 additional pages, at no increase in price.

Mr. Leiber is back, speculating eerily on country gardens and cats. (Note to Leiber fans: we still have some copies remaining of the special Fritz Leiber issue, signed by Mr. Leiber, available for $2.00 each.)

The Lotus Eaters

by FRITZ LEIBER

I ALWAYS STRONGLY DISapproved of castrating male cats or spaying female ones—I believed that such operations diminished strength, invaded individuality, and were an insult to any being's right to procreate—until I started to take care of a house and three neutered cats in Summerland in Southern California. It was a lovely house on the dry, steep hillside.

Soon I began to have an understanding of my three eunuchs.

My wife spent most of her time in bed. She was ill and had an addiction for alcohol and books and soft fireside lights.

I fed the three cats: Braggi, a big, soft, sloppy male, red of hair and eye; Fanusi, a small beige female with the habits of a flapper; and the Grand Duchess, white with black spots, snaky and strong, who looked like some creature who should be riding point (though on what steed I don't know) before a troop of western cavalry.

Braggi was a lover. He would come over and just suddenly flop on my shoes—a great big gesture of affection.

Fanusi was a neurotic, despite her basic flapper behavior. Even while wooing you, she was nervous and apt to run off.

The Grand Duchess never lost her cool, though she was the smallest—yet hardiest—of the three.

The thing that most startled me about them, after about a week, was that they were all killers. They would bring in dead mice, rats even, birds and gophers, not eating them, but tossing them at my feet. I

expected they were devoted exponents of blood sports. In fact, I noticed that the Grand Duchess had a regular hunting trail she took each day, waiting for a few minutes at each kill spot.

I wondered how they got enough to eat, since they apparently didn't eat their kills—merely displayed them to me, while their mistress, who owned the house, when strictly giving them into my trust, assured me that they each took only two teaspoons of canned cat food a day. A statement I immediately wondered about.

Soon I found the solution, through my wife, who understands people better than I do. Each of the three had a regular route to four sympathetic houses in the near neighborhood, where they got good victuals off the human tables.

Then I became more aware of the quite large garden on the downhill side of the house my wife and I were taking care of—along with the three desexed hunting cats. (Heck—desexed!) They even indulged often in sex play with each other—neutering isn't nearly such a disaster to sexual activity as many people think. Those three felines enjoyed each other.

I got still more interested in the garden downside of the house, from which the cries of the cats would sometimes come in the evenings like the soft coughs of lions.

The garden was a jungle. No, worse than a jungle. More like chaos.

So I started in on the worst stuff first. This happened to be a weed that had black spikes looking like early bambo phonograph needles, but wit tiny black burrs on the ends o. them. They stuck on my socks and trousers very determinedly. But I kept getting rid of them, through the help of my wife.

Then I came to small, brown, circular burrs. They weren't so troublesome to deal with. The back garden began to look like something I could conquer.

I started to cut out all sorts of dead wood. There were bushes that bore red berries in the center of the garden. When I'd sawed all of their gray, dry, dead underwood away, I discovered a simple cement fountain underneath. I imagine the mistress and master of the house we were tending—along with their three cats—could hardly have known about the fountain, since for five years they had merely ground-hosed the garden from above a half hour every afternoon, their only attention to that area. I never did find out how that fountain worked.

My wife had a mild heart

attack about that time, but we found her a doctor who did her good, and both she and I kept up our lonely ways of life, she in her bedroom, I at my typewriter in my study, and always for a strenuous, sweaty hour or three in the back garden.

I cleaned the lower surface out—now that the nastiest weeds were taken care of—first with a machete, then with a hand mower.

Then I began to get at the trees and the high border vegetation. This meant much more deadwood. Too much for our garbage cans. I would load up my car with big corrugated cardboard boxes filled with my dead gray vegetable refuse and take it to the city dump, a huge dark valley behind the sea hills, but circled always with screaming sea birds. It gave me a strange feeling to do this, as if I were burying my wife—or one or all of the three cats she and I were tending.

At about this time Braggi started visiting me in the downhill garden while I worked. He would watch me closely, and when I sat down on the crude fountain edge to rest and wipe my face, he would topple against my ankles in affection. I would stroke him.

My wife read her books and drank her highballs in our bedroom. When she looked down at me from the wide window, it was companionably, affectionately, and concernedly. I would wave at her.

I was fascinated by the things my afternoon cuttings were uncovering. Working at the dead gray underbranches of two tall avocado trees, I discovered a complete hemispherical "pleasure dome," as in the poem by Coleridge, a dome walled overhead with huge green leaves and large green dropping fruit. My wife and I had a tremendous salad that night.

During later days, we gave away a number of these lovely, grainy-skinned fruits to briefly visiting friends.

At about this time the two "altered" female cats—the neurotic Fanusi and the stately Grand Duchess—began to look in on me and Braggi from a distance occasionally as I worked in the garden.

Then I attacked the fifteen-foot hedge of the whole garden—all green and vigorous with clumps of small yellow strange berries. I was amazed at my discoveries as I cut down this fierce stuff—three small evergreens growing sidewise in their attempt to get out of their huge green prison and reach the sun; two lovely branches of enormous, softly yellow roses just in bloom; and a small orange tree with tiny fruit.

That night my wife and I had a beautiful centerpiece at our dining table and lovely screwdrivers. I had a great feeling of triumph at having conquered the garden.

But later that night it was horrible. I awakened from a light sleep, and slipping out of the king-size bed very quietly, so as not to awaken my wife, I put on a dressing gown and stole down to the back garden.

Everything I had cut down was growing at a supernatural velocity, though I don't know what god or goddess had the power at that point.

For a moment I stood astounded—long enough to note Braggi, Fanusi, and the Grand Duchess watching me from the hillside, silhouetted by the moonlight.

It seemed clear that all the vegetation—grasses, weeds, shrubs, vines, and trees—was determined to encircle and strangle to death me and my wife and the house.

I realized I had not a green thumb, to give life, but a gray thumb, to give death. Though this left me with the paradox that in trying to bring the garden to life—to free it—I had infuriated it against me.

I rushed uphill and upstairs. My wife roused instantly. I grabbed a bottle for her. Without packing, we raced out to our car past threatening growing hedges and weeds which stung our legs. We jumped into the auto and started it, opening the back door and yelling, "Fanusi! Grand Duchess! Braggi! Pile in!"

To my relief and utter amazement they did—Fanusi almost in fits, Braggi loving as usual (in fact, snuggling up to my wife), the Duchess staring back over her white, black-spotted shoulder in a proud way at the vegetation which appeared to be pursuing us.

Days later I sent some letters.

Three months afterward I heard from the couple who owned the house.

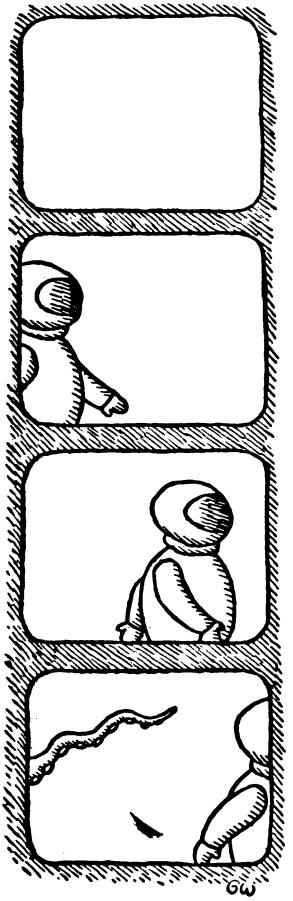
The chief points were that they were grateful to us for taking on their three cats—which had been a bother to them for a long time—but no offer to redeem their pets. And why had I left the back garden in such a rank state after promising to clear it? And yet taken away all the ripe avocados?

In view of which my plea for a little extra care-taking fee was ridiculous.

My wife and I looked at each other, while Braggi, Fanusi, and the Grand Duchess looked up at us from their appointed places before the flickering, red, streaming, mysterious fireplace, and smiled their Cheshire smiles. ■

BAIRD SEARLES

FILMS



SOME MONTHS AGO, WHILE taking part in a panel on criticism at the Lunacon, I said in passing that I felt it part of a critic's duty to make as clear as possible what his criteria are. It's only fair to the reader to make it known to him what the critic feels to be his own limitations; otherwise he comes over like the voice of the Almighty declaring from on high, a school of criticism I'm not fond of. Since this piece is being written in the depths of the summer doldrums, when there is very little around to be reviewed except yet another Planet of the Apes film (I can't; I'm sorry, I just can't. . .and there's a limitation right there) and another bunch of films about possession, it occurs to me that a short essay might be in order on what I look for in the fantastic film, combined with an extended Late, Late Show Department of examples from films that probably will keep appearing on television.

I find that a major problem with the fantasy film (a convenient handle that includes sf and horror) is, as with the literary, sorting out the true narrative imaginative films from the satirical, the surrealist, the allegorical, and other forms of non-realism. About the only conclusion I've come to for both media is: is the reader/

viewer expected to believe, if only momentarily, what he is reading/viewing?* One of the necessary talents for a writer in the field is to talk the reader out of his disbelief in the fantastic things he is being told. In film, the problem is only slightly different, mainly be cause a film is an amalgam of talents. But is the physical eye (as opposed to the mind's eye of the reader) being convinced that the fantastic thing he is being shown is real? It is the moments when that happens that I look for, hope for, and sometimes find.

Now judging from that, it would seem that all a filmmaker needs is a super special effects man, which, of course, is nonsense. But that has been the saving of more than one film that otherwise would have been balderdash, and why sometimes I give high marks to films of no intellectual content whatsoever. A perfect example is a film called *Jason and the Argonauts* (1963), which is a fairly simple-minded account of the journey of the Argo (though in all fairness I must say that it never lapses into blatant foolishness). Its special effects, however, are superlative, from the big set pieces (the giant of brass, the harpies, Poseidon rising from the waves, an eye-boggling battle with the skeletal warriors grown from the dragon's teeth) to smaller touches (Hermes, in disguise, talks with Jason, and suddenly revealing his true nature, he grows to infinite size and disappears; the gods, on Olympus, hover over a gaming table where Zeus and Hera are playing with the real Argo on its voyage). All of these convince my eye, and I happily sit back feeling that I have seen wonders. On the other hand, due to the subtle interplay of eye and brain, a really idiotic script can undermine the very best special effects. This so often is the problem with the Japanese monster rallies. They are always good for amusement, but despite the often excellent effects, one doesn't believe them even visually.

Good special effects cost money, always a determining factor with film. Contrariwise to the above, too often one sees a film with a usable idea, a literate script and no budget for the effects called for, whereupon the whole project has fallen flat on its face. But this is where that odd quality called talent comes in. A really talented crew can evoke wonder with limited means and again, with the help of a good script, can sweep the eye and mind

**For instance, not for a moment do you believe in the anthropomorphic animals of Orwell's Animal Farm (book or film) though it is certainly successful satire.*

into belief. *Stairway to Heaven* (1946) was hardly a big budget movie by Hollywood standards of the time, but with astute use of visual manipulation, it stands as a stunning example of the romantic fantastic. Essentially a hymn to Anglo-American relations, it concerns an English pilot shot down over the Channel. Fated to die, he is missed by the Heavenly messenger sent to collect him (a French aristocrat guillotined in the Revolution, who blames it on the English fog). The action shuttles back and forth between Heaven and Earth; the pilot refuses to go because he has fallen in love, in the time on Earth mistakenly allotted him, with an American girl. It resolves in a huge trial in Heaven, essentially encompassing the historical relationship between England and the U.S., the prosecuting attorney being a Yankee killed in the American Revolution (played by Raymond Massey, a brilliant choice for the Lincoln association), the defense the pilot's doctor, just killed in a motor accident. The major effect is an enormously wide marble escalator, bordered by epic statuary, that ascends upward to infinity, the stairway to heaven of the title. The trial is in a huge amphitheater, cleverly suggested as being made of clouds. At the conclusion of the trial, the camera pulls back, and the theater resolves visually into a spiral nebula, one of the great visual and conceptual moments in fantastic cinema. When exposed to an absolutely cold analytical eye, these effects show an air of artifice, but suggestion and the flow of the intelligent script manage to utterly convince the viewer.

Yet another method is to avoid visual effects entirely and to simply suggest the unbelievable; this takes great talent to pull off, and even then can be used only in certain genres, primarily the horror film. It was this on which the fame of Val Lewton's horror films of the 40s are based (*The Cat People*, etc.); hardly anything is shown, but implication and sound effects are used for subliminal evocation of horrors. And it was this that made the cinematic *Turn of the Screw*, Jack Clayton's *The Innocents*, so hair raising (literally—it was the first time I had ever felt that interesting phenomenon). So far as I can remember, there was not one special effect used in the film. Incidentally, it is one film that does not hold up well on TV. Usually I find commercials not difficult to turn off mentally, since most films in their natural rhythm can take momentary interruptions; it's like laying down a novel every ten minutes or so.

But *The Innocents* has such a one-lined build of tension that the start-stop of television does it in entirely.

The inherent problem with science fiction in film, of course, is that so much takes place in totally different environments such as space or other planets. This is almost impossible to evoke or suggest; you simply need a *Quo Vadis* budget to build it. There are exceptions, of course. *The Incredible Shrinking Man* took a classic s-f theme and realized it brilliantly; *Revolt of the Humanoids* made a valiant attempt to create a future android/human society on a very slim budget and nearly carried it off with clever design and a script that made no concessions away from its excellent 40s style s-f ambiance.

But until *2001*, no film ever brought the feeling of space flight to me. (Even there, the "trip" sequence is a stylized evocation rather than the more "realistic" journey described by Clarke in the novel.) But like everything else I've talked of in this space, it seemed to depend much on the receptivity, susceptibility, and good will of the viewer. After my initial ecstatic review of *2001*, I received a verbose and endless phone call from an irate lady who demanded a retraction, mainly because of all those shabby, shoddy models that Kubrick had used. Which goes to prove, I guess, that one man's marvel is another man's *papier-mache.*

"Just exactly what are you teaching these children, Miss Rawley?"

Harry Harrison is one of sf's most versatile writers (and editors—his latest book is BEST SF: 1971, from Putnam), but he has few peers when it comes to the writing of fast-moving, humorous sf like this brisk tale of a fantastic shipboard romance.

Strangers

by HARRY HARRISON

IT HAD RAINED DURING the night, scrubbing the air clean so that the looming gray bulk of Gibraltar stood out sharp and clear against the unbelievable blue of the Mediterranean sky. The blue that is impossible to mix on the palette; I tried I don't know how many times before I finally stomped on my paint box and threw the whole mess over the side. Now there was The Rock, like something off a picture postcard or out of an insurance ad, and there was I on the rusty deck of the *Mafia Bella* heading ofr home. Depressing. The summer was over. Europe was saying an indifferent good-by. The dudes down there in the rowboats with the sleezy rugs and shining brass junk were my farewell committee. I spat into the ocean and turned my back on Europe.

Africa was waiting on the other side of the strait, just hazy green hills from here. Yet hooked on to those hills was a continent; steamy jungles, burning desert, exotic cities, elephants, cannibals, barebreasted broads, the whole steaming stew the mind conjures up at the mention of the word. Africa. I was saying good-by to Africa too—without ever even seeing it. Andy Davis: ex-student, ex-painter. Ex-expatriate as well. Back to the land of the Establishment which would reach out and grab me the second my foot touched the shore. The Army. A job. Responsibilities. A wife. Kids. I could see it all and I was thoroughly depressed.

I had been hearing the bam-bam exhaust for some time, and now the vessel itself swung around the bow of the ship and headed for the lowered companionway. It was maybe

twenty feet long with a square cabin in the center that sprouted a pipe smokestack that puffed out a snort of black diesel smoke every time the engine fired. Ragged guys on deck, plenty of shouting in a couple of languages; and frezied throwing of ropes before they drifted to a halt. More shouts while they levered out a couple of ancient heavy trunks onto the companionway and up to the ship. A new passenger? I moved over for a better view. My only fellow passenger on the freighter was an old French priest with red eyes and a bobbing head and not a word of English. Smiles and *bonjours* were not my idea of bright conversation. Captain Sebastiano spoke a kind of English, but he was put out by my rebuff when I explained that though I swung I didn't swing the way he did, and so now he had his eyes on the young messboy and only glared at me whenever we met. So another passenger would really help since I didn't look forward to talking to myself and counting rivet heads all the way across the Atlantic.

It was another passenger, but I was still out of luck. An Arab woman, head to toes in yards of black cloth, black shoes and gloves, a veil, the works. She would talk Arabic and maybe French and be a hundred years old, and there went my jollies for this crossing. The trunks went by, and she came up the steps looking down carefully, and I wished I had bought some more books for the trip.
bought some more books for the trip.

When she passed she raised her head, and I stared into the darkest, blackest, loveliest eyes I had ever seen. Fell down into their depths as the poet said. Just that quick look, vanished in an instant, long lashes, arched eyebrows, fair skin. Then gone. I gaped after her, and from the way she moved I could tell she was young, gracefully young.

Bam. Just like that. I went to my cabin and closed the door and dug out the bottle of grappa and poured the water glass half full and belted it down. And shuddered. It hit me real hard, and I'm not the kind of guy that gets hit that way. You know. Bam. Like in a song. Across a crowded room. One look, and then I knew. But this wasn't the romantic love the songs sung about. This was good old-fashioned lust. Maybe when I saw what was behind the veil and the clothes, I would change my mind. Probably. But it was the mystery that got to me because not seeing what was there I could imagine anything. My imagination worked overtime. I lay back on the bunk with the warm patch of sunlight from the porthole moving over me and sucked at the grappa and watched the visions go by.

Ten days at sea, just her and me.

I fell asleep during this haze of pure delight, and my imaginings carried over into my dreams, which did them no harm at all. Things were just getting good when there was a sharp crash that kicked me awake and sitting up.

My glass. It had fallen to the floor and broken. We were under way, and the *Maria Bella* was heaving up and down in a more uncomfortable fashion than I had ever known her to do before. I went on deck and saw the cold green of the Atlantic rollers coming at me, lifting the ship and passing beneath her. We had sailed while I was asleep. I turned quickly, and there was only the open sea astern and a ragged pennant of white gulls drifting above the wake. The ship lifted higher on a large wave, and for an instant I could see a smudge on the horizon, and then this was gone too. My last sight of Europe.

There was a bonging from the passageway, and the mess-boy poked his head out on deck. "*La cena, signore,*" he said, bonging the gong in my direction to drive home the message.

"*Si, pronto.*" And I meant it. The cook was the only good thing about this rusty tub, and he liked everyone to the table on time, or he sulked and overcooked the spaghetti or burned the meat. I hurried to wash and remembered our new passenger and so put on my last clean shirt and my tie for the occasion.

As usual the captain wasn't there. He ate in his own quarters ever since our difference of opinion. The priest nodded and smiled and sucked at his soup, and the second mate, Allesandro, looked up and mumbled something unhappily. He had reason to be unhappy. He and Giorgio, the first mate, were the only officers other than the captain, and he did as little work as possible. So they stood watch and watch, twelve on and twelve off every day of the week while at sea. They were both always tired. But whoever owned the ship saved a bundle on salaries. The bowl of soup was slid under my nose. Minestrone again, but I loved it, and I shook it full of cheese and poured in some of the rough red wine from the carafe on the table, filling my glass too, and dived in.

I was sopping up the last dregs with bread when she came into the dining room.

She was in silently and seated at an empty place at the long table before I was even aware of it. I pulled the napkin away from around my neck—

keep my only tie clean at any cost—and half rose, then dropped back. She was silent, calm, and those eyes above the veil, just as I remembered them only maybe better.

"*Buona sera,*" Allesandro muttered.

"*Buona sera.*"

Sweet as a bell. None of the harshness that most Arab women seem to have to their voices.

"*Buona sera,*" I said, not to be left out of the act. "*E, anche. . .signora, signorina,* I mean. Allesandro, how in hell do you say welcome aboard?"

"I speek English eef you weesh."

"Cool. I do too." Witty as hell tonight. "So welcome aboard."

She just nodded at that and sat there as calm as a statue. My brain ground to a stop, and there was nothing I could say though I had been most chattily seductive in my erotic imagination of the afternoon. I gulped down some wine and watched out of the corner of my eye as the soup arrived and was put in front of her. Now unless she had a damned big soda straw, something would have to be done about the veil. I felt a tightening in my gut, and I drank some more wine.

It was simple enough. She just unhooked the black veil and took it off.

My erotic fantasies had been second rate. This was a face in a thousand, the kind they photograph for the magazine covers and make screen tests of, or maybe launch a thousand ships for. Pointed and heart-shaped, smooth and flawless. Full lips, red and moist, the nose a graceful swoop, the cheekbones just right. If I wasn't such a lousy second-rate artist, I would have painted that face. As a not-too-bad lover, I wanted to kiss those lips. Would I were the chunks of macaroni in her minestrone, as the poet said. Speak lover, begin the immortal conversation that will bring her rushing to your arms.

"My name is Andy Davis." Ohh, that will bring her rushing all right, but, Christ, at least I was talking again. "Your fellow passenger."

She looked at me again, spoon poised halfway to her mouth, frowning slightly. Translation problems? Should I tell her again? Before I could make my mind up, she spoke.

"I am fellow passenger as well. My name ees Tamu Safavi."

"That's a very nice name."

"My father gave eet to me."

"That's great. My father gave me mine too." He hadn't. In fact he wouldn't even use it. I was named after my mother's uncle, whom he despised, and he always called me Buster.

"I'm named after Andrew Jackson, Old Stonewall, who is a relative."

"An old stone wall?"

Allesandro snorted loudly and began to chew on some olives. I ignored him. We were rapping and that is what counted. There would be plenty of time to improve the quality of the conversation.

The thing was she wanted to talk, I felt that at once. And her accent wasn't as bad as I thought it was. We talked through the rest of the meal, which I do not remember at all, and she told me about this town where she came from, I forget its name, and how her old man was in business and that is where the money came from and how she was on the way to the States to stay with relatives. I told her how I got out of college and had worked at a job and saved to come to Europe and I had, and how my old man was a vice president of a corporation she had maybe heard of, but she hadn't, most of which was true, except I forgot to mention I got out of college by being thrown out, and how the Army had its jaws open to swallow me as soon as I appeared again. And how I didn't want to get swallowed, or get married and have a house in the suburbs and grab the 8:07 every day, or how much I enjoyed booze and a joint now and then and did not have the slightest idea where I was at or where I was going.

Then she said excuse me and drifted off, and I went back to my cabin and finished the grappa, and even in the dark I could still see her face.

The next morning when I came up, she was sitting in a deck chair reading the Bible. She was no longer wearing the veil but was still draped in the black outfit, clothes by Omar the Tentmaker. Then she looked up and caught me staring at the Bible.

"Do you know this book?" she asked.

"Yeah, sure. Always a copy around the house. A best seller."

"The priest gave it to me at breakfast. He said it would do me good, and it does make interesting historical reading. Parts of it are exactly like the Koran. I must give him a Koran in return."

"I don't think that's what he had in mind." I dropped into the next chair and opened my shirt. The sun was warm, and I was not getting into any religious discussions, thank you, no. "Great day for sunbathing." Her eyebrows lifted daintily.

"Sunbathing. That's what we do a lot of." A quick lecture on comparative civilization, and the Bible is forgotten. "In your country you wear heavy clothes

to keep off the heat of the sun, but we do it the other way. See how these chairs are made so you can stretch out. We wear heavy clothes all winter, then peel down in the summer to get a tan. Everybody does it."

"Peel? That means to strip off the skin, rind, bark, etc., decorticate. You will not peel off your skin?" I had to laugh, and she hesitated a second, then laughed as well. "I have made a foolish linguistic mistake?"

"Hardly. You're correct, though that decorticate is a new one to me. Peel, that's slang, to take off your clothes. Like, look, I'll peel off my shirt now so the sun can get to me." And I did. Things were moving along just too nicely.

"Do you peel off all your clothes? We would never do that."

Wouldn't you? Not even if I helped. I choked over the thought and had a quick cough to cover it.

"No, not all the clothes. We usually wear swim clothes for sunbathing, that kind of thing."

"And what are they?"

"It's, well, sort of hard to describe." Brainstorm. "Look, hold on a sec. I have a magazine in my cabin with pix in it, sort of give you the idea."

A beat-up copy of *Life*. Ticket to paradise. I was down the steps and back inside sixty seconds, thumbing through it. Jackpot! A bathing suit ad with zoftig broads lolling around in postures of wild abandon.

"I see," Tamu said, but never changed expression. Very cool this girl. "The fabric and colors appear different, but essentially the same areas are covered in all the designs."

"Yes, those are the areas—the idea, you have the idea."

"May I read the rest of the magazine?"

"Great, keep it if you want. I'm going to get some coffee—want some?"

She shook her head no, already well into the mag, and I went after the coffee, which I needed. When I came back she was gone, and she didn't come out for lunch, and I was going to knock and see if anything was wrong, but when I passed her cabin I didn't have the nerve. The captain's door opened when I went by, and the messboy came out and rolled his eyes sadly at me, and the captain, glaring and shirtless, slammed the door behind him. I looked at my money again, and it hadn't grown since last I looked, so I decided what the hell I might as well be broke as land in New York with seven bucks and so went to buy another dollar bottle of grappa from the purser. A few good belts of this helped my digestion and state of mind, and I went back on deck, and she

was there in the same deck chair.

Only this time wearing a tight black low-cut bathing suit.

"Is there something wrong with it?" she asked when I braked to a sudden stop.

"No, great, couldn't be greater. I thought you didn't know anything about this kind of thing?"

"I assembled it out of other clothes I have. If I am to go to the States, I must dress as others dress."

"A nice idea." I dropped into the next chair feeling definitely light-headed. She had a build like the kind you always hope you are going to see but never do. All girl, lots of it, looking very soft and pneumatic indeed, and it took an effort of will not to lick my lips.

"Now we will sunbathe, and I hope you will tell me more about your country that I have never seen."

I did. She was eager to hear everything about our great land, and I gave it to her, chapter and verse. First general, cultural, artistic, and political, then specific, social customs and habits, aiming eventually at a detailed lecture, with examples, on interpersonal relationships. She listened intently every foot of the way. Nail polish and manicuring needed a demonstration that involved my holding her hand—and a neat little warm hand it was too!—that did not bother her in the slightest. But time had slipped by a lot faster than I had realized, so that just at this happy moment there was a bong in my ear and the messboy with gong and hammer stood there looking at me reproachfully out of his hound dog eyes. It was time to get dressed for dinner.

This time when I passed the captain's cabin, the door swung open suddenly, and he popped out like a Mediterranean jack-in-the-box.

"I am watching you with this woman," he hissed.

"Don't be jealous, not your type."

"Do not make fun with me. She is no good Arab woman with her clothes off and no veil. And the talk. At first she speaks English very bad, then all at once, *instantaneamente*, she speaks perfect with North American accent."

"Can't hate the girl because she's got a good ear."

"*Una meretrice!* That's what she is. *Prostituta* for the CIA. CIA spy!" He was waving his hands and getting very excited, and so I squeezed by.

"You have too much imagination, Captain. Just too much."

But did he? I thought about it while I shaved with the rusty trickle of lukewarm water from

had read it from the dictionary. Like that other time with *peel.* Is that why her English was so good? She had memorized a dictionary. I knew she was bright—but that bright? I stole a quick look, but she was intent on absorbing every page of a coverless *Reader's Digest.* Try my tie carefully so the knot covered the new spot of spaghetti sauce and grabbed up the magazines she had asked about. The captain was a nut.

We moved to the cracked leather chairs at the end of the dining room after dinner, and Tamu dived into the reading. The priest vanished without nodding, misunderstanding the gift of the Koran perhaps, and I found a magazine with a crossword puzzle I hadn't done and waded into it when Tamu showed no interest in continuing our conversation. She had the thick black outfit on again, and it was intimidating.

"Fraggis. . .frittle. . ." I muttered and erased.

"What is that?" she asked.

"Microscopic substructure," I answered, purely by reflex, intent on the puzzle. "Eight letters beginning with FR."

"Frustule, botany, the siliceous cell wall of a diatom." Then she was back at her reading.

It fit. It was right. Just like a definition out of the dictionary. In fact it sounded just like she the faucet. The CIA part, I mean that was screwball. But Tamu was speaking good English, incredibly better English than she had been speaking just a day earlier. She was a bright girl, that's all. She picked things up fast. Nothing else.

Yet it still bugged me. I tied another one, this could have been a fluke.

"Madly desirous, twelve letters."

"Concupiscent."

"Yes, that seems to fit. Here, nineteen down, beginning with an H, six letters, a feudal service or tribute—"

"Heriot."

And she did it, I swear, while she was still reading about The Greatest Character Working for the F.B.I. I Have Ever Known. I was beginning to sweat. I had never even heard of heriot, but it fit perfectly. What was with this girl? A great memory, photographic maybe, trained to remember anything read. A spy? That was nuts. I was beginning to think like the captain. Memory was one thing, intelligence another. I scratched some figures in the margin of the page.

"Here is an interesting puzzle, ha-ha. There are ninety-two. . .hunters and they go hunting and every guy shoots four hundred and thirty ducks. How many ducks do they kill? This is a time limit. . ."

"Thirty-nine thousand, five hundred and sixty. That is a very large flock of ducks." Turning the page, not even looking up.

This was all wrong. This was no half-educated Arab girl from the back of beyond. She pretended to be unsophisticated, but it didn't work. She could do math in her head that I had to work out on paper. And maybe had a better vocabulary than I had. Me, a dropout from one of the better universities. I'm not sure I liked it. I caught a sudden movement out of the corner of my eye and looked up to see the purser going into his cabin. Now that was a thought.

"Have to see the purser," I muttered and went after him.

"You can have good Scotch whiskey for only two dollars," he said gloomily, digging into the stacked boxes. A man with an ulcer surrounded by a sea of booze. He had a right to be gloomy.

"It is a matter of budget not quality, signore purser. The few bucks I have left must get me to New York. So I consider only alcoholic content for money paid. Grappa. Please."

He dug out a bottle of the oily, clear, poisonous liquid—with a corncob for a cork, a bit of symbolism I have never been quite able to understand—and dusted it off.

"Six hundred lire or a dollar American."

I slapped at my pocket and realized I had left my wallet in my cabin when I had changed.

"I'll bring you the money later." The bottle vanished back into the box far faster than it had appeared. "You can trust me. I'm not going to jump overboard and swim ashore with your buck bottle of booze in my teeth." He sat unmoving, slumped under the weight of all the poverty forced upon him by embezzling tourists. "All right then, don't lock up. I'll be right back."

Tamu was gone, though the magazines were still there, which was okay. A few stiff belts would clear my head before I tried talking to her again. I went down quietly past her cabin so she wouldn't hear me and to my own, the door of which was slightly open.

I had left it closed. And locked. I always kept it closed and locked so there would be no temptation for any of the crew to lift anything of mine—or my few remaining dollars. Which were in the room!

I threw the door open. It was anger, pure and simple. Really simple. If I had stopped to think for a moment, I could have visualized one of the musclebound stokers, my wallet in one fist, a length of lead pipe

in the other. Bam on the head; over the side. Not nice. But I did not stop to think or summon aid but barged right in.

Tamu was standing over my open suitcase with my passport in her hand.

It was a stopper all right. What *did* you say in a situation like this? I was still angry and that helped.

"You have broken into my cabin and are stealing my passport!"

"How cruel of you. The door was open and I came in. I have stolen nothing."

"You have it in your hand!"

"I am examining it. It is a very interesting document."

"You better believe it, baby, and hard to come by. Now hand it back."

She hesitated a moment, looking at me closely, before she spoke.

"I would very much like to examine it further. Just for a little while. You know I will give it back—what else could I do?"

What else? What did she mean? And I was still angry.

"Of course you can examine it. But the examination fee for the standard blue American passport with a number punched through it is a hundred dollars an hour."

"Very agreeable. Here is the hundred dollars."

And she had it too, in a little purse she dug out of her clothes. Five twenties, coin of the realm. They were in my palm, and she was out of the door before I could realize what had happened.

One hundred bucks. They crinkled and smelt like the real green, and for all I could tell they were. And a minute later the purser agreed with me as he cashed one and gave me the change from two bottles of real Scotch whiskey. He almost even smiled at the magnitude of the purchase. The stuff tasted very, very good indeed, and I chased the first glassful with a second to warm me all the way down.

Why? Don't ask. There are times for questions and times for spending. This was a spending time. Europe was behind me, America ahead, a mystery woman in my life, and money in my pocket. Plus, there was more than booze on this ship. One of the sailors had already sidled up and tried to sell me a lid of what looked like very fair grass except I was too broke to buy. I wasn't now! The hell with mystery and women when there were headier pleasures awaiting.

I got smashed, bombed, really wiped out. I'm not sure why. Maybe long abstinence, maybe thoughts of the future, maybe my mysterious CIA-Arab Mata Hari. Maybe because I'm just stupid. I knew from sad

experience that joints and juice don't mix, but I wasn't remembering this night. I sat out on the fantail and drank and smoked and looked at the stars which were doing things that I had never seen stars do before, and it was just pure luck I didn't roll over the side into the ocean and drown.

An indeterminate length of time later I found my supplies depleted and wondered if I could get some more, then wondered if I had any money left, then wondered if it might not be time to find my cabin. Mind you, the thoughts did not move in this logical or simple a fashion, but this is what they added up to because I found myself further down the rail, then on a stairway, then in a corridor. I had no memory of physically moving, just these still scenes like bits of a badly cut movie full of sharp transitions. I was in front of a door and a little screwing up of my eyes to read the number and some more difficult screwing up of my brain to remember the significance of the number produced the fact that it was her cabin.

"Her cabin," I told myself with authority. Some sort of bright blue light was flickering on and off inside the cabin, I could see it beneath the door, but it was of no interest to me. "My passport. You have rented my passport and the hour is up. Return my passport."

When I knocked, the door, unlocked, swung open. There was some sort of sound and the blue light went out. I pushed the door wide and went into the dark room. The door was closed behind me, and I was aware of Tamu, quite close.

"Your passport is back in your room. I returned it some time ago."

"Passport," I said, putting my hands out to find my balance in the unsteady darkness. Instead of solid wall I touched soft woman. My hands were on her shoulders, her back, before I realized that it was skin I was touching not clothing.

"Tamu. . ."

"You had better go to your cabin now, Andy. We'll talk in the morning."

"Tamu," pulling her closer.

"Please, I do not think this is wise."

Her flesh was velvet.

"Don't argue about it now, Andy. It is not a matter of a simple yes or no, or of what you call morality. Should you be doing that?"

I should. I did. I wanted to. There were no more arguments.

It was afternoon before I could crawl out of bed, and crawl was all I could do. I was in my own cabin, and I never

questioned how I had gotten here. In fact memory of the previous evening returned only slowly as I chewed all the aspirins and pills I had, took a cold shower, and rang for the messboy, who finally appeared and had to be fearfully overtipped to bring me lots of black coffee at this unusual hour of the day. His eyes brimmed with sorrow as always when he looked at me, though this time with damn good reason.

When memory and an imitation of health had returned, I began to beam at myself in the mirror. This was going to be a good trip after all. Shaved, powdered and restored, I went out and down the corridor, whistling, to Tamu's cabin and pushed the door open.

"Hi!" I called out warmly, but there was no one there. The cabin was neat, the big trunks closed and locked, no clothing or personal possessions in sight at all. Except for an American passport on the writing desk. Mine? But mine was still in my cabin; I had found it there and locked it away. I picked it up and turned to the first page, looking at the photograph with the official red and blue lettering across the edge of it. Tamu stared up at me out of the picture.

It could not be true, but it was. It was her, wearing a white blouse. The page opposite gave the name of Tammy Savani. Tamu Safavi? Birthplace, Connecticut, U.S.A. Was she CIA then and the captain was right? Or maybe the other gang, a Russian—and what had she wanted my passport for?

"When you are through examining it, may I have it back?" she asked. Inside with her back to the closed door.

"You're an American?"

"No."

"Well then a Soviet spy—or a Peking commando or—"

"No. None of those things. But I will tell you if you will listen."

"Tell, tell," I said, throwing the passport down and dropping into the chair. The headache was back with hammers in the temple, and I was feeling very confused and not too good.

"This is a business trip, nothing more. I am a commercial representative representing certain financial interests interested in investments."

"You said you were a simple Arab girl."

"A necessary cover." She stood calmly, unemotionally, with her hands lost in her dark garments.

"Well what are you really?" I was feeling quite peckish.

"If I were to tell you, what would you do?"

"What? Nothing I suppose. I'm no business spy or salesman. Doesn't bother me. If you were a government spy, okay, that's different, and I'm still going to believe you are until you convince me different. But business is business, that's what dad always says."

"Very wise of your father. I must meet him. I am sure it would be to our mutual financial advantage."

"You ought to meet him—you are even beginning to sound like him. Convince him he can make money selling Hammer and Sickle tractors, and he'll have everyone in the office with red stars in their buttonholes. So what country are you from?"

"None you know."

This teed me. "My geography isn't that bad, maybe my best subject. I know every country, even the new ones."

"My country is incredibly distant, a matter of light-years."

"Yeah, yeah, like on another planet."

"That is correct."

Well that stopped me, as you might imagine. And sobered me.

"You are making a big statement, Tammy-Tamu. Do you have any proof?"

"Of course I do, more than enough. I am here to attempt to open commercial relationships with your world, and so I have a complete range of samples of products as well as details of manufacturing techniques and other items that might be of interest."

"Show me."

She did. She took her hand out of her clothing and held up a red cylinder about as long as my thumb.

"Brownian thermal utilizator, a generalized heat tool. No external power source needed since it taps molecular binding energy. Useful life about a hundred of your years. Two controls. This single wheel adjusts the output from a small thermion about the size of the flame of a cigarette lighter," it flared bluely, "to a wider area that may be used for food preparation, paint removal, industrial applications, or any other use." A red disc appeared in the air which wavered with heat waves.

"Very handy gadget." My throat was very dry.

"Or at full output and narrow field it produces a thermal lance that has applications in welding, cutting and other uses."

A red line, thin as a thread, sparked from her hand and across the room where it burnt a blistering, melting hole in the steel bulkhead. The thing snapped off and she put the gadget down on the table. I looked at it with very wide eyes

and felt no temptation to pick it up.

"A very nasty weapon," I said.

"It could be used as that."

"And you had it in your hand while we talked. In case I gave the wrong answers to your questions?" She did not reply, and I did not press the point. "Then I gave the right answers?"

"Yes. I was rather sure you would. I wish to employ you as a cultural contact for our organization, lawyers, engineers, and the like, after the opening negotiations are established. Your main occupation will be to see that contact with your governmental and business executives runs smoothly in the opening when difficulties might arise. . ."

"They might see you as front man—girl—for an invasion."

"They might. A very primitive reaction. You will advise ways to avoid this kind of occurrence. Your fee will be one million dollars and one millionth of one percent of net profits during a period of two decades or your life, whichever is the longer."

"You talk like a lawyer," Tamu."

"I am one, among other things."

"And one of those things is a woman. Do you want to tell me about that? Is it an accident that your people and mine are so much alike?"

"No accident. Quite deliberate. We have many similarities; erect bipeds, bisexual, binocular vision and hearing, etc., but the differences, I am afraid, outweigh the similarities."

"You look pretty similar to me."

"Elective surgery. Our medical techniques are far beyond yours in every way. That is another item we should be able to sell."

I tried to imagine what she really looked like—then tried not to imagine. It might be best to settle for the form I knew. Particularly after the previous night. Last night!

"I'm—I guess sorry about what happened here last night. I'm afraid I wasn't quite myself. . ."

"I was fully aware of that. The odors of cannabis and ethyl alcohol were quite strong. I thought you might cause a disturbance if you did not get your way. I could not turn on the lights because the dimensional copier was open while I prepared my passport from yours. The course chosen seemed to be the wisest for the occasion."

"Yes, ha-ha, wisest. Glad you didn't mind."

"I felt no emotion at all

about the occasion. Had I been a zoologist or an anthropologist, I might have taken notes. Though it did make me aware of one factor that perhaps you might like to know. Mine is a bisexual race, as I told you. For first contact on this world I adopted this form of the female of your species that the exobiologists assured me would be both attractive and motherly to bring out protective instincts in the male."

"The ample motherly aspect brings out other instincts as well."

"I am aware of that now and will inform our specialists of the fact. What I wish to inform you of is the fact that the female form was adopted for this role."

"Then you are. . ."

"Male. Exactly. One of the senior executives in our largest corporation."

I was right. She—I mean he—and dad would really get along. The potted biography my father had had written for him described himself in the same words. Senior executive . . .largest corporation. Maybe they were from different planets, but they thought alike. They were part of the establishment, and it was depressing to think of the establishment stretching from one side to the other of the galaxy. But I shouldn't complain. Me and my million dollars and my percentage were going to be part of it now.

And then I had an even more depressing thought.

I mean I always said screw the establishment.

But literally?

ISAAC ASIMOV

SCIENCE

THE UNLIKELY TWINS

A LITTLE OVER A YEAR AGO (as I write this) I was urged by two estimable ladies at Walker and Company to write a satire on the sexual "how-to" books that were, and are, infesting the nation. Much against my better judgement I let myself be talked into it, and one weekend in April, 1971, I sat down and dashed off something called THE SENSUOUS DIRTY OLD MAN. (A case of typecasting, I suppose, except that I'm not *really* old.)

It was published under the transparent pseudonym of "Dr. A.," and I was under the impression. that nobody was going to know I wrote it.

Fat chance! The "secret" was announced in a press release even before the book was published, and pretty soon I found myself on television in my role as sensuous dirty late-youth man. And now it is out in paperback with the "Dr. A." followed by my full name in parentheses.

Since the book is *not* grimy, it never made the best-seller lists. On the other hand, since it *is* funny, it sells pretty well.

And because it is *not* grimy and *is* funny, I'm not in the least ashamed of it.

One thing, though, is that I'm getting (and expect to continue to get) a rash of speaker-introductions that include "—and among his umpty-ump books are ASIMOV'S GUIDE TO THE BIBLE and THE SENSUOUS DIRTY OLD MAN."

The incongruous coupling is always good for a laugh, which, of course, is why they do it.

Incongruous couplings are amusing, or disturbing, in science, too, and I will now go on to talk of it in connection with a pair of particularly unlikely chemical twins.

Carbon is one of the elements known to the ancients, because its chemical properties are such that it can exist free in nature; and because it is solid, and therefore easily recognizable. There are nine such elements altogether and, of these, seven are metals. (See THE FIRST METAL, December, 1967.) Only two are non-metals; carbon is one and sulfur is the other.

Carbon actually exists as a mineral and can be dug out of the earth. In one of its less common forms it is a black, flaky substance that can be used for making marks. While solid enough to stick together in a chunk, tiny pieces will rub off when it is passed over some surface. Pieces of such carbon (mixed with clay) are used as the "lead" in pencils and it is therefore called "graphite" from a Greek word meaning "to write."

The ancients did not, however, come across carbon in the form of graphite to begin with. It is much more likely that their first experience with carbon came in connection with wood fires. If the pile of burning wood was large and insufficiently aerated, the wood inside the pile would not burn completely. Atoms in the wood other than carbon (chiefly the hydrogen atom) would combine readily with oxygen. It was molecules of hydrogen-combined-with-carbon, that produced the vapors and dancing flame. Carbon atoms in themselves combine with oxygen not at all readily, and when the hydrogen-containing compounds are consumed and the flame dies down, wood that has been charred blackly into carbon may be left behind.

In Latin, this black stuff was called "carbo," from which we get our word "carbon." In English, the word "coal" originally meant any glowing ember, and when such embers ended up charred into a black substance, or when such a black substance could form an

ember, it was called "charcoal."

The value of charcoal was that it *would* burn if it was well exposed to air, but unlike wood, would release no vapors to speak of and yield no flame. It merely glowed, and the result was that it delivered a particularly high temperature over a particularly long period of time. The high temperature was particularly valuable in the smelting of iron, and charcoal-making became an important industry. (Since it was particularly wasteful of wood, it accelerated the disappearance of forests in those areas where metallurgy was important.)

Over geologic ages, whole forests have slowly undergone a kind of natural charring by heat, pressure, and insufficient oxygen, and thick seams of carbon are commonly found underground. This is "coal" (because it will form a coal in the old sense if heated).

Some forms of coal are more nearly pure carbon than others are. If coal is heated without access to oxygen, the non-carbonaceous portion is driven off, and what is left is called "coke."

Another form of carbon which must certainly have been noted in earliest times is the soot deposited out of the smoke and vapor of burning wood or oil. This is composed of carbon fragments left behind when the readily inflammable hydrogen-containing compounds burn, with the hydrogen seizing the oxygen so avidly that the carbon atoms are sometimes crowded out. This soot, mixed with oil, formed the first inks, so that carbon is the secret of both pen and pencil.

All these forms of carbon are black and brittle. Graphite is clearly crystalline while the other forms are not. Charcoal, coal, coke and soot, in all their various forms, are, however, made up of crystals of microscopic or sub-microscopic size, and these are always identical to those in graphite. It is perfectly fair, therefore, to lump all the forms of black carbon together as "graphite."

To be sure, although carbon has been known in elementary form since prehistoric times, its recognition as an element in the modern chemical sense did not take place until chemists understood what elements were—in the modern chemical sense.

It was not till the 18th Century that chemists developed a clear notion of elements, and it was only then that it was realized that graphite was an element, being made up of carbon atoms only.

Now we change the subject, apparently. Since ancient times, occasional pebbles were discovered which differed from all others

in being extremely hard. They could not be scratched by anything else, rocks, glass or the sharpest metal. The pebbles, on the other hand, could scratch anything else.

The Greeks called it "adamas" or, in the genitive case "adamantos," from words meaning "untamable" since there was nothing else that could make an impression on it. This became "adamant" in English, a word still used to signify the characteristic of unchangeability. However, the word also underwent gradual distortion, including the loss of the initial "a," and became "diamond," which is what we now call those hardest of all pebbles.

In the early days of chemistry, chemists gained a furious desire to know the composition of all things, diamonds included. Diamonds were, however, hard to handle just because they were "untamable." Not only could they not be scratched, but they remained untouched by almost all chemicals and were not affected by even considerable heat.

What's more, chemists weren't too anxious to expose diamonds to the chance of chemical or physical vicissitudes. A diamond couldn't possibly change into anything as valuable as itself, and who wanted to buy a diamond and then destroy it.

What was needed was a rich patron and, as it happened, Cosimo III Grand Duke of Tuscany, who ruled from 1670 to 1723, was well-to-do and was interested in science. In about 1695, he presented a couple of interested Italian scholars with a diamond, and the scholars put it at the focus of a strong lens. The concentrated Solar rays lifted the temperature of the diamond to a level higher than that of any flame available to the experimenters. —And the diamond disappeared completely.

That was their report, and, naturally, it was met with considerable scepticism. Nevertheless, the number of chemists willing to repeat the experiment was confined to those willing to risk a diamond, and it was eighty years before the experiment was repeated.

In 1771, a French chemist, Pierre Joseph Macquer, obtained a flawless diamond and heated it to temperatures approaching 1000° C. The diamond was, by then, red-hot, yet there seemed to be a still brighter glow around it. The temperature was maintained, and in less than an hour the diamond was gone.

Was the diamond simply vanishing in some mysterious way, or was it burning? If it were burning as other things burned, a supply of air would be necessary. A jeweler named Maillard therefore

packed diamonds into all sorts of non-combustibles, sealed the whole system tightly and then heated it strongly enough to make the diamond disappear. This time it did not disappear. The conclusion was that diamonds burned in air just as so many other things did—provided they were heated sufficiently.

About this time, the French chemist, Antoine Laurent Lavoisier (See SLOW BURN, October, 1962.) was working out the fundamentals of modern chemistry and he was to make it quite clear that ordinary burning in air involved a combination with oxygen of whatever it was that was burning. The burning object turned into an oxide, and if it seemed to disappear, it was because the oxide was a vapor. It could be concluded then that diamond-oxide was a vapor.

One ought to trap and study the vapor if one wanted to find out something about diamond. In 1773, Lavoisier, Macquer and a couple of others heated a diamond under a glass bell jar, using a giant burning glass. The diamond disappeared, of course, but now the diamond-oxide vapor was trapped inside the bell jar. It could be studied and was found to have the same properties as carbon dioxide obtained by burning charcoal.

By the time Lavoisier had completely worked out his oxide theory, he had to conclude that diamond and graphite both yielded carbon dioxide and that both were therefore forms of pure carbon.

The incongruity of placing diamond and graphite in the same cubbyhole was so extreme as to cause laughter—or indignation. Scientists found it hard to believe. Diamond (once it was properly cut—with other diamonds) was transparent and beautiful, while graphite was black and dull. Diamond was the hardest substance known; graphite was soft and so slippery that it could be used for a lubricant. Diamond did not conduct an electric current; graphite did.

For a generation, chemists remained doubtful, but more and more experimentation finally made the fact incontrovertible. Graphite and diamond were two different forms of carbon. In 1799, for instance, a French chemist, Guyton de Morveau, heated diamond strongly in the absence of air (so that it would not burn) and actually observed it change into graphite.

Naturally, once diamond was successfully turned to graphite, there arose a furious interest in the possibility of doing the reverse; of turning graphite into diamond. Throughout the 19th Century, attempts were made, and for a while it was believed that the

French chemist, Henri Moissan, (See DEATH IN THE LABORATORY, September, 1965.) had succeeded in 1893. He actually presented diamonds he had prepared, one being a thirty-fifth of an inch in diameter and, apparently, flawless.

The work could not be repeated, however, and it is now known that diamonds couldn't possibly be formed by the methods Moissan used. The usual theory is that Moissan was victimized by an assistant who hoaxed him and then dared not own up to it when the hoax was taken seriously.

Carbon is not unique in this twinship. There are other cases of elements existing in different forms. Ordinary oxygen consists of molecules, each of which contain two oxygen atoms. Ozone, however, (discovered in 1840) consists of molecules, each containing three oxygen atoms. Oxygen and ozone are "allotropes" (from a Greek word meaning "variety") of oxygen.

There are allotropes of sulfur, phosphorus, and tin, too, and in every case it is a matter of the atoms of the element being present in any of two or more different arrangements.

Well, then, aren't diamond and graphite just one more case of allotropy? Yes, but in no other case are allotropes of an element so distinct in properties, so radically different, as are diamond and graphite. It is possible that such opposites can be produced merely by rearranging the atoms?

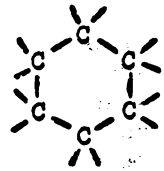
Let's go back to the carbon atom. It has four bonds; that is, it can attach itself to four different atoms in four different directions. The bonds are in the direction of the vertices of a tetrahedron.

You can perhaps see this without a three-dimensional model (two-dimensional drawings are of doubtful help) if you imagine the carbon atom sitting on three of its bonds as though it were a flattish three-legged stool, while the fourth bond is sticking straight up.

If a series of carbon atoms are attached, one to another, to form a chain, such a chain is usually written in a straight line, for simplicity's sake: -C-C-C-C-. Actually, it should be written zig-zag to allow for the natural angle (109.5°) at which the bonds are placed.

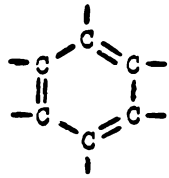
By following the natural angle of the bonds it is easy to produce a ring of six carbon atoms, but that ring isn't flat. Seen in profile, the two ends curl up or one end curls up while the other curls down. Ignoring that, we can write the six-carbon

"cyclohexane ring" as follows:



Notice that each carbon atom has four bonds altogether. Two are used up in joining to its neighbors in the ring, but the remaining two are available for use in other ways.

In the case of each carbon atom, however, one of those two spare bonds can be added to those forming the ring. In that case each carbon atom is joined to one of its neighbors by a single bond and to the other by a double bond to form a "benzene ring", thus:



Ordinarily, a double bond between carbon atoms is less stable than a single bond. You would expect that it would be easy to convert the benzene ring into a cyclohexane ring—but it isn't. Quite the reverse! The benzene ring is more stable than the cyclohexane ring despite the double bonds.

The reason for this is that the carbon atoms in the benzene ring are in a plane; the benzene ring is perfectly flat. Furthermore, the benzene ring is symmetrical. This flatness and symmetry adds to the stability of the ring for reasons that require the use of quantum mechanics, and, if you don't mind, we'll leave out the quantum mechanics in these articles.

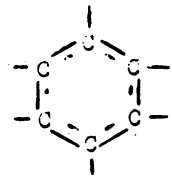
Of course, the benzene ring as I drew it above is not entirely symmetrical. Each carbon atom has a single bond on one side and a double bond on the other, and surely this represents an asymmetry. Yes, it does, but this business about single bonds and double bonds arose before chemists had learned about electrons. Nowadays, we know that the bonds consist of shared electrons and the electrons have wave properties.

If the single bonds and double bonds are taken literally, it would seem that two carbon atoms separated by a single bond share two electrons and two carbon atoms separated by a double

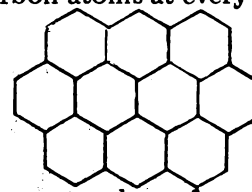
bond share four electrons. This would be so if the electrons were particles—but they are waves.

Because of the flatness and the symmetry of the benzene ring, the electron-waves stretch over the entire benzene ring and distribute themselves equally among all the atoms. The result is that each carbon atom is attached to each of its neighbors in precisely equal fashion (which is what makes the benzene ring so stable). If we wanted to be simplistic, we would say that the six connections in a benzene ring consisted of six "one-and-a-half" bonds.

We could therefore write the benzene ring as follows, in order to show the equivalence of the bonds and make the molecule entirely symmetrical.



Notice that each carbon atom in the benzene ring still has one spare bond that could be attached to some atom not in the ring. These bonds can all be attached to still other carbon atoms which can themselves form parts of other benzene rings. In the end you can get a tessellation of hexagons (such as those we frequently see on a tile floor) with carbon atoms at every vertex, thus:



If you imagine a large number of such flat tessellations, one stacked over another, then these tessellations will hold together, not by oridinary chemical bonds, but by weaker "Van der Waals forces."

Each carbon atom in a hexagon is 1.4 angstroms from its neighbor (where an "angstrom" is a hundred-millionth of a centimeter). One tessellation is, however, 3.4 angstroms from the one below. The longer distance in the second case is an expression of the weaker force of attraction.

As it happens, pure graphite consists of just such stacks of tessellations of carbon atoms. Each flat layer of hexagons holds

firmly together but can be easily flaked off the flat layer beneath. It is for this reason that graphite can be used for writing or as a lubricant.

Then, too, the electrons that stretch all over the benzene rings have some of the properties of the mobile electrons that help form metallic bonds. The result is that graphite can conduct an electric current moderately well (though not as well as true metals).

Heat and electricity can travel more readily along the plane of tessellation than they can travel from one plane to another. This means that heat can travel through a graphite crystal in one direction a thousand times more easily than it can in another direction. The corresponding figure for electricity is two hundred.

What about diamond, now. Let's go back to the single carbon atom with its four bonds pointing equivalently in four directions; a carbon atom sitting on a flat tripod with the fourth bond upward.

Imagine each bond connected to a carbon atom, each of which has three remaining bonds, and each of *these* is attached to a carbon atom, each of which has three remaining bonds, and each of *these* is attached to a carbon— And so on and so on and so on.

The result is an "adamantine" arrangement, a perfectly symmetrical arrangement of carbon atoms in three dimensions.

This means that all the carbon atoms are held equally well in four different directions. No atom or group of atoms is particularly easy to break off, so diamond won't flake. You can't write with it or use it as a lubricant.

Quite the reverse. Since in every direction, carbon atoms are held together by strong single bonds, and since these are the strongest bonds to be found in any substance solid at ordinary temperatures, diamond is unusually hard. It scratches rather than being scratched and, far from lubricating, would quickly ruin anything at all rubbing against it.

Furthermore, the electrons in diamond are all held firmly in place. Their waves are confined to the space between two atoms, so that diamond is a poor conductor of heat and electricity.

About the only thing that isn't easy to explain is why diamond is transparent and graphite is opaque. That comes down to quantum mechanics again, and I won't try.

The next question is this: If you start with a large quantity of

carbon atoms and let them combine, what arrangement will they take up spontaneously: the graphite arrangement or the diamond arrangement?

Well, it depends on conditions.

On the whole, the benzene ring is so stable that, given a reasonable choice, carbon atoms will happily form these flat hexagons. (While carbon atoms in the benzene ring are separated by 1.4 angstroms, those in the adamantine arrangement are separated by 1.5 angstroms.) Under most conditions, then, you can expect graphite to be formed.

Diamond, however, has a density of about 3.5 grams per cubic centimeter, while graphite, thanks to the large distance between tessellations, has a density of only about 2 grams per cubic centimeter.

If, therefore, carbon atoms are placed under huge pressure, the tendency to have them rearrange themselves into a form taking up less room eventually becomes overwhelming and diamond is formed.

But if at ordinary pressure, graphite is the form of choice, how is it that diamonds exist? Even assuming they were formed in the first place under great pressure deep in the bowels of the earth, why do they not turn to graphite as soon as the pressure is relieved?

There's a catch. The carbon atoms in diamond would indeed be doing what comes naturally if they shifted into the graphite configuration. They are held so tightly by their bonds, however, that the energy required to break those bonds and allow the shift is enormous. It is as though the diamond were on top of a hill and perfectly ready to roll down it except that it is at the bottom of a deep pit on the top of that hill and must be lifted out of the pit before it can do any rolling.

If the temperature of diamond is raised to nearly 2000° C. (in the absence of oxygen, so as to prevent burning) then it is lifted out of the pit, so to speak. The atoms are shaken loose and take up the preferred graphite configuration.

To do the reverse—to turn graphite into carbon—you need not only very high temperatures to knock the atoms loose, but *also* very high pressures to convince them they ought to take up the denser diamond pattern.

Moissan's facilities in 1893 were absolutely incapable of delivering the simultaneous heights of temperature and pressure required so that we know he could not really have formed

synthetic diamonds. In 1955, scientists at General Electric Company managed to form the first synthetic diamonds by working with temperatures of 2500° C. combined with pressures of over 700 tons per square inch.

One last item, before I let you go for this month. Carbon has a total of six electrons; boron, five; and nitrogen, seven. If two carbon atoms combine (C-C), they have twelve electrons altogether. If a boron atom and a nitrogen atom combine (B-N) they also have twelve electrons altogether.

It is not surprising, then, that the combination of boron and nitrogen, or "boron nitride" has properties very much like that of graphite, (though boron nitride is white rather than black and does not conduct electricity). Boron nitride is made up of hexagons in which boron and nitrogen atoms alternate at the corners, and from these hexagons, stacks of tessellations are built up.

If boron nitride is subjected to the high-temperature, high-pressure combination, its atoms also take up the adamantine arrangement. The result is a denser and harder form of boron nitride; a form called "borazon." (The "-azon" suffix comes from "azote," and old name for nitrogen.)

Borazon (again, not surprisingly) is almost as hard as diamond. In fact, it has an important advantage over diamond in being non-inflammable. It can be used at temperatures where diamond would combine with oxygen and disappear.

Borazon may therefore well replace diamond for industrial uses, but somehow I don't expect to see borazon engagement rings for a while.

ABOUT THE COVER: Volcanic action or an atmosphere long ago frozen on to its rocks could have formed the cave seen here on the enigmatic planet Pluto—outpost of the Solar System unless the existence of "Planet X" is confirmed. The icicle-like structures, once formed as the temperature dropped, would remain unchanged for aeons. We are looking across a waveless lake of liquid methane; such a surface could account for the fact that Pluto seems to be smaller than the calculations which led to its discovery in 1930 suggested. We may be seeing a point reflection of the Sun in a smooth globe, instead of the true diameter. The Sun appears as a star-like point, but still 100 times as bright as a full Moon. Painting by David Hardy from CHALLENGE OF THE STARS by David A. Hardy and Patrick Moore, Mitchell Beazley, 1972 (to be published in the U.S. by Rand McNally).

One of Zenna Henderson's stories about "The People" was recently done on TV, with some success according to our man in front of the tube, Baird Searles. This is not a People story, but it retains the distinctive qualities which have gained Mrs. Henderson such a devoted following.

Thrumthing and Out

by ZENNA HENDERSON

I SHOULD HAVE REPORTED the Spill the second I found it. I felt a cold clutch of terror when I saw it—back in a corner of Section LL, halfway up YDN, about where the wall changes color. A Spill meant a Breach—an incursion of Out! In all my dreams I had never really believed that this could ever happen—and certainly not to me—to actually find a Breach—though this was exactly what all my training as a Greenclad was supposed to prepare me for. My hand should have flown automatically to my belt alarm. By now Repair should be swarming—

So why didn't I report it? Maybe because it was so small? Only about two handfuls of brown granular substance—if I had dared gather it up to measure it. But some disastrous Spills have started pinpoint. Maybe because it was so quiet? So was the Spill that killed every breathing thing in Section YL, a hundred years or so ago. No, after searching myself for a long time, I've finally decided. I didn't report it because it was Mine.

It's only been in the last few months that I have begun to realize that everything is Town. Nothing is Mine—nothing of my own. Of course I've known this all my life. Of course no individual owns anything. We possess when we need. Even though we say *my* quarters, *my* bed, *my* coat, we know it's really Ours. And if we have a need, we fill it wherever we find the item available, being sure, of course, that we do not deprive another capriciously. But for it always to have been so and to come as a sudden realization, are two different things.

So, as I crouched there,

staring at the Spill, I vividly realized—of all Town; no one—*no* one else knew! No one else had seen! No one else at all, at all! This was Mine! And if Mine, then I must touch to possess. Quickly, before I could reason, I put my hand out and flatly pressed the Spill. My hand snatched away and, for a breath-span, I saw the shadowy print of my fingers and my palm. Then there was a shift, a movement. I winced back. My hand print was gone. And now, surely, there were three handfuls of the brown granules instead of two, and the new in-move had brought a finer greyish, substance with it.

I waited, unbreathing, for the whole of Section LL to crack, to give way and irretrievably breach Town. I stared, half hypnotized, until I thought I could actually distinguish the irregular outlines of the small breach in the wall, behind the granules—a breach perhaps no larger than my thumb. The powdery granules settled again, and a sudden thrust of light from the hole made every granule cast long, ominous shadows. Panic-stricken, I pushed my hand towards the Spill and the light. Fleetingly I saw the pink flesh of my fingers filtering the light. Then my hand was dark. There were no shadows. no light—only the greyish brown Spill.

Perhaps I had stared too long. Perhaps my eyes had made illusive light of their own. Because how could light come from Out and not damage?

I swallowed and stood up stiffly. I glanced at my watch—my work watch, marked with no frivolous hours, but only Duty, Change and Release. It was in the orange Shift Change sector. With a sinking feeling I realized. Shift change. Someone else would come—Well, the Spill *had* been Mine. For a little while. Now the next Green along the catwalk would see the Spill and report it with much noise and excitement. I clutched the railing and looked down, down into the shadowy depths below me. I couldn't see the bottom. I could see the curvature far to my left but not to my right. I couldn't see the curve above. Rebelliously I thought—in all this creation, all this Town, why couldn't I conceal this one tiny place? This hand-span of Mine.

Then I remembered. This was my first shift this year in this sector. I had found a heap of anonymous clutter pushed across the catwalk, cutting off this section. I had had to clear the walk, then round the structural element before finding the Spill. Whoever had been duty in the period before Transfer had been slouching the job, not scanning the Wall inch

by inch as required. Well, then—

I pushed the clutter back across the catwalk. With a sense of betraying, I saw how easy it was to go on by and not bother with this short jog of the walk. I was uneasy because I had so nearly passed it myself without noticing it.

I had no time to brood over it. The flick of the section lights indicated the shift change was on his way. I rubbed my guilty hand down the side of my uniform, fished the symbolic key out of its holster and had it ready to pass along to my relief. I tightened my jaws against the inevitable. According to the Roster, Gillyun was my relief. And knowing Gillyun—

I saluted and, extending the key, said, "Secure." Gillyun sketched an excuse for a salute and took the key carelessly. "Vigilance," he said, his eyes mocking me. "Come, come, Corolla, lovely child! Blush for me!"

His laughter followed me as, blushing furiously, and deliberately slowing my steps to conceal any suggestion of flight, I turned my back and left. I disliked Gillyun's eyes and voice almost as much as I did the impudent curl of his beginning whiskers! He's one of those odious creatures who start belaboring sex differences as soon as he finds out there are any! Well, at least I wouldn't have to worry about his finding my Spill. In all probability he had put the clutter there himself to cut his patrol distance. And whoever followed him was just as bad. Gillyun is a slack, slouchy worker, a disgrace to the Order of Greenclads. I wished his transfer schedule had coincided with mine—then he wouldn't still be around.

That evening, Sepal, my best friend, and I went down to the Recreation Square. The Experimentalists were there from Music Division—which is a Secondary, of course. They are trying out different instruments that they have built from Archive pictures—hand instruments—for making music—I mean raw, not even programmed. And some of the weird effects they get from even weirder looking instruments is droll! How they labor, bending so intent and sober over those collections of wires and wood and twisted metal—and the squeaking, squacking, blaring results—well, it's really more-so!

Sepal was fascinated by one instrument that consisted of wires stretched over a roundish, flatish box of wood, and she lingered after the concert to get a closer look at it—or the ginger-whiskered fellow who played it. I wandered off through the crowd to my favorite seat near the Memory

Arch. I kicked off my sandals and flexed my toes. They didn't like the thongs that circled each of them, then joined over my insteps. The turf was pleasantly warm underfoot, and the cool air moved pleasantly over my face. I like the Memory Arch. If you can remember your history, you can pick out the life of Town on that arch, right up to where the present blankness begins. And what person in Town has never dreamed of having the next spot on that bright curve? But that night the thought was less than warm to me. My eyes sought out the place, too far above for me actually to see, where one of our family had been so honored.

We are a long, proud line, we Greenclads—my father and his father and his father before him—stretching back, so they say, to that dim long ago when the order of Greenclads was first commissioned. We have always been proud of the responsibility that took them—and now us—daily so close to death and disaster to protect Town from death and disaster. In the past, many Greens have given their lives in the line of duty. We have stories, not only of our own family, of the heroism and unselfishness of those who died. Our family has small plaque, a tiny copy of the figure on the Memory Arch. It shows our man, his face twisted away from the hissing, roaring Spill that was blinding him as he pressed his body into the breach long enough for Repair to arrive. And not all Spills have been noted in history. Not all heroes are known—the many unsung who have done their duty so faithfully. *So why hadn't I reported the Spill?*

I stubbornly twisted away from the discomfort of the thought and went back to look for Sepal. She was leaning on the edge of the platform, looking adoringly up at the musician who was sitting on the edge of the platform, looking adoringly down at her as they both ignored the instrument on the floor beside him.

I sighed patiently. Some day! Some day Sepal would prove immune to any likely male—then—well, I guess then I *would* worry!

I picked up the instrument and held it across me. I flipped my fingers across the strings. He had plucked them gingerly between thumb and forefinger. I liked my *thrum* better than the *plok-plok* he had produced. I shifted my fingers at the narrow end of the box and strummed again. The tone had changed. The musician's head jerked up and his eyes left Sepal's.

"What did you do?" he demanded.

I almost dropped the instrument in my astonishment. "I didn't hurt it," I said defensively. "I only—"

"Show me! Show me!" the fellow demanded. "Do it again!"

So I strummed. And shifted my fingers. And strummed again. And had the instrument snatched from me. The fellow bent, engrossed, over the thing, strumming and shifting—

Sepal drew a long, exasperated breath, her lips tightening as she glared at me. She released the breath explosively through her nose and stalked away. I followed her, my eyes rolled up patiently. Now she'd pout for an hour or so. Well, could I help it if I had short-circuited a likely setup for her again? She's another who's fascinated by sex differences. Oh, yawn! And she and Gillyun can't stand each other!

The Spill was still there. It could have been discovered and reported. It could have been a hallucination in the first place. But it was neither. It was there—and it was larger! I knelt beside it. It was a dark, wet-looking brown now, though, and as I watched, a brown wetness slid thinly across its surface and crawled toward me. I jerked back, startled, but the curl wound itself into a little puddle. The reflection of the overhead lights scribbled across it before it stopped completely. I smiled at myself. "It's only water," I told myself comfortingly. "Only water colored by the Spill!" I reached out my hand with the compulsion to sign it again with my touch. I hesitated. A Spill. It might not be water. It might be a substance that would eat my hand to the bone. It might be a contagion that would decimate Town—after *I* was dead. My hand hovered—hesitated—and then I touched the Spill firmly. There. Mine. Signed Mine with my hand print. And my hand was signed by the Spill—with the semiliquid brownness that emphasized every line in my hand. Then light came through the breach—not a thin pencil of light as before, but a blare of it, bluish-white and intense like a sudden full note from one of those archival instruments. But this light didn't squawk off into noise as the instruments usually did. The noise! Here it followed the quick light, overlapping it, even, a deep vibrating noise that—again my only analogy was that concert—the huge, cylindrical section that had only one note, a deep throb that could trick you into thinking you had another heart beating up against you instead of inside you. I had another heart right then, too, throbbing madly in my throat as I

scrambled back away from the Spill and hastily jumbled the junk back across the walk.

By shift change, my hand had dried and I could brush the brown off.

Gillyun arrived. We saluted. "Secure," I reported, extending the key. He took it. "Vigilance," he yawned. "Well, Corolla, my little flower face," he grinned. "You must have fascinations of which I know nothing!"

"Oh?" I moved to slip past him.

"Not so fast, my pretty," he said, his hand on my arm detaining me. "You quite caught the fancy of one of the Experimentalists at last night's concert. We dorm together. Well, same dorm block, anyway. He's in the Math wing. Music's his Secondary. He drove us mad last night, alternately scratching at that thing he tries to make music from, and singing your praises. Neither performance could be called musical. He asked me to tell you he'd be by Memory Arch this evening if you'd like to hear what he's done with your idea."

"Thank you for the message," I said neutrally.

He sighed and shook my arm a little before he released me. "Such an outrush of emotion," he mocked. "Now if it were that Sepal—"

"Vigilance," I said, and slipped past him. He followed closely behind me along the walk, though his sector was the other way.

"Such unsuspected talents," he said, breathily, against the back of my neck. "Though I suppose you former Logikids are full of unplumbed depths." I flicked my feet just enough to interrupt the walking rhythm, and he stumbled a step or so on the backs of my heels. He grabbed my shoulder, halting me to steady himself. "Nevertheless, who would have suspected musical talent in a Green?"

I looked back at him and something in my look turned him off. He flushed slightly above his cheek whiskers and let go of me. His eyes fell. "Such a grubby-handed Green, too!" His grin was full grown again. "Vigilance," he said and turned back to his sector. I scrubbed my hand down my side again. It *was* grubby. But I *had* turned him off!

The Experimentalist was there by Memory Arch when Sepal and I arrived that evening. Sepal's welcome expanded as it always does in a male presence, and quite overshadowed me. But this time the male only flicked his teeth at her and turned to me. Sepal's astonishment amused me, and I was smiling as she turned away with

a swish of ruffles. I cleared my face when I realized that the fellow was looking at me.

"Look!" he said hastily, taking my elbow and steering me to a narrow path leading back to Archives. His other hand clutched the instrument that had to trail behind him because of the narrowness. "Look!" He pushed me down to sit on the curve of a concrete sculpture. "I've been working unsanely, unsanely. I think I'm getting it—only—well, look!" And he cradled the instrument across himself and began to strum and to hum along with it. He deepened the pulse of the rhythm, and I found myself flicking my toe to its insistence.

"Look!" he said, "My fingertips are gone and I can't get a melody, but look—"

Very softly he sang and the strums changed to cradle the melody and surround the words and underline the rhythm. It made a Thing out of that worn-out old song everyone sings at Sings—

I am my love's and she is mine,
She causes all my life to shine.
She has my heart—we'll never part,
For she is mine—is mine—is mine—

"It goes," I admitted to him.

"It goes." A breathy gust of laughter flicked. "Yes, it goes, but look! My fingertips are bleeding and I can't get a melody."

"Can't you use something to strum with until your fingers get well?" I asked. "And do you need a melody? Singers carry a melody. The tapes carry melodies. Why can't you go on and just—strum around the melody?"

"Just strum." Again the breathy, brief laugh. "With something else—"

"Yes," I said. I flicked mentally over myself, then I flexed the metal clip on one of my shoes and took it off. "Here, use this."

He did and it sounded the same to me, but he choked over "resonance" and "vibrancy"? and looked at me as though I were programmed for miracles.

"Might as well take the other, too." I bent to shut out the sight of his slightly lack-minded, open-mouthed wonderment. I took off the other clip, and he took it so eagerly that he pinched my finger against it.

"Look!" he said, licking his lips. Then he firmed his mouth and straightened himself. "Really," he grinned, "I'm not usually so besotted, but you keep answering questions that have no answers. Bet you were a Logikid."

"Still am," I grinned back at him. "You don't get cured of it and I guess you automatically use the skills—"

"But a Logikid and—and a Green!" he wondered.

"It's my family," I said, flushing, and hating myself for flushing. "It was only natural—" Then suddenly I was very much in earnest. "Do you know of anything else that would be more-so?" I asked him. "Something really and truly more-so?"

"Well, we—" his eyes wavered away from mine. "More-so is what you hardly can find any more of any more. Well, anyway sometimes I think we Experimentalists are an unsane bunch trying to make music when all we have to do to get music is to flick a tape. But tapes are all the same! All the same! All so predictable that no matter which you play, you can predict it down to the last worn-out ending. We had a game. Given the first three notes, write the whole—and we could. So we thought maybe if we could go back to instruments. If we could make unprogrammed music. One time they must have. Someone must have programmed all our music once—anew. So I took this from a picture—an instrument on one of the tapes that are destructing now of age and disuse. And I made this—this replica. Only how can you tell? Look. It has these things sticking out at the end. Do they have a function or are they just ornamental? And look. There's a hole into the box under the strings—well, wires, but they're called strings. Or should they *be* string? What kind? Of what? But the hole. Does it have to be? Does the shape of it have anything to do?—look, this design around the edge. Does it function? Or is it decoration? It's unsane. It really is." He slumped on his segment of the sculpture.

"But more-so?" I asked.

"But more-so?" His laughed jerked. "Absorbing. Absorbing."

"Did the picture show the wires going to the knobs?" I asked. "There are as many knobs as wires."

"Strings," he said. "It wasn't very plain." He frowned at the instrument.

"What do you call it?" I asked. "And yourself."

"Oh. Oh, well. I'm Stem, of Music," he said. "And you?"

"Corolla," I said, "of the Greens."

His instinct was a little too fast for his manners, this time. Now it was that he ritually shrank back, his palm flat to me for a moment—all a harkback to when Greenclads used to be almost outcasts because their nearness to a Breach or a Spill might pass contamination on to anyone they touched. Town people used to look at Greens half in admiration, half in terror. To work so close to destruction! It brought the thought of death too close! Perhaps only a breath, a touch

away! The ritual is dying out, exhausted by time and absence of emergency; but, as now, it crops out in unexpected places. My chest suddenly clenched again, remembering the unreported Breach—the Breach, not only of Town, but of the sacred trust of the Greens.

"I blew up a copy of the picture," said Stem. "If you'd care to come to Archives." He was hurrying me along the narrow pathway.

"But—" I protested, then shrugged and went along.

Archives was shadowy and a little frightening after hours. Stem lead me expertly among display cases and up stairs and around and around, up and down spirals of clanging steps, before we finally emerged into a cluttered room—whether upstairs or down, I couldn't tell. We bent together over the grainy, grey enlargement.

"They connect," I said. "Here, hold the print up. Now look at it quickly. Just a fast glance. See? Each line terminates at a knob. And the knob is flat as though to fit—to fit a finger and thumb. Turn to loosen or turn to tighten. Stem, when you change your left hand on the strings, the sound changes."

"There's a correlation between string length and the rate of vibration, so the tone—mathematically—that's why this—"

"Then those knobs could change the length or the correlation much more that just a touch. To make them all match. I mean make regular intervals up and down—for music—"

His mouth was slightly open again as he drank in my words, his face bemused. I flushed and moved uneasily. "What do you call it?" I looked down and flicked my finger across the strings. The *thrum* aroused him.

"Call it. Oh—oh, call it." He blinked and grinned. "I haven't called it yet, but I'll think of thrumthing!" We winced together and laughed together—not knowing we had just added a new word to the language!

Then he was hovering back over his papers. "Look, where shall I start? Let's see. Mathematically this first string—"

I was gone, as far as he was concerned. I waited impatiently for a few minutes with no sound in all of Archives except the scurry of his pencil and an irregular mumble from him. Finally I said, "I think I'll go back to Memory Arch." No reply. "I'm going back," I said loudly.

"Back?" He didn't even look up. "Sure. Go back."

Well! I caught myself flouncing out as Sepal might have, but unflounced in a hurry in the eeriness of the shadowy halls of

Archives. I scurried up and down and dizzily around and around until I had passed the same bent stair-support three times, twice going up and once going down. I huddled down on a step and considered. I knew I couldn't find Stem again. I had two choices. Keep on looking for the exit or just sit and wait to be found. In the morning. Late for Duty. Hungry, tired, and, most annoying, in growing need of a Services room.

That was the deciding factor. I got up and clattered down to the landing. No more stairs and halls for me. Doors, after this.

Some doors opened reluctantly. Twice ghostly things wound around my face as I went through creaky doors. Then doors began to open more readily and, oh, joy! finally a green-rimmed Services Room door!

When I came out, I looked around me with a much more relaxed feeling. Now, where in Archives was I? I hadn't been in the building very often since Customs and Traditions classes in Early School. This room was tapes. I peered at a shelf sign. "Steel—Internal Stresses—"

The next room was a viewing room, dust deep on the adult-sized seats and on the floor. The next, an exhibition hall, the exhibits wall lined with small models to be projected. I picked up one—a tiny globe with details too small for me to discern. I balanced it thoughtfully in my hand. Why not? It was after hours, but who'd care? Who came to Archives after hours except unsanities like Stem and Me? It would be Different to do and Differents are as hard to come by as more-so's.

I went back to the projection room and, blowing the dust off the projector, I inserted the exhibit and flipped the switch I heard a whirr and click and a disgruntled clank or two from the projector while I dusted a chair and sat down. Light lanced through the darkness.

And God said—the voice filled the room—*Let the earth bring*

forth grass, the herb yielding seed, and the fruit tree yielding

fruit after his kind, whose seed is in itself, upon the earth and it was so.

The screen was alive with—things. They were illustrating the words—grass, herbs, seeds, trees—all those unsense words—but beautiful! beautiful!

And the earth brought forth grass and herb yielding seed after

his kind and the tree yielding fruit whose seed was in itself,

after his kind: and God saw that it was good.

And again the screen filled with blueness all above and

greenness—all below—and brilliant colors—scattered among—fastened to green—or fluttering slowly or darting swiftly in the blueness. What was it? Where was it? *When* was it? The voice again—

And God said, Behold, I have given you every herb bearing seed

which is upon the face of all the earth and every tree in the which

is the fruit of a tree yielding seed: to you it shall be for meat.

Again the pictures, this time with animals moving among the green—and with blue flowing across the screen between brown—I scrambled to the projector. I fumbled the reverse switch, ignoring the mute. The projector squawked backwards to—*be for meat*—then I slowed it, stepping it down far past normal. The projection crept and crept until the blue flowed between brown. I flicked the stop button. There was a curl of blue, wrapped around a mound of brown. If you saw the blue as brown, too, and reduced the size of the mound, there it was! My Breach—my Spill! Then all that blue flowing was water—all the brown was—was—I groped for an applicable word from the voice, *earth.* That's what the voice had said. *Upon the Earth.* The brown of my Spill was earth, but my water was different. It was brown. And all those up-springing green things were anchored in earth, growing up towards the blue that couldn't be water because it was so up. All those *grass* and *herbs* and *trees!*

Where was this? When was it? I scrambled back to the exhibits room. With difficulty I deciphered the ornate script above the exhibits shelves. PREHISTORY I—IN THE BEGINNING—GOD.

Oh. I felt something up-springing and bright drain out of an essential part of me. I remembered. From Early School. Nothing more-so at all. They don't bring the classes to Archives any more. No one seems to care how things started. Things are. Things have been Things will be. Always no change. A shudder shook me. Forever and ever the same?

The other theories. The Big Bang—the—but wait. This Beginning couldn't be for Town. Where was the earth from which things sprang? The uniform turf that is everywhere underfoot outside the buildings isn't brown. Colors change according to some time schedule programmed with Town. And, reaching back to Early School, those up-reaching green things grew. They changed and yielded seed and fruit and—where did they go? Nothing grows in our turf.

I started slowly back to Dorm. Early School was so long ago, especially with all the repetition of the days between, *the days between, the days*—My steps quickened with the words until I was running down the grey corridors, hearing my feet repeat and repeat and repeat—*the days between, the days between*, past the grey blur of closed doors and the grey blur of past days.

I slid out of the side door and heard it sigh shut behind me. I looked up at the arching glow overhead. At least I've been told it arches—on duty I've seen—

Suddenly such a pang struck me that I thought I had actually been wounded! *What was Out? Why was In?*

My mind was dissolving against the idea of anything being Out. How could there not be encircling walls? What could possibly be where nothing was? Never in my life had I felt so near to becoming unsane. And then my staggering mind caught on the Spill. And the wet curl. And I relaxed down to my toenails. Of course. There *was* something Out. And I rested myself against the memory of my hand print in the Spill—in the Earth.

As shift followed shift, I kept my secret of the Spill. Each duty period I knelt at least once before the Earth as before an altar—and it was as huge and mysterious and satisfyingly unsatisfying to me as the altar in the Assembly in the center of Town where people used to crowd on their traditional worship days and observe their various rituals. We used to—our family—on a Twenty-fourth. I only remember a Twenty-fourth and *A Child Is Born* and—why, yes! *On Earth as it is*—on *Earth!* Isn't that an odd worship?

Sometimes the Spill was flooded with light. Sometimes the water ran. And sometimes it was just a brown Spill under the lights.

Stem had redesigned the Strumthing—such a silly name I told him and told him—so the knobs controlled the tension of the strings and, with the resultant orderly progression of the tones, he had learned to play it most amazingly well, so much so that Production called him in and began to issue reproductions. The new More-so for the moment was Strumthings and trying to write words to go with the awkward, unprogrammed tunes, or rather, collections of notes everyone was becoming passionate about.

Stem even had one he called *Out*, though no one liked it because it sounded so weird and no one likes to think of Out. He blamed me. He wrote the thing after I told him about the

projection. He had learned to play odd half-steps with the notes, and they made this tune unresolved and as though it ended with a question mark, and somehow it fitted the Out feeling.

He remembered the projection. "All that blue and green and earth is Out," he said. "We had that in Middle School. I guess they dropped it just before your age group got to that level—or were you in Logikid classes by then?"

"Out?" My stomach curled with the thought. "But Spills are when Out comes in. How can blue and green and growing be where such disastrous Spills come from?"

"Don't ask me," said Stem. "It must have changed. God saw it was good. Once, anyway."

"God?" I asked.

"The Beginning," he said. "They said God meant the Beginning in this theory."

"But if God saw and talked—" I started. "Maybe God was before the Beginning. A separate—"

"You Logikids never can simply accept," said Stem, flicking his fingers over the strings.

"If Out was good once, something happened to it. It stopped being good. That's why there's Town and Out. I don't think they ever told us why." He made the weird sorrowing sounds on the strings and half sang, half said,

Where is the blue?
Where is the green?
Where is the growing?
Out.

Out in the bad,
Out in the death,
Out in the poison—
Out.

"But," I protested. "It's not all—" I caught my lower lip between my teeth.

"All what?" Stem's eyes were sharp.

"All the same length lines," I said casually. "Only one word in a line? Awkward programming."

He didn't quite accept my glib explanation, but he was willing to be drawn into a safe argument. "That's the whole idea. Anything except what sounds programmed—"

Next duty period, as I knelt by the Spill, I suddenly leaned forward and pushed my hand into the featureless heap. And pushed. And pushed, balancing myself with my other hand as I watched my knuckles, then my wrist, then my forearm disappear into the earth. Then my out-of-sight fingers moved in nothing. The nothing of Out. I held my breath. I felt something brush across my palm. I clenched my fist and yanked it

back through the earth, feeling something ripping away as I pulled, and something staying. I opened my fingers slowly. My palm was speckled with black. What was this I had brought into Town from Out? I turned my hand and pressed it to the earth firmly. Then my palm was cleansed of the black speckles. I smoothed the Spill so the speckles were out of sight and signed it again with my palm.

Next day I couldn't reach my palm print. The Spill had enlarged so much I couldn't reach across it, though I could still see the mark of my hand. The increase had nudged in under it. And the Spill was wet again, so much so that the water was reaching the edge of the catwalk and dripping down into the shadowy endlessness beneath me! I looked at it with a slump of despair. How could I possibly conceal it any longer? I glanced at my duty watch. Oh, no! Frantically I shuffled past the concealing clutter and, running as fast and as soundlessly as I could, arrived at the change point barely before Gillyun. My still-panting breath jerked the word as I said, "Secure."

"Vigilance," he replied. "Say, you've been running! Or is it your ungovernable passion for me—"

"I was delayed," I said neutrally. "I had to hurry."

"Delayed?" He looked at me in amazement, then grinned incredulously. "You mean you actually *patrol*? You *walk* the course? You actually cover the area?"

It was my turn for astonishment. "Of course! It's our duty!"

"Duty!" He pouted it disgustedly off his mouth. "Foul footsteps! Anyone who has any know at all—well, my roost isn't ten yards from here. My tapes, my nibbles, my sleeping place—more-so! But more-so! And, I might add, my brainless Logikid—not always lonely is my roost. If *you* would deal a different hand, maybe even you—"

"Dereliction of duty!" I gulped, my face stiff with the shock. "You—"

"Me?. Listen, chucklehead, you're the one out of step. Go on! Try to find the duty officer to report me. Nothing's ever happened and nothing ever will. Just try to find the guy! And if he's slightly missing, you might try asking Sepal. I hear that they—"

I turned on my heel and left, not quite sure my knees would bend the right direction. I couldn't grasp what I'd heard. How could it be that *Greens* could be so lax—and if it weren't true? It couldn't be true. How could Gillyun joke about such a subject? How

could he so dishonor—? Of course it wasn't true. But *Sepal?* She wasn't a Green. How could she possibly come into the area? Duty officer? *No one watching?* No one but me? What if there was a Breach—a Spill—and it went unreported?

Oh, but—!

I held my face stiffly in front of the seething upset inside me until I was almost back to Dorm. Then a sharp, silver glimpse of Memory Arch across the square broke me. I turned blindly into the first door that would receive me and, folding up on the dim stairs, I wept into my lap until I felt tears warmly wet on my knees clear through my clothes.

Finally outside sounds reached me again, and my tears stopped. I drew my breath raggedly. Someone was coming down the steps to the door beyond me. I pressed myself against the wall, my face turned away.

"Corolla?" I didn't want to recognize the voice. "Corolla!" Stem folded up on the step beside me. "Corolla?" I felt his hand hesitate on my shoulder.

Well, my tears hadn't all been spent, because they flowed copiously as I practically threw myself upon Stem. One of my hands banged against the Strumthing he had slung across his back by some strap arrangement.

Finally I got vocal and poured out the incredible story of Gillyun while Stem and I shredded a number of tissues trying to keep my face dry. Then we sat silently for a moment on the steps.

"It could be true," said Stem. "Things—things in general seem to be wobbling as if they were thinking of stopping. Something is running down. Sometimes I truly believe that we could all just sit for a week, not taking any duty at all, and it wouldn't matter a whit to Town. That's why—" He moved restlessly, shifting his Thrumthing. I heard its soft *thrum* in the shadowy stillness.

"But, on the other hand—" he stood up briskly and helped me to my feet. "That Gillyun's a thoroughgoing bad piece of news. Maybe only he and a couple of others like him are laxing. As long as Town has Greens like you, no Breach or Spill can sneak up on us unheralded!"

I wailed and fled, my tears gushing again, leaving behind me Stem and his astonishment.

For a long time I didn't go near my Spill. I took my duty, performed it, turned over the key correctly and didn't allow my thoughts to deviate, even off duty. I spent much of my off-duty with Stem and the other Experimentalists, listen-

ing to all the odd sounds they were bringing forth in the name of music. And some of it was surprisingly good, especially if you could hear willingly the far side of the programmed.

But one evening in the tiny room they fancied for its acoustics, Stem, in the unpatterned melange of sounds and rhythms, began softly on his Strumthing.

Where is the blue?
Where is the green?
Where is the growing?
Out!

And, quite suddenly, I couldn't bear it. I left the tight cacophony of the little room in Archives and started aimlessly back to Dorm. I went under Memory Arch—quickly, eyes averted—then slowed down and stopped at the door of the Assembly. I slipped in impulsively. The low murmur of voices slowed my steps. One of the chapels—no, several—were in use. Voices, alone or in concert, crossed each other, as the sounds of the musical instruments had in Archives. Why! I thought. People still come to Assembly! The same as when I was a child!

I moved soundlessly toward candle flames, my feet changing directions twice before I reached the right place and sat down softly in the same seat I used to sit in so long ago. When I was Home. When Dorm was a life too far ahead for anything but dreaming. When A Child Is Born. When Mother—I clenched my memory tightly around Mother. Only by never looking had I been able to keep her unchanged. I held closely the memory of her going to Clinic, smiling her wasted smile, waving her ghostly hand, promising to be back. But she never came. And when the official notice came, I tore it into as many tiny pieces as possible. "Name removed from population rolls. Reason: Death." Bitterly I knew I'd never really know. Whether she had died, or had been "removed." Stories go around about Clinic—and population rolls. Father had gone long before I knew questions could be asked—that were never answered. I hadn't asked about Mother. She was gone.

But now I could remember all of the "on earth" because the tiny group of people between me and the candles were chanting it softly. I slid to my knees and let memory clasp my hands and bow my head, but I had no voice for the words until *Amen.*

Next duty period, I made my first round as I always had. When time came for the second one, I wiggled and squirmed around and among the clutter hiding my Spill. I caught my

breath in a half scream. *What was wrong with my Spill?* It was big! It had spread and spread! But that wasn't the terror of it! A part of the wall had broken off and lay across an opening as wide as the length of my arm. An opening half filled with earth, and through which light flooded strong and bright—casting shadows of the hand-high green that dotted the brown Spill. Green reaching up—reaching up—*growing?* the —the green—my hand dotted with black specks from my clutching Out. *Seed of its kind*—I slid to my knees and, creeping gently forward, softly touched the green. *And it was good!*

I thought my heart would burst with wonder. What could I do? How could I stand it, alone? But—what if it was *death* growing hand-high and green? What would happen now? Would the green get bigger or taller or wider or—or—?

That night Stem and I sat by the base of Memory Arch. He had been strumming. Now he spoke. "I've been wondering about making these strings of different material. I wonder—"

"Stem," I clasped my hands tightly palm to palm between my knees. I was going to have to give away what was Mine. "Stem, I have some green growing in the earth."

"You have *what?*" Stem's mouth slacked open.

"I have an unreported Spill in Section LL. I got seeds from Out." I felt a throb inside me. Instead of emptying by giving Mine away, I was filling! I was growing! "I have green growing in the earth of the Spill."

"You have—" His eyes widened and his hand flipped in the old gesture against the Greens. "You've flipped!"

"Maybe so, but I still have it." I jerked to my feet. "Come, I'll show you."

"Me? In Green area—" he protested.

"I go to Archives," I said, as though it were anything like. Then I cried, "Oh, Stem, it's true! It's true! It's growing all green and cool and the light from Out casts long shadows—"

The height frightened Stem. The tightening of his hand on mine as we stepped out of the elevator told me so. My astonishment faded when I remembered my first few times up the tiny, fragile-seeming catwalks and ladders that looked penciled across the immensity of the Wall. But I had as little softness for him now as they had had for me then.

"Watch my shoulders," I said. "Don't look anywhere but at my shoulders." And I led him to the cluttered corner. He drew a deep breath when we

slid behind a huge container and lost the vastness around us. He leaned weakly against this shelter. "It's—it's different," he said, his shaking voice trying to fill our silence. "I mean the Wall." His short breathy laugh wavered. "It changes color."

"Yes," I said. "And my Spill is right at the color change." I dragged him around the last of the clutter—and waited for his reaction

I had forgotten—forgotten how long it had taken me to be able to halfway accept the Spill and the earth and even the green—and the impact of it on Stem came as a terrifying surprise. He wasn't even used to the Wall—or being near it, let alone being able to accept a Spill without automatic panic. All the old, persistent teachings that flung his hand up protectively against me as a Green flooded back to him now, and he shrank away from me but had to cling, too, to the only familiarity in the whole experience.

"Oh, Stem!" I used both of my hands to cover his white, drawn face and his frantic eyes. "I'm sorry! I didn't even think! Oh, Stem!" I turned his shaken body away from the Spill and back toward the walk. He was so nearly in a state of collapse that for a minute I was afraid I couldn't keep him from doubling over the guard rail and sliding down into the nothingness below.

I finally blindfolded him with my scarf and got him back to the elevators and down the elevators. Then, blindly staggering, freed of my scarf, he fled slowly from me through a green-rimmed Services door.

It was a long time before Stem could talk about the Spill, even uncomfortably. He would start me talking about it, but beads of sweat would cluster above his eyebrows and his breath would be ragged, his hands clenched. Finally, though, he was able to talk about the brown, and the green and the growing almost as easily as I could, and he could listen with no great discomfort. So we talked—and speculated and wondered.

"It's been at least fifty years," he began one evening, his fingers busy with finding notes on his Thrumthing.

"Since what?" I asked, trying to get a *ting* from the little metal discs looped by cord on my thumbs and forefingers. Stem thinks they're just rings—ornaments—but only dancers in the old pictures have them on. I think they're instruments of some sort.

"Since the last reported Breach," said Stem. "At least the last one I've been able to find. It was on lower GF at the very bottom. Water ran for

several days until they sealed the Breach. The water tested neutral—just water."

"How old is Town?" I asked, suddenly wondering.

"Old?" Stem's eyebrow lifted. Then he called across the noise and confusion of the room. "Hi, Root! How old is Town."

"Who knows?" Root whacked his small cylinder vigorously. It split open with a *whap* and laughter lapped around the room. Root poked his stick into the cylinder and lifted it up. "Oh, well!" he shrugged. "How old from what? When Town began, time started again. Before Town—" He twirled the cylinder reflectively. "Can't remember my prehistory. Hmm—before Town—Oh, yes! Time was measured from the birth—from someone's birth—"

"Birth," I said thoughtfully. "Born. A Child is born—" Warmness crept in above my diaphragm. Maybe our worship was for the one who started time—before Town. I had been back to Assembly several times but hadn't yet found the time pattern of worship. I must go again—

"Why?" asked Root, then turned away to his broken instrument.

"Why?" asked Stem.

"Why?" My mind scrambled back to our conversation. "Oh, I wondered when Out became bad. It must have been when Town began—or Town must have begun then—"

"Oh, I found a poem about that, on one of the lyric tapes. Can't remember word for word, but in essence it said, 'We need more room for garbage—throw the people out'—I found out 'garbage' means uncycled discards—"

"Throw the people Out," I said reflectively, "Or In."

"So either there haven't been any Breaches," said Stem as he tightened one of my metal discs, "Or Gillyun is right and Breaches are not being reported. *Or* it doesn't matter any more if there are Breaches—"

"Breaches?" An owlish face popped up over Stem's shoulder. "The accepted pronunciation is 'britches' and they were the forerunners of our hosen—"

The face went away and Stem and I laughed. Then I sobered. "We've got to be more careful if we're to keep the Spill My Spill."

"Then you still haven't told—" Stem was sober.

"No," I said. "No, I haven't told."

Sometimes I hurried to the Spill, fearing it would be gone. Sometimes I went reluctantly, afraid it might still be there. But I ended up making my rounds at breakneck speed and spending the rest of the time

watching the green—and the growing. I was fascinated by knobs developing among the green—knobs that got bigger and bigger. And then one day on one growing thing—plant, I mean, Stem found out the generic term for me—there was a crumple of white! A knob had split and folded back. I crept on my stomach across the brown until my nose almost touched the white. The crumple was smoothing out. Deep inside it was yellow. The second day the crumple had stiffened into white rays all around the yellow, and another crumple was showing farther up the plant.

That night I told Stem and he strummed thoughtfully a moment. Then he said, "I wish I could tell Bract. He's passionate about growing things. He found some tapes recently that are called stop-action, and he's almost incoherent. He's even prating about getting seed exhibits out of stasis in Archives and starting his own growing. I don't suppose—"

"No," I said, flushing. "Because then I'd have to report and explain the delay—"

"He wouldn't tell—"

"If he's incoherent over a tape, what would he do if he saw for real?" I closed the discussion.

Gillyun was getting more and more insistent. Almost every day I had to evade his reaching hands.

"Foul footsteps!" he scowled once. "You don't dodge Stem! You don't mind his touching you!"

"I don't even notice it," I said cooly. "And neither does Stem."

"Stupid Stem!" he said. I only looked past his ear, and he got redder and redder and finally flung away from me blindly, stumbling against the guard rail, straightening and leaving without even the ceremonial exchange of "secured" and "vigilance."

Finally every plant on the Spill was covered with the unfolded white. And sometimes there was air moving from the Breach, and sometimes there were small living things with wings—but not the bright wings of the Beginning, but noisy little wings. The creatures walked into the—the white—oh, if only I dared ask Bract!—and walked around and around then went away again through the Breach.

Then there came the time when I sat there, so full of happiness, so bursting with delight over my Spill that I was saying aloud to myself, "I'll *have* to tell! I'll *have* to show—!" And it happened!

"Tell who?" I leaped convulsively and whirled.

There was Gillyun! I glanced frantically at my watch. Past change time! I scrambled toward Gillyun, hoping he'd back away in front of me and back around that container. But he didn't. He dodged past me and tromped out into my Spill, his blind feet smashing a plant.

"Well, well! What have we here?" he mocked. "So you have your little roost, too! So shocked because I admitted I didn't waste time and energy looking for something that will never—"

He broke off and looked at the Spill. He clomped over to the Wall. He bent toward the Breach. For a long, quiet moment everything was so still that I could hear one of the creatures in a white—

Then Gillyun was stumbling back. "A Breach!" His voice was horrified and choked. "A Breach!" He strangled on his own indrawn breath. "Report!" he babbled. "Report!" He fumbled for his belt alarm, the color draining from his face.

"No!" I cried, throwing myself against him and grabbing his hand. "It doesn't matter. It won't hurt!"

"Won't hurt? A *Breach!*" His voice cracked and he tried to yank his hand free.

"It—it breached a long time ago," I confessed. "I've been watching it—"

"And not reporting." His voice laid the statement out flat in front of us, his breath quieting. "A Green—*Corolla* of the Greens. Proud, duty-bound Corolla, not reporting a Breach! Well, well, this gives to think—" He reached back to the Spill and crushed his hand over one of the whites—small creature and all—and yanking up the plant, shoved past me back to the walk.

"Too precious to touch, too duty-true to lax, too everything to track with me at all! But not too anything to let a major Breach go unreported—"

"Gillyun, Gillyun—" I followed him, gasping, "don't tell! Don't tell!"

"Oh, ho! Gillyun it is now! No looking past my left ear! Listen to your voice! No flat words only when necessary—" Gillyun turned, his back pressed to the guard rail, and grinned. "Well, maybe *not* telling will be more fun for me. Just what will you exchange—"

Then he flung up his hand and roared! The plant clung to his sleeve even as he shook his hand frantically with a look of pained astonishment on his face. He flung himself back. Away from me. And—over—the —rail—

I crouched down on the catwalk and hid my eyes and ears against my knees and under my wrapping arms, but I heard and saw and heard again his

horrified cry as he went over and down—down—and nothing below but the shadowy Nothing below—

Finally life crept back into me. I unfolded painfully. I looked for the crushed white that he had had in his hand. It was gone. I found the small creature tightly clenched upon itself and all unmoving. I took it up gently and in a sort of daze carried it back to the Spill. I put it in a white, but its legs had no clinging now and it fell out. I crouched there looking at it until suddenly realization came to me.

Gillyun was gone! Because of me, he was gone! He had fallen down—down—I shuddered. Then coldness tightened on my insides. Because of me the population roll had been altered. Without permission! I had no right to alter the roll! What would they do to me? To Clinic? To Removal? To the Cycler to be recycled?—And when they found him and traced back to where he had fallen—what would they do to me for dereliction of duty? Not only altering the population rolls without permission but not reporting a major Breach—! What *did* they do? In all my life I'd never known anyone—

My terror drove me to my feet. The looming of unknown catastrophes sent me across the Spill. The disbelieving revulsion against what I had done sent me stumbling to the Breach. And the wild, lonely despair of the utter outcast sent me through the Breach—Out!

At first I just huddled blindly, miserably against the Wall, waiting for death, because Out *is* death. Then, eyes closed, I began to sample Out. Air was moving softly over me, a warm, good-smelling air. I could hear the busy sounds of the little creatures around me, and under me was a softness—and—my eyes flipped open. Surely under me was wetness! I looked. I was sitting on the edge of a flowing water, so close to it that I was crumpling one earth edge and slowly sliding into the wetness. As I pushed myself up and back, one foot kicked into the water and what had been clear and beautiful, suddenly swirled brown—and beautiful! I watched, fascinated, as the brown went away and the clear, shining blue—Blue? I gathered a handful of water and searched it before it dripped off my elbows. It wasn't blue! I looked at the stream. Blue—yet the under was brown.

And then my head lifted and I looked up and up—forever! Forever! No shadows of the Over-wall—up into blue and blue and blue! Until my neck was tired, until billows of greying whiteness swept across the blue, I looked at it. Then

when the blue was gone, I looked down at the flowing water. Not blue. The water and the above had been speaking blue together—

Now like an explosion, Out changed! The air was hot and twisty and then suddenly cold and heavy. The above was billowing grey, then black, then split across by brightness, too bright for me to look. Then the roar came that shook me even into my bones. Then a flurry of pellets hit me and stung. I saw them bounce away, white and hard, and melt away into wet spots. A thin curtain of falling wetness swept across me and was gone

I shivered, hugging the Wall with my back. What could I do? Where could I go? Back In? Oh, no! Oh, no! Across the flowing water was a wall—a jumbled disorderly wall of growing things and heaped up earth. Maybe among the larger plants —but there would be creatures among the plants—tiny ones that, if you held them in your hand, could make you roar and fall. If so the tiny ones, what of the larger ones?

Falling water swept across me again. Slowly at first, stiff with fear, shaken with terror, I stood up and tried to leap the flowing water, but at that moment came the terrifying sudden light again; this time the explosive rumble came at the same split moment, and the falling water deluged me. At first I *couldn't* move. Then convulsively I turned back to the Breach. No! No! Not back there! Whirling blindly, I fled away from accusation and guilt and punishment, toward the unknown, so caught up in my terror and the tumult that I could never after remember that flight.

When next I could think, I was crouched against a hard outcropping of earth that arched over my head. Plants waved in front of me and prickled against my wet face. I moved cautiously away from the prickle—and leaped quickly back again. I fished under me and pulled out a sharp piece of plant I had sat on.

And now darkness was flowing in like water. Some rheostat somewhere was functioning. I couldn't see the growing things beyond me. I couldn't see the billowing grey and black above. I couldn't see the earth curved over me. I held my hands up and waved my fingers. I couldn't see them, either! Was I blind? Had the down-pouring waters blinded me? I touched my eyes fearfully—then jerked convulsively as the sudden brightness split the darkness. Fear made me cry out at the crash that followed, but part of my cry was relief. I could see! I wasn't

blind! There had only been a massive power failure. The lights were out.

I can't possibly count the cold, wet, terrified centuries that crept over me in the darkness there, but sleep found me finally, a sleep so exhaustedly heavy that it had no dreams.

The first consciousness I had was cold, and a scurrying of some sort of creature across my outstretched legs that were too stiff and cold to draw up as I willed them to. They only twitched. And then thirst arrived, and hunger. I crept out from my shelter. Earth smeared me from one end to the other and had dried across my face so that it felt as though my skin were splitting as I moved. Painfully I crept to the sound of water. When I finally reached the flowing, I groped for it with my mouth, pulling myself forward on my stomach until I was elbow-deep in the clear coldness. It swirled around my arms and left again clouded with the earth from me. I didn't even pause before I put my mouth to the water and drank. If I had a warning thought at all, I pushed it away. If I was to die of Out, let me die unthirsty!

When finally my thirst was quenched, staying my hunger for the moment, I slid on out into the water that lapped my waist as I sat, and washed myself clean, hair and all, then I crept out to sit on a fallen plant that scratched my legs as I slid along it. I sat and shivered and huddled until slowly a feeling of warmth came to me, and light came through the plants. The power failure was over. Atmosphere was adjusting itself. I let the warmth and the light flood over me until weariness flooded over me too and I curled sideways on the plant and slept again.

I awoke to heat and thirst and hunger. My eyes didn't want to open to the blare of light that roared around me on sheets of heat. Atmosphere was out of order still! But what combination of errors could bring such an incandescent light to life above the plants? Lights are cool! Heating units are separate. I sheltered my eyes with my crooked arm and stumbled into the shadow of the plants. In their shelter I walked into the flowing water again, and, cupping my hands, drank. Quickly I changed my scooping place to one above me. I didn't like the taste of the water smudged from my earthy feet.

Hunger woke in my stomach again. But the halls would be closed by now. What time was it? The only watch I had was my shift watch and it still stubbornly showed *Change* with a wet stain across it. Change? I looked around me and laughed,

a quick, short sound of laughter that died as I looked around again. I backed slowly away—away from what? My face felt frozen into the last echo of that laughter. I was afraid to look—anywhere! Afraid to close my eyes! There was no hiding place. Everything was strange—menacing!

Fear began to fill me, weakening my ankles, stiffening my knees, squeezing the breath out of my lungs, wavering my sight until all of Out began to spin about me. I turned and, shrieking breathily but almost soundlessly, I ran. And collided and ran. And fell and ran. And wrenched my clothes free of grabbing things. And staggered in the hot light. And crept into the wet shadows under things until a long, legless beast slithered across my scratched, bleeding arm and I tripped out completely.

The next thing I could remember was lifting my dripping, gasping face from the flowing water and gulping, "Wall! Where is the Wall? Here's the water! Where's the Wall?! I pushed myself upright, my arms in the water up to my elbows. The water rimmed my arms, swirled around me and moved out of sight behind me among the plants. Then I saw a thing moving in the water—a creature that gaped a mouth and drifted toward me—a legless beast! Again I tripped out, and then I was huddled against a hardness—and darkness all around me. Power failure *again?* Things *were* coming apart! Wobbling to a stop!

Sounds were around me. Sounds I couldn't identify, but all threatening. Too weary even to be moved by fright, I pushed back against the hardness, my arms spreading sideways on either side. I slid along its solidity, trying to push my exhausted self into the wall—the *Wall?* The Wall!

Whimpering with urgent eagerness, I felt along the hardness. The Wall! I had found the Wall! Now for the Breach—

I melted down into a heap of complete misery. Out of all those miles and miles and miles of Wall, where was the Breach? Out of all that blind fleeing panic of mine, where had I arrived? Maybe *this* way to the Breach? Maybe *that* way? Or maybe—since logic had nothing to do with thought any more—maybe this wasn't even *my* Wall. Maybe there were *two* Walls! I had to laugh at such wild unreason, but my laughter was a sob, and I pressed my cheek against the bottom of the Wall and cried.

I remember creeping in the darkness along the Wall, feeling my way, for an endless time, then stopping and thinking, "I may be going farther and

farther from the Breach every step." So I started slowly back the way I had come, but stopped, stricken. What if the Breach had been only inches away from my groping hand when I had turned back? I melted into misery again. Finally I lifted my head to push back the hair that had been sucking into my mouth at each frightened in-breath, and noticed far, far up in the darkness, tiny lights had come on. Maybe the power was coming back on! Then I'd be able to see and to find the flowing water— Of course! The flowing water. I hadn't passed the Breach the other way because I hadn't crossed any flowing water. The comfort was brief—no flowing water that I remembered. I was lost, but utterly.

Then I noticed the light brightening all around me so that I could see the laciness of the plant tops and a light—a big light, but strangely soft. And it was a cool light, as light should be. At least it wasn't a burning light like the one that had stiffened the skin on my arms and legs. I watched the light and finally saw that it was moving! Slowly—oh, so slowly! But up and up, higher and higher! How odd! Then air began to move past me and around me. All the plants began to move and make a small flowing kind of sound—or maybe the flowing sound made them move. But blackness swept above me and rolling darkness covered up the light. I winced back against the Wall and began creeping again.

The bright blare of light jabbed the darkness and the heavy shaking sound followed. Large drops of water hit me hard enough to hurt, and I heard them splattering on the Wall above me. Then, with a roar, all the terrifying noise and movement and discomfort rushed down on me again. All I could think to do was to keep creeping along the Wall so that I wouldn't lose it again. So I crept, cold and wet, my hair wrapped across my face so tightly that I stopped even trying to pull it free.

And I crept and crept, wondering if other legless things were creeping around me unseen. I pushed myself between the plants and the Wall, knowing only—don't lose the Wall—don't lose the Wall. Then the tumult softened and died. I crouched against the Wall and clawed my hair back from my face. I tasted the earth from my hands as they brushed my mouth. And something deep inside me suddenly giggled and poked me inside my ribs and said, "Is this more-so! Is this ever more-so!"

"More-so!" I sobbed. "More-so!" I laughed and clenched

both my fists against my mouth to keep the laughter from turning into screams.

Then sound began again. Oh, no! Not that tumult—not—I jerked to my knees. Listen! Oh, listen!

Where is the green
Where is the growing?
Out!

The Strumthing! The Strumthing! I stumbled toward the sound, even in my wild astonishment trailing one hand along the Wall.

"Stem!" I shouted—inside—but it came out a jolt and a gasp. Again I shrieked, "Stem!" and the noise came out. I scuttled even faster along the Wall, and the sound of the Strumthing came stronger. "Corolla! Corolla!" My name echoed and lost itself in the wet darkness.

"Stem! Stem!" I shrieked again and, stumbling forward, was seized and held. I jerked away but couldn't jerk free!

"Cool it, my lovely!" The panting words swept across my cheek.

"Gillyun!" All my insides jerked with shock. "But you're dead! You're dead!"

"I will be if we don't get back In!" He dragged me off into the darkness.

"But the Strumthing!" I protested. "I heard the Strumthing!"

"You better go on hearing it until we make it back to the Breach." Gillyun jerked me loose from a plant that tangled my feet. "If it stops, that guy's going to get dead, but for sure—"

My mind stopped thinking. It was too much to take in. I let myself be jerked along, skimming the Wall every inch of the way, the quick backslap of the plants catching and lashing me as though deliberately punishing me. The water deluged down on me. The quick light and the crackling rumbles shook the soul of me. Then my feet splashed in water and ahead I could see a faint glow against the Wall. The Thrumthing was only thrumming now. There was no pattern. I was pulled and pushed and dragged over those miles and miles of the last few yards. I must have tripped out then because my next consciousness was of the cupped whiteness bobbing across my folded arm and against my nose. I was lying across my Spill. "I'll ruin it," I thought dully. "I'll ruin it." And turned painfully. Then I shot upright. "Gillyun! Stem!" I gasped. Gillyun was half out of the Breach, pulling something. I scrambled over and grabbed his shoulder. "Gillyun—Stem!"

Gillyun looked back over his shoulder. His eyes were closed

and his face was frozen in a mask of frightened concentration. "Help!" he gasped. "Help me get him in. He's out. He's Out! I can't take much—" His hands loosened from whatever they held, and he slid sideways away from the Breach. I crowded past him and reached out. I groped and found Stem. I grabbed hold of whatever I could and, with an effort that seemed to rip down one thigh and up my ribs, I dragged.

Stem's arm came. Then his shoulder and head. I had his other arm and shoulder in sight when Gillyun reappeared. He took one arm and I the other and we got Stem back in. At first I thought something had happened to his face, but Gillyun clawed at it and pulled the blindfold off Stem's eyes. It left an odd-looking clean white strip across his face. We crouched, panting, watching for living signs.

I heard myself whimper when Stem's chest rose convulsively and fell again and his face began to twist. I reached out and, with the flat of my hand, tried to wipe the wet earth off his mouth, but I only spread it more. Gillyun shoved past me and over the body of Stem. Astonished, I watched him crawl Out again. He was back almost immediately, limping on one hand and his knees, dragging Stem's Thrumthing along with the other hand. He caught my astonished look and his eyes shifted.

"He values it," he muttered. "Water might spoil it."

It was not to be believed—the rosy light all around, unflickering—the warmth—the softness—the—the In-ness! We were in Gillyun's Roost, which, I noticed with a twinge of relief, was only part of an abandoned Service room. He had taken out the partition and made one room of it and fixed up one corner of it. We were clean, dry, fed and exhausted. How long we'd been there I couldn't tell. I sat up painfully, trying to wince away from my thigh and ribs.

We had collapsed to the floor after shuddering under the shower, clothes and all, to cleanse us of Out. The warm, drying blast afterwards had melted us down to the floor to warm sleep. Gillyun's eyes were open at my first movement. Stem slept heavily between us, one of his hands tight on the Strumthing.

I crept around to Gillyun, dragging my aching side with me. I put my hand on his. "Tell me," I whispered.

His hand turned beneath mine and his fingers closed gently over mine. "No need to whisper," he said in his familiar Gillyun voice. "He'll sleep. Too

deep to hear anything except maybe his Strumthing!"

"You fell," I said, my throat catching at the memory.

"I fell," he said. "That white thing I grabbed out of the Spill jabbed me—"

"There was a small beast in it," I said. "Maybe it bit you."

"Whatever it was, it threw me off balance and I fell—"

"I thought you were dead," I said. My lips shook. I steadied them, folding them in between my teeth. "I thought you'd fallen clear to first level. I thought they'd say I altered the population. I thought—"

"Shouldn't think," said Gillyun. "See what it leads to? Especially if you really don't think at all. Me fall? To first level? And you a Green! What do you suppose happened to Safety after you left training?"

"Safety?" My jaw dropped and I reddened painfully. The Safety that stretched along the walls under every catwalk at all levels. "Oh," I said very small.

"Didn't have time to fall right, so I half tripped out and got tangled up in the thing. By the time I got back on duty, you were gone. Naturally, because your shift was over. After shift, I went to Dorm and then the Square. Stem came roaring up, asking for you. You hadn't come off shift. How'd he know? Only that you hadn't met him. So? Maybe you had other strings to strum! But this morning Sepal said you hadn't dormed. When you didn't come by shift time, I took yours and mine—"

"Gillyun!" My fingers closed over his in my astonishment.

"Well, foul footsteps pollution!" he roared softly, his eyes carefully on Stem. "If duty officer found you missing, he'd alert Green headquarters and—and they'd find the Breach and the Spill, and large questions would be put—like why hadn't I reported the Breach—and the Spill—and—" His eyes slid to me, then away. "—And you, long since. So after my shift, I got Stem and we stormed the problem together until we came up with the idea that probably a fool kid like you—Logikids! Too smart's dumb!—went Out!

"Stem insisted on coming up with me, but he was literally so limp-legged by the time we got to the Spill that he couldn't walk. So, son of a gun—the guy crawled! But he couldn't force himself up to the Breach until he made me blindfold him. Then we—we went—Out!"

The recollection was a painful gulp, and his voice shook as he went on. "The—noise was so much—and no lights—and the air pushing us! We called. We yelled. Our little sound just—wasn't—in all that racket—Is it always like that? Is that Out?" he asked.

"No, I said, remembering—with pleasure!—and with a small something in the back of my mind that was beginning to be insistent—"Some of it is good—and beautiful—but it changes. Fast. And then sometimes there are legless things—"

"Legless!" He was startled. "Well, Stem had tripped out a couple of times already. The last time, his face was in the water. So I shoved him up against the Wall, and when he came back, he said maybe you'd be able to hear the Thrumthing. It had a different sound from all the air and water sounds. What's that sudden light that kept jabbing?"

"I don't know," I said. "Maybe a short circuit? And it made the noise—"

"*Light* making noise?" Gillyun's side-glance mocked me. "So he played the Thrumthing and after a while we heard you. And I went way, *way* Out—" His fingers were tight around mine. "And I found you and he kept strumming, and I'll betcha he had tripped out again before we got back, but even so, he didn't stop!"

Gillyun lay back and looked around him. "How warm," he whispered. "How warm and complete to be In." We lay in relaxed silence and then he giggled. I moved my eyes to look at him.

"The recycler," he explained. "What will it do with all that earth the shower washed down? Bet it's not programmed to process earth!"

"Then we're not safe, even now," I said, half fearful, half—not, still waiting on that nudge in my mind.

"Never safe," agreed Gillyun. "But, you know, even that's more-so! A *big* more-so!"

And it is—real more-so! And Mine! Because I began it. Began—I darkened my eyes with my bent arm. Now the nudging was surfacing in my mind. As I had been trained, I put forth no effort, but let the nudging become a flowing.

Things equal to the same thing are equal to each other. —In the Beginning, God. Time began at the Birth—The Baby and God both equal to Beginning—equal to each other—

But then, if *I* began—!

I felt my lips tighten as they stretched to a small smile. Well—no. No equality—only as the water spoke blue to the above that had first let its blue speak to the water.

But Out once was good! And I think I felt and saw bits of the good while I was out. This feeling, like the question-ended, unresolved melody of the Strumthing, needs an answer.

So, even if it's cold and hard and unfinished and un-In, I want Out—again. Soon.

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