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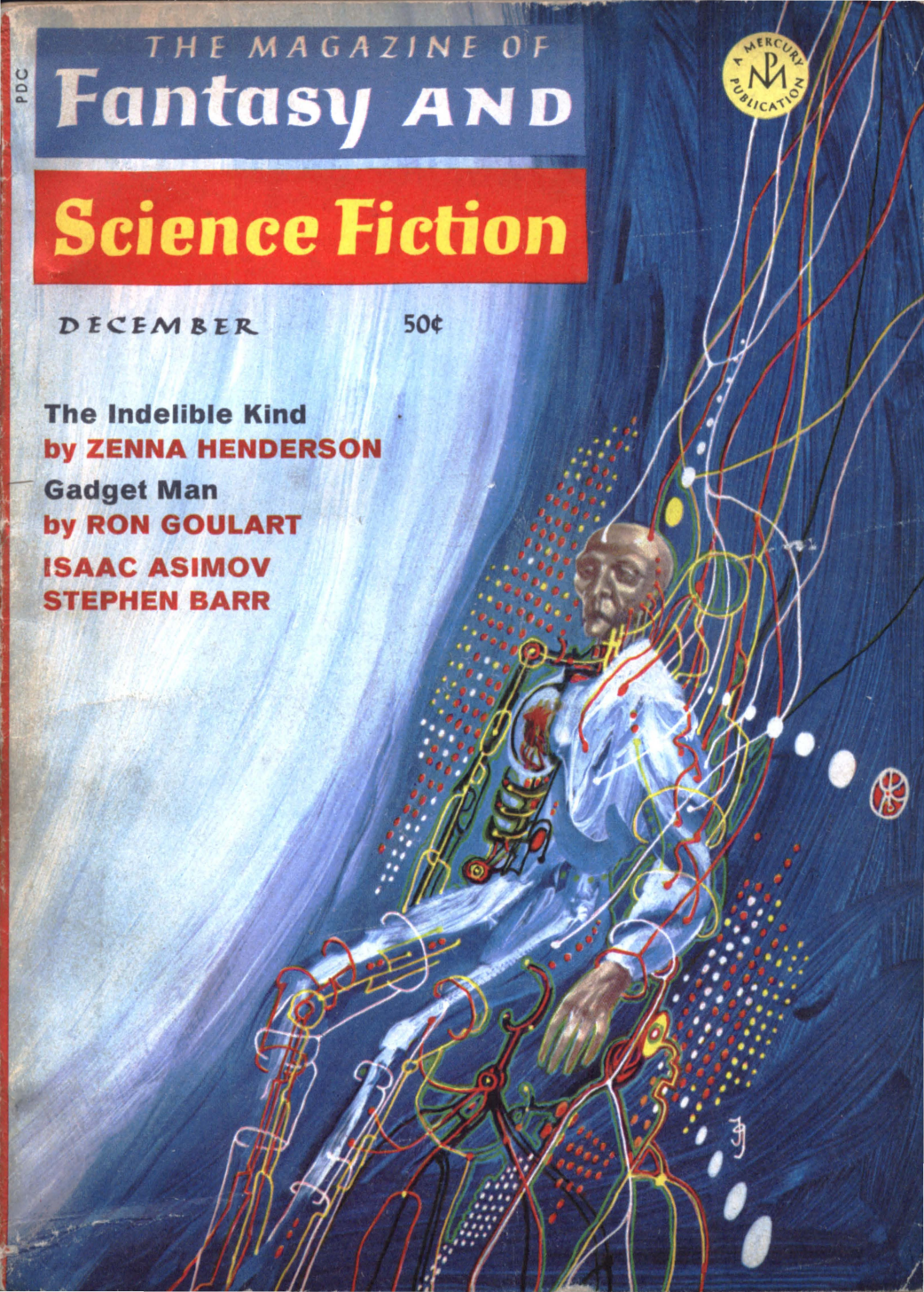

Fantasy and Science Fiction

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Bruce McAllister spent some time studying art before his decision to commit himself to writing (recommit would be better; his first story was published six years ago, when he was sixteen). He wrote to us recently, noting one similarity between painting and writing: "The artist (writer) has gone through many hours of mundane, unmysterious labor over his work, and he knows the finiteness of much of his work; the viewer sees not the brushstrokes of minute-by-minute labor, but the illusions of infinite worlds." We would add that the effectiveness of a work depends on the quality of each brushstroke—or sentence; that there is nothing but excellence in the components of this story; and that they form an unusually rewarding experience.

PRIME-TIME TEASER

by Bruce McAllister

THREE YEARS AGO IT HAD seemed strange to Edna Waverly Paulson that the "last man on earth" should be a woman; now the spark of irony was dead, and she was used to it. More than that, in three years she had become, through her driving effort, not the last human on earth at all: she was a thousand people now, with no time for feelings of aloneness. She had work to do, since being a thousand people involved a constant labor of mind and body.

The evidence of a thousand people's existence was everywhere. Four rooms in the yellow-brick house she had finally chosen for her home were packed with her work: puppets and a puppet stage, vases, figurines, landscapes, seascapes, nude paintings done of herself with the aid of a mirror, short stories, novels, "commercial" scripts, children's books, fifty-seven poems, one television script, all pieces she had created herself; blueprints for dream houses, fashion designs in water colors and ink, plans for elementary schools, high schools and colleges *cum* curricula, all her own ideas and development; a radio receiver, a television set, a clock, ones she had made from the components of receivers, sets and clocks she had carefully disassembled. The rooms

were not all. Behind the yellow-brick house, chosen because of its deep well, stretched the largest vegetable and flower garden in the world. Edna knew that was so. Whatever she did, she did it best in the world; and she did everything. A few minutes after Edna-painter cleaned her brushes and emptied the jelly glass of dirty turpentine, Edna-florist stepped out the back door and cut fresh "mums", great leonine white ones, and left them on the back porch with a bill scribbled in red ball-point ink on a piece of yellow scratch paper. Edna-housekeeper picked up the flowers immediately and placed them in water in an aquamarine vase Edna-potter had molded two years before.

The pretense never blinded Edna, and she was proud of that. She knew that her husband wouldn't return at night to see her "mums", or watch her puppet show, or sit during prime-time at her TV set. It didn't really matter now. The job was to keep things rolling. Edna-gardner weeded the flowers of crab grass and thistly intruders; Edna-florist cut the flowers and delivered them; Edna-housekeeper arranged them in vases produced by the score by Edna-potter; Edna-painter depicted the flowers with oils or water colors; Edna-collector bought the painting; Edna-interior-decorator hung it on an off-white living room wall, hitting her finger with the hammer as she tried to drive the fang-sized nail for the picture hanger; Edna-doctor anointed the bruise with bacimycin, wrapping it with gauze and adhesive tape. The world was Amazonia, Edna knew, with no place for men, but that never meant she forgot Joe or those two best years of her life when her husband was mayor of San Diego.

What had happened to the world, Edna didn't know. She was still guessing, though there was some proof for her suspicions. Before her visit to the ocean floor in the bathysphere *Monaco,* there had been articles in the *Union* about the "Big Bug," a mutated virus that could rip through the nerve-ganglia of higher animals and kill in seconds. Were the virus to be set loose on the world, the articles had explained, the total time for the extinction of all vertebrates would be something like seventy-two hours, and all of the virus itself would be dead after seventy-four hours. That had seemed to Edna an awfully short time for such massive death, and even now she didn't know if the "Big Bug" had been the cause of her present aloneness. Scientists of the three great powers had allegedly developed large stockpiles of the virus, so it did seem the only answer: no animal larger than an insect was still alive. When Edna had first walked the streets of downtown San Diego

after her return to land, the corpses of men, women, children, dogs and cats were littering everything, slouched in corners, on sidewalks, in cars and gutters. Much less frequent had been the sight of dead birds. Even now she still could only wonder if any fish had survived—whales, porpoises, seals and fish. During her first year of solitude she had tried to find out, by watching the water from the piers or from the white Coast Guard station at the end of Point Loma. Never any "opal-eyes" darting among the pilings, nor "boils" of bonito, nor the glassy backs of whales and the serpentine formations of seals farther out at sea. She hadn't been to the water in months, and she promised herself daily that Edna-fisherman would soon go to the piers and drop or cast her first line, baited with worms, cheese or bread. Any kind of fish, after the monotony of canned meat, would be well received—if fish still existed out there. She would have to read up on fishing first, she knew, as she had read up on architecture, ceramics, figure painting, flower and vegetable health, and a thousand other subjects for the thousand other women living in Edna's house. Eventually she would even build a car and a house. There was time.

And she should, she realized enthusiastically, build a boat some time. In a way the sea still scared her—in the same ambivalent way it had frightened her since childhood—but the fear was waning. Perhaps, she had concluded often in the three years, she feared the sea because its empty surface accentuated her aloneness. But to have a complete world you had to have an Edna-boat-builder, and an Edna-lobster-fisherman, and an Edna-Coast Guard official.

The last boat Edna had ridden in was a five-horsepower outboard motorboat towed behind the *Laguna.* The large white "tuna clipper" style vessel called the *Laguna* was the mother ship for the bathysphere *Monaco,* and it had carried the *Monaco,* four photographers, fifteen crew members, a scuba diver and Edna herself the day she descended to the ocean floor between San Diego Bay and the distant Coronado Islands. That descent into deep water, Edna knew, had saved her life; the "Bug"-less independent air supply of the bathysphere had been her savior. She remembered only faintly the day the world had changed so much; her work in these days gave her little time to reminisce and strengthen the memory of the last day she'd seen another living human.

Edna Waverly Paulson made her voyage in the bathysphere with Randy Askolph, a curly-haired diver at the Navy Electronics Lab on Point Loma. Edna's husband Joe, acclaimed by the

Union as "the best mayor of San Diego since 1945," had expressed his disapproval of her diving plans in his usual quiet manner, but Edna had persisted. She knew that a mayor's wife should be knowledgeable and experienced, especially in connection with her husband's own city. The bathyscaphe *Trieste*—a diving device much like a submarine—had just arrived in San Diego with the famous moviemaker Jacques Cousteau and was dry-docked at the Lab's waterfront, while scientists from all over attended a convention where the renowned Frenchman was guest speaker. Edna had seen photographs of the bathyscaphe twice before—a giant yellow bowling ball with two short sawed-off "wings"—and she wanted to see the bottom of the ocean. Not necessarily the real "deeps" of the Pacific Ocean, but any ocean bottom as long as she was in the bathyscaphe.

"As the mayor's wife," she told Joe more than once, "I should be involved with important events—not just social events, but scientific ones, too. The Lab is important in San Diego, and Cousteau is an international figure. I should show an interest in this thing, so I'd very much like to take a dive in the *Trieste*." Joe groaned more than once, but still made fifteen or twenty phone calls in an attempt to arrange a dive for his wife. The *Trieste* was both unavailable at this time and much too costly to operate for a civilian dive like the one Edna was proposing; or so the proper authorities responded.

What Edna ended with was a bathysphere—a diving device dependent for its movement on a cable from the mother ship. Not as free as the *Trieste*, but Edna was assured that her bathysphere was the most modern—it had its own air supply from spacious tanks, and when fully stocked, it could feed and water two people for two weeks, all precautions in case the cable snapped. But the cables on bathyspheres never snapped. They were even safer than bathyscaphes.

Edna and "chauffeur" Askolph sat quietly in the *Monaco* as it was lowered smoothly into the water. She had wanted Joe to be on the *Laguna* during the dive, but a meeting with officials of the Mexican government had prevented that. At least, Edna thought to herself, there were five reporters waiting for her return to the surface.

If claustrophobic tendencies were anywhere in her, Edna went on thinking as the bathysphere sank deeper, now was the time for them to crop up. The lights, dials and metal surfaces of the *Monaco's* interior pressed in on her mind like teeth, but she held back her complaints in the presence of Askolph, who seemed to be used to this sort of thing. Soon both of

them were looking through the thick glass window at the ocean bottom with its seaweed lace and flashes of fish. After what seemed only a few minutes, the *Monaco* began its ascent.

Suddenly all motion ceased, and the unexpected waiting began. Edna and the diver sat and sat in the bathysphere, twelve hours turning to twenty-four, and eventually a day turning to two, then to three. The diver tried everything. Communications were dead, and when Askolph finally admitted that something was very wrong, that they were trapped, Edna gave up struggling against the fact, and accepted the fear that came with the fact. There was enough drinking water, and most importantly, the diver informed her that there were eighty-eight hours of air in the bathysphere's air supply. But someone had neglected to stock the food compartments. They had to get the *Monaco* out of dry-dock so quickly, Askolph tried to explain. "So much confusion," he said. With feelings of foolishness about a diving expedition that she had forced onto everyone—feelings honed by the cramped quarters and the web of fear in her chest—Edna began crying, and the diver tried a long, frantic apology for their predicament. Askolph's words failed even more miserably when she continued her crying from the pain of hunger. Eventually the diver gave up in his attempt at consolation, and silence reigned in the bathysphere, unless broken by Edna's sobs. When only two hours' air was left, the diver made his decision, and even as Edna sat in her yellow-brick house three years later, she thought of the brave diver with a feeling not unlike tears gathering behind her eyes.

The diver, without scuba gear or even a wet-suit, slipped into the exit chamber of the *Monaco,* sealed the door between Edna and himself, and left the bathysphere with just the air in his lungs to get him to the surface. He did make it to the *Laguna,* and even managed to reactivate the controls that would pull the *Monaco* to the surface.

After Edna managed to open the upper hatch on the bathysphere and after she reached the relative security of the rolling deck of the *Laguna,* she found the diver dead, his left arm resting in the doorway that led to the decompression chamber. She knew then, without having to read up on the subject in the library, that the diver had died from the "bends," in terrible agony, with "bubbles in the blood," caused by surfacing too quickly.

Ignoring her forty-five years of age, Edna scrambled quickly into the little motorboat roped to the stern of the *Laguna,* and after twenty-three tries managed to start the engine. The *Laguna's* crew

and the photographers were all dead, but the sky looked so blue and the city of San Diego in the grey distance looked so normal that Edna's ride to shore in the motorboat was free of suspicions about the "Big Bug." Even the first sight of downtown streets littered with soon-to-be-rotting flesh brought no questions to her mind, only a fiery retching to her stomach and throat, and the fact of hunger did not occur to her until two hours later when she fainted on her frontsteps, unaware that twenty-eight feet from her was the body of her husband.

Even when questions eventually bloomed in her mind, she ignored many of them. She never did set eyes upon her two daughters, who were dead and deteriorating, she knew, somewhere near the University of California in Westwood.

Edna-painter set down her No. 3 pencil and moved her eyes from the canvas on the easel to the mirror where the age-lines of her face were echoed back into her eyes. The sketch for the oil painting seemed finished now: the thinness of her lips, the almond-shapes of her eyes, the highness of her forehead, the waviness of her short peroxided hair, all were sufficiently represented in the sketch. Now the soft purity of the white gesso and the wisps of pencil lines waited to be fed the next time by brushes full of London oil paints.

Right now Edna-psychologist was to begin her daily work, and she, as she readily admitted to herself, was really only at a high school or first-year college level of psych-concepts competency. She did remember some fuzzy concepts from a one-semester college course, but she knew that an extensive reading of Freud, Jung, Rogers, Mazlow, and half a dozen other fundamental writers was in order right away.

Only one day of study, of Freud, behind her, and already something interesting had occurred. She had begun the day before with a thin paperback called *The Psychology of Freud,* and the chapters on dreams and sexuality had made her think of the one TV script Edna-writer had created the year before. The idea for the script had come from a dream, a very moving dream that had awakened her with the surprise of salty wetness in her eyes.

Why those chapters had stimulated memory of the dream, Edna-psychologist didn't yet know, but she promised herself that she would have the answer before the working week was over. All she knew was that she had read the chapters, and a feeling had struck her darkly; that same feeling had hooked the script from the past and pleaded that she reread it immediately. She postponed the reading until the next day, so that Edna-gardner, Edna-painter and

Edna-housekeeper could do their work too; but the dark syrupy feeling went on to nag her for twenty-four hours, offering the first respite when she put down her pencil and rose from her painting stool to search for the TV script.

In the first storage room, once a young boy's room with its cowboy-and-indian wallpaper but now just a dusty room where cardboard boxes full of Edna-writer's work were strewn like the forgotten blocks of some giant infant, Edna-psychologist found the lone TV script—a piece of writing composed by Edna-writer after long studies of how-to-TV-format articles in *Writer's Digest* at the public library. Edna-psychologist began reading the script eagerly, fingering the pages nervously with paint- and earth-stained hands, which she managed to ignore when she was Edna-psychologist or Edna-housekeeper.

The Turtle
By
Edna Waverly Paulson

First note to self: Climatic conditions in the projected world necessitate the personification and deification of inanimate objects, and the humanization of a primitive aquatic reptile.
Second note to self: The term "beat" here is used to mean a brief unit of time, as a pause in the duration of some perception.

ESTABLISHING SHOT
OF OCEAN

Breaking the slight roll of the Ocean, Who commands the horizon, are the top twenty feet of a red-brick BUILDING, one side of Whom faces the fury of the acromegalic afternoon SUN—a Sun recently bloated by His own impatient metabolism. (Further note: the world's icecaps have melted, but that has made the Ocean neither cooler nor less salty for the heroine.) Since the submerged land under the Building has settled radically, the Building leans heavily away from the Sun, creating a trim brick beach facing the Sun. CAMERA MOVES IN on brick beach until in the middle of the foreground we see the glinting eye, surrounded by sea-green wrinkles, of a GASPING SEA TURTLE, who has halfway emerged from the Water to rest her exhausted foreflippers on the beach, on the nearest dry bricks. CAMERA PULLS BACK to include: (1) Turtle rocking gently in the Waves, and (2) Turtle's neck bobbing, parallel to the slope of the brick beach.
Camera changes to SEA TURTLE POINT OF VIEW, what she sees as shot through her eyes as the brick beach begins to heat-shimmer more pleasantly to her pill-size eyes. For TEN BEATS we hear a crescendo of SWEET MUSIC: partly whimsical piccolo, triangle and trumpet; partly the secure, melodic sounds of bubbles, like a scuba diver

makes; and partly the distant rhythm of waves on a sandy shore. OVER the shimmering of the bricks, we HEAR the music fade into the VOICE of the brick BUILDING:

BUILDING
(a bit alienated, but not at all cool; spoken in faint gasps not unlike the Turtle's)
I'm not your island. Breathe. But you are welcome here. Breathe. Push up farther and breathe air. Breathe.

Shot of TURTLE and BUILDING. Turtle lifts her drying flippers slowly, one after the other in a jerky swimming motion, her scaly limbs glittering like religio-medieval gold mosaics, as she pulls herself up the bricks until she is halfway on a platonic BRONZE PLAQUE that reads: "Sepana Beach Apartments." After ONE BEAT, CAMERA ZOOMS IN and stays on Turtle's pill-size eye, while with this sight we HEAR the VOICE of the BUILDING:

BUILDING
(still in faint gasps, which now seem to be mocking)
The metal is beating, burning your legs. Breathe. Move over to the cooler non-slip brick again. Breathe.

As CAMERA PULLS BACK SLOWLY, we see Turtle press down with right foreflipper and turn nearly 180 degrees, off the bronze onto the brick, where she immediately nuzzles her ancient snout into the hard brick and begins caressing the brick with a pushing and parting motion of her forelimbs, more energetically each time, until we realize that she believes she is digging a hole for her eggs, who must be buried on the beach. CAMERA ZOOMS IN and stays on the wrinkled SUNBLISTERS that have been added to her neck at each surfacing since the solar inflation, and OVER this sight we HEAR the VOICE of the BUILDING:

BUILDING
Stay. Breathe. Pull your head in. Breathe.

TURTLE
I am breathing, but the new sun is beating, burning my legs and burning my neck. I breathe. But my shell is hot. I am breathing easily again. I should leave this heat now, but I cannot . . .

CAMERA PULLS BACK RAPIDLY, stays for SEVERAL BEATS on Turtle, then we shoot DOWN SLOPE OF BRICK BUILDING, where a dark blur becomes the bobbing Turtle face inching toward the camera. OVER the fish-like opening and closing of her beak, we HEAR her VOICE:

TURTLE
(her hoarse words ending in gasps, barely intelligible)

Under the heat of my shell . . .
(BEAT: a pause)
I am living too much to leave you.
(BEAT)
In the hold of me there is something waiting to see the sun.

CAMERA ZOOMS DOWN the red bricks to focus on Turtle's nasal slits, and OVER this sight we HEAR the VOICE of the BUILDING:

BUILDING
(still in mocking gasps, sounding even more like the Turtle's)
Stay here for that something you have. Breathe. I want that something you have. Breathe.

TURTLE
I breathe. But the beating, burning on my legs and shell is greater than that something now. I breathe. But the water sounding behind me is cool. I breathe. I must go to the cool now.

CAMERA PULLS BACK to previous shot DOWN SLOPE OF BRICK BUILDING. Turtle, staring ahead like an old woman with a stiff neck, puts her left foreflipper forward, pulls down, and with a loud RASPING SOUND turns parallel to the Water's edge. With another put, pull and RASPING, she faces the Ocean and presents the CAMERA with VIEW OF POSTERIOR, as she rocks down the bricks toward the coolness. On reaching the Water, her head bobs down, disappears, and we HEAR a SIGH which is more like a gasping sound as she exhales and inhales for the last time before her plunge. CAMERA ZOOMS IN on the back of her shell, to go OUT OF FOCUS for FOUR BEATS and COME BACK INTO FOCUS, this time in the TURTLE POINT OF VIEW, what she sees as shot through her eyes: a SUBMARINE VIEW OF SUNLIGHT penetrating the green Water. OVER this point of view we HEAR a BUBBLING, and OVER the bubbling we HEAR:

BUILDING
(nasalized in its sudden remoteness, and its voice no longer mocks)
Stay! Breathe. Stay. That something within you will die within you and rot deep within you. Breathe. Stay!

TURTLE
You won't open to me. I try you and you keep your cradle closed. Open to me for that something within my hold.

BUILDING
I am closed, yes. Breathe. But continue to try me, perhaps I'll open, perhaps your try will open me. Breathe. There is no cradle but I.

TURTLE
I must go to the cool now . . .

BUILDING
Stay and breathe!

The BUBBLING SOUND waxes and BARELY OVER this we HEAR:

TURTLE
I am sorry . . .
(BEAT: a pause)
But I will come back.
(ONE BEAT: we HEAR a "lub" SOUND)
Under the heat of my shell . . .
(ONE BEAT: we HEAR a "dub" SOUND)
In the hold of me . . .
(TWO BEATS: we HEAR "LUB-DUB"
Something waits to see the sun.
(MANY BEATS: we HEAR "LUB-DUB, LUB-DUB, LUB-DUB, LUB-DUB, LUB-DUB," which fades out as Water grows darker)
DISSOLVE: finis

Edna - psychologist finished reading, but clenched the script tightly, her hands in her lap. Staring at nothing, in the direction of the boxes, she felt a crescendoing in her chest. She tried to think of *nothing,* of black obsidian voids, cottony colorless rivers, black funnels, but the vision of the turtle came back again and again, and specific words of understanding from the chapters of Freud began to nag her mind's eye: "dreams," "wish-fulfillment," "womb," "phallic symbols" . . .

Edna-writer reread the script quickly, then reread it again and again, holding out against the surge in her chest. The reading became her only weapon, and she reread, she reread. Suddenly the tide within her broke past the words of her reading, and screamed the truth of the turtle at her. Understanding brought moisture to her eyes, and the moisture brought a fusion of Edna-writer and Edna-psychologist. Soon all of the women meshed into one, and she was alone. She thought once deeply of her children, and of the waiting thing within her, then let her head fall forward onto her breast. With her eyes blurred from their own salt water—the first real streams in three years—she looked at her hands and saw them as scaly flippers. Her head began bobbing gently as she indulged the moisture; the wrinkled skin on the back of her neck turned the same color red as her eyes, and the sounds in her throat reached her own ears as the reprimanding but soothing rhythm of Ocean Waves, beckoning, beckoning strongly to a beach fifteen minutes away. ◄


SOON ON THIS SITE
THE
J.B. ROTHMAN
ELEMENTARY
SCHOOL
CONSTRUCTED
FOR THE CITY
BY THE
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COMPANY
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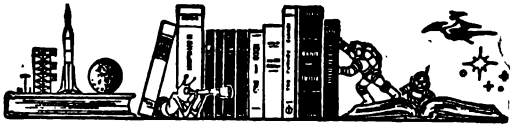
BOOKS



IN THE FIELD OF SCIENCE FICTION or fantasy, morality—when it enters a book at all—is almost always either thoughtlessly liberal (you can't judge other cultures) or thoughtlessly illiberal (strong men must rule) or just plain thoughtless (killing people is bad). James Blish has taken thought and has written a novel called BLACK EASTER (Doubleday, $3.95). This book is about nothing less than the problem of Evil, and it is brilliant. Says Yeats:* "If God is good he is not God/If God is God he is not good," a dilemma for which there have been many solutions. Blish chooses a heretical solution, the Manichean, and pushes it to its logical outcome. If God is omnipotent and benevolent, why does Evil exist? And if God is not omnipotent, if Evil has any kind of positive existence, what may not happen? To go any further would give away part of the book that a reader ought to have to himself; plot, in this book, is the very embodiment of the theme and not merely a diversionary tactic. It is as beautifully worked, as thorough and as complete a cul-de-sac as I have seen in a long time. Blish's gift for relentless, technical detail is at its best here—more than that, his gift for portraying people who are passionately fond of logic, knowledge, and technical detail. His equation of black magic with science is no accident; it was Levi-Strauss (I believe) who called magic a primitive form of science. And the motives here are the same. In an Author's Note, the author states that "the vast majority" of "novels, poems and plays about magic and witchcraft . . . classify without exception as either romantic or playful . . . I have never seen one which dealt with what real sorcery actually had to be like if it existed." BLACK EASTER is not in the least romantic, nor is it, God forbid, playful; in a world of such pedantic religion and legalistic metaphysics, it is indeed better to curse God and die.

* *So I think, but can't find it.*

This horrifying novel may sound too special, as I have described it, but the nerve it hits is in all of us. Westerners are all unconscious Manicheans; perhaps most people everywhere are. One has only to remember the common reaction to Eichmann's trial ("a fiend in human form" as if the soul and the crimes must somehow match *in essence*), or the usual reactions of people to political opponents, to see that most of us believe—somewhere, somehow—that Evil and Good both have a substantive being apart from the historically accidental, particular acts that people do. Good and Evil are conceived as nouns, not adjectives.

What one might call the orthodox Problem of Evil (how can an omnipotent God permit it?) is a special case of a more general Problem of Evil that exists in a widespread secular form, particularly in this country. It is a conception of Good and Evil that severely handicaps Good, and is perfectly exemplified by the commonplace, "Good guys finish last." Good is here conceived as restraint, inaction, *adhering to the rules* by not allowing oneself to do X, Y or Z. Evil is the freedom to break the rules and do as one pleases. BLACK EASTER embodies this idea also. The "black" magician of the book is free (within the limits of his craft) to commit whatever atrocities he wishes; the "white" magician is constrained not to meddle, *not even to pray for the failure of the other's schemes.* A man not hampered by Good would have shot the "black" magician in the back, and a good thing, too. For the results of a self-limiting Good confronting an Evil which does not limit itself would be altogether horrible without the intervention of a benevolent Deity—and that is where BLACK EASTER turns on the reader and bites him in the jugular, so to speak. It's the theme of *High Noon,* which got out of its dilemma by changing the terms of the argument at the last moment. Blish does not let you off so easily.

The book is dedicated to the memory of C. S. Lewis, which I find odd. Not only does it knock *That Hideous Strength* into a cocked hat; Lewis is more than a bit of a Manichean himself, and BLACK EASTER, if not a *reductio ad absurdum* of the Manichean view, is at least a *reductio ad nauseam.* To put it another way, to C. S. Lewis the question, "What does it feel like to be a demon?" is a conceivable question, while to Blish it is not. BLACK EASTER emphasizes the hideous boredom, the nothingness, the inhumanness of evil again and again. These are not qualities that can reside in a human breast, and Blish does not try for a subjective view of his demons. They remain, like avalanches or firestorms, out-

side the possibility of human comprehension, though not human horror.

The Problem of Evil—how to combat it if one isn't allowed its freedom—is unanswerable within those terms. Eastern cosmologies which do not feature a Creation separate from the Creator do not have the religious problem; and any philosophy which subordinates the struggle of Good against Evil to other matters does not encounter the secular version. If what is important in life is to understand and share suffering (Buddhism, in part) or to become part of the transcendental (Taoism in its original form), then Good vs. Evil simply does not matter. Indeed, Lao Tzu is supposed to have admonished Confucius that "All this talk of goodness and duty . . . unnerves and irritates the hearer; nothing, indeed, could be more destructive of his inner tranquillity."* When what matters is one's inner "unmixedness," goodness and duty are irrelevant.

And indeed, the only solution for the problem of evil is to get outside the terms of the problem. This is in fact what is happening. In Shaw's MISALLIANCE, one character says to another, who demands "justice":

"A modest sort of demand, isn't it? Nobody ever had it since the world began . . . Well, you've come to the wrong shop for it: you'll get no justice here: we don't keep it. Human nature is what we stock."

When people begin talking this way, when one hears the word "values" more often than "morals," when books are published with titles like LIFE AGAINST DEATH it is a sign that Good and Evil are being redefined. This is happening both in the churches and in secular life. Interested readers may try the early chapters of Sartre's SAINT GENET for a radical critique of traditional ideas about Evil and a radical redefinition of Evil.

BLACK EASTER is in itself a sign of this change. It is not only about an Armageddon; it is also part of one. There is no room for me to mention the superb things in this bare, powerful, immensely suggestive book. I will adduce only a few: the "white" magician's ironically innocent worryings about the very problems the book embodies; a good magician, "Father Anselm, a brusque engineer type who specialized in unclouding the minds of politicians"; the extraordinarily un-angelic Celestial Princes, one of whom vanishes with a roar; and best of all, Satan's "petulant bass voice, at once deep and mannered, like a homosexual actor's."

It's a stunning book.

**Waley, Arthur, "Three Ways of Thought in Ancient China," Doubleday Anchor Books, 1956, p. 14*

"Beyond Good and Evil" might be the subtitle of Michael Moorcock's THE FINAL PROGRAMME (Avon, 60¢), another book about Armageddon, but one that has abandoned all the usual concerns for something that is beautiful and strangely moving but very hard to describe. Moorcock dedicates his book to (among others) "the Beatles, who are pointing the way through," and the novel can best be pictured by analogy with their music. The book is not "savagely satirical," as the blurb says, or "horribly funny." Rather it shows, like Beatles music, the use of pastiche as an artistic principle. All the shopworn clichés are here: monster computers, mad scientists, incest in the mode of Byron *and* Poe, people who live on pills and candy, mod clothes, expensive cars, James Bond weapons, hermaphroditism, crowd-mindlessness; you name it, the book's got it. But these things are not the subject of the book. They parade through it like blank-faced mannequins in a fashion show. They are simple, flat, brightly colored objects that Moorcock is using to make patterns about Something Else, like the Beatles song that consists almost entirely of the words, "You say goodbye/ And I say hello." There is the same avoidance of dynamics: in one case always using the voice mezzo-forte, in the other pacing each scene so that suspense or development is entirely eliminated. There is the same deliberate flatness of tone, the same balancing just this side of satire, the same absence of emotional expressiveness that becomes—somehow—a positive force.

If I tell you that fully one-third of the novel is given over to describing people's clothes, you will laugh at me; yet it's true. And if I say that the central character's motives change constantly and have nothing to do with the plot, you'll be put off; but that's true, too. And if I add that the plot itself is made up of dead-ends, inconsistencies, irrelevancies and unexplained events, and that all this is beautiful, exciting, and moving, you won't believe me. But it's true.

Moorcock has apparently decided to treat characters and plot on an equal footing with every other element of the book; the result is a kind of literary Cubism: a shifting, unstable, shallow foreground in which every element is constantly entering into new associations with every other element.

It is very pleasant to be able to review PROGRAMME and BLACK EASTER at the same time. Both are impressive achievements. BLACK EASTER has luckily been released as general fiction by Doubleday; unhappily PROGRAMME (which should have been given the same treatment) has been put

out as science fiction, which it is not. To call it fantasy would be inaccurate also; let me just close by noting that the only sticky patch in it is a discussion that almost deviates into sense (pp. 109-111), that the cover is abominable, and that the jacket blurbs are, as usual, totally misleading.

After such heights, it's hard to come down to the run-of-the-mill. Lloyd Biggle's THE STILL SMALL VOICE OF TRUMPETS (Doubleday, $4.50) is a good example of a bad trend—the short story blown up into a novel. I remember the short story as a small, graceful solution to a small, graceful problem. The transition to novel length has necessitated a great deal of padding, which shows. There are a few interesting points about music and a plot that is silly and hard to follow, not that such a feat is absolutely necessary. The book is innocuous and mildly analgesic, which is (I suppose) what this sort of book is for. It has the kind of respectable cover that Michael Moorcock's book should have had.

THE DOOMSDAY MEN by Kenneth Bulmer (Doubleday, $4.50) is more pretentious and fails in proportion. There are sinful orgies (well, sort of) and thrill-killing and a general air of dissolute city living that recalls innumerable detective movies in which the hero Cleans Up City Hall. There is an interesting gadget, a device by which one person can read another's memories right after the second person's death, but Bulmer does not explore what such a gadget would imply about the state of medicine and psychology (at least) or what such advanced science would mean for sociology, city planning, and the whole state of society. It's another case of extrapolating only one aspect of the present and ignoring everything else. There is a scream-of-consciousness page (called in its entirety "Chapter Five") which should have been not only cut out but burned. The writing generally tends to get pretty bad in moments of stress. For example: "Thickly, Durlston spoke, the words dropping like curdled blood. 'It's a radio trigger! And they're not going to have the chance to set it off! The Shield is there to protect me—me!' . . . he could not control the spittle that dribbled from the corner of his lax mouth—but his forefinger tightened on the trigger—tightened—the narrow red creases disappeared from the knuckle—the blood flowed away—the whiteness of marbled death showed—"*

The plot ends with a sudden leap into the incredible, a real breach of contract between reader and writer.

* *p. 201*

Philip José Farmer's FLESH (Doubleday, $3.95) is "a revised and expanded version of a novel by the same name first published by Galaxy Publishing Corp." The original copyright is 1960. It is my uninformed, outsider's opinion that the revision and expansion have been minimal and that the book might have been very good if more time had been spent on it. It is a satire (part of the time), an adventure story (part of the time), a celebration of primal appetites (ditto) and a primitive society created out of whole cloth along the lines of Frazer's GOLDEN BOUGH (likewise). Farmer seems never to have settled on a consistent attitude toward his material; none of the versions of the book listed above manage to mesh with any of the others. Most promising but worst achieved is the celebration of primal appetites (eating and sex)—arch when it should be coarse and coyly evasive when it should be specific. The book keeps heading into erotic scenes and shying off at the last minute. And some very unpretty things lie under the "comic" surface: mass castration, death by rape, and the ripping apart of children, to name a few. The book gives the impression of a naturally austere, cultivated and somewhat morbid sensibility trying to portray Rabelaisian simplicity and heartiness with all the forced go of an unhappy conventioneer. There are vivid flashes of imagination that no one but Philip Farmer could even come near, but even so, it isn't a good book. It does his reputation particular disservice because it could have been one. Readers especially interested in Farmer can simply consider it early Farmer and read it as such. Others will probably wish it were less uneven and confused.

—JOANNA RUSS

C. L. Grant is twenty-six years old and presently lives in New Jersey, where he teaches American Literature to high school juniors. "I've managed to infiltrate Ray Bradbury into the course (with great success) and am planning to make a flank attack next year with H. Ellison and T. Sturgeon." Mr. Grant's first published story is a mock-horror yarn that transmits, in a highly enjoyable prose narrative, the same sort of outrageous macabre humor that Gahan Wilson does so well in his drawings.

THE HOUSE OF EVIL

by C. L. Grant

IT HAS BEEN SEVERAL PSYCHE-wrenching weeks since my death, now, and only recently has my scientific and literary training come to the fore and enabled me to adjust to my new life, so to speak. I pen this chronicle of my demise not only as a warning to others that Evil still lurks 'round the hearths of men, but also to give me, David Conner, the courage and strength to carry on, since suicide would hardly improve my position.

The summer of 19— was dreadfully torrid and frightfully humid. Since I was vacationing on the New Jersey coast, I anticipated the latter, but the former enervated me to such an astonishing degree that, truthfully, I was more than ready to pack it all in when I received a visitor at my modest seven-room cottage. It was Friday, and I had three fans going simultaneously in the living room, whose furniture consisted only of a luxuriant day bed, several cane chairs and an unused television set. The air, though moving, refused to cool me; the ice in my Scarlet O'Haras barely hung around long enough to cause condensation on the outside of my glass, and the one thing I did not want was someone else raiding my already depleted stock of cubes. When I swung open the door,

however, all my misgivings vanished in an instant. Standing on the threshold was the loveliest creature I had yet seen. Her hair was fair and fell in gentle curves to her deeply tanned shoulders. Her body was slim, yet well-pronounced where her gay, two-piece swimsuit clung tenaciously, perhaps even timidly, to her frame. But her face! Even now my blood races when I see before me those limpid brown eyes, that tiny, slightly upturned nose, and a mouth that seemed forever poised in an eternal pout.

"May I help you?" I asked, not knowing what I know now and stepping aside as she glided inside and perched lightly on the arm of a chair.

"You are David Conner, I presume?"

"I am, indeed," I answered, smiling.

"Lord Ness?"

"Well, not actually," I replied. "Since American law forbids me to accept a foreign title, I'm afraid I must forego that highly desirable honor. But it is true, my grand-uncle was Lord Ness, lately deceased through cirrhosis of the liver, and it is also true that I have inherited his lands, though his title must find refuge elsewhere."

"Fine," she said. "Why don't you close the door and come sit beside me."

To say the least, I was startled by her abrupt manner, but unaccountably I did as I was bidden. We gravitated to the sofa, and in spite of the distance between us, I could feel the temperature of the room rising with the presence of her lithe body.

Her profile was even more remarkable than her head-on view, and I took fond pleasure in staring quite frankly at her as she leaned forward to pick up my newly poured drink, and I must confess that my gaze was drawn from her delightful face to the subtle curves and sensuous arch of her back. My God! I thought. What subtlety! What sensuousness! She interrupted my wanderings, however, by quickly straightening herself. A gentle pink tongue moistened her moist lips, and she folded her doll-like hands in her lap.

"I don't mean to disturb you, Mr. Conner, but I was told by the local tavern owner that you are an important man in the field of literature, particulary that which deals with the extrapolation of science into the future."

I mumbled a modest demurral and blushed. I was dying for a drink but did not wish to reach in front of her for my half empty glass and violate her concentration.

"I came to you," she continued, "because of my uncle, Howard Fairview. You may already know of him as the man who owns the

brown mansion not three miles down the coast from here. Because of your knowledge, Mr. Conner, I have come to you for help."

"But how can *I* assist you, Miss . . . uh . . ."

"Fairview."

"Yes. I'm just a man who puts words to paper, not a full-fledged scientist."

"But you *must* have some knowledge of it or else your pieces wouldn't be so authoritative."

I bowed my head to the compliment. "Perhaps I will grant you that much, Miss . . . uh . . ."

"Fairview."

"Right. Why don't you lean back and tell me all you can. If I can help you, I will be more than happy to do so."

At my words, a light seemed to glow behind her eyes, and as she rested against the sofa's thick cushions, I twisted myself around in order to drink in her beauty as she spoke.

It appeared that the young girl's uncle was a collector of mythology of a rather fantastic nature. After spending years in the world's great libraries, he realized that, apart from popular fiction, there existed no definitive work on the East European myths. Thus he spent a great fortune in traveling through the back country of the Balkan lands, amassing a ponderous sheath of interviews which his niece helped him catalogue into a manuscript.

"Another Bullfinch," I muttered, not aware that I was speaking aloud.

"No," she said. "He's a Pisces, but that has nothing to do with my story."

I murmured an apology and she continued, drawing a bleak picture of her uncle, residing for the past five years in that mansion by the sea, pouring over notes and translating books he had gleaned on his travels. Apparently he worked at night because the heat of the day prohibited any exhaustive reasoning or clear thinking. Of late, however, he had taken to long walks by the sea after the household had retired for the evening. Miss Fairview was naturally worried, and the thought of the dear old man wandering alone while the waves crashed darkly at his tired feet brought tears to her eyes.

"But what," I asked innocently, "does this have to do with me?"

Miss Fairview looked at me for the first time since her pathetic tale began. "There . . . there have been . . . I don't know how to explain it."

"Strange happenings," I prompted, and we both shivered. It was then that I realized how chilled the evening had become, and I hadn't even turned off the fans! Quickly, I rose to my feet and performed the necessary chores to keep out the night breeze. We looked at each other for sev-

eral moments then, and she dropped her eyes slowly. I offered her a drink, but she declined with a delicate wave of her hand and the motion brought her attention to her watch.

"Oh my!" she exclaimed, and jumped to her feet. "I must be getting home before Uncle Howard gets worried."

We stood together in the doorway, the ocean roaring a symphony to the stars beyond the dunes that began where my red-tiled patio ended. Gently she placed a hand on my arm and without a sound disappeared into the darkness. I turned to re-enter the house when I heard quiet footsteps behind me. Whirling around in an attitude of defense, I saw Miss Fairview crossing the tiles. She smiled sadly and disappeared into the darkness. Poor child, I thought. Her excitement has disrupted her sense of direction. With a strange, yet not unpleasant feeling stirring within me, I took myself to bed and slept without dreaming, not realizing what nightmares would come from such a gentle beginning.

The following day was a gloom-filled one. Though it had ceased raining by noon, heavy gray clouds continued to drift in from the horizon, bringing a dampness that made everything sticky to the touch. I attempted to pen several thousand words to placate my impatient publisher, but the ink would not flow. I considered drinking myself into one hell of a stupor, but my admirable capacity for liquor prevented even that. It was then that I gave birth to a delightful idea. Why not, I said to myself, visit Miss Fairview and her uncle! I noted that we had failed to come to grips with her problem; that, in truth she never did explain what her dire need was.

I decided that the walk would do my husky legs good, and I set off. There were few houses in the area; only eight, in fact, lay between my bungalow and the Fairview mansion. Lights showed dimly behind the windows of a few, but life seemed to have deserted the Atlantic shore until the sun should reappear and warm the sand. My thoughts, too, were lifeless: reviewing half-heartedly the inheritance I desired to accept yet was forced to decline; and my tragic *affaire* with a sensuous young Philadelphian that ended disastrously when she, being high-strung and a Main Liner, took that final, soul-shattering leap from the top of the Walt Whitman Bridge into the icy Delaware River. I choked back a sob when my mind cast before me a picture of her lithe, heavily clad body floating peacefully, face down, in the dark waters. It had happened four years ago and still I searched for the means to drive her from my

thoughts, but the possible theological implications alone drove me to distraction! At that moment I noticed that I had arrived at my destination, and I prepared to make myself known.

The Fairview mansion was a foreboding sight even to the most esthetic of eyes: three stories high with cedar shingles browned by the relentless spray of the sea; the roof peaked slightly off-center and slated a dull, splotchy orange. Four windows were on the upper floor, curtained in black and coated with a layer of salt not even the purest of solutions could dissolve.

As I approached the vast porch that apparently circumscribed the first story, the huge yellow and gold double doors swung open and Miss Fairview came running out to meet me. She wore a lavender gown that was apparently cut three and a half inches above her tender knees, and her wonderful, fair hair was tied back and braided into a single strand tipped with a violet bow. Before I could commence my greeting, she lunged at me, flinging her arms wantonly about my waist, burying her smooth face in my muscularly naked chest and sobbing as if the world had divested itself of all its grief and had placed the entire Herculean burden on her frail, tanned shoulders.

"Dear Miss Fairview," I admonished her, with a sternness my palpitating heart did not feel. "Control yourself and let us go inside where I might better grasp the problem at hand."

Miss Fairview wiped her eyes with a lace sleeve and nodded. When the doors closed behind us, I found myself in a magnificent room whose length and breadth matched that of the house. Nearly half a dozen bejeweled chandeliers hung from silver chains in a glittering circle above the rugless floor. A veritable forest of richly upholstered chairs and exotically shaped divans competed with tapestries displaying scenes ranging from the romantically pastoral to the surrealistically erotic. And in the center of this palatial room was a structure I could not believe was possible. A single brass pole not unlike those used by our firefighting brigades! I blinked once and saw tiny rungs affixed at regular intervals in the glittering shaft, and since they were of the same texture and hue as the pole itself, they were cleverly hidden except to the closest of scrutiny.

Miss Fairview led me to a divan just large enough to seat us comfortably, and following what was obviously a household custom, we put our feet up on an exquisite ivory and mauve coffee table.

"How devilishly clever," I declared, nodding toward the pole.

"Yes," she replied. "My uncle believes in physical fitness, and so all stairwells were eschewed in the

building of this house. I see that you're also in favor of fitness, physically."

Noting that she was admiring my naked chest, I smiled modestly. "By nature I'm a modest man, Miss Fairview—"

"Please, call me Carlotta."

"Very well, Carlotta. I believe a man should keep a healthy body, and since he's a creature of nature, it would be improper to remain hidden from natural things, so to speak. But enough of me, my child, I've come to help you because your eloquent plea last night could not help but move the stoniest heart."

"Oh, bless you!" she cried, and after a brief but distressing bout of nervous hiccoughs, she resumed her tale.

Her uncle, she said, had become so imbued with the legends of middle Europe that he began to have delusions of persecution by all manner of ministers and priests. As if that weren't enough, he shifted not three months ago into a more horrifyingly sublime phase. In his own fiendishly distorted mind, he had since entertained the notion that he was one of the Undead! My eyes widened at this revelation, but I tactfully refrained from speaking.

"Every night," she half whispered, "Uncle Howard goes off into the night, prowling about as if he were a wolf. What if the neighbors should find out? They would surely believe him deranged and have him taken away!"

Tears flowed from her brown eyes, and I placed an arm around her shoulder in an attitude of comfort. I asked as gently as I could if I could meet her uncle, but she demurred, saying that since taking to nocturnal perambulations, he slept during the day. Thus finding ourselves with time on our hands, Carlotta and I exchanged pleasantries, and soon she was laughing the time away in spite of the gloom-laden atmosphere that had settled over us while she had unraveled her frightful story.

Afterward, we lay side by side on the knotty pine floor as I divulged the story of my suicidal love, and I'm not ashamed to say that bitter tears sprang to my eyes when I described her lithe, bloated body lying placidly on the cold slab in the morgue. Carlotta's tanned arms encircled my head tenderly and drew it to her bosom while she murmured her sympathy in my ear. How can I describe the aroma of perfume, the softness of the heavenly cushion that rocked ever so gently beneath her wafer-thin gown? Her hands were soft in my hair, and her empathic tears mingled freely with mine.

Suddenly she sat up, consequently letting go of my head and causing it to fall inadvertently to the floor where I received a stun-

ning blow from a knot that protruded archly from its wooden bed. When my eyes cleared, she was standing by the pole in a pose of intense concentration. I rose to my feet and tiptoed to her.

"He'll be awake soon," she said. "Come with me now, and perhaps with your scientific lore and knowledge of human behavioral patterns, you can save him from himself."

I nodded and, grasping the rungs firmly, followed her to the next floor. It was an arduous climb, especially since I was forced to keep my head turned upward to note how Carlotta Fairview was doing, ready at a moment's notice to sacrifice my life lest she slip.

Finally, I hoisted myself through the hole in the ceiling and found myself in a room fully as large as the one below, the single difference, among others, being that what light there was flickered from nine sinister black candles set in a diamond candelabra that rested on a gleaming black coffin inside an irregular circle of nine black chairs.

Obviously, I thought, an arrangment of some cabalistic import. But what fiefdom of Hell had I stumbled upon? Instantly, I vowed to free Carlotta from this highly unstable environment!

In spite of my nervousness, our stealthy approach to the coffin was silent. The air was stifling hot and I barely heard her whisper, "His fantasy has led him to that hideous place as his bed. Oh, David," she cried, "can you help him?"

Though doubts reeled through my whirling brain, I bravely assured her I could.

The atmosphere in that hellish room, combining with the wind that seemed to thunder directly above our heads, made me tense. Perspiration beaded on my unlined brow, and my pre-shrunk jeans grew too tight for adequate comfort. My facial expression must have betrayed my feelings because Carlotta laughed then, almost playfully.

"It's all right, David. I know the feeling. He should be awake soon, anyway."

As if her words were a command, a piercing screech shattered the air, and the coffin's lid began to rise. A fat hand snaked slowly over the sleek side, and when the lid was upright, a man rose from within. He was about fifty years of age, quite heavy, and there wasn't a single hair on his entire head! His eyes were bright, and a big smile creased his ruddy face. Without speaking, he lifted himself laboriously out of his resting place and bounded over to us.

"Hi!" he greeted, paternally kissing his niece's cheek while taking my outstretched hand in a firm, masculine grip. "Lousy night, isn't it? You must be a friend of Lotta's. Fairview. Howard Fairview, scientist."

"David Conner, author," I reciprocated, and bowed slightly while trying to get my hand back.

"You a health nut or something?"

"Uncle!"

"Sir?"

"Sorry. You aren't wearing much, so I figured you're a health bug, or—" A frown crossed his cherub-like face as he looked from his niece to me, and I was puzzled until I grasped the nature of his innuendo. When I had assured him that nothing had passed between Lotta and myself, he laughed and waved a hand to the chairs I'd noticed upon arriving.

"Have a seat, Conner. So you're a writer. Like what?"

"Oh, *Moon, Mars, Saturn, Pluto, Venus,* and *Uranus.*"

I was sorely tempted to add the nine volumes of my collected short works because he was definitely unimpressed. However, as the conversation had reached a momentary lull, I impulsively added *The Werewolf of St. Patrick's.* With that, his eyes lighted up and he slapped his knees.

"*You* are the author of that magnificent novel? You? Well," he said. "You can't tell a book and all that. Glad to have you here, Mr. Conner." His voice dropped then, and I could see that here, sitting before us in natty tails and scarlet-lined cape, was a lonely old man. I vowed then and there, for Carlotta's sake, to rid him of his fantasies and spare his niece further heartbreak; and so, hoping to get the story from his own lips, I tried to steer the conversation toward my goal. Had I but known the devilish truth!

I skillfully brought my interest to the fore by remarking on the unusual decor of his room. "And where," I added, "does Carlotta sleep?"

"Oh, around," he answered vaguely.

Then, as if sparked by my prodding, he launched into his narrative. As the black candles glowed darkly in the ill-lit room, my spine tingled when he regaled me with his adventures in the misty Balkan lands, and as he spoke I could see his eyes take on a fanatical gleam. I didn't even realize that Carlotta had given me a glass of wine, so enthralled was I by the morbid pictures he drew of the foul rites still practiced by Satanists, the vampires that continued to drink the flowing red blood of their victims, and the werewolves whose evil yet tragic lives brought tears to his eyes. In fact, he was so persuasive that I found myself listening without questioning the veracity of his suspect truths.

Here, I contemplated as I sipped the cool red liquid, is a man so steeped in his own research that he is no longer able to disassociate himself from it! Is it possible that a scientist such as Howard Fairview, a man of the

progressive twentieth century, can so lose himself in his work that he casts away the real world for the dark fantasy of hellish legend? Yet it must be so, for here was the horrible evidence right before my very eyes!

Suddenly Carlotta put a shaking hand over her lovely eyes and screamed, "Stop! Stop it, please!"

At once I sprang to my feet and rushed to her quivering side. Fairview frowned at the interruption, but concern swiftly followed irritation and the gleam faded from his eyes. Then, just as Carlotta calmed down, he suddenly clutched at his throat from which a curious gagging sound emitted.

"Sir, what is it?" I inquired anxiously, rushing to his heaving side. "Something you ate?"

"Not . . . .not yet," he wheezed. "I always get this way just before the big move."

Puzzled by this cryptic statement, I looked to Carlotta for an explanation, only to find that she had fainted and was now slipping rapidly to the floor. Where, I shouted to myself, has sanity flown? Suddenly I spied a swirling fuscous mist gathering in a single area just outside the diabolical circle of chairs. Fairview cried out when he followed my gaze and joined me behind the casket, his face pale, his lower lip trembling as he tried to speak.

"Quickly!" he said, "what's the date?"

Consulting my watch in the dim light of the candles, I answered, "August fifth."

"My God!" he gasped and grabbed me by the arms, forcing me to look into his eyes. I saw at once that here was one of the most frightened men I had ever encountered. "Listen to me, Conner. Without knowing it, Lotta has made the biggest bloody blunder of her life by bringing you here. This is Stag's Eve! A night when all bachelor Undeads gather to claim one of their own and an innocent virgin for rites so terrifying I daren't begin to tell you. An old hag in the Carpathian Mountains told me about it, saying that every leap year one of the unmarried Undead and an innocent virgin must be taken for rites so disgusting she wouldn't tell me about them. I can see that you don't believe me, but every word is true.

"As God is my witness, Conner, I . . . *I* am to be chosen this night."

I was stunned! My scientific background reeled under the impact of his foreshadowing words. Staring with foreboding and horror at the girl on the floor, I said, "And . . . and the virgin?"

"Hell, no," he profaned. "You got to be kidding. In those clothes? Look, son, there're only three of us here, and two of us obviously aren't innocent, and one of us is definitely Undead. Simple

math should make the rest easy, even for your literary brain."

Good heavens, what could I say? It was true! For years, after I lost my first love in a train wreck in Lionel, Pennsylvania, I had fabricated a purely platonic relationship with the world, and now I could see the horrifying consequences of my actions. Fairview was, my mind finally admitted, the Undead, and I . . . I was . . . Lord, how ignominious!

"Now look, Conner," Fairview was saying. "There's only one way to get out of this mess. I read about it last night. The old witch did tell me that we can be spared if one of us, that's you, does battle with whatever comes."

"I'll do it!" I cried, leaping to my feet with a surge of power that coursed through my muscles and cleared my reeling brain. "But only if you will let me have Lotta for my wife."

"Suit yourself, she's over twenty-one." And he pulled from the folds of his cloak a mighty, steel-blue blade such as would be the envy of the heroic Porthos himself.

Grasping the hilt tightly in what I assumed was the proper manner—thank God for Douglas Fairbanks!—I steeled myself for the creature's appearance; yet, when the mist's transformation was complete, I staggered back at the sight.

It was huge, towering a good fifteen feet above me. It had the head of a ewe, the burning red eyes of an anaconda, the brutal tusks of a prime-sized mammoth, the chest and arms of Marilyn Monroe, and hydrant-like legs scaled with ugly gleaming purple and red scales tapering suggestively into what looked like solid gold horseshoes. From what depths of Hell did this loathsome creature emerge? Surely Dante and Poe together in their wildest dreams could not imagine such a fearsome phantom of foul evil.

The thing looked down at me and laughed noiselessly, its lower jaw working feverishly. It was obviously on to what my plans were, especially after I picked up one of the chairs with an isometric-strong hand and flung it deftly at the monster, striking it square in its chest, and prompting me to say "excuse me" had it occurred under less trying circumstances.

Then, as the wind rumbled through the eaves, the ocean roared in its bed, and the air filled with the stench of sulphur, the monster reached out a gargantuan, yet relatively dainty hand in an effort to snare me, but with the speed of an expert swordsman, I pinked it neatly in the center of its palm. The Hell-montage bellowed its rage and charged, scattering chairs, coffin, uncle and niece in its wake. Because of its size and the confinement of the

room, the thing's agility was luckily impaired, and I was able to duck between its legs before it could crush me underfoot. I knew then that mere epee dexterity would not foil that hideous thing, and so, to give me strength and peace of mind, I uttered lines from the first prayer that came to me.

"And grant me the wisdom to know the difference."

Filled with a resurgence of spirit, I lunged forward, my shining blade determined to do justice to its forebears, Excalibur, Wilkinson, and a host of others that helped bring evil to its knees.

"Geronimo!" I shouted.

We met with such a resounding crash that the hilt of my sword was shattered in my hand. A terrific wind hurricaned through the room, lights spun dizzily before my eyes, and with Carlotta's name on my bruised lips, I sank into fathomless unconsciousness.

When I awoke, I found myself lying on a downstairs sofa. I tried sitting up but a piercing throb forced me to recline quickly. I must have slept then, for when next I opened my eyes, Carlotta was bending over me, a damp cloth in her lovely hand. At that moment the memory of the battle flooded my memory.

"That . . . that fiend from Hell," I gasped.

"Dead, David. Your sword did its heroic duty."

"And . . . and your uncle?"

"Upstairs, sleeping. It's two in the afternoon."

I had failed!

Defeating that mammalian monster had not freed Howard Fairview from his dreadful fate. I cursed my ineptitude until my lips were closed by the touch of her tiny fingers. It was then that my love tore my breast asunder. I wanted to take her in my arms and profess my devotion, leave that house of evil, never to return. I said as much to her, but she smiled sadly and gently placed two fingers on my throat just below the jaw-line. Her sad brown eyes spoke more than the words that came reluctantly from her moist lips, but the horror of it drove me to my feet, and I raced across the room and flung open the double doors. Carlotta screamed as the sunlight poured in and I was blasted by what must have been a thousand lightning bolts. By sheer superhuman effort I managed to close the doors and walk dejectedly back to the divan.

It was obvious what had happened: the diabolical uncle had tricked me, even to using the monster, into coming here so that my life's blood might mingle freely in his veins with that of the others he had victimized. A brilliant career as a writer nipped in the bud! And worse, the lovely Carlotta lost to me forever, for she was still a mortal!

"Hush, David," she murmured lovingly as I bemoaned my fate. "It's not as bleak as you think."

"But darling," I ventured. "What's to become of my books?"

"You can still write, dearest. And think of the tremendous advantages you'll have over the others in your field. The experiences you'll have, the stories you'll be able to weave. You'll be another Poe. Think of it! And in my own small way, I can help. I can mail manuscripts, lick stamps, even attend conferences that cannot be held at night or on rainy days."

Hope flowed like a flood within me as I realized the gold mine with which I had now been entrusted.

"But darling, what about you?" I asked. "If I must write in the evenings and sleep during the daylight hours, what will become of . . . of . . . of our love?"

Carlotta placed a tender palm against my burning cheek, and I could see that here, too, would be an answer.

"Today, my dearest, is Sunday. A holy day, if you remember."

I frowned, trying to plumb the depths of her feminine logic. She would not prompt me, but instead began to hum. Like a flash, the solution came to my tongue.

"I . . . that is, we of the trade don't work on Sunday, do we?"

"No, my muscular darling."

I could have sung with joy!

"And you'll be here on Sundays?"

"Yes, my mighty warrior."

I smiled at the maidenly blush that graced her cheeks, and I took her hands in mine.

"You promise? You'll *always* be here on Sunday?"

"Always," she whispered, and I knew that, though dead, I was . . . we were, would be always alive.

Zenna Henderson's stories about the visitors to Earth known simply as "The People" have been running almost as long as the magazine itself, a remarkable record that is due largely to the variety of the individual adventures and the warmth of the writing. This story of an "unusual" school child and an orbital mission in serious trouble is the first story of The People in two years; it's a pleasure to have them back.

THE INDELIBLE KIND

by Zenna Henderson

I'VE ALWAYS BEEN A DOWN-TO-earth sort of person. On re-reading that sentence, my mouth corners lift. It reads differently now. Anyway, matter-of-fact and just a trifle sceptical—that's a further description of me. I've enjoyed—perhaps a little wistfully—other people's ghosts, and breath-taking coincidences, and flying saucer sightings, and table tiltings and prophetic dreams, but I've never had any of my own. I suppose it takes a very determined, or very childlike—not childish—person to keep illusion and wonder alive in a lifetime of teaching. "Lifetime" sounds awfully elderly-making, doesn't it? But more and more I feel that I fit the role of observer more than that of participant. Perhaps that explains a little of my unexcitement when I did participate. It was mostly in the role of spectator. But what a participation! What a spectacular!

But, back to the schoolroom. Faces and names have a habit of repeating and repeating in your classes over the years. Once in a while, though, along comes one of the indelible kind—and they mark you, happily or unhappily beyond erasing. But, true to my nature, I didn't even have a twinge or premonition.

The new boy came alone. He was small, slight, and had a smooth cap of dark hair. He had the assurance of a child who had

registered many times by himself, not particularly comfortable or uncomfortable at being in a new school. He had brought a say-nothing report card, which, I noted in passing, gave him a low grade in Group Activity Participation and a high one in Adjustment to Redirective Counseling—by which I gathered that he was a loner but minded when spoken to, which didn't help much in placing him academically.

"What book were you reading?" I asked, fishing on the shelf behind me for various readers in case he didn't know a specific name. Sometimes we get those whose faces overspread with astonishment and they say, "Reading?"

"In which of those series?" he asked. "Look-and-say, ITA, or phonics?" He frowned a little. "We've moved so much and it seems as though every place we go is different. It does confuse me sometimes." He caught my surprised eye and flushed. "I'm really not very good by any method, even if I do know their names," he admitted. "I'm functioning only on about a second-grade level."

"Your vocabulary certainly isn't second grade," I said, pausing over the enrollment form.

"No, but my reading is," he admitted. "I'm afraid—"

"According to your age, you should be third grade." I traced over his birthdate. This carbon wasn't the best in the world.

"Yes, and I suppose that counting everything, I'd average out about third grade, but my reading is poor."

"Why?" Maybe knowing as much as he did about his academic standing, he'd know the answer to this question.

"I have a block," he said, "I'm afraid—"

"Do you know what your block is?" I pursued, automatically probing for the point where communication would end.

"I—" his eyes dropped. "I'm not very good in reading," he said. I felt him folding himself away from me. End of communication.

"Well, here at Rinconcillo, you'll be on a number of levels. We have only one room and fifteen students, so we all begin our subjects at the level where we function best—" I looked at him sharply. "And work like mad!"

"Yes, ma'am." We exchanged one understanding glance; then his eyes became eight-year old eyes and mine, I knew, teacher eyes. I dismissed him to the playground and turned to the paper work.

Kroginold, Vincent Lorma, I penciled into my notebook. A lumpy sort of name, I thought, to match a lumpy sort of student—scholastically speaking.

Let me explain Rinconcillo. Here in the mountainous West, small towns, exploding into large cities, gulp down all sorts of odd

terrain in expanding their city limits. Here at Winter Wells, city growth has followed the three intersecting highways for miles out, forming a spidery, six-legged sort of city. The city limits have followed the growth in swatches about four blocks wide, which leaves long ridges, and truly ridges —mountainous ones—of non-city projecting into the city. Consequently, here is Rinconcillo, a one-roomed school with only 15 students, and only about half a mile from a school system with eight schools and 4800 students. The only reason this school exists is the cluster of family units around the MEL (Mathematics Experimental Laboratory) facilities, and a half dozen fiercely independent ranchers who stubbornly refuse to be urbanized and cut up into real estate developments or be city-limited and absorbed into the Winter Wells school system.

As for me—this was my fourth year at Rinconcillo, and I don't know whether it's being fiercely independent or just stubborn, but I come back each year to my "little inside corner" tucked quite literally under the curve of a towering sandstone cliff at the end of a box canyon. The violently pursuing and pursued traffic, on the two highways sandwiching us, never even suspects we exist. When I look out into the silence of an early school morning, I still can't believe that civilization could be anywhere within a hundred miles. Long shadows under the twisted, ragged oak trees mark the orangy gold of the sand in the wash that flows—dryly mostly, wetly tumultuous seldomly—down the middle of our canyon. Manzanitas tangle the hillside until the walls become too steep and sterile to support them. And yet, a twenty-minute drive—ten minutes out of here and ten minutes into there—parks you right in front of the MONSTER MERCANTILE, EVERYTHING CHEAPER. I seldom drive that way.

Back to Kroginold, Vincent Lorma—I was used to unusual children at my school. The lab attracted brilliant and erratic personnel. The majority of the men there were good, solid citizens and no more eccentric than a like number of any professionals, but we do get our share of kooks, and their sometimes twisted children. Besides the size and situation being an ideal set up for ungraded teaching, the uneven development for some of the children made it almost mandatory. As, for instance, Vincent, almost nine, reading, so he said, on second-grade level, averaging out to third grade, which implied above-age excellence in something. Where to put him? Why, second grade (or maybe first) and fourth (or maybe fifth) and third—of course! Perhaps a conference with his mother

would throw some light on his "block." Well, difficult. According to the enrollment blank, both parents worked at MEL.

By any method we tried, Vincent *was* second grade—or less—in reading.

"I'm sorry." He stacked his hands on the middle page of *Through Happy Hours,* through which he had stumbled most woefully. "And reading is so basic, isn't it?"

"It is," I said, fingering his math paper—above age-level. And the vocabulary check test—"If it's just words, I'll define them," he had said. And he had. Third year of high school worth. "I suppose your math ability comes from your parents," I suggested.

"Oh, no!" he said, "I have nothing like their gift for math. It's—it's—I like it. You can always get out. You're never caught—"

"Caught?" I frowned.

"Yes—look!" Eagerly he seized a pencil. "See! One plus one equals two. Of course it does, but it doesn't stop there. If you want to, you can back right out. Two equals one plus one. And there you are—out! The doors swing both ways!"

"Well, yes," I said, teased by an almost grasping of what he meant. "But math traps me. One plus one equals two whether I want it to or not. Sometimes I want it to be one and a half or two and three-fourths and it won't—ever!"

"No, it won't." His face was troubled. "Does it bother you all the time?"

"Heavens, no child!" I laughed. "It hasn't warped my life!"

"No," he said, his eyes widely on mine, "But that's why—" His voice died as he looked longingly out the window at the recess-roaring playground, and I released him to go stand against the wall of the school, wistfully watching our eight other boys manage to be sixteen or even twenty-four in their wild gyrations.

So that's why? I doodled absently on the workbook cover. I didn't like a big school system because its one-plus-one was my one and one-half—or two and three-fourths? Could be—could be. Honestly! What kids don't come up with! I turned to the work sheet I was preparing for consonant blends for my this-year's beginners—all both of them—and one for Vincent.

My records on Vincent over the next month or so were an odd patch-work. I found that he could read some of the articles in the encyclopedia, but couldn't read *Billy Goats Gruff.* That he could read *What Is So Rare As A Day In June,* but couldn't read *Peter, Peter, Pumpkin Eater.* It was beginning to look as though he could read what he wanted to and that was all. I don't mean a capricious wanting-to, but that he shied away from certain readings and

actually *couldn't* read them. As yet I could find no pattern to his unreadings; so I let him choose the things he wanted and he read—oh, how he read! He gulped down the material so avidly that it worried me. But he did his gulping silently. Orally, he wore us both out with his stumbling struggles.

He seemed to like school, but seldom mingled. He was shyly pleasant when the other children invited him to join them, and played quite competently—which isn't the kind of play you expect from an eight-year old.

And there matters stood until the day that Kipper—our eighth grade—dragged Vincent in, bloody and battered.

"This guy's nearly killed Gene," Kipper said. "Ruth's out there trying to bring him to. First aid says don't move him until we know."

"Wait here," I snapped at Vincent as I headed for the door. "Get tissues for your face!" And I rushed out after Kipper.

We found Gene crumpled in the middle of a horrified group gathered at the base of the canyon wall. Ruth was crying as she mopped his muddy forehead with a soggy tissue. I checked him over quickly. No obvious bleeding. I breathed a little easier as he moaned, moved and opened his eyes. He struggled to a sitting position and tenderly explored the side of his head.

"Ow! That dang rock!" He blinked tears as I parted his hair to see if he had any damage besides the egg-sized lump. He hadn't. "He hit me with that big rock!"

"My!" I giggled, foolish with relief. "He must have addled your brains at the same time. Look at the size of that rock!" The group separated to let Gene look, and Pete scrambled down from where he had perched on the rock for a better look at the excitement.

"Well," Gene rubbed his head tenderly. "Anyway, he did!"

"Come on inside," I said, helping him up. "Do you want Kipper to carry you?"

"Heck no!" Gene pulled away from my hands. "I ain't hurt. G'wan—noseys!" He turned his back on the staring children.

"You children stay out here." I herded Gene ahead of me. "We have things to settle inside."

Vincent was waiting quietly in his seat. He had mopped himself fairly clean, though he still dabbled with a tissue at a cut over his left eye. Two long scratches oozed redly down his cheek. I spent the next few minutes rendering first aid. Vincent was certainly the more damaged of the two, and I could feel the thrumming leap of his still-racing heart against me as I turned his docile body around, tucking in his shirt during the final tidying up.

"Now." I sat, sternly teacher, at my desk and surveyed the two before me. "Gene, you first."

"Well," he ruffed his hair up and paused to finger, half proudly, the knot under his hair. "He said let my ground squirrel go and I said no. What the heck! It was mine. And he said let it go and I said no and he took the cage and busted it and—" Indignation in his eyes faded into defensiveness. "—and I busted him one and—and— Well, then he hit me with that rock! Gosh, I was knocked out, wasn't I?"

"You were," I said, grimly. "Vincent?"

"He's right." His voice was husky, his eyes on the tape on the back of one hand. Then he looked up with a tentative lift of his mouth corners. "Except that I hit the rock with him."

"Hit the rock with him?" I asked. "You mean like judo or something? You pushed him against the rock hard enough to knock him out?"

"If you like," he shrugged.

"It's not what I like," I said, "It's—what happened?"

"I hit the rock with him," Vincent repeated.

"And why?" I asked, ignoring his foolish insistence.

"We were having a fight. He told you."

"You busted my cage!" Gene flushed indignantly.

"Gene," I reminded. "You had your turn. Vincent?"

"I had to let it go," he said, his eyes hopefully on mine. "He wouldn't, and it—it wanted to get out—the ground squirrel." His eyes lost their hopefulness before mine.

"It wasn't yours," I reminded.

"It wasn't *his* either!" His eyes blazed. "It belonged to itself! He had no right—!"

"I caught it!" Gene blazed back.

"Gene! Be still or I'll send you outside!"

Gene subsided, muttering.

"You didn't object to Ruth's hamster being in a cage." "Cage" and "math" seemed trying to equate in my mind.

"That's because it was a cage beast," he said, fingering the taped hand again. "It didn't know any better. It didn't care." His voice tightened. "The ground squirrel did. It would have killed itself to get out. I—I just *had* to—"

To my astonishment, I saw tears slide down his cheek as he turned his face away from me. Wordlessly I handed him a tissue from the box on my desk. He wiped his face, his fingers trembling.

"Gene?" I turned to him. "Anything more?"

"Well, gollee! It was mine! And I liked it! It—it was *mine!*"

"I'll trade you," said Vincent. "I'll trade you a white rat in a real neat aluminum cage. A pregnant one, if you like. It'll have four or five babies in about a week."

"Gollee! Honest?" Gene's eyes were shining.

"Vincent?" I questioned him.

"We have some at home," he said. "Mr. Wellerk at MEL gave me some when we came. They were surplus. Mother says I may trade if his mother says okay."

"She won't care!" cried Gene. "Us kids have part of the barn for our pets, and if we take care of them, she doesn't care what we have. She don't even ever come out there! Dad checks once in a while to be sure we're doing a decent job. They won't care.

"Well, you have your mother write a note saying you may have the rat, and Vincent, if you're sure you want to trade, bring the rat tomorrow and we'll consider the affair ended." I reached for my hand bell. "Well, scoot, you two. Drinks and rest room, if necessary. It's past bell time now."

Gene scooted and I could hear him yelling, "Hey! I getta white rat—"

Vincent was at the door when I stopped him with a question. "Vincent, did your mother know before you came to school that you were going to let the ground squirrel go?"

"No, ma'am. I didn't even know Gene had it."

"Then she *didn't* suggest you trade with Gene."

"Yes, ma'am, she did," he said reluctantly.

"When?" I asked, wondering if he was going to turn out to be a twisted child after all.

"When you were out getting Gene. I called her and told her." He smiled his tentative lip-smile. "She gave me fits for fighting and suggested Gene might like the rat. I like it, too, but I have to make up for the ground squirrel." He hesitated. I said nothing. He left.

"Well!" I exploded my held breath out. "Ananias K. Munchausen! Called his mother, did he? And no phone closer than MONSTER MERCANTILE! But still —" I was puzzled. "It didn't *feel* like a lie!"

Next afternoon after dismissal time I sighed silently. I was staring moodily out the window where the lonely creaking of one swing signified that Vincent, as well as I, was waiting for his mother to appear. Well, inevitable, I guess. Send a taped-up child home, you're almost sure to get an irate parent back. And Vincent had been taped up! Still was, for that matter.

I hadn't heard the car. The creaking of the swing stopped abruptly, and I heard Vincent's happy calling voice. I watched the two of them come up onto the porch, Vincent happily clinging.

"My mother, Teacher," he said, "Mrs. Kroginold."

"Good afternoon, Miss Murcer." Mrs. Kroginold was small, dark haired and bright eyed. "You wait outside, erring man-child!" She dismissed him with a spat on his bottom. "This is adult talk." He

left, his small smile slanting back over his shoulder a little anxiously.

Mrs. Kroginold settled comfortably in the visitor's chair I had already pulled up beside my desk.

"Prepared, I see," she sighed. "I suppose I should have come sooner and explained Vincent."

"He is a little unusual," I offered cautiously. "But he didn't impress me as the fighting kind."

"He isn't," said Mrs. Kroginold. "No, he's—um—unusual in plenty of other ways, but he comes by it naturally. It runs in the family. We've moved around so much since Vincent's been in school that this is the first time I've really felt I should explain him. Of course, this is also the first time he ever knocked anyone out. His father could hardly believe him. Well, anyway, he's so happy here and making such progress in school that I don't want anything to tarnish it for him, so—" she sighed and smiled. "He says you asked him about his trading the rat—"

"The pregnant rat," I nodded.

"He *did* ask me," she said. "Our family uses a sort of telepathy in emergencies."

"A *sort* of telepathy—!" My jaw sagged, then tightened. Well, I could play the game, too. "How interesting!"

Her eyes gleamed. "Interesting aberration, isn't it?" I flushed and she added hastily. "I'm sorry. I didn't mean to—to put interpretations into your mouth. But Vincent did hear—well, maybe 'feel' is a better word—the ground squirrel crying out against being caged. It caught him right where he lives. I think the block he has in reading is against anything that implies unwilling compulsion—you know, being held against your will—or prevented—"

Put her in a pumpkin shell, my memory chanted. *The three Billy Goats Gruff were afraid to cross the bridge because—*

"The other schools," she went on, "have restricted him to the reading materials provided for his grade level, and you'd be surprised how many of the stories—

"And he *did* hit the rock with Gene." She smiled ruefully. "Lifted him bodily and threw him. A rather liberal interpretation of our family rules. He's been forbidden to lift any large objects in anger. He considered Gene the lesser of the two objects.

"You see, Miss Murcer, we do have family characteristics that aren't exactly—mmm—usual, but Vincent is still just a school child, and we're just parents, and he likes you much and we do, too. Accept us?"

"I—" I said, trying to blink away my confusion. "I—I—"

"Ay! Ay!" Mrs. Kroginold sighed and, smiling, stood up. "Thank you for not being loudly insulted by what I've told you. Once a neighbor of ours that I

talked a little too freely to, threatened to sue—so I appreciate. You are so good for Vincent. Thanks."

She was gone before I could get my wits collected. It had been a little like being caught in a dustless dust-devil. I hadn't heard the car leave, but when I looked out, there was one swing still stirring lazily between the motionless ones, and no one at all in sight on the school grounds.

I closed up the schoolroom and went into the tiny two-roomed teacher-age extention on the back of the school to get my coat and purse. I had lived in those two tiny rooms for the first two years of my stay at Rinconcillo before I began to feel the need of more space and more freedom from school. Occasionally, even now, when I felt too tired to plunge out into the roar of Winter Wells, I would spend a night on my old narrow bed in the quiet of the canyon.

I wondered again about not hearing the car when I dipped down into the last sand wash before the highway. I steered carefully back across the packed narrowness of my morning tracks. Mine were the only ones, coming or going. I laid the odd discovery aside because I was immediately gulped up by the highway traffic. After I had been honked at and muttered at by two Coast drivers and had muttered at (I don't like to honk) and swerved around two Midwest tourist types roaring along at twenty-five miles an hour in the center lane admiring the scenery, I suddenly laughed. After all, there was nothing mysterious about my lonely tire tracks. I was just slightly disoriented. MEL was less than a mile away from the school, up over the ridge, though it was a good half hour by road. Mrs. Kroginold had hiked over for the conference and the two of them had hiked back together. My imagination boggled a little at the memory of Mrs. Kroginold's strap-'n'heel sandals and the hillsides, but then, not everyone insists on flats to walk in.

Well, the white rat achieved six offspring, which cemented the friendship between Gene and Vincent forever, and school rocked along more or less serenely.

Then suddenly, as though at a signal, the pace of space exploration was stepped up in every country that had ever tried launching anything; so the school started a space unit. We went through our regular systematic lessons at a dizzying pace, and each child, after he had finished his assignment, plunged into his own chosen activity—all unrealizing of the fact that he was immediately putting into practice what he had been studying so reluctantly.

My primary group was busy working out a moonscape in the sand table. It was to be complete with clay moon-people— "They

don't *have* to have any noses!" That was Ginny, tender to critical comment. "They're different! They don't breathe. No air!" And moon-dogs and cats and cars and flowers, and even a moon-bird. "It can't fly in the sky cause there ain't—isn't any air so it flies in the dirt!" That was Justin. "It likes bottoms of craters cause there's more dirt there!"

I caught Vincent's amused eyes as he listened to the small ones. "Little kids are funny!" he murmured. "Animals on the moon! My dad, when he was there, all he saw—" His eyes widened and he became very busy choosing the right-sized nails from the rusty coffee can.

"Middle-sized kids are funny, too," I said. "Moon, indeed! There aren't any dads on the moon, either!"

"I guess not." He picked up the hammer and, as he moved away, I heard him whisper, "Not now!"

My intermediates were in the midst of a huge argument. I umpired for a while. If you use a BB shot to represent the Earth, would there be room in the schoolroom to make a scale mobile of the planetary system? I extinguished some of the fire bred of ignorance, by suggesting an encyclopedia and some math, and moved on through the room.

Gene and Vincent, not caring for such intellectual pursuits, were working on our model space capsule which was patterned after the very latest in U. S. spacecraft, modified to include different aspects of the latest in flying saucers. I was watching Vincent leaning through a window, fitting a tin can altitude gauge—or some such—into the control panel. Gene was painting purple a row of cans around the middle of the craft. Purple was currently popular for flying saucer lights.

"I wonder if astronauts ever develop claustrophobia?" I said idly. "I get a twinge sometimes in elevators or mines."

"I suppose susceptible ones would be eliminated long before they ever got to be astronauts," grunted Vincent as he pushed on the tin can. "They go through all sorts of tests."

"I know," I said, "But people change. Just supposing—"

"Gollee!" said Gene, his poised paint brush dribbling purple down his arm and off his elbow. "Imagine! Way up there! No way out! Can't get down! And claustrophobia!" He brought out the five syllables proudly. The school had defined and discussed the word when we first started the unit.

The tin can slipped and Vincent staggered sideways, falling against me.

"Oh!" said Vincent, his shaking hands lifting, his right arm curling up over his head. "I—"

I took one look at his twisted face, the cold sweat beading his

hairline, and, circling his shoulders, steered him over to the reading bench near my desk. "Sit," I said.

"Whatsa matter him?" Now the paint was dripping on one leg of Gene's Levi's.

"Just slightly wampsy," I said. "Watch that paint. You're making a mess of your clothes."

"Gollee!" He smeared his hand down his pants from hip to knee. "Mom'll kill me!"

I lifted my voice. "It's put-away time. Kipper, will you monitor today?"

The children were swept into organized confusion. I turned back to Vincent. "Better?"

"I'm sorry." Color hadn't come back to his face yet, but it was plumping up from its stricken drawnness. "Sometimes it gets through too sharply—"

"Don't worry about it," I said, pushing his front hair up out of his eyes. "You could drive yourself crazy—"

"Mom says my imagination is a little too vivid—" His mouth corners lifted.

"So 'tis," I smiled at him, "if it must seize upon my imaginary astronaut. There's no point to your harrowing up your soul with what might happen. Problems we have always with us. No need to borrow any."

"I'm not exactly borrowing," he whispered, his shoulder hunching up towards his wincing head. "He never did want to, anyway, and now that they're orbiting, he's still scared. What if—" He straightened resolutely. "I'll help Gene." He slid away before I could stop him.

"Vincent," I called, "*Who's* orbiting—" And just then Justin dumped over the whole stack of jigsaw puzzles, upside down. That ended any further questions I might have had.

That evening I pushed the newspaper aside and thoughtfully lifted my coffee cup. I stared past its rim and out into the gathering darkness. This was the local newspaper which was still struggling to become a big metropolitan daily after half a century of being a four-page county weekly. Sometimes its reach exceeded its grasp, and it had to bolster short columns with little folksy-type squibs. I re-read the one that had caught my eye. Morris was usually good for an item or two. I watched for them since he had had a conversation with a friend of mine I'd lost track of.

Local ham operator, Morris Staviski, says the Russians have a new manned sputnik in orbit. He says he has monitored radio signals from the capsule. He can't tell what they're saying, but he says they're talking Russian. He knows what Russian sounds like because his grandmother was Russian.

"Hmm," I thought. "I wonder.

Maybe Vincent knows Morris. Maybe that's where he got this orbiting bit."

So the next day I asked him.

"Staviski?" He frowned a little. "No, ma'am, I don't know anyone named Staviski. At least I don't remember the name. Should I?"

"Not necessarily," I said, "I just wondered. He's a ham radio operator—"

"Oh!" His face flushed happily. "I'm working on the code now so I can take the test next time it's given in Winter Wells! Maybe I'll get to talk to him sometimes!"

"Me, too!" said Gene. "I'm learning the code, too!"

"He's a little handicapped, though," Vincent smiled. "He can't tell a *dit* from a *dah* yet!"

The next morning Vincent crept into school with all the sun gone out. He moved like someone in a dream and got farther and farther away. Before morning recess came, I took his temperature. It was normal. But he certainly wasn't. At recess the rapid outflow of children left him stranded in his seat, his pinched face turned to the window, his unfinished work in front of him, his idle pencil in the hand that curved up over the side of his head.

"Vincent!" I called, but there was no sign he even heard me. "Vincent!"

He drew a sobbing breath and focused his eyes on me slowly. "Yes, ma'am?" He wet his dry lips.

"What *is* the matter?" I asked. "Where do you feel bad?"

"Bad?" His eyes unfocused again and his face slowly distorted into a crying mask. With an effort he smoothed it out again. "I'm not the one. It's—it's—" He leaned his shaking chin in the palm of his hand and steadied his elbow on the top of his desk. His knuckles whitened as he clenched his fingers against his mouth.

"Vincent!" I went to him and touched his head lightly. With a little shudder and a sob, he turned and buried his face against me.

"Oh, Teacher! Teacher!"

A quick look out the window showed me that all the students were down in the creek bed building sand forts. Eight-year old pride is easily bruised. I led Vincent up to my desk and took him onto my lap. For a while we sat there, my cheek pressed to his head as I rocked silently. His hair was spiky against my face and smelled a little like a baby chick's feathers.

"He's afraid! He's afraid!" He finally whispered, his eyes tight shut. "The other one is dead. It's broken so it can't come back. He's afraid! And the dead one keeps looking at him with blood on his mouth! And he can't come down! His hands are bleeding! He hit the walls wanting to get out. But there's no air outside!"

"Vincent," I went on rocking, "Have you been telling yourself stories until you believe them?"

"No!" He buried his face against my shoulder, his body tense. "I know! I know! I can hear him! He screamed at first, but now he's too scared. Now he—" Vincent stilled on my lap. He lifted his face—listening. The anguish slowly smoothed away. "It's gone again! He must go to sleep. Or unconscious. I don't hear him all the time."

"What was he saying?" I asked, caught up in his—well, whatever it was.

"I don't know." Vincent slid from my lap, his face still wary. "I don't know his language."

"But you said—" I protested. "How do you know what he's feeling if you don't even know—"

He smiled his little lip-lift. "When you look at one of us kids without a word and your left eyebrow goes up—what do you mean?"

"Well, that depends on what who's doing," I flushed.

"If it's for me, I *know* what you mean. And I stop it. So do the other kids about themselves. That's the way I know this." He started back to his desk. "I'd better get my spelling done."

"Is that the one that's orbiting?" I asked hopefully, wanting to tie something to something.

"Orbiting?" Vincent was busily writing. "That's the sixth word. I'm only on the fourth."

That afternoon I finally put aside the unit tests I'd been checking and looked at the clock. Five o'clock. And at my hands. Filthy. And assessed the ache across my shoulders, the hollow in my stomach, and decided to spend the night right where I was. I didn't even straighten my desk, but turned my weary back on it and unlocked the door to the teacherage.

I kicked off my shoes, flipped on the floor lamp and turned up the thermostat to take the dank chill out of the small apartment. The cupboards yielded enough supplies to make an entirely satisfying meal. Afterwards, I turned the lights low and sat curled up at one end of the couch listening to one of my Acker Bilke records while I drank my coffee. I flexed my toes in blissful comfort as I let the clear, concise, tidy notes of the clarinet clear away my cobwebs of fatigue. Instead of purring, I composed another strophe to my Praise Song:

Praise God for Fedness—and Warmness—and Shelteredness—and Darkness—and Lightness—and Cleanness—and Quietness—and Unharriedness—

I dozed then for a while and woke to stillness. The stereo had turned itself off, and it was so still I could hear the wind in the oak trees and the far, unmusical blat of a diesel train. And I also could hear a repetition of the sound that had wakened me.

Someone was in the schoolroom.

I felt a throb of fright and wondered if I had locked the teacherage door. But I *knew* I had locked the school door just after four o'clock. Of course, a bent bobby pin and your tongue in the correct corner of your mouth and you could open the old lock. But what—who would want to? What was in there? The stealthy noises went on. I heard the creak of the loose board in the back of the room. I heard the *yaaaawn* of the double front door hinges and a thud and clatter on the front porch.

Half paralyzed with fright, I crept to the little window that looked out onto the porch. Cautiously I separated two of the slats of the blind and peered out into the thin slice of moonlight. I gasped and let the slats fall.

A flying saucer! With purple lights! On the porch!

Then I gave a half grunt of laughter. Flying saucers, indeed! There was something familiar about that row of purple lights—unglowing—around its middle. I knew they were purple—even by the dim light—because that was *our* space capsule! Who was trying to steal our cardboard-tincan-posterpainted capsule?

Then I hastily shoved the blind aside and pressed my nose to the dusty screen. The blind retaliated by swinging back and whacking me heavily on the ear, but that wasn't what was dizzying me.

Our capsule was taking off!

"It can't!" I gasped as it slid up past the edge of the porch roof. "Not that storage barrel and all those tin cans! It can't!" And, sure enough, it couldn't. It crash-landed just beyond the flagpole. But it staggered up again, spilling several cans noisily, and skimmed over the swings, only to smash against the boulder at the base of the wall.

I was out of the teacherage, through the dark schoolroom and down the porch steps before the echo of the smash stopped bouncing from surface to surface around the canyon. I was halfway to the capsule before my toes curled and made me conscious of the fact that I was barefooted. Rather delicately I walked the rest of the way to the crumpled wreckage. What on earth had possessed it—?

In the shadows I found what had possessed it. It was Vincent, his arms wrapped tightly over his ears and across his head. He was writhing silently, his face distorted and gasping.

"Good Lord!" I gasped and fell to my knees beside him. "Vincent! What on earth!" I gathered him up as best I could with his body twisting and his legs flailing, and moved him out into the moonlight.

"I have to! I have to! I have to!" he moaned, struggling away from me. "I hear him! I hear him!"

"Hear whom?" I asked. "Vincent!" I shook him. "Make sense! What are you doing here?"

Vincent stilled in my arms for a frozen second. Then his eyes opened and he blinked in astonishment. "Teacher! What are *you* doing here?"

"I asked first," I said. "What *are* you doing here, and what is this capsule bit?"

"The capsule?" He peered at the pile of wreckage and tears flooded down his cheeks. "Now I can't go and I have to! I have to!"

"Come on inside," I said. "Let's get this thing straightened out once and for all." He dragged behind me, his feet scuffling, his sobs and sniffles jerking to the jolting movement of his steps. But he dug in at the porch and pulled me to a halt.

"Not inside!" he said. "Oh, not inside!"

"Well, okay," I said. "We'll sit here for now."

He sat on the step below me and looked up, his face wet and shining in the moonlight. I fished in the pocket of my robe for a tissue and swabbed his eyes. Then I gave him another. "Blow," I said. He did. "Now, from the beginning."

"I—" He had recourse to the tissue again. "I came to get the capsule. It was the only way I could think of to get the man."

Silence crept around his flat statement until I said, *"That's* the beginning?"

Tears started again. I handed him another tissue. "Now look, Vincent, something's been bothering you for several days. Have you talked it over with your parents?"

"No," he hiccoughed. "I'm not supp-upposed to listen in on people. It isn't fair. But I didn't really. He came in first and I can't shut him out now because I know he's in trouble, and you can't *not* help if you know about someone's need—"

Maybe, I thought hopefully, maybe this is still my nap that I'll soon wake from—but I sighed. "Who is this man? The one that's orbiting?"

"Yes," he said, and cut the last hope for good solid sense from under my feet. "He's up in a capsule and its retro-rockets won't fire. Even if he could live until the orbital decay dropped him back into the atmosphere, the re-entry would burn him up. And he's so afraid! He's trapped! He can't get out!"

I took hold of both of his shaking shoulders. "Calm down," I said. "You can't help him like this." He buried his face against the skirt of my robe. I slid one of my hands over to his neck and patted him for a moment.

"How did you make the capsule move?" I asked. "It *did* move, didn't it?"

"Yes," he said. "I lifted it. We can, you know—lift things. My People can. But I'm not big enough. I'm not supposed to anyway, and I can't sustain the lift. And if I can't even get it out of

this canyon, how can I lift clear out of the atmosphere? And he'll die—scared!"

"You can make things fly?" I asked.

"Yes, all of us can. And ourselves, too. See?"

And there he was, floating! His knees level with my head! His shoe laces drooped forlornly down, and one used tissue tumbled to the steps below him.

"Come down," I said, swallowing a vast lump of some kind. He did. "But you know there's no air in space, and our capsule— *Good Lord! Our* capsule? In *space?*—wasn't airtight. How did you expect to breathe?"

"We have a shield," he said. "See?" And there he sat, a glint of something about him. I reached out a hand and drew back my stubbed fingers. The glint was gone. "It keeps out the cold and keeps in the air," he said.

"Let's—let's analyze this a little," I suggested weakly, nursing my fingers unnecessarily. "You say there's a man orbiting in a disabled capsule, and you planned to go up in our capsule with only the air you could take with you and rescue him?" He nodded wordlessly. "Oh, child! Child!" I cried. "You couldn't possibly!"

"Then he'll die." Desolation flattened his voice and he sagged forlornly.

Well, what comfort could I offer him? I sagged, too. Lucky, I thought then, that it's moonlight tonight. People traditionally believe all kinds of arrant nonsense by moonlight. So. I straightened. Let's believe a little—or at least act as if.

"Vincent?"

"Yes,ma'am." His face was shadowed by his hunched shoulders.

"If you can lift our capsule this far, how far could your daddy lift it?"

"Oh, *lots* farther!" he cried. "My daddy was studying to be a regular Motiver when he went to the New Home, but he stopped when he came back across space to Earth again because Outsiders don't accept—oh!" His eyes rounded and he pressed his hands to his mouth. "Oh, I forgot!" His voice came muffled. "I forgot! You're an Outsider! We're forbidden to tell —to show—Outsiders don't—"

"Nonsense," I said, "I'm not an Outsider. I'm a teacher. Can you call your mother tonight the way you did the day you and Gene had that fight?"

"A fight? Me and Gene?" The fight was obviously an event of the neolithic period for Vincent. "Oh, yes, I remember. Yes, I guess I could, but she'll be mad because I left—and I told—and—and—" Weeping was close again.

"You'll have to choose," I pointed out, glad to the bones that it wasn't my choice to make, "between letting the man die or having her mad at you. You should

have told them when you first knew about him."

"I didn't want to tell that I'd listened to the man—"

"Is he Russian?" I asked, just for curiosity's sake.

"I don't know," he said. "His words are strange. Now he keeps saying something like *Hospodi pomelui.* I think he's talking to God."

"Call your mother," I said, no linguist I, "She's probably worried to death by now."

Obediently, he closed his eyes and sat silent for a while on the step below me. Then he opened his eyes. "She'd just found out I wasn't in bed," he said. "They're coming." He shivered a little. "Daddy gets so mad sometimes. He hasn't the most equitable of temperaments!"

"Oh, Vincent!" I laughed. "What an odd mixture you are!"

"No, I'm not," he said. "Both my mother and daddy are of the People. Remy is a mixture 'cause his grampa was of the Earth, but mine came from the Home. You know—when it was destroyed. I wish I could have seen the ship our People came to Earth in. Daddy says when he was little, they used to dig up pieces of it from the walls and floors of the canyon where it crashed. But they still had a life slip in a shed behind their house and they'd play they were escaping again from the big ship." Vincent shivered. "But some didn't escape. Some died in the sky and some died because Earth people were scared of them."

I shivered too and rubbed my cold ankles with both hands. I wondered wistfully if this wasn't asking just a trifle too much of my ability to believe, even in the name of moonlight.

Vincent brought me back abruptly to my particular Earth. "Look! Here they are already! Gollee! That was fast. They sure must be mad!" And he trailed out onto the playground.

I looked expectantly toward the road and only whirled the other way when I heard the thud of feet. And there they stood, both Mr. and Mrs. Kroginold. And he *did* look mad! His—well—rough-hewn is about the kindest description—face frowning in the moonlight. Mrs. Kroginold surged toward Vincent and Mr. Kroginold swelled preliminary to a vocal blast—or so I feared—so I stepped quickly into the silence.

"There's our school capsule," I said, motioning towards the crushed clutter at the base of the boulder. "That's what he was planning to go up in to rescue a man in a disabled sputnik. He thought the air inside that shiny whatever he put around himself would suffice for the trip. He says a man is dying up there, and he's been carrying that agony around with him, all alone, because he was afraid to tell you."

I stopped for a breath and Mr. Kroginold deflated and—amazingly—grinned a wide, attractive grin, half silver, half shadow.

"Why the gutsy little devil!" he said admiringly. "And I've been fearing the stock was running out! When I was a boy in the canyon —" But he sobered suddenly and turned to Vincent. "Vince! If there's need, let's get with it. What's the deal?" He gathered Vincent into the curve of his arm, and we all went back to the porch. "Now. Details." We all sat.

Vincent, his eyes intent on his father's face and his hand firmly holding his mother's, detailed.

"There are two men orbiting up there. The capsule won't function properly. One man is dead. I never did hear him. The other one is crying for help." Vincent's face tightened anxiously. "He—he feels so bad that it nearly kills me. Only sometimes I guess he passes out because the feeling goes away—like now. Then it comes back worse—"

"He's orbiting," said Mr. Kroginold, his eyes intent on Vincent's face.

"Oh," said Vincent weakly, "Of course! I didn't think of that! Oh, Dad! I'm so stupid!" And he flung himself on Mr. Kroginold.

"No," said Mr. Kroginold, wrapping him around with the dark strength of his arms. "Just young. You'll learn. But first learn to bring your problems to your mother and me. That's what we're for!"

"But," said Vincent. "I'm not supposed to listen in—"

"Did you seek him out?" asked Mr. Kroginold. "Did you know about the capsule?"

"No," said Vincent. "He just came in to me—"

"See?" Mr. Kroginold set Vincent back on the step. "You weren't listening in. You were invaded. You just happened to be the right receptivity. Now, what were your plans?"

"They were probably stupid, too," admitted Vincent, "But I was going to lift our capsule—I had to have something to put him in—and try to intercept the orbit of the other one. Then I was going to get the man out—I don't know how—and bring him back to Earth and put him down at the FBI building in Washington. They'd know how to get him home again."

"Well," Mr. Kroginold smiled faintly. "Your plan has the virtue of simplicity, anyway. Just nit-picking, though, I can see one slight problem. How would the FBI ever convince the authorities in his country that we hadn't impounded the capsule for our own nefarious purposes?" Then he became very business-like.

"Lizbeth, will you get in touch with Ron? I think he's in Kerry tonight. Lucky our best Motiver is This End right now. I'll see if Jemmy is up-canyon. We'll get his okay on Remy's craft at the Selkirk. If this has been going on for

very long, time is what we've got little of."

It was rather anti-climactic after all those efficient rattlings-out of directions to see the three of them just sit quietly there on the step, hands clasped, their faces lifted a little in the moonlight, their eyes closed. My left foot was beginning to go to sleep when Vincent's chin finally dropped, and he pulled one hand free from his mother's grasp to curl his arm up over his head. Mrs. Kroginold's eyes flipped open. "Vincent?" Her voice was anxious.

"It's coming again," I said. "That distress—whatever it is."

"Ron's heading for the Selkirk now," she said, gathering Vincent to her. "Jake, Vincent's receiving again."

Mr. Kroginold said hastily to the eaves of the porch, "—as soon as possible. Hang on. Vincent's got him again. Wait, I'll relay. Vince, where can I reach him? Show me."

And darned if they didn't all sit there again—with Vincent's face shining with sweat and his mother trying to cradle his twisting body. Then Mr. Kroginold gave a grunt, and Vincent relaxed with a sob. His father took him from his mother.

"Already?" I asked. "That was a short one."

Mrs. Kroginold fished for a tissue in her pocket and wiped Vincent's face. "It isn't over yet," she said. "It won't be until the capsule swings behind the Earth again, but he's channeling the distress to his father, and he's relaying it to Jemmy up-canyon. Jemmy is our Old One. He'll help us handle it from here on out. But Vincent will have to be our receptor—"

" 'A sort of telepathy' ", I quoted, dizzy with trying to follow a road I couldn't even imagine.

"A sort of telepathy." Mrs. Kroginold laughed and sighed, her finger tracing Vincent's cheek lovingly. "You've had quite a mishmash dumped in your lap, haven't you? And no time for us to be subtle."

"It *is* bewildering," I said. "I've been adding two and two and getting the oddest fours!"

"Like?" she asked.

"Like maybe Vincent's forefathers didn't come over in the Mayflower, but maybe a spaceship?"

"But not quite Mayflower years ago," she smiled. "And?"

"And maybe Vincent's Dad *has* seen no life on the moon?"

"Not so very long ago," she said. "And?"

"And maybe there *is* a man in distress up there and you *are* going to try to rescue him?"

"Well," said Mrs. Kroginold. "Those fours look all right to me."

"They *do?*" I goggled. Then I sighed, "Ah well, this modern math! I knew it would be the end of me!"

Mr. Kroginold brought his eyes back to us. "Well, it's all set in motion. Ron's gone for the craft.

He'll be here to pick us up as soon as he can make it. Jemmy's taking readings on the capsule so we'll be able to attempt rendezvous. Then, the Power being willing, we'll be able to bring the fellow back."

"I—I—" I stood up. This was suddenly too much. "I think maybe I'd better go back in the house." I brushed the sand off the back of my robe. "One thing bothers me still, though."

"Yes?" Mrs. Kroginold smiled.

"How *is* the FBI going to convince the authorities of the other country?"

"Ay!" she said, sobering. "Jake—"

And I gathered my skirts up and left the family there on the school porch. As I closed the teacherage door behind me, I leaned against it. It was so dark—in here. And there was such light out there! Why, they had jumped into helping without asking one single question! Then I wondered what questions I had expected—Was the man a nice man? Was he worth saving? Was he an important personage? What kind of reward? *Is there a need*? That's all they needed to know!

I looked at the sleepcoat I hadn't worn yet, but I felt too morning to undress and go to bed properly, so I slid out of my robe and put my dress back on. And my shoes. And a sweater. And stood irresolutely in the middle of the floor. After all! What is the etiquette for when your guests are about to go into orbit from your front porch?

Then there was a thud at the door and the knob rattled. I heard Mrs. Kroginold call softly, "But Vincent! An Outsider?"

"But she isn't!" said Vincent, fumbling again at the door. "She said she isn't—she's a teacher. And I know she'd like—" The door swung open suddenly and tumbled Vincent to the schoolroom floor. Mrs. Kroginold was just outside the outer door on the porch.

"Sorry," she said, "Vincent thinks maybe you'd like to see the craft arrive—but—"

"You're afraid I might tell," I said for her. "And it should be kept in the family. I've been repository for odd family stories before. Well, maybe not *quite*—"

Vincent scrambled for the porch. "Here it comes!" he cried.

I was beside Mrs. Kroginold in a split second and, grasping hands, we raced after Vincent. Mr. Kroginold had been standing in the middle of the playground, but he drifted back to us as a huge—well, a huge *nothing* came down through the moonlight.

"It—where is it?" I wondered if some dimension I didn't know was involved.

"Oh," said Mrs. Kroginold. "It has the unlight over it. Jake! Ask Ron—"

Mr. Kroginold turned his face to the huge nothing. And there it

was! A slender silver something, its nose arcing down from a rocket position to rest on the tawny sands of the playground.

"The unlight's so no one will see us," said Mrs. Kroginold, "and we flow it so it won't bother radar and things like that." She laughed. "We're not the right shape for this year's flying saucers, anyway. I'm glad we're not. Who wants to look like a frosted cupcake on a purple lighted plate? That's what's so In now."

"Is it really a spaceship?" I asked, struck by how clean the lovely gleaming craft was that had come so silently to dent our playground.

"Sure it is!" cried Vincent. "The Old Man had it and they took him to the moon in it to bury him and Bethie too and Remy went with their Dad and Mom and—"

"A little reticence, Son," said Mr. Kroginold, catching Vincent's hand. "It isn't necessary to go into all that history."

"She—she realizes," said Mrs. Kroginold. "It's not as if she were a stranger."

"We shouldn't be gone too long," said Mr. Kroginold. "I'll pick you up here as soon—"

"Pick us up! I'm going with you!" cried Mrs. Kroginold. "Jake Kroginold! If you think you're going to do me out of a thing as wild and wonderful as this—"

"Let her go with us, Dad," begged Vincent.

"With *us?*" Mr. Kroginold raked his fingers back through his hair. "You, too?"

"Of course!" Vincent's eyes were wide with astonishment. "It's *my* man!"

"Well, *adonday veeah* in cards and spades!" said Mr. Kroginold. He grinned over at me. "Family!" he said.

I studiously didn't meet his eyes. I felt a deep wave of color move up my face as I kept my mouth clamped shut. I *wouldn't* say anything! I couldn't ask! I had no right to expect—

"And Teacher, too!" cried Vincent, "Teacher, too!"

Mr. Kroginold considered me for a long moment. My wanting must have been a flaring thing because he finally shrugged an eyebrow and echoed, "And Teacher, too."

Then I nearly died! It *was* so wild and wonderful and impossible and I'm scared to death of heights! We scurried about getting me a jacket. Getting Kipper's forgotten jacket out of the cloak room for Vincent who had come off without his. Taking one of my blankets, just in case. I paused a moment in the mad scramble, hand poised over my Russian-English, English-Russian pocket dictionary. Then left it. The man might not be Russian at all. And even if he was, people like Vincent's seemed to have little need for such aids to communication.

A door opened in the craft. I looked at it, thinking blankly, Ohmy! Ohmy! We had started across the yard toward the craft when I gasped, "The—the door! I have to lock the door!"

I dashed back to the schoolhouse and into the darkness of the teacherage. And foolishly, childishly, there in the dark, I got awfully hungry! I yanked a cupboard door open and scrabbled briefly. Peanut butter—slippery, glassy cylinder—crackers—square cornered, waxy carton. I slammed the cupboard shut, snatched up my purse as though I were on the way to the MONSTER MERCANTILE, staggered out of the door, and juggled my burdens until I could manipulate the key. Then I hesitated on the porch, one foot lifting, all ready to go to the craft, and silently gasped my travel prayer. "Dear God, go with me to my destination. Don't let me imperil anyone or be imperiled by anyone. Amen." I started down the steps, paused, and cried softly, "To my destination *and back!* Oh, please! And back!"

Have you, oh, have you ever watched space reach down to surround you as your hands would reach down to surround a minnow? Have you ever seen Earth, a separate thing, apart from you, and see-almost-all-able? Have you ever watched color deepen and run until it blared into blaze and blackness? Have you ever stepped out of the context in which your identity is established and floated un-anyone beyond the steady pulse of night and day and accustomed being? Have you ever, for even a fleeting second, shared God's eyes? I have! *I have!*

And Mrs. Kroginold and Vincent were with me in all the awesome wonder of our going. You couldn't have seen us go even if you had known where to look. We were wrapped in unlight again, and the craft was flowed again to make it a nothing to any detection device.

"I wish I could space walk!" said Vincent, finally, turning his shoulders but not his eyes away from the window. "Daddy—"

"No." Mr. Kroginold's tone left no loophole for further argument.

"Well, it would be fun," Vincent sighed. Then he said in a very small voice. "Mother, I'm hungry."

"So sorry!" Mrs. Kroginold hugged him to her briefly. "Nearest hamburger joint's a far piece down the road!"

"Here—" I found, after two abortive attempts, that I still had a voice. I slithered cautiously to my knees on the bare floor—no luxury liner, this—and sat back. "Peanut butter." The jar clicked down. "And crackers." The carton thumped—and my elbow creaked almost audibly as I straightened it out from its spasmed clutch.

"Gollee! Real deal!" Vincent

plumped down beside me and began working on the lid of the jar. "What'll we spread it with?"

"Oh!" I blankly considered the problem. "Oh, I have a nail file here in my purse." I was fishing for it amid the usual clutter when I caught Mrs. Kroginold's surprised look. I grinned sheepishly. "I thought I was hungry. But I guess that wasn't what was wrong with my stomach!"

Shortly after the jar was opened and the roasty smell of peanuts spread, Mr. Kroginold and another fellow drifted casually over to us. I preferred to ignore the fact that they actually drifted—no steps on the floor. The other fellow was introduced as Jemmy. The Old One? Not so old, it seemed to me. But then "old" might mean "wise" to these people. And on that score he could qualify. He had none of the loose ends that I can often sense in people. He was—whole.

"Ron is lifting," said Mr. Kroginold through a mouthful of peanut butter and crackers. He nodded at the center of the room where another fellow sat looking intently at a square, boxy-looking thing.

"That's the amplifier," Jemmy said, as though that explained anything. "It makes it possible for one man to manage the craft."

Something buzzed on a panel across the room. "There!" Mr. Kroginold was at the window, staring intently. "There it is! Good work, Ron!"

At that moment Vincent cried out, his arms going up in their protesting posture. Mrs. Kroginold pushed him over to his father who drew him in the curve of his shoulder to the window, coaxing down the tense arms.

"See? There's the craft! It looks odd. Something's not right about it."

"Can—can we take off the unlight now?" asked Vincent, jerkily, "So he can see us? Then maybe he won't feel so bad—"

"Jemmy?" Mr. Kroginold called across the craft. "What do you think? Would the shock of our appearance be too much?"

"It could hardly be worse than the hell he's in now," said Jemmy, "So—"

"Oh!" cried Vincent. "He thinks he just now died. He thinks we're the Golden Gates!"

"Rather a loose translation." Jemmy flung a smiling glance at us. "But he is wondering if we are the entrance to the afterworld. Ron, can we dock?"

Moments later, there was a faint metallic click and a slight vibration through our craft. Then we three extras stood pressed to the window and watched Mr. Kroginold and Jemmy leave our craft. They were surrounded, it's true, by their shields that caught light and slid it rapidly around, but they did look so unguarded—no, they didn't! They looked right at home and intent on their rescue

mission. They disappeared from the sight of our windows. We waited and waited, not saying anything—not aloud, anyway. I could feel a clanking through the floor under me. And a scraping. Then a long nothing again.

Finally they came back in sight, the light from our window glinting across a mutual protective bubble that enclosed the two of them and a third inert figure between them.

"He still thinks he's dead," said Vincent soberly. "He's wondering if he ought to try to pray. He wasn't expecting people after he died. But mostly he's trying not to think."

They brought him in and laid him on the floor. They eased him out of his suit and wrapped him in my blanket. We three gathered around him, looking at his quiet, tight face. *So young!* I thought. *So young!* Unexpectedly his eyes opened, and he took us in, one by one. At the sight of Vincent, his mouth dropped open and his eyes fled shut again.

"What'd he do that for?" asked Vincent, a trifle hurt.

"Angels," said his mother firmly, "are not supposed to have peanut butter around the mouth!"

The three men consulted briefly. Then Mr. Kroginold prepared to leave our craft again. This time he took a blanket from the Rescue Pack they had brought in the craft.

"He can manage the body alone," said Jemmy, being our inter-com. A little later— "He has the body out, but he's gone back—" His forehead creased, then cleared. "Oh, the tapes and instrument packets," he explained to our questioning glances. "He thinks maybe they can study them and prevent this happening again."

He turned to Mrs. Kroginold. "Well, Lizbeth, back when all of you were in school together in the canyon, I wouldn't have given a sandwiched quarter for the chances of any Kroginold ever turning out well. I sprinkle repentant ashes on my bowed head. Some good *can* come from Kroginolds!"

And Vincent screamed!

Before we could look his way, there was a blinding flash that exploded through every window as though we had suddenly been stabbed through and through. Then we were all tumbled in blinded confusion from one wall of our craft to another until, almost as suddenly, we floated in a soundless blackness. "Jake! Oh, Jake!" I heard Mrs. Kroginold's whispering gasp. Then she cried out, "Jemmy! Jemmy! What happened? Where's Jake?"

Light came back. From where, I never did know. I hadn't known its source even before.

"The retro-rockets—" I felt more of his answer than I heard. "Maybe they finally fired. Or maybe the whole capsule just blew up. Ron?"

"Might have holed us." A voice

I hadn't heard before answered. "Didn't. Capsule's gone."

"But—but—" The enormity of what had happened slowed our thoughts. "Jake!" Mrs. Kroginold screamed. "Jemmy! Ron! Jake's out there!"

And, as suddenly as the outcry came, it was cut off. In terror I crouched on the floor, my arms up defensively, not to my ears as Vincent's had gone—there was nothing to hear—but against the soundless, aimless tumbling of bodies above me. Jemmy and Vincent and Mrs. Kroginold were like corpses afloat in some invisible sea. And Vincent, burrowed into a corner, was a small, silent, humped-up bundle.

I think I would have gone mad in the incomprehensible silence if a hand hadn't clutched mine. Startled, I snatched my hand away, but gave it back, with a sob, to our shipwrecked stranger. He accepted it with both of his. We huddled together, taking comfort in having someone to cling to.

Then I shook with hysterical laughter as I suddenly realized. "'A sort of telepathy'!" I giggled. "They are not dead, but speak. Words are slow, you know." I caught the young man's puzzled eyes. "And of very little use in a situation like this."

I called to Ron where he crouched near the amplifier box. "They are all right, aren't they?"

"They?" His head jerked upward. "Of course. Communicating."

"Where's Mr. Kroginold?" I asked. "How can we ever hope to find him out there?"

"Trying to reach him," said Ron, his chin flipping upward again. "Don't feel him dead. Probably knocked out. Can't find him unconcious."

"Oh." The stranger's fingers tightened on mine. I looked at him. He was struggling to get up. I let go of him and shakily, on hands and knees we crawled to the window, his knees catching on the blanket. For a long moment, the two of us stared out into the darkness. I watched the lights wheel slowly past until I re-oriented, and we were the ones wheeling. But as soon as I relaxed, again it was the lights wheeling slowly past. I didn't know what we were looking for. I couldn't get any kind of perspective on anything outside our craft. Any given point of light could have been a dozen light-years away—or could have been a glint inside the glass—or was it glass?—against which I had my nose pressed.

But the stranger seemed to know what he was looking for. Suddenly I cried out and twisted my crushed fingers to free them. He let go and gestured toward the darkness, saying something tentative and hopeful.

"Ron!" I called, trying to see what the man was seeing. "Maybe

—maybe he sees something." There was a stir above me and Jemmy slid down to the floor beside me.

"A visual sighting?" he whispered tensely.

"I don't know," I whispered back. "Maybe he—"

Jemmy laid his hand on the man's wrist, and then concentrated on whatever it was out in the void that had caught the stranger's attention.

"Ron—" Jemmy gestured out the window and—well, I guess Ron gestured with our craft—because things outside swam a different way until I caught a flick or a gleam or a movement.

"There, there, there," crooned Jemmy, almost as though soothing an anxious child. "There, there, there, Lizbeth!"

And all of us except Ron were crowded against the window, watching a bundle of some sort tumbling toward us. "Shield intact," whispered Jemmy. "Praise the Power!"

"Oh, Daddy, Daddy!" choked Vincent against his whitened knuckles. Mrs. Kroginold clung to him wordlessly.

Then Jemmy was gone, streaking through our craft, away outside from us. I saw the glint of his shield as he rounded our craft. I saw him gather the tumbling bundle up and disappear with it. Then he was back in the craft again, kneeling—unglinted—beside Mr. Kroginold as he lay on the floor. Mrs. Kroginold and Vincent launched themselves toward them.

Our stranger tugged at his half-shed blanket. I shuffled my knees off it and he shivered himself back into it.

They had to peel Mr. Kroginold's arms from around the instrument packet before they could work on him—in their odd, undoing way of working. And the stranger and I exchanged wavery smiles of congratulations when Mr. Kroginold finally opened his eyes.

So that was it. After it was all over, I got the deep, breath-drawing feeling I get when I have finished a most engrossing book, and a sort of last-page-flipping—feeling, wistfully wishing there were more—just a little more!

Oh, the loose ends? I guess there were a few. They tied themselves quite casually and briskly in the next few days.

It was only a matter of moments after Mr. Kroginold had sat up and smiled a craggy smile of satisfaction at the packet he had brought back with him that Ron said, "Convenient." And we spiraled down—or so it felt to me to the Earth beneath while Jemmy, fingers to our stranger's wrist, communicated to him in such a way that the stranger's eyes got very large and astonished and he looked at me—at *me!*—questioningly. I

nodded. Well, what else could I do? He was asking something, and, so far, every question around these People seemed to have a positive answer!

So it was that we delivered him, not to the FBI in Washington, but to his own doorstep at a launching base somewhere deep in his own country. We waited, hovering under our unlight and well flowed, until the door swung open and gulped him in, instrument packet, my blanket, and all.

Imagination boggles at the reception there must have been for him! They surely knew the capsule had been destroyed in orbit. And to have him walk in—!

And Mr. Kroginold struggled for a couple of days with "Virus X" without benefit of the company doctor, then went back to work.

A couple of weeks later they moved away to another lab, half across the country, where Mr. Kroginold could go on pursuing whatever it is he is pursuing.

And a couple of days before they left, I quite unexpectedly gave Vincent a going-away gift.

That morning Vincent firmed his lips, his cheeks coloring, and shook his head. "I can't read it," he said, and began to close the book.

"*That* I don't belive," I said firmly, my flare of exasperation igniting into sudden inspiration. Vincent looked at me, startled. He was so used to my acceptance of his reading block that he was shaken a bit.

"But I *can't,*" he said patiently.

"Why not?" I asked bluntly.

"I have a block," he said as flatly.

"What triggers it?" I probed.

"Why—why Mother says anything that suggests unhappy compulsion—"

"How do you know this story has any such thing in it?" I asked. "All it says in the title is a name—*Stickeen.*"

"But I *know,*" he said miserably, his head bent as he flicked the pages of the story with his thumb.

"I'll tell you how you know," I said. "You know because you've read the story already."

"But I haven't!" Vincent's face puckered. "You only brought this book today!"

"That's true," I said. "And you turned the pages to see how long the story was. Only then did you decide you *wouldn't* read it—again!"

"I don't understand—" Wonder was stirring in his eyes.

"Vincent," I said, "you read this whole story in the time it took you to turn the pages. You gulped it page by page and that's how you know there's unhappy compulsion in it. So, you refuse to read it—again."

"Do—do you really think so?" asked Vincent in a hopeful half whisper. "Oh, Teacher, can I really read after all? I've been so

ashamed! One of the People, and not able to read!"

"Let's check," I said, excited, too. "Give me the book. I'll ask you questions—" And I did. And he answered every single one of them!

"I can read!" He snatched the book from me and hugged it to him with both arms. "Hey! Gene! I can read!"

"Big deal!" said Gene, glancing up from his labor on the butcher paper spread on the floor. He was executing a fanciful rendition, in tempera, of the Indians greeting Columbus in a chartreuse, magenta and shriek-pink jungle. "I learned to read in the first grade. Which way do a crocodile's knees bend?"

"All you have to remember," I said to a slightly dashed Vincent, "is to slow down a bit and be a little less empathetic." I was as pleased as he was. "And to think of the time I wasted for both of us, making you sound out your words—"

"But I need it," he said. "I still can't spell for sour apples!"

Vincent gave me a going-away present the Friday night that the Kroginolds came to say goodbye. We were sitting in the twilight on the school porch. Vincent, shaken by having to leave Rinconcillo and Gene, and still thrilling to knowing he could read, gave me one of his treasures. It was a small rock, an odd crystaline formation that contrived at the same time to be betryoidal. In the curve of my palm it even had a strange feeling of resilience, though there was no yielding in it when I pressed my thumb to it.

"Daddy brought it to me from the moon," he told me, and deftly fielded it as my astonishment let it fall. "I'll probably get another one, someday," he said as he gave it back to me. "But even if I don't, I want you to have it."

Mr. and Mrs. Kroginold and I talked quietly for a while with no reference to parting. I shook them a little with, "Why do you suppose that stranger could send his thoughts to Vincent? I mean, he doesn't pick up distress from everyone, very apparently. Do you suppose that man might be from People like you? *Are* there People like you in that part of the world?"

They looked at each other, startled. "We really don't know!" said Mr. Kroginold. "Many of our People were unaccounted for when we arrived on Earth, but we just assumed that all of them were dead except for the groups around here —"

"I wonder if it ever occurred to Jemmy," said Mrs. Kroginold thoughtfully.

After they left, disappearing into the shadows of the hillside toward MEL, I sat for a while longer, turning the moon-pebble in my hands. What an odd episode! In a month or so it would probably

seem like a distant dream, melting into my teaching years along with all the other things past. But it still didn't seem quite finished to me. Meeting people like the Kroginolds and the others, makes an indelible impression on a person. Look what it did for that stranger—

What *about* that stranger? How was he explaining? Were they giving him a hard time? Then I gulped. I had just remembered. My name and address were on a tape on the corner of that blanket of mine he had been wrapped in. If he had discovered it—! And if things got too thick for him—

Oh, gollee! What if some day there comes a knock on my door and there—!

Stephen Barr returns with a delightful tale about a girl who, after nineteen years of not feeling like getting up, awakens without a superego. There are more gods in the unconscious than the followers of Freud would have us believe, so if there is a moral to this story, it is that you should make sure your shrink does some outside reading.

MISS VAN WINKLE

by Stephen Barr

PSYCHIATRY TELLS US THAT babies are born without a conscience. Some may achieve it spontaneously, but all—it is said—eventually have it thrust upon them. It is then called the superego.

Our heroine, Vanessa, was born in the usual way, but on taking her first breath it turned, not into a cry of disbelief as is common among babies, but into a snore. She had inherited a somnolent inclination from a remote, upstate New York ancestor and remained in this nearly unapproachable condition until she was nineteen. I say "nearly" because, as every psychiatrist knows, we are, whether consciously or not, aware of everything that goes on about us. So, in the rosy convolutions of her sleeping brain, she developed a good enough knowledge of English, though her minikin tongue had not yet essayed the act of speech.

Speech had gone on in her vicinity: "I think it's too hot in here for her," or, "When do you think she'll wake, Doctor?" and so on, but who would attempt to rebuke or teach morals to a sleeping child? She lay there, taking it all in and growing quite normally, but into a more than normal beauty. Her optimistic mother kept buying her clothes—first babies', then little girls', then eventually size 12—so that when she finally awoke she got up and got dressed. Don't ask me how: she

just did, and she was alone—tall, beautiful, exquisitely turned out and totally without a superego. Then she walked downstairs.

Her parents, when they got over their surprise, found her to be even more lovely and winning than they had expected, and her speech was in no way childish. The only puzzling thing was a trace of a Viennese accent.

Her first words were, "This is a very nice dress, Mother, but I think I shall have to raise the hem a little." Later on she said she would like to learn to read, but she kept putting it off. The young men who came around were picked by her parents on the basis of intelligence, a neat appearance and good upbringing, but they were one and all uneasy with her. Just why, it is hard to say, and they did not know themselves. True, she had no conscience, but she had a heart—they are not after all synonymous. Yet there was something about her that gave them pause. A heart, if warm enough, is insurance against hurting others, and a good mind may help protect its owner, but these two endowments, beneficient as they may be, will not stop the censorious. Mesdames Grundy and Rumor put their heads together, and in no time there was Talk.

When it reached the Van Winkles, Senior, they were confounded. How could this possibly be?—they asked one another. Vanessa had not heard the talk because no one had the nerve to repeat it to her. To look into Vanessa's eye was like looking into an X-ray tube: you could see in, but that wasn't the half of it.

A young man of indeterminate origin, named Walkly, somehow managed to gain entrance to the Van Winkle household. These things are done in a manner quite similar to cutting in at a coming-out party. The Lord knows how you got invited, or why you came, but all you have to do is walk across the dance floor and tap a more eligible man, and next thing you know, you are holding the belle of the ball in your arms. Walkly was not holding Vanessa in his arms, however. Here for the first time was a man who, though plainly attracted, kept his distance. It was most peculiar.

"My parents disapprove of you," she said, but he didn't seem moved. "They say you inherited a fortune, but lost it."

"I didn't lose it," Walkly said. "I like to be liked and all that, but not for my money, so I gave it to Harvard University. It was nearly a million."

"Golly!" Vanessa said. "Why Harvard?"

"Well, you see, I went to Yale . . ."

"I don't follow you, but I expect that's because I'm only six months old."

"Really?" Walkly said, looking at her closely. "Is it true about you sleeping for nineteen years?"

"Of course not. I was awake the whole time—I just didn't feel like getting up. Why aren't you scared of me? All the other young men are."

"You're the only person I'm not afraid of."

"You don't act scared of my parents."

"That's merely protective coloration. Did you know there's a lot of talk about you?"

"There is? What sort of talk?"

"Bad. That's why I wanted to meet you. The kind of people who do the talking is always very revealing: in this instance if the people who were doing the talking had been praising you, I'd have run like hell. Would you like me to teach you to read?"

"All right."

After the first lesson Walkly said, "You're very clever. Only I don't think you were awake all that time."

Vanessa smiled—others might have blushed but, then, they have superegos. When Walkly left she took her mother aside.

"Walkly says there's been a lot of talk about me," she said.

Her mother's face stiffened. "I don't like that young man, dear, and I wish you wouldn't call people by their last names."

"He doesn't mind, Mother."

"That's neither here nor there," Mrs. Van Winkle said. "It's not done. And I wish you'd stop seeing him—there's something . . . *cold* about him."

Vanessa looked thoughtful and shook her head. "Just because something isn't done," she said, "is that any reason I mustn't?"

"Yes, dear."

"But I don't understand."

"I know, dear. We'll have to have a talk about it sometime."

"You keep saying that, Mother, but we never have the talk. Oh, that reminds me: what *was* all the talk about me?"

"I haven't heard a word of it."

Being as she was, Vanessa took this at its face value, but her mother was rather honest, too, and proceeded to give the show away. "That is," she amended, "I've only been told there *was* talk . . ."

"That's what I meant," Vanessa said. "I've noticed that's the way people do it—they say there's been talk, and you ask them what, and they tell you. Only that way they think they aren't gossiping because *you* asked them."

"I don't think I quite follow, dear."

When her father came home Vanessa decided to ask him. Having a well-developed conscience, Mr. Van Winkle at once denied having heard any talk at all, but then he too gave the show away. "I think you ought to show more discretion, though."

"That means not letting them know what you're doing, doesn't it?"

"Er . . . yes." Mr. Van Winkle smiled. "The school principal was here and he says you have to go to school."

"Walkly's teaching me to read," Vanessa replied. "And anyway it doesn't apply if you're over sixteen, and I'm nineteen. Walkly said so."

Mr. Van Winkle's face betrayed aversion for Walkly but approbation of his views. "I told the principal under the circumstances it might be better to have a tutor, but he said it was a special case."

Mrs. Van Winkle came in and did not at first see her daughter. "Oh, John!" she said in a loud whisper, "that dreadful Helen Potter from the P.T.A. is here! She says if Vanessa goes to the school she'll—" She stopped as she caught sight of Vanessa.

"She'll what, Mother?"

"Oh dear, I wish you'd been more . . . I mean, less . . ."

"Well, I'm not going to school, so they can all shut up. And why does the principal insist that I go, and the others insist that I don't? They all sound crazy."

Mrs. Potter had been listening at the door, and she came in full of indignation. "The very idea!" she cried. "So now *we're* crazy, are we? Fine thing! Letting her talk like that in front of guests!"

"It wasn't in front of you," Vanessa pointed out. "You were eavesdropping. You know, I've often wondered why it's called that: it hasn't anything to do with—"

"Brazen!" Mrs. Potter interjected loudly. "That's what *I* call it!" She was unaware that the school principal—who also happened to be her husband—wanted Vanessa to be in the school, until she overheard it, and it confused her. "If you can't teach your daughter to behave, Mrs. Van Winkle, I think it would be best to place her in an institution!"

"Well, really!" Mrs. Van Winkle began, and her husband said, "Now just hold on a minute, Mrs. Potter—Vanessa is, in effect, very young and unaccustomed to the world—"

"I wouldn't describe her behavior that way!" Mrs. Potter interrupted. "She . . ." She turned to include Vanessa in the denunciation, but the girl was lying on the sofa, fast asleep.

"Oh dear!" Mrs. Van Winkle said. "She often goes to sleep when people . . . er, talk crossly, and it takes ever so long to wake her . . ." She went and sat by her daughter and patted her cheek, but without result. Mrs. Potter sniffed disdainfully, but as she seemed to have lost her audience, she left.

Vanessa slept through till the

next afternoon, and then went to the summerhouse at the end of their garden in hopes that Walkly might turn up—they had used it as a meeting place. It was there, she felt, that they had become almost intimate, conversationally. She had asked him if he hadn't kept *any* of the million dollars. "I mean enough so that you don't have to work?" she added.

"Oh, I like my work," he replied. "And I make a fair living at it, too."

Why had he told her that? Did it mean anything personal? They were interrupted by a helicopter, and the subject was dropped. Her meditations were interrupted this time by the appearance of Mr. Potter, the school principal. "Your mother said I'd find you here," he said in the way one talks to a child—with a fixed and unrelated smile. Otherwise he was athletic and quite handsome. "I would like to talk to you."

"All right, but not about school. I'm not going. Besides, your wife said she'd do something if I did. She didn't say what, though."

Mr. Potter's face showed annoyance—which often resulted from the mention of his wife. "Mrs. Potter perhaps does not realize the . . . er, situation."

"The situation," Vanessa said, "is that I don't intend to go. I'm nineteen, so I don't have to."

Mr. Potter disliked intensely to have people say they didn't have to do something he proposed, and he tried to hold onto his temper.

"You know," Vanessa said with her head on one side, "you're really very attractive." She leaned forward and kissed him.

Funny—she thought to herself—I wouldn't dare do this to Walkly. . . . What Mr. Potter's reactions might have been will never be known as there were now two almost simultaneous interruptions. The first was the arrival of a very thin man of about forty-five who, on seeing them, said, "Ah . . ." as though he was having his throat examined. He was Dr. Spode, and he had been told by Mrs. Van Winkle that he would find Vanessa in the summerhouse. He was a general practitioner who had psychiatric aspirations, insecurely based on having majored in psychology before premed. The other interruption was Mrs. Potter.

She had driven her car down the lane that led by the summerhouse, and her worst suspicions were confirmed. She stopped the car and emerged from it, her eyes blazing. "Harold!" she shouted. "What is this I see?" The miscreants drew apart.

Dr. Spode saw his chance and took, or attempted to take, charge. "Now, Mrs. Potter," he said soothingly, "everything is going to be all right. Mr. Potter I'm sure was just trying to calm our patient.

Perhaps it might be best if—"

"Calm her, indeed!" Mrs. Potter said, fortissimo. "The hussy!" She made her way through a hedge and into the summerhouse, panting. Mr. Potter flinched ever so slightly and tried to look innocent yet commanding—an unconvincing combination. Dr. Spode felt that he still had the ascendancy and was about to prescribe, but the Van Winkles, Senior, arrived, drawn by the extreme audibility of Mrs. Potter.

"I wish you wouldn't shout so at Vanessa," Mrs. Van Winkle said. "She's liable to—"

"Well, I like that!" said Mrs. Potter. "She—"

"Be quiet, Helen!" said Mr. Potter. "I—"

"There's a young man over there," said Dr. Spode, pointing. Walkly was visible next to the house, but when he saw the intense tableau he disappeared nervously as if into a rabbit hole.

"Oh, *Lord!*" Mr. Van Winkle said. "Vanessa's gone to sleep again!"

This time there seemed to be no waking Vanessa—Dr. Spode had asked for a consultation, and the specialists agreed she was in a trance like the original one. Every attempt was made to rouse her, but all she did was murmur Walkly's name. Finally they shrugged, presented their bills and departed. The Van Winkles were in despair. Weeks went by—Dr. Spode dropped in from time to time, but was at a loss, and Walkly called every day to ask for news but never got further than the door mat.

At last her parents held their own consultation.

"I suppose we owe it to her to at least give it a *try* . . ." her father said, and her mother nodded her head reluctantly.

"I suppose so, but I don't approve of him . . ."

So that afternoon when Walkly called he was asked in.

"I really don't know what you can do that the doctors can't," Mr. Van Winkle said, "but she keeps murmuring your—"

"Oh, I know what to do," Walkly broke in, and started for the stairs. Mrs. Van Winkle put out her hand to stop him, but thought better of it. "I'm afraid from a medical point of view you'd think what I'm going to do is a bit silly," Walkly said. "But there's nothing to get worried about—it's a sort of classical situation." He smiled nervously and went on up.

When he got there he looked at Vannessa, who murmured "Walkly," and he bent over and kissed her on her beautiful mouth.

"If you'll marry me," she said, "I'll wake up."

"Of course. That's what I've been driving at all along."

"You have?" she said, opening

her eyes. "And how did you know this would do the trick?"

"Well, it's a hobby of mine."

"You mean kissing people?"

"No, of course not. I mean genealogy."

"You mean Van *Winkle?* That was just Washington Irving's—"

"No. I mean your mother's maiden name: Prynne. I suppose it's a silly sort of hobby—looking up family lines."

"Well, what *about* Prynne? It's just New England . . ."

"It's a form of the Norse name, Prunnhilt."

"And?"

"Same as Brünnhilde . . ."

"Oh." She considered for a moment. "Well, that's your hobby, but seeing as we're going to get married, don't you think you ought to tell me what your line of work is? You never did, you know."

"That's sort of silly, too, when you come to think of it: I'm a psychiatrist."

In this new age of audio/visual extravagances (e. g., multimedia productions, magazines that come in boxes, magazines—so we are reliably informed—that come as boxes that you climb into), John Sladek has evidently done some thinking about the future of the book as a flat, printed thing that you keep on a shelf, and he has come up with this amazing report.

A REPORT ON THE MIGRATIONS OF EDUCATIONAL MATERIALS

by John Sladek

As Edward Sankey stepped from his limousine, he involuntarily glanced up. The sky was a flat, glazed blue, empty of clouds. The corner of his eye caught movement: a ragged line of specks. Birds? He did not wish to look directly at them to find out. Lowering the black brim of his homburg against them, Sankey moved on into the courthouse.

Preston, the other committee member, was already at his table, laying out batches of documents like a game of solitaire. These would be new depositions from witnesses of the alleged migrations. Preston seemed to be sorting them by some intricate system of his own.

"You look as if you had a rough night, Ed," he murmured. "Hope you're ready to hear our last witnesses today. I think we can wrap up the report by Thursday afternoon and get a long weekend out of this."

"I—something happened last night, Harry." Sankey dropped into a chair and unfastened the top button of his overcoat with gloved fingers. "I—I think I saw something myself. And not only that, I—"

"Haven't got time to go into it now, old sport. We've got fifty witnesses out there to interview, and all these statements to read. Try to pull yourself together for now, and you can tell me all about it at lunch."

Sankey tried to take his partner's advice. Yet all through the morning, even as he listened to testimony, he found his thoughts filled with the events of last night.

He was sitting in the reading nook, a warmer, cozier room than his library. At midnight Sankey found himself dozing over a lukewarm cup of chocolate and the report, in execrable police English, of one Patrolman H. L. Weems:

"We received a call from the protection agency who handles the Waxman Collection of manuscripts. They reported a broken window. We proceeded to the scene. We arrived at 10:45. No other doors or windows were open. The broken glass lay outside, like the window was broken outwards. There was a book found lying in the grass. Subsequently we found no other book missing. The book was damaged by broken glass. It was a copy of *The Nürnburg Chronicle,* a rare book and one of the first printed books."

Suddenly Edward caught his breath. The sound—if a sound there had been—seemed to come from the library. Marian, he supposed, looking for a sleep-inducing novel.

The final witnesses were government experts. Bates of the Wildlife Commission was a small, balding man with clownish tufts of hair over his ears and circumflex eyebrows that made him seem utterly astonished by everything he saw.

"As this chart shows, the migrations are not just southward, but toward a specific point in the Brazilian jungle. The density of migrants increases porportionately as one approaches this point. We have asked the Air Force to overfly this area and report, but it seems conventional planes were unable to get through. The air is literally filled with—ah—migrants."

"What about high-altitude reconnaissance planes?" Preston asked, his voice hoarse from the week's strain.

"They have flown over and photographed the area extensively, but the photographs show nothing of special import."

The thumping began again. Sankey frowned, looking at a report of dubious significance:

"Librarian Emma Thwart, 51, reports an unknown assailant hurled a large dictionary at her from behind. The accompanying photos are of Miss Thwart's

shoulder bruises. If . . ."

There was a crash of glass, and Sankey came to his feet. Moving almost automatically to the closet, he selected a golf club and crept to the library door. He turned out the light behind him, slipped an arm inside the door and switched on the library light. In one movement, he kicked the door back and ducked.

There was no one in the room. One pane high in the French windows had been broken, but they appeared to be still locked. Four or five bound volumes of early quarterlies were missing from one end of the shelf, he noticed, including the first volumes of *Dial* and *Transition*. They would be costly to replace, he thought, glancing around.

Something struck him in the back of the head, hard. He fell, recalling for no reason the photos of Miss Thwart's bruises. . . .

Mr. Tone of the Library of Congress was speaking.

"We seem to have a correlation between the migrants and the rate of book usage—a negative correlation, I might add," he said in a pompous voice. "We thus find that the rare book collections are hardest hit. It is no surprise to learn that the 'remaindered' shelves of bookstores are being picked clean." He handed out Mimeographed sheets of statistics.

"But isn't it a fact, Mr. Tone, that the rate of migrations has actually increased? And wouldn't this imply that more books of all types are disappearing?"

Tone licked papery lips with a pale tongue. "Yes. And in fact, the books now disappearing are progressively more well-used types. According to our latest estimates, the entire book output of the world will be gone by—" he checked a notebook "—by the twenty-second of this month."

"That's Friday, isn't it?" asked Preston.

"Yes, I believe so."

"Right. We'll put it into the record as Friday, the twenty-second of April."

Sankey felt he had not been unconscious for more than a few seconds, yet the entire shelf of quarterlies was now missing. He staggered to his feet, the useless mashie still gripped in his fist, and looked about for his assailant.

There was a noise down behind the desk, as of a bird beating its broken wing against the floor. He yanked the desk back and raised the iron.

Volume I of Gibbon's *The Decline and Fall of the Roman Empire* flopped back and forth, fanning its leaves madly. The binding was broken and torn—no doubt from smashing his window or knocking him down! So this

was what had helped the quarterlies escape! Sankey tried to think of his blood pressure, but suddenly all his thought was concentrated in the fingers that held the golf club. Savagely he whipped it down at the fluttering thing on the floor, again and again, watching its thrashing cover pulp and shred. . . .

The witnesses, amateur and expert, had strong views on the causes of the migrations. While many of the amateurs gave supernatural explanations or referred to rats leaving a sinking ship, the *deformation professional* was clearly no less responsible for many distorted opinions. A psychologist insisted that cold war hysteria and the stress of modern living were producing mass hallucinations; people were unknowingly destroying or hiding books, he said.

A meteorologist tried to relate the migrations to atmospheric disturbances caused by sunspot activity. Even when his "peculiar wind" theory was proven inadequate, he clung to it childishly.

Bates of the Wildlife Commission hazarded a guess that the books were trying to return to a state of nature. "It makes sense," he insisted. "They came from trees. Who knows but what they've been conscious, if only on some chemical level, of their origins? They've been longing to return to the jungle, and now they are doing it."

Mr. Tone wondered if books felt unloved and rejected.

"These educational materials," he said. "They stand there, week after week, unread. How would you feel? You'd commit suicide. And that is just what they are doing, killing themselves like lemmings. I've been around books all my life, and I think I'm qualified to say I understand them."

Sedley of the NASA explained how books flew, but was reluctant to assign a meaning to their flight. "The way we figure it, they convert some small part of their mass into energy, in some way we don't understand yet. Then they just—well, just flap their covers.

"Anything flat can fly, that part is easy. But as for *why* they fly, I'd hate to guess. Maybe Russia could answer that question quicker than I can. I say no more."

Marian was watching the migrations on television when Sankey reached home that evening.

"Telephone books over Florida," she said gaily. "Millions of them, darling."

He glanced at the large, slow-flapping, graceful creatures for only a moment before going directly up to bed. Later he would get up to try dealing with the final batch of reports, he promised himself.

The ache in the back of his head was worse when he awoke late in the evening. Though Sankey tried to examine reports in the reading nook, his vision was blurred with pain, and he could not ignore the thumping sounds from the library.

Marian looked in to say goodnight.

"If you want a book, dear," he said carefully, "you'd better let me get it for you. The library really isn't safe tonight."

"Oh, goodness no!" she said. "I wouldn't think of letting you go in there again for any reason! Anyway, I'm getting to sleep early tonight, I hope. Big doings in town tomorrow."

"Eh? What's that?"

"They say there's a really huge flock passing over the city at noon."

Sankey and Preston worked on the draft of their report for only two hours. At 11:30 they were out on the courthouse roof with binoculars. A dark cloud front along the horizon was, Preston claimed, the forefront of the flock. Sankey trained his binoculars downward, on the crowds.

"There certainly is a holiday atmosphere down there," he observed. "It's as if they were waiting for a parade." He realized even as he said it that he, too, felt that way. Unaccountably, the air had a savor of expected joy for him. He examined his bubbly feelings and questioned them. How ridiculous! What did he come out to see? He ought to go inside and work—but he kept his seat on the parapet.

Below him, traffic was stalled for miles in every direction, and pedestrians had spilled out into the street. Many drivers had given up, switched off their engines, and climbed upon their car roofs to watch. Here and there were people with books under their arms; they would probably release them to see if they joined the flock. Hawkers moved up and down, dispensing cheap paperbacks from cartons.

"Here they come!" Harry Preston cried, leaping up. The cloud had advanced, and now Sankey could see the individual particles of which it was made. Through binoculars he could just make out the shapes of the leaders, which were now flapping steadily. They rose in an heroic effort to pull the flock up enough to clear the city. These were strong, heavy, clothbound ledgers and reference works, and the books rising behind them, he guessed by their wedge formations, would be encyclopedias. There were perhaps ten thousand sets, perhaps a million, he could not guess. A courthouse window smashed somewhere below; a set of law references rose in a lazy spiral, beating their strong, hard covers.

Myriads of volumes of all types came on then, grouped now by color, now by age. He noted one giant hymnal, its parchment leaves opening downward to expose square, black single notes, each larger than a human hand. It was accompanied by a host of tiny old psalters or books of hours, he could not be sure which, hovering like ministering cherubim. Immediately behind them were serried ranks of textbooks in gray covers, flapping their pictureless, colorless leaves in unison. Old medical books with brilliant plates flew over, their leaves sodden, dripping from some recent shower. Close behind these were slim volumes of poetry in green limp leather, blue burlap or brown wrapping paper; Sankey was surprised to find these needed as much effort as the rest to stay aloft. Behind them fluttered beautiful loose-leaf cookbooks and gay picture magazines.

Here was all of literature, all of philosophy, all modern and ancient sciences, the sum of written thought. Sankey trained his binoculars on nearer titles that flashed by: Pascal's *Pensées* in a small indigo volume; Whitman's *Leaves of Grass* in olive green; *Rembrandt* in burnt umber; *Training the Collie* in white, and a small black pocket Bible. Here were the last living records of civilized man: almanacs, bankbooks, address books, diaries, borrowed violet volumes from libraries. They fluttered and twinkled a thousand colors against the dimming sunlight (dimmed, he reminded himself, by other myriads like them): cheap paperback thrillers alongside *Tractatus Logico-Philosophicus;* Voltaire by Aquinas; Rabelais next to Elizabeth Barrett Browning.

And now the crowds below were holding up their volumes, spread face-down across their forearms, lofting them to the stinging wind. With a great, deep applause of clattering pages, these thousands of books rose to join the flock above.

"Wish we had something to send up," Sankey shouted over the noise.

"Checkbooks! How about checkbooks?"

The two gray-haired men brought out their black checkbooks and solemnly flung them to the breeze. The thin, awkward things soared for a moment uncertainly, then began to flap their leathern wings with great energy.

"There must be something else," Preston complained.

"Why not the draft of the report?"

"Why not? Who would want to read it anyhow, now: 'A Report on the Migrations of Educational Materials'."

They lifted the half-completed draft from Preston's briefcase and balanced it a moment on the

building's parapet. The spring clip at one side held the pages in a sort of book form, Sankey supposed. It might work.

"After you," he said, stepping back.

Preston opened the batch of paper, lifted it like a shot putter and threw it straight out from the roof. It dipped, flapped shut and fell. Just as Sankey groaned, the bundle opened its wings once more, several floors below them, and began to fly.

It climbed fast, a magnificent patch of white against the dark cloud. Through the binoculars Sankey watched it join its brethren and turn itself toward the south. It was soon out of sight.

Coming next month . . .

is the month of December, which in itself, we admit, is not enough to generate a headlong rush to the newsstands for our January issue. So— We asked Hugo award-winner **Harlan Ellison** to do a special Holiday yarn for us, and he has come up with a story that defies generalized description. It is titled SANTA CLAUS VS. S.P.I.D.E.R. It has a Santa Claus, sort of; it has hideous aliens; it has Mayor Richard Daley of Chicago; it does not have a dull or unfunny moment. If you've ever wondered whether there really is a Santa Claus; if you've ever wondered whether there really is a Ronald Reagan, you cannot afford to miss this story.

Mr. Ellison received two Hugos—for best short story and best dramatic presentation—at this fall's World Science Fiction Convention in Berkeley, California. The award for best novella was won by **Anne McCaffrey,** for her story "Weyr Search." She is the first woman ever to win a Hugo, and we are pleased to announce that the January issue will feature a new sf novelet by Anne McCaffrey called A MEETING OF MINDS. It's a superior story.

The January issue is on sale November 26.

Leonard Tushnet (GIFTS FROM THE UNIVERSE, *May 1968*) *brings his distinctive brand of storytelling to this tale of Dr. Zvi Ben-Ari, who tracks down a myth and makes an extraordinary discovery in a small tent village in the desert of the Negev.*

THE WORM SHAMIR

by Leonard Tushnet

LIKE MOST OF HIS COLLEAGUES at the Weizmann Institute of Science at Rehovoth, Zvi Ben-Ari, Ph.D. in biochemistry, was an amateur archeologist. But while they used their vacations to dig at Massada or Caesarea, he spent all his spare time reading the Bible and the commentaries thereon, laying the groundwork for their searches. A suggestion of his had led to the discovery of the long-lost smelting plant near Timna. He also had truly predicted that the excavations for the housing project in the Old City of Jerusalem would disclose a series of underground chambers painted with scenes of sacrifices to Phoenician deities.

Dr. Ben-Ari had a simple explanation for his studies. "I don't believe in shoveling and sifting dirt," he said. "That's too haphazard. What do you find if you're lucky? Another piece of parchment, a bill of divorcement? Or a pot full of Herodian coins? Or a stack of broken wine jars? No, the best way is the scientific way. Go to what's at hand, scrape it clean of the overlying encrustations and ornamentations, and try to find the truth that's hidden. In the biblical legends lie buried ancient techniques. Uncovering them is more fun and easier on the back than using a pick and shovel."

His reasoning convinced one of his students, Moshe Gofen, that he was right. Finding a disciple filled Dr. Ben-Ari with enthusiasm. He explained Project Shamir to Moshe.

"When Solomon built the First Temple," he said, "he recalled the words of Exodus 20:25, 'If thou

make an altar of stone unto Me, make it not of hewn stones; for if thy tool be lifted on it, thou hast polluted it.' Iron tools signified the sword and all weapons of war. Iron, therefore, could not be used to hew the stones for a building dedicated to the God of peace and of life. We know from the descriptions of the Temple, nevertheless, that it was not built of rough stones from the quarry but from hewn stones. The legends of the Midrash say in several places that to break the huge rocks Solomon placed on them the worm Shamir, which had the power to break rocks and make iron as brittle as glass merely by its presence. That fantastic fiction must have had some basis in fact, but between the ninth century before the Christian era and the third to the fifth after, the trials and tribulations of the Jews made them remember with longing the glamour and the glory of the great king. The stories of that time, told and retold as they were in the Oral Tradition, became so elaborate that the original fact was lost. It's the job of the scientist to find the fact interred under the fairy tales."

Moshe chuckled. "And you think there really was a worm Shamir?"

"Not at all," Dr. Ben-Ari replied. "Such a creature is as mythologic as the basilisk and the hippogriff. But there was something King Solomon used to break the stones, call it the worm Shamir or what you will. It's our job to find it."

The two men used what little time they had painstakingly going over the commentaries on Kings and Chronicles. From there they went on to the Solomonic legends, both in Hebrew and Arabic. The story of the worm Shamir began to appear in apocryphal fragments in dubiously dated narratives from long before the Hasmonean dynasty. Then there was no mention of it until after the destruction of the Second Temple, when it again occurred in folk tales and miracle stories. The Kabbalists of the medieval German ghettos and the traveling preachers of Poland added so many more fanciful details about the virtues of the worm Shamir that in the most recent stories its original function was forgotten.

All the reading led up blind alleys. One thing, however, was accomplished. Dr. Ben-Ari and Moshe definitely established by their studies that the land of Ophir whence came "gold and algum trees" was not Monomotapaland, as had been suspected, but Eritrea. A British syndicate headed by Sir Albert Stern, acting on the much publicized report, rediscovered the lost gold mines, richer than those of South Africa. In gratitude, Sir Albert gave Dr. Ben-Ari an enormous grant of funds for further research.

Freed from their academic tasks and with so much money to spend, the two men started all over again on Project Shamir. This time they used a computer into which they fed the material from the legends. "Now we'll do it right," said Dr. Ben-Ari. "We'll start from the latest stories and work backwards in time."

With the techniques developed by Christian exegetists to determine the authorship of the books of the New Testament, they gave the computer everything that was known about the worm Shamir. What came out was two surprising bits of information: that sledom was the worm Shamir mentioned without mention of the woodcock and that the worm Shamir could not abide dryness.

"Woodcocks? What are woodcocks?" asked Moshe, who was, like all *sabras*, native born Israelis, more acquainted with soccer than with hunting.

"I think they're like pheasants. Or maybe quail?" Dr. Ben-Ari was equally ignorant. "But it's easy to find out. Check with the ornithologists."

"There are no woodcocks in Israel," Moshe reported later, "and there have been none since the days of the Romans."

"Ah-ha!" Dr. Ben-Ari's eyes glinted. "That makes its mention more significant. The worm Shamir and the woodcock are somehow tied together."

Moshe laughed. "Such close contact would be bad for the worm. The woodcock would have eaten it long ago." He stopped short, as though an idea had suddenly struck him. Dr. Ben-Ari nodded; he had had the same thought. Moshe continued his report. "Dr. Shechem says that woodcocks are allied to snipes and sandpipers, and like them inhabit wet areas such as river bottoms. The ecology of Palestine has changed over the centuries. Woodcocks and other game birds, formerly plentiful here, disappeared from the land when their food supply vanished because of the increasing aridity, which he attributes to the devastation by the Romans after the Bar-Kochba revolt and to the progressive deforestation of the post-Exilic period. One thing more —quite significant. The woodcock's beak is specially adapted for digging for earthworms."

Both Moshe and his mentor felt the thrill that told them they were on the right track. Woodcocks and earthworms. The worm Shamir. Their researches took a new turn in the direction of Lumbricidae. On that subject there was a wealth of material, so much so that were it not for the computer they would have been lost in it. The computer helped them to cut out non-essentials, and by combining its information with the worm Shamir's legendary fear of dryness they came to the conclusion that in the

mucoid slime excreted for lubrication by all lumbricoids lay the secret of the worm Shamir. They also discovered, to their dismay, that the earthworms indigenous to Palestine had long been superseded by new peregrine varieties in the irrigated and cultivated areas. Again Project Shamir seemed to be at a dead end.

Before giving up they sat down to think. Dr. Ben-Ari said, "We seek a substance secreted by a species of earthworm, a substance that has adsorptive and penetrating powers similar to dimethyl sulfoxide, a substance that can alter the structure of rock. The problem is where to find that earthworm, if it still exists anywhere in Israel."

Moshe made a suggestion. "Well, it wouldn't be in the kibbutzim or any newly developed farm areas. If it's remained here since King Solomon's time, it can only be in relatively isolated naturally watered areas in the desert. We need a topographic survey map of Israel that will show oases."

The map showed dozens of tiny oases in the desert of the Negev, some named, some unnamed. The prospect of visiting them all, digging for earthworms, and then identifying the species dismayed the two men. Again they felt they had reached an impasse, but Sir Albert's money was still available, so they hired a couple of Bedouins and started their explorations at a small oasis fed by a spring near Beersheba.

Of earthworms there were many. They collected them, placed them in little plastic boxes filled with moistened dirt, and brought them back to the helminthologic specialist at the Institute. He sorted them out according to species and variety, showed Moshe how to distinguish them, and confidentially told his colleagues he was convinced that Moshe and Dr. Ben-Ari were victims of a peculiar *folie a deux*. The two men heard the gossip about their mania and at times felt it was well founded, because the most careful analysis of the slime from every kind of lumbricoid they collected showed it had an identical chemical composition. It was a mucopolysaccharide. But by now the spirit of the chase was in them. They would not give up. Dr. Ben-Ari set up a portable laboratory in a truck, got a small bus to transport more workers, and planned to go deep into the desert to another spring-fed oasis.

The Bedouins who worked for them also thought they were crazy. Yussuf ibn Mahmud Cefik, the foreman, discussed the matter with his kinsmen, who made up the work crew. "The Jews are filled with a madness. It will not be long before the authorities place them in a House of Mercy, and then our jobs will be lost. They seek earthworms. Let us take them

back home to the Wadi Malikatyar, where earthworms abound. There while they play with their glass bottles and brushing machines we can be near to our families." His cousins and brothers and uncles nodded. It was a good idea.

Yussuf approached Dr. Ben-Ari and made the polite obeisance. "Sir, I have wondered at your work. If you seek earthworms there is one place where they are fat and many. We can take you there. It is not far from Yotvata, at the Wadi Malikatyar."

Yotvata, Dr. Ben-Ari knew, was a garden spot not far from Timna, but his eyes lit up at the mention of the wadi's name. "Why is it called the Wadi of the Kingbirds?" he asked. "And if it is indeed a wadi, a dry river course, then how are earthworms found there?"

Yussuf shrugged. "Such has been its name since before the time of the Prophet. The wadi is dry, of course, but in the spring rains it becomes a torrent that feeds into the village." He boasted, "It is the village of my fathers, like no other. It has deep wells with pure water and grain grows freely thereabouts."

"Let us go then to the Wadi Malikatyar," Dr. Ben-Ari said.

Moshe was a little doubtful when he heard of the proposed expedition. "Hopping around from place to place is very unsystematic," he objected.

Dr. Ben-Ari held up his hand. "Maybe it is an omen that the wadi is named after birds."

The tiny tent village was indeed as Yussuf had described it. Situated in a small depression in the desert, evidently a natural catch basin, its gnarled olive trees gave shade to the goats wandering in the surrounding pasturage; small fields of wheat surrounded it; a communal sheep fold was at one end. What lifted up Moshe's heart was the sound of birds twittering, a rare occurrence in the desert. "Where there are birds, there must be food for them, and not merely grain." Actually, birds were so abundant that the little boys and girls of the village were given the task of periodically running around with brass clappers to drive them from the fields.

On the day after their arrival, the sheikh, Yussuf's maternal uncle, invited the learned doctor and his assistant to a feast of welcome. After the dinner of lamb and *burghul,* eaten with the fingers, had been eaten and sweetened coffee passed around, the visitors were entertained with wailing songs, dissonant music, and finally by the story-teller with a tale from the Arabian Nights. The visitors applauded vigorously and then Moshe, with the enthusiam of youth, inquired of the story-teller whether he knew any tales of King Solomon or how the wadi got its name.

The story-teller, a venerable old man, replied, "It is one and the same story. It is one my grandfather's grandfather learned from his grandfather." He clapped his hands for silence and began, "Long, long ago, before the days of the Prophet, King Solomon, to whom Allah had given the gift of wisdom, journeyed from Jerusalem to Eilat because in a dream had come to him word that the idolators of the south were preparing a rebellion. In those days the roads were bordered with fruit trees of all kinds. Wherever the king stopped the people brought him grapes and figs and pomegranates and honey-sweetened water to refresh himself. In those days the wadi was a wide gently flowing stream abounding in fish and by its banks was a dense forest where all manner of birds sang in the branches. While the king was sitting in the sheikh's tent, even as we sit now, he heard one bird say to another—for Allah had given the king knowledge of the language of birds and beasts—that an evil man in the pay of the idolators was preparing a snare for him. The king . . ." The richly embroidered Oriental fantasy went on with Moshe and Dr. Ben-Ari listening intently. It ended, ". . . and from that day, the king ordered that the bird who had warned him be no longer called Tairsheen but Maliktair and from that day the river was called the River of the Kingbirds, alas! now no river, but a wadi."

The tale excited Moshe. He asked, "What does Tairsheen mean?"

The story-teller wiped his lips. "No man now knows. Those birds flew away long ago, when the forests were destroyed by the anger of Allah against the idolators." Trembling in his agitation, Dr. Ben-Ari gave generous gifts to the sheikh and to the story-teller.

Back in the truck, both men danced for glee. "This is the spot!" they laughed. "Here we shall find the worm Shamir!"

Yussuf was right. The earthworms of his village were fat and juicy. Hundreds of them were collected in a single day, and while the Jews went on with the tedious task of classifying them, the Arabs relaxed in the bosoms of their families.

The investigations showed that the earthworms were no different from those collected near Beersheba, except that the mucus they secreted was thicker and more tenacious.

The mucus from the exterior of the earthworms was collected mechanically by tiny rotating brushes. From one earthworm about 0.2 milliliters was obtained; at least 100 milliliters was necessary for proper analysis. On the sixth day, after thousands of earthworms had been brushed and five flasks filled with the mucus, the chemical

analysis was started, with both Moshe and Dr. Ben-Ari in high hopes that they would discover something unusual.

Alas! Chemical analysis showed the same mucopolysaccharides they had become familiar with from other earthworms. Crestfallen, the two men were about ready to give up Project Shamir when came the lucky accident.

One flask, sitting too near the edge of a shelf, was dislodged by the vibration of the centrifuge directly under it. It fell, and the glutinous foul-smelling mess spattered over the work table beneath the shelf. With a curse, Moshe flung down the test-tube he held in his hand and said, "That does it! I'm finished, Doctor. This was a hopeless task that we set ourselves."

Dr. Ben-Ari sighed. "You're right, Moshe. Let's wash up and go outside away from this stink. Tomorrow morning we'll have the men help us clean up in here and we'll leave."

That night the sheikh again invited them to a feast, a farewell feast this time, because the laborers had spread around the sad news of the departure. Again the two men ate lamb and *burghul,* drank bitter coffee, and listened to the songs and music. The storyteller, to please them, had a new tale about the wisdom of Solomon. It was new to him but not to the Jews; they had read it in a collection of Hebrew demon tales. Their gifts were generous, nevertheless.

At dawn Yussuf and his cousin Achmed helped with the packing up of the instruments and the apparatus. The microtome was wiped dry of the slime spilled on it the previous day, dismantled, and the parts handed to Dr. Ben-Ari, who stowed them into a chest. Achmed was clumsy. He dropped a blade and it fell to the floor and shattered as though it had been made of glass, not finely tempered steel. "Don't worry," Dr. Ben-Ari reassured him. "Sometimes a fine crack will make—will make—" He stopped short and called Moshe. "Look here," he said, pointing to the tiny slivers on the floor of the improvised truck-laboratory.

Moshe heard what had happened. He ran to the work table, saw there a screwdriver used to tighten the gears on the brushes. It, too, had drops of mucus clinging to it. He held it up and twanged it at the end. Tinkle, tinkle. Only the handle remained in his hand. The rest fell like a snow of powdered glass to the floor.

The Arabs were hustled out of the truck. Dr. Ben-Ari and Moshe picked up every instrument on the work table and dropped it on the hard plastic surface. Nothing happened to those uncontaminated by the slime or those made of aluminum or stainless steel or those chrome-plated, but plain steel ob-

jects, like the finger forceps or the staples, that the mucus had touched, broke into tiny pieces with the slightest jar. Moshe tapped the base of the colorimeter where several screws had lost their plating. They fell apart. He caught the colorimeter barely in time to keep it from falling.

Of the five original flasks, only one was left. Dr. Ben-Ari went out to the waiting workmen and gave them the good news that they would stay another week on condition that more thousands of earthworms be collected and that he get two men to help in the collection of the mucus. The thousands of earthworms were readily promised but not the two men. The Arabs wanted nothing to do with such lunacy. At last a compromise was reached. Four boys from the village were provided; the sheikh, stimulated by an additional gift, told them to do what the afflicted of Allah ordered. They, also afflicted, being feeble-minded, could raise no objections. As a matter of fact, they enjoyed the process, making a game out of running the hapless earthworms through the brushes.

In a week twenty-six flasks of slime were collected. They were carefully packed away and the convoy started back to Rehovoth.

On the way Dr. Ben-Ari conducted a few experiments. Contrary to legend, rock was not split by the mucus; only iron was affected and those ferruginous rocks like red sandstone to a limited extent. "That's how the stories got started," he said. "Sandstone is good for building. You recall how many times the Temple was depicted as being all red and gold?"

A tiny drop, if allowed to stay long enough in contact with iron or steel, made the metal brittle. It was quite easy for the men to construct a chart showing how much and how long a time was needed for varying sizes of surfaces of the metal. Weight and cubic volume meant nothing; the linear equation was applicable to areas only.

They speculated on the value of the discovery. It seemed to them quite useless, merely an interesting confirmation of legend. "Industrial application is nil," Dr. Ben-Ari said. "Who needs iron as brittle as glass? Now, if the worm Shamir could harden iron, that would be a different story." Moshe suggested that they inform their benefactor, Sir Albert Stern, of the successful outcome of their research. He was a businessman; he would know whether it had any commercial value.

Sir Albert flew from London to see a private demonstration of the almost magical properties of the worm Shamir's slime. He pursed his lips and thought a while before commenting. "First, the method of collecting this goo is too expensive and time-consuming. Second, the earthworm population would be

rapidly depleted. A very thorough chemical analysis has to be made of the slime and the substance responsible for this very unusual action must be isolated. If it is not too complex, after analysis perhaps artificial synthesis will be possible. If synthesis is not too involved, the substance can be made in quantity. Then and only then can a possible use for it be looked for."

A laboratory was set up on the outskirts of Sodom, near the great chemical complex, and a team of chemists set to work on the analysis under the close supervision of Moshe and Dr. Ben-Ari. They were there to see that no iron came in contact with the slime. After a month of intensive work, the substance was isolated and its formula determined. It was a mucopolysaccharide, all right, but one that had a carbon atom weakly linked to an organic side chain, ammonium tetraethyl sulfomolybdenate. Separately the ammonium salt and the polysaccarhide had no effect on iron; the conjoined molecule had the power to change any of the four allotropic forms of iron into a fifth amorphous form; how this came about was still undetermined. Dr. Ben-Ari's equations were checked, their validity confirmed, and a new discovery made. The compound, now named shamirite, was effective in extremely dilute solution and had great spreading power. One part in a thousand of water sprayed on a square metre of an iron surface changed the metal into its shatterable form in fifteen minutes.

Synthesis was easier than had been expected. Sir Albert, with the blessing of the Israeli government, which said it was desirous of increasing industrialization and decreasing unemployment, set up an enormous chemical plant for that purpose. Dr. Ben-Ari asked him why. "What possible use can there be for shamirite, and when can Mr. Gofen and I publish our results?"

Sir Albert shut one eye and peered quizzically at Dr. Ben-Ari. "Are you joking? There will be no publication. This information is strictly classified for security reasons. Israel and Great Britain have already reached agreement on that. This is a better weapon than the atomic bomb. The bomb makes a conquered territory potentially uninhabitable besides causing great destruction of life and property. This in a water pistol, so to speak, renders tanks and guns worthless." He laughed. "Who can fight with glass weapons? Who will dare attack a country armed with shamirite?"

Dr. Ben-Ari was taken aback. He had never conceived of the worm Shamir being used for warfare. He conferred with Moshe. "I feel like the atomic scientists. Out of a theory I have made a Frankenstein monster. What are we to do?"

Sir Albert, being astute, felt it would be wise to show the two men shamirite in action. He arranged for them to pay a visit to Kfar Dovid, on the Syrian border, where troops guarding the settlement had been equipped with the new weapon. They stayed there almost a month before a friendly Arab brought the army units information that an attack was imminent.

The Israeli troops were ready. They had no weapons other than truncheons and huge wheeled ceramic tanks with long hoses, looking like old-fashioned fire engines. When the reconnaissance patrols returned and said a dozen armed jeeps and a force of machine gunners was on its way, capsules of shamirite were dropped into the tanks and the high pressure units activated. Dr. Ben-Ari and Moshe watched the battle from a rooftop. Just at dawn the Syrians came into view. They met no resistance until they were within range of the hoses. Then they were sprayed with the shamirite solution. They kept advancing but within a matter of minutes the jeeps began to fall apart as they hit the tiniest obstacle in their path; the rifles and machine-guns splintered; even the steel buttons on the ammunition belts disintegrated. The attackers were quickly surrounded and captured, all but two, who fled back across the border.

Word of the new weapon spread rapidly throughout the Arab League. The delegate of the Soviet Union to the United Nations accused Israel of using a barbarous technique worse than the atom bomb or poison gas, but he was laughed down when the Israeli delegate showed pictures of the Arabs being attacked by streams of water. The delegate from Guatemala, coached by the United States ambassador, sarcastically remarked that the jeeps and the weapons must have been held together by spit since they fell apart so easily.

Shamirite was quickly distributed to all the Israeli troops at the borders. When the next wave of the indeterminate war started, it ended in a few hours. This time newspaper correspondents and TV cameramen were at hand to record the amazing effectiveness of shamirite, the composition of which remained a closely guarded secret.

There were a few drawbacks to its use, as General Gabriel Melamed, the Israeli Chief of Staff, pointed out. No water cannon could reach long range artillery and no way had yet been devised to use shamirite as a defense against aerial attack. No stream of water could be projected far enough or high enough without a fine mist forming that would descend to earth and ruin the defenders' equipment. Shamirite could be used only for defense, and then only at the borders of the country.

Dr. Ben-Ari smiled grimly when he heard through Sir Albert about the general's critical comments. "Good!" he said later to Moshe. "Aerial warfare is useless for conquest. So is long range artillery. Both can destroy but no occupying army can invade a country equipped with shamirite." He clapped Moshe on the back. "Thanks to the worm Shamir we shall have peace in our time!"

The following year every nation in the world used only chrome-plated steel in its armamentarium.

LOST

A busy little UFO,
Swinging above the Hebrides,
Eagerly searching all below
For some long-sought antipodes,
Some green abode of Calypso,
Hopes it is in the Cyclades.

Brown fields begin to haunt the eye
Of the young, anxious engineer;
Now the long shore of lonely Skye
Swims toward his ken. He starts to steer
Closer to where the mountains lie,
Smothering his engine and his fear.

What landscape is this? Greece? The States?
The earth to no landmark confesses,
No Cycladean ruins, no gates
Entwined with girls or lionesses,
No rocket gantries; no known traits.
All seems to dismay his careful guesses.

New York Harbor? Hills of Fort Knox?
Forbidding crags of Ohio?
What secret lies beneath these flocks?
He ponders them; then turns to go,
Sailing above the empty rocks,
A lost and searching UFO.

—DOROTHY GILBERT

VIEW FROM AMALTHEA

by Isaac Asimov

SEVERAL MONTHS AGO I ATTENDED A preview of the motion picture "2001: A Space Odyssey" here in Boston. Against my better judgment I even got into a tuxedo for the occasion.

Perhaps the tuxedo contributed to an unwitting bit of pomposity on my part, for at one point I dissolved into a semi-irrational spasm of anger.

You see, I have included in a number of my stories something I call "The Three Laws of Robotics" of which the first is: "A robot may not harm a human being or, by inaction, allow a human being to come to harm." The Laws are a purely fictional device, but they have been picked up by other writers, who take them for granted in *their* robot stories, and over the years I have come to take them very seriously indeed.

In "2001," the most dramatic episodes involve an intelligent computer (equivalent to one of my robots) who deliberately brings about the death of several human beings. That this was going to happen was made abundantly clear to the audience just before the midpoint intermission, and at intermission I went seething up the aisle toward a friend of mine I noticed in the audience.

In tones of deep shock, I said to him, "They're breaking First Law! They're breaking First Law!"

And my friend answered, calmly, "So why don't you strike them with lightning, Isaac!"

Somehow that restored my perspective and I watched the rest of

the picture with something like calm and was even able to enjoy an arousal of curiosity.

Near the end of the picture when the spaceship was approaching Jupiter, several satellites were visible as small globes near the giant globe of the planet itself. I started counting the satellites at once, trying to figure out whether it was really possible to see them all in the sizes indicated from any one point in space.

Unfortunately, because they kept changing scenes, and because I could not remember the necessary data exactly enough or manipulate them without trigonometric tables, I could come to no conclusion.

So let's you and I work it out together now, if we can.

To begin with, Jupiter has twelve known satellites, of which four are giants with diameters in the thousands of miles, and the other eight are dwarfs with diameters of a hundred fifty miles or less.

Naturally, if we want to see a spectacular display, we would want to choose an observation post reasonably close to the four giants. If we do, then seven of the eight dwarfs are bound to be millions of miles away and would be seen as star-like points of light at best.

Let's ignore the dwarfs then. There may be some interest in following a star-like object that shifts its position among the other stars, but that is not at all comparable to a satellite that shows a visible disc.

Concentrating on the four giant satellites, we will surely agree that we don't want to take up an observation post from which one or more of the satellites will spend much of its time in the direction of Jupiter. If that happens, we would be forced to watch it with Jupiter in the sky, and I defy anyone to pay much attention to any satellite when there is a close-up view of Jupiter in the field of vision.

For that reason, we would want our observation post in a position closer to Jupiter than are the orbits of any of the four giant satellites. Then we can watch all four of them with our back to Jupiter.

We could build a space station designed to circle Jupiter at close range and always watch from the side away from Jupiter, but why bother? There is a perfect natural station with just the properties we need. It is Jupiter's innermost satellite, a dwarf that is closer to the planet than any of the giants.

The four giant satellites of Jupiter were the first satellites to be discovered anywhere in the Solar system (except for our own Moon, of course). Three of them were discovered on January 7, 1610, by Galileo, and he spotted the fourth on January 13.

Those remained the only four known satellites of Jupiter for nearly three hundred years. And then, on September 9, 1892, the American astronomer, Edward Emerson Barnard, detected a fifth one, much dimmer and therefore smaller, than the giant four, and also considerably closer to Jupiter.

The discovery came as somewhat of a shock, for the astronomical world had grown very accustomed to thinking of Jupiter as having four satellites and no more. The shock was so great, apparently, that astronomers could not bear to give the newcomer a proper name of its own. They called it "Barnard's Satellite" after the discoverer, and also "Jupiter V" because it was the fifth of Jupiter's satellites to be discovered. In recent years, however, it has come to be called Amalthea, after the nymph (or goat) who served as wet-nurse for the infant Zeus (Jupiter).*

Amalthea's exact diameter is uncertain (as is the diameter of every satellite in the Solar system but the Moon itself). The usual figure given is 100 miles with a question mark after it. I have seen estimates as large as 150 miles. For our purposes, fortunately, the exact size doesn't matter.

There is no direct evidence, but it seems reasonable to suppose that Amalthea revolves about Jupiter with one face turned eternally toward the planet. On half the surface of the satellite, Jupiter's midpoint is always visible. When standing on the very edge of that "sub-Jovian" side, the center of Jupiter is right on the horizon. The planet (as seen from Amalthea) is so huge, however,** that one must go a considerable distance into the other hemisphere before *all* of Jupiter sinks below the horizon.

From roughly one-quarter of the surface of Amalthea, *all* of Jupiter is eternally below the horizon, and the night-sky can be contemplated in peace and quiet. For our purposes, since we want to study the satellites of Jupiter, we will take a position (in imagination) at the very center of this "contra-Jovian" side of Amalthea.

One object that will be visible, every so often, in the contra-Jovian sky of Amalthea will be the Sun. Amalthea revolves about Jupiter in 11 hours and 50 minutes. That is its period of rotation, too, with respect to the stars and (with a correction too small to worry about) to the Sun as well. To an observer on Amalthea, the Sun will appear to make a complete circle of the sky in 11 hours and 50 minutes.

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* *See ROLLCALL, F & SF, December 1963.*
** *See CATSKILLS IN THE SKY, F & SF, August 1960.*

Since Amalthea revolves about Jupiter directly (or counterclockwise), the Sun will appear to rise in the east and set in the west, and there will be 5 hours and 55 minutes from sunrise to sunset.

With this statement, which I introduce only to assure you I am not unaware of the existence of the Sun, I will pass on to the matter of satellites exclusively for the remainder of the article. The Sun has something to do with them, but what that something is, I hope to consider next month.

The four giant satellites, reading outward from Jupiter, are: Io, Europa, Ganymede, and Callisto. Sometimes they are called Jupiter I, Jupiter II, Jupiter III, and Jupiter IV respectively or, in abbreviated form, J-I, J-II, J-III and J-IV.

Actually, for what we want, the abbreviations are very convenient. The names are irrelevant after all, and it is difficult to keep in mind which is nearer and which is farther if those names are all we go by. With the abbreviations, on the other hand, we can concentrate on the order of distances of the satellites in a very obvious way, and that's what we need to make the data in this article meaningful.

Using the same system, I can and, on occasion, will, call Amalthea J-V. Generally, though, since it is to be our observation point and therefore a very special place, I will use its name.

So let's start with the basic statistics concerning the four giant satellites (see Table 1) with those for Amalthea also included for good measure. Of the data in Table 1, the least satisfactory are the values for the diameters. For instance, I have seen figures for Callisto as high as 3220 and as low as 2900. What I have given you is the rough consensus, as far as I can tell from the various sources in my library.

Table 1—The Five Inner Jovian Satellites

Satellite	*Name*	*Diameter (miles)*	*Distance from Jupiter's center (miles)*
J-V	Amalthea	100	113,000
J-I	Io	2,300	262,000
J-II	Europa	1,950	417,000
J-III	Ganymede	3,200	666,000
J-IV	Callisto	3,200	1,170,000

For comparison, the diameter of our own Moon is 2,160 miles,

so that we can say J-I is a little wider than our Moon, J-II a little thinner, and J-III and J-IV are considerably wider.

In terms of volume, the disparity in size between J-III and J-IV, on the one hand, and our Moon, on the other, is larger. Each of the two largest Jovian satellites is 3.3 times as voluminous as the Moon. However, they are apparently less dense than the Moon (perhaps there is more ice mixed with the rocks and less metal) so that they are not proportionately more massive.

Nevertheless, J-III is massive enough. It is not only twice as massive as the Moon; it is the most massive satellite in the Solar system. For the record, here are the figures on mass for the seven giant satellites of the Solar system (see Table 2). The table includes not only the four Jovian giants and our Moon (which we can call E-I), but Triton, which is Neptune's inner satellite and therefore N-I, and Titan, which I will call S-VI for reasons that will be made clear later.

Table 2—Masses of Satellites

Satellite	*Name*	*Mass (Moon = 1.0)*
J-III	Ganymede	2.1
S-VI	Titan	1.9
N-I	Triton	1.9
J-IV	Callisto	1.3
E-I	Moon	1.0
J-I	Io	1.0
J-II	Europa	0.65

If we are going to view the satellites, not from Jupiter's center (the point of reference for the figures on distance given in Table 1) but from the observation post on the contra-Jovian surface of Amalthea, then we have to take some complications into account.

When any of the satellites, say J-I, is directly above Amalthea's contra-Jovian point, it and Amalthea form a straight line with Jupiter. J-I's distance from Amalthea is then equal to its distance from Jupiter's center minus the distance of Amalthea from Jupiter's center. This represents the minimum distance of J-I from Amalthea.

As J-I draws away from this overhead position, its distance from the observation point increases and is considerably higher when it is on the horizon. The distance continues to increase as it sinks below the horizon until it reaches a point exactly on the opposite side of

Jupiter from Amalthea. The entire width of Amalthea's orbit would have to be added to the distance between Amalthea and J-I.

Of course, from our vantage point on Amalthea's surface, we would only be able to follow the other satellites to the horizon. We will be faced with a minimum distance at zenith and a maximum distance at either horizon. Without troubling you with the details, I will present those distances in Table 3.

Table 3—Distances of the Jovian Satellites from Amalthea

Satellite	*Distance from Amalthea (miles)*	
	at zenith	*at horizon*
J-I	149,000	236,000
J-II	304,000	403,000
J-III	553,000	659,000
J-IV	1,057,000	1,168,000

This change in distance from zenith to horizon is not something peculiar to Jupiter's satellites. It is true whenever the point of observation is not at the center of the orbit. The distance of the Moon from a given point on the *surface* of the Earth is greater when the Moon is at the horizon than when it is at the zenith. The average distance of the center of the Moon from a point on Earth's *surface* is 234,400 miles when the Moon is at zenith and 238,400 when it is at the horizon. This difference is very small because it is only the 4,000 mile radius of the Earth that is involved. When the Moon is at the horizon, we must look at it across half the thickness of the Earth, which we need not do when it is at the zenith.

From a point on Amalthea's surface, however, we must look across a considerable part of the 113,000 radius of its orbit, which makes more of a difference.

In the case of our Moon, we are dealing with an orbit that is markedly elliptical so that it can be as close as 221,500 miles at one point in its orbit and as far as 252,700 at another point. Fortunately for myself and this article, the orbits of the five Jovian satellites we are discussing are all almost perfectly circular and ellipticity is a complication we don't have to face here.

Given the distance of each satellite from Amalthea, and the diameter of each satellite, it is possible to calculate the apparent size of each, as seen from our Amalthean viewpoint (see Table 4).

Table 4—Apparent Size of Jovian Satellites as Seen from Amalthea

Satellite	*Diameter (minutes of arc)*	
	at zenith	*at horizon*
J-I	53	34
J-II	23	17
J-III	20	17
J-IV	10	9

If you want to compare this with something familiar, consider that the average apparent diameter of the Moon is 31 minutes of arc. This means that J-I, for instance, is just slightly larger than the Moon when it rises, bloats out to a circle half again as wide as the Moon when it reaches zenith and shrinks back to its original size when it sets.

The other three satellites, being farther from Amalthea, do not show such large percentage differences in distance from horizon to zenith and therefore do not show such differences in apparent size either.

Notice that although J-III is considerably farther than J-II, it is also considerably larger. The two effects counterbalance as seen from Amalthea so that J-II and J-III appear indistinguishable in size, at least at the horizon. Of course, J-II, being closer, bloats just a little more at zenith. As for J-IV, it is smallest in appearance, and shows only one-third the apparent diameter of our Moon.

The sky of Amalthea puts on quite a display, then. There are four satellites with visible discs, of which one is considerably larger than our Moon.

But never mind size; what about brightness? Here several factors are involved. First there is the apparent surface area of each satellite, then the amount of light received by it from the Sun, and finally the fraction of received Sunlight reflected by it (its albedo). In Table 5, I list each of these bits of data for each of the satellites, using the value for our own Moon as basis for comparison.

If we consider the figures in Table 5, we see that J-I as seen from Amalthea is remarkable. At zenith it will possess an area up to three times that of our Moon. The intensity of Sunlight it receives, however, (as do the other Jovian satellites) is only 3/80 that received by the Moon. This is not surprising. The Moon, after all, is at an average distance of 93,000,000 miles from the Sun as compared to 483,000,000 for the Jovian satellites.

Table 5—The Jovian Satellites and our Moon

Satellite	*Apparent area (Moon = 1.0)*		*Sunlight received (Moon = 1.0)*	*Albedo (Moon = 1.0)*
	Maximum	*Minimum*		
J-I	2.92	1.20	0.037	5
J-II	0.55	0.30	0.037	5.5
J-III	0.42	0.30	0.037	3
J-IV	0.10	0.084	0.037	0.4

The Moon has no atmosphere and therefore no clouds—and it is atmospheric clouds that contribute most to light reflection. The Moon, therefore, showing bare rock, reflects only about 1/14 of the light it receives from the Sun, absorbing the rest.

The Moon's mark is bettered by J-I, J-II, and J-III. In fact, J-II reflects about 2/5 of the light it receives, which is every bit as good as the Earth can manage. This doesn't necessarily mean that these three satellites have an atmosphere and clouds like the Earth. It seems more likely that there are drifts of water-ice and ammonia-ice (or both) on the surfaces of the satellites, and that these drifts do the reflecting.

Callisto, for some reason, reflects only 1/30 of the light it receives and is therefore less than half as reflective as the Moon. Perhaps Callisto is composed of particularly dark rock.—Or is it conceivable that astronomers have badly overestimated Callisto's diameter? (If it were smaller than astronomers think it is, it would have to reflect more light to account for its brightness.)

Anyway, we can now calculate the apparent brightness of each satellite (as compared with our Moon) by multiplying the area by the amount of Sunlight received by the albedo. The results are given in Table 6.

Table 6—Apparent Brightness of the Jovian Satellites

Satellite	*Apparent brightness (Moon = 1.0)*	
	Maximum	*Minimum*
J-I	0.54	0.22
J-II	0.11	0.06
J-III	0.045	0.033
J-IV	0.0015	0.0012

As you see, not one of the Jovian satellites, as seen from Amalthea, can compare in apparent brightness with our Moon as seen from the Earth's surface. Even J-I, the closest to Amalthea and therefore the brightest, is never better than half as bright as the Moon; J-II is less than a seventh as bright; J-III less than a twentieth; and J-IV less than a six-hundredth.

And yet who says brightness is everything? Our own Moon is only 1/465,000 as bright as the Sun, and if we consider beauty alone, it is all the better for that.

Perhaps the Jovian satellites as seen from Amalthea will be still more beautiful than our Moon, for being so softly-illuminated. It will result, perhaps, in better contrast, so that craters and maria will be more clearly visible. If the satellites are partly ice-covered, patches of comparative brilliance will stand out against the darkness of bare rock. It will be all the more startling because on Amalthea there will be no air to soften or blur the sharpness of the view.

Callisto may be most beautiful of all, though it may require a field-glass to see it at its best. It would be a darkling satellite, with its mysteriously low albedo. Perhaps it might look rather like a lump of coal, with its very occasional patches of highly-reflecting ice so interspersed by very dark rock that it would seem a cluster of diamonds in the sky, rather than a solid circle of light.

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There are only two planets, other than Jupiter, that have real families of satellites, as opposed to merely one or two. These are Uranus with five and Saturn with ten. Uranus is a special problem to which I will eventually devote a special article, but let's tackle Saturn according to the system we have already used for Jupiter.

Although Saturn has only ten satellites to Jupiter's twelve, and only one giant as compared to Jupiter's four, it still puts on a better show in a way. Whereas no less than seven of Jupiter's twelve are so small and distant they can be ignored, only three of Saturn's need be neglected. From Saturn's innermost satellite, six other satellites can be seen as visible discs.

Let's start by giving the basic statistics for the Saturnian satellites (see Table 7).

The Roman numerals are not as well established for Saturn as for Jupiter but I have seen them used from I through IX for the satellites from Mimas through Phoebe. Janus was discovered at the very end of 1967* but I won't reorganize the numbering system because of

* *See LITTLE FOUND SATELLITE, F & SF, October 1968.*

Table 7—The Saturnian Satellites

Satellite	*Name*	*Diameter (miles)*	*Distance from Saturn's center (miles)*
S-X	Janus	300	98,000
S-I	Mimas	320	115,000
S-II	Enceladus	370	149,000
S-III	Tethys	800	183,000
S-IV	Dione	800	234,500
S-V	Rhea	1,100	328,000
S-VI	Titan	3,100	760,000
S-VII	Hyperion	250	922,000
S-VIII	Iapetus	750	2,213,000
S-IX	Phoebe	190	8,043,000

that. Just as Jupiter's closest satellite is J-V, so I will let Saturn's closest satellite be S-X (even though it looks like a prudish way of writing "sex"). Besides, if we place our observation point on Janus (or S-X), it will be convenient to number the satellites in its sky as S-I, S-II and so on.

If we assume that Janus presents one face, always, to Saturn and take up our position at the contra-Saturnian position, we will never see Saturn and its rings, and we will be able to concentrate on the satellites.

We can work out the zenith and horizon distances of each satellite from Janus, as we did in connection with the Jovian system and from that determine the apparent sizes of the Saturnian satellites (see Table 8.)

Table 8—Apparent Size of Saturnian Satellites as Seen from Janus

Satellite	*Diameter (minutes of arc)*	
	Zenith	*Horizon*
S-I	65	18
S-II	25	11
S-III	32	18
S-IV	20	15
S-V	17	13
S-VI	16	15

As you see, the situation on Janus is most amazing. The outermost

three satellites are only star-like points and are therefore omitted from the table. The other six satellites, which are included, are so closely spaced and increase in size so steadily as one goes outward that all appear, on the horizon, to be very much the same size. All have an apparent diameter about half that of our own Moon (S-I and S-III are a little larger, S-11 and S-V are a little smaller, while S-IV and S-VI are just right).

This picture of sextuplet-satellites is quite unique. Nothing like it can be seen from any other point in the Solar system; not even from any other point in the Saturnian system.

Each of the six satellites bloats as it approaches the zenith, the effect being more extreme the closer the satellite. S-I expands from a diameter half that of the Moon at the horizon to twice that of the Moon at zenith. Its area (and therefore its brightness at any given phase) increases thirteen-fold, as it travels from horizon to zenith.

And the brightness of the Saturnian satellites? Here there is a difficulty that was not present in the case of the Jovian satellites, for there are no figures that I can find on the albedoes of the Saturnian satellites. However S-I and S-II are thought to be largely snow, and S-VI is known to have an atmosphere (the only satellite in the Solar system *known* to have one).

We won't be too far out then if we decide to make the general albedo of the Saturnian satellites 0.5, or seven times that of the Moon. Working with that assumption and realizing that the Sun delivers only 0.011 times as much light to the Saturnian satellites as to our own Moon, we can calculate the apparent brightnesses of the Saturnian satellites as seen from Janus (see Table 9).

Table 9—Apparent Brightness of the Saturnian Satellites

Satellite	*Brightness (Moon = 1.0)*	
	Zenith	*Horizon*
S-I	0.0115	0.0032
S-II	0.0042	0.0020
S-III	0.0057	0.0032
S-IV	0.0035	0.0027
S-V	0.0030	0.0023
S-VI	0.0028	0.0027

Here we have a picture of a soft and delicate family of dim satellites,

about as bright as Callisto (the dimmest of Jupiter's four giant satellites), as seen from Amalthea. All are only 1/500 to 1/200 as bright as the Moon. Only one of the Saturnians, S-I, manages to shoot up to the unusual mark of 1/90 as bright as the Moon.

Does this give us all we need to know about the satellites of Jupiter and Saturn? Heavens, no!

So far I have painted only a static picture and left the most fascinating aspects of the situation untouched. Those four satellites of Jupiter as seen from Amalthea, and those six satellites of Saturn as seen from Janus are moving relative to each other. Each moves at its own characteristic rate and the group forms an ever-changing pattern.

What's more, the Sun moves across the sky, too (something I mentioned briefly near the beginning of the article), and that introduces interesting complications, such as phases changes and eclipses.

I am going to try to work out the motion picture of the Jovian satellites. Right now, I'm a little appalled at the prospect and I'm not sure I can be very successful. But wish me luck, and if I manage, I will present it next month.

Among the favorite words begat by the "new politics"—whatever that is—is the term "polarization," which generally refers to the opposite direction being taken by the increasing forces of the extreme left and right. This story extrapolates that notion into a red-white-and-black comedy that takes place some time after the country has fallen apart. The piece that is picked up here is called the Republic of Southern California, which in turn has polarized into—moving from left pole to right—a guerrilla operation headed by Jane Kendry and a militant right wing group led by a behind-the-scenes operative known only as . . .

GADGET MAN

by Ron Goulart

THE MAD GIRL FLASHED ANGRILY across the bright tower room and interfered with the view of the riot. Two plain-clothes therapists dived into the big circular room on her trail, apologetic, and hunkered so as to leave the tinted windows clear for watching. The girl, thin and fair, shrugged out of the reach of the lead therapist and ran straight at Sgt. James Xavier Hecker. He was already up out of his vinyl wing chair, reaching one calming hand to her. "Just be easy now," he said.

In the chair next to his, Therapist-in-Chief Weeman said, "Halt, Mrs. Gibbons." He stretched over and slapped the slim girl with his clip-on stunrod. She stiffened just short of touching Hecker.

"Why that?" asked Hecker, steadying the girl's now paralyzed body.

"We strive to give our more hopeful patients a semblance of autonomy and free motion," said Weeman. He breast-pocketed the stunrod in his lime-green tunic. "Incidents can't be encouraged, but on the other side of the token, neither should they be subdued with too drastic means."

The two therapists hesitated, hands extending, unobtrusively, for the caught patient. Hecker said, "It'll take her two hours to come out of that." He let the two wide men carry the girl away and out of the top tower of the Rehab Center.

Weeman tugged at his blond beard, as though he suddenly

suspected it was false. "I find your concern for a disturbed suburban housewife, a girl you don't even know, to be almost fascinating."

"Why don't you turn over those Kendry files, and I'll take off." Hecker was a lean man, tall and slightly bent, with a bony face and too big hands. The Social Wing of the Police Corps had allowed him to grow a shaggy moustache, but would probably not promote him much beyond sergeant.

Therapist-in-Chief Weeman's small tidy lap was filled with carded microfilm. He let some of the fingers of his left hand dance on the film and nodded at the view windows. "I wish you shared my fascination with these riots, though your reasons for not doing so are best known to yourself. That one occurring down there in Citrus Knolls right now seems rich in fascination. I've monitored all the recent suburban riots in the area, but this is the first one to take place in, as you might say, my own back yard."

Far below and across an artificial river a troop of cub scouts had just put torches to the community recreation center, and to the immediate left of that a mob of greying matrons were lobbing plastic bombs into the main building of the tennis club. The majority of the members of the Veterans of the Chinese Invasion were chucking surplus grenades into patios and rock gardens all along Citrus Knolls' wide and neatly pastoral streets and lanes. Over two thousand of the residents of the planned suburb, a good third of its population, were involved in the rioting and looting. "Here come the troops," said Hecker, turning his back on the windows.

Weeman toggled a switch on his chair arm and television screens on the blind wall of the Rehabilitation Center tower snapped alive. "I want a better look at all this. These initial confrontations between the dazed citizens and the army of the Republic of Southern California are little less than fascinating."

Hecker glanced up at the images of the lime- and lemon-uniformed soldiers of the Republic of Southern California marching with locked arms down the main esplanade of Citrus Knolls. "The Kendry files," he repeated.

"What do you, as a representative of the Social Wing—a division of our Southern Californian government I can't help believing is more liberal than necessary—think causes these outbreaks in our best suburbs, sergeant?" Weeman twisted new curls into his full beard, ticked his head forward. The army was apparently using stun gas, and the screens showed people slowing and freezing, still clutching torches and bombs and bright new rifles.

"The riots are the Junta's business," said Hecker. "They govern the Republic of Southern California."

"You seem reluctant to express an opinion that is solidly yours, Sgt. Hecker."

"I just work here."

"Look at that," said Weeman. "That little old lady sniped one of the cameramen off the roof of the United Methodist." He studied then the microfilm between his legs and watched Hecker for several long seconds. "Some people, a small but vocal minority, consider the cause of the riots to be the recent tightening of law enforcement and the additional troops being garrisoned in some of our larger secured towns and cities. What do you, Sgt. Hecker, feel about the notion that the Junta has ruled the Republic with undue strictness in recent years?"

"Since my branch of the Police Corps is under the jurisdiction of the Junta, you don't have to ask," Hecker told him. He paced away from the seated therapist, watching, briefly, the smoke columns fuse into a thick black smear in the bright afternoon sky.

"Younger people," said Weeman, "forget how things were back in 1981 and those years. Before the Chinese commandos were defeated in the battle of Glendale there were many, not deluded but calm and rational people, who felt Red China would successfully carry off its land invasion of Southern California."

"If Southern California hadn't seceded from the Union in 1980, things wouldn't have happened as they did."

"The president of the United States, even though his country was falling apart, should have supported us," said Weeman. "Had the Junta not been formed, merging our best Southern Californian military and industrial brain-power into one dedicated and loyal ruling think-tank, there would have been black days for the Republic. You, a man in his middle or late twenties, don't remember those bad times."

"Probably not," said Hecker. He returned and sat next to the Therapist-in-Chief. "I have a contact point to be at by tonight."

"This has been, thanks to younger residents of the Republic such as yourself, Sgt. Hecker, validly christened the age of anxiety." Weeman twined his stubby fingers in the swatch of beard beneath his chin. "Myself, Sgt. Hecker, I favor the conspiracy theory to explain the riots. These most recent suburban riots, there's a strange and fascinating quality to them." He freed his fingers from his facial hair and indicated the burning and fighting below. "Social repressions, supposed injustices and unlawful restraints, don't evoke the kind of mania we're witnessing at this moment,

Sgt. Hecker. A thoughtful examination of the sweeping panorama of riot history tells us that citizens in comfortable $100,000 homes in landscaped and secured areas should not loot and burn. They're not blacks, are they, most of them?" He bundled the microfilm cards and tossed them across to Hecker. "The classic riots in the United States—and in Southern California, especially because of our near tropic climate—have traditionally been the work of militant black men, Sgt. Hecker. Though you may not be aware, at this remote place in time, of that."

"We studied the riots in school," said Hecker. He thumbed through the cards, holding them up next to the overhead lights in turn. "Most of this information on the Kendry family we have in our Social Wing files. I thought you had some extra stuff that couldn't be trusted to transmission."

Weeman drew a last card from beneath his narrow thigh. "Some background material on Jane Kendry. Tests and projections done during the brief period when she was a ward of the rehab system. What exactly is your mission for SW, sergeant?"

Hecker took the new card in one big-knuckled hand, walked to a wall microfilm reader and inserted the card. "You were told that when the Social Wing requested this interiew."

"That story wasn't a cover? Somebody in the Kendry clan has sent the Social Wing word that they have information on the cause of the riots?"

"The nature of the information sent and the procedures suggested indicate the Kendry family may be involved," Hecker said. The young face of a lean, intense girl rolled into view on the screen of the reader. She had smooth tan skin, hair of a red-gold color, long. "Jane Kendry," muttered Hecker to himself.

"Seven years ago," said Weeman. "She was fifteen then, coltish. Her wild father and a bunch of the clan broke her out of a minimum security Rehab Center down near the Laguna Sector. Lovely marine view there. She's a quirky girl, and I believe that it is Jane Kendry who runs that band of ragged guerrillas. Her father, old Jess, is in his middle sixties now, ridden with addictions and badly healed wounds. She's a tough girl, Sgt. Hecker, and you won't find that hopeful look the picture there shows. Not anymore with Jane Kendry. Is she your contact?"

"I don't know," said Hecker. "Our information isn't that specific. We have a contact point fairly close to one of the unsecured towns the Kendrys are thought to operate in. There's a safe conduct pass of sorts. I came here to fill myself in on them."

Therapist-in-Chief Weeman rose up behind Hecker. "You look quite unlike a policeman, even a Social Wing one, in your civilian clothes." He flicked a sequence of toggles and the view windows blanked, the monitor screens died. "Listen to me now, Sgt. Hecker. I worked on the Kendry girl's case, down there in Laguna Sector seven years ago. I liked her and felt I was reaching her. We could work together on her problems and conflicts. Then those wild men came in and smashed things and wrenched her away."

Hecker stopped reading the micro file. "So?"

"I have authority to bring her in for rehabilitation," Weeman said, moving closer to the Social Wing sergeant. "If she wishes, we can help her. Fit her back into the legitimate social processes of the Republic of Southern California. She's a girl with fascinating potential."

"She may not want back in," said Hecker. "Her exile is probably voluntary."

"We often think that, sergeant, and we are often wrong," said the therapist. "If you see Jane Kendry, offer. Tell her Therapist-in-Chief—no, she knew me as Associate Therapist—tell her Dr. Weeman can get her safe conduct here to the Pasadena Rehab Center. It could be her only chance."

Hecker frowned. "Wait now. Why her only chance?"

"You may, Sgt. Hecker, have some competition in your quest for Jane Kendry."

"And I may not even see her," he said. "But who's searching for her?"

"Are you familiar with 2nd Lt. Same?"

"Norman Same?" asked Hecker. "He's with the Manipulation Council. Why do they want Jane Kendry?"

"Why does Manipulation usually want people?" said the Therapist. "The Junta must want her locked away or, forgive the dark thought, simply killed. The guerrillas have been trouble, and 2nd Lt. Same, who has been here, too, seeking background material, believes Jane Kendry leads the guerrillas."

"Maybe there's been a leak in the Social Wing, if Same has been here already." Hecker clicked his bony thumb against his teeth. "We'll see then."

"You get to her and tell her to be careful," said Weeman. "Once she's here in Rehab, I can guarantee they won't touch her. Believe me, Sgt. Hecker, when I tell you that I really can help Jane Kendry."

"I'll tell her," said Hecker. "Now I'll retrieve my hopper from your roof port and get going."

On the highest roof of the five-towered Rehab Center, Hecker could see Citrus Knolls burning away, blackening the day. His

unmarked Social Wing hopper was not in the reserved slot of the rooftop landing area. Two orange-uniformed soldiers of the RSC army were squatting where the small heliplane had been.

"Looking for your machine?" asked one of the soldiers, bouncing inquisitively and making his buttocks smack the topping lightly.

"Yes, indeed," said Hecker. He, being in civilian clothes, had his blaster pistol cupped under his arm and not quickly accessible. "You boys take it?"

"Sorry, sarge," said the other soldier. They were both young privates. "We needed extra wings and the order went out. Your Social Wing reported an unmarked hopper parked here, signed out to a Sergeant James Xavier Hecker, and it was picked up. They got your hopper over to Citrus Knolls, using it to dust nerve powder on the folks trying to dismantle the shopping plaza."

Hecker surveyed the roof. There was a pitted old surplus hopper, with the ARSC insignia still vaguely visible on its side, parked nearby. "Who does that one belong to?"

"That's for you if you want to use it," said the bouncing private. "Corporal Bozes said you could use it. That's why we hung around, to be helpful. That clunk isn't much for altitude, and there's not enough armour on its belly. Those humping snipers can set your tail on fire easy enough as it is, without flying over in a thing like that."

"I hope it'll do for me," said Hecker. "I have an appointment."

"It'll be plenty good for Social Wing purposes," said the private, and he bounced again.

In five minutes Hecker was in the air. He had to be in San Emanuel Sector, a beach town beyond the Laguna Sector, by nightfall. The town was not one the military rated as secured, and he could expect no help from any officials of the RSC once he got there. The old army hopper, which he'd have to ditch before he got in sight of San Emanuel, chugged through the sky. It strained for altitude, whining, for nearly a half hour. Then it began to make rumpling pocking sounds and dropped from the sky toward a stretch of scrubby beach. Hecker's safety straps snapped as he tried to right the ship. When the crash came, he was slammed hard into the control panel.

The hopper was moving away from him in pieces, like a jigsaw puzzle dissolving. There were weathered gritty hands all around him and raw smells of the sea and strong spices. Grey clothes and close-cropped hair. Hecker caught at himself and sat back. Hands were sliding through his clothes, and one snapped out his

packet of identification material, while another hand got his pistol. Since he'd passed into the Rehab Center on retinal and voice prints, the packet contained only the faked papers he was to use on his trip into the unsecured towns. Plus the dog-eared business card with the drawing of a gull on it, the one which had come into Social Wing headquarters with the message from the possible Kendry contact.

Hands had found the card and someone said, "Kendry pass. Leave him safe and alive."

Hecker's pistol was returned, tucked back into its pouch and patted. "Scavengers," he said, seeing a little better. "Beach people." The old army hopper was dismantled completely, and its pilot seat, still holding Hecker, was tipped in a clump of beach scrub. The sky had thinned and the wind grown warm. It was late in the afternoon now, and when Hecker touched at his head, he found a swelling spreading across the left side of his face, a smear of dry blood in its center.

The man with his hands still on Hecker was old, sixty-five or more, and dry with age and sun. "Want to talk, you can talk. Want to eat, you can eat. Want to hide, you can hide. I'm Rius." He seemed to have too many ribs. They lined his thin body in places where there shouldn't be ribs. "The military won't venture into this stretch. You find yourself in the Manhattan Beach Sector, south of Venice."

"I've got to," said Hecker, letting Rius help him to stand, "get to San Emanuel by tonight."

"He does know the Kendrys," said a tall blonde girl. She was wearing a pair of thin grey shorts and mismatched souvenir moccasins.

"We're free and easy here," Rius told him. He had a plastic bag of green chili peppers in the pocket of his shorts. "He doesn't have to talk. Or share."

"I seem already to have shared my hopper with you," said Hecker. He found he could walk and took himself clear of the grasp of the old man.

"Rights of salvage," said Rius. "An ancient law of the sea." He bit a pepper in half and pointed with the uneaten portion at the Pacific Ocean.

The glare of the sun on the water made Hecker turn away. Along the beach were scattered fifty people, most of them dressed as simply as Rius and the blonde. Hecker stretched out a long lanky arm and took his identification folder from Rius, along with the Kendry card. "Much obliged."

"Would you," asked the blonde, "like to talk about your problems? Are you thinking of quitting the formal culture up there in the Republic?"

"He's free to talk or not to

talk," reminded Rius, starting another chili pepper. "That's the way we are here."

"If you'd like to talk about what business you have with the Kendrys," said the tall blonde, who had small breasts, "you can do that, too."

A plump, pale man with his hair recently cropped padded over the sand and squinted at Hecker. "They didn't mention you till now. I'm Dr. Jay V. Leavitt. What happened? Oh, no, that's right . . . you don't have to tell me. That's how it is here."

"My hopper crashed and then you guys dismantled it for scrap," said Hecker. "I'll talk freely about that. My head hit the instrument panel in the crash because the safety belts snapped."

"I bet nobody even asked you how you came by that old army hopper," said the doctor.

"I borrowed it."

The doctor smiled and shrugged. "My wife lets me spend a month down here each spring. May I feel your head?"

"Sure."

"We live in a condominium in the Pacific Palisades sector. It's our second condominium. The first one we owned fell into the ocean. But I don't have to worry about things like that here." He poked his sandy fingers at Hecker's swollen head. "I'm not even sterile. I hope it won't cause an infection."

"Don't worry yourself."

"No brain damage, I guess." The doctor thumbed down Hecker's lower eyelids. Then rapped his head. "And no sign of a fracture. I bet you don't even have much of a concussion. You could rest up here on the beach a couple of days if you like, though I'm not prescribing. The nights get cold here, but we build fires."

"I'm enroute to San Emanuel," said Hecker.

"You should talk to Marsloff and Percher," Dr. Leavitt told him. He screwed his forefinger around the pocket of his new grey shorts. "I had some bandaids in here. No, all used up."

"Who are Marsloff and Percher?"

"Drive one of the land trucks," said the blonde girl. "They're going to try to get down to the San Diego Sector tonight with a load of salvage. Dr. Leavitt is probably suggesting you could catch a ride as far as San Emanuel with them. If he doesn't mind my speaking for him."

"Not at all," replied the doctor. "You're a very bright girl. Were you possibly a receptionist or dental hygiene nurse up in the Republic?"

"Only a housewife," said the blonde. "I could never have any satisfactory conversations with my husband. He's in riot-control research and used to bring new equipment home to try out." To

Hecker she said, "You have to be a little careful of Percher. He's a gadget freak."

"Oh," said Hecker. He'd worked with gadget cases in the Social Wing.

"A gadget freak is a person," explained Dr. Leaitt, "who uses machines and appliances in unnatural ways to produce electric brain stimulation and other potentially dangerous, though momentarily pleasurable, effects. Unlicensed electric brain stimulation was outlawed well over two years ago by the Junta."

"Where's his partner, this Marsloff?" asked Hecker.

"They're the both of them off down there." The blonde indicated the location with a turn of her head. "See the old fallen-down beach restaurant that says Poor Boy on its side? Their truck is hidden in there. Marsloff is the big and dark-haired man leaning on the rail. Percher's a little blond fellow. He's in the truck probably."

"He rewired an electric mixer to stimulate himself with last night," said the doctor sadly. "A bright young man, otherwise, when he's not comatose."

"You should have been here when he got inside a rebuilt soft-drink machine," said the blonde. "Want me to walk over with you?"

"Sure," said Hecker.

She started down the sand and he moved in beside her. "Been out here long?" he asked.

"A year, I guess. My name's Hildy. You don't have to tell me yours. We don't care here."

"James Xavier Hecker." His faked papers had used his real name.

"I read your ID packet. Jim do they call you?"

"Hecker, usually," said Hecker.

"Hey, Marsloff. Rius says it's okay if you help this guy." She stopped a few yards from the big man. "He knows the Kendrys. He wants a lift south."

Marsloff strode over. He had grey-black hair, short on his head and long and swirling on most of his body. "Can you drive a truck?"

"Yes."

"My partner, Percher, is a gadget freak. He found half a dozen old-fashioned electric toothbrushes this morning, and he's knocked himself blooey again in the cab of our truck. Has his own portable generator back in what used to be the pantry of the cafe. He's in a coma right now."

"Shouldn't you get Leavitt to look at him?"

"This isn't the Republic," said Marsloff. "He always comes out of it. He doesn't favor anybody tinkering with him when he's having one of his comas. I'll leave him here in the shack, under a quilt, for this haul. You watch him a little, Hildy?"

"If you like."

Marsloff watched the westering sun. "Well leave in half hour. How far south?"

"San Emanuel," said Hecker. The sunlight wasn't bothering him as much now.

"You do know the Kendrys then," said Marsloff. He grinned. "Percher smuggled in some beer from the Tijuana Enclave, real Mexican beer. It's warm because he's been using the ice machine on himself. Wait here and I'll get us a couple bottles. We can cool them off in the ocean." He patted Hecker and the girl on their backs and climbed over fallen wood and plaster into the remnants of the seashore cafe.

The hanging sign that caught the night wind said Giacomo of San Emanuel on it. The sign flapped over the doorway of a building that was gone. There were only the traces of a collapsed wharf out this close to the ocean now, fragments of restaurants and shops. It was his contact point, and Hecker stood there on a firm section of wharf, hearing nothing except the dark water moving across the cluttered sand below the pilings. There were mounds of seashells dotting this section of San Emanuel beach, twists of dead seaweed. The wind carried what looked like a tatter of red-checkered tablecloth up above Hecker's head, and the cloth fought and twisted, fluttering free and fading into the darkness among the fallen timbers and planking. He thought of the girl who had tried to reach him in the rehabilitation tower.

"See the card. Let's see the card," said a boy's voice.

Hecker carefully turned. "What card?"

The boy was too small for his age. He seemed to be about fifteen and was barely five feet tall. His legs were thin and subtly twisted, and his arms were thin, too, and bent in wrong ways. He was holding a big shaggy cat in his arms, close to his bare chest. "I'm a younger brother," he told Hecker. "An adopted brother, actually. I'm a Kendry, though." The cat was limp but awake. It lolled comfortably, watching Hecker with its round yellow-green eyes.

"Tell me the cat's name," said Hecker.

"Burrwick," the boy said, "if you have to have the countersign crap. Now let's see the card. Fetch it out slowly, or you'll feel some steel in your fat ribs."

"I look fat to you?" Hecker drew out the ID packet, located the card with the gull drawn on it in pale blue writing fluid.

The boy took the card, held it near his face. "Everybody seems fat. I hid from the soldiers too long, missed out on too many meals. They call that nutrition,

you know, all that business with vitamins and minerals. I read up on it all but haven't been able to change myself much so far."

"Don't be discouraged," said Hecker. "Can you tell me who sent you to meet me?"

"Not allowed to," said the boy. The cat mewed once, tapped on his narrow chest. "I'm to guide you to a conclave. A family gathering, a Kendry thing. Hundreds of us to be there. You're to palm yourself off as a cousin by marriage of old Mace Kendry. Use your real name, or whatever name you're traveling under. You married Mace's second-oldest daughter, Reesie. They were both ridden down by the army, are dead now. You been in a solitary cell down in San Pedro Sector since shortly after you got married two years ago. You got let out on the Junta's last birthday amnesty a week ago. Mace gave you this card—here take it back—and you heard about this gathering tonight in a bar in Venice Sector named Uncle Avram's. Can you remember well all this crap?"

"Most of it."

"Better get it all straight. Mace, in case somebody asks, had his left arm missing from just below the elbow due to a Police Corps blaster. Reesie was a tall girl, big boned with bad front teeth. Okay looking, but too meaty." The boy rubbed the cat's stomach. "With at least a coupled hundred Kendrys together, there's likely to be someone'll want to kill you for the sport. If you give them the added inspiration of lying and stumbling in your yarn, you'll surely feel steel from several directions."

"Thanks," said Hecker. "I won't slip. What's your name?"

"It isn't part of the password crap." The boy beckoned Hecker to follow him.

Walking away from the fallen wharf, Hecker said, "I wanted to know, just for myself."

"Jack," said the boy.

"Jack."

"Know where I got that name?"

"No." They turned onto a street that wound between still-standing, but long vacant, shops and hotels. The municipal trees had grown wild and there was a thick tangle of branches and leaves overhead.

"Off that sign back there. Giacomo. That's Jack, more or less, in Italian. I like it down there, down by the water. Especially at night. Have you ever heard of people like that?"

"Sure, Jack. Many."

"Kendrys don't figure so."

"But you do," said Hecker. "Can you tell me, by the way, who's going to contact me at this family gathering?"

"Not that either. It will happen, don't fret." They walked two blocks higher, and then the cat yowled, its hair stood up and its

tail went thick and erect. "Getting close."

The cat yowled again, twisted and jumped to Jack's shoulders and then off into the night. "He doesn't much like Kendrys?" remarked Hecker.

"They're good people, but not much given to gentleness." The thin boy pointed at a rusted hurricane fence across the street. They were at the rear of a defunct public school complex, and the school gymnasium was bright with light and noise. "Gate's fallen in. Go on through and down to the gym. Tell your story. Luck to you. I'm no party-goer."

"Okay. Thanks, Jack."

"You have a name?"

"James Xavier Hecker."

"Xavier part is good. I might assimilate that sometime. Goodbye." He drifted back and away into the dark beneath the trees, and Hecker headed for the loud, shining gymnasium.

A big woman in a sleeveless leather dress handed Hecker a second piece of chicken. "Look at the way she carries herself," she shouted. "Smug, provocative.

"A constant worry to her father," shouted the greying woman on Hecker's left. "Guerrilla warfare is hard enough without trying to keep tabs on a snooty daughter with a mind of her own." She grabbed an avocado off the abundant banquet table, split it with a knife sheathed on her dappled thigh. She popped out the big egg-like seed and passed half the avocado to Hecker. "Eat this, Cousin Jim. You're mighty underweight."

"Just look at her," shouted the big woman. "Straight as a rail and no flesh to speak of. Are they partial to skinny women in your neck of the Republic, Cousin Jimmy?"

Before Hecker could reply, one of the Kendry boys grabbed him away from the food corner of the ramshackled gymnasium and pulled him through half of the several hundred Kendrys jammed together on the yellow flooring. "Game, Cousin Jim," he shouted. A six-foot tall man, a shade over thirty, in a cut-down noga suit, his hair long in ringlets. "We're going to play pumpkin ball."

"Okay by me," Hecker said.

"Bet your ass," shouted the Kendry boy. "I'm Rollo."

"Good to know you, Cousin Rollo."

"Second cousin," said Rollo. "Eat up that avocado and hunk of chicken, and we'll get going. See the basket up there?"

Hecker tilted his head back. Up high in the smoke and haze, the old gymnasium basketball goal still hung. "That I do, Second Cousin Rollo."

"The object of this game is to kick the pumpkins up through there. Fun for all concerned." He whacked Hecker and sent him

into a circle of eight Kendry boys. Three fat, orange pumpkins were huddled in the circle center. "Cousin Jim gets first kick."

"I've already been promised it," said Milo Kendry, who'd introduced himself earlier.

"Bullshit," said Rollo. "Cousin James is our guest, you lout."

"Don't 'bullshit' me," replied Milo. He grabbed up the biggest pumpkin and smashed it on Rollo's head.

"Don't go spoiling the game," said another Kendry. He backed and kicked one of the remaining pumpkins. It rose up toward the metal-raftered ceiling, spun awkwardly, fell toward the musicians' stand.

A dozen Kendrys were on the narrow makeshift platform, playing amplified fiddles and banjos. The Kendry with the hand microphone had been singing a song whose lyric consisted of the word "stomp" reiterated. The pumpkin dropped on the end of the mike and was impaled there. The singer went on singing.

Rollo snatched a coil of rusty barbed wire out of his jacket pocket, wrapped it around his fist and swung on Milo. He roared, shook pumpkin seeds from his locks and slashed again.

"You like to give me tetanus, you dummy," shouted Milo. "Lockjaw or something, you dumb bunny." He kicked Rollo in the stomach.

Another Kendry pulled Hecker away from the thwarted game. "Hello, Cousin Jim. I'm your Uncle Fred. What do you think about Jess' last will and testament?"

"You mean Jane's father?"

"Jess left all his possessions to her, he says. I don't think he's ever been quite right since Jane's mother passed on. Army got her with that new gas they introduced that year," said Uncle Fred. He was broad and tall, but gone to fat. "Insurgents shouldn't have a girl up front. Women are more for homebody stuff. You feel like punching somebody around, a woman is handy for that, too. I used to like to stump them, but I'm aging beyond that. Women are okay for stumping but not to head a band of guerrillas. You getting enough to eat?"

"Yes, fine," said Hecker.

"See these teeth," said Uncle Fred, grinning. "My third set this month. Stole them in a raid on the Santa Monica Sector. These younger kids, their idea of fun is to kick an old man in the face. I don't mind their funning some, but it costs me a set of teeth every damn time. You get old and you get sentimental about your teeth. That will of Jess', though, is a bad thing. Isn't that the way you see it?"

"I figure Jess knows what he's doing." Hecker ducked a flying fragment of pumpkin.

"This conclave isn't like the ones we used to have," shouted Uncle Fred.

A man with feathery white hair stepped up and tapped Uncle Fred on the bicep. He was a straight-standing man, tall and leathery. "Complaining about something?"

"Just the food, Jess. Food's not like it used to be. Chicken isn't like it used to be. Potatoes aren't like they used to be. Even the lettuce is different."

"You aren't like you used to be either," said Jess Kendry, the leader of the clan and of the guerrillas. He smiled at Hecker. "You're supposed to be Cousin Jim?"

"Right."

"Good to see you," said Jess, holding out his hand. "Be sure and say hello to Jane." He narrowed his left eye, said to Uncle Fred, "Jane's a bright girl, a born leader. Fred'll tell you that."

"I already have, Jess."

A grinning Kendry jumped on Jess' back, and Jess, without looking around, bent and airplane-spinned the grinning Kendry off and into the nearest wall. "There's my daughter Jane over there. Trot over and pay your respects, Cousin Jim."

Hecker had noticed the girl before, had her pointed out by relatives in the crowd. She was tall, nearly five-feet eight, and slender. Her hair was darker now than in the days of the Rehab pictures. It was long and straight. She was wearing a pair of boy's tapered khaki trousers and a sleeveless white pullover. Her tan face was slightly flushed. Hecker edged toward her. Someone put a chicken wing in his hand, and someone else punched him in the kidneys. "Thought I'd introduce myself, Cousin Jane," said Hecker.

She had been standing silent, not looking at anything. She blinked her grey eyes and a slight smile touched her lips. "You're Jim. I had something to discuss with you."

"Oh?"

"Problem of a lost cat."

"His name is?"

"Burrwick," she said. "He spends much of his time down at the waterfront."

"Around Giacomo's?"

"That's him." Her hand touched her arm. "Walk with me over by that exit and I can talk to you."

"Fine," said Hecker.

She studied his face as they moved toward the arched doorway. "You didn't get hurt here, did you?"

"No, earlier," said Hecker. He had forgotten the traces of the hopper crash on his face.

Jane stopped, back to the wall. "You know," she said quietly, "something about what we're up to."

"You want to topple the Junta."

"And you work for them."

"The Social Wing isn't always obliged to agree with the Junta," said Hecker.

"Perhaps," said the girl. "I took a chance on that. The Kendrys, and those who've joined us, are getting blamed for the riots. That kind of rebellion I'm not opposed to, if the motives behind it could be used by us. From what I've picked up, these riots won't do us any good. They really are prompted by someone on the outside. Someone who wants to use them against the Junta."

"You sure?"

"I've gathered enough fragments of information to put together a picture," said Jane. "There are people in the Republic of Southern California who think the Junta is much too mild. I'm afraid they're the ones behind the riots in the suburbs. Should they take over, which is a possibility, conditions will grow even worse. Our attempts to get a good government for the Republic will be set back. It's difficult enough now."

"Who," asked Hecker, "do you think is behind these riots and how do they do it?"

"The how I don't know," Jane said. "As to who, the only name I have is not really a name. I keep hearing about somebody called Gadget Man."

"Gadget Man?"

The girl said, "I know where you can start looking for a more definite lead. There's some link between this Gadget Man and Nathan E. Westlake, though I haven't been able to investigate that yet. I feel it's time to try to bring someone official in on this.'

"Nathan E. Westlake, the for mer vice-president of the United States?"

. "That Westlake, yes. Get to him and investigate. You should find out something."

"He's running that dance pavilion up in the Santa Monica Sector now . . ." began Hecker. He stopped, frowned at the bandstand.

Jane's glance followed his. "What is it?"

"There, by the musicians," he said carefully. "That's 2nd Lt. Same."

The girl caught his hand. "The Manipulation Council man? You didn't tell him to come here?"

"No," said Hecker. "No. I did call in a report to the Social Wing late this afternoon. They already knew, of course, that I had a contact to make someplace in San Emanuel. There must be a leak in SW somewhere." He looked straight at her. "I didn't set you up. It is you Same wants, though."

The girl watched his face again. "Yes, okay, you aren't lying. He must have men surrounding us."

"Maybe," said Hecker. "Same

usually likes to work alone or with a small complement of men. Tactics he prefers to numbers."

"Come this way," she said. "There's an emergency exit through that locker room. I doubt he'll try to round up the whole clan. Dad and the boys can fight out of here, should they have to." She walked casually toward an archway marked Boys' Locker Rooms.

"You have a place to hide for awhile?"

"I'll," said Jane, "go with you. We can borrow transportation. I'll go with you as far as Westlake's."

Hecker did not disagree.

They tumbled. Down a steep hillside that was rich with interlocked palm trees and tangled vines. There were so many big scarlet-petaled flowers that Hecker could not run foward without scattering petals, grinding them to fragments. At the slope's end Jane Kendry grabbed his hand and pulled him. "That passway between the trees," she said. "Quick."

Above and behind them blaster rifles crackled and leaves and branches burned away to black dust. "I could talk to them," said Hecker, running with her into the shadows the trees made in the hot afternoon.

"The army won't talk," said Jane. "On these patrols the soldiers don't talk. They just sweep through these disputed areas."

Jane ran him off the pathways and in and around through underbrush. In and around where there seemed to be no way of passing but always was finally. Suddenly there was a wooden door in the jungle, masked almost completely by thick ferns and green brush.

Hecker caught his breath, said, "I'm with the Police Corps after all."

"You couldn't get close enough to tell the soldiers," said the slender girl as they tugged the door open. "They shouldn't spot us in here. They never have."

"The army won't run down an SW man from PC," said Hecker.

"Stay out there and see then," said Jane and stepped through the doorway.

Hecker followed. "Where are are we?" Jane closed the door, bolted it silently and pulled him down a long pastel-walled corridor.

"This is the Wheelan Studios, their writers' building," said the girl. "That jungle back there isn't all Southern California gone to seed. That was the back lot, where they made jungle films. After the Chinese invasion and after most of the rest of the United States went through that economic collapse, this place closed down."

He dimly heard the half dozen orange- and yellow-uniformed sol-

diers sweeping along the jungle paths far outside. There was a shout, crackling and burning from the blaster rifles. The men moved on, became increasingly distant sounds. "Safe," said Hecker. "We probably were all along."

"Even if you had been," said Jane, "the military has orders to shoot me down. Which, I admit, is not your problem."

"The Junta has been toughening its policies, Jane, but they haven't issued any orders like that." Hecker shook his head. "They don't shoot women down."

"Oh, sure." Jane walked away, further into the building. "Look at this," she called from a doorless office.

On the top of a bright and undusty metal desk was a dictating-typing unit, compact and chromed. "An antique," said Hecker. "From what?—it must be the early 1980s."

"That's right," said Jane. "I fixed it so it'll operate on an energy cell."

"You use it?"

She was squinting at the two framed pictures on the wall, one of an actress unknown to either of them and one of a plump man in an old-fashioned sky-diving suit standing next to a brand-new 1980 hopper. "Yes, I dictate things into it. I never did that when I was younger, kept a diary or anything." She faced him, her head tilted and her smile quiet.

Hecker nodded. The room's high window showed jungle and sunlight.

Jane said, "Memoirs, I guess, reflections." She rested against the desk, wiped her forehead with the side of her wrist. "Besides 2nd Lt. Same and the Manipulation Council, who wants me? Who has orders to bring me in?"

"Nobody," said Hecker. "Not the Social Wing of the Police Corps."

"Nor the rehab system either?"

"That's up to you. There's a guy named Weeman who says you can come to him. Once a Rehab Center gives you a release, then neither the police nor the military can touch you. You're clear. While you're inside, you have sanctuary."

Jane traced the line of her jaw with her finger. "Dr. Weeman. I guess he was all right. He wanted to help. He didn't understand our cause."

"You and your father's cause?"

"Not only ours," replied the girl. "We have thousands of people in the Republic who sympathize with us. Only a small percent of the total population as yet, but we can eventually topple the Junta. The rest of the United States is still too screwed up to intervene, not for the next few years."

"All your raids, forays," said Hecker, "are aimed at hurting the Junta, at gaining control of the

government and setting up a better system. That's what drives all the Kendrys, all the rest?"

Jane folded her arms tight under her breasts. "I know you've had access to lots of files, background material on the Kendrys. You didn't grow up with my father. You don't understand him. His methods, his style."

"Probably."

"We've terrorized towns, looted. We have to unsettle people, scare them into thinking. We can use the techniques of outlaws and bandits and still not be outlaws and bandits. My father is wild and strong," said the girl, "and not tied to an official pose. He's not afraid. You know who you are, and then you don't have to apologize for what you do."

Hecker watched the jungle. "Your father didn't think you should tell the Social Wing what you knew about the Gadget Man, did he?"

"No," said Jane. "As I said, you have to know my father. Have to know what he's lived, and about my mother and what happened. Then you could understand why he didn't want me to tell anyone like you."

"You didn't agree?"

"I acted on my own, without telling him."

"You are the leader of the guerrilla operation, though?"

"No, my father is. I help. I'm second." After a moment Jane said, "We're about twenty-five miles from former Vice-President Westlake's place, from the Don't Tread On Me electronic dance pavilion. I'll take you there."

"Same is looking for you."

"Nobody knows I'm heading there, except my half-brother Jack," said Jane. "As far as my father knows, I'm off on one of my rambles. And you haven't been filing any more reports, have you?"

"There hasn't been much opportunity," said Hecker. "Seems safer not to anyway. The Social Wing allows us to extemporize as the assignment calls for."

"Extemporize as the assignment calls for," said the girl, hugging herself tighter. "You qualify for what my father calls—a name he picked up as a boy—the 'establishment'. Why do you have to be so stiff and quiet?"

Hecker scratched a spot between his shoulder blades. "Look," he said, "we can sleep together right now. You don't have to start an argument to get there."

Jane remained motionless for several seconds, then lowered her arms.

The glass pavilion was filled with neon flags. They flashed red white and blue all around and overhead, interrupted by stars and night clouds that showed above the great glass-squared dome. Undulating around the upper walls,

in multicolored translux, was the name DON'T TREAD ON ME DANCE PAVILION. Below that, in electric cross-stitch, pulsed a sign saying YOUR HOST: NATHAN E. WESTLAKE, FORMER VICE-PRESIDENT OF THE UNITED STATES OF AMERICA. On pedestals at twice eye level were android replicas of the past presidents of the United States. Just inside the wide doorway of the glass pavilion, his back to the three hundred dancing patrons, was a small black man in a powdered wig and buckskin suit. "Welcome to the Don't Tread On Me," he said as Hecker and Jane entered.

"Good evening," said Hecker.

"I am," said the black man, "Ralph E. Prickens. If you're fans of American history you may remember me as the first Negro Secretary of Defense."

"Didn't your policies," said Jane, who had borrowed a dark wig from the abandoned movie studio, "lead to . . ."

"The ultimate collapse of the United States government," said Prickens. "It's nice to be remembered."

"And there was," added Hecker, talking above the music, "the SFX scandal."

"Yes," said the Negro, touching his dusted wig. "That was a high point in my career."

"Was the SFX a fighter plane or a missile?" asked Jane.

"Nobody was ever sure," said Prickens. "That was part of the scandal. It was glorious in our nation's capital in those days, when we still had a nation."

"Who," asked Hecker, his hand on Jane's arm lightly, "are you dressed as, Mr. Secretary?"

"Guess."

"The wig is George Washington," said Jane and got a pleased nod from the Negro. "The buckskin is Daniel Boone."

"To be eclectic and patriotic is very satisfying," said Prickens, his head bobbing pleasantly. "When you tire of dancing, I'll show you my Museum of Historical American Weaponry. You two seem mature enough to appreciate the American past at its best."

There was a ratcheting crash far across the pavilion. Hecker pointed. "President Hoover just fell off his pedestal."

Prickens patted his wig and grinned. "Yes, he's programed to do that. Customers get bored seeing the andies just dance and make speeches."

"We've heard a lot about—though we've never been here before—the former vice-president," said Jane. "Is there any chance of getting a glimpse of Mr. Westlake himself?"

"Up on the bandstand touching his toes," said the Negro. "It's a new dance step the V.P. is working on. See him there? Touch your left toe, jump up,

snap your fingers, touch your right toe, pat your fanny, snap your fingers, walk like a duck."

The bandstand in the Don't Tread On Me was mounted on four eagle-topped flagpoles and was filled with electronic musicians dressed like the Union Army. Former Vice-President Westlake, his familiar cigar in his mouth, was dancing in front of the Fender bass section, dressed as Abraham Lincoln. He lost his stovepipe hat in the midst of a frantic duck-walk and swung off the high platform, slid down a pole. On the red, white and blue mosaic dance floor he shrugged his Lincoln shawl off his shoulders and toweled it back and forth across his buttocks.

"He can relax more than he did in the White House," said Prickens. "There he was too hampered and pressured." He smiled suddenly at Hecker and Jane. "You don't really want to dance now. Come see my museum first. I'll fetch the vice-president in, and you can shake his hand, and he might give you one of his souvenir pencils."

They followed the former Secretary of Defense, zigzag, through the dancers, most of whom looked young and untroubled. Highlights in the life of Benjamin Franklin were carved on the door of the Museum of Historical American Weaponry. It was a dome, too, half as large as the dance pavilion. The weapons—muskets, M-16s, cannons, bazookas, flintlocks, flamethrowers, grenades, and things not easily identifiable—were in great heaps on the mosaic floor.

"I haven't systematized this wealth of stuff yet," admitted Prickens. He took off his powdered wig and exhaled. "To me the biggest thrill is in the collecting. Cataloging and sorting is enervating. Over in that area I have my planes. Bombers, fighters. I've been exceptionally lucky on warplanes lately, getting my hands on some truly nice items." He gestured at a half a dozen battered airplanes that made a vast winged heap against the far wall. Two of the planes were upside down; instruments and wires hung down out of the open cockpit of one. "Come over and get a closer glimpse."

"Impressive," said Hecker, as they drew closer to the mound of planes.

Up out of the cockpit of an ancient World War II fighter plane rose a lean grey man in a grey seamless suit. His face was long, sad, and his eyes were mostly pockets. "Snared," he said. A bright pistol, the newest weapon in the museum, was in his lean right hand and aimed at Hecker and Jane.

"We got them good," said Prickens. "I spotted them right off."

"I have jurisdiction over this case," Hecker told the man in the plane. "What are you up to, Same?"

2nd Lt. Same of the Manipulation Council smiled, his face remaining sad. "No, Hecker. MC doesn't need to bother with protocol and procedures. MC can cut through such. Besides," he said, swinging out of the ship, "my interest in Miss Kendry is more than an expression of interest on the part of MC."

"I was wondering why you'd pull a gun on me," said Hecker.

"Exactly," said Same. "I serve a variety of causes. The riot sponsors are among those I work for. Questioning Miss Kendry will help me serve both. The riot makers and Manipulation Council. As will eliminating her."

Jane took Hecker's hand, watching Same. "Who told you we'd come here?"

Same dropped from the warplane to the floor. "An awkward boy named Jack. He was the only one who seemed to know."

Jane moved sideways and ahead, hit Same across the mouth with her fist.

2nd Lt. Same said, "It's sometimes valuable to work out frustrations physically."

Prickens grabbed the girl, saying, "Calm yourself, miss."

"They seemed to like the dancing," said former Vice-President Westlake, who had come into the weapons dome while Jane was swinging on Same. "That Latin touch at the end drew a nice round of applause. Is this them?"

"I want," said the second lieutenant, "to find out what the girl knows and whom she's told about it. I want to find out what the social worker knows and whom he's told about it."

Westlake's double-chinned face was still deeply pink from the exertion of dancing. "Did you bring your own interrogation equipment? Ralph's is always going on the fritz. It's that outmoded junk from the war with Brazil."

"I can't keep every single damn thing around here shipshape," said Prickens.

Smiling sadly, 2nd Lt. Same reached behind him for a small, pebbled tan case. "I always use my own."

Westlake got a fresh cigar going. "Once Swingle takes over we won't have to worry about outmoded equipment."

"Don't mention his name," said Same, his free hand setting the case on a pile of rifles.

"Who's name? Swingle's?" asked Westlake. "One thing I learned in nearly eight long years in the White House, Same, is that it really doesn't matter what you say in front of expendable people."

Prickens let go of Jane and moved closer to Same's interrogation case. He said, powdered wig

in hand, "Let's not squabble in front of company."

Hecker pushed Jane aside, said, "Take cover." He kicked Prickens' wig out of his hand and it sailed, hard, into Same's face.

The second lieutenant's blaster crackled, cutting a rut across the side of a Sherman tank.

Hecker then caught both ends of the vice-president's shawl, tugged with alternate motions, and spun Westlake over into Prickens. The two men lost balance and toppled into 2nd Lt. Same, who went over backwards and shot a square of blue glass out of the dome high above.

Hecker drew his own pistol and sent a warning blast at the tangle of men. He vaulted a pile of gas masks and airplane helmets and found Jane. The slender girl was throwing dud hand grenades in the direction of Same. "Let's leave," Hecker said.

They swung up a bazooka and used it as a ram to shatter out a section of the glass wall of the museum dome. Hecker fired again over his shoulder as Same, looking both sad and grim, got himself righted and ready to shoot.

There was a fifty yard stretch of empty field, high grass, behind the dome. Hecker and Jane ran across it before 2nd Lt. Same could make his way through the souvenirs and reach the shattered place in the wall.

There was a block of ornamental forest next, then a few small beach cottages. In front of the second darkened house a hover scooter was parked. "Hold them off," said Jane, "until I can job this thing."

"No sign of anybody yet."

Jane picked the lock over the starting compartment of the two-seat scooter and had the machine going before the lights in the cottage came on full.

The fog began to thin and the water to lighten. Jane turned away from Hecker and the borrowed grey blanket slipped off her shoulders. Hecker sat up, flexed, rubbed his head. A breakfast had started up nearby. Hecker sat watching the ocean, then studied the scatter of people camped on this stretch of unsecured beach.

A Negro girl in a castoff Chinese commando uniform cocked a hand at him and mouthed the word coffee. Hecker gestured yes, stood.

Jane moaned once, sat up full awake. "Morning," she said.

"Want some coffee?" Hecker asked, kneeling, resting his palm on the back of her neck.

"Sure," she said.

Hecker walked across the cold sand to the black girl. "Spare two cups?"

"Easy. You know Marsloff, don't you?" When Hecker nodded, she said, "He's parked in that tumbled-down penny arcade up

the beach. He noticed you when he arrived last night. He says if you want a ride anywhere, you and Jane, ask him. Even if you don't need one, step over and say hello."

With Jane again Hecker said, "Can we trust Marsloff?

"Yes," said Jane, taking a pewter mug of hot coffee from him.

"He seems to be up the beach, offering us a lift."

"We're still twenty miles from Swingleton," said the girl. "It was a good idea to ditch the borrowed scooter where we did, but we can use new transportation."

"Swingle, the man Westlake mentioned, still lives there?"

"Far as I know." Jane warmed her chin against the cup. "Erwin LeBeck Swingle. He was supposed to be the second richest man in the country, back when there was still a functioning United States. It must be nearly thirty years ago or so that he bought up most of the Anaheim Sector and turned it into a model city for older people."

"I've heard of him. He has to be about ninety," said Hecker. He drank some of his strong coffee. "And he's the kind of guy who could be tied in with Westlake and his patriotic pavilion."

"I wonder if Swingle is at the top of the riot makers."

"You mean, could Swingle be the Gadget Man?"

"Sure, he is," said Marsloff, who trotted up to them now. "He's a gadget man."

"Not a, *the*." Hecker shook hands with the big shaggy man.

"That I don't know," said Marsloff. "Swingle is a gadget freak. Every once in a while when Percher comes up with something new in the way of gadget kicks, we go down to Swingleton and sell the thing to one of old Swingle's reps. I'd estimate there are dozens of gadget freaks who supply him."

Hecker asked, "Who do you contact in Swingleton?"

"Never the old man himself. Him we've never seen." Marsloff sniffed and started backing toward the girl with the coffee, still talking. "Swingle we've never seen. We go to the Club Repose. It's a hot spot for senior citizens. We deal with the chef there." The black girl put a cup of coffee in his hand, and he kissed her cheek, trotted toward Jane and Hecker. "This chef in the Club Repose is our contact man. His name is Joe Senco."

Hecker massaged his knuckles. "Could Percher work us up something in the way of a gadget? It doesn't have to be that original. Jane and I have to get inside Swingleton, near Swingle. I want something to use as a passport."

"You're in luck." Marsloff drank down his coffee. "Because Percher is awake today and he was saying he's in a creative mood."

Hecker grinned at Jane.

Chef Senco had six kettles going on the giant stove. "Gourmet cooking for people over eighty is a special kind of challenge," he told Hecker and Jane.

"That smells good," said Jane, who had borrowed a pale blonde wig from a girl on the beach.

"Oatmeal," the chef told her. "Next to that diced beets. Then creamed tuna and minced spinach." He paused and made a wincing motion. "That noise out there in the club itself keeps me in emotional turmoil. Shuffleboard and skittles should be played out in the fresh air." He flat footed away from them, around his new butcher table. Reaching up, he thumped hanging copper pans with both small fists, making noises to counter those of the aged patrons of the Club Repose. "What did little Percher send in with you?"

From a paper sack Hecker took an electric weather house. "This gadget has the advantage of being practically an antique. One of those little houses where the witch comes out if there's going to be bad weather, two little blond kids for fair weather."

"Cute," said Chef Senco. "What's the gimmick?"

"Notice the little figures," Hecker explained. "Each one has a tiny needle attached now. This gadget combines the basic fun of Russian roulette with that of old-fashioned shock therapy. At least that's how Percher explains it. He wants $1000 for this."

"I tell you what," said the chef, pointing at them with a wooden spoon. "Percher has been so swell in thinking up ideas that old man Swingle wants to express his thanks in person. It's a real shame Percher didn't get in himself, but you two'll do as substitutes at the little appreciation ceremony Swingle has in mind." He shuffled to the stove. "Let me turn the heat down low and I'll escort you into his presence."

"We're honored," said Hecker.

The tower was higher than the one at the Rehab Center, and its smoky windows kept the sunlight almost completely out. Closed just inside the doorway, Jane said, "Not too good."

"That's what I thought when it turned out to be 2nd Lt. Same who opened the door," said Hecker.

Far across the room, behind a wide, floor-standing beaded screen, 2nd Lt. Same was now talking to someone. At Hecker and Jane's backs stood the chef, with a pistol resting against the string of his striped apron.

"He'd like to meet you," called Same, emerging from behind the screen. "You can get back to your kitchen, Joe."

The chef left and Hecker and Jane approached the screen.

"We've been waiting to see what you'd do, Hecker. You haven't reported to the Social Wing since our encounter in the pavilion," said Same. "I had expected you'd try a more indirect approach."

"I figured," said Hecker.

"Nevertheless, I took precautions to cover the possibility of your walking right in."

Behind the screen they met Erwin LeBeck Swingle. There did not seem to be much left of him. His head, his left arm and his right leg to the knee. Everything else was chrome and vinyl, mechanical parts. He was wired and bolted. Cords and hoses trailed away from him and wound intricately across the smooth floor behind him. He was connected to an old computer that filled the rear wall, wired to a smaller console computer, which 2nd Lt. Same leaned against. Swingle was linked, too, with a complex pumping mechanism that made an endless seesaw noise.

"Gadget Man," said Jane softly.

"My continued life," said Swingle in a voice which didn't seem to be coming from his mouth," is a miracle."

"Of sorts," said Hecker.

The old man's face was long, thin, infinitely wrinkled. "Transplants and spare parts have kept me alive. We abandoned human replacements—when was it, Same?"

"Twenty years ago, sir."

"All machinery and gadgets now," Swingle told them. "Gadgets were always a pleasure to me, and so I am pleased to be almost one myself. It's a miracle. Or have I mentioned that? Have I, Same?"

"Yes, sir."

"Two brains in addition to my own, to be on the safe side," said the very old man, "and I still slip up. Age, you see. Age will try to trip you up no matter how slick and sly you are. I wager that when I am completely gadget, I'll still be forgetful. Still shake now and again. She's a pretty girl, isn't she, Same? So tall and straight."

"She has bad posture, sir."

"No, a lovely stance." The old man rubbed a metal part of himself with his one real hand and produced a grating sound. "We'll kill them both, I'm afraid. After you find out what they know and whom they've told." A bubble rose from the bottom to the top of the large tank of yellow fluid connected to the Gadget Man's major pumping apparatus.

"What," asked Hecker, "are you actually up to?"

"He hasn't time to explain," put in Same.

"Oh, I do," said the old man. "I have time. I'm ninety-four, young people, and nowhere near dying. My purposes are simple. To overthrow the government of the Republic of Southern Califor-

nia. To return this part of the state to its rightful paths. Then we will destroy the San Francisco Enclave. No hope of converting them to traditional American values. Always was that way up there, even when we had an America. Take over California. Have to destroy everyone in the Frisco Enclave. Don't call it Frisco. They used to say. I think I've put the plan well. I have three brains to think with. Same is leaning on one of them with that smug look on his face. No balls. No balls, but he works like the devil. Like a gadget. We intend to rebuild America, young people. We'll have the whole glorious country again. Not as it was in the dreadful 1970s and 1980s. No, as it was in an earlier day, a quieter day. I grew up in such a quiet place. There were almost three acres of land, trees and fields. My father—who has passed away, rest his soul—used to milk by hand. No machinery for him. That was a long time ago."

Pumps, glass and metal, whirred and methodically ticked. "Why the riots?" Hecker asked the Gadget Man.

"To terrorize the Junta," said Swingle. "It's only part of my plan. I am going to shift to more force soon, when things get to collapsing a bit more."

"How do you make the riots?" Jane asked.

Swingle laughed, inside himself someplace. "I use the Chinese."

"What Chinese?" asked Hecker. "The commandos?" He was still holding the weather house, and he tucked its bag up under his arm.

"Not plural, singular," said the old man. "As a matter of fact, though, he was a commando. The Red Chinese were keeping him in reserve, but his unit got wiped out and never got to put him to use. We found him wandering, dazed and burned, in one of my orange groves. I learned what he could do, and I put him safe away until I was ready to use him. I'm immune to him. I made sure of that, too."

"What can he do?"

"He's a mass hypnotist," said Swingle. "His name is Lee Bock and we keep him locked up in the basement here."

"What does he do?"

"We pick a suburb. Set up our television cameras, unobtrusively, and provide Lee Bock with assorted monitor pictures of the place. We also give him ordnance maps, chamber of commerce circulars and other details about the suburb in question. Then Lee Bock concentrates and concentrates and wills the people to riot. He's a mystic. He didn't even want to be a commando. They conscripted him. If he doesn't do what we tell him, we don't feed him. Same is immune to Lee

Bock, one of the reasons I let him work for me, and he has ways of persuading Lee Bock to make riots for us."

"He's right here in the basement?" asked Jane.

"Yes," said the Gadget Man.

"Curious," said Hecker. He rocked forward and overhanded the packaged weather house into the open glass tank of Swingle's biggest pump. The witch figure fell free and bounced out of the tank and into the wires and circuitry next to it.

Hollow thunking bubbles began to form in the tank, and parts of the pump started buzzing and creaking. "Not them," gasped Swingle, waving 2nd Lt. Same's rising pistol down. "Attend to me first."

"But, sir?"

Hecker took Jane's hand and they ran around to the other side of the screen. They stopped and pushed flat-handed until the big screen began to teeter and rock. One final grunting shove and they got the screen to topple over onto Same and Swingle.

"Downstairs," said Hecker.

Beneath the beaded screen were sounds of breaking and sputtering, fizzling and splashing, off-key whirs and running down grates.

The basement was confused. The lighting, overhead tubes and strips meant to glow pale orange, was flickering and going off. Doors were opening and closing on their own, swishing and clicking. Door chimes seemed to be ringing in hundreds of rooms throughout the tower. Three attendants in pale lemon, ran by Hecker and Jane and up a ramp. "A government raid," panted one of them. "It must be."

A door slid open at the moment Hecker passed it. In the low, shadowy room sat an old Chinese man in a white bathrobe with no belt.

"You are Hecker," said the Chinese, a tall man with a faint bend to him.

"Yes. You're Lee Bock?"

"I am." He left the scuffed-leather armchair he'd been sitting in and picked up a small towel-tied bundle from the matted floor. "I foresaw your arrival and was waiting. All this building's mechanisms are connected with Swingle. Another egocentric touch of his. Your monkey wrenching has botched the entire structure. How do you do, Jane Kendry?"

"Fine, yourself?"

"Weary," said Lee Bock. "We can leave now."

The lane outside the tower was lined with artificial orange trees in blossom. "They'll come after us before we can clear the outskirts of Swingleton," said Hecker.

"I have thought about that," said Lee Bock. His robe ballooned

and his paisley shorts flashed for an instant. "As a diversion, Hecker, I will cause a riot. My last insurrection." He halted beneath an orange tree. "Stand close to me, rest your hands on my shoulders so you won't run the risk of being affected by the impulses I will create." They did, and Lee Bock closed his eyes and gripped his elbows. A full minute went by. "We can proceed," said the Chinese mystic. "There should be sufficient diversions."

From the dental clinic on their right came a shatter of glass, and then thousands of tooth x-rays fluttered out of an upper window. At the golf course next to the clinic, a foursome of knickered old men began chasing a grounds keeper with their irons. Old women were abandoning their patios, starting to conspire in larger and larger groups beneath rustic lamp posts.

"Do you get the whole population?" Hecker asked as they began to run in a direction opposite to that of the growing crowds.

"No," said Lee Bock. "Only those who are really dissatisfied already."

Fires began to burn all around them.

The Chinese mystic had his robe spread as a blanket on the afternoon sand. He was sitting with his hands on his knees, bent forward. "You should not return to your profession just yet, Hecker," said Lee Bock.

Crouched next to Jane on the unsecured beach, Hecker asked, "What do you mean?"

"I am able to see," said the old Chinese, "that you cannot trust your superiors. Nor, I am afraid, is Therapist-in-Chief Weeman to be trusted. Were you to bring Jane Kendry to Weeman's Rehabilitation Center, she would be turned over to the Manipulation Council."

"I don't believe that," said Hecker.

"It is true," said Lee Bock. "Although the Junta is not in favor of the suburban riots, they are even less in favor of the Kendrys. Jane Kendry will be executed, quietly and not officially, if she comes near a Rehab Center or any member of the Police Corps above the rank of lieutenant. You didn't know this, Hecker. Manipulation Council has long controlled the Police Corps. You have actually been working for them."

"I didn't know that," said Hecker, rising, "I'm still not sure I can believe you."

"Think about what has been happening to you," said the Chinese. "Examine yourself and your feelings. Then decide."

Hecker looked at Jane. She smiled quietly. "Okay," he said—and sat down beside her. ◄

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