



NO	VEL	ETS

Santa Claus vs. S.P.I.D.E.R.	HARLAN ELLISON	84
HORT STORIES		
Black Snowstorm	D. F. IONES	45

A Meeting of Minds

Diacit ono wotorin	2, 1, 301,20	
Unidentified Fallen Object	SYDNEY VAN SCYOC	63
How I Take Their Measure	K. M. O'DONNELL	78
The Legend and the Chemistry	ARTHUR SELLINGS	116

FEATURES

11 2100H 1E (01H0H0 (00,00)		
Books	JUDITH MERRIL	34
Cartoon	GAHAN WILSON	44
Films: Charly	SAMUEL R. DELANY	76
Science: Dance of the Satellites	ISAAC ASIMOV	105

128 F&SF Marketplace

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22

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Anne McCaffrey, winner of this year's Hugo Award for best novella, published her first story (THE LADY IN THE TOWER) here in April 1959. It was the story of the Rowan, one of the few Prime Telepaths in control of the Federated Worlds, and it described in a particularly moving and exciting fashion the loneliness of the Rowan and her strange courtship-under-fire by another Prime Talent, Jeff Raven. This story concerns a second generation of telepaths and their response to an alien probe. It is a worthy sequel.

A MEETING OF MINDS

by Anne McCaffrey

IOTA AURIGAE WAS A BLAZE AT zenith, to Damia's left, glinting off her tiny personal capsule. Capella's light, from the right nadir, was a pulsing blue-white. Starlight from the Milky Way bathed her, too, but the only sound was her even breathing as she allowed her mind to open fully to the mindless echo-freedom of deep space.

It was as if she could feel the separate cerebral muscles relaxing, expanding, just as her tall, slender body gradually went limp. But it was primarily the mental relief which Damia had sought, so far from her control tower at the Federated Telepath and Teleport installation on Auriga. It was the utter peace of deep space which she required as anodyne to the

constant demands of her position as Psionic Prime, responsible for the flow of commerce and communications in this sector of the Federated Worlds. True, she was young, barely twenty; but age is relative, particularly when the need is great, and her mental talents were unusually mature. Furthermore, she was of the Raven Clan, born into a tremendously talented family, carefully indoctrinated and trained to assume an executive role as the influence of Federated Worlds expanded into new star systems, needing more Prime Talents.

Occasionally, even her young mind felt the strain and required respite from the insistent murmur of broadcasting thoughts which beat-beat aginst hers: little minds which could not conceive the forces that Damia, Aurigan Prime, could marshall in gestalt with the mighty dynamos of the tower.

With a flick of a finger, Damia screened out the over-brilliant starlight; she opened her eyes. The softened star gleams, points of gem fire in the black of space, winked and pulsed at her. Idly she identified the familiar patterns they made, these silent friends. Somehow the petty grievances which were built up inside her gently dispersed as the overwhelming impersonality of cold nothingness brought them into proper perspective.

She could even forget her present preoccupation for a moment: forget how lonely she was; how she envied her brother Larak his loving, lovely wife and their new son; envied her mother the company of her husband and children: envied her Afra's company. . . .

Afra! What right had he to interfere, to reprimand her? His words still seared. "You've been getting an almighty huge vicarious charge out of peeking in on Larak and Jenna. Scared Jenna out of her wits, lurking in her mind while she was in labor! You leave them both alone!"

She was forced to admit herself at fault. But how had Afra known? Unless Larak had told him. She sighed. Yes, Larak would have known she was eavesdropping. Though he was the only T-3 among her brothers and sisters, he had always been extremely sensitive to her mind touch. And she and Larak could always overwhelm any combination of the others, even if Jeran, Cera and Ezro, all T-1s, teamed up against them. Somehow, Damia could switch mental gears, doubling the capability of other minds within her focus.

But it had humiliated her to be reamed by Afra. Well, better by that yellow-eyed, green-skinned T-3 Capellan than her father, acting in his capacity as Earth Prime. She rather hoped her father had not learned of her breach of T-etiquette.

Odd, though, she hadn't heard so much as a whisper from Afra, since then. It must be all of seven months. He had listened in as she'd apologized to both Jenna and Larak, and then silence. He couldn't be *that* angry with her.

Damia diverted her thoughts away from Afra and went through the ritual of muscular relaxation, of mental wipe-out. She must be back in the tower very soon. In a way, the fact that she could handle Prime duties with no higher ratings than a T-6 had certain disadvantages. The tower staff could handle merely routine, planetary traffic, but she had to be on hand for all intersteller tel-

epathic and teleportation commerce.

It would be wonderful to have a T-3 with her: someone who could understand. Not someone . . . be honest with yourself out here in space, Damia . . . some man. Only men shy away from you as if you'd developed Lynxsun cancers. And the only other unmarried Prime was her own brother, Jeran. Come to think about Jeran, the smug tone in his recent mind touches undoubtedly meant he had found a likely mate, too.

It was no consolation to Damia that her mother had known and warned her of this intense, feminine loneliness. But Jeff Raven had appeared to storm the Rowan's tower and before that, the Rowan had at least had Afra. . . .

Afra! Why did her mind keep returning to him?

Damia realized she was grinding her teeth. She forced herself through the rituals again, sternly making specific thought dissipate until her mind drifted. And in the course of that aimless drifting, an aura impinged on her roving consciousness. Startled, for nothing should be coming back from that far quarter of space, she tightened her mind into a seeking channel.

An aura. A mere wisp of the presence of something. Something... alien!

Alien! Damia recomposed herself. She disciplined her mind to a pure, clear, uncluttered shaft. She touched the aura. Recognition of her touch; retreat; return.

The aura was undeniably alien but so faint she would have doubted its existence except that her finely trained mind was not given to error.

An exultation as hot as lust caused her blood to pound in her ears. She was not wrong. The trace was there.

Taking a deep breath, she directed an arrow-fine mental shout across the light years, nadirwards, to the Earth Prime F T & T Tower, high above the Grand Canyon.

/ALIEN SPACECRAFT AP-PROACHING OUR GALAXY INTERCEPTING AT AURIGA/ she informed Jeff Raven.

/DAMIA, control, damn it, girl. Control/ Jeff replied, keeping his own mental roar within tolerable bounds.

/Sorry/ Damia amended briefly without real contrition. Her father was capable of deflecting her most powerful thrust.

/You are on a tight focus, I trust, with news like this?/ he asked in icy official tones.

/Of course I am. But my first duty is to report to Earth Prime, isn't it?/

/Don't come over sweet innocence on me, missy. Now, give your full report/

/Can't give a *full* one. The alien aura is barely detectible, four light-years galactic north-

northeast, sector 2. I arrowed in once I heard the trace, and it responded/

/It responded?/

/The aura/ /You reported a spacecraft/

/Father, how else could anything cross the galactic sea?/

/My dear child, in our own galaxy, we have encountered many odd life forms that did not re-

quire light or oxygen to exist/

/I say, spacecraft. I touched it/ /Damia?/ and Jeff's tone was

suspicious. /Where are you?/ /I was only resting/ she temporized, suddenly aware she was doing something not quite cir-

cumspect. /Resting is permitted. But how far are you from the tower?/

/A light-year/ /With only a T-6 as station control? Supposing, daughter, something happened to you? Supposing that alien aura decided

to home in on you . . ./ /Oh, Dad, if I can't read more than an aura of them, and they haven't changed position or rate since I informed you, they sure as hell don't pose any threat to me/

She carefully suppressed a giggle at her father's exasperated exclamation. She very seldom got the better of either her father or Afra . . . she erased that name and went on . . . but it didn't keep her from trying.

/All right, missy, show Jeff demanded, still severe.

She allowed him to join her mind completely, herself the focus, as she led him out beyond the blaze of the stars. She led him directly to the alien trace. The aura was palpable but so far away that only the extraordinary perception of two powerful minds could find it.

/I caught anticipation, curiosity. And caution, too/ Jeff told his daughter thoughtfully as he withdrew from the tight focus. /And whatever it is, is approaching our galaxy/

/I shall maintain a watch/ Damia volunteered, unable to conceal her intense excitement at this momentous event.

/Not at any time personally

endangering yourself, Prime/ Jeff adjured her, coloring the official with personal concern. /No, of course not. But I'd like

to borrow Larak to maintain an augmented watch/ /Larak's training T-3s to aug-

ment Guzman on Altair. The old man sleeps most of the time, but he's the only Prime we have for that sector until Ezro's older/ Jeff replied. /I'll send you Afra. He'd be better anyway/

/Because Afra has already touched the aliens you and mother routed above Deneb twenty-odd years ago?/ Damia laughed, covering up her reaction to Afra's coming with a jab at her father.

Jeff chuckled, amiably, giving her credit for a deep perception.

/Well, I'd rather wait until Larak's free. I can just hear mother screaming at being deprived of Afra/

/Damia/ Jeff's tone crackled with disapproval. /That is an irrational, childish and insulting remark. Repair your attitude/ His tone altered. /If you hadn't, at one time or another, intimidated every other T-2, -3 and -4 in the Federated Worlds, I could send someone else . . ./

/. . . and matchmake into the bargain?/ She tinged her thoughts with derision and then advised smugly /Your dynastic plans will bear better fruit with Jeran. Only don't let him settle for anything less than a T-4/

decided as she felt her father's startled pause.

/You haven't been eavesdrop-

That was score two for her, she

/You haven't been eavesdropping again, have you, Damia?/

She parried that surprise with a quick /After Afra reamed me for that with Larak? Not bloody likely/

/Oh, it was he who stopped you? Your mother thought it was Isthia/

/The trouble with telepaths is sometimes they think too much/ she remarked acidly, infuriated afresh to realize that her mother, also, knew of that incident.

/Damia!/ Jeff's tone was unusually sharp. /Your mother is the only person in the galaxy who has any idea of your problems . . ./

/Then why did she hand me over to Isthia to raise?/ Damia flashed back without thinking.

/Because, my darling daughter, you were without doubt the most infuriating, recalcitrant, unmanageable four-year old. Your mother was too ill during her pregnancy to keep track of you blithely teleporting all over the system. I sent you away, not your mother. It was not her decision, and she resisted it every step. But you two are so bloody much alike . . ./

Damia snorted. She was not the least bit like her mother. There was absolutely no resemblance between them. She was Jeff's daughter from her slender height to her black hair and vivid blue eyes. Ezro, yes and Larak too, took after the Rowan. But not she. Of course, Damia had to admit, her mother had an exceedingly strong and diverse psionic talent, or she wouldn't be Callisto Prime, but Damia was just as strong, and she had the added advantage of that catalytic ability as well.

/Well/ Jeff was saying in a milder frame of mind /you'll see it one day, my dear, and I, for one, shall be immensely relieved. Your mother and I love you very much, and we're damned proud of the way you've taken over your official responsibilities on Auriga. Professionally I have no quarrel with you/

Damia basked in her father's praise. He didn't give it lightly.

/If you were only able to relate more to the people around you/ he continued, spoiling the compliment, then added briskly, /I'll send Afra on directest. I can trust his impartiality/ and to Damia's amazement, her father chuckled.

She stabbed at his mind to find the basis for the amusement but met a blankness. Her father had probably turned to some other problem.

"Impartiality? Afra?" the sound of her own voice in the little personal capsule startled her.

What on earth was that supposed to mean? Why would Afra's impartiality be trusted—above hers—in identifying or evaluating an alien aura?

But Afra was to come to Auriga.

After he had broken contact with Damia, Jeff did not immediately turn to other problems. He mulled over the subtler aspects of that vivid contact with his daughter. Damia's mind was as brilliant as Iota Aurigae's and about as stable as any active star's surface. He had caught the edges of the skillfully shielded reactions to several references. He noticed with some reassurance certain evidences of emotional maturities, except where her mother and Afra were concerned.

Damia had unwittingly suppressed what Jeff recalled most vividly about the day he had sent her away to Isthia on Betelgeuse for fostering. It had been Afra whom the four-year old Damia had clung to and cried for, not her mother. Jeff sighed. The decision to send Damia to Isthia had been one of the hardest he had ever had to make, personally and professionally. But Rowan had been extremely ill carrying Larak. And Damia, coming early into her extraordinary mental powers, had made life pure hell for everyone Raven household: in the porting herself . . . and thing her fancy seized upon . . . indiscriminately around the system. Afra alone had some control over her, and he had had to be

at Callisto Tower.

Under Isthia's calm, unruffled discipline, Damia had learned to control her waywardness. And benefited by the regimen. She was sincerely fond of Isthia. Strange that it was the Rowan whom Damia still blamed for that separation.

/Rowan/ Jeff called out to Callisto Tower and sensed that his wife was resting as the interchanges on Callisto's cargo deck filled from Earthside.

Her mind touched his gladly, as delighted with his presence as if they had not breakfasted together a few hours earlier.

/Open to me. Damia's made an alien contact. See it/

/Alien? Near Damia?/ The

fleeting maternal concern was quickly supplanted by professional curiosity as the Rowan scanned Jeff's recent experience beyond Auriga. /Of course, Afra can go. But why on earth would Damia think Afra couldn't be reassigned as you see fit? He often has, but it's true I never get on as well with other T-3s/

/Too true/ Jeff replied teasingly, to divert Rowan from scanning recent conversations too deeply, /but if I didn't know Afra as well as I do . . ./

/Jeff Raven, there has never been a single thought between me and Afra that . . ./

Jeff laughed and she sputtered at him indignantly.

/Actually/ she finally said thoughtfully, /I'd be very relieved to have Afra with Damia. I know how lonely it must be for her . . ./

/If she hadn't been so heavy-handed with every other high-T young male, she wouldn't be lonely/ Jeff said briskly, before Rowan got started on how she had "failed" her daughter. /Now, is Afra in gestalt right now?/

/Right here. I'll leave you two men alone/

Refusing to placate her ruffled feelings, Jeff caressed her with a very affectionate thought before he felt Afra's mind touch his.

/Are you sure you're only T-3?/ he asked, surprised at the firmness in the Capellan's touch.

/I'm in gestalt, after all/ Afra replied, good naturedly. /And, during the course of twenty-odd years in the presence of the fine Raven touch, even a lowly T-3 learns a few tricks. From the expression on the Rowan's face, I'd hazard that Damia was being discussed. What's she up to now?/

Damia had just returned to Auriga when she heard the Rowan give the tower official warning of the transmission of a personal capsule.

/Afra?/ Damia exclaimed, reaching back along her mother's touch to Callisto.

/Damia!/ Afra said warningly. But too late. Without waiting for the Rowan to flip the capsule halfway to Auriga, Damia blithely drew the carrier directly from Callisto, ignoring her mother's stunned and angry reaction to such a lapse of protocol.

She regretted the gesture as soon as she had done it. But now Afra's capsule was opening, and he swung himself over the edge. She could not have missed his trenchant disapproval if she'd been a mere T-15. He stood, looking down at her, the same aloof, contained man. Now why, Damia wondered irritably, had she expected Afra to change? Would he notice she had? And would Afra condescend to remark on it?

She rose from her own capsule, instinctively standing very erect as

if to bridge the differences between their heights. Tall as she was, inches taller than her mother, she came only to Afra's shoulder.

"You'd better apologize to your mother, Damia," Afra said, his unexpectedly tenor speaking voice a curious echo to his quiet mental tone. "Isthia taught you better manners even if we never could."

"You've been trying to lately, though, haven't you?" The retort came out before she could stop it. Would Afra always have this effect on her?

He cocked his head to one side and regarded her steadily. She sent a swift probe which he parried easily.

"You were distressing Jenna unnecessarily, Damia. She appealed to me as the nearest male of her Clan and because she did not wish Jeff to know of your indiscretion."

"She chose well." Damia was so appalled at that waspishness in her voice that she extended her hand towards him apologetically.

She could feel him throw up his mental barriers, and for a second, she wondered if he might refuse what was, after all, the height of familiarity between telepaths. But his hand rose smoothly to clasp hers, lightly, warmly, leaving her with the essential coolgreen-comfortable-security that was the physical/mental double-touch of him.

Then, with a one-sided smile, he bowed to indicate he was flat-

tered but allowed a recollection of her as a nude baby on a bath towel to cross his public mind.

She made a face at him and substituted Larak's son. Afra blandly put "her" back on the tow-el beside her nephew.

"All right," she laughed. "I'll behave."

"About time," he grinned amiably and looked beyond her to their surroundings.

He had seen Auriga in others' minds, but the amber sunlight was easier on his eyes than earth's bright yellow, so that Auriga was not a dark world to him, but a restful one. The sweet-scented breeze sweeping down from the high snowy mountain range was lightly moist and the atmosphere had a high oxygen content, exhilarating him.

"It's a lovely world you have here, Damia."

She smiled up at him, her so blue eyes brilliant under the fringes of long black lashes.

"It's a lovely young vigorous world. Come see where I live," and she led the way from the landing stage to her dwelling.

The house perched on the high plateau above the noisy metropolis that was Auriga's major city and Damia's Sector Headquarters. Its sprawling newness had a vitality which the planned order of Earth lacked. Afra found the sight stimulating.

"It is, isn't it?" Damia agreed,

following his surface thought. Then she directed his mind to her day's discovery, giving him the experience exactly as it had happened to her. "And the touch is unlike anything I've ever met."

"You certainly didn't expect it to be familiar, did you?" asked Afra with dry amusement.

"Just because they come from another galaxy doesn't mean they can't be humanoid," she retorted.

Afra snorted in disgust and went into her main living room.

"I'll fix your favorite protein," she volunteered in one of her mercurial shifts.

"Don't go to any trouble for me."

"No trouble at all," she assured him mischievously. She allowed him to see her reaching for supplies from his home world lightyears away.

"Always the thoughtful hostess," he said graciously. "Have you estimated the alien's arrival?"

"I'll know better when I've had a chance to judge their relative speed," she replied thoughtfully. "A day or two would give me some idea."

He watched her at the homey duties. Like most T-1s, she enjoyed manual work and performed the daily housekeeping herself, without relying on mechanical services most households considered necessities. In a few minutes she set before him a perfectly cooked, attractively served meal which he greeted perfunctorily.

"Can't I ever impress you?" she demanded sharply.

"Why should you want to?" he asked, affecting mild surprise. "I knew you from your first incoherent thought."

"Familiarity breeds contempt, huh?"

"Contempt, no. Understanding, yes. Particularly at our levels. And, of course, confusion, wherever you are," Afra said. "Very good, just the way I like it," he added appreciatively, indicating his dinner.

Damia made a face at him across the table and with a deliberate disregard for T-manners, reached a portion of sauce-steeped meat into her mouth without spilling a drop. When Afra continued to ignore her, she sighed and picked up her fork.

"Shall I take over the regular work load, Damia, and leave you free for surveillance?"

"We don't have a heavy traffic right now. It's between harvests in this system, and manufacturing is slow for the next few months. The usual amount of tourists, though."

"How have you covered your absences with the staff?"

"Just told them I've been resting. I'll account for your presence as a preliminary survey for F T & T. Right? As if any of those lamebrains could 'search' me," she concluded contemptuously.

"So, true," Afra remarked.

She was not deaf to the irony

and was about to reply hotly, but she went back to eating rather than give him further satisfaction.

It was unprecedented, this contact with sentient life from possibly another galaxy, yet for all her capriciousness, Damia had permitted a hint of panic or her own inner excitement to escape. In that, she heeded one of the basic tenets of her position.

Panic enough was fomented within the complex Federated Worlds in the normal course of power struggles, revolutions, ecological problems and pioneer exigencies. By common consent, instantaneous communications between planets no longer meant instant hysteria on planets unconcerned by the emergency. Federated Worlds Government handled the reports of all local disputes which were, by law, reported to them by FT & T Primes. Interstellar political or natural disasters were not added to the emotional burdens already suffered by populations. Primes exercised the option to disperse or retain reports which might affect minorities within their jurisdiction, but digests of all communications were by law available on request.

Damia propped her chin in her hands and looked earnestly at Afra across the table. She sighed heavily.

"You were right to call me to task for 'tasting' Larak and Jenna.

But I did want to know what it would be like to be in love and then bring forth a baby."

"And . . . ?"

"Apart from hurting, I guess it's rewarding enough." "You don't sound too sure."

Damia cocked her head and traced an involved pattern on the table with her index finger.

"It must be different to do it vourself no matter how deeply you scan."

A trace-thought behind her shield, associated with her remark. sent a bolt of terror through Afra he barely managed to contain. She was unconsciously censoring, and it had to do with the alien aura and with her own desire for the experience of motherhood. But trace-thought it was, and he had only that one millisecond impression, tantalizing, terrorizing.

"Why, Afra, why?" Damia continued, unaware of the reaction she had produced in him, her own mind absorbed in selfpity. She launched herself physically from the table in one lightning move and stood at the window wall, her back as eloquent of her frustration and bitterness as her mind. "Why am I a loner? The Rowan found Jeff, but where will I find someone?"

"Damia, you've met every psionic prospect talent above 7 in the Federated Class Worlds. . . ."
"Them . . ." and she

missed those candidates scornfully.

"Young Nicos, the T-5 working with Jeran on Deneb was mighty taken with you. Calm down a bit. . . ."

"Nicos!" Damia's eyes flashed. "That post-adolescent mess! Why it'd be five or six years before he's even presentable."

Afra was no stranger to such discussion. He'd heard many since the time Damia had begun to be interested in the opposite sex as a precocious adolescent. There had been times when he wished he had followed his own deep-hidden desire. But he had given a great deal of thought to the variables and knew that he could only wait. He knew all too personally how hard it must be for Damia to watch others pairing off and achieving the enviable total accord telepaths enjoyed, and for which she was so eager. Her very brilliance and beauty put off many otherwise willing mates. Usually, she would talk herself out, but tonight there was a new undercurrent that was dangerous in its intensity.

"Is that why you so eagerly await the arrival of the aliens?" Afra drawled, deliberately leaching all emotion out of his words. "On the off-chance they're ethnically compatible? Do you envision your soul-mate winging across the void to you?"

She whirled to face him, her

eyes wide with rage. Foremost in her mind was the urge to strike him deeply.

"Don't you taunt me, Afra," she whispered hoarsely.

He inclined his head in apology.

"Better get some sleep, Damia," he suggested gently and gave her a little mental push toward her bedroom.

"You're right. I am tired, Afra, and excited, and silly. It's just . . . just that sometimes I feel like nothing more than a mental stevedore; not a person at all. Then this happens . . . and I . . . I have the fantastic chance to establish communication with alien minds. . . ."

Again Afra caught the unmistakable and unconscious suppression of a thought within the maelstrom of her weariness.

Damia turned on her heel and left the room. The sunset, turning the plateau a deep tangerine, diminished in the east; while Afra watched, brooding over the evening's conversation. He waited until the roiling activity of Damia's mind subsided into the even beat of sleep. Then he, too, went to bed. Carefully, just as he was on the edge of sleep, he reinforced his mental screens so that none of his longing for her would escape. He wondered in that interval between sciousness and sleep, if he would have enough strength left to cope with a third generation of Raven women.

The next day they intiated the new routine. Damia handled the long distance items first. Then, once the incoming work load had been sorted out and the demands on her talent acquitted, she departed into space, to "rest," leaving Afra to deal with the remaining affairs.

Although the function of a Prime was complex, a two-minute mental briefing by Damia supplied Afra with the background of immediate problems and all the procedures peculiar to that station. The memory bank would supply additional information. When the focal talents of the gestalt were exchanged, not half a beat of the pulse of the Aurigan Sector headquarters was missed. This allocation of duties pleased Afra because it would give him the opportunity to use the gestalt of the station to reach Jeff without Damia knowing. She would be too busy "reaching" for the alien touch to be aware of Afra. The temporary breach of her trust in him was offset by the absolving knowledge of its necessity.

In terms of intragalactic distances, the aliens approached at a snail's pace; by interstellar references, faster than the speed of light. A week passed until the evening Damia returned from her daily "rest" bursting with news. She moved from the landing area

right into the living room of her house where Afra was lounging.

"I made individual contact," she cried. "And what a mind!" she exclaimed, so excited she ignored the flare of jealousy which Afra couldn't control quickly. "And what a surprise he got," she chortled.

From the moment she had entered, Afra had known the mind was male.

"A Prime talent?" he asked, counterfeiting a show of genuine interest.

"I can't assess it. He's so . . . different," she exclaimed, her eyes shining and her mental aura dazzling with her success. "He fades and then returns. The distance is immense and there isn't much definition in the thoughts. I can only reach the surface." Damia threw herself onto the long couch. "I'm exhausted. I shall have to sleep before I can reach Jeff with the news. I don't dare use the station."

Afra agreed readily, waiting until she relaxed into sleep. Ethics disregarded, he tried to reach this experience in her mind below the emotional level only to find himself overwhelmed by the subjective. Damia was treating herself to a high emotional kick! Afra was afraid for her, with a fear deeper than any he had ever personally or vicariously touched. Afra withdrew, troubled. She had better calm down and start act-

ing like a Prime instead of a giddy girl when she woke, or he'd push the panic button himself.

After several hours' sleep, Damia's mental pyrotechnics were calmer, but she was still noticeably high as she "reached" Jeff with a professional report of the contact. When she had finished broadcasting, Jeff got a private thought to Afra, but Afra could only confirm Damia's honest report. He did not yet comment on his vague forebodings.

The next day Damia tossed off her necessary work as fast as she could spin it out and went into space. And Afra waited as he had been waiting for Damia for years. She returned so shining from the second encounter, Afra had to clamp an icy hold over his mind.

The third morning, as Damia sat in the control tower, she worked with such haste Afra reprimanded her. Gaily she corrected herself, making far too light of her mistake and then, eagerly, she propelled herself out towards the rendezvous. When she returned that evening so tired that she reeled into the living room, Afra took command.

"I'm going with you tomorrow, Damia," he said firmly.

"What for?" she demanded, sitting bolt upright to glare at him.

"You forget that I have a direct order from Earth Prime to check the aura of these aliens. You've no way of knowing this isn't a reinvasion by the same entities which attacked Deneb twenty years ago."

"Sodan said they'd had no previous contact with any sentients," she snapped.

"Sodan?"

"That is how he identifies himself," she said with smug complacency. She lay back on the couch, smiling up at Afra.

It disturbed him to know that this entity had a name. It made the alien seem too human. Nor could Afra quite reason away the tenderness with which Damia spoke that name.

"Good enough," Afra said with an indifference he didn't feel. "However, you don't need to introduce me formally. All I need is to check on the aura. I'll know in an instant if there's any familiarity. I won't jeopardize his confidence in your touch. He'll never know I've been there," Afra assured her, yawning.

"Why are you tired?"

"Why are you tired?"

"I've been stevedoring all day,"
he said with a malicious grin.
The remark had the desired effect
of infuriating Damia. The very
fact that he could so easily divert
her proved to Afra conclusively
that her emotions were unhealthily involved. It no longer
mattered whether this Sodan
might be of the race that Jeff and
the Rowan had fought. He was
a menace in himself.

Somehow Afra got through the evening without a hint of his inner absorption spilling over. Damia, reliving the success of her day, wasn't listening to anything but her own thoughts.

The next day, after the necessary work was completed, Damia and Afra both took to their personal capsules. Afra followed Damia's thrust and held himself silently as she reached the area where she could touch the aura of Sodan. Damia then linked Afra and carried his mind to the alien ship. As soon as the alien touch impinged on Afra's awareness, much was suddenly clear to him: much seen and worse, unseen.

What Damia could not, would not or did not see gave confirmation to Afra's nagging presentiment of danger. Nothing out of Sodan's mind was visible: and nothing beyond his public mind was touchable. The alien had a very powerful brain. As a quiescent eavesdropper, Afra could not probe, but he widened his own sensitivity to its limit, and the impressions he received were as unreassuring as his increasingly stronger intuition of disaster.

It was patent that this Sodan was not of the previous invasion species: that he had been traveling for an unspecifiable length of time far in excess of two Earth decades.

It would not occur to Damia that Afra would linger once he

had established his facts. But Afra did linger, discovering other disturbing things. Sodan's mind, undeniably brilliant, was nevertheless augmented. Afra couldn't perceive whether Sodan was the focus for other minds on the ship or in gestalt with the ship's power source. Straining to his limit without revealing himself, Afra tried to pierce either the visual screen or at least the aural one. All he received was a low stereo babble of mechanical activity and the burn of heavy elements.

Defeated, Afra withdrew, leaving Sodan and Damia to exchange thoughts which he had to admit were the ploys of courtship. He returned to Auriga and lay in the tower couch, summoning up the energy to call. Jeff Raven had moved young Larak nearer to Auriga to facilitate sub-rosa communications.

It was not, Afra assured himself, that Damia had deliberately hidden anything in her reports to himself or to Jeff. She was unaware that her usually keen perceptions were dazzled and distorted by her emotional involvement; she who had prided herself on her dispassionate assessments of any emotionally charged incidents.

/Larak/ Afra called, drawing heavily on the gestalt and projecting his own mental-physical concept of Larak to aid him in reaching the mind. /Man, you're beat/ Larak came back, sharp, clear green.

/Larak, relay back to Jeff that

/It's got a name?/

/It's got more than that, and Damia is responding on a very high emotional level/ Afra sighed heavily. /Relay back to Jeff that I want him and the Rowan to remain on call to me at all times. I consider this an emergency. Get yourself pushed out here as soon as you relay that message. I'll need you so we can get through to Prime when we need to without going through station or Damia/

/Coming/ Larak responded crisply.

Afra leaned back in the couch and flicked off the generators, thanking the paradox that allowed Damia to run a Sector Station with low T-ratings who would be unable to catch what he had just transmitted.

He would have given much to have been able to handle the Sodan mind by himself, without having to call on other Primes than Damia. All through Damia's life, Afra had been able to cope with her mercurial tempers and to direct her restless energies. He had become extremely adept at managing her adroitly. Even his recent complete withdrawal from her had been painfully calculated. Now he could neither further his cause, nor divert Damia from her

headlong immersion in romance. Nor was he able to challenge Sodan and remove that competition.

"Galloping gronities, you look like a rough ride on a long elipse comet," was Larak's cheery greeting as he bounced into the tower.

"Your description is remarkably apt," Afra agreed grimly and gripped Larak's shoulder, making close contact to convey the one impression he had not included in the broadcast.

/Love has touched our fair sister, at last, huh?/ Larak murmured sympathetically. /And with a total alien/

/A very dangerous alien, unfortunately/ Afra added. "There were fissionables aboard, mighty heavy stuff for a ship bound on an ostensibly peaceful exploratory mission. Heavy enough to suggest that whoever gave Sodan his mission knew our civilization is on an advanced level."

"More's the pity," Larak agreed thoughtfully, perching on the edge of the console. "Could you sense any communications with his own people?"

"Tremendous power source in the ship. Tremendous, but by the mighty atom, Larak, you can't get past the public mind. Anyhow, I couldn't. And Damia hasn't." Afra rose, pacing restlessly in the narrrow tower.

"Then it's possible he has informed them of the contact?" "I can't tell," Afra muttered in helpless frustration.

Larak held Afra's glance and then sighed.

"It'll be a shame to have to destroy him," he said slowly.

"Ha! We'll be lucky if we can," Afra exclaimed. "Oh, yes, Larak, that mind is the equal, if not the superior, of Damia's. It could destroy . . . all of us."

"Then we must act as quickly as possible before any suspicion leaks to Damia," Larak said with resolution.

Together they flicked on the generators and soberly presented to Jeff and Rowan the action they deemed advisable.

/But are we sure the evasions are deliberate? Maybe this alien is merely exercising caution? I would if I met a mind in outer space/ the Rowan argued. She met absolute resistance to her suggestion. /Why can't we destroy him? Must we ask her to do it?/ and she spoke as Damia's mother, not Callisto Prime.

/For one thing, we can't reach that far without her. Nor can we draw, as Damia can without pre-arrangement, on other talent reserves/ Jeff explained. /We'll have to show her how dangerous Sodan is/ he said flatly, disliking it as much as any of them.

/Each day Damia returns to Auriga a little more tired than the previous day/ Afra said slowly. /I suspect he realizes that he must drain her before she suspects his intentions/ /Leading her on?/ cried the

Rowan, angry now.

/Don't be silly, mother/ said
Larak derisively.

/Not in that sense, Rowan/ Afra answered her. /I suspect Damia was as much a surprise to him as he has been to her/

/Hurry/ cautioned Larak./She's returning. And, boy, she is bushed/

Afra suppressed a feeling of annoyance that the curious childhood link between Damia and Larak gave Larak an edge on himself in sensing Damia. He turned his mind to the debate, as decision and strategy were settled in the moment before Damia's capsule landed back on Auriga.

"Larak, I thought I felt you near," she cried happily as she saw her brother perched on the edge of the console.

"Just thought? You usually know," he crowed with boyish triumph. "This alien sure has got you wrapped up and tied like a present. See how the mighty have fallen."

When Damia flushed, Larak roared with laughter.

"I've got to meet this guy," Larak exclaimed.

"I've always felt I was building experience and training for one special reason," Damia said, her eyes shining, "and now I know what it is!"

"The whole sector will know in a moment if you don't lower your 'voice'," Afra snapped to give Larak a chance to control the shock the boy was feeling at witnessing Damia's exultation.

Resentfully Damia dampered her emotional outpouring.

"I suppose you arrived with an appetite like a mule," she said sourly.

Larak turned with innocent hurt on his face.

"I'm a growing boy and while you're out courting, Afra's getting overworked and leaner and hungrier."

Damia looked guiltily at Afra. "You do look tired," she said with concern. "Let's all push over to the house and have dinner.

Larak, why are you here?"

"Oh, Dad wants Afra to pinchhit on Procyon. Two high Ts are down with one of the local viruses and traffic is backing up. Say, what's this alien ship like? Crew or full automation?"

Damia, her hand poised over the cooking dials, hesitated. She looked at her brother blankly.

"Oh, you men are all alike. Details, details!" she scoffed.

"Well, sure," Larak replied, "but if details like that bore you, they fascinate me and I'll ask him myself."

"You can't reach that far," she taunted him.

"I'll just hop a ride with you tomorrow then."

Damia hesitated, looking for assistance from Afra, who shrugged noncommittally.

"Oh, for glory's sake, Damia. This is no time to be coy," her brother said.

"I'm not being coy," she exploded. "It's just that . . . just that. . . . "

"Who're you kidding?" Larak demanded, his temper rising. "You're gone on this guy, and how do you know he's even anything resembling a man?"

"His is a true mind, a brilliant and powerful mind," she defendad houghtily

ed haughtily.

"That's fine for fireside chats, but no damned good in bed."

Damia reddened, half with fury and indignation, and half with sudden virginal embarrassment at her brother's accurate thrust.

"You're . . . insufferable. If it weren't for me, we wouldn't have been warned at all."

"Warned?" and Afra leapt on the word. Perhaps she was not as bedazzled as they thought.

"Of this momentous meeting," she continued, oblivious to the inference. "You've touched him, Afra, don't you agree?"

"That it's a brilliant mind? Yes," Afra agreed, nodding judiciously.

Damia caught his sour undertone. "Oh you, you're jealous, that's all." And then she frowned, looking at Afra with sudden suspicion.

"Hey, you're letting my dinner burn," Larak cried.

"Oh, and you men say women gossip," Damia exclaimed, quickly lifting the pans from the heat. "It's a mercy nothing is burned."

They ate in rather a strained silence, Larak and Afra concentrating hard to maintain a convincing surface of thought. They hardly needed to because Damia went off into her own private meditations, ignoring them completely.

"You may be infatuated with this Sodan," Larak remarked, "but it doesn't affect your cooking."

Too much a woman not to be pleased by even a brother's praise, Damia relaxed.

"He isn't an advance scout for a second invasion force, I gather," Larak asked Afra.

"No. The very brief touch I had," Afra said swiftly, "showed he's been traveling much longer than twenty years."

Larak whistled appreciatively just as if he didn't know this already.

"Did you take a look around at the details my sweet sister missed?" he asked amiably.

"No. There were no obvious visual images, and I was only concerned with recognition."

"He has eyes," Damia replied loyally. "We've discussed the concept of sight. You must take into consideration that he is also the controller of the ship, and the drain on his energies reaching me and managing his crew and the ship, must be enormous. It certainly is on me."

"Yeah. You need your beauty

sleep . . . bad," Larak remarked. "I'd like to see you do half as

well," Damia bridled.

"Children, cut it out!" Afra intervened authoritatively.

Larak and Damia glared at

Larak and Damia glared at each other, but the long habit of obeying Afra held.

"Both of you get to bed," he added. "Snarling at each other is the worst example of sibling rivalry I've seen since you, Damia, returned from Isthia's an opinionated ten-year old. Makes me wonder how your father dared put you in as Aurigan Prime."

"If there's one thing that annoys me more than Larak acting fraternal, it's you, Afra, making like the 'other' generation," Damia remarked caustically, but her fury had subsided.

Afra shrugged, relieved that his diversion had worked before Larak inadvertently showed Damia why he was probing these particular subjects.

"At least this generation's representative has sense enough to go to bed when he's out on his feet," he muttered. As he passed Larak, the boy winked.

The next morning at breakfast, no one looked as if he had slept well. Afra kept a surface rumble going in his mind to mask both tension and anxiety. Larak delivered a running monologue on his son. Damia was also closely shielding, so that, by the time they reached the tower, all three were unusually quiet.

"I'll take you out now, Larak," Damia announced after the most cursory glance at the station business.

"Fine. Dad wants Afra back at Callisto tonight."

Damia hesitated. "Afra had better come along, then, for a second look around." She looked a challenge at Afra, who shrugged.

This was, however, unexpected luck. Afra had thought he might have to follow Larak and Damia surreptitiously. He switched the boosters up to the top and signaled Damia and Larak to get into their capsules. In that moment, he called Jeff and the Rowan to stand by, then settled into his own shell, reassured by their sustaining presence in his mind.

/Is there any possible chance we're wrong about Sodan's intentions, or the depth of Damia's emotional commitment?/ pleaded the Rowan.

/Less and less/ Afra replied grimly. /We'll know soon for sure. Larak needled her last night. She'll have to check to make sure he's wrong/

Then he touched Damia and Larak, and all three went the mere half light-year further to the ship and Sodan.

/You have rested well and are strong today/ was the cool greeting after an instant's welcoming flash.

Damia instinctively covered against a discovery of her co-riders, but the greeting stuck in her mind. There was the hint that Sodan did not wish her so strong, and yet a tinge of relief colored that thought.

/You come nearer to physical contact with us every day/she began.

/Us?/ Sodan queried.

/My planet, my people . . . me/ she qualified.

/I'm only interested in you/ he replied.

/But my people will be interested in you/ she parried, unable to censor from Afra and Larak the pleasure she felt in his compliment.

/There are many people on your planets?/ he asked.

/Planet/ she corrected.

At least, Afra concluded, she remembered to be politically discreet.

/Doesn't your sun have several life-supporting satellites?/

/That is why I must know a little more about your physical requirements/ Damia replied smoothly. /After all, my home world may not have the proper atmosphere . . ./

/My physical wants are attended to/ Sodan replied coldly, with a slight emphasis on the second word.

It was the Rowan who caught the infinitesimal break in his shielding, and simultaneously all four minds stabbed at the area to lay it bare. Sodan, torn by this powerful invasion, lashed back in self-defense with a vicious blow at Damia whom he thought perpetrated the attack.

/No, no. Not I, Sodan/ she screamed. /Larak, what are you doing?/

Afra struggled frantically to become the focus of the other minds, only to find himself caught in Larak's mind with the Rowan and Jeff, as the curious bond between brother and sister snapped into effect.

/He must be destroyed before he can destroy you, Damia/ the Larak-focus said, tinging its inexorable decision with the regret it felt.

/No! I love him. His mind is so brilliant/ cried Damia, pitting her own strength against her peers to defend her love. The Larak-focus staggered back, unable to prosecute an attack against such a combination.

/Damia, he is only a mind!/

Stunned, Damia hesitated and the Larak-focus plunged forward again, battering and dispersing momentarily against the shielded Sodan.

Damia flashed past them.

/Only . . . mind?/ she gasped, begging Sodan to deny it.

The Larak-focus poised, alert

and waiting. Larak diverted a filament of energy to his sister:

/Why no vision? Why no sound? This is only a brain, devoid of all except remembered emotion. Sodan is bound to destroy. Feel the heavy stuff on the ship? Is that customary for a peaceful scouting expedition?/

/You're against me, against me. No one wants me to be happy/cried Damia, suddenly aware, terribly aware of her loving blindness. /He loves me. I love him/

/If he has nothing to hide, he will let you see/ the Larak-focus continued implacably.

/Let me see you, Sodan/ Damia, desperately, hopefully.

For what seemed an eternity, Sodan hesitated.

/If I could, I would/ he said softly and with honest regret.

Like a vengeful sword, her mind, freed from the infatuation Sodan had artfully fostered, gathered and sprang with the others to destroy the aggressor. For Damia now understood the dangerous purpose behind Sodan's impersonality.

The battle was waged in the tremendous space between two heartbeats.

Sodan, his mind fortified by the nuclear power of his ship, was stronger than their conservative estimates. And almost negligently, he held the Larak-focus at bay, his mind laughing at what he considered their puny efforts.

Then Damia's pressure increased and increased as she stripped away the veil of her romantic illusions, aligning herself with the Larak-focus to defend her sector. Sodan called for more power within himself. The scorching blaze that fed, catalyzed, through Damia's mind, joined with the others, flashed through stripped his thinking bare, lashing beyond to trigger the atoms of the ship into instability. Involuntarily, and for a microsecond, Sodan's past flickered.

Once, generations ago, embodied, he had breathed an alien air, walked an alien road, until his brain had been chosen to undertake the incredible enterprise of crossing the galactic rift.

/In my fashion have I loved you/ he cried to Damia as he felt her reach the fuel mass. Her mind, vulnerable in the instant of that massive thrust, lay open to him. /But you never loved me/ he added with intense surprise. /And he shall not have you either!/

With his last strength, Sodan arced one final jealous mental blast. His ship exploded.

Frantically, feeling herself about to black out from the tremendous drain on her resources, Damia strove to deflect that blow.

As a kingpin flattens a row of its fellows, Sodan's blast, striking through the Larak-focus, caused a wave of mental agony to roll backwards to Auriga where station personnel grabbed at their skulls in anguish, to Earth and Callisto where T-ratings cringed in pain, and on to Deneb and even Altair. Horrified crews found Jeffrey Raven and the Rowan unconscious in their tower couches.

Jeran Raven, head aching, was hastily summoned as the chain of F T & T command devolved to him in the emergency. Jeran took time out to assure himself that his parents would recover after sufficient rest before he informed the Federated World Government of the event. He was requested to proceed with the defensive fleet to Auriga.

Isthia appeared at Earth Headquarters at his urgent bidding and, with her help, he was able to extract gently from Jeffrey's taxed mind the position of the three personal shells.

As they approached the orbit, they could hear nothing.

/It is possible/ Isthia said hopefully as they could find no discernible aura, /that all three have gone into very deep shock. The power in Damia's final thrust

/Damia cannot be dead/ Jeran tried to convince himself. "Sodan may have been powerful, but is there a T-rating in the galaxy who didn't feel her hit him? We cannot lose her!" he repeated, having already resigned himself to other losses.

"Ah!" Isthia gave a sharp gasp. /I have them!/

Jeran reached with her, signaling the flagship's T-3 to assist.

"She's alive," he cried in relief. I thought I felt them all die/ he admitted.

"Afra lives, too, but he's very faint. Larak . . ." and Isthia's voice faded. /Why did the focus have to snap through him?/

They brought Afra's capsule in first, and Jeran, who was at the head as the shell was opened, pressed fearful hands against the man's temples. Afra's body was drawn up in the foetal position of complete withdrawal.

"He's badly hurt, Isthia. God, will we save him? Should we, if he'll be psionically numb the rest of his life?"

Isthia moved his hands aside and applied her own, her touch naturally more delicate than Jeran's.

"I can't tell more than that he wants to die. The spark of life is very faint." She gave rapid mental orders to the medics standing by, so that within seconds Afra's body was receiving emergency injections to stimulate the failing life.

/Divorce your emotions, Jeran/ Isthia told him sharply. /Help me reach him. He wants to die. We must pull him back/

Jeran shook himself and, holding his breath, placed his hands above Isthia's on Afra's head.

Together they probed, ignoring

the mental anguish they felt at having to touch so torn a mind. Uppermost was the thought that both Larak and Afra had shared: Sodan was striking at them, and Damia, exhausted, was trying to block it.

/He'll kill her, he'll kill her/ was the repeated cry of terror, a curious melding of both Larak and Afra, swirling in the pain of Afra's mind. /No, Damia. Don't try. I waited too long. No, Damia/ Then the enigmatic sequence was repeated.

/Damia lives. Damia lives/ Jeran and Isthia told him. /Damia lives, damia livesdamialives/ whispered the essence of Afra.

Isthia caught Jeran's eyes with surprised confusion. Hopefully they reinforced the will to live.

/Afra, Damia lives. She rests. She waits for you/ Isthia murmured soothingly.

/Sleep, Afra, rest. Damia lives/ Jeran urged.

/Damia lives? Damia waits?/
With a shudder, Afra's body
untwisted from the foetal curl.
For one terrifying moment, the
body was still. Gasping, Isthia
dipped deep in the suddenly tranquil mind only to be reassured
that Afra had merely slipped into
deep sleep.

"He's very badly hurt, Jeran," Isthia admitted sadly as they watched the medics wheel Afra away to a tightly shielded room.

They opened Damia's capsule

together. She lay on her side, looking very young, but there were marks that showed the effects of that meeting of minds. She had bitten through her underlip and a trickle of blood ran a scarlet line across her cheek. Her fingernails had cut into her palms where she had clenched her fists, and her face was streaked with tears.

With infinite compassion, Isthia turned the girl onto her back, laying both her hands lightly to Damia's temples.

/I can't reach them. I can't get there in time. I hurt. I've got to try. I hurt. Oh, will I lose them both?/ Isthia could hear the words faintly, deep in the tired mind.

With a sigh of relief, Isthia straightened.

/Is she badly burned?/ Jeran asked impatiently, having waited outside Isthia's contact but aware it had been made.

/Not burned, but deeply hurt on several levels. Damia's been cut down to size/ Isthia remarked ruefully. /The terrible way only the very bright and confident are. She'll never forget that she underestimated Sodan's potential because she became infatuated by him/

/For all of that, if she hadn't touched him first, where would we be with that menace zeroing in from space?/

Isthia waved that aside as of incidental importance.

/That won't matter to Damia, Jeran. Her initial lapse of judgment caused Larak's death and has seriously injured Afra/

/Merciful God, Isthia, once the attack on Sodan began, nothing could have saved Larak, no matter where he was in the focusmind. Death is far kinder than being burned out. She's not to blame/

Isthia shook her head sadly. /No, she isn't to blame, and I hope it never occurs to her that in the crisis, instinct overrode reason, and it was Afra she struggled to save/

/Afra? What in hell?/ asked Jeran before he followed Isthia's thought to its source. /So that's why Sodan struck to kill. He was after Afra!/

He stepped back as Isthia signaled to the medics to attend Damia with deep-sleep drugs and intravenous nourishment.

With great reluctance they turned to Larak's silent shell. Because they had to, they opened it and saw with what little relief it afforded them that there was no mark of his passing on the young face. A curiously surprised smile lingered on his lips.

Isthia turned away in tears and Jeran, too numb to display his own sorrow, put his arm around her to lead her away.

"Sir," the captain of the ship said respectfully when they entered the control room, "we have the location of the alien ship debris. Permission to recover fragments?"

"Permission granted, of course. Is this and I will return to our towers, while you bring the . . . others in."

"Very good, sir," the captain agreed and stiffened to rigid attention, emphasized by the unashamed tears in his eyes for Larak's death. In his very crisp salute, he expressed wordlessly his pride, his sympathy and his sorrow.

Struggling against a will determined to keep her asleep, Damia fought her way to semi-consciousness.

/I can't keep her under. She's resisting/ a remote voice called to someone.

As distant as the sound was, like a far echo in a subterranean cavern, each syllable fell like a hammer on her exposed nerves. Sobbing, Damia struggled for sanity, consciousness and a release from her agony. She couldn't seem to trigger the reflexes that would divert pain, and an effort to call Afra to help her met with not only the resistance of increased agony but a vast blankness. Her mind was stiff as iron, holding each thought firmly to it as though magnetized.

"Damia, do not reach. Do not use your mind," a voice said in her ear. The noise of the sound was like a blessing, and the reassurance it gave her wavering sanity was reinforced by the touch of . . . Isthia's hands on hers.

Damia focused her eyes on the woman's face and clutched Isthia's hands to her temples in an unconscious plea for relief of pain.

"What happened? Why can't I control my . . . head?" cried Damia, tears of weakness streaming down her face.

"You overreached yourself, destroying Sodan," Isthia explained.

"I can't remember," Damia groaned, blinking away the tears so she could see clearly.

"Every rating in FT & T does."

"Oh, my head. It's all a blank and there's something I have got to do and I can't remember what it is."

"You will. You will. But you're very tired, dear," Isthia crooned to her, stroking her forehead with cool hands. Each caress seemed to lessen the terrible pain.

Damia felt the coolness of an injection pop onto her arm.

"I'm putting you back to sleep, Damia. We're very proud of you, but you must allow your mind to heal in sleep."

"'Great nature's second course
. . . that knits the raveled
sleeve of care!" What's knitting,
Isthia? I've never known," Damia babbled as the drug spread, a
cool scalliony taste in her throat.

Again, after what seemed no passage of time at all, Damia

struggled from the grip of sleep, inexorably forced to consciousness by her indefinable but relentless need.

/I can't understand it/ came Isthia's voice. This time it did not reverberate like tympany in a small room across Damia's pained mind. /I gave her enough to put a city to sleep/

/She's worrying at something and probably won't rest until she's resolved it. Let's wake her up and get the agony over/

Damia forced her mind to concentrate on identifying the two mental touches. With a grateful smile she labelled them "Isthia" and "Jeff". She felt her face gently slapped and, opening her eyes, saw Jeff's face swimming out of the blurred mass above her.

"Jeff," she pleaded, not because he had slapped her but because she had to make him understand.

"Dear Damia," he said with such loving pride she almost lost the tenuous thought she tried to hold for him to see.

Her body strained with the effort to reach out only a few inches the mind that once had blithely coursed light years, but she managed to articulate her crime.

/I burned out Larak and Afra. I killed them. I linked to the Larak-focus and killed them to destroy Sodan. I saved myself and killed them/she gasped.

Behind Jeff she heard the Rowan's cry and Isthia's exclamation.

"No, no," Jeff said gently, shaking his head. He placed her hands on his forehead and with great care let her feel the honesty of his denial. "In the first place, you couldn't. You don't misuse others. You sort of shift gears into high speed to make other minds work on a higher level. You drew power from the Larak-focus to destroy Sodan, yes. But the killing thrust was yours, Damia; you were the only one capable of doing it. And every T-rating in the Federated Worlds will vouch for it. Your touch, my dear, is indescribable. and without you to throw us into high gear, Sodan could have destroyed every Prime in F T & T."

Damia heard an approving, admiring murmur from the Rowan.

"Will my touch come back? I can't feel anything," and in spite of her control, Damia's chin quivered, and she started to sob with fear.

"Of course it'll come back, dear," cried the Rowan who elbowed Jeff aside to kneel by her daughter and stroke her hair tenderly.

"You'd better go knit some more sleeves of raveled care," Isthia suggested with therapeutic asperity. "You knit like this," and Isthia inserted a visual description of the technique of knitting into Damia's mind. It was an adroit change of subject, but Damia, with a flash return of perception, saw the three were evading her.

"I must be told what has happened," she demanded imperiously. A wisp of memory nagged at her and she caught it. "I remember. Sodan made one last thrust." She closed her eyes as she remembered, too, that she had tried to intercept it and "... Larak's dead," she said in a flat voice. "And Afra. I couldn't shield in time."

"Afra lives," the Rowan murmured.

"But Larak? Why Larak?" Damia demanded, desperately striving to touch what she felt they must still be hiding from her.

"Larak was the focus," the Rowan said softly, knowing, too, that Damia would never absolve herself of her brother's death. "Afra was supposed to be the focus, being the experienced mind, but the old bond between you and Larak snapped into effect. You tried to shield Larak, but his mind was too unskilled to draw help from you. Jeff and I felt it because we were part of the focus, too, and we tried to help divert it. We could cushion only Afra in time. Sodan's was a very powerful mind."

Damia looked from her mother to her father and knew that that much was true, but another reservation hovered in the background.

"You're still hiding something," she insisted, fighting with exhaustion. "Where's Afra?"

"Okay, sceptic," Jeff assented,

lifting her into his arms. "Though why his snores haven't kept you awake, I don't know."

He carried her down the hall. Pausing at an open door, he swung her around so she could see into the room. The night light hung over the bed, illuminating Afra's quiet face, lined deeply with fatigue and pain. Denying even the physical evidence, Damia reached out, touching just enough for reassurance the pained mental rumble that meant Afra still inhabited his body.

"Damia, don't do that again," Jeff ordered, striding back to her room with her.

"I won't but I had to," she murmured, her head ballooning with pain.

"And we'll see you don't again until you're well. Out you go, miss," and she slid back into blackness..

An insistent whisper nibbled at the corners of her awareness and roused Damia from restoring sleep. Cringing in anticipation of the return of pain, she was mildly surprised to feel only the faintest twinges. Experimentally, Damia pushed a depressant on the ache and that, too, disappeared. Unutterably reassured by her success, she sat up in bed. It was night and she was in her family's home. She stretched until a cramp caught her in the side.

/Heavens, hasn't anyone

moved me in months?/ she asked herself, noting that her mental tone was firm. She lay back in bed, deliberating. /Poor Damia/ she mocked herself, /ever since that encounter with that dreadfulmind-alien, she's been nothing but a T-4? T-9? T-3?/ Damia tried out different grades for size and then discarded them all, along with her histrionics. /You idiot, you'll never know til you try/

Tentatively, without apparent effort, she reached out and counted the pulses of three . . . no four, sleepers. Afra's was the faint one. But, Damia said with calm triumph, it was there. Which brought her face to face with the second fact.

She slid from her bed to stand by the window. Beyond the lawn of evergrass, beyond the little lake, to the copse of evergreens, her glance traveled. And stopped. Instinct told her that Larak was buried there, and the thought of Larak buried and his touch forever gone broke her. Alone, she wept in loneliness, biting her knuckles and pressing her arms tightly into her breasts to dampen the sound of her mourning.

The whisper tugged at her again, out of the night, out of the stillness. She stifled her tears to listen, trying to identify the sliver of sound. It faded before she caught it.

Resolutely now she laid her sorrow gently in her deepest soul, a part of her but apart forever. No matter what Jeff and the Rowan said, she had caused Larak's death and Afra's maiming. Had she been less preoccupied, less self-centred, she would not have been so dazzled by the fancy that Sodan was her Prince Charming, her knight in cylindrical armor.

Such a pitiful thing she was, a spoiled, rotten-hearted child, demanding a new toy to dispel boredom when all the time. . . .

The whisper again, fainter, surer. With a startled cry of joy, Damia whirled from her room, running on light feet down the hall. Catching at the doorframe to brake her headlong flight, she hesitated on the threshold of Afra's room.

She caught her breath as she realized that Afra was sitting up. He was looking at her with a smile of disbelief on his face.

"You've been calling me," she whispered, half-questioning, half-stating.

"In a lame-brained way," he replied. "I can't seem to reach beyond the edge of the bed."

"Don't try. It hurts," she said, stepping into the room and pausing shyly at the foot of the bed.

Afra grimaced wryly, rubbing his forehead. "I know it hurts, but I can't seem to find any balance in my skull," he confessed, his voice uneven.

"May I?" she asked formally, unexpectedly timid with him.

Afra nodded, closing his eyes. Sitting down cautiously, Damia lightly laid her fingertips to his temples and touched his mind as delicately as she knew how. Afra stiffened with pain and quickly Damia established a block, spreading it over the damaged edges. Resolutely, regardless of the cost to her own recent recovery, she drew away the pain, laying in the tender areas a healing mental anesthesia. Jealously she noticed someone else had been doing the same thing.

/Isthia . . . has . . . a delicate . . . touch . . . too/ he sent the thought carefully, slowly.

"Oh, Afra," Damia cried in anguish for the agony the simple thought cost him. "You aren't burned out. You won't be numb. I won't let you be. Together we can be just as powerful as ever."

Afra leaned forward, his face close to hers, his yellow eyes blazing.

ing.
"Together, Damia?" he asked
in a low intense voice as he
searched her face.

Shyly, her fingers plucking nervously at his blanket, Damia was unable to look away from an Afra who had altered disturbingly. Damia tried to comprehend the startling change. Unable to resort to a mental touch, she saw Afra for the first time with only physical sight. And he was suddenly a very different man. A man! That

was it. He was suddenly so excessively masculine.

How could she have blundered around so, looking for a *mind* that was superior to hers, completely overlooking the fact that a woman's primary function in life begins with physical submission?

"Damia . . . is speechless?" Afra teased, his voice tender.

She nodded violently as she felt his warm fingers closing around her nervous hand. Immediately she experienced a profoundly sensual empathy.

"Why did you wait so long, knowing that I needed you?" she burst out.

With a low triumphant laugh, Afra pulled her into his arms, cradling her body against his and settling her head in the crook of his arm.

"Familiarity breeds contempt?" he suggested, mocking her gently with her own words.

"And how could you . . . a T-3 . . . manage to mask. . . ." she continued indignantly.

"Familiarity also bred certain skills."

"But you were always so aloof and reserved. And mother. . . . "

"Your mother was no more for me than Sodan was for you," Afra interrupted her, his eyes stern as she stared up at him, shaken by his harsh voice.

His expression altered again, his arms tightened convulsively as he bent his head and kissed her with an urgent, lusty eagerness. "Sodan may have loved you... in his fashion, Damia," Afra's voice said in her ear, "but mine will be far more gratifying for you."

Shaken and eager, Damia opened her mind to Afra without a single reservation. Their lips met again as Afra held her tightly in what would shortly be far more than a mere meeting of minds.



A BROOK IN VERMONT

Here stands a clump of scouring rushes; there
A fragile horsetail rises from the thick,
Dark mass of staghorn moss. Beyond the creek,
A fount of ferns sprays emeralds in the air.
Once ferns and lycopods and horsetails grew
As tall as houses, shading somber bogs
Where crocamanders roared, and dragon-frogs
Made croaking grunts, amid the stagnant slough.

Now all the soaring plants that once did fence
Those steaming swamps have turned to coal, which men
Dig up and burn. I sometimes wonder, when
Our present plants, a million cycles hence,
In turn are anthracite, what creatures then
Will mine and burn that coal, as once did men?

BOOKS



Chicago, 28 August, 1968:

Daley City, they're calling it, Fort Chicago, and now Prague West. Barbed wire and security checkpoints, Chemical Mace and police clubs; sequinspangled Humphrey Girls—street-scene Yippies, sleepless, beaded, bandaged, bearded—V-signing clean-for-Geners, earnest smiles and angry eyes; incongruously babyblue bright helmets of Chicago's Finest, and the long slow convoys of army-drab Guards on Lake Shore Drive.

The kids I drove out here are a backroom squad, not-so-clean Geners, doing their thing here the way they were doing it in New York, with silk screens and paint stains, but working on cloth now, block-letter STOP THE WAR posters for delegates to smuggle, folded, into The Hall.

The buses and taxis are on strike. The kids tell me, wear your McCarthy button, and any McCarthy-stickered car will stop. What will they do when the miracle doesn't occur? If they get through the plank battle today, nominations will happen tonight, and the mood here is more and more mortuary—a growing feeling they may even Dump the Hump tonight and Draft Byrdman—if the Kennedy Heir Presumptive doesn't come forward: whoever it is, it won't be McCarthy.

If he agrees to a fourth party, they'll get some sleep and get back to work, I guess; and if he doesn't—

The SDS is waiting on the corners, and the police make the Yippies look better all the time. Black Chicago growls and glowers and grins in the ghettoes (except for the watchers patrolling the Loop: "Go home, sister—no black blood spilled here tonight."), but what happens if the next reporter the cops club down and Macespray on the ground is black?

From here and now, the batch of books I brought out to review seem remote and pallid . . .

Milford, Pa., September:

Too remote. The peace plank was defeated, the kids' cloth posters made some prime TV time,

and all the savagery of the streets up to that point seemed nothing at all beside the film clips the networks (finally aroused) began

showing alternately with the Amphitheatre Nominations coverage that Wednesday night. The whole world is watching, they chanted in the streets, while Delegates' Ladies aimed cocktail glasses from the windows of the Conrad Hilton at the cops below. Next morning, I phoned Ed Ferman in New York, warned him there'd be no column from me, packed up the typewriter and drove up to Lincoln Park. Later, I drove a Medic team between the hospital station at St. Chris' church on the near North Side, and Michigan Avenue. ("Don't mind her, she's a good kid," the med student said when the nurse student screamed at him: "She's just been gassed. It makes them irritable.") For two days afterwards, I interviewed medics and patients, first at the headquarters of the Medical Committee on Human Rights, then at the Free Theatre, took names and addresses of people there was no time to talk with on the spot. (But no one who wasn't there wants to believe it the way it was; some of the publishers I approached made it clear they'd be glad to discuss a new science fiction anthology . . .)

And here I am, with the same stack of books, and some more. Some of them are pretty good reading, too. But almost all of them are——remote.

"Reality" is a crutch: a crutch we need, to cope with a universe

whose multiplex phenomena are still beyond the scope of our small range of two-, three-, or (marginally, occasionally) four-dimensional perceptions. What first attracted me to the esoteric pulpmagazine cult of science fiction, almost thirty years ago, was its "realism"—as distinct from the pastoral, psychiatric, and/or patriotic fantasy-worlds of almost all popular and "mainstream" fiction of that time. The future histories and space-flung landscapes Heinlein, Leiber, Simak, Sturgeon, De Camp, Boucher, Brown, del Rey, Cartmill, Jameson, et al., actually bore a recognizable relation to the world I was living in. I found a complete literature aware of, and dealing in, the technological and sociopolitical facts of life as I knew it, in those pre-Pearl Harbor years of World War 11.

It was a truly esoteric cult, in that its members shared wisdom hidden from the world outside: it was also a true "ghetto" in that a public ("outside") consensus of ignorance, not any lack of evangelism "inside," preserved the "secret" nature of the group. For fifteen years, through and around the forties, the science fiction magazines maintained an open. continuous, and almost exclusive forum for speculation, debate, and poetic vision stemming from such self-evident phenomena as: the dynamics of Big-Business-andBureaucracy (in trade unions, education and government, as well as business); the economic and anthropological implications of an accelerating technology on the verge of atomic power, robotics, space flight, and computerized high-speed decision making; the incipient conflict between nationalist, racist, cultural, and religious patriotisms and the ecumenical imperatives implicit in the developing technologies of communication, transportation, and warfare.

Through the forties, science fiction was ahead of the game: when the news of Hiroshima broke, s-freaders were dismayed at the manner of the coming of atomic power—not stunned by its existence. In some respects, we stayed ahead well into the fifties: when Sputnik I went up, we amused ourselves watching our neighbors, teachers, and literary critics shift from talk of escapist phallic symbolism to awed despair at the USSR's "incredible breakthrough."

But more and more through the fifties, through the dark age years of Joe McCarthy and the witch-hunt, alike-with-Ike conformism, and crypto-1984 anti-egghead sentiment, the best we could do was a holding battle against the smothering forces of (the manifold meanings of) "security." The first (brief, post-Hiroshima) s-f boom was over, and here and there security agencies got up dossiers on nearby science fictionists, but

on the whole they wrote us off as nuts. Still, we were the only abit-subversive game in town, and we got to be an In Thing with the highbrow crowd. The dawn of what eye-rubbing editors at Time and Newsweek and the like called. interchangeably, The Space Age and The Science Fiction Age caught us, so to speak, with our pants up. Sudden public respect for science fiction's strange prophetic powers, and the bit of prose polish we had acquired rewriting old ideas when all the new information was classified (at least in physics and chemistry and bacteriology—the old hunting grounds) started the field on its second boom, and we even sprouted an infant Establishment that grew into the mid-sixties with a respectable new-found security of its own and a vested interest in continuing to purvey profitably what The New Yorker last year called "the futures of yesterday." (Overpopulation stories were going so well, for instance, the fieldas-a-whole managed to overlook the technological breakthroughs of the Pill and the Coil until they had become commonplace. I suspect s-f readers were just a bit more astonished than subscribers to the Reader's Digest when Roman Catholic priests and parishioners rebelled openly this fall against the Pope's ruling on the Pill!)

Today, approaching the seven-

ties, the strange agglomeration now labeled "science fiction" seems at last actually to have become the Escapist Literature a blinkered public once hoped it was—and for which, I guess, unhappily unblindfolded they now embrace it.

This is not to say there are no writers in the field who are aware of, and working with, the revolutionary (technological, political, artistic, scientific, philosophic) concepts of 1968. (I mean, there are also a few breakaways from Johnson and Humphrey among the big labor leaders.) But-much as the fatcat former organizers, who got their own heads busted in sitdown strikes in the thirties, now uphold clubbings and gassings of hairy demonstrators in the name of Law and Order-the bulk of s-f seems determined to continue examining the same-new things it first discovered in 1938.

One thinks of perhaps ten or fifteen science fiction Names (Leiber and Simak, Dick, Herbert, and Farmer, Aldiss and Ballard, Delany, Disch, Zelazny, and Lafferty, perhaps Moorcock and Spinrad; add a scattering of newer or less "ingroup" names: Bunch, Jacobs, Reed, Emshwiller, Hayden Howard, Langdon Iones, Peter Tate, K. M. O'Donnell, come first to mind . . .) who seem fairly consistently to be cognizant of, and concerned with, at least some of the areas of exploratory excitement and explosive upheaval occurring in (for instance—and this list is even less inclusive than that of authors' names above) biophysical psychology, existential psychiatry, behavioral therapy, the technology of education, and the communicative arts.

Doubleday is the biggest publisher of hardcover science fiction in the U.S.; there are six Doubleday books in my stack, four of them designated as science fiction. TWILIGHT JOURNEY (\$4.50) is a British import in which L. P. Davies deftly hashes up a mixture of scraps from sleep-teaching, sensory deprivation and dream experiments, and NINETEEN EIGHTY-FOUR leftovers, to concoct a fastreading updated Svengali Special, topped off with a reassuring conclusion in which the Dedicated Scientist snatches humanity's prospects from the jaws of Malevolent Bureaucracy with an antitape tape. This one is so smoothly put together, you will find you have read it all before you really begin to be annoyed.

Theodore Tyler's THE MAN WHOSE NAME WOULDN'T FIT (\$4.95) is almost an exact inversion: sophomore slapstick, freshman prose, and Hollywood-stock characterization here almost conceal a smartly conceived light farce constructed from relevant, quite contemporary, elements which produce a number of small but gratifyingly fresh turns

years beforetime, from a comfortable executive office, because the new computer payroll system cannot process names of more than twenty characters. Dr. Nathan Osgood is a brilliant (not black, but) brown-skinned physicist-for a rival computer firm—suffering from his daughter's taunts of Uncle Tomism. Together with Mr. C-C's ex-secretary and her formidable mother, they launch a neo-Luddite revolt armed with water pistols containing a plasticidal fungoid solution—sudden death to computer tapes! From there, I'm afraid, it gets into some very routine foreign-spies-and-presidentialchats stuff en route to the rosy ending. But it does sparkle a bit on the way, and in some of the flashes of communion between the two bewildered grandfathers, it does maybe just a bit more. Not quite enough, though: for that real old-time s-f satisfaction, you have to do more than make pertinent comments of contemporary relevance. (That's what 'mainstream" is supposed to do.)

of thought. Mr. Cartwright-Chick-

ering is retired abruptly, three

Not quite enough, though: for that real old-time s-f satisfaction, you have to do more than make pertinent comments of contemporary relevance. (That's what "mainstream" is supposed to do.) The third Doubleday novel, not published under the science fiction logo, is the only one of the three that really qualifies—barely. And frankly I hate to mention it at all, because kings of infinite space (\$4.95), falls far short of the book anyone who still treasures THE SMALL BACK ROOM and

MINE OWN EXECUTIONER as I do. might have expected from Nigel Balchin when he turned his attention to NASA and the astronautical pageant. An intelligent speculative examination of the philosophic. scientific, and human values of the Space Race has long been overdue. This book should have been it. Balchin seems to be asking the right questions; I suspect the answers are so weak for the same reason that an (usually) unusually sure-footed suspenseand-story-pacer produced such a stumbling hesitant plot-inadequate homework. The jacket says the author (a Londoner) spent four weeks at space centers in the U.S. gathering material for the book. It wasn't long enough. (Query: why do American publishers insist on changing British spelling and distinctive usages, but refrain from blue-penciling the curious dialogue recorded by the peculiarly British ear for the unfamiliar American voice?)

Nevertheless, this is at least a thoughtful book by an observer with a well-trained questioning mind. For those who do not know Balchin's earlier work, its rewards will considerably surpass its disappointments.

I cannot say as much for Keith Laumer's two-title short-shrift volume, consisting of one novella and one long novelette (\$3.95). The first, and longer, piece, THE

DAY BEFORE FOREVER, is a mixture of cryogenics, neo-zombies, suspense, violence, secret passages, and slick psychiatry so confusing in retrospect that I cannot even say with any certainty that it had no idea-content. Thunder-Head is slower paced and genuinely moving enough in the beginning, with its lonely figure of a forgotten sentinel of Earth's farflung space empire, so that its ultimate bathos is actively offensive:

"I'm sorry, Admiral," he said a moment later. "He's dead. Frozen. Both of them."

The admiral came up, knelt at Carnaby's side.

"I'm sorry, Jimmy," he said. "Sorry . . ."

"I don't understand," the general said. "He could have stayed up above, in the station. He'd have been all right there. What in the world was he doing down here?"

"What he always did," Admiral Carnaby said. "His duty."

Laumer, whose early work included such dark perceptive visions as "Cocoon" and "A Trip to the City," and whose long series of Retief stories began as sharp satires on conventional diplomacy and nationalist/racist idiocies, seems to have taken on himself of late the odd role of Defender of Dead Pasts.

(To double my digression for a moment: on that Wednesday

night in Chicago last month, about ten o'clock, two authorized medics attached to the 15th floor first aid station in the Hilton, fully outfitted with white coats, red crosses, and the required roomkey, were not permitted to enter the hotel with a—hairy, hippietype-gas victim in serious condition. At the same time, same night, and same entrance, a neatly hair-trimmed young man in business suit and tie-who happened to be an official parade marshall for the Yippies—walked past the guards with neither key nor pass nor delegate's tag. The rule of thumb in Daleytown that week was: If it has hair, hit it!)

The title story in Laumer's other recent novelette collection, GREYLORN, from Berkley, is a solidly constructed, well-told space adventure classic with equal parts of technology-puzzle and battle-suspense—Laumer at his yarn-spinning best for 50 pages. On the fifty-first, the last loose end is tied into place, when a reporter asks the hero how he knew that the cargo of naked bodies in the enemy ship were actually civilized beings, and not, as represented, "slaves, or rather domesticated animals."

"How could you be so sure, Admiral? They had no clothing, no identifying marks, nothing. Why didn't you believe they were cattle?"

"Because," said the Admiral,

"all the men had nice neat hair-

(Did I mention that all this takes place in an interstellar civilization sometime around the 25th Century? Well, the military values are long-lived: loyalty, duty to the death, and haircuts.)

The other two Doubleday short story collections are something else again. Kate Wilhelm's THE DOWNSTAIRS ROOM (\$4.95) is outstanding for its title story, and for at least five others: "Baby, You Were Great," "The Planners," "Windsong," "How Many Miles to Babylon?" and "The Feel of Desperation." These last two (and a few others in the collection) fall outside even my elastic usage of "s-f" as "speculative fiction"; but the extraordinary thing about the whole collection is that every one of the fourteen stories does satisfy at least my minimum requirements for contemporary fiction. That is, each and every one is about something, and the something is in each case a relevant, pertinent component of "Reality, c. 1968." In all but three—"Unbirthday Party," "The Plausible Improbable," and "Perchance to Dream"—I also found, if little in the way of original speculation or creative conceptualization, least some valid new insight or unexpected perspective on problems and challenges that are clearly connected to my current realitycrutch. On top of all this, Kate Wilhelm is a born story-teller—and even more important for me, she has a rare capacity for vivid image making. There are some scenes in the first group of titles mentioned that I doubt I will ever forget.

The other Doubleday collection, John Barth's LOST IN THE FUNHOUSE, describes itself neither as science fiction nor short stories, but "Fiction for Print, Tape, Live Voice," and everything in it (as well as a whole that is somewhat more than the sum of the parts) is, emphatically, speculative fiction of a vitally necessary sort, examining one of the most actively eruptive open-ended processes of this decade—namely, the (r?)evolution of fiction itself.

Aside from a small enclave of experimental writers (mostly more ghetto-ized than science fiction ever was), the prose forms have been the slowest of the communicative arts to respond to the insistent demands of new concepts and new complexities for new forms, new vocabularies, and new syntaxes: certainly, it is the medium most resistant to dramatic change (if only because it is such common property, unlike the specialist arts of poetry, music, painting, etc.).

The new Barth collection is less a series of forthright experiments than an inter-related set of

studies examining the difficulties and dissatisfactions of the serious modern writer, and pointing toward a few possible directions (mostly along the illuminated forking paths Borges alone has so far trod successfully). Unfortunately, this does not make for exciting reading: it is a truism, all too true, that the writer as character is the dullest of protagonistsexcept of course to other writers. Required reading, I'd say, for any practitioner of fiction today, and otherwise of dubious interest, except perhaps for "Night Sea Journey" and "Anonymaid"—and the opening selection, "Frame-Tale," which you can enjoy at a glance in your local bookstore.

Please understand, I am not making any special accusations against the Doubleday Science Fiction list: with the largest hardcover program, they publish both the best and worst, and much more (including the titles above) that is outstanding in neither way, but creditably representative of what writers are writing and readers are buying just now. ("Creditably" because their average is a good deal better than in the paperbacks or magazines.) The fact is, "Science Fiction" (the Established Category) has developed a peculiar imperviousness to the impact of the new ideas of the near-seventies: you are simply more likely to find the

"breakthrough concepts" in Esquire than in Analog (or Galaxy or even F&SF) these days.

Whether this trend is to be laid primarily at the door of the readers, writers, or editors, and what the root causes of this categorical insensitivity may be, are questions I hope to pursue in future columns. (Readers are welcome to join in.) But I suspect the answer is partly in the nature of the new concepts, concerning as they do values and relationships more than measurements and tables of organization—call it "software"—and partly in the nature of the Creeping Establishment-ism that has accompanied s-f's current popularity.

I have not taken a recent titlecount, but Ace is, if not the biggest, then one of the biggest paperback publishers of original s-f: the Ace Specials, in particular, provide some of the best (literary and conceptual) work in paperback specialty field. In its first eight months, this line has published three first novels of superior merit: Lafferty's PAST MASTER, Russ's PICNIC ON PAR-ADISE, (both previously discussed here) and Alexei Panshin's RITE OF PASSAGE. Panshin's book was squeezed out of this column several months running, with the fortuitous result that it can now be considered with his second novel, STAR WELL.

Panshin, after the manner of this decade, begins his novelist's career with full accreditation: he has published a suitable number of increasingly good short stories, served his time with distinction in the fan press, attended the Milford Science Fiction Writers' Conference, worked as an editorial assistant, and published a scholarly-yet-readable volume of criticism (HEINLEIN IN DIMEN-SION. Advent, recently reviewed here). If ever first-novelist might have beeen expected to display expertise, Panshin was it: surprisingly, he does.

RITE OF PASSAGE was published with cover blurbs from some impressive names: ". . . a fully realized, lived-in world . . . A first novel than most people's tenth . . ." Blish; "An impressive portraval of the psychological and moral coming-of-age of a young girl whose upringing and background are truly of the future . . . " Brunner; ". . . the power of a born storyteller . . . the start of what is sure to be a notable career . . ." Silverberg; ". . . he has captured the feelings of a young girl, at the point in her life where all young girls are most beautiful and most pathetic . . ." Zelazny.

I am in full agreement with Blish and Silverberg. Some male—readers may also agree with Brunner and Zelazny: for my part, I felt that the author's only real mistake was in his choice of viewpoint character; it is a rare talent—and seldom an inexperienced one—that can write successfully in the first person of the opposite sex, and this is the one area in which Panshin is clearly and unequivocally outpointed by Heinlein.

For of course the most important single thing about this book is—for better and worse—its Heinleinesque character. (I cannot help wondering how much of the enthusiasm expressed on the jacket was at least subliminally evoked by this aspect of the novel? Or how many other writers in this field understand—as Panshin clearly does—the extent to which Robert A. Heinlein, as idea-originator, form-progenitor, and values-formulator, still stands as father-figure to everyone reared—as writer or reader—in the American s-f specialty field of the forties and fifties?) Panshin, in any case, emerges as the first clearly successful challenger of the master on his own grounds. That is, he demonstrates a narrative sense. structural soundness, and capacity for internal consistency that rank with the best in the field, and his argument with Heinlein's attitudes is solidly presented in context embodying overtones (not imitations) of much of the best Heinlein from UNIVERSE to POD-KAYNE OF MARS. (I except. in passing, certain titles of which BEYOND THIS HORIZON and STRANGER IN A STRANGE LAND are notable exemplars.)

The story, told in first-person by a teen-age girl, concerns the coming-of-age "Trial" (by planetdropping among the "Mudeaters") of adolescent members of a nomadic starship society. It is in the on-planet scenes that I feel Panshin sometimes outdoes Heinlein: here and there I caught echoes of the excitement with which I first read Kipling's account of Kim's adventures on the Great Road. I also found Panshin's Elder Philosopher, Mr. Mbele, more agreeable than any Heinleinian counterpart WALDO. Panshin loses a bit in his viewpoint character: Heinlein does understand the pubescent female better. All in all, it is high praise for Panshin to say that I think it depends on which man you agreed with to start with, whether Panshin or Heinlein comes out on top. My complaint, by the same token, is that a young man of Panshin's demonstrable talent, in 1968, should have elected to write his first novel not just in the (then revolutionary)

structure and format initiated by Heinlein in 1938—but on the same conceptual grounds.

Still (I told myself) now he has performed his own Rite of Passage, conducted his ritual battle with the clan chief and proved his manhood. Perhaps the next novel will apply the same vitality, color, interior logic, and narrative power to Panshin's own ideas, in Panshin's own voice.

Almost it does, STAR WELL is the first of a projected series featuring a dashing dandy of the spaceways, Anthony Villers. An introduction by Samuel Delanv describes it as "a gallery of gamblers, duels and doublecrosses, a minuette of manners and manners mangled . . ." It is all that, and it does have the vitality. color, interior logic, and narrative power aforementioned—plus, I think, Panshin's own voice. A good read: a fun book: it goes quickly enough to take to bed with you at night, and you can be sure it won't keep vou awake thinking.

Well, that's science fiction, I guess: great escape literature.

-JUDITH MERRIL





There are generally two types of stories that depict world-wide disaster: one is the holocaust of commission (e.g. nations hurling nuclear missiles at each other); the second is the disaster of omission (the population crush, etc.) Commander D. F. Jones keys on the second in this strong story, which suggests that it is not necessary for mankind to do anything to cause disaster on a huge scale, that his qualities of apathy and selfishness are implements enough. As frightening as it is, the story is not essentially sf. The situation he describes—given the right combination of circumstances—could happen now.

BLACK SNOWSTORM

by D. F. Jones

THE CITY WAS UNSEASONABLY hot, even now, in early morning. The warm, damp wind blew steadily from the south, and it was only the end of March. Old beggars obstinately drew their ragged, greasy coats about them, muttered knowingly about atomic bombs. . . . Youth, more resilient, was less concerned—although the girls were shifting, as if by secret edict, to light summer dresses.

One such girl, in her cramped fourth-floor bedroom overlooking a narrow clamorous street, was dressing with care, for she was a shop assistant, selling bright, smart, ephemeral junk to her contemporaries. Checking the hem of her micro-mini skirt, she reflected wryly that the bottom-pinching season would begin early, but being of a philosophic turn of mind, she reckoned it better to be sought and sore than untracked and intact. And if it should be that gorgeous policeman . . . which was all the wind meant to her, then.

Well over a thousand miles away it was also unusually warm, even by local standards, which the city, sidewalk cafe tables were being hastily placed in position to catch custom, but here there were no sidewalks or potential customers. Here the sun had been up earlier, and the shimmer of heat haze was apparent on the endless miles of featureless, silent desert, miles of utter barren waste-in man's eyes. For all his ingenuity, this he had not yet conquered; a land of no return in all senses of the phrase. The patchy, stunted vegetation, mere scrub, brought on by recent rain, meant nothing to man. It had no commercial value, and man cannot say less than that. But for the small, insignificant life, newly emerged from the sand, this scrub was life itself. The individual might be insignificant, but en masse they were a very different proposition. And for them conditions were just right. Self-satisfied man was however, entirely blind to threat this ageless enemy posed. Unfortunately, that third of mankind which—at the moment—

were pretty high, but there were no

peach-like bottoms to pinch. In

Self-satisfied man was not, however, entirely blind to the threat this ageless enemy posed. Unfortunately, that third of mankind which—at the moment—eats regularly did not live in the areas subject to this insect's depredations. There were many in the Western World fully alive to the scourge that could devastate twenty percent of the world's land mass, but it did not touch them personally, and the countries which suffered were, in the main, new nations, chronically short of

money. Chauvinism did not help either; international co-operation was not perfect. There had been a period of several years quiescence or, as the experts called it, recession. The World Health Organization did what it could, but WHO also was short of money, and its defences were thin. In the areas at risk, large numbers had no option but to put their faith in appeals to the many aspects of God, and human nature being what it is, even this precaution got less attention as the recession lengthened.

So mankind's usual selfishness, short-sightedness and apathy all contributed to what followed. combining with unusual natural factors which no one foresaw. Like an accumulator bet on ten horse races, the odds were enormous, but this time it came off. paid off. And when the desert rains, unusually heavy, were followed in due time by a damp hot wind, moisture laden from its journey across the Indian Ocean, crossing westward over the Arabian desert, the stage was set. It only needed a converging south wind, and that too, came. . . .

It seems probable that watchful soldiers on the Israel-Jordan frontier were the first to observe part of the invasion. Possibly it was not very heavy, or perhaps both sides were so busy watching for 75mm shells or .5 machine guns that they had no time for insects.

Certainly no reports reached the respective GHQ's, and it is hard to see what they could have done about it, even if they had known.

The first human really alive to the situation was a businessman, an amateur entomologist who lived near Damour, a small town ten miles south of Beirut, Lebanon. Georges Kalb, a bachelor, started shortly after sunset for the house of a rich business friend; his object, dinner and a convivial evening; his destination, a fine villa above the coast road, just to the north of Saida, the Sidon of Biblical days. The wind from inland was damp, hot, and luckily for Georges Kalb, he decided to close the car windows and use his air-conditioning. Even if it was only fifteen miles, there was no point in arriving hot and sweaty with his collar like chewed string. The road was good, and he could get there comfortably in twenty minutes.

He was a half hour late, and arrived pale and shaking. Air-conditioning or not, his shirt was a grotesque parody of its original state. At first his friend feared a heart attack, helped him to a reclining chair, and made for the drinks tray.

But Kalb's mind, shocked and horrified, had other ideas. "No, Leon, never mind that! Get all the windows and shutters closed!"

Leon turned and looked at his friend in surprise. "My dear fel-

low, they are! Surely you remember we're fully air-conditioned?"

Georges relaxed momentarily. "Of course." Then he sat up again, "Get the curtains drawn and the outside lights switched off!"

"What on earth's the matter? D'you expect an Israeli air raid?"
"No, but do it, please." He got up and stumbled over to a large plate-glass window, overlooking the sea, and fumbled with the curtain cords. "They're not attracted by light, but it disorientates them."

Although puzzled, Leon did not doubt his friend's sincerity. A loud snap of his fingers and a servant appeared, was curtly instructed and left hurriedly. The host drew the curtains over the other large picture window and smiled at Kalb. "Now, can we have that drink—and exactly what is worrying you?"

Kalb did not smile back, but remained staring blankly before him; reliving his experience, he grimaced, shuddered. "Yes, I'll have that drink now, thank you, Leon." He watched as his host prepared the drinks. The silver tray, the heavy Waterford glasses, the English silver ice-bucket, glittering and shining against the deep glow of the rich mahogany table, all so very civilized. . . .

"Well?" Leon handed him a glass.

"Locusts," said Georges shortly.

"Locusts?" His host was puzzled, but not noticeably frightened by the news. "Locusts," he said thoughtfully. "It's rather early, is it not? What did you see, some hoppers on the road?" He did not say, "Is that all?" but his tone conveyed it.

Georges flushed. "Surely you don't imagine that a few immature non-flying insects—in any case, hoppers seldom move at night." He finished his drink, passed the glass back without comment and stood rubbing his thin fingers nervously together, thinking. "Where's your wife?"

"Arida? Oh, she's spending a few days with her family up in Trablos—why?" This evening had been arranged because she was away. Leon knew well that his friend not only did not care for women, he was downright awkward in their presence. Trablos, or Tripoli, was a good seventy miles to the north.

"Well," said Georges, half to himself, "that ought to be clear. I've got it straight now, I'll tell you. I started just after sunset. I'd left Damour and was coming down to the bridge over the Nahr Ed Damour—must have been on the bridge in fact when I first saw them—a few. Then, in less than fifty yards, I was right into them."

He shuddered. "You know me, Leon, I'm used to insects if anyone is, but this! I'd no time to slow down and I was right in, and I mean in, them. Slipping and sliding, crunching over thousands of them! In the headlights it looked like a black snowstorm! Luckily there is very little traffic at night: I was sliding all over the road— I almost panicked, I should have stopped, but frankly, I was too scared-me! I kept going somehow, and the nightmare went on, and on . . . it must have been for nearly ten miles. Think of it! Ten miles, driving over locusts so thick that they were crawling, hopping over each other! I had the windshield wipers going, and my speed was far too low to make them shatter against the glass, but after the first mile or so I was terrified, completely shut in, unable to turn round, frightened of what lay ahead. I did try once to speed up, but I felt the wheels spin . . . Think of it, wheel spin due to layers of crushed locusts! It's a miracle my air intakes were not blocked. Then about a mile short of here, as suddenly as they began, the swarm ceased. That's significant, Leon. They're clumsy flyers. The best they can do in still air conditions is between ten and twelve miles an hour. In this wind they can do little more than steer; they certainly can't go against it. The shape of the swarm is determined by air conditions. If there are upcurrents of warm air, thermals or "air pockets", they tend to spiral up and down with the circulating air, and if you were looking down from above, it would look very roughly circular, with those on the outside flying back into the swarm —why, we do not know."

He paused, sipped his drink, then frowned. "Something happens to the locust mind—if you can call it that—when there are enough to make a swarm. They're not, in small numbers, social insects like bees or ants; they do not congregate, but when there are sufficient numbers, this frightening change comes over them, yet there are no leaders. This mindless urge forces them together. This is well known, and was, even in Biblical times. What was it in Proverbs? Yes, 'The locusts have no king, yet go they forth all of them by bands.' And they're going forth tonight, all right!" He stared somberly at the carpet.

"You said there was something significant about the sudden beginning and ending of the swarm."

"Ah, yes. Well, apart from the thermal or columnar formation, there is another. Thermals move over the ground, but not very far, being tied, indeed formed by ground conditions. The other is called stratiform, and looks rather like a flattened jellyfish swimming forward. The front, or leading edge is pretty sharply defined, in a sort of curve, but as you get further back, the edge gets ragged,

more locusts are moving out and back at the side, and behind. Like the jellyfish's tentacles, some trail behind and the whole swarm is about ten miles across, but if I only crossed a chord, as it were, of that front," he shrugged, "who can say how wide it is? Thirty—fifty miles?"

"But you said they were crawling or hopping on the road."

Georges nodded. "True. There appears to be a sort of constant circular flow from the swarm to the ground beneath. Perhaps they drop out of the leading edge to the ground, rest and then rejoin in the tail and, refreshed by food and rest, fly up to the front again."

Leon was very thoughtful, his sharp business brain working swiftly. "Then only a small percentage of the swarm is on the ground at any one time. Don't they all come down together to rest?"

"I don't claim to know it all, Leon; but, yes, I think most can come down at once. It depends on the warmth and humidity of the air; if they get cold—their body temperature is about 75 degrees—they're forced down by the reduction in their metabolism."

"Let's hope it stays warm!" Leon snapped his fingers and instructed the servant to look round outside for locusts. The man rolled his eyes expressively and left. "You don't think it had got cold, locally, and that what you saw was the majority of the swarm on the ground? If what you say is right there must have been millions on the road."

Georges looked at him pityingly. "You've no real idea how big a swarm can be, have you? Let me give you an idea. Five hundred thousand locusts of what I fear is this variety weigh one ton—"

"What d'you mean, the variety you fear?"

"From the glimpses I got I think this is the desert locust. Some others breed in a relatively small area, and spraying can keep them down, once the spot is located. This one is the biggest menace because you cannot possibly cover the whole Arabian desert, and they breed all over it. Consequently we can get a lot more of them. But as I was saying, half a million of them weigh a ton! In swarm conditions—like this—you can get up to two hundred million in one square mile, and a swarm may cover quite reasonably two hundred square miles. That is about forty thousand million locusts!"

Again Leon's calculating mind; "But that means a total weight of, um, eighty thousand tons!"

Georges smiled as his friend began to realize the magnitude. "I've seen a weight of a hundred thousand tons quoted."

Leon was looking at the problem from another angle. "But we must do something!"

Georges smiled sardonically. "And what would you suggest we do—apart from have another drink?"

"Well, we must tell someone, there must be something someone can do!"

"I've no doubt quite a lot of people know now!"

"I'm going to call the Chief of Police in Beirut. I know him." He was moving swiftly to the phone as the servant returned, his hands cupped, his face grinning. "There are some, sir, very few in the garden, but plenty on the road."

"Let me see," Georges looked into the cupped hands intently, taking in the shiny body, powerful back legs, the blank, mindless eyes. He straightened up. "Look at that, Leon. Pink, the color of the sexually immature locust, not yet fully developed. This is a new swarm, hardly started on its travels."

"Mightn't it be the odd young one?"

"No, it doesn't work that way. In any swarm, they're all within a few days of each other's life cycle. No, this is a new swarm, they change color to yellow when mature."

His friend picked up the telephone.

"And there's another thing you can tell him—if you get through—this is the desert locust."

"What d'you mean, if I get through?"

"The lines may be down. You're forgetting their weight, my friend." He stared again at the insect. "There's very little we can do about this swarm—now—we can only hope they are swept out to sea and drown. They can't go far from land."

There he was wrong: He did not know that in 1958 a small group of locusts made a sea passage of 1,600 miles from the Canaries to Britain. Neither did he know of the case of the S.S. Harrisburg in 1895 which met a swarm at sea—1,200 miles out in the Atlantic. . . .

But in one thing he was right: The telephone was dead.

Since the Suez Canal had become an unreliable route, shipping had got scarce at the eastern end of the Mediterranean. A freighter, rolling up from Port Said, en route for Beirut encountered them -but did not mention the fact until they docked, and by then it was history. A cruiser liner reported their presence south of Cyprus early the next morning, but there appears to have been some delay in passing the message on. Shipping companies have little entomological experience, and it was very late in the day when report reached WHO in Rome. They had no contact with the local meteorological organization, and while the report caused some concern, the full import was

not realized. A message was sent on to the Anti-Locust Research Center in London—and that arrived in the middle of the night. The next morning, the experts there were quick to appreciate the situation, but the time involved in obtaining additional information further delayed matters, and their warning message, accurate as it was, arrived too late.

That morning the shopgirl rose early, as usual. Her prognostication had been right, and she had bruises on her buttocks to prove it. She had also been right about that gorgeous young policeman. His were the bluest bruises. This evening, on her way back, she would see him again; something would transpire . . .

And then the south wind from Africa joined forces with the east wind. The swarm, driven westward, veered to the northwest. . . . About the same time a cold front, temporarily held by the Alps, pushed past that barrier and was heading southeast. Anyone with the disparate knowledge necessary to judge could have outlined the disaster precisely, but there was no one in that position. There would be little warning, and even if it could have been given, there was even less anyone could have done. It was far too late.

Western Sicily, from Marsala

to Castellamare, caught some of the passing invasion. Communications in that sparse country were mainly by telephone, and the lines were soon down. Palermo was aware that something was happening to the west, but could not be sure what. Bandetti?

This brief visit to Sicily had another, profound effect. It is not generally realized that the average swarm suffers very considerable attrition as it progresses. Birds, starvation, the sea take a heavy toll, but this swarm drew some refreshment from the island. A locust eats only two grams of food a day, but a swarm the size of this one can eat eighty thousand tons of food a day, enough, if it were corn, to feed some four hundred thousand people for a vearwestern Sicily was completely devastated by the time the host passed on, and thus far, their casualties were light.

The first people who encountered the host and were effectively vocal about it were the personnel of a United States Army Air Force airstrip near the coast north of Naples.

A radar operator saw them first, a slight clutter on the scan, spread over a good deal more than forty degrees. He frowned, discussed the picture with himself in basic Brooklynese, and tried to adjust his picture. Then he gave it up.

"Hey, Sarge, there sure is a foul-up on this scan!"

The sergeant, whose well-trained mind was divided between keeping tabs on an incoming C-130 from Germany and deciding if he should spend the evening writing to his wife stateside or make a play for a waitress in the Cafe Gregoric, was not pleased. But since Pearl Harbor no one in authority in the U.S. armed forces, from corporal up, has been inclined to disregard agitated radar operators.

"So—unfoul it!" He peered at the screen, but not understanding what he saw, he kept silent. There were those who said this was the way he made sergeant, but the operator had not played chicken on the Brooklyn Bridge without sharpening his wits.

"Well—what's that, Sarge?"

The sergeant went through the same motions of picture adjustment as his subordinate, and with as much success. Finally he grudgingly admitted, "Sure is odd. Mebbe it's a flock of birds—you keep an eye out for that C-130. Rome control has cleared it to us, should be on any time now."

The operator stabbed a finger on the screen. "That's your baby, Sarge—had it for some time now." That was a mistake.

"Well, Godalmighty, what d'you reckon you're paid for—just to polish the ass of your pants? Report, mac, report!"

It got the sergeant out of it nicely. Nevertheless, he rang Operations. "We've got the C-130 on plot, sir, and there's something else; southwest, mebbe twenty miles out, there appears to be a mighty big flock of birds. For sure it's not an aircraft response. No, Lieutenant, it's well clear of the C-130's flight path. Sure, I'll keep you informed."

The sergeant smoked a cigarette, glancing now and again at the radar screen, but concentrating on the main runway, its white concrete modified by the tinted glass of the control tower. Maybe there'd be a letter in this crate for him, but it would be some time before the mail was sorted. Duty ended in half an hour, and the waitress loomed alluringly. If he could get that dolly in the back of his Montana, well. . . .

"Sarge!"

He stubbed out the cigarette irritably. "Yeah?"

"Dem boids is gettin' mighty close!"

They were. Suddenly things began to happen. The loudspeaker crackled into life. "Maxie one four five to Starchbag Airco, over."

The sergeant grabbed the desk mike. "One four five, this is Airco. Wind is one nine five, four. Queen Foxtrot Echo nine nine seven, visibility unlimited." He hesitated, then, "Over!"

"This is one four five, roger. On finals now."

The sergeant put the mike down, pressed the warning bell to the fire and ambulance readyroom below and looked to the southwest. For a few seconds he watched, unable to believe his eyes.

A dark band, irregular in thickness, and hazy beneath, stretched for miles across the southern horizon of the afternoon sky. Range was impossible to guess, and he turned swiftly to the radar.

"How far are those goddamn birds!"

"Around five miles, Sarge."
"Five miles! They just can't—"
He snatched up a pair of binoculars and rushed out onto the balcony. What he saw did nothing to soothe him. He rushed back. "One four five—how far?"

"Bearing three three zero, twenty miles."

The sergeant dropped the binoculars on the desk and rang Operations. "Sir, these birds are getting mighty close. There's a whole scad of them. I've never seen anything like it—and the freighter's on finals now!" He nodded hastily at the phone. "Right, sir!"

"One four five, this is Airco, abort on finals, I say again, abort on finals!" He looked in fascinated horror at the black cloud, now visibly larger. "We don't know what we've got, but it looks like an almighty flock of birds heading in from the southwest! Over!"

"This is one four five." The bored professionalism in the pilot's voice had gone. "We see your flock, you aren't kidding! Is it clear for us to go and have a look? Over."

"Sure, go right ahead, estimated top layer of birds is three thousand feet!"

"Roger, out."

Two officers, a lieutenant and a captain, came into the control room. The latter, a tough product of West Point, was about to blast the sergeant when he caught sight of the swarm. His mouth shut like a rat trip. The lieutenant, without the benefit of West Point, allowed his mouth to open wider. "Holy Cow!"

"The C-130's going to take a look, Captain."

"I can see that, Sergeant."

As indeed he could. The giant freighter was clearly visible; for all its bulk, a graceful thing, the sun glinting on it as it rumbled past, climbing slightly. The group in the control tower watched silently as it gained position over the swarm. The sound that burst from the loudspeaker was difficult to associate with that large, yet beautiful thing. There was a good deal of background noise, and the pilot's voice was high with excitement.

"One four five to Airco. On top. These are the screwiest birds I ever saw! Closing to investigateover."

It was the captain that grabbed the mike. "Don't get too close to it!"

Radiotelephone procedure collapsed under the excitement.

"Worry not, mac, I won't!"

The plane dipped cautiously, and the watchers in the tower, absorbed in following the aircraft, failed to notice that the whole scene was getting closer. . . .

"These are no goddamn birds! I don't know what the hell! My copilot says they're locusts! It's it's enormous, I can't tell you-" It was no less than the truth; he was quite unable to convey his impression.

The setting sun, while not blotted out for those in the tower, was certainly heavily obscured. Real or imagined, the air seemed colder, and like the first heavy splash of an impending thunder storm, a locust hit the glass audibly, and then vanished. It galvanized the captain into life.

"Sergeant, shut the door, close all windows!" He pressed the station alarm bell and almost at the same moment grabbed the mike. "One four five, this is Starchbag, report vour fuel state, over."

His harsh tone restored the military atmosphere.

"This is one four five. I have fifteen percent fuel remaining. are, we think, locusts, tracking roughly north, no estimate of size, the cloud stretched to east and west for miles. Do I land? Over."

The captain, who was later to be congratulated—and promoted—by the commanding general, was firm. "This is Starchbag. You are not, repeat not to land. Track and report swarm to Prudent Limit of Endurance, then head for Naples who will be informed. Over."

"Roger, sir." The pilot was not without perception.

But the captain was busy with the public address system.

"Now hear this! Shortly we will be covered with a swarm of insects, locusts. They are not dangerous, but it may be nasty. All personnel are to remain under cover, close all external doors and vents and assume anti-gas state one, masks need not be worn. All flying is suspended. That is all."

He did very well, really. It was a different story in less fortunate places. Like Ciampino Airport, Roma.

The shopgirl had finished for the day, amber plastic sheeting had been spread over the baubles in the window, the stands draped. Her part done, she slipped happily into the growing rush-hour crowds, a self-contained unit in the numberless mass, intent on her own affairs; pleasure at the ending of work, anxiety that the unexpected drizzle might ruin her new hairdo, pleasure at the impending meeting with the policeman, anxiety that he might not be there. Shivering slightly, she debated the vital question: to put on her head-scarf or not? Hot and damp all day, now this chill, fine rain. Maddening! She decided against the head-scarf and hurried on, heels clacking, miniskirt swinging rhythmically.

The change in the weather was due to the advancing cold front meeting the warm southern air, cooling it, causing rain—and so much else. . . .

The sun was setting, many lights were already on. Bright red and blue neon took on a sharper intensity in the growing gloom. Runway lights glowed yellow in the faint drizzle; airliners taxied ponderously, gleaming wetly. Engines roared as they were run up on test, the sound battening hollowly in the bright lit hangers. A steadily accelerating group of occulting lights outlined a departing plane.

In the passenger terminal the usual scene of confusion: sad farewells, happy meetings, happy farewells, sad meetings. Impatience, reluctance, anticipation, apprehension. Fractious children in a dozen different styles of dress, self-important businessmen in only one. Salesmen and lovers, wives and grandmothers, listening to flight announcements intoned tri-lingually by some remote goddess. Ciampino Airport was normal.

In the control tower the situation was still normal, but moving rapidly to crisis. Down in the communications room the tension was starting. A teletype was hammering out a curiously incoherent message, relayed via Naples, but the message had yet to reach the tower, and there tension was seeping in from another source.

The broken ground to south of the airport does not improve the radar picture. Even so, with the swarm losing height and beginning to merge with the ground effects, the local control operator could detect it, and the very size of the response made it less alarming. The small pinpoint of light of an intruding aircraft would soon be seen, understood and dealt with, but this was so enormous, so vast, blanketing half the scan with a thin, fluctuating glow—to see it as a danger was, literally, unthinkable. The operator frowned, changed his range scale, and frowned again. Couldn't possibly be birds—rain? Might be hail. He checked with his colleague watching the distant control scan, but his interests lay in everything above 4,000, and there was no sign of this phenomenon at that height. The local control operator looked again at his scan, half turned in his chair, and called the controller. The teletype message was on its way from the communication room. . . .

The twin-engined executive jet was letting down swiftly, smoothly. The pilot flicked the channel selector to that used by Ground Control Approach, Ciampino, and called. There was no answer. He called again. Cursing quietly, he had a sneaking feeling that his set had gone u/s on that channel. He continued to let down; there was plenty of time. . . . He flicked the switch to another channel and called again. There'd be hell from the Big Man back in the cabin if they were late: he never took kindly to failure in any shape or form. If he gave an order, he expected it to be carried out, regardless. It had been a powerful factor in his rise

to the position of Big Man. The pilot sighed with relief to hear an answer to his call. He explained his situation, asked that he be controlled on that channel and requested final instructions for landing. The ground operator appeared disturbed. After a short pause, he relayed the information that while there was a "slot" between airliners, during which the executive jet could land, he must hold off for the moment; there was probable trouble with insects -he did not know the English for "locusts." The pilot snorted. If they

imagined he was put off by bloody insects, they had another thought coming. He'd get down there, call again when he was closer. If

there was a "slot," he was going to take it!

The plane broke through the cloud base at about 3,000 feet. and almost at once was into the locusts. They shattered in their thousands on the windshield, covering it with an obscene pus-yellow that slid off in the wind, only to be replaced by more. The plane was blind. Instinctively, the pilot pulled the control column back, trying to climb, but it was too late; the air intakes of the jets were choked. In a nose-up attitude, with both engines flamed out, and with speed reduced for landing, there could only be one result; the machine stalled. Had the pilot been able to see, he might have got her down safely. As it was, he had no chance at that height, with only the artificial horizon to assist him. He fought desperately. Ironically, tragically, he kept the machine airborne long enough for it to reach, and crash into, the control tower. Ciampino was paralyzed.

Swarm is a totally inadequate word. This cloud of locusts stretched from the heights of Tivoli down to the Lido de Roma and the international airport of Leonardo di Vinci, 22 miles from Rome. Here they were more fortunate. The signal from the U.S. airstrip arrived in time, and better radar conditions gave sufficient warning for all flying to be

suspended. So from da Vinci to Tivoli, some 45 miles, the cloud swept in, in the typical bow formation. And it was along this line that the warm damp air that had sustained the locusts for so long met the cold front from the north. As the air cooled, the locusts, still being driven blindly, slowly north, were forced down. They had no option: it was too cold to fly, they had to land, and Rome lay beneath the center of the swarm. In their tens of thousands, hundreds of thousands, tens of millions they came down, over a hundred thousand tons of them, on the Eternal City.

The shopgirl, threading her way through the crowded streets, was oblivious to the Roman scene. It was her home, and to her quite unremarkable. The lights, cafes, the shouted imprecations of under stress—and drivers can be under as much stress as a Roman driver-all this was normality to her. She was intent only on meeting the young policeman, and hoping that the telling hairdo would not be ruined. Like all city dwellers she was quite unaware of the sky. She was oblivious too, to the scream of a jet sliding in from the north.

On the flight deck of the airliner there was a very considerable awareness; this particular aircraft had just been taken over by Ciampino GCA when the airport's communications were put out of action. Flying blind in the massive cloud of the cold front was not attractive without guidance from the ground. The aircraft's captain did two things: he called Rome Control—and came below the cloud base to verify his position. It was a very small change in altitude, and one within regulation limitations, but it was enough to bring him into the locusts.

In the cabin, the hundred and forty-nine passengers never really knew what happened. There was the sudden, surprising silence as the choked engines cut, a slight dimming of the lights, and then they knew no more.

The plane crashed on the Statzione Nationale, Rome's main railroad station. Parts of three trains were involved. Burning paraffin arched across the station, starting more fires in mailbags, newsstands and luggage. Lights failed, and the silence that followed the thunderous impact of the jet liner was broken only by the thin screams of trapped passengers in the trains, and the crackle of the flames.

And people in the forecourt of the station, a bare hundred yards away, hardly noticed. Their screams and cries drowned those from the burning station, and the flames only served to illuminate their own condition. The locusts had arrived.

Luigi Marelli was everything a tourist expected of an Italian, and this was a considerable factor in building up his small trattoria near the Spanish Steps. Short, fat, voluble, he flitted round his cafe, hissing directions at his staff in the manner of a stage villain, yet welcoming every customer and conveying the impression that the new arrival had made his day. His effusive compliments went down well with the women, and no husband could resent his arch. flirtatious manner. Luigi was a good psychologist, knew exactly how far to go, when to flash his "I'm only kidding" glance at a husband. His pleasant, clever custom of giving the favored guest a glass of grappa—and having one himself—reinforced the tourist's feeling that he "belonged," was part of the scene, not just watching from the outside, and that is worth a lot. He gave value, and was in a fair way to an early rea certain Tuscan tirement to vinevard.

About the time the jet liner crashed, Luigi was standing in the entrance of his cafe. It was too early for any serious customers, just the odd regular—Italian—taking a coffee or bianco. His quick black eyes took in the light rain; there'd be little sidewalk trade this evening. . . . Then his eye caught the figure of a hurrying girl; business was forgotten for the moment. He watched, with the

controlled avidity of a gourmet, as she passed, his lips parted slightly as his imagination ran riot. He sighed as she turned the corner, and for a moment he stared blankly after her, then his gaze sharpened. A few feet away, there was something on the sidewalk, something he was sure was not there before she passed.

His agile mind raced; perhaps she had dropped something. Luigi might appear to be slightly comic to his customers, but all his waitresses, without exception, could have told a different tale. He started forward, and in the space of two steps the invasion began. There was not one object on the paving; there were dozens.

He stopped, startled. Something whirred past his face, and he jerked back in alarm. With appalling swiftness the swarm grew; the air was full of locusts, fluttering, dropping, crawling, hopping. They covered the ground, the outside tables. They were on his clothes, his fine polished shoes. Several hit him in the face, and he nearly cried out. There was a pattering like loud rain on the awning.

Luigi turned and ran back to the cafe, his arms waving desperately. He was dimly aware of cries, screams, and the howl of brakes followed by the tinny crash of a motor smash. He ignored it all, and once inside, slammed the doors shut and stood gasping. There was something on his collar, and with a shudder of disgust, he shook it off.

The banging doors made a customer look up from his paper, and a waitress hurried over. All three stared in amazement at the dozen or so locusts on the terrazzo floor. One got airborne, and the waitress screamed. Grasshoppers they knew, but this—

Her scream galvanized Luigi. He stamped furiously on the locusts, venting his frightened anger, but before he finished, fresh cries from the kitchen announced the arrival of several hundred via the back window. Luigi joined the shouting and ran frantically into the kitchen. The move saved his life.

A large bulk tanker, traveling too fast, like most Roman vehicles, had swerved to avoid a demented woman who ran into the road. The driver, startled and off balance by the sudden appearance of the locusts, crashed into the front of the cafe. Metal ripped, plate glass shattered, and the cab of the wrecked vehicle was jammed hard against a steel column; and locusts, in their thousands, engulfed the cafe. The driver was lucky, he died instantly.

The few customers and the waitresses, already shocked, were changed to little better than panic-stricken animals. Screaming, scrabbling over tables, in an at-

mosphere heavy with fumes and alive with locusts, they fought and tore at the door to the kitchen. But Luigi, with a single horrified glance through the observation panel, acted. He locked the door.

Even then, to an observer some two thousand feet up, the scene around Spanish Steps would not have looked so very different. True, he would have noted that some car headlights were at an odd angle, slewed across the roads, and in their light he might have seen the curious ant-like scurrying of pedestrians, caught glimpses of running figures, but when, some two minutes after the tanker had crashed, the gasoline which had run down the sloping street went up in a thunderous roar, then.

He would have seen the ragged tongue of yellow flame race with terrifying speed down the street, illuminating in all its horror a scene that only a Dante could fully describe.

Innumerable accidents had, by now, jammed the rush-hour traffic solid all over central Rome. In Luigi's street the burning gasoline set fire to cars; tires burned, tanks exploded, blazing fuel splashed people, buildings. Shop awnings spread the blaze upward and into shops where the doors and windows had been smashed by terrified people, intent only on escaping from the locusts. Some sought

refuge in the jammed cars, and burnt with them.

Soon the whole street was a roaring river of flame, and there was a dreadful, revolting smell, a melange of gasoline, flesh, rubber and roasting locusts.

Maria—the shopgirl—one of perhaps ten thousand girls in Rome of that name, had nearly reached her rendezvous. The rain had got a little heavier, but anxiety at the effect on her hair was overlaid by excitement. He really was gorgeous and from where Maria stood in the social scale, no mean catch. Firmly she dismissed such daydreams from her mind. That was unthinkably wonderful . . . for now, the objective was limited, just to know him. Time enough. . . .

The Fates, who had not been excessively kind to Maria, now gave her a moment of heart-stopping ecstasy. She turned the corner, and there, in all the glory of his uniform, less than twenty yards away, was the policeman. In the light of a bright-lit shop she saw his grave face break into a smile-at her! All her careful plans for a calculated indifference were swept away; her legs felt weak, yet she had to restrain herself from running to him. It was then that the first locust landed. entangled, in her bouffant hair.

As for so many others, there was a moment of surprised in-

comprehension which moved at dreadful speed to alarm and panic as the insects appeared in their vast numbers. She felt something on her hair, and her first feeling was only of annoyance. She raised a hand to brush whatever it was off, but by then there were many, many more. A woman's hair was a perfect trap.

There were locusts on her arms, shoulders, clinging, slipping. They pattered lightly on the ground before her. She cried out, and ran towards the policeman screaming A locust found her open mouth . . .

The policeman moved towards her, arms waving. They met, she almost fell into his arms, coughing, sobbing, the thick, damp serge of his jacket rough against her cheek. His arm around her comforted her as chaos descended on the street and on the city.

On hilly streets shocked drivers slammed on their brakes and skidded on a surface made greasy by rain, and now made much worse by the locusts crushed beneath their tires. Any vehicle with an open window almost inevitably wrecked. The chilling insects, settling in their thousands on overhead power cables, broke some down, causing many fires. With the roads choked with traffic, the police and fire departments were helpless. A deadly trinity ruled the city: fire, chaos and panic.

Dawn came to Rome. It was a strangely silent city under the slate-grey clouds. The rain had increased, and this had at least damped down some of the fires, although smoke still rolled thick black coils from the four or five major outbreaks in the city. With the destruction of power lines, lights had blacked out in many parts, and overloading, reminiscent of the great New York blackout, thrust much of the city into black night. But now it was dawn, and the terror of the night had gone. The cold rain had reduced the locusts to a state of quiescence, and cold, fire, rain and cars had killed them in their millions. Their bodies choked the road gullies; in parts of the city there was flooding. . . .

A light wind blew through the Borghesi Gardens, but there was no rustling of leaves. All the young spring greenery had gone, eaten; boughs lay on the ground, broken off by the sheer weight of locusts. It was an ominous sign of what had happened to the agricutural areas around Rome, but citizens gave that much thought at this time. The impact on the city was enough. Hundreds had died in stampedes; the ento all subways trances iammed with the suffocated and trampled dead, and the injured cried and called for help that so often could not reach them.

Luigi's trattoria, and most of

the street, had gone, gutted. Luigi escaped out of the kitchen window and found refuge in an unlocked car. So Luigi survived, but then, he was the surviving type.

And in the street where Maria and her policeman met, the scene was little better. There had been no fire, but the top end of the street was effectually blocked by a multiple smash-up, involving three cars. A dead man half hung out of his car door.

Slowly, reluctantly, people were beginning to come out from their houses and hiding places, shocked, and perhaps a little ashamed. The radio station had not been affected, and was pouring out a stream of instructions, threats and exhortations for people to aid themselves. Help would come, but those in the area—they were very careful not to disclose just how vast the area was—must first help by clearing the roads.

So the people came out, and as might be expected, the women were more practical; they had buckets and brooms in use while the men stood in little silent groups, hunched up, waiting for a leader to emerge.

Certainly, it was a daunting sight. Every horizontal surface was covered with the yellow mass of the locusts. Some still fell, helpless, from cornices, parapets. Even to walk called for nerve, and there were other hazards, hidden beneath the insects. Plate glass was one. Quick-witted looters had raided more than one shop. . . .

Further down the sloping street another car had skidded on to the sidewalk and claimed two victims, two of the dozens, hundreds killed by cars in that first chaotic fifteen minutes of the invasion.

The policeman, grotesquely huddled against a lamp post, had one outflung arm resting protectively on the broken doll that had been Maria. Her mini-skirt was up, disclosing frivolously frilly panties, and a dying locust crawled painfully on her leg. A rain-sodden shoe, the high heel torn off, lay in the gutter, soon to be swept away with the blood and the locusts by the increasing rain. Across the city, distant ambulance sirens wailed a lament.

There would be other springs; the Borghesi Gardens would be green again. There would be other Marias and gorgeous policemen—and there would be plenty of Luigis, too.

And in the distant Arabian desert, in their own good time, there would be more locusts.

Perhaps the Fates were kind to young, innocent Maria. She was, despite the locusts, happy; and she died quickly, saved from a situation that is as old as the hills. That gorgeous young policeman was married.

Sydney Van Scyoc demonstrates that the theme of alien "invasion" can still be fresh and compelling in the hands of a good writer. This is a deceptively simple story, which builds to a thoroughly chilling conclusion.

UNIDENTIFIED FALLEN OBJECT

by Sydney Van Scyoc

DURING THE DAY, Miss McCulla had devoted all her attention to her pupils. Now only lymmy Branch remained in her care. He swung from the horizontal bars on the playground, systematically exercising his slim pre-adolescent limbs. Miss Culla took the quiet moments to watch winter swirl past window. Snow swept across the playground in billows.

A glint drew her eye upward. A small metal object settled slowly, vertically, through the snow. It lit near the bars. Jymmy monkeyed to the ground and bent. Then he gazed up and around, frowning.

His glance fell across Miss McCulla's window. His eyes locked hers, darkly, questioning. Miss McCulla stepped from the window.

She settled into her chair, sighing. In truth, Jymmy Branch was an exasperating child. He was a handsome boy, a well-behaved boy, and he was meticulous in his work, sometimes even brilliant. But he refused her ground for communication. He looked out at her from unreadable eyes, dark barriers, refusing to recognize overtures, much less to respond. Her thirty years of experience with the young went for nothing.

Sighing, Miss McCulla took up her study plans.

A few minutes later, Jymmy Branch slipped silently into the room. He bent over the science bench, then began searching the instrument cabinets impatiently, with uncharacteristic clatter.

Miss McCulla looked up, startled. "What have you there?"

Muted excitement flashed in Jymmy's eyes. He was a slender boy, dark. "A spacecraft," he said matter-of-factly. He dropped to his knees, banged through the lower cabinets. "It set down on the playfield, by the bars, a few minutes ago. I thought it was just a launch toy at first." He was on his feet again, explaining earnestly. "But I checked the entire field. There wasn't anyone out there but me. My mother's late again."

Her face drawn, Miss Mc-Culla examined the fallen object. It was smooth, brightly gleaming, obviously the product of thoughtful craftmanship. But its design violated her sense of expectation. The body proper took a form entirely alien to her eyes, and the airfoil surfaces joined the body at unexpected angles, in unexpected juxtapositions. They seemed to reflect more light than was available. The object gleamed aggressively.

Disturbed, Miss McCulla refrained from physical contact. "It's certainly nothing I'm familiar with," she admitted. She frowned as she revisualized the scene on the playfield. The object definitely had settled rather than fallen, and on a vertical course. "Perhaps it's a weather instrument of some sort," she suggested doubtfully.

Jymmy shook his head impatiently, busy with calipers. "No, it isn't any known metal. That was my project last term: identification of known metals." He set the object on the bench. It rested clumsily, ungainly despite its diminutive size. "But after I study it, I might be able to determine what kind of star their planet orbits."

"Whose planet?" she said, startled.

"The people who built the craft," he said distractedly, working now at the balance. "I'll find a way to analyze the metal, even though it isn't any metal known on Earth. Then I'll research star conditions. I'll determine what type of star has atmospheric conditions that might produce the type of metal the ship is built from."

Miss McCulla found herself staring, wordless, at his bent head, equally startled by his unprecedented burst of imagination and by the answering flicker it had sparked in her own mind. She was no impressionable maiden lady, certainly, but a sensible tweed pedagogue, competent, direct, down-to-earth.

"Perhaps I should ask Mr. Nolan to examine it for us." She wasn't, after all, a specialist. She drew up study plans in all subjects for her dozen pupils, moved each student through the available study materials at a pace suitable to his abilities. She leaned heavily on the specializing instructors, such as Mr. Nolan of the chemistry department, when questions arose.

Jymmy's eyes flashed, blackly belligerent. Both hands closed hard around the object, knuckles white.

Miss McCulla stood pinned by his hostile glare. Her wallphone burred. She broke away to answer.

"Mrs. Branch is waiting at the north gate," the school receptionist said.

With unspoken challenge, Jymmy pocketed the metal object and moved quickly past her, to the door.

"Jymmy—"

He presented her with running heels.

Miss McCulla frowned down the hallway. Jymmy was not a running boy, never. Nor was he an imaginative one, nor one stirred lightly to excitement and anger.

Miss McCulla leaned at her window, bemused. Perhaps, she decided, this would make a turning point in the boy's development. Perhaps this was what had been needed, a unique experience to

challenge his dormant imagination, to call forth a response from him.

Outside the wind had slackened. Snow sank heavily, solemnly. Miss McCulla sighed. She had never appreciated the earth in mock-innocent robes of white. Soon the streets would be white with treachery.

She gathered her materials.

She had just fed Tam, her placid calico, and was clearing her own dinner dishes when the wall-phone burred.

Mrs. Branch smiled tentatively from the viewplate, a wispy, colorless woman, chronically disorganized. "I'm so sorry to bother you at home, Miss McCulla. I just wondered if you would be in your room tomorrow. Jymmy wants to use the science bench, and I thought if you planned to be there anyway, I could drop him over."

Miss McCulla sighed, considering the study plans that could indeed be dealt with more effectively at school. "I'll plan to be in my room between two and four, Mrs. Branch. I'll leave the north door unlocked."

Miss McCulla broke the connection before Mrs. Branch could pass from gratitude into a recitation of her son's brilliances. Miss McCulla had endured that monologue several times since Jymmy had enrolled in July. She suspected Mrs. Branch's effusiveness

accounted in part at least for Jymmy's withdrawal.

Tam nudged her, purring sluggishly. Miss McCulla put matters educational out of mind.

Seventeen inches of snow fell overnight. But by Saturday afternoon the roads were passable, though the walks approaching the school were heavily drifted. Miss McCulla was relieved to close the north door on the cold white glare of winter.

Jymmy arrived late, trousers caked with snow to mid-thigh.

Miss McCulla felt unreasonably irritated with him. "Wasn't your mother able to drive you?"

His fingers worked stiffly at his buttons. "She didn't get back from the beauty parlor. I walked over." He hung his wet clothes and retreated to the science bench, the fallen object glaring in his grasp. Astonishingly, he glanced up again. "Thank you for coming over so I could get in."

Miss McCulla pursed her lips, feeling only annoyance that he had waded through snow and ice rather than staying home like any normal boy. She scowled down at her study outlines, supersensitive to every sound from the science bench. The splash of water, the chink of glass irritated her nerves. She ground her teeth.

Her irritation rose sharply. She glared up, to find Jymmy at her desk.

"I've made a requisition on the central supply room. Will you sign it for me?"

"This is Saturday. There's no one there today." She stiffened at the unexpectedly harsh tone of her voice.

"I can find everything myself. The room isn't locked. I checked on my way up."

"Then why didn't you help yourself to whatever you wanted? Without bothering to make a requisition?" Taut with anger, she crumpled the paper she had been writing upon.

Jymmy blinked, disconcerted. "I didn't know what I needed, then," he said, uncertainly. "You let Byll Berger pick up his own supplies sometimes."

"Byll is my top student," she rasped. "He doesn't sneak behind my back, checking the door, slipping things into his pocket if there's no one watching." She threw the crumpled paper down, surrendering completely to anger. "Bring your coat to me, young man. Let's see what you've helped

Jymmy stepped back in surprise. "But—I didn't take anything. I didn't even go in. I just tried the door."

vourself to already!"

Miss McCulla snorted. She stalked past him to snatch his coat. She searched the pockets savagely, then flung the coat to the floor in vexation.

His eyes were large with shock.

Miss McCulla flushed. With the width of the room between them, her rage dissolved. She retrieved his coat and hung it away.

"The requisition, please." Her voice dropped to its normal level.

When she returned to her desk, her anger rose again. She bit back another tirade of accusation. She scrawled her signature and with great effort handed the form to the boy instead of crumpling it in her fist.

Jymmy jumped back warily. For a moment he regarded her tensely. Then he was in the hallway, running.

When his footsteps had receded, her fists unclenched. Her jaws relaxed. She leaned at the window, weak and let down. The anger had seemed a physical thing, rising unbidden and alien in her bloodstream. The boy himself had given no reason for such abrupt rage.

Of course she had been somewhat irritated at being maneuvered into the classroom on Saturday. But she had never been given to expressing minor irritations.

She turned from the window, coldly anxious at her loss of rationality. The fallen object glared from the bench, offering convenient distraction. Bending to examine it, she was surprised to note blotchy areas of dullness on the metallic surface.

Without thinking, she touched the object. It imparted a slight,

cold shock. The patches where the metallic sheen had eroded appeared porous. She tapped one blotch with a fingernail. It gave back a deadened sound.

It was undoubtedly just a form of corrosion. But the palm of her hand tingled unpleasantly, and the thought of decomposition filled her mind. She dropped the object distastefully and wiped her hand on her dress.

Jymmy returned silently to his work. Miss McCulla felt irritation rising. She stood, slamming her work to her desk.

Jymmy's head jerked up. "Did you find everything?"

He nodded, nervously. "Except for one reagent. I marked it off the requisition."

She choked back a wave of suspicion. "Did you notice the metal has changed in spots?"

He nodded, eagerly. "I noticed it after dinner last night, when it had just started. Now almost twenty percent of the area shows the change. Maybe more. They should all be disembarked in just a few days."

"Disembarked?" she snapped.
"The passengers. If twenty percent have disembarked since dinner yesterday, they won't require even four days to finish. Unless they've unloaded only from the surface, and there are more inside. I can't estimate it on volume, of course."

She snatched the object, then

discarded it angrily. "You must be losing your reason. Any passengers on that thing would be the size of bacteria. Or virus."

He nodded. "That's why I can't be sure where they go after they disembark. I think they crawl right through the pores of my skin. I took palm scrapings, and I didn't find anything there."

She stared obtusely. "Do you mean you think creatures from outer space are crawling off that toy and penetrating the pores of your skin?" Her voice rose.

"It's—just a theory," he said,

hesitantly.

Rage overcame her. "Then please tell me, if you can, why you think intelligent beings went to the trouble and expense to travel light-years just to infiltrate your bloodstream? I should refer you to the school psychiatrist. I've never before listened to such paranoid ravings."

"But—it was just an accident, that I was the one who picked it up," he said defensively. "Anyway, I might be wrong. They might be floating away on the air, or crawling out on the bench. They—"

Miss McCulla would not be appeased. "You're unfit to associate with the other children. I'm going to call Principal Bayer at home immediately, to insist you be removed from my class and scheduled for psychiatric examination." She trembled with outrage. "I hope they commit you to an in-

stitution. You have no right among normal, decent children."

The boy backed away, his face suddenly white.

She stalked to the wallphone and dialed fiercely. But her anger ebbed, lessening with every unheeded ring at the other end of the line.

Finally, deflated, she hung up. "He doesn't answer."

Jymmy pressed himself against the far wall. "I'm just doing what you always tell us to do. I'm just trying to think for myself, instead of accepting the easy answer."

Now that the length of the room separated them, her rage had gone. It almost seemed that Jymmy's proximity brought the anger. When he moved away, reason returned. "I think you'd better go," she said.

"I—y-yes." His lips trembled. "I—if I could get my things from the closet. Please?"

She moved from the wallphone. They circled the room warily, until they had exchanged positions. Jymmy slung his coat over his arm and backed out the door, boots in hand. He ran.

Miss McCulla collapsed in her chair, limp with reaction, rubbing the palm of her hand against her skirt. The tingling had gone, but the hand felt soiled. She dug it with her nails.

Perhaps Jymmy was right. Perhaps thousands of invisible beings had disembarked from the fallen object to infiltrate his bloodstream. Perhaps they were producing some chemical or electrical change there that caused her to react irrationally, violently, to his nearness. Perhaps there was a change in the air he exhaled, a difference in perspiration, some electrical emanation.

Pain distracted her. Her nails had drawn blood from the palm of her hand.

She jerked her hands apart. Of course it was nonsense. She had the teacher's distaste for childish notions. She was tired, irritated at being called to school on the weekend. Perhaps she was taking cold. She had merely let her control slip.

Wearily she gathered her work.

She slept the night restlessly, feverish, disturbed by pain in her hand. Tam purred soothingly, but in vain.

It was nearly nine when she was wakened by knocking at her door. Miss McCulla pulled a housecoat over her gown. Her hand throbbed.

Jymmy Branch shivered on the porch in shirtsleeves. A purple welt marred his left temple. "P-please, I—I don't have anyplace to go. I thought—may I come in? Please?"

Cold wind swept into the house. Tam formed herself into a hissing arch. Miss McCulla glared. "Why don't you go to your own house? Where is your coat?" "I—it's my father. I w-wasn't doing anything. Just eating my toast. And he jumped up and said, 'I don't have to tolerate this at the breakfast table. I'm going to get my belt and whip the skin off you. Then you'll have something to stink about.' And my m-mother, she jumped up too, and she yelled, 'The belt is too good for an animal like him. We ought to—we ought—'" Jymmy shuddered. "I can't say it, what she said. I—"

"And you were doing nothing, I suppose? Just crunching your toast like a pig and breathing your dirty essence around like a poisonous cloud? You don't deserve to sit at the same table with decent human beings like your parents. You should be shut in a hole and—"

He backed off the porch, stumbled, sprawled in a snow drift.

Tam sprang past Miss McCulla, claws bared, fangs thirsting at his throat.

The boy screamed, scrambling. Miss McCulla shrilled, inciting the cat.

The cat growled and swarmed. But the boy fought her off. He panted heavily, then saw Miss Mc-Culla stalking ominously through the snow. He struggled to his feet and ran, blood on his shirt.

Miss McCulla cursed after him, cradling the dazed cat. The animal stirred, smearing blood on her housecoat. Jymmy had disappeared. Miss McCulla felt the abrupt ebbing of anger. Her limbs went weak. She let the cat drop.

Inside, shaking, she scrubbed Jymmy's blood from her housecoat. Then she sank into bed, suddenly sluggish with fever.

It was dusk when the wallphone woke her. She groped. "Yes?"

"Miss McCulla? This is Terrel

Branch. Jymmy's father."

Foreboding mantled her. "Oh—yes," she said heavily. "Jymmy came to me around nine today. Did he—reach home safely?" Tam's throaty growl, Jymmy's scream of fear, her own shrill blood-cry echoed inside her head.

Mr. Branch spoke cautiously. "No, he hasn't come home. My wife and I were, well, severe with him at breakfast. He wasn't really doing anything, but we both lost our tempers and he, well, ran out without his coat. My wife suggested you might know someone he's friendly with at school. We only settled here in July, you know. We haven't had much chance to meet his friends."

"I couldn't say he's formed any friendships at school, Mr. Branch. He's not a shy boy. But he's quite reserved. Almost withdrawn."

"You don't have any idea where he might have gone? They're forecasting another foot of snow, and he's out there without even a sweater."

She spoke reluctantly. "Well, I

suppose he could have gotten into the school. The janitors work on Sunday. I believe I left my own room unlocked, in fact."

"I'll pick you up right away."

Miss McCulla regarded the dead receiver with consternation. She most certainly hadn't meant to accompany him. She knew she couldn't trust herself if they did find the boy. She couldn't control the savage rage Jymmy Branch aroused, evidently just by his physical presence.

Remembering the welt on his temple, she wondered if Terrel Branch could be trusted to defend his son in a crisis.

Resignedly, she began to dress. Terrel Branch was his wife's junior by years, a darkly serious young man. "I don't know what

young man. "I don't know what came over us at the breakfast table." He frowned at the snow blowing restlessly down the road. "I can't forgive myself if he's hurt, out in this mess."

Miss McCulla sank into her coat collar, sickened, remembering the blood smeared over her house-coat.

As they approached the school, she saw that her classroom was fully lit.

With dread, she applied her key to the north door. Their footsteps echoed emptily down the hall. Miss McCulla clenched her jaws against a voice that might shrill out insanely, obscenely.

They reached her classroom

door. Something clattered at her foot. She bent. She picked up the little metal ship that had—or had not—journeyed from the stars.

Her mind didn't register the slight, cold shock it imparted to her hand. For her feet had carried her through her classroom door, and her senses were staggered by a more devastating shock.

Mr. Branch sucked his breath sharply. They stared in timeless silence at the still body on the floor.

"I didn't mean to do him no harm. Not really." Miss McCulla recognized the grey-faced man only as one of the janitors. "I come in to mop, and he was at the worktable, fiddling around. First I thought he was just studying late. Then it came over me he had no business here on a Sunday night. He was up to something. Stealing supplies or vandalizing. So I asked him just what he was doing. And he started backing off, trying to get around me to the door. I knew for sure he was up to trouble then. These kids, you can't turn your back on them anymore. And him trying to sneak and get behind me. So I—I—"

"You killed him," Miss McCulla

said quietly.

"I grabbed him. And he jerked, and I hit him. Just one time, and he fell down."

Mr. Branch knelt beside the boy's body, detached, calm with shock. "The whole side of his head is caved in," he said, thoughtfully.

The custodian blinked fear-fully, backing away. "Well, it's—like I said. He fell down." He swallowed nervously. "Then I bent over him, and he was still breathing. I tell you, I spent the whole day cleaning in this building, scrubbing and polishing. And there he was laying on the floor breathing filthy clouds all over everything. Dirtying up the air the rest of us have to breathe. Polluting the atmosphere. I—I—"

The sticky red smear on the toe of his boot finished his story. He shuddered and sobbed harshly.

Terrel Branch stood. "I suppose we'll need the authorities."

The janitor had recovered himself by the time the police arrived. The plainclothes detective knelt at the boy's body, then regarded the janitor stonily. "You drive Mr. Branch down in your car. We'll have the prisoner in ours."

It wasn't until she reached her car that Miss McCulla realized that she still clutched the little metal ship. She stared at it under her domelight. Almost fifty percent of the surface had dulled. The object felt light and porous.

Her hand tingled ominously. Shuddering, she threw the ship into a snowdrift. She scrubbed her hand against her coat. Terrel Branch watched without interest.

In the police waiting room, her

hand kept escaping control, scrubbing compulsively at her coat, at the chair, at her stockinged knee. The janitor's voice droned from the inner room, interrupted by occasional booms from Captain Fell, the plainclothes man.

An hour passed. At Miss Mc-Culla's side, Terrel Branch stirred. His eyes swiveled her way, slowly, darkly suspicious. He rose, warily, crossed the waiting room, sat in the chair farthest from hers.

Mis McCulla's hands clutched convulsively. She tried to force the damp chill of dreadful anxiety to the back of her mind. She thought upon the smooth-worn floor, upon the smudged grey walls, upon solid, homely reality.

The door to the inner room opened. The janitor shambled out, beaten, all humanity gone. A uniformed man supported him by one elbow.

Halfway across the waiting room, the janitor stopped, sniffed. He turned to stare at Miss Mc-Culla. His expression changed from sullenness to suspicion, dislike, open hatred.

He pulled himself indignantly erect. "It was all lies I told you in there. I was out of my head, that's what. It was the shock of seeing that poor kid dead." His gaze riveted Miss McCulla, hatefully. "I wouldn't hurt no elevenyear old kid. It was her classroom, wasn't it? I always knew there was something dirty about her, a

woman living alone, pretending to be so respectable." His eyes caught fire. His voice thickened. "Now she sits there breathing dirty fumes and pretending to be all pure, when it was her doing all along." He lunged.

Miss McCulla pressed herself to the wall, trembling at the focus of his hatred.

The janitor roared as the uniformed man felled him. He bawled as three men carried him thrashing from the room.

Captain Fell advanced, massive, conciliatory.

Miss McCulla cringed from his helping hand. "I'm all right," she uttered, hoarsely. Her body felt a-crawl with tiny, filthy beings. Her lungs seemed to swarm with contamination.

Terrel Branch regarded Miss McCulla darkly, unreadably.

"Mr. Branch, we'd like to speak with you briefly now, if we may," Captain Fell said. "We have decided to leave your statement for tomorrow, Miss McCulla."

Miss McCulla moved quickly, gratefully to the door.

"Miss McCulla!" Captain Fell sniffed the waiting room distastefully. Puzzled suspicion marred his massive face. His voice roughened. "I'll warn you not to attempt to leave this municipality."

"No. Of course not." Miss McCulla fled.

At home, she collapsed into her armchair, racked by fever.

Principal Bayer's call roused her. "The Board has agreed to dismiss the entire school tomorrow," he intoned. "I'm sure you appreciate the gravity of this dreadful occurrence. We must all search our souls."

Miss McCulla tossed feverishly in her bed. Search the soul, yes. She had always been sensible, calm, conscientious.

Now her rationality had come to crisis. Either she had, somehow, slipped into Jymmy Branch's fantasy. Or—

If there had indeed been a disembarkation of tiny beings, penetrating the pores, colonizing the moist tissues of the body, procreating, giving off a subliminal stench that incited fury—if so, only two days had been required to produce the full, lethal effect. Jymmy had first handled the fallen object on Friday, late. He had died on Sunday.

Miss McCulla had first touched the object on Saturday.

Tomorrow, irrevocably, was Monday.

Winter threw another snowy blanket over the night. With dawn, Miss McCulla woke to a coldness at her cheek. Dully she realized Tam had left her accustomed spot upon the pillow.

The next hour brought deep sleep. Miss McCulla woke feeling unexpectedly renewed. She lay for a while, examining the situation by light of day. Composed, she dressed herself. When the wallphone burred, she answered briskly.

Captain Fell was courteous, deferential. "We're ready for your statement, Miss McCulla. Shall I send a car for you?"

"I can drive myself," Miss McCulla assured him, almost cheerfully.

Then, ominous and growling, fear stalked into her heart.

"I'll expect you around ten then." Fell's face faded.

Slowly, dreading, Miss McCulla turned to face the placid calico companion of her middle years.

Tam puffed and snarled, advancing.

Miss McCulla backed. Her heart fell throbbing into vacancy.

The cat howled, sprang, slashing and thirsting for blood.

A hoarse scream, a bleeding struggle, and Miss McCulla tore claws from her flesh, hurled away the squalling mass of cat, clawed open the door, slammed it between fury and herself.

And sank bleeding into the snow.

When her lungs would draw air again, she pulled herself from the snow, stiff with certainty of the incredible. Tam's furious growls battered the door. The cat appeared at the window, bloodied.

Miss McCulla was suddenly obsessed with the image of the little spacecraft buried in drifted snow, waiting for the thaw, wait-

ing for another warm human palm, another hot salty bloodstream, another pair of hospitable lungs.

Her keys hung in her car. She guided the vehicle recklessly into the street. Perhaps it wasn't too late to give warning. She had clasped the ship only twice. Her body was larger, slower than Jymmy Branch's. Perhaps her colony had not yet reached full, fatal concentration.

Hope drove her through the iced streets, guided her to the spot where she had parked the evening before. Hope trembled in her arms, quivered in her bare hands as they dug the drifted snow. burrowed, and—closed around the tiny metal object.

It warmed to her palm, gleaming. Miss McCulla shuddered, resisting the impulse to hurl the thing far, far from herself.

She considered alternative actions. She could go directly to Captain Fell, gambling that the infection had not yet reached critical proportions, that she would survive to present her warning.

Or, in a few moments' time, she could type out her story, her conjectures. She could leave a written record, in case she did not survive human contact.

Sighing, she raised her eyes to the window of her classroom.

She keyed the north door. She moved nervously watchfully through the halls. There were no

sounds of human activity, no footsteps, no words of greeting, no friendly faces to dissolve into fury.

In her relief, she didn't register the fact that her classroom door was already unlocked. She didn't notice the grey cord snaking across the floor. She saw only the typewriter, on the far side of the room.

She almost reached it.

"I reckon you have some right here with school closed, lady."

She whirled. She recognized the pale, heavy-boned young man only as another of the janitors. Her mouth dried. The object in her hand pulsed.

She drew herself up sternly. "I'm Miss McCulla. This is my classroom." She moved slowly sideways, toward the door.

The janitor blocked the door, his face soured. "Then why are you trying to sneak back out? If you got the right to be here?" He clutched the vacuum cleaner wand in roughened hands.

From somewhere she summoned imperious calm. "I don't want to interrupt your cleaning, young man. I'll return later to do my typing."

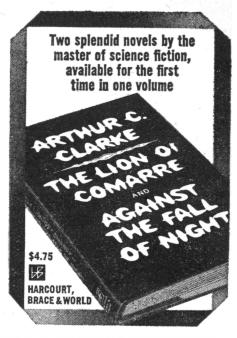
The pale eyes glittered. "Yeah, sure." He advanced, slapping the metal wand against the palm of his hand. "You know, I had a teacher one time. Talked just like you. Fourth grade." He grinned, terribly. "She sent me home one time with a note that said my clothes was dirty all the time and

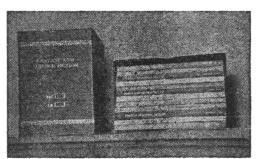
I smelled bad. I never forgot

"No! I—" Desperately, Miss McCulla tried to hold her breath, but foul fumes leaked from her nose.

The typewriter stood, futile, across the classroom. The janitor glittered and crowed in vengeful rage.

Beyond the polished windows, snow blew in light-hearted spirals. Sunlight glinted on something small and metallic settling in a vertical path through the wintry celebration.





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CHARLY

Screenplay by Stirling Silliphant, based on the short story and novel "Flowers for Algernon," by Daniel Keyes; produced and directed by Ralph Nelson. Running time: 103 minutes.

Charly Gordon Cliff Robertson Alice Kinnian Claire Bloom Dr. Richard Nemur . . . Leon Janney Dr. Anna Strauss Lillia Skala

LONG-TIME READERS OF THIS magazine will recall, and recall fondly, "Flowers for Algernon," by Daniel Keyes, [April 1959] the novelet subsequently expanded into the Nebula Award winning novel on which this film is based.

Film is the art of the twentieth century. At this point we are all at least peripherally aware of the problems—if not impossibilities—of translating from the verbal medium to the cinematic. I, at any rate, went to "Charly" prepared to enjoy something that may or may not have had all that much to do with Keyes' novel.

I was still grossly disappointed. While acknowledging the general incompatibility of the media, the most economical way to analyze my disappointment is to refer back to the novel. "Algernon" is a meticulous examination of a process undergone by a mentally retarded janitor, Charlie Gordon, who has an operation that increases his learning capacity to genius level. At his intelligence

peak, it is discovered that the process will reverse; the genius must suffer becoming a moron again, and eventual death, as a "side effect" of the operation. The book takes us carefully up and down the I.Q. ladder and leaves us days, or hours, before the end.

The film gives several fantasias at cross sections in this process and cuts off well before the symmetry of the book is even suggested. There is nothing of movement, development, or change. Had the film been able to capture any of the drive that impells the learning process, I would have been happy with any number of plot deviations, a totally new one, or no plot at all. Had this been achieved, the essentially interesting film techniques (much use of split screen, montage, multiple exposure) might have been effective; as it was, the whole thing seemed terribly self-conscious and unbearably sentimental. Robertson's portrayal of a mentally retarded janitor was embarrassing. There was no acting: it was all indication. A spastic alcoholic with dilepsia? Motor control problems are the ornament, not the essence, of mental retardation. (And I suffered from dilepsia well into my teens.) In all his bumbling and mugging I never saw the quiet, despairing patience on his face that identifies those

who cannot and have never been able to comprehend. The scene in a recreational therapy session in which real mentally retarded children were seen only pointed up the inadequacy of his performance.

If he was a little less convincing as a genius, at least some of the blame goes to the script writer, who seemed to feel that the hallmark of genius is the ability to deliver, at machine-gun speed, all the cliches of the disaffected liberal who sees chaos in change, death in progress. The twin nadirs of the movie are, first, the sequence in which Genius Charlie decides to be a Hell's Angel (!) for a montage or two, and, second, the long love-in-the-woods sequence which has some fine vis-

ual moments that were made ludicrous by the running dialogue beneath.

The acting around Cliff Robertson is fine. That it shows through in such a misconceived film is a tribute to the other actors. Claire Bloom's performance of Miss Kinnian is lovely. Lillia Skala, who plays Dr. Strauss, does a remarkably personalized portrayal of an overbearing lady psychologist—a part that could have been deadly with less skillful acting.

What I am essentially out of sympathy with, however, is taking such a human and resonant subject and, what is bad, trying, and, what is worse, failing to turn it into a "pretty" film.

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K. M. O'Donnell (FINAL WAR, April 1968) was once a Welfare Department caseworker in New York City, which accounts, in part, for the grim verisimilitude of this new story.

HOW I TAKE THEIR MEASURE

by K. M. O'Donnell

". . . At the present rate, as I see it, by the year 2000 everybody is either going to be on welfare or administering it. I see no middleground at all. Just consider the statistics . . ."

Unit Supervisor NYC Dept. of Welfare January, 1964

I HAD TO CLIMB FIVE FLIGHTS to get to the fellow. It was hell, believe me. There's nothing funny about these old-line tenements, particularly the carpeting they have on the stairs. It's at least a century old and it's slippery. Not to complain, however. Every job has its drawbacks.

I knocked at his door several times and heard mumblings and complaints inside. The usual routine; they hate to get out of bed. After a while I turned the knocks into real bangs and added a few curses. There's no sense in letting them feel they have the upper hand.

It worked. The door opened about wide enough to accommodate head and shoulders. He was a small man, alert, bright eyes, a little younger looking than I would have figured from the ap-

plication. "What you want?" he said. Sullen. Cautious. The usual business.

I showed him my black book in one hand, the identifying card in the other. "Government. We're here to investigate your application."

"I only filed yesterday. I thought it took a week."

"There's a new procedure. We're trying to catch up on our pending applications, move a little ahead." That wasn't strictly true; the truth was that his application had interested me the moment service had put it on my desk. Even on my caseload, he was something out of the ordinary.

"All right, come in," he said and opened the door. I went in. The apartment was foul, absolutely foul. It is impossible to believe how these people live. Litter in every corner, newspapers, smudges of food on the walls. That kind of thing. Inexcusable.

He saw me looking at it. "I'm demoralized," he said. "Things generally get this way when the external disorder begins to correlate to the internal chaos."

Big shot. I nodded at that one, opened my book and very cautiously edged to the center of the room to take the interview. You never sit down where these people have sat. And you have to watch out all the time for rats and insects. That's part of the training.

"Want to ask you a few questions," I said. "First—name, address and so on, all as verified on the application, right? John Steiner, 36 years old, this address."

"You have all that. They took it down yesterday."

"But we have to make sure it's the same person," I said. "Sometimes they send someone down for them, create a whole fictitious background. We've got to protect the public." Before he could think about it I took out my thumbprint kit, opened it, took his wrist and pressed his thumb into the ink, then took the smudge on the paper inside and put the whole thing away. "Procedure," I said.

"It all fits," he said. "Total depersonalization of the individual, that's what it is. Don't you have enough regard to tell me what you're going to do first?"

"Some of them protest," I said.
"They know they'll get caught." I opened to his interview record and compared the physical description with him; it dovetailed reasonably well. "Just a few questions now," I said.

"Mind if I sit down?"

"You're ill? You can't stand.
You need to rest?"

"Nothing like that," he said. "I just prefer to sit when I'm spoken to."

"If you're sick enough we can probably get you in a fully reimbursed category. No difference to you but more money for us," I said.

"I'm not sick," he said again. "Just depressed. Not that there's much of a difference to you people." The you rang out. One thing that can be counted on, always, is this stolid hostility. If it were enjoyable, one would count it as a fringe benefit. I do. It makes a good definition of the relationship. There is no hatred without fear and respect, two qualities which I like to command.

He sat in an old chair in the center of the room. Moth-eaten cloth, intimations of small life crawling up and through the upholstery and so on. He lit a cigarette for me and tossed the match out the window.

"No," I said. "No cigarettes."

"What do you mean?"

"I don't like smoke," I said. "People don't smoke in my presence. At least, not people making applications. Put it out."

"No."

"Throw it away," I said.

"I won't. I like to smoke." The whine was coming into his voice.

"Fine," I said. "I'm leaving. We'll call it application with-drawn."

He looked at me for a moment. He could see that I meant it. After a time, he threw the cigarette out the window.

"That's better," I said.

"You really enjoy this, don't vou?"

"Enjoy what?"

"The power. The assertiveness of your job. It defines your role-situation, gives you a rationale for your—"

"Enough," I said. "I don't need analyses. Now, we'll call it quits in one second if you don't can it." Since he had lost the first bat-

tle, the second was no contest. His eyes dropped.

"Occupational training?" I said.

"Sociologist," he said. Of course. "I went through all that yesterday in the intake section."

"I told you, I'm conducting my own investigation here. Intake and unit are entirely different; as far as I'm concerned, you don't even exist until you prove it to me. Why are you making application now?"

"Why do you think? I'm out of work."

"How did you support yourself prior to the application?"

He looked at me, almost pleadingly. "I went through that," he said. "I told you."

"The field investigator is the sole determinant of eligibility as he interprets the manual and regulations on public assistance. The intake unit passes on applications to the field investigator for exploration and judgment. You want more quotes?"

"No," he said. I guess that is when I beat him. He seemed to cave in on the seat, his eyes turning inward, almost oblivious of the small things that seemed to be moving on his wrists. He had been easier to bring around than most of them; it was surprising in view of his credentials. But then again, everything considered, his credentials almost explained it.

"I was on the Blauvelt Project," he said, "for 15 years, ever since I took my undergraduate degree and became a fellow there. The Project just ended last week. So I have no means of support."

The Blauvelt was another one of those small government-created boondoggles; probably the major means of sustenance for the psychologists and sociologists. Even I had heard of it. They investigated genealogy, the expression of characteristics as revealed through heredity and so on. Most of it was concerned with going back through old records and making statistics, but Congress had finally decided last year that it was easier and cheaper to shove them all on assistance. That was Steiner's little life in a nutshell. Useless. Wholly useless.

"Have you made efforts to seek other employment?" That was the test-punch. There was only one answer.

Even Steiner knew that. He managed to grin at me. "Are you kidding?" he said.

"So now you want government assistance? *Public* assistance. Relief."

"Do you see any alternative?" he said. His voice moved up on the any a little. I had him sweating, there was no doubt about it. A perfectly routine investigation.

"There must be jobs open to a man who's been on the Blauvelt. How about unskilled labor?"

"The pools are backed up 10 years with the waiting lists. You know that as well as I do."

I sure did. "Any relatives who might furnish support?"

"My parents are dead. My sister has been on relief for 18 years. I don't know where my exwife is."

"You were married?"

"I put all that down yesterday."

"I told you, there are no yesterdays with me. When were you married?"

"2015. I haven't seen her since 2021. I think she emigrated."

"You mean, she left the country?"

"That's right. We didn't get along."

"She didn't like the Blauvelt?"
He stared at me. "Who did?
It was make-work. Anybody could see it. She couldn't take it anymore. She said I should either kill myself or get out of the country. I didn't do either. I thought the project was going to go on forever."

Well, I had thought so too until Congress had had their little convulsion last year. A lot of things that were going to go on

forever weren't. I felt like telling him that. But I said, "I guess that's about it. We'll keep you posted."

"You mean I'm eligible?"

"I mean, I've completed the pending investigation. Now I have to go back and write it up—after I see a lot of other people—and make a decision. You'll be notified."

"But listen," he said, gesturing toward me, "don't you understand? I have no money. I have no food. I got this place last week by telling the landlord that I'd be on assistance soon. I owe rent. I can't even breathe."

"You'll have to wait your turn."

"But I haven't had a thing for three days—"

"You have running water," I said, pointing to the rusted tap in the corner suspended over a bucket. "That fills up the stomach pretty good. You'll hold." Then, because I really didn't want to smash him down all the way, I added, "you see, there are a lot of people I've got to service. You have to wait your turn. The need is general."

That turned him off. "Yes," he said, nodding, "the need is general."

"I'm just trying to do a job, you understand. Nothing personal."

"You've got a job," he said bitterly. "That's something to say."

"You know how much I often

think I'd like to collect and let the people like you do the work? It's no picnic, believe me. The responsibility and the pressure. Not that anybody owes me any favors, you understand. But it's a very tough racket. I work 10 hours a day."

"I bet you love it," he said.

"What was that?"

"I said, I guess it's very tough. I have sympathy for you."

"Much better," I said. The interview was over and the fun was out of it. I had taken him, I supposed, to the best limits I could. I closed my book, put away the pencil, went to the door. "Any questions?" I asked.

"None. Except when do I start getting some money."

"When I get to it," I said. My last perception of him was a good one: staring stricken at the closing crack in the door. A hand moved idly to his face, and I snapped off the image before it went to his eyes.

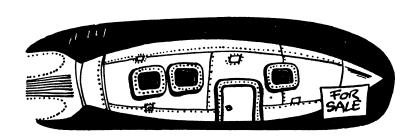
I went down the stairs three at a time.

In the street, I tossed my field-book and kit into the glove compartment of my car parked outside and went down the way to have a beer before I went on to see the other bastards. A place named Joe's which I had often visited before was full of reliefers, and, of course, I had the bartender trained as well: he kept them coming and I kept my mon-

ey away. One of the reliefers tried to talk to me and asked me if I could get him into the bureau, somehow: he was a full medical doctor and perhaps his services could be used. Just for the hell of it, I told him that we were full up on medical doctors at present but there was an interesting government project, something called the Blauvelt, which was keeping lots of people occupied. I suggested that he pursue it, chase it

hard. He must have seen what I was saying because he moved away and left me alone, and the drinking was so good and the respect in the place so thick that I forgot all about work for the rest of the day and got stoned and needed four reliefers to get me to my car. I gave them the address and one of them drove me home. He owed it to me.

They all owed it to me. The hell with them.



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SANTA CLAUS VS. S.P.I.D.E.R.

by Harlan Ellison

IT WAS HALF-PAST SEPTEMBER when the red phone rang. Kris moved away from the warm and pliant form into which he had been folded, belly to back, and rubbed a hand across sticky eyes. The phone rang again. He could not make out the time on the luminous dial of his wrist watch. "What is it, honey?" mumbled the blonde woman beside him. The phone rang a third time. "Nothing, baby . . . go back to sleep," he soothed her. She burrowed deeper under the covers as he reached for the receiver, plucking it out of the cradle in the middle of a fourth imperative.

"Yeah?" His mouth tasted unhappy.

A voice on the other end said, "The king of Canaan needs your service."

Kris sat up. "Wait a minute, I'll take it on the extension." He thumbed the HOLD button, slipped out of the bed even as he racked the receiver and, naked, padded across the immense bedroom in the dark. He found his way through the hall and into the front office, guiding his passage only by the barest touch of fingertips to walls. He pulled the bronze testimonial plaque from the little people away from the wall, spun

the dial on the wall safe and pulled it open. The red phone with its complex scrambler attachment lurked in the opening.

He punched out code on the scrambler, lifted the receiver and said, "The king fears the devil, and the devil fears the Cross." Code and counter-code.

"Kris, it's S.P.I.D.E.R.," said the voice on the other end.

"Shit!" he hissed. "Where?"

"The States. Alabama, California, D. C., Texas . . ."

"Serious?"

"Serious enough to wake you."

"Right, right. Sorry. I'm still half asleep. What time is it?"

"Half-past September."

Kris ran a hand through his thick hair. "Nobody any closer for this one?"

"Belly Button was handling it."
"Yeah . . . and . . . ?"

"He floated to the top off the coast of Galveston. He must have been in the Gulf for almost a week. They packed plastic charges on his inner thighs. . . ."

"Okay, don't describe it. I'm mad enough at being shook out of sleep. Is there a dossier?"

"Waiting for you at Hilltop."
"I'll be there in six hours."

He racked the receiver, slammed the safe port and spun the dial. He shoved the plaque back in place on the wall and stood with his balled fist lying against the bronze. Faint light from a fluorescent lamp left burn-

ing over one of the little people's drafting tables caught his tensed features. The hard, mirthless lines of his face were the work of a Giacometti. The eyes were gunmetal blue, and flat, as though unseeing. The faintly cruel mouth was thinned to an incision. He drew a deep breath and the muscle-corded body drew up with purpose.

Then, reaching over to his desk, he opened a drawer and rang three times, sharply, on a concealed button set into the underside of the drawer. Down below, in the labyrinth, PoPo would be plunging out of his cocoon, pulling on his loincloth and clipping on his earrings, and then he would tap out the code to fill the egress chamber with water.

"Peace on Earth . . ." Kris murmured, starting back for the bedroom and his wet suit.

PoPo was waiting in the grotto, standing on the let-down shelf beside the air tanks. Kris nodded to the little one and turned his back. PoPo helped him into his rig, and when Kris had cleared the mouthpiece, PoPo adjusted the oxygen mixture. "Keeble keeble?" PoPo inquired.

"Sounds like it," Kris replied. He wanted to be on his way.

"Dill-dill neat peemee," PoPo said.

"Thanks. I'll need it." He moved quickly to the egress cham-

ber, which had been filled and emptied. He undogged the wheel and swung the port open. A few trickles of Arctic water hit the basalt floor. He turned—"Keep the toy plant going. And look into that problem on Tier 9 with CorLo. I'll be back in time for the holidays." He put one foot over the sill, then turned and added, "If everything goes okay."

"Weeble zexfunt," said PoPo.
"Yeah, no war toys to you, too."
He stepped inside the egress chamber, spun the wheel hard to dog it and signaled through the lucite port. PoPo filled the chamber and Kris blew himself out.

The water was black and subzero. The homing light on the sub was his only comfort. He made it to the steel fish quickly and within minutes was on his way. Once he had passed the outer extreme of the floe, he surfaced, converted to airborne, blew the tanks that extruded the pontoons and taxied for a takeoff. Aloft, he made ramjet velocity and converted again.

Three hundred miles behind him, somewhere below the Arctic Ocean, PoPo was rousing CorLo from his cocoon and chiding the hell out of him for putting European threading on all the roller skates, thereby making all the American keys useless.

Hilltop was inside a mountain in Colorado. The peak of the

mountain swung open, allowing Kris's VTOL (the sub, in its third conversion) to drop down onto the target pad.

The Taskmaster was waiting for him with the dossier. Kris flipped it rapidly: eidetic memory.

"S.P.I.D.E.R. again," he said, softly. Then, with an inquiring tone, "It means

Society for
Pollution,
Infection and
Destruction of
Earthmen's
Resources

is that it?" The Taskmaster shook his head. Kris mmmm'ed. "Well, what are they up to this time? I thought we'd put them out of commission after that anthrax business in the Valley of the Winds."

The Taskmaster tilted back in his plastic chair. The multifaceted eyeball-globes around the room picked up pinpoints of brilliance from the chair and cast them over the walls in a subtle light-show. "It's as you read there. They've taken over the minds of those six. What they intend to do with them, as puppets, we have no idea."

Kris scanned the list again. "Reagan, Johnson, Nixon, Humphrey, Daley, and Wallace."

"We can usually keep them out of trouble, keep them from hurting themselves . . . but since S.P.I.D.E.R. got into them, they've been running amuck." "I've never even heard of most of these."

"How the hell could you, up there, making toys."

"It's the best cover I've ever had."

"So don't get crabby, just because you never see a newspaper. Take my word for it: these are the names this season."

"Whatever happened to that whatwashisname . . . Willkie?"

"Didn't pan out."

"S.P.I.D.E.R.," Kris said again.
"Does it stand for

Special

Politburo
Intent on
Destroying
Everybody's

Race

and suchlike?" The Taskmaster shook his head again, a bit wearily.

Kris rose and shook the Task-master's hand. "From the dossier, I suggest the best end for starting is with this Daley, in Chicago."

The Taskmaster nodded approval. "That's what COMPgod said, too. You'd better stop down and see the Armorer before you leave. He's batched up a few new surprises for you."

"Will I be working that dumb

red suit again?"

"As a spare, probably. It's a little early for the red suit."

"What time is it?"

"Half-past September."

When Kris emerged from the dropshaft, Miss Seven-Seventeen's eyes grew round. He came toward her, with the easy, muscled stride that set him so far apart from the rest of the agents. Most of them were little more than pudgy file clerks; where had she ever gotten the idea that espionage was a line of work best suited to Adonises? Surely from the endless stream of bad spy novels that had glutted the newsstands; what a shock when she had discovered that pinching the trigeminal nerve to cause excruciating pain or overpowering an enemy by cupping both hands and slapping both of his ears simultaneously were tactics as easily employed by men who resembled auks, as by beefcontest winners. Tactics equally as effective when struck by gobbets of mud, as by Rodin statues. But Kris. . . .

He came up to her desk and stared down silently until she dropped her eyes. Then, "Hello, Chan."

She could not look at him. It was too painful. The Bahamas. That night. The gibbous moon hanging above them like an all-watching eye as the night winds played a wild contrapuntal accompaniment to their insensate passion, the lunatic surf breaking around them on the silver sands. The goodbye. The waiting. The report from upstairs that he had been lost in Tibet. She could han-

dle none of it . . . now . . . with him standing there . . . a thick, white scar across the breastbone, now hidden by his shirt but known to her nonetheless, a scar made by Tibor Kaszlov's saber . . . she knew every inch of his flesh . . . and she could not answer. "Well, answer, stupid!" he said

He seemed to understand.

She spoke into the intercom, "Kris is here, sir." The red light flashed on her board, and without looking up she said, "The Armorer will see you now."

He strode past her, seemingly intent on walking into the stone wall. At the last possible instant it slid smoothly back, and he disappeared into the Armorer's workshop. The wall slid back and Seven-Seventeen suddenly realized she had been fisting so tightly that her lacquered nails had drawn blood from her palm.

The Armorer was a thickset, bluff man given to tweeds and pipes. His jackets were made specially for him on Saville Row, with many pockets to hold the infinitude of gadgets and pipe tools he constantly carried.

"Kris, good to see you." He took the agent's hand and pumped it effusively. "Mmm. Harris tweed?"

"No, as a matter of fact it's one of those miracle fibers," Kris replied, turning smoothly to show the center-vent, depressed-waist, Edwardian-styled, patch-pocket

jacket. "Something my man in Hong Kong whipped up. Like it?" "Elegant," the Armorer said.

"But we aren't here to discuss each other's sartorial elegance, are we?"

They had a small mutual laugh at that. Divided evenly, it took less than ten seconds. "Step over here," the Armorer said, moving toward a wall rack where several gadgets were displayed on pegboard. "I think you'll find these most intriguing."

"I thought I wasn't supposed to use the red suit this time," Kris said tartly. The red suit was hanging neatly on a teakwood valet near the wall. The Armorer turned and gave him a surprised look. "Oh? Who told you that?" Kris touched the suit, fingered it absently. "The Taskmaster." The Armorer's mouth drew down in a frown. He pulled a pipe from a jacket pocket and thrust it between his lips. It was a Sasieni Fantail with an apple bowl shape, seriously in need of a carboncake scraping. "Well, let us just say the Taskmaster occasionally fails to follow his own lines of communication." He was obviously distressed, but Kris was in no mood to become embroiled in interoffice politics.

"Show me what you've got."

The Armorer pulled a small penlight-shaped gadget off one of the pegboards. There was a clip on its upper end for attaching to a shirt pocket. "Proud of this one. I call it my deadly nightshade." He lit the pipe with a Consul butane lighter, turning up the flame till it was blue, just right for soldering.

Kris took the penlight-shaped gadget and turned it over and over. "Neat. Very compact."

The Armorer looked like a man who has just bought a new car, about to ask a neighbor to guess how much he had paid for it. "Ask me what it does."

"What does it do?"

"Spreads darkness for a radius of two miles."

"Great."

"No, really. I mean it. Just twist the clip to the right—no, no, don't do it now, for Christ's sake! you'll blot out all of Hilltop—when you get in a spot and you need an escape, just twist that clip and pfizzzz you've got all the cover you need for an escape." The Armorer blew a dense cloud of smoke; it was Niemeyer's Danish Fruit Cake, very aromatic.

Kris kept looking at the suit. "What's new with that?"

The Armorer pointed with the stem of his pipe. It was a mannerism. "Well, you've got the usual stuff: the rockets, the jet-pack, the napalm, the mace, the throwing knives, the high-pressure hoses, the boot-spikes, the .30 calibre machine guns, the acid, the flammable beard, the stomach still inflates into a raft,

the flamethrower, the plastic explosives, the red rubber nose grenade, the belt tool-kit, the boomerang, the bolo, the bolas, the machete, the derringer, the belt-buckle time bomb, the lock-pick equipment, the scuba gear, the camera and Xerox attachment in the hips, the steel mittens with the extensible hooks, the gas mask, the poison gas, the shark repellent, the sterno stove, the survival rations and the microfilm library of one hundred great books."

Kris fingered the suit again. "Heavy."

"But in addition," the Armorer said, happily, "this time we've really extended ourselves down here in Armor—"

"You're doing a helluva job."
"Thanks, sincerely, Kris."

"No, I mean, really!" '

"Yes, well. In addition, this time the suit has been fully automated, and when you depress this third button on the jacket, the entire suit becomes inflatable, airborne, and seals for high-level flight."

Kris pulled a sour face. "If I ever fall over, I'll be like a turtle on its back."

The Armorer gave Kris a jab of camaraderie, high on the left bicep. "You're a great kidder, Kris." He pointed to the boots. "Gyroscopes. Keep you level at all times. You can't fall over."

"I'm a great kidder. What else

have you got for me?"

The Armorer stepped to the pegboard and pulled off an automatic pistol. "Try this."

He depressed a button on the control console and the east wall of the Armory dropped, revealing a concealed firing range behind it. Silhouette targets were lined up at the far end of the tunnel.

"What happened to my Wembley?" Kris asked.

William I all a vi

"Too bulky. Too unreliable. Latest thing you're holding: a Lassiter-Krupp laser explosive. Sensational."

Kris turned, showing his thinnest side to the mute silhouettes. He extended and locked his right arm, bracing it with left hand around right wrist, and squeezed the trigger. A beam of light and a sibilant hiss erupted from the muzzle of the weapon. At the same instant, down the tunnel, all ten of the silhouettes vanished in a burst of blinding light. Shrapnel and bits of stone wall ricocheted back and forth in the tunnel. The sound of their destruction was deafening.

"Jesus God in Heaven," Kris murmured, turning back to the Armorer, who was only now removing the glare-blast goggles. "Why didn't you warn me about this stupid thing! I can't use one of these . . . I have to be surreptitious, circumspect, unnoticed. This bloody thing would be fine to level Gibraltar, but it's ri-

diculous for hand-to-hand combat. Here, take it!"

He thrust the weapon at the

"Ingrate!"

Armorer.

"Give me my Wembley, you lunatic!"

"Take it, it's there on the wall, you short-sighted slave of the Establishment!"

Kris grabbed the automatic, and the deadly nightshade. "Send the suit care of my contact in Montgomery, Alabama," he said, hurrying toward the door.

"Maybe I will, and maybe I

won't, you moron!"

Kris stopped and turned. "Listen, man, dammit, I can't stand here and argue with you about firepower. I've got to save the world!"

"Melodrama! Lout! Reactionary!".

"Cranky bastard! And I hate your damned blunderbuss, that's what . . . I hate the stupid loud thing!"

He reached the wall, which slid back, and dashed through. Just before it closed completely, the Armorer threw down his pipe, smashed it with his foot and screamed, "And I hate that faggy jacket of yours!"

Chicago, from the Shore Drive, looked like one immense burning garbage dump. They were rioting again on the South Side. From the direction of Evanston and

Skokie could be seen twin spiraling arms of thick black smoke. In Evanston the D.A.R. was looting and burning; in Skokie the D.A.R. had joined with the women of the W.C.T.U. from Evanston, and the offices of a paperback pornographer were being razed. The city was going insane.

Kris drove the rental birdcage Maserati into Ohio Street, turned right onto the underground ramp of the motel and let the attendant take it. Carrying only his attache case, he made for the fire exit leading up to the first floor of the motel. Once inside the stairwell. however, he turned to the blank wall, used his sonic signaler, and the wall pivoted open. He hurried inside, closed the wall and threw the attache case onto the double bed. The WAITING light was glowing on the closed-circuit television. He flicked the set on, stood in front of the camera and was pleased to see that his Chicago contact, Frieda, was wearing her hair long again.

"Hello, Ten-Nineteen," he

said.

"Hello, Kris. Welcome to the Windy City."

"You've got big troubles."

"How soon do you want to start? I've got Daley pinpointed."

"How soon can I get to him?"
"Tonight."

"Soon enough. What are you doing at the moment?"

"Not much."

"Where are you?"
"Down the hall."
"Come on over."

"In the afternoon!?!"

"A healthy mind in a healthy body."

"See you in ten minutes."
"Wear the Réplique."

Dressed entirely in black, the Wembley in an upside-down breakaway rig, its butt just protruding from his left armpit, Kris pulled himself across the open space between the electrified fence and the dark, squat powerhouse, his arms and legs crablike in the traditional infantryman's crawl.

Inside that building, Daley had been pinpointed by Ten-Nineteen's tracking equipment. He had been there for almost two days, even through the riots.

Kris had asked Frieda what he was up to, there in the power-house. She had not known. The entire building was damped, impenetrable to any sensors she had employed. But it was S.P.I.D.E.R. business, whatever it was—that had to be for dead certain. For a man in his position to be closeted away like that, while his city went up in flames—that had to be for dead certain.

Kris reached the base of the powerhouse. He slid along its face till he could see the blacked-over windows of the el above him. They were nearly a foot over his head. No purchase for climbing. He had to pull a smash-and-grab. He drew three deep breaths, broke the Wembley out of its packet and pulled the tape wound around the butt. It came loose, and he taped the weapon into his hand. Then three more deep breaths. Digging hard he dashed away from the building, thirty feet into the open, sucked in breath again, spun, and dashed back for the powerhouse. Almost at the face of the building he bent deeply from the knees. pushed off, and crossed his arms over his head as he smashed full into the window.

Then he was through, arching into the powerhouse, performing a tight somersault and coming down with knees still bent, absorbing the impact up through his hips. Glass tinkled all around him, his black suit was ripped raggedly down across the chest. His right arm came out, straight, and the Wembley extended.

Light suddenly flooded the powerhouse. Kris caught the scene in one total impression: everything.

Daley was hunched over an intricate clockwork mechanism, set high on a podium-like structure at the far end of the room. Black-light equipment all over the room still glowed an evil, rotting purple. Three men, wearing skintight outfits of pale green, were starting toward him, pulling off black-light goggles. A fourth man

still had his hand on the knife switch that had turned on the interior lights. There was more.

Kris saw great serpentine connections running from Daley's clockwork mechanism, snaking across the floor to hookups on the walls. A blower system, immense and bulky, dominating one entire wall. Vats of some bubbling dark substance, almost like liquid smoke, ranked behind the podium.

"Stop him!" Daley screamed.

Kris had only a moment as the three men in green came for him. And in that instant he chose to firm his resolve for what was certainly to come. He always had this instant, on every assignment, and he had to prove to himself that it was right, what he must do. however brutal. He chose, in that instant, to look at Daley; and his resolve was firmed more eloquently than he could have hoped. This was an evil old man. What might have been generous old age in another man, had been cemented into lines of unspeakable ugliness. This man was evil incarnate. Totally owned by S.P.I.D.E.R.

The three green men lumbered forward. Big men, heavily muscled, faces dulled with malice. Kris fired. He took the first one in the stomach, spinning him back and around, into one of his companions, who tried to sidestep but went down in a twist of arms and legs as the first green man

died. Kris pumped three shots into the tangle and the arms and legs ceased moving, save for an occasional quiver. The third man broke sidewise and tried to tackle Kris. He pulled back a step and shot him in the face. The green man went limp as a Raggedy Andy Doll and settled comically onto his knees, then tumbled forward onto the meat that had been his head.

As though what had happened to his companions meant nothing to the fourth man, he stretched both arms out before him—zombie-like—and stumbled toward Kris. The agent disposed of him with one shot.

Then he turned for Daley.

The man was raising a deadly-looking hand weapon with a needle-muzzle. Kris threw himself flat-out to the side. It was only empty space that Daley's weapon burned with its beam of sizzling crimson energy. Kris rolled, and rolled, and rolled right up to the blower system. Then he was up, had the Wembley leveled and yelled, "Don't make me do it, Daley!"

The weapon in Daley's hand tracked, came to rest on Kris, and the agent fired at that moment. The needle-nosed weapon shattered under the impact of the steel-jacketed round, and Daley fell backward off the podium.

Kris was on him in a moment. He had him up on his feet, thrust against the podium, and a two-fingered paralyzer applied to a pressure point in the clavicular depression before Daley could regain himself. Daley's mouth dropped open with the pain, but he could not speak. Kris hauled him up on the podium, a bit more roughly than was necessary, and threw him down at the foot of the clockwork mechanism.

It was incredibly complex, with timers and chronographs hooked in somehow between the vats of bubbling smoke and the blower system on the wall. Kris was absorbed in trying to understand precisely what the equipment did, when he heard the sigh at his feet. He glanced down just in time to see something so hideous he could not look at it straight-on emerge from Daley's right ear, slither and scuttle onto the floor of the podium and then explode in a black puff of soot and filth. When Kris looked again, all that remained was a dusty smear, what might be left should a child set fire to a heap of powdered magnesium and potassium nitrate.

Daley stirred. He rolled over on his back and lay gasping. Then he tried to sit up. Kris knelt and helped him to a sitting position.

"Oh, my God, my God," Daley mumbled, shaking his head as if to clear it. The evil was gone from his face. Now he was little less than a kindly old gentleman who had been sick for a very, very long time. "Thank you, whoever you are. Thank you."

Kris helped Daley to his feet, and the old man leaned against the clockwork mechanism.

"They took me over . . . years ago," he said.

"S.P.I.D.E.R., eh?" Kris said. "Yes. Slipped inside my head,

evil. Oh, God, it was awful. The things I've done. The rotten, unconscionable things! I'm so ashamed. I have so much to atone for."

"Not you, Your Honor," said Kris, "S.P.I.D.E.R. They're the ones who'll pay. Even as this one did." The black splotch.

"No, no, no . . . me! I did all those terrible things, and now I have to clean it all up. I'll tear down the South Side slums, the Back o' the Yards squalor. I'll hire the best city planners to make living space for all those black people I ignored, that I used shamefully for my own political needs. Not soulless high-rises wherein people stifle and lose their dignity, but decent communities filled with light and laughter. And I'll free the Polacks! And all the machine politics I used to assign contracts to inadequate builders . . . I'll tear down all those unsafe buildings and have them done right. I'll disband the secret gestapo I've been gathering all these years and hire only those men who can pass a stringent police exam that will take into account how much humanitarianism they have in them. I'll landscape everything, so this city will be beautiful. And then I'll have to give myself up for trial. I hope I don't get more than fifty years. I'm not that young any more."

Kris sucked on a tooth reflectively. "Don't get carried away, Your Honor."

Then he indicated the clockwork machine.

"What was this all about?"

Daley looked at the machine with loathing. "We'll have to destroy it. This was my part of the six-point plan S.P.I.D.E.R. put into operation twenty-four years ago, to . . . to. . . ."

He stumbled to a halt, a confused, perplexed look spread over his kindly features. He bit his lower lip.

"Yes, go on," Kris urged him, "to do what? What's S.P.I.-D.E.R.'s master plan? What is their goal?"

Daley spread his hands. "I—I don't know."

"Then tell me . . . who are they? Where do they come from? We've battled them for years, but we have no more idea of who they are than when we started. They always self-destruct themselves like that one—" he nodded toward the sooty smear on the podium, "—and we haven't been able to capture one. In fact, you're the first pawn of theirs that

we've ever captured alive."

Daley kept nodding all through Kris's unnecessary explanation. When the agent was finished, he shrugged.

"All I remember—whatever it was in my head there, it seems to have kept me blocked off from learning anything very much—all I remember is that they're from another planet."

"Aliens!" Kris almost shouted, instantly grasping what Daley had said. "A six-point plan. The other five names on the list, and yourself. Each of you taking one phase of a master plan whose purpose we do not as yet understand."

Daley looked at him. "You have a genuine gift for stating the obvious."

"I like to synthesize things."

"Amalgamate."

"What?"

"Nothing. Forget it. Go on."

Kris looked confused. "No, as a matter of fact, you go on. Tell me what this equipment here was supposed to do."

"It's still doing it. We haven't

shut it off."

Kris looked alarmed. "How do we shut it off?"

"Push that button."

Kris pushed the button, and almost immediately the vats stopped bubbling, the smoke-like substance in the vats subsided, the blowers ceased blowing, the clockwork machine slowed and

stopped, the cuckoo turned blue and died, the hoses flattened, the room became silent. "What *did* it do?" Kris asked.

"It created and sowed smog in the atmosphere."

"You're kidding."
"I'm not kidding. You don't

really think smog comes from factories and cars and cigarettes, do you? It cost S.P.I.D.E.R. a fortune to dummy up reports and put on a publicity campaign that it was cars and suchlike. In actuality, I've been spreading smog into the atmosphere for twenty-four years."

"Sonofagun," Kris said, with awe. Then he paused, looked cagey, and asked, "Tell me, since we now know that S.P.I.D.E.R. are aliens from outer space, does it mean

Scabrous,
Predatory
Invaders
Determined to
Eliminate
Rationality?"

Daley stared at him. "Don't ask me, no one tells me anything."

Then he jumped down off the podium and started for the door to the powerhouse. Kris looked after him, then picked up a crowbar and set about destroying the smog machine. When he had finished, sweating, and surrounded by crushed and twisted wreckage, he looked up to see Daley

standing by the open door leading outside.

"Something I can do for you?" he asked.

Daley smiled wistfully. "No. Just watching. Now that I'm a nice fellah again, I wanted to see my last example of random, brutal violence. It's going to be so quiet in Chicago."

"Tough it out, baby," Kris said, with feeling.

The six-point plan seemed to tie together in Alabama. Wallace. But Wallace was off campaigning for something or other, and apparently the plan needed his special touch (filtered through the even gentler touch of a S.P.I.D.E.R. operative, inside his head) to be tied together. Kris decided to save Wallace for the last. Time was important, but Frieda was covering for Daley and the death of the smog machine in Chicago, and frankly, time be hanged! This looked like the last showdown with S.P.I.-D.E.R., so Kris informed Hilltop he was going to track down and eradicate the remaining four points of the plan, with Wallace coming under his attention around Christmastime. It would press Kris close, but he was sure PoPo was on the job at the factory, and what had to be done . . . had to be done. It was going to be anything but easy. He thought wistfully of his Arctic

home, the happily buzzing toy factory, the way Blitzen, particularly, nuzzled his palm when he brought the sugar cubes drenched in LSD, and the way the little mothers flew when they got high.

Then he pulled his thoughts away from happier times and cooler climes, setting out to wreck S.P.I.D.E.R. He took the remaining Four in order. . . .

REAGAN: CAMARILLO, CALIFORNIA

Having closed down all the state mental institutions on the unassailable theory that nobody was really in need of psychiatric attention ("It's all in their heads!" Reagan had said at a \$500-a-plate American Legion dinner only six months earlier), Reagan disclosed himself to Kris in the men's toilet on the first floor of the abandoned Camarillo state facility, combing his pompadour.

Reagan spun around, seeing Kris's reflection in the mirror, and screamed for help from one of his zombie assistants, a man in green, who was closeted in a pay toilet. (Inmates had been paid a monthly dole in Regulation Golden State Scrip, converted from monies sent to them by married children who didn't want their freakodevo-pervo relatives around. This Scrip could be used to work the pay toilets. Reagan had always believed in a pay-as-you-go system

of state government.)

Kris hit the booth with a savate kick that shattered the door just as the man in green was emerging, the side of his shoe collapsing the man's spleen. Then the agent hurled himself on Reagan in an attempt to capture him, subdue him and somehow keep the S.P.I.D.E.R. parasite within Reagan's head from self-destructing. But the devilishly handsome Reagan abruptly pulled away, and as Kris watched, horrified, Reagan began to shimmer and change shape.

In moments it was not Reagan standing before Kris, but a sevenheaded Hydra, breathing from its seven mouths (a) fire, (b) ammonia clouds, (c) dust, (d) broken glass, (e) chlorine gas, (f) mustard gas and (g) a combination of halitosis and rock music.

Three of the heads (viz., c, e and f) lunged forward on their serpentine necks, and Kris flattened against the toilet wall. His hand darted into his jacket and came out with a ball-point pen. He shook it twice, counterclockwise, and the pen converted into a two-handed sword. Wielding the carver easily, Kris lay about him with vigor, and in a few minutes the seven heads had been severed.

Kris aimed true for the heart of the beast, and ran it through. The great body thumped over on its side, and lay still. It shimmered and changed back into Reagan. Then the black thing scampered out of his ear, erupted and smeared the floor tiles with soot.

Later, having combed his hair and applied pancake makeup to the glare spots on his nose and cheekbones, Reagan moaned piteously about the really funky things he had done under the stupefying and incredibly evil direction of S.P.I.D.E.R. He swore he didn't know what the letters of the organization's name stood for. Kris was depressed.

Reagan then showed him around the Camarillo plant, explaining that his part of the six-point plan was to use the great machines on the second and third floors to spread insanity through the atmosphere. They broke up the machines with some difficulty: much of the equipment was very hard plastic.

Reagan assured Kris that he would work with Hilltop to cover the demise of the second phase of the six point plan and that from this day forward (he raised a hand in the Boy Scout salute) he would be as good as good could be: he would bring about muchneeded property tax reform, he would stop noodging the students at UCLA, he would subscribe to the LA Free Press, The Avatar, The East Village Other, The Berkeley Barb, Horseshit, Open City and all the other underground newspapers so he could find out what was really happening, and within the week he would institute daily classes in folk dancing, soul music and peaceful coercion for members of the various police departments within the state.

He was smiling like a man who has regained that innocence of childhood or nature that he had somehow lost.

JOHNSON: JOHNSON CITY, TEXAS

Kris found him eating mashed potatoes with his hands, sitting apart from the rest of the crowd. He looked like hell. He looked weary. There was half an eaten cow on a spit, turning lazily over charcoal embers. Kris settled down beside him and passed the time of day. He thought Kris was with the party. He belched. Then Kris snapped a finger against his right temple and dragged his unconscious form into the woods.

When Johnson came around, he knew it was all over. The S.P.I.D.E.R. symbiont scuttled, erupted, smeared on the dead leaves—it was now the middle of October—and Johnson said he had to hurry off to stop the war. Kris didn't know which war he was referring to, but it sounded like a fine idea.

Johnson told him his part of the six-point plan was fomenting war. But now that was all over. He would recall the troops. He would let all the dissenters out of prison. He would retool for peace. He would send grain to needy nations. He would take elocution lessons. Kris shrugged and moved on.

HUMPHREY AND NIXON: WASHINGTON, D.C.

It was a week after the election. One of them was president. It didn't matter. The other one was shilling for the opposition, and between them they'd divided the country down the middle. Nixon was trying to get a good shave, and Humphrey was trying to learn to wear contact lenses that would make his eyes look bigger.

"You know, Dick, the trouble is, basically, I got funny little eyes, like a bird, v'know?"

Nixon turned from the mirror on the office wall and said, "You should complain. I've got five o'clock shadow and it's only three thirty. Hey, who's that?"

Humphrey turned in the easy chair and saw Kris.
"Coodbyn S.P.I.D.F.P." V-ia

"Goodbye, S.P.I.D.E.R.," Kris said, and fired sleep-darts at each of them.

Before the darts could hit, the black things scuttled, erupted and smeared. "Damn!" Kris said, and left the office without waiting for Nixon and Humphrey to regain consciousness. It would be a week or two before that happened, in

any case. The Armorer wasn't yet on target when it came to gauging how long people stayed under with these darts. Kris left, because he knew their parts in the six-point plan were to confuse issues, to sow confusion and dissension in the atmophere. Johnson had told him that much. Now they would become sweet fellahs, and the president would play like he had a watchbird watching him, saying no-no.

Christmas was fast a-coming.

Kris was homesick.

S.P.I.D.E.R. tried to kill Kris in Memphis, Detroit, Cleveland, Great Falls and Los Angeles. They missed.

WALLACE: MONTGOMERY, ALABAMA

The red-suited Santa Claus trudged across the open square in front of the Montgomery state building, clanging his little brass bell. The Santa Claus was fat, jolly, bearded, and possibly the deadliest man in the world.

The state buildings were clustered around the perimeter of the circular square, and he had a terrible prickling feeling up and down his spine. It might have been the cumbersomeness of the suit with all its equipment, so confining it made him sweat even in the midst of December 24th's hoarfrost. His boots were soaking wet from the sweat, his pace

measured, as he climbed the statehouse steps . . . watching.

Everything was closed down for the holidays. All Alabama state facilities. Yet there was movement inside the city . . . last-minute shoppers hurrying to fulfill their quotas as happy consumers . . . children scurrying here and there, seeming to be going somewhere, but probably just caroming. Kris always when he saw the kids: they were truly the only hope; they had to be protected, not cut off from reality, but simply protected; and the increasing cynicism in the young had begun to disturb him; yet it seemed as though the young activists were fighting against everything S.P.I.D.E.R. stood for, unconsciously, but doing a far better job than their elders.

A man, hurrying past, down the steps, bundled to the chin in a heavy topcoat, glanced sidewise, squinting, and ignored the outstretched donation cup the Santa Claus proffered. Kris continued on up.

The tracking devices inside the fur-tasseled hat he wore bleeped now, and the range-finding trackers were phasing higher as Kris neared Wallace. But then, if it weren't for problems, making it necessary to carry such a surfeit of equipment in the red suit, Santa Claus would be a thin, svelte figure. "Ho ho ho," Kris murmured, expelling puffs of frosty air.

As he reached the first landing of the statehouse, Kris began the implementation of his plan to gain access. Finger tipping the suit controls in the palm of his right mitten, he directed the highpressure hoses toward a barred window on the left wing of the statehouse. Once they had locked in directionally. Kris coded the tubes to run acid and napalm, depressed the firing studs and watched as the hoses sprayed the window with acid, dissolving bars and glass alike. Then the napalm erupted from the hoses in a burning spray, arcing out and striking the gaping hole in the face of the statehouse. In moments the front of the statehouse was burning.

Kris hit the jet-pack and went straight up. When he was hovering at two hundred feet, he cut in the rockets and zoomed over the statehouse. The rockets died and Kris settled slowly, then cut out the jet-pack. He was on the roof . . . unseen. The fire would keep their attention. At this stage in the eradication of the six-point plan they would be expecting him, but they wouldn't know it would be this formidable an assault force.

The Geigers were giving a hot reading from the north wing of the statehouse. His seven-league boots allowed him to leap over in three strides, and he packed plastic charges along the edges of the roof, damping them with implosion spray so the force of their

blast would be directed straight down. Then he set the timer and leaped back to the section of roof where his trackers gave him the strongest Wallace reading. tending the hooks in his mittens. he cut a circular patch in the roof, then burned it out with acid. It hung in its place. Suddenly the plastic charges went off on the roof of the north wing, and, under cover of the tumult, he struck. He used the boot-spikes to kick in the circular patch. He had cut through the roofing material; now he used the flamethrower to burn through the several layers of lath and plaster and beaming, till all that stood between him and entrance was the plaster of the ceiling. He withdrew a grenade from the inner pockets of the capacious suit, pulled the pin, released the handle and dropped the grenade into the hole. There was a sharp, short explosion, and when the plaster dust settled, he was free to leap down inside the Alabama statehouse.

Kris jumped, setting the boots for a light bounce.

He jumped into a ready and waiting group of green-suited zombies. "Ho ho ho!" Kris chortled again opening up with the machine guns. Bodies spun and flopped and caromed off walls, and seconds later the reception squad was stacked high in its own seepage of blood.

They had barricaded the doors

to the room. Kris now had no time for lock-picks. He pulled off his red rubber nose and hurled it. The doors exploded outward in a cascading shower of splintered toothpickery. He plunged through the smoke and still-flying wreckage, hit the hallway, turned to follow the pinging urgency of his trackers. Wallace was moving. Trying to get away? Maybe.

Hauling out the bolo knife, he dashed forward again. Greensuited zombies came at him from a cross-corridor, and he hacked his way through them without pause. A shot spanged off the wall beside his ear, and he half turned, letting a throwing knife drop into his hand from its oiled sheath. The marksman was half in, half out of a doorway down the corridor. Kris let the knife slide down his palm, caught it by the tip and in one quicksilver movement overhanded it. knife just scored the edge of the doorjamb and buried itself in the zombie's throat. He disappeared inside the room.

The trackers were now indicating a blank wall at the end of a cul-de-sac. Kris came on at it, full out, his suit's body-armor locked for ramming. He hit the wall and went right through. Behind the blank face of the cul-de-sac was a stone stairway, leading down into the darkness. Zombies lurked on those stairs. The .30 cal's were good enough for them;

Kris fled down the stairs, firing ahead of him. The zombies peeled away and fell into darkness.

At the bottom he found the underground river, and saw the triangular black blades of shark dorsals.

Still murmuring ho ho ho, Kris dove headfirst into the Stygian blackness. The water closed over him and nothing more could be seen, save the thrashing of sharks.

Less than an hour later, the entire Alabama statehouse and much of the public square went straight up in a hellfire explosion of such ferocity that windows were knocked out in slat-back houses of po' darkies in Selma.

She was lightly scraping her long, painted fingernails down his naked back. He lay face down on the bed, occasionally reaching to the nightstand for a pull on the whiskey and water. The livid scars that still pulsed on his back seemed to attract her. She wet her full lips, and her breasts heaved as she surveyed his body.

"He fought to the end. The sonofabitch was the only one of the six who really liked that black thing in his head. Really, genuinely evil. Worst of the bunch; no wonder S.P.I.D.E.R. picked him to ramrod the six point plan." He buried his face in the pillow, as though trying to blot out the memory of what had gone before.

"I waited three and a half months for you to come back," the blonde said, tidying her bosom, "the least you could do is tell me where you were!"

He turned over and grabbed her. He pulled her down to him and ran his hands over her lush flesh. She seemed to burn with a special heat. Much, much later, sometime in mid-January, he released her and said, "Baby, it's just too ugly to talk about. All I'll say is that if there had been any chance of saving that Wallace mother from his own meanness, I'd have taken it."

"He was killed?"

"When the underground caverns blew. Sank half the state of Alabama. Funny thing was . . . it sank mostly Caucasian holdings. All the darktowns are still standing. The new governor—Shabbaz X. Turner—has declared the entire state a disaster area, and he's got the Black Cross organized to come in and help all the poor white folks who were refugeed by the explosion. That bastard Wallace must have had the entire state wired."

"Sounds dreadful."

"Dreadful? You know what that fink had as his part of the plan?"

The girl looked at him wide-eyed.

"I'll tell you. It was his job through the use of tremendously sophisticated equipment—to harden the thought-processes of the young, to age them. To set their concepts like concrete. When we exploded all that devil's machinery, suddenly everyone started thinking freely, digging each other, turning-on to one another and realizing that the world was in a sorry state, and that what they'd been sure of, a moment before, might just possibly be in question. He was literally turning the young into old. And it was causing aging."

"You mean we don't age all the

time?"

"Hell no. It was S.P.I.D.E.R. that was making us get older and older, and fall apart. Now we'll all stay the way we are, reach an age physically of about thirty-six or seven and then coast on out for another two or three hundred years. And, oh yeah, no cancer."

"That too?"

Kris nodded.

The blonde lay on her back, and Kris traced a pattern on her stomach with his large, scarred hands. "Just one thing," the blonde said.

"Yeah, what's that?"

"What was S.P.I.D.E.R.s sixpoint plan all about? I mean, aside from the individual elements of making everyone hate everyone else, what were they trying for?"

Kris shrugged. "That, and what the name S.P.I.D.E.R. means, we may never know. Now that their organization has been broken up. Shame. I would've liked to know."

And you will know, a voice suddenly said, inside Kris's head. The blonde rose up off the bed and withdrew a deadly stingerpistol from beneath the pillow. Our agents are everywhere, she said, telepathically.

"You!" Kris ejaculated.

Since the moment you returned after Christmas. I trailed you from Alabama—that's why you never found evidence that Wallace's symbiont had self-destructed and while you were recuperating from your wounds, I slipped in and invaded this poor husk. What made you think you had beaten us, fool? We are everywhere. We came to this planet sixty years ago—check your history; you'll find the exact date. We are here, and here we stay. For the present to wage a terrorist war, but soon —to take everything for selves. The six-point plan our most ambitious to date.

"Ambitious!" Kris sneered. "Hate, madness, cancer, prejudice, confusion, subservience, smog, corruption, aging . . . what kind of filth are you?"

We are S.P.I.D.E.R., the voice said, while the blonde held the needle on him. And once you know what S.P.I.D.E.R. stands for, you will know what our plan was intended to do to your poor, weak Earthmen.

Watch! the voice was jubilant.

And the S.P.I.D.E.R. symbiont crawled out of her ear and darted for Kris's throat. He reacted instantly, spinning off the bed. The symbiont missed his throat by micromillimeters. Kris hit the wall, shoved off with a bare foot and dove back onto the bed, scrambling around the blonde, grabbing her hand and directing the needle of the weapon at the symbiont. It scuttled for cover, even as the lethal blast seared across the bedsheets. Then Kris grabbed for the deadly nightshade, on the bedstand beside him, and hurled it.

Instantly, all of the underground toy-making complex was awash in darkness.

He felt the blonde jerk in his grasp, and he knew that the S.P.I.D.E.R. symbiont had fled back to its one place of safety. Inside her. He had no choice but to kill her. But she threw the needle away, and he was locked there in complete darkness, on the bed, holding her body as it struggled to free itself, and he was forced by his nakedness to kill her using the one weapon God had given him when he came into the world.

It was a special weapon, and it took almost a week to kill her.

But when it was over and the darkness had cleared, he lay there thinking. Exhausted, weak as a kitten, and thinking.

Now he knew what S.P.I.-

D.E.R. meant.

The parasite was small, black, hairy, and scuttled on many little legs. The six-point plan was intended to make people feel bad. That simple. It was to make them feel simply crummy. And crummy people kill each other. And people who kill each other leave a world intact enough for S.P.I.-D.E.R.

All he had to do was delete the periods.

The time/motion studies came in the next week. They said that the deliveries this past holiday had been the sloppiest on record. Kris and PoPo shuffled the reports and smiled. Well, it would be better next year. No wonder it was so sloppy this year . . . how effective was a Santa Claus who was really an imposter? How effective could Santa Claus be when he was PoPo and CorLo, the one standing on the other's

shoulders, wearing a red suit three sizes too big for them? But with Kris laid up from saving the world, they had had no choice.

There were complaints coming in from all over.

Even from Hilltop.

"PoPo," Kris said, when the phones refused to cease clanging, "I'm not taking any calls. They want me, they can reach me at Antibes. I'm going off to sleep for three months. They can reach me in April sometime."

He started out of the office just as CorLo ran in, a wild expression on his face. "Geeble gip freesee jim-jim," CorLo said. Kris slumped back into his seat.

He dropped his head into his hands.

Everything went wrong.

Dasher had knocked up Vixen.

"The shits just won't let you live," Kris murmured, and began crying.

Coming next month . . .

... is PATER ONE, PATER TWO, a novelet by Patrick Meadows about a top-secret birth control plan and its astonishing results; also, some deep-space drama from James M. Schmitz. Samuel R. Delany will be on hand with a report on BARBARELLA. Tentatively scheduled for next month or soon thereafter are stories by Vance Aandahl, R. Bretnor, Larry Niven, and Josephine Saxton.

SCIENCE











DANCE OF THE SATELLITES

by Isaac Asimov

PEOPLE ALWAYS SEEM TO BE AMAZED OVER the fact that I am forever writing about spaceships but never get into an airplane; that I have my characters travel all over the Galaxy while I myself drive to a neighboring state only with the greatest reluctance.

"You don't know what you're missing," they keep saying.

And they're right, I suppose, except that there's something also to be said for travelling in thought alone. It may not be quite as three-dimensional as the real thing, but it saves trouble.

For instance, about five years ago I drove the family to Niagara Falls, and the trip wasn't bad at that. We pulled into the neighborhood of the Falls, turned a corner, and there it was! I was fascinated; it was majestic; I was so pleased I had nerved myself to the 400-mile trip.

We got a nice pair of rooms in a motel in the very near neighborhood of the Falls, and I lay down at last, so that I might sink into the rest I

had so richly earned.

Or at least I tried to. My eyes closed, then opened, and a puzzled frown rested on my clear and ingenuous forehead. There was a dull roar that filled the room like a nearby train, except that it was a train that neither approached nor receded, but remained where it was.

After a while, I identified the sound. With great indignation I realized that they did not turn the Falls off at night

ized that they did not turn the Falls off at night.

There you have it. An imagined Niagara may not be as impressive as the real thing, but it is quieter.

I shall never see the view from Amalthea that I described last month—not even if a rocket ship to the Jovian system were available

at this very moment with tickets for sale at a dollar a passenger and one of them reserved in my name. Still, I can *imagine* the view, and do so, gratis, in the peace and quiet of my attic.

While I'm at it, then, I will fulfil the promise of last month and consider the five inner satellites of Jupiter (the ones that concerned us

last month) as moving bodies, rather than as static ones.

All revolve about Jupiter in fixed periods. The closer to Jupiter, the faster a satellite moves relative to the planet and the smaller its orbit about it; and, for both reasons, its period is shorter.

We can begin then by considering the period of revolution of each of the satellites and, in order to make those periods directly comparable, we can give them all in hours (see Table 1).

Table 1—Motion of Jovian Satellites Relative to Jupiter

Satellite	Name	Per i od (hours)	Motion per hour (degrees of arc)
J-V	Amalthea	11.83	+30.43
J-I	Io	42.45	+ 8.50
J-II	Europa	86.22	+ 4.18
J-III	Ganymede	171.7	+ 2.10
J-IV	Callisto	400.5	+ 0.90

In travelling a circular path about Jupiter, each satellite sweeps over 360 degrees (since every circle, whatever its size, can be divided into 360 degrees). By dividing the period, in hours, into 360 degrees, we find how many degrees of arc each satellite traverses in one hour. That figure is given in the last column of Table 1. The degrees of arc traversed in an hour are given as positive figures, because the satellites are moving in direct, or counterclockwise, rotation.*

Suppose we imagine ourselves somewhere above Jupiter's equator, well above its unimaginably stormy atmosphere, so that we can observe the satellites in comfort. Suppose, also, that we are motionless with respect to Jupiter's center, which means we do *not* partake in Jupiter's rotation.

^{*} In other words, if we were to hover thousands of miles above Jupiter's north pole, we would see these five satellites of Jupiter moving in circles in a direction opposite to those in which we are accustomed to seeing the hands of a clock move—see BACKWARD, TURN AROUND, F & SF, May 1968.

All the satellites would then be seen to rise in the west, travel across the sky, pass overhead, then sink in the east.

But suppose we ourselves, while observing, were to circle Jupiter in the same counterclockwise direction. Even if we did so slowly, we would partially overtake the satellites which would seem to us, then, to move more slowly. They would still rise in the west and set in the east, but would take longer between rising and setting.

If we speeded our own motion more and more, the satellites would seem to move more and more slowly, as observed by ourselves from our moving vantage-point. Finally, if we circled Jupiter at a speed that swept out +0.90 degrees per hour, we would stay even with Callisto. The other satellites would continue to rise in the west and set in the east, but Callisto would seem to remain motionless in the sky as we matched it step for step. (Of course, we could still tell that Callisto was moving by comparing its position night after night with the neighboring fixed stars, but in this article we are completely ignoring the motion of the satellites relative to the stars. Our view is confined entirely to the Jovian system itself.)

If we continued to hasten our motion, we would more than match Callisto, we would outrace it and it would seem to fall behind. It would rise in the east and set in the west and would seem thus to travel in a direction opposite to that of its real motion relative to Jupiter. (No mystery! If two trains were racing in the same direction on parallel tracks, passengers on the faster train would see the slower train seem to move backward as it is overtaken, even though it is really moving forward.)

As our own personal speed increased, we would next overtake Ganymede and force that into apparent east-to-west motion, then Europa, then Io, and so on.

But let's not set ourselves an arbitrary motion. Let us place ourselves on Amalthea, J-V, where we were last month. That will give us a fixed speed of +30.43 degrees per hour. (If you're interested in a more easily visualized figure, Amalthea's speed about Jupiter is something like 16.7 miles per second relative to Jupiter's center, and this is nearly equal to the 18.5 miles-per-second figure of Earth's motion about the Sun. Compare this with Callisto, which moves at a speed of only 5.1 miles per second relative to Jupiter's center.)

Amalthea sweeps out many more degrees in a given time than any other of Jupiter's satellites, of course, and so it handily overtakes them all. From our vantage point on the contra-Jovian side of Amalthea, all the giant satellites would rise in the east and set in the west.

We can easily determine the rapidity of this motion relative to Amalthea by subtracting the degrees-per-hour motion of Amalthea relative to Jupiter from the corresponding value for each of the other four satellites. Thus, if Amalthea moves +30.43 degrees per hour relative to Jupiter and Callisto moves +0.90 degrees per hour relative to Jupiter; then Callisto moves (+0.90) - (+30.43), or -29.53 degrees per hour relative to Amalthea. The minus sign here indicates that Callisto, as seen from Amalthea, was travelling east to west.*

The motions of the various satellites as seen from Amalthea are given in Table 2. Having presented the names of the satellites in Table 1, I will henceforward (as I did last month) continue to refer to them only by the Roman numeral identification.

Table 2-Motion of Jovian Satellites Relative to Amalthea

Satellite	Motion per hour (degrees of arc)
J-I	-21.93
J-II	-26.25
J-III	— 28.33
J-IV	— 29.53

As you see, the satellites all move quite rapidly from east to west, something which reflects Amalthea's very rapid motion from west to east. The closer a satellite to Amalthea, the faster that satellite moves and the more effectively it tends to chase after Amalthea. None of the satellites does this very well, of course, but J-I, the closest to Amalthea, manages to fall behind only 22 degrees per hour, whereas J-IV, the most distant, falls behind 29½ degrees per hour.

It would seem then that the more distant a satellite from Amalthea, and the more slowly it turns about Jupiter, the more quickly it moves in Amalthea's sky. This may sound paradoxical, but all we are saying is that the more distant and slow a satellite, the more rapidly it is overtaken by Amalthea.

^{*} The situation would be more complicated if Amalthea were turning on its axis in a period different from that of its period of revolution about Jupiter. I am assuming, here, however (as I assumed last month) that Amalthea turns one face only to Jupiter and that the opposite face is turned forever away from Jupiter. The contra-Jovian point would then be that point on the surface that is in the very center of the hemisphere that turns away from Jupiter.

Let's put this into more familiar terms. From the motion in degrees per hour, it is not hard to calculate how many hours it would take to traverse 360 degrees. This would move the satellite through a complete circle and give its period, in hours, relative to Amalthea (see Table 3).

Table 3—Period of Jovian Satellites Relative to Amalthea

Satellite	Period of revolution (hours)
J-I	16.4
J-II	13.7
J-III	12.7
J-IV	12.2

The period of revolution gives us the time lapse from satellite-rise to satellite-rise. (Actually, there's a small complication here in that Amalthea is somewhat over a hundred thousand miles removed from the center about which the satellites orbit. This means that a given satellite is 226,000 miles farther from Amalthea at some parts of its orbit than at other parts. Its motion as seen from Amalthea is not strictly uniform, and the time from satellite-rise to satellite-set is not quite equal to the time from satellite-set to satellite-rise again. We will dispose of these complications by ignoring them.)

It so happens that Amalthea and the four giants all revolve in orbits that are nearly exactly in Jupiter's equatorial plane. Callisto's orbit is the most tilted but even so is only about ¼ degree off. (Compare this with our own Moon, which has an orbit tilted about 18 degrees to the plane of the Earth's equator.)

This means that every time one satellite passes another in Amalthea's sky, there is an eclipse. (Actually, it is possible for Ganymede and Callisto to just miss one another in passing, sometimes, but even for them, a partial eclipse would be the rule.)

In order to determine the frequency of eclipses then, it is only necessary to calculate how long it would take one satellite to overtake another. It would always be the more distant satellite that would do the overtaking, for it is the more distant that has the more rapid east-to-west motion. The more distant satellite would approach the nearer (and usually larger-in-appearance) from the east, slip behind it, and emerge at its west.

There would be six types of two-satellite eclipses altogether. The period between such eclipses, and the maximum time each would take from initial contact to final break-free is given in Table 4.

Table 4—Satellite-Eclipses as Seen From Amalthea

Eclipse	Time between eclipses (hours)	Maximum duration of eclipse (minutes)
J-IV/J-III	300	25.0
J-III/J-II	173	20.7
J-IV/J-II	110	10.1
J-II/J-I	83	17.5
J-III/J- I	56	11.7
J-IV/J-I	47	8.2

I leave it to you to calculate (if you wish) the time between the various possible three-satellite eclipses: I-II-IV, I-III-IV and II-III-IV.

You might wonder why I've left out I-II-III. Apparently the three innermost giant satellites, J-I, J-II, and J-III, do not move completely independently in their orbits but maintain a certain fixed relationship that precludes their ever being in a straight line on the same side of Jupiter (although they can be in a straight line with two on one side of Jupiter and one on the other).

This eliminates the I-II-III eclipse and also (more's the pity) what would have been a most remarkable coming together of all four satellites in Amalthea's sky.

But now, what about the Sun—

Amalthea rotates about Jupiter in 11.83 hours, with (we assume) one side always facing Jupiter. That means it also rotates on its axis, relative to the Sun, in 11.83 hours. (The correction that needs to be applied as a result of Jupiter's motion in its orbit about the Sun in the course of that 11.83-hour period is so small it can be ignored.) As seen from Amalthea's contra-Jovian point, then, the Sun rises in the east at 11.83-hour intervals, so that there is a 5.92-hour day and a 5.92-hour night. (The changing distance of Amalthea from the Sun in the course of the satellite's revolution about Jupiter is small enough to be neglected.)

To a viewer on Amalthea, the Sun would be just 6 minutes of arc

in diameter, a bit less than one-fifth its diameter as seen from the Earth. This means that the Sun would be just visible as a distinct globe, rather like a glowing pea in the sky.

Its apparent area, as seen from Amalthea, would be only 1/27 of its apparent area as seen from Earth and it would therefore be only 1/27 as bright. The fall-off in brightness would be entirely due to the smaller apparent area of the Sun and not in the least due to the lesser brightness of the Sun itself, area for area. The pea-sized Sun of Amalthea would be just as bright as a similar-sized section of our own Sun would appear to be if the rest of it were blocked off. I would suggest then that our Amalthea-based viewer would not find it comfortable to stare at the Sun, shrunken though it might appear.

Amalthea's shrunken Sun would still be the incomparably brightest

object in its sky.

To show that, let's abandon Amalthea's contra-Jovian point for a while and move to the other hemisphere, where we can see Jupiter. If the Sun were on the other side of the satellite, it would be shining over Amalthea's shoulder, so to speak, and lighting up the entire visible face of Jupiter. We would be seeing "full-Jupiter."

Jupiter would then be a shining glory, 43 degrees across, or nearly one-quarter the full width of the sky. Its brightness would be -20.2 magnitude, or 1,100 times as bright as our full Moon seen from

Earth's surface.

The Sun, however, for all its shrunkenness, has a magnitude of —23.1 and would be 14 times as bright as Jupiter at its brightest. What's more, when the Sun and Jupiter are both visible from Amalthea's surface, Jupiter must be in less than its half-phase so that it is considerably dimmer than it is at the full, and it is then even less able to compete with the diamond-hard brilliance of the tiny Sun.

Now let's get back to our contra-Jovian point, where Jupiter is never visible and where the Sun can only be compared to the satellites. The comparison is pathetic, in that case. Even Io, the brightest of the satellites (as seen from Amalthea) is never more than about half as bright as our full Moon. Amalthea's Sun is about 32,000 times as bright as Io at its brightest.

Furthermore, when the Sun is in Amalthea's contra-Jovian sky, all the satellites that are above the horizon are in the half-phase or less and are correspondingly dimmer. They are merely washed-out crescents.

As the Sun swoops across Amalthea's contra-Jovian sky from east to west, it does so faster than any of the satellites, faster even than

Callisto. The Sun moves at a rate of -30.43 degrees per hour (an exact reflection of Amalthea's motion about Jupiter, as you can see in Table 1).

The Sun therefore overtakes each of the four satellites, as shown in Table 5. If you compare Table 5 and Table 1, you will see that the length of time it takes the Sun to overtake a particular satellite is equal to the length of time it takes that satellite to circle the Sun once.

Table 5—The Sun and Satellites from Amalthea

Satellite	Time between	
	solar-overtakings (hours)	
J-I	42.45	
J-II	86.22	
J-III	171 .7	
J-IV	400.5	

It is during the period from Solar-overtaking to Solar overtaking that each satellite goes through its cycle of phases from new to full and back to new. The period is shortest for J-I, which also remains longest in Amalthea's sky. In the case of J-I, it can go from crescent at rising to nearly "half-Io" at setting. The other satellites change phase less spectacularly.

The Sun is farther from Amalthea than are any of the satellites, so that when the Sun overtakes a satellite, it can pass behind it and be eclipsed. This would happen every time if the Sun's apparent orbit were in the same plane as the orbits of the satellites.

However, all the satellites revolve in Jupiter's equatorial plane, which is itself tipped 3 degrees to the plane of Jupiter's orbit about the Sun. That means that the Sun's path across Amalthea's sky intersects the paths of the satellites in such a way that at places ninety degrees from the points of intersection there will be a 3-degree gap between the Sun's path and those of the satellites. This is big enough to allow the Sun to miss the satellite completely so that there will be no eclipse.

However, every once in a while, the Sun will overtake a particular satellite so close to the point of intersection that the two will be only slightly separated (at the actual point of intersection they are not separated at all), and an eclipse will then take place.

How close to the point of intersection Sun and satellite must be

Time between total eclipses (hours)

530

Satellite

T_T

depends on the apparent size of the Sun and satellite. For instance, the Sun has an apparent diameter of 6 minutes of arc and J-IV, at the horizon, one of 9 minutes of arc. The distance, center to center, between the Sun and Callisto must be 7.5 minutes if their edges are to appear to make contact. The distance, center to center, must be less than 2 minutes of arc if Callisto is to eclipse the Sun entirely.

I am not enough of a celestial mechanic to make the appropriate calculations precisely, but by making some rough estimates (and I hope I'm not too badly off) I have worked out the data presented in Table 6.

Table 6—Satellite Eclipses of the Sun

Number of total eclipses

of Sun per hundred overtakings

Q

J-1	O	230
J-II	4	2,100
J-III	31/3	5,200
J-IV	1	40,000
every 400 hours. The satellite or another or Such an eclipse is mor	ne chances of seeing n any given Amalthea e common than on Eas	Solar eclipse of some sort the Sun eclipsed by one an day is about 1 in 66. rth and more easily viewed, oss all of small Amalthea,

whereas the Moon's shadow narrows down to almost nothing by the time it reaches Earth's surface so that any given Solar eclipse can be

viewed from only a terribly restricted area.

The total eclipse doesn't last very long, because the apparent motion of the Sun in Amalthea's sky is so rapid. It endures longest when J-IV is the eclipsing body, since J-IV has the largest apparent motion of any of the satellites. It would take fully 5 minutes under the most favorable conditions, between the time when the last scrap of the eastern edge of the Sun disappeared behind Callisto and the first scrap of the western edge reappeared on the other side. For the other satellites, the eclipse never lasts more than two to four minutes.

A Solar eclipse is not as spectacular on Amalthea as it is on Earth, in some ways. The Sun's corona is dimmer than it is here, and it would be hidden by the satellite. (The impressiveness of a Solar eclipse as seen

from Earth rests largely in the extraordinary coincidence that the Moon and the Sun have almost equal apparent sizes so that the Moon just fits over the body of the Sun, allowing all the corona to be visible.)

Still, Solar eclipses, as seen from Amalthea, will have their points. As the Sun approaches one of the satellites, the latter will show as a thin and shrinking crescent. If one or two other satellites are in the sky, farther removed from the Sun, they will be rather thicker crescents.

As the Sun disappears behind the one satellite, the other one or two would stand out brightly against a sky which now lacked the brightness of the small Sun.

What's more, there would be another phenomenon, considerably more interesting than that; a phenomenon which will take a bit of explaining.

While the Sun is high in Amalthea's contra-Jovian sky, Jupiter is nearly full on the other side of Amalthea. (When the Sun is at zenith over the contra-Jovian point, Jupiter is entirely full.)

This means that the Jupiter-light shining on the satellites in the Amalthean sky is considerable. Ordinarily, a viewer at the contra-Jovian point on Amalthea would not be aware of Jupiter-light. During the Amalthean nighttime, the Sun would be on the other side of the satellite, near Jupiter, and Jupiter would be a crescent. It would be comparatively dim, delivering little light to the satellites in the contra-Jovian sky. On the other hand, when the Sun was high in the sky and Jupiter was fat and bright on the other side of Amalthea, what light the planet delivered would be dimmed by comparison with the Sun's brilliance.

But what about the moment of Solar eclipse, when Jupiter is bright indeed and the Sun is suddenly not there to compete? The satellite behind which the Sun is hidden, has its side toward Amalthea lit by Jupiter-light. To be sure, Jupiter-light is, at its very best, only 1/14 as bright as Sunlight (from the Amalthean viewpoint), but that is still rather impressive.

It would be particularly impressive under the circumstances. As the Sun passed behind a satellite, that satellite would be black by contrast and invisible against the black, airless sky except as a blot against the Sun. But then, when the Sun disappeared behind it altogether, the satellite would seem to flame out—suddenly visible in Jupiter-light.

Other satellites in the sky at the time would still be marked out as crescents by Sunlight, but the remainder of their Amalthea-facing surface would be lit by Jupiter-light and, with the Sun itself momentarily

absent from the sky, that Jupiter-light would be more clearly visible.

Under favorable conditions, our own crescent Moon has the rest of its body very dimly lit by Earth-light ("the old Moon in the new Moon's arms"), but it must be remembered that Jupiter-light is considerably brighter than Earthlight under comparable conditions. And in addition, the Sunlit portions of the Jovian satellites would be less brilliant than the Sunlit portions of our Moon.

So far I have described two types of eclipses, satellite-satellite and satellite-Sun. Let's consider a third type.

Imagine the Sun to be circling about Amalthea (as seen by an observer on Amalthea's surface) and let's imagine ourselves to be on the hemisphere facing Jupiter.

Each time the Sun makes its circle, it must pass behind Jupiter's swollen globe and would spend 1.4 hours behind it, too, so that there would be an eclipse for nearly one-quarter of the daylight period, during every daylight period. Nor would there be any Jupiter-light bathing Amalthea's surface, for during the period of the eclipse, Jupiter would be in its "new" phase, presenting only its dark side to Amalthea.

On Jupiter's contra-Jovian side, such an eclipse would never be directly seen, because Jupiter itself is never directly seen. When the Sun is in the contra-Jovian sky there is no chance for an eclipse (except the occasional momentary ones by the satellites). The contra-Jovian side of Amalthea gets the full 5.92-hour's-worth of Sunlight—one-third more than the Jupiter-side gets.

However, the eclipse of the Sun by Jupiter can be detected indirectly, for Jupiter's shadow falls on any of the satellites that may be on

the night side of the planet.

From Amalthea's contra-Jovian side, it will be possible, at intervals, to see one satellite or another move into the Jovian shadow and blink out. Nor will it be lit by Jupiter-light for, of course, it will be facing Jupiter's night-side and the huge planet will be in the "new-Jupiter" phase.

I suppose an observer on Amalthea's contra-Jovian side, from his knowledge of the Sun and the satellites, which he could see, and from his observations of the manner in which each satellite would be eclipsed on occasion when the Sun was not in the sky would be able to deduce the existence of Jupiter and get an idea of its size just from those eclipses, even if he never travelled to Amalthea's other side to see for himself.

This strong tale about the 3,000th-odd expedition in search of intelligent life is only the second story by Arthur Sellings to appear in these pages. It also—sadly—will be his last. Mr. Sellings died in England in September 1968. He was 47. His books included the QUY Effect, the uncensored man, and an upcoming collection of short stories, the long eureka (all published by Berkley).

THE LEGEND AND THE CHEMISTRY

by Arthur Sellings

THE SHIP CAME BACK OUT OF interspace.

The six men lay in their cradles, willing the sharp agony out of themselves, bidding hearts eyes eardrums artery walls to readjust, the several clocks of their bodies to restart after a moment of death.

Moment . . . death, both words being only approximations. For a moment has meaning only in a world of time, and death is real. Whereas the place they had been had no objective reality. A waste of mathematics, inhabited only by symbols, entered by analysis and departed by integration, it had been discovered or invented—nobody was sure which — by Man, or perhaps invented first and then discovered, but by

Man certainly . . . but just as certainly not to be inhabited by men, only to be traversed as urgently as possible.

Even now, back in the real universe, time itself took a long moment of doubt to reassert itself. Eyes looked at eyes, limbs trembled.

Somewhere a cage swung back. Footsteps padded across the floor.

"Where to, mister?"

Wessel's voice held authority, even though the words were a question and the voice still strained by the efforts of transit.

Regan stopped, but as if he intended that to be only temporary, looking back obliquely. "Just going to take a look at the planet-scope."

"That's Cohen's job."

"Come off it, Skip. Sure it's his baby, but there's no rule against me taking a squint."

"But there is, mister," Strength was returning to the captain's voice. "Rule two seven. All personnel shall remain in cradles for twenty minutes after interdimensional transition."

Regan shrugged, surveying the other five members of the Bellamy's company. Wessel knew what the look meant. First, that rank, misters and quoting of rules, was as out-of-date in an exploring team as rockets. Second, that rule two seven might be necessary for old personnel, but not for nineteen-year olds who could throw off transit-stress in a few seconds.

Old—that's what he probably calls us, thought Wessel, and suppressed a smile. Age limit was forty-two, actual or equivalent. Ignore two seven, son, and you'll reach equivalent a damn sight quicker than some of the decrepit thirty-five-year olds around you.

Regan sauntered back to his cradle and stretched out elaborately, humoring his elders.

"Anybody heard any good jokes lately?"

"There was the one," said Cohen, eager to oblige. "about the Rigelian decapod and the bagpipes. It didn't know—"

"Whether to play them or—" Regan shrugged contemptuously. "Man, that was old a coupla centuries ago. It used to be an octopus."

"You were around then, two hundred years ago?" said Cohen, suddenly angered.

"Me? I was around when the whole works began. De Ole Boss Man took me into his personal confidence. 'Shall we have electrons going round protons or protons round electrons?' he asked me. He was real worried over that. In the end we tossed for it." He laughed. Nobody else did. "Yeah man, I been around." He snapped his fingers rhythmically, rocking back and forth in his cradle, singing, "I was dere when Pharoah built de Pyramids, I was dere when—"

"He's crazy," said Kroger, the biologist.

"It's that transit, dad. Gets me going."
"Kicks" said Kroger

"Kicks," said Kroger.

Regan's fingers stopped snapping. "I could get all the kicks I personally wanted back on Earth. Me, I prefer humans."

"Why, you young-"

McLeod, the statistician, said quickly, "Is this all we can talk about when—"

"Blame him," said Kroger.

"Mr. McLeod is right," Regan said, bowing mockingly from his canted cradle. "This is an auspicious occasion. Expedition three thousand six hundred and seven —or is it eight?"

Wessel was abruptly aware of

the reality—the prejudice and irritation—behind the ragging. Regan was a Novarian—a member of the country that young people, in a final assault on frustration, had started to build in the Sahara fifty years before. The rest of the world had given them the place gladly. It became a sort of promised land for kids all over the world. Some stayed, a lot came back. The ones that came back didn't speak much about it. And their elders outside didn't ask questions, being only too relieved to let well enough alone, to have found some kind of a solution. The language of a kid like Regan—the teen language of the mid-twentieth century that they had revived as part of their armory of defiance—was a raw reminder of the time when the friction between the generations had threatened to break into open civil war.

But it was Fry, the anthropologist, who said, "Just why did you enlist?"

"Because Novaria can't build spaceships yet," Regan answered offhandedly. "Why did you?"

"To discover why Man, five thousand years ago, suddenly took the path that led out here."

Fry was a small, fair, wiry man with a simplicity of manner that enabled him to say things like that, which from anybody else would have sounded pretentious.

"Have you found it, amigo?"
"After ten years, no. Not yet."

"Has anybody?"

"Not unless somebody has turned up with the answer since we left Earth. The highest culture found has been on a level a good way below the Maya."

"So you're no nearer?"

"I wouldn't say that. Let's say that my ignorance now is not so absolute. The more cultures we find that didn't make the grade, or haven't made it yet, the better we may be placed to find out why ours did. To find out why round a small lake on an insignificant planet of a minor star, intelligence suddenly pulled itself up by the bootstraps."

"Lake?"

"The Mediterranean."

"Oh, yeah." Regan pondered for a moment. "Interaction? Crossfertilization?"

Fry shook his head. "Those factors obtained in India centuries before. And in China. But it didn't happen there. Sure, they reached high levels of theory, an organized culture and art, but they didn't take off. Something was lacking."

"Maybe they were *too* organized?"

Fry looked at him curiously. "When did you study anthropology?"

"Me? You're kidding." Regan was again on the defensive. "I'm just the odd-job man aboard. And I guess I just had an odd-job education." He turned away from the subject. "How long now, Skip?"

"Another eight minutes." "Jeesh."

Fry laughed briefly. "You holler about time going slow. For me it goes too fast. All I get time for is a few notes—"

"A few!" McLeod complained. "Last trip you had me punching Ida all the way back to Earth."

"Wife beater," said Kroger.

"Like who's Ida?" Regan asked.

McLeod blocked in the initials. "Intersystem Data Analyzer. The tincan we bring all the way out here, fill up and take back to be emptied."

"If Mac had his way," said Kroger, "all research would be devoted to making us guys superfluous. Bigger and better Idas with built-in cameras and spectroscopes and specimen collectors—and built-in homing instincts. With even bigger and better Idas back on Earth to sort it all out."

"You know," said Cohen, "Mac's dreaming of the day when Fry turns up with proof that somewhere in the universe Ida created man, not vice versa."

They laughed, but the laughter stopped short. Cohen had a talent for saying the not-quite-wrong thing at the not-quite-right-moment. Now his words reminded them of the vast, alien, lonely universe in which they hung, protected only by the thin shell of their ship. They were reminded that in several thousand contacts

man had found many races, but none who could answer the questions that man asked. Seventy years among the stars had provided masses of data but precious little information. But there was always the fear that one day an expedition would land on a world, and the answer would be there, and it would not be an answer that man would like finding.

Wessel glanced at his wrist. "All right, men." He turned to Cohen. "Take a look at the scope. Oh, and take Regan along with you."

It was Regan who came back bouncing with the news.

"One Earth-type. Atmosphere like gravy."

Cohen, following up, amplified. "Lower mass, surface gravity point nine two two TMG. Dense but breathable atmosphere."

asked.

"Two methane planets outside it."

"That the only one?" Wessel

There was a general grimace, except from McLeod who held out a hungry hand for the data. Just such super-Idas as Kroger had joked about were being planned on Earth for use on methane and other non-oxygen worlds.

"Well, one's better than none," Wessel said. "Right, men, planetfall stations."

They descended on the web which the planet itself, like every

body in the universe from giant star to dust mote, wove in spacetime. Cohen took vector readings. McLeod fed them into computers. Wessel translated the results into action, his fingers twitching over the instrument panel.

It was like coming down on a weather map, McLeod thought. For isobars read isodynamics and swing between them like a trapeze artist. Wessel, for his part, remembered his grandfather—as he always did at these times—and the tales he used to tell him of the old rocket days, when a ship had to be wrestled down—to a matfall that often broke its back.

The planet bloomed from a point to a green-blue disk that looked nostalgically like Earth. But as they came in closer they could see that the green was not vegetation, nor the blue seas. This world was a good five-sixths land—at least on the day side to which they made approach—the land veined in patterns that were mineral more than vegetable.

The captain brought the ship down midway between the equator and one pole. The port shifted and sidestepped inward. The men disembarked, testing their legs against a true gravity, breathing new air, looking about them.

They were in the middle of a green plateau that stretched under an orange sun to an horizon of sharp mountains. The plateau was broken in places by outcroppings of blue crystal. The green-blue was the color of the soil; what vegetation there was was red.

A small mauve animal, the size of a fox, came out of a clump of ferns and poised, looking at them out of faceted eyes. Regan stooped, picked up a sharp fragment of crystal and hurled it. It hit the creature on the head, dropping it. Regan brought it back, still twitching, to Kroger. The blood that trickled from it was bright blue.

"Interesting," said Kroger and got out his dissecting instruments. Cohen was gathering chunks of the crystal. Any planet held work for these two. Fry looked morose as he surveyed the scene.

"What's up, doc?" Regan asked.
"I don't know, but after the number of trips I've made you get the feel of a world pretty quickly, its chances of coming up with higher life-forms."

"And you don't reckon this place?"

"No." Fry shrugged. "But I could be wrong. Give me a hand to break out the field flyer, will you?"

"Sure thing."

They lugged out an odd-shaped crate from the stores. Fry uncovered, then jabbed, a button. The crate unfolded, levers shuttled, the contents opened out and became a frame on sleds, with two bucket seats and stubby wings. It was like a bright orange butterfly coming out of a chrysalis.

Regan seemed impressed somewhere behind his flip exterior. "Can I have a go at it?"

Fry shook his head. "You have to have a course on flying these things. But you can come along if you like."

They climbed in. With only a faint whir of the Greiff-Jones planet-field motor, the flyer took off, leveled off at five hundred feet and headed for the mountains. They began to rise as the tiny craft neared the range, Fry relaxed and sparse of movement at the controls.

"A kid of three could handle one of these," Regan said, looking airily down at the jagged, but not lofty, peaks.

Fry only smiled, and smiled wider as the machine jerked up fiercely and slewed, before righting itself. He glanced at Regan who had gone tense.

"What are you trying to prove?"

Regan snarled.

"Nothing. That was a flux-wave—the planet-field equivalent of a thermal."

Regan shrugged and looked away and down again as they came out over the plain that opened up on this side of the mountain range. Then his head jerked back to Fry.

"Look." His finger stretched out toward a mountain that rose out of the plain. But this was an isolated one, with a broad flattening of the peak that tilted up to their vision as they approached it. Tendrils of smoke rose from it.

"A volcano," Fry said.

Fry shot him a sharp glance.

"Wrong."

"It may have been once," Regan conceded. "But not now, unless the people in there are salamanders."

"People?"

"Fire-making creatures, anyway."

Fry strained his eyes, wondering at the youngster's eyesight—if indeed he had seen signs of life. He himself could see nothing. But another few seconds and his eyes made out a cluster of buildings through the smoke, and undeniable signs of movement.

They leveled out over crater. In its mile-wide floor was a settlement of several hundred buildings, arranged in two concentric rings, the central one so much smaller as to be almost a cluster rather than a ring. But its buildings, though only of one story like the rest, were bigger and more ornate. The others were made of what looked like adobe, but these were built of great glazed blocks, shining prismatically blue and green and mauve in the strong sunlight. Smoke rose from some of the buildings, but the main source of it was from the foot of the crater walls.

For a moment Fry thought it was some residual volcanic activity, until he saw that the foot of the walls was riddled with holes. They looked like cave-mouths, and probably had been originally. Some were covered with rock slabs, kept in with props. By the other holes, the ones from which smoke was belching, the covers were laid aside. It was around these that Fry saw people—creatures—moving.

He went back to his first judgment with the same mixed feelings that usually accompanied a closer view of a planet's inhabitants. They were people—humanoids. That was the way it was nine times out of ten. The exceptions in his experience had been so few he could number them on his fingers: one amphibious race. rather like dolphins with rudimentary legs—obviously intelligent but doomed to a wait of millions of years until they developed manipulative members, if ever; a lizard race on Lovell Three; a bovine race of spasmodically erect quadrupeds, but with the same hopeless limitation as the dolphins; a shy bird race on the twenty-third planet of the same star . . . and those the brightest, and none with a highly developed culture.

Yet Fry felt that his answer—
if it ever came—would come
from a non-humanoid race, developed to such a level that its
non-human scale of values would
make a referent for man's. That
referent had been lacking for all
of man's history, and the need

of it, Fry knew, lay behind all his questing among the stars, no matter what other reasons he gave. To meet another species that had had to bear the bright anguish of mind would shake his arrogance—but assuage his guilt.

As the two Earthmen hovered above, the people came pouring out of the houses and scurrying back from the smoke-holes. Fry put the flyer down at a spot beyond the outer ring. The two men got out and waited.

The natives clustered behind their houses, looking out at the intruders warily. They were tall, fragile looking. The garb for men and women alike was a strip of patterned cloth about the middle. The children were naked. They could have been some tribe of Earth, but for the bluish color of their skin and faceted eyes like those of the beast that Regan had killed.

One of the men stepped forward. This one was clad in a long loose robe, patterned more richly than the breechcloths of the rest. Evidently the head of the tribe. His face was wrinkled, but he stood very straight. He stopped, facing the two Earthmen, and thrust out both palms toward them.

"Sign of peace?" whispered Regan.

"Looks too brusque to me," Fry muttered. The two men stood their ground. An expression of what could only have been anger passed over the chief's face. He turned his head and beckoned curtly. Out stepped a young man bearing a spear. He strode to the chief's side. The chief nodded.

Fry's hand moved to his pistol as the young warrior arched—then he all but laughed as the spear came slowly through the air between them. It was Regan who reached out a hand and caught it, who crouched to hurl it back.

"No," said Fry, snatching it from him. It was a pitifully inadequate weapon, the shaft of some light fibrous wood, the head of blue crystal. Perhaps the head was poisoned, perhaps it was a deadly weapon among these people, physically weaker as they obviously were, but it was no threat to an Earthman. He snapped it over his knee and threw it to the ground. To reinforce the message, he unshipped his laser pistol and blew a nearby outcropping of rock to splinters. He reholstered the weapon.

The chief and the warrior backed away. There was a squealing from behind the houses. Fry nodded to Regan to stay by the flyer, while he himself moved slowly toward the natives. They scattered from him. He walked on, past the outer ring of buildings, and headed for the central cluster.

He stopped by the largest building in the center. This must be

the chief's house or perhaps the meeting place of their council, perhaps a temple. It was a handsome building. The blocks were ceramic, with a frieze of hieroglyphics running along them at eye level. Fry recognized, with a weary sense of familiarity, the motif—of a sun with formalized rays. He had seen it on too many planets. He went in.

In the dim light shed by scattered lamps, he could see that this was the only room of the building. It was deserted now. but the central area, sunk beneath ground level, was obviously a gathering place. His nostrils wrinkled to a strangely inhuman human smell. Trays of oddly shaped fruit lay within reach of scattered mats. But, as his eves adjusted to the light after the brightness of day outside, the thing that seized his attention was the array of pots that stood in tiers around the walls, starting on a level not far above his head and stretching away into the upper shadows. He took in his breath at the beauty of them.

None was under three feet tall; some must have been nearer six. They were of many colors, from a pearly white to black, but the most striking were row upon row of blue ones. They varied in shade from azure to near-purple, many of them veined and striated. He had come across some wonderful products, both of nature and in-

telligence, on worlds he had visited, but nothing so enchantingly beautiful as these, not even the bubble-jewels of Lovell Three or the intricate lacy nests of Betelgeuse Twenty-Three's tiny bird people.

He heard a noise behind him. In the moment that he turned he knew that it was human. His mind had subconsciously absorbed the fact that these people moved quietly.

He glared at Regan. "Why the hell have you left the flyer?"

Regan grinned. "Nobody's going to tamper with that. They're too scared of it—and us. Jeesh!" He had just seen the pots. Looking at him, Fry realized just how child-like he could appear when the veneer of teenage flipness dropped away.

"God," the boy breathed. "They're lovely." He stood there, looking at them reverently for many moments. Then he became conscious of Fry's gaze on him—and the covers went back on. "A couple of those'd fetch a fortune back on Earth."

"You can forget that. Maybe we'll take a small one back. If they'll let us have one."

"Let us?"

Fry dodged the implication. "In any case, anything that goes back goes to the museum center."

"Yeah, I forgot," Regan said airily.

Fry was annoyed with him.

"Come on. We'll report back."

"We can report back by radio. I want to look around some more."

"You're junior crew member," Fry reminded him curtly. "So if you don't mind . . ."

The next day Captain Wessel went out with Fry. Regan protested loudly, for there was only room for two on the flyer, but Wessel shut him up. "If there's an intelligent race on a planet, I have to check on it. The others will find you enough work to do."

Regan walked away morosely as Wessel got in the flyer with Fry.

"I'm not happy with Regan," Fry said as they crossed the mountains. He felt traitorous saying it.

"Why?"

"I don't know. I feel he enlisted for the wrong reasons."

"Such as?"

those."

He told Wessel about the pots. Wessel laughed. "At least three feet high, you say? He wouldn't be able to get far with one of

"All the same—"

"I know. He's a bit of a problem. But he'll soon get the corners knocked off him."

As they hovered over the crater, Fry took one hand from the control bar to point to the crater wall. Hundreds of the natives were gathered around one spot.

"Some kind of a coremony by

"Some kind of a ceremony, by the look of it," Fry commented. He set the flyer down a short dis-

from the crowd. Faces tance turned to look at the two Earthmen for a moment, then turned back to the center of attention the mouth of a large cave from which smoke poured. The ground before it was cleared in a semicircle. Into the clearing stepped a young man of the tribe, naked. The crowd started chanting.

The young man turned to face his people, stood there impassivethen turned about-and walked slowly into the cave. The chant of the natives rose in volume but lowered in pitch, so that it sounded like a swelling dirge before it died away.

Blacker smoke gushed from the mouth of the cave, and Fry thought he saw a tongue of flame. Then a slab of rock was dragged over the cave mouth and propped up by a timber. "Human sacrifice," Wessel said.

"Doesn't say much for their level of culture, does it?"

"It doesn't make a comment one way or the other. Some of the highest non-European cultures practiced human sacrifice. And Europe has had its own ways." He thought of the ovens at Belsen —and then he thought of the blue pots, and shivered, remembering the legend of the Japanese potter who, in despair, had leapt into his own kiln—and produced his finest pot. A crimson pot-hadn't the legend had it?—and probably unscientifically. Legend had

own laws and chemistry. But he thought of the animal that Regan had killed and its blue blood. The same color as the natives, in all likelihood. Perhaps on this world the chemistry matched the legend.

"It's not a high level of culture anyway. Their pots are remarkable, but you often find a single craft raised to a high level in a primitive culture, especially when it's related to religion as it obviously is here. I'll look them over, take pictures, get a line on their language if possible. That'll be my quota, and about all they warrant. Two days at the most."

They returned to the ship at sundown under a green and purple sky. Their arrival coincided with the return of Cohen on foot, toting a sack of rock specimens. It was then that they realized that Regan was missing.

"I thought he was with you," McLeod said to Cohen, "when Kroger came back on his own."

"And I thought he must have been with one of you," said Cohen.

"The damn fool," Wessel said quietly. "Who saw him last?"

"I must have," said McLeod. "Not long after you and Fry left. I was working here. I saw him heading in Kroger's direction."

"How was he equipped?" "Weapons, you mean?"

"Anything."

"He wasn't carrying a gun. He

had a rucksack."

"Which direction was Kroger?" McLeod and Kroger both pointed toward the mountains.

"He must have gone back to the village," Wessel said wearily. It was almost dark now. He pulled the handcom from his tunic pocket and sent a call out to the missing Regan. He wasn't surprised that no answering call came. Anybody who was crazy enough to set off to loot a village on an unknown planet was also crazy enough to have switched off radio contact.

"There's nothing we can do now. Fry and I will go out in the flyer at daybreak."

They arrived at the crater and Fry murmured. "This is where we came in," as they climbed out of the flyer.

"Not quite," said Wessel, pointing. A few feet behind the semicircle, and kneeling like the rest, was Regan.

Fry and Wessel looked at each other. They turned back, and another young man was walking into the smoke-belching cave. The stone rolled into place behind him. The dirge rose.

The chanting died away finally. The crowd broke up and made its way back to the village, Regan on the fringes of it. He nodded at Wessel and Fry, a barely perceptible gesture. Wessel grabbed him by the arm.

"What is this? Are you doped or something?"

"Leave me alone," Regan muttered savagely.

"What! You're under my command."

Regan looked pained. "Sorry, Skip. No disrespect meant. But I'm learning about these people."

"That's Fry's job. He'll compile the report."

"Does he say why they sacrifice like this?"

"That's beside the point. Come on. I'm taking you back."

"Wait," Fry said. "Why do they?"

"Those blue pots in the tribal house, they're all memorials to chiefs and warriors. Each house has smaller ones. It's like cremation."

"I figured that," Fry told him. "The sacrifices too?"

"They don't sacrifice—not normally. Only when a man loses face, and then it's self-sacrifice. It's his only hope of regaining immortality in the world beyond."

"How do you know? Have you picked up their language?"

"You don't need many words to understand people—if you approach them right."

"But you haven't explained why—" Light dawned. "You mean they feel they've lost face as a tribe because of us?"

"What do you think? We come from the skies and we're stronger than they are. But we're not gods, because they worship the sun and fire. Or if we are gods, then their own gods have been overthrown and they no longer have the will to live. The young men are the chief's sons. When the last son has been sacrificed, then the chief. Then . . ." Regan shrugged.

Fry's face was somber. thought, as he had thought many times, of the way man and all the creatures like him maimed themselves, laid themselves on the altars of their pitiful beliefs. Those beliefs were his study, but at times like this, brought face-to-face with them in action, he felt that his life's work was a circle, coming back on itself, as futile and as finally meaningless as that sun symbol that was its image. Man had broken out from one tiny planet, out among the stars, but nowhere, it seemed, could mind break out of the fetters of guilt that mind placed upon itself.

He shivered. "There's only one thing to do—for their sake. Take off as soon as we can."

"That'll be all right by the rest of the men," said Wessel. "They're finishing up their work. We can be away before nightfall."

"It isn't quite as simple as that," Regan said.

"How do you mean?" Wessel asked sharply.

"Going away won't help any. The sacrifices will go on."

"How do you know?" Fry said, almost testily. "You've only been with these people for a few hours."

"I couldn't swear to it—but I

know. Let me have a last talk with them. Maybe I can make up some kind of a story to make things right. Three of us can't go back in the flyer, anyway. You go back and one of you come back for me."

"All right," Wessel said. "Fry can come and pick you up. Within the hour."

When Fry came back he knew that Regan had failed. The people were gathered in the by-nowfamiliar semicircle of sacrifice.

He grounded the flyer, looking for Regan. There was no sign of him. And then a figure came out from the village, naked and head erect.

"Oh no!" Fry whispered. He leapt from the flyer and fell in by Regan's side.

"You can't do this! It's no solution."

"It is," said Regan vehemently. "It's the only one."

"I can't let you." Fry's hand moved downward to his holster.

Regan's eyes, his head still erect, followed the movement, and his lips twisted in lofty amusement. "What can you do—stop me dying my way by threatening to kill me? Now leave me alone. Don't spoil it."

"But they're not worth it!" Fry almost screamed. "One backward tribe. . . ."

"The dishonor will spread. It won't be just one tribe, but the

whole race of people on this world."

"You can't know that."

"It's a risk we can't afford to take. They've got to have their chance. Like Novaria."

"What the hell's Novaria got to do with it?"

"Nothing . . . only I failed there. I wasn't good enough. They chucked me out."

They were near the gathering now. "But surely—" began Fry, making one last effort to reason with the boy.

"Get lost," Regan said, shoving him hard in the chest. Fry went reeling backward against the rocks. The impact half stunned him.

When he picked himself up, Regan was already in the clearing, and Fry knew that there was nothing he could do. He turned away, feeling sick, as the chorus rose to a wailing lamentation. He walked slowly back to the flyer.

An account would have to go into his report. What would he say, beyond the bare bones of it? A mention of his doubts about Regan's stability—which Captain Wessel would attest to—the glib diagnosis of a death wish? He felt a pang of bitterness at the inadequacy of language.

But what good had Regan's action done? For how long? As

yet, among the stars, every landing by man was a first one; there were too many worlds to visit. But in time to come-within decades, millennia?—another party of men from Earth would land here. Would his report, however he worded it, be remembered . . . and, if remembered, assessed properly? Would the members of a second party, gazing around the tiers in the tribal house, know which one of those artifacts was a memorial to a man of their own world who had given himself upon the altars of this other? Would the chemistry of legend work for this one, this alien one, too? So that they would see one stroke of crimson among the blue-and know?

He trembled. Or would the circle of sacrifice only start all over again? He reached the flyer. Dear God, or whatever makes final sense of this vast universe, let him have succeeded! Let him have broken the circle—at this point, at this time—once and for all. And have liberated this pitiful race, teaching them that even the gods are mortal and that all things are possible.

He climbed into the narrow seat. It seemed a long time before he reached the other side of the mountains.



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