

Absolute Magnitude

Science Fiction

Summer 1999

Issue #11

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Eric Ren
A new Liaden story in this issue

Editorial Notes by Warren Lapine

M = m + 5 + 5 log p

The last ten months have been the busiest months of my life. I got married to Angela Kessler, the editor of *Dreams of Decadence*, on June 21st. We went to New Orleans (a fun city) for our honeymoon. The last weekend in July we moved seven hundred miles to Radford, Virginia. I've become quite enamored of the Blue Ridge mountains. The day after we moved the boxes into our new place, we left for Worldcon in Baltimore. WorldCon was a great experience, it was nice to get to meet so many of our readers and get together with other editors.

I also concluded business deals that have brought two more magazines into the DNA fold. As many of you already know, we've taken over the business end of *Aboriginal SF*, and we're now also publishing *Pirate Writings*. I'm really excited by this, as I think Charles Ryan and Edward McFadden are both excellent editors, *Aboriginal* and *Pirate Writings* are very good fits with our other magazines.

All of the above aside, everyone here at DNA Publications would like to express our deepest condolences to Casey Gallagher and family on the death of Christopher Gallagher. While Casey was an associate editor here, I spent a great deal of time with him and his sons Jason and Chris. I remember Christopher as being a happy and inquisitive kid. On August 22nd, Christopher and some of his friends were swimming in the Connecticut River. A friend of his, Winter Clarke, got caught by the strong Connecticut River current and Christopher jumped into the water in an attempt to help him. Both boys drowned. There are no words that can take away the pain that the Gallagher family has been through. And in the end, the only thing any of us can do is keep the memory of Christopher Robin Gallagher alive.

This issue is dedicated to the memory of
Christopher Robin Gallagher
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Science Fiction Adventures

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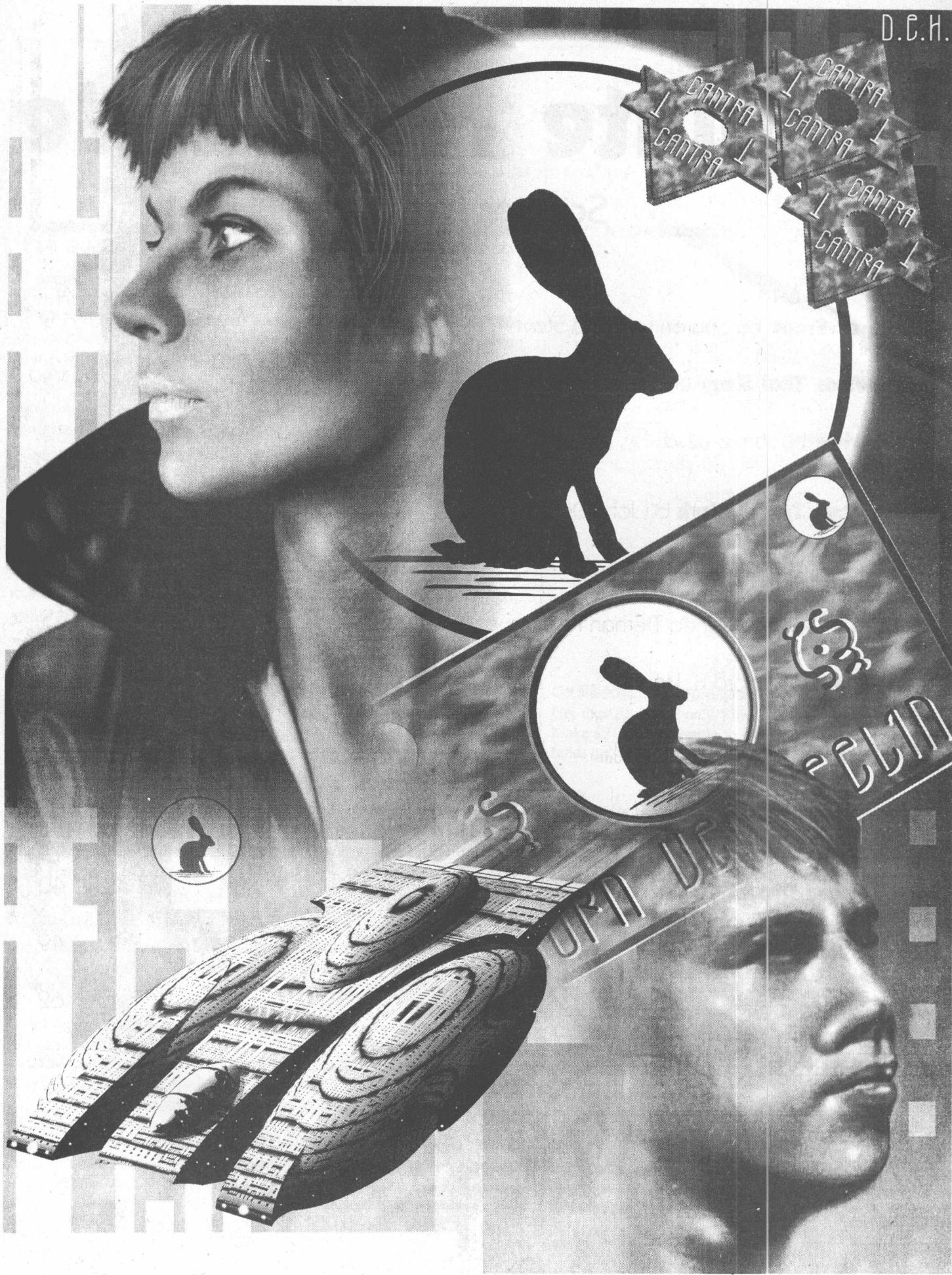
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D.C.H.



Balance of Trade

by Sharon Lee and Steve Miller

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Gobelyn's Market

Standard Year 1118

66 If you trade with Liadens, trade careful, and for the gods' love don't come sideways of honor."

This set of notes was old: recorded by Great-Grand-Captain Larence Gobelyn more than forty Standard years ago, dubbed to ship's library twenty Standards later from the original deteriorating tape. Jethri fiddled with the feed on the audio board, but only succeeded in lowering the old man's voice. Sighing, he upped the gain again, squinting in protest of the scratchy, uneven sound.

"Liaden honor is—active. Insult—any insult—is punished. Immediately. An individual's name is his most important possession and he will kill to preserve it's integrity. Think twice before trading with—"

"Jethri?" Uncle Paitor's voice broke across the tape's recitation. Jethri sighed and thumbed 'pause'.

"Yessir," he said, turning his head toward the intercom grid set in the wall.

"Come on down to the trade room, will you? We need to talk over a couple things."

Jethri slipped the remote out of his ear. His uncle was Senior Trader on *Gobelyn's Market*, and Jethri was Senior Apprentice. Actually, he was the only apprentice trader, his sibs and cousins being well above him in years and rank, but the ladder was immutable.

"Yessir," he said again. Two quick fingertaps marked his place in the old notes file. He left the common room at a brisk walk, his thoughts half on honor.

His uncle nodded him into a chair and eased back in his. They were coming in on Ynsolt'i and next hour Paitor Gobelyn would have time for nothing but the feed from the port trade center. Now, his screen was dark, the desk-top barren. Paitor cleared his throat.

"Got a couple things," he said, folding his hands over his belt buckle. "On-Port roster: Dyk an' me'll be escorting the payload to central hall and seeing it safe with the highest bidder. Khat's data, Grig's eatables, Mel's on tech, Cris'll stay ship-side. You . . ."

Paitor paused and Jethri gripped his hands together tight on his lap, willing his face into a trader's expression of courteous disinterest. They had textile on board—half-a-dozen bolts of cellosilk that Cris had taken on two stops back, with Ynsolt'i very much in his mind. Was it possible, Jethri wondered, that Uncle Paitor was going to allow . . .

"Yourself—you'll be handling the silk lot. I expect to see a cantra out of the six. If I was you, I'd call on Honored Sir din'Flora first."

Jethri remembered to breathe. "Yes, sir. Thank you." He gripped his hands together so hard they hurt. His own trade. His own, very first, solo trade with no Senior standing by, ready to take over if the thing looked like going awry. . . .

His uncle waved a hand. "Time you were selling small stuff on your own. Now." He leaned forward abruptly, folded his arms on the desk and looked at Jethri seriously. "You know we got a lot riding on this trip."

Indeed they did—three-quarters of the *Market's* capital was tied up in eight Terran pounds of *vya*, a spice most commonly sold in five gram lots. Jethri's research had discovered that *vya* was the active ingredient in *fa'vya*, a Liaden drink the ship's library classified as a potent aphrodisiac. Ynsolt'i was a Liaden port and the spice should bring a substantial profit to the ship. Not, Jethri reminded himself, that profit was ever guaranteed.

"We do well with the spice here," Paitor was saying, "and the Captain's going to take us across to Kinaveral, do that refit we'd been banking for *now*, rather than two Standards from now."

This was news. Jethri sat up straighter, rubbing the palms of his hands down the rough fabric of his work pants.

"Refit'll keep us world-bound 'bout a Standard, near's we can figure. Captain wants that engine upgrade bad and trade-side's gonna need two more cargo pods to balance the debt." He grinned suddenly. "Three, if I can get 'em."

Jethri smiled politely, thinking that his uncle didn't look as pleased with that as he might have and wondering what the downside of the trade was.

"While refit's doing, we figured—the Captain and me—that it'd be optimum to re-structure crew. So, we've signed you as Senior 'prentice with *Gold Digger*."

It was said so smoothly that Jethri didn't quite get the sense of it.

"*Gold Digger*?" he repeated blankly, that much having gotten through, by reason of him and Mac Gold having traded blows on last sighting—more to Jethri's discomfort than Mac's. He came forward in his chair, hearing the rest of it play back inside the whorlings of his ears.

"You've signed me onto *Gold Digger*?" he demanded "For how long?"

Paitor raised a hand. "Ease down, boy. One loop through the mines. Time they're back in port, you'll be twenty—full adult and able to find your own berth." He nodded. "You make yourself useful like you and me both know you can and you'll come off *Digger* a full trader with experience under your belt—"

"Three Standards?" Jethri's voice broke, but for once he didn't cringe in shame. He was too busy thinking about a converted ore ship smaller than the *Market*, its purely male crew crammed all six into a common sleeping room, and the trade nothing more than foodstuffs and ore, ore and mining tools, oxy tanks and ore. . . .

Balance of Trade

"Ore," he said, staring at his uncle. "Not even rough gem. Industrial ore." He took a breath, knowing his dismay showed and not caring about that, either. "Uncle Paitor, I've been studying. If there's something else I—"

Paitor showed him palm again. "Nothing to do with your studying. You been doing real good. I'll tell you—better than the Captain supposed you would. Little more interested in the Liaden side of things than I thought reasonable, there at first. No harm in learning how to read the lingo, though, and I will say the Liadens seem to take positive note of you." He shook his head. "Course, you don't have your full growth yet, which puts you nearer their level."

Liadens were a short, slight people, measured against Terran averages. Jethri wasn't as short as a Liaden, but he was, he thought bitterly, a damn sight shorter than Mac Gold.

"What it is," Paitor said slowly. "We're out of room. It's hard for us, too, Jethri. If we were a bigger ship, we'd keep you on. But you're youngest, none of the others're inclined to change berth, and, well—Ship's Option. Captain's cleared it. Ben Gold states himself willing to have you." He leaned back, looking stern. "And ore needs study, too, 'prentice. Nothing's as simple as it looks."

Thrown off, thought Jethri. I'm being thrown off of my ship. He thought that he could have borne it better, if he was simply being cast out to make his own way. But the arranged berth on *Gold Digger* added an edge of fury to his disbelief. He opened his mouth to protest further and was forestalled by a *ping!* from Paitor's terminal.

The Senior Trader snapped forward in his chair, flipping the switch that accepted the first of the trade feeds from Ynsolt'i Port. He glanced over at Jethri.

"You get me a cantra for that silk, now."

That was dismissal. Jethri stood. "Yessir," he said, calm as a dry mouth would let him, and left the trade room.

Ynsolt'i Port
Textile Hall

66 **P**remium grade, honored sir," Jethri murmured, keeping his eyes modestly lowered, as befit a young person in discourse with a person of lineage and honor.

Honored Sir din'Flora moved his shoulders and flipped an edge of the fabric up, frowning at the underweave. Jethri ground his teeth against an impulse to add more in praise of the hand-loomed Gindoree cellosilk.

Don't oversell! he could hear Uncle Paitor snap from memory. *The Trader is in control of the trade.*

"Half-a-cantra the six-bolt," the buyer stated, tossing the sample cloth back across the spindle. Jethri sighed gently and spread his hands.

"The honored buyer is, of course, distrustful of goods offered by one so many years his inferior in wisdom. I assure you that I am instructed by an elder of my ship, who bade me accept not a breath less than two cantra."

"Two?" The Liaden's shoulders moved again—not a shrug, but expressive of some emotion. Amusement, Jethri thought. Or anger.

"Your elder mis-instructs you, young sir. Perhaps it is a testing." The buyer tipped his head slightly to one side, as if considering. "I will offer an additional quarter-cantra," he said at last, accent rounding the edges of the trade-tongue, "in kindness of a student's diligence."

Wrong, Jethri thought. Liadens did nothing for kindness, which he knew from the tapes and from crew-talk. Liadens lived for revenge, and the stories Khat told on the subject kept a body awake on sleep-shift, praying against the mistake that would earn him nitrogen in his back-up oxy tank in payment of a Liaden's "balance."

Respectful, Jethri bowed, and, respectful, brought his eyes to the buyer's face. "Sir, I value your kindness. However, the distance between three-quarter cantra and two is so vast that I feel certain my elder would counsel me to forgo the trade. Perhaps you had not noticed—" he caught himself on the edge of insult and smoothly changed course—"the light is poor, just here. . . ."

Pulling the bolt forward, he again showed the fineness of the cloth, the precious irregularities of weave, which proved it hand woven, spoke rapturously of the pure crimson dye.

The buyer moved his hand. "Enough. One cantra. A last offer."

Gotcha, thought Jethri, making a serious effort to keep his face neutral. One cantra, just like Uncle Paitor had wanted. In retrospect, it had been an easy sell.

Too easy? he wondered then, looking down at the Liaden's smooth face and disinterested brown eyes. Was there, just maybe, additional profit to be made here?

Trade is study, Uncle Paitor said from memory. Study the goods, and study the market. And after you prepare as much as you can, there's still nothing says that a ship didn't land yesterday with three holds full of something you're carrying as a luxury sell.

Nor was there a law, thought Jethri, against Honored Buyer din'Flora being critically short on

crimson cellosilk, this Port-day. He took a cautious breath and made his decision.

"Of course," he told the buyer, gathering the sample bolt gently into his arms, "I am desolate not to have closed trade in this instance. A cantra. . . It is generous, respected sir, but—alas. My elder will be distressed—he had instructed me most carefully to offer the lot first to yourself and to make every accommodation. . . . But a cantra, when his word was two? I do not. . . ." He fancied he caught a gleam along the edge of the Liaden's bland face, a flicker in the depths of the careful eyes, and bit his lip, hoping he wasn't about to blow the whole deal.

"I don't suppose," he said, voice edging disastrously toward a squeak, "—my elder spoke of you so highly. . . . I don't suppose you might go a cantra-six?"

"Ah." Honored Sir din'Flora's shoulders rippled and this time Jethri was sure the gesture expressed amusement. "One cantra-six it is." He bowed and Jethri did, clumsily, because of the bolt he still cradled.

"Done," he said.



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"Very good," returned the buyer. "Set the bolt down, young sir. You are quite correct regarding that crimson. Remarkably pure. If your elder instructed you to hold at anything less than three cantra, he was testing you in good earnest."

Jethri stared, then, with an effort, he straightened his face, trying to make it as bland and ungiuing as the buyer's.

He needn't have bothered. The Liaden had pulled a pouch from his belt and was intent on counting out coins. He placed them on the trade table and stepped back, sweeping the sample bolt up as he did.

"One cantra, six dex, as agreed. Delivery may be made to our warehouse within the twelve-hour." He bowed, fluid and unstrained, despite the bolt.

"Be you well, young sir. Fair trading, safe lift."

Jethri gave his best bow, which was nowhere near as pretty as the buyer's. "Thank you, respected sir. Fair trading, fair profit."

"Indeed," said the buyer and was gone.

Ynsolt'i Port

Zeroground Pub

By rights, he should have walked a straight line from Textile Hall to the *Market* and put himself at the disposal of the Captain.

Say he was disinclined just yet to talk with Captain Iza Gobelyn, coincidentally his mother, on the subject of his upcoming change of berth. Or say he was coming off his first solo trade and wanted time to turn the thing over in his mind. Which he was doing, merebeer to hand, on the corner of the bar he'd staked out for his own.

Buyer din'Flora, now—that wanted chewing on. Liadens were fiercely competitive, and, in his experience, tight-fisted of data. Jethri had lately formed the theory that this reluctance to offer information was not what a Terran would call spitefulness, but *courtesy*. It would be—an *insult*, if his reading of the tapes was right, to assume that another person was ignorant of any particular something.

Which theory made Honored Sir din'Flora's extemporaneous lecture on the appropriate price of crimson cellosilk—interesting.

Jethri sipped his beer, considering whether or not he'd been insulted. This was a delicate question, since it was also OK, as far as his own observations and the crewtapes went, for an elder to instruct a junior. He had another sip of beer, frowning absently at the ship-board above the bar.

"nother brew, kid?" The bartender's voice penetrated his abstraction. He set the glass down, seeing with surprise that it was nearly empty. He fingered a Terran bit out of his pocket and put it on the bar.

"Merebeer, please."

"Coming up," she said, skating the coin from the bar to her palm. Her pale blue eyes moved to the next customer and she grinned.

"Hey, Sirge! Ain't seen you for a Port-year."

The dark-haired man in modest trading clothes leaned his elbows on the counter and smiled. "That long?" He shook his head, smile going toward a grin. "I lose track of time, when there's business to be done."

She laughed. "What'll it be?"

"Franses Ale?" he asked, wistfully.

"Coming up," she said and he grinned and put ten-bit in her hand.

"The extra's for you—a reward for saving my life."

The barkeeper laughed again and moved off down-bar, collecting orders and coins as she went. Jethri finished the last of his beer. When he put the glass down, he found the barkeeper's friend—Sirge—looking at him quizzically.

"Don't mean to pry into what's none of my business, but I noticed you looking at the board, there. Wouldn't be you had business with *Stork*?"

Jethri blinked, then smiled and shook his head. "I was thinking of—something else," he said, with cautious truth. "Didn't really see the board at all."

"Man with business on his mind," said Sirge good-naturedly. "Well, just thought I'd ask. Misery loves company, my mam used to say—Thanks, Nance." This last as the barkeeper set a tall glass filled with dark liquid before him.

"No trouble," she assured him and put Jethri's schooner down. "Merebeer, Trader."

"Thank you," he murmured, wondering if she was making fun of him or really thought him old enough to be a full Trader. He raised the mug and shot a look at the ship-board. *Stork* was there, right enough, showing departed on an amended flight plan.

"Damnedest thing," said the man next to him, ruefully. "Can't blame them for lifting when they got rush cargo and a bonus at the far end, but I sure could wish they waited lift a quarter-hour longer."

Jethri felt a stir of morbid curiosity. "They didn't—leave you, did they, sir?"

The man laughed. "Gods, no, none of that! I've got a berth promised on Ringfelder's *Halcyon*, end of next Port-week. No, this was a matter of buy-in—had half the paperwork filled out, happened to look up at the board there in the Trade Bar and they're already lifting." He took a healthy swallow of his ale. "Sent a message to my lodgings, of course, but I wasn't at the lodgings, I was out making paper, like we'd agreed." He sighed. "Well, no use crying over spilled wine, eh?" He extended a thin, calloused hand. "Sirge Milton, Trader at leisure, damn the luck."

He shook the offered hand. "Jethri Gobelyn, off *Gobelyn's Market*."

"Pleasure. *Market's* a solid ship—Arin still Senior Trader?"

Jethri blinked. The routes being as they were, there were still some who'd missed news of Arin Gobelyn's death. This man didn't seem quite old enough to have been one of his father's contemporaries, but . . .

"Paitor's Senior Trader," he told Sirge Milton steadily. "Arin died in a loading accident, seven Standards back."

"Sorry to hear that," the man said seriously. "I was just a 'prentice, but he impressed me real favorable." He took a drink of ale, eyes wandering back to the ship-board. "Damn," he said, not quite under his breath, then laughed a little and looked at Jethri.



Balance of Trade

"Let this be a lesson to you—*stay liquid*. Think I'd know *that* by now." Another laugh.

Jethri had a sip of beer. "But," he said, though it was none of his business, "what happened?"

For a moment, he thought the other wouldn't answer. He drank ale, frowning at the board, then seemed to collect himself and flashed Jethri a quick grin.

"Couple things. First, I was approached for a closed buy-in on—futures." He shrugged. "You understand I can't be specific. But the guarantee was four-on-one and—well, the lodgings were paid until I shipped and I had plenty on my tab at the Trade Bar, so I sunk all my serious cash into the future."

Jethri frowned. A four-on-one return on speculation? It was possible—the crewtapes told of astonishing fortunes made Port-side, now and then—but not likely. To invest all liquid assets into such a venture—

Sirge Milton held up a hand. "Now, I know you're thinking exactly what I thought when the thing was put to me—four-on-one's way outta line. But the gig turns on Liaden Master Trader's say-so, and I figured that was good enough for me." He finished his ale and put the glass down, waving at the barkeeper.

"Short of it is, I'm cash-poor til tomorrow mid-day, when the pay-off's guaranteed. And this morning I came across as sweet a deal as you'd care to see—and I know just who'll want it, to my profit. A cantra holds the lot—and me with three ten-bits in pocket. *Stork* was going to front the cash, and earn half the profit, fair enough. But the rush-money and bonus was brighter." He shook his head. "So, Jethri Gobelyn, you can learn from my mistake—and I'm hopeful I'll do the same."

"Four-on-one," Jethri said, mind a-buzz with the circumstance, so he forgot he was just a 'prentice, talking to a full Trader. "Do you have a paper with the guarantee spelled out?"

"I got better than that," Sirge Milton said. "I got his card." He turned his head, smiling at the bartender. "Thanks, Nance."

"No problem," she returned. "You got a Liaden's card? Really? Can I see?"

The man looked uneasy. "It's not the kind of thing you flash around."

"Aw, c'mon, Sirge—I never seen one."

Jethri could appreciate her curiosity: he was half agog, himself. A Liaden's card was as good as his name, and a Liaden's name, according to Great-Grand-Captain Larance, was his dearest possession.

"Well," Sirge said. He glanced around, but the other patrons seemed well-involved in their own various businesses. "OK."

He reached into his pouch and pulled out a flat, creamy rectangle, holding it face up between the three of them.

"Ooh," Nance said. "What's it say?"

Jethri frowned at the lettering. It was a more ornate form of the Liaden alphabet he had laboriously taught himself off the library files, but not at all unreadable.

"Norn ven'Deelin," he said, hoping he had the pronunciation of the name right. "Master of Trade."

"Right you are," said Sirge, nodding. "And this here—" he rubbed his thumb over the graphic of a rabbit silhouetted against a full moon—"is the sign for his Clan. Ixin."

"Oh," Nance said again, then turned to answer a hail from up-bar. Sirge slipped the card away and Jethri took another sip of beer,



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mind racing. A four-on-one return, guaranteed by a Master Trader's card? It was possible. Jethri had seen the rabbit-and-moon sign on a land-barge that very day. And Sirge Milton was going to collect tomorrow mid-day. Jethri thought he was beginning to see a way to buy into a bit of profit, himself.

"I have a cantra to lend," he said, setting the schooner aside.

Sirge Milton shook his head. "Nah—I appreciate it, Jethri, but I don't take loans. Bad business."

Which, Jethri acknowledged, was exactly what his uncle would say. He nodded, hoping his face didn't show how excited he felt.

"I understand. But you have collateral. How 'bout if I buy *Stork's* share of your Port-deal payoff tomorrow mid-day, after you collect from Master ven'Deelin?"

"Not the way I like to do business," Sirge said slowly.

Jethri took a careful breath. "We can write an agreement," he said.

The other brightened. "We can, can't we? Make it all legal and binding. Sure, why not?" He took a swallow of ale and grinned. "Got paper?"

Gobelyn's Market:

"No, ma'am," Jethri said as respectfully as he could, while giving his mother glare-for-glare. "I'm in no way trying to captain this ship. I just want to know if the final papers are signed with *Digger*." His jaw muscles felt tight and he tried to relax them—to make his face trading-bland. "I think the ship owes me that information. At least that."

"Think we can do better for you," his mother the Captain surmised, her mouth a straight, hard line of displeasure. "All right, boy. No, the final papers aren't signed. We'll catch up with *Digger* 'tween here and Kinaveral and do the legal then." She tipped her head, sarcastically civil. "That OK by you?"

Jethri held onto his temper, barely. His mother's mood was never happy, dirt-side. He wondered, briefly, how she was going to survive a whole year world-bound, while the *Market* was rebuilt.

"I don't want to ship on *Digger*," he said, keeping his voice just factual. He sighed. "Please, ma'am—there's got to be another ship willing to take me."

She stared at him until he heard his heart thudding in his ears. Then she sighed in her turn, and spun the chair so she faced the screens, showing him profile.

"You want another ship," she said, and she didn't sound mad, anymore. "You find it"

Zeroground Pub

No calls for Jethri Gobelyn? No message from Sirge Milton?" The barkeeper on-shift today was maybe a Standard Jethri's elder. He was also twelve inches taller and outmassed him by a factor of two. He shook his head, so that the six titanium rings in his left ear chimed together, and sighed, none too patient. "Kid, I told you. No calls. No message. No package. No Milton. No *nothing*, kid. Got it?"

Jethri swallowed, hard. "Got it."

"Great," said the barkeep. "You wanna beer or you wanna clear out so a paying customer can have a stool?"



"Merebeer, please," he said, slipping a bit across the counter. The keeper swept up the coin, went up-bar, drew a glass, and slid it down the polished surface with a will. Jethri put out a hand—the mug smacked into his palm, stinging. Carefully, he eased away from the not-exactly-overcrowded counter and took his drink to the back.

He was on the approach to trouble. Dodging his Senior, sliding off-ship without the Captain's aye—approaching trouble, right enough, but not quite established in orbit. Khat was inventive—he trusted her to cover him for another hour, by which time he had better be on-ship, cash in hand and looking to show Uncle Paitor the whole.

And Sirge Milton was late.

A man, Jethri reasoned, slipping into a booth and setting his beer down, might well be late for a meeting. A man might even, with good reason, be an hour late for that same meeting. But a man could call the place named and leave a message for the one who was set to meet him.

Which Sirge Milton hadn't done, nor sent a courier with a package containing Jethri's payout, neither.

So, something must have come up. Business. Sirge Milton seemed a busy man. Jethri opened his pouch and pulled out the agreement they'd written yesterday, sitting at this very back booth, with Nance the bartender as witness.

Carefully, he smoothed the paper, read over the guarantee of payment. Two cantra was a higher buy-out than he had asked for, but Sirge had insisted, saying the profit would cover it, not to

Balance of Trade

mention his 'expectations.' There was even a paragraph about being paid in the event that Sirge's sure buyer was out of cash, citing the debt owed Sirge Milton, Trader, by Norn ven'Deelin, Master Trader, as security.

It had all seemed clear enough yesterday afternoon, but Jethri thought now that he should have asked Sirge to take him around to his supplier, or at least listed the name and location of the supplier on the paper.

He had a sip of beer, but it tasted flat and he pushed the glass away. The door to the bar slid open, admitting a noisy gaggle of Terrans. Jethri looked up, eagerly, but Sirge was not among them. Sighing, he frowned down at the paper, trying to figure out a next move that didn't put him on the receiving end of one of his uncle's furious rakedowns.

Norn ven'Deelin, Master of Trade . . . The words looked odd, written in Terran. Norn ven'Deelin, who had given his card—his *name*—into Sirge Milton's keeping. Jethri blinked. Norn ven'Deelin, he thought, would very likely know how to get in touch with a person he held in such high esteem. With luck, he'd be inclined to share that information with a polite-talking 'prentice.

If he wasn't inclined . . . Jethri folded his paper away and got out of the booth, leaving the beer behind. No use borrowing trouble, he told himself.

Ynsolt'i Upper Port

It was late, but still day-Port, when he found the right office. At least, he thought, pausing across the street and staring at that damned bunny silhouetted against the big yellow moon, he hoped it was the right office. He was tired from walking miles in gravity, but worse than that, he was scared. Norn ven'Deelin's office—if this *was* at last his office—was well into the Liaden side of Port.

Not that there was properly a *Terran* side, Ynsolt'i being a Liaden world. But there were portions where Terrans were tolerated as a necessary evil attending galactic trade, and where a body caught the notion that maybe Terrans were cut some extra length of line, in regard to what might be seen as insult.

Standing across from the door, which might, after all, be the right one, Jethri did consider turning around, trudging back to the *Market* and taking the licks he'd traded for.

Except he'd *traded* for profit to the ship, and he was going to collect it. That, at least, he would show his Senior and his Captain, though he had long since stopped thinking that profit would buy him pardon.

Jethri sighed. There was dust all over his good trading clothes. He brushed himself off as well as he could, finger-combed his hair and looked across the street. It came to him that the rabbit on Clan Ixin's sign wasn't so much howling at that moon, as laughing its fool head off.

Thinking so, he crossed the street, wiped his boots on the mat, and pushed the door open.

The office behind the door was airy and bright, and Jethri was abruptly glad that he had dressed in trading clothes, dusty as they now were. This place was high-class—a body could smell profit in the subtly fragrant air, see it in the floor covering and the real wooden chairs.



The man sitting behind the carved center console was as elegant as the room: crisp-cut yellow hair, bland and beardless Liaden face, a vest embroidered with the moon-and-rabbit worn over a salt-white silken shirt. He looked up from his work screen as the door opened, eyebrows lifting in what Jethri had no trouble reading as astonishment.

"Good-day to you, young sir." The man's voice was soft, his Trade only lightly tinged with accent.

"Good-day, honored sir." Jethri moved forward slowly, taking care to keep his hands in sight. Three steps from the console, he stopped and bowed, as low as he could manage without falling on his head.

"Jethri Gobelyn, Apprentice Trader, *Gobelyn's Market*." He straightened and met the bland blue eyes squarely. "I am come to call upon the Honored Norn ven'Deelin."

"Ah." The man folded his hands neatly upon the console. "I regret it is necessary that you acquaint me more nearly with your business, Jethri Gobelyn."

Jethri bowed again, not so deep this time, and waited 'til he was upright to begin the telling.

"I am in search of a man—a Terran," he added, half-amazed to hear no quaver in his voice—"named Sirge Milton, who owes me a sum of money. It was in my mind that the Honored ven'Deelin might be willing to put me in touch with this man."

The Liaden frowned. "Forgive me, Jethri Gobelyn, but how came such a notion into your mind?"

Absolute Magnitude

Jethri took a breath. "Sirge Milton had the Honored ven'Deelin's card in pledge of—"

The Liaden held up a hand, and Jethri gulped to a stop, feeling a little gone around the knees.

"Hold." A Terran would have smiled to show there was no threat. Liaden's didn't smile, at least, not at Terrans, but this one exerted himself to incline his head an inch.

"If you please," he said. "I must ask if you are certain that it was the Honored ven'Deelin's own card."

"I—the name was plainly written, sir. I read it myself. And the sigil was the same, the very moon-and-rabbit you yourself wear."

"I regret." The Liaden stood, bowed and beckoned, all in one fluid movement. "This falls without my area of authority. If you please, young sir, follow me." The blue eyes met his, as if the Liaden had somehow heard his dismay at being thus directed deeper into alien territory. "House courtesy, Jethri Gobelyn. You receive no danger here."

Which made it plain enough, to Jethri's mind, that refusing to follow would be an insult and the last thing he wanted to do. . . .

He bowed slightly and walked forward as sedately as trembling knees allowed. The Liaden led him down a short hallway, past two closed doors, and bowed him across the threshold of the third, open.

"Please be at ease," the Liaden said from the threshold. "I will apprise the Master Trader of your errand." He hesitated, then extended a hand, palm up. "It is well, Jethri Gobelyn. The House is vigilant on your behalf." He was gone on that, the door sliding silently closed behind him.

This room was smaller than the antechamber, though slightly bigger than the *Market's* common room, the shelves set at heights he had to believe handy for Liadens. Jethri stood for a couple minutes, eyes closed, doing cube roots in his head until his heartbeat slowed down and the panic had eased back to a vague feeling of sickness in his gut.

Opening his eyes, he went over to the shelves on the right, half-trained eye running over the bric-a-brac, wondering if that was really a piece of Sofleg porcelain and, if so, what it was doing set naked out on a shelf, as if it were a common pottery bowl.

The door whispered behind him, and he spun to face a Liaden woman dressed in dark trousers and a garnet colored shirt. Her hair was short and gray, her eyebrows straight and black. She stepped energetically into the center of the room as the door slid closed behind her, and bowed with precision, right hand flat against her chest.

"Norn ven'Deelin," she stated in a clear, level voice. "Clan Ixin."

Jethri felt the blood go to ice in his veins.

Before him, Norn ven'Deelin straightened and slanted a bright black glance into his face. "You discover me a dismay," she observed, in heavily accented Terran. "Say why, do."

He managed to breathe, managed to bow. "Honored Ma'am, I—I've just learned the depth of my own folly."

"So young, yet made so wise!" She brought her hands together in a gentle clap, the big amethyst ring on her right hand throwing light off its facets like purple lightning. "Speak on, young Jethri. I would drink of your wisdom."

He bit his lip. "Ma'am, the—person—I came here to find—told me Norn ven'Deelin was—was male."

"Ah. But Liaden names are difficult, I am learning, for those of Terran Code. Possible it is that your friend achieved honest error, occasioned by null-acquaintance with myself."

"I'm certain that's the case, honored," Jethri said carefully, trying to feel his way toward a path that would win him free, with no insult to the Trader or her House, and extricate Sirge Milton from a Junior's hopeless muddle.

"I—my friend—did know the person I mistakenly believed yourself to be well enough to have lent money on a Portweck investment. The—error— is all my own. Likely there is another Norn ven'Deelin in Port, and I foolishly—"

A tiny hand rose, palm out, to stop him. "Be assured, Jethri Gobelyn, of Norn ven'Deelin there is one. This one."

He had, Jethri thought, been afraid of that. Hastily, he tried to shuffle possibilities. Had Sirge Milton dealt with a go-between authorized to hand over his employer's card? Had—

"My assistant," said Norn ven'Deelin, "discloses to me a tale of wondering obfession. I am understanding that you are in possession of one of my cards?"

Her assistant, Jethri thought, with a sudden sharpening of his wits on the matter at hand, had told her no such thing. She was trying to throw him off-balance, and startle him into revealing a weakness. She was, in fact, *trading*. Jethri ground his teeth and made his face smooth.

"No, ma'am," he said respectfully. "What happened was that I met a man in Port who needed loan of a cantra to hold a deal. He said he had lent his liquid to—to Norn ven'Deelin, Master Trader. Of Clan Ixin. He said he was to collect tomorrow—today, mid-day, that would be—a guaranteed return of four-on-one. My—my payout contingent on his payout." He stopped and did not bite his lip, though he wanted to.

There was a short silence, then, "Four-on-one. That is a very large profit, young Jethri."

He ducked his head. "Yes, ma'am. I thought that. But he had the—the card of the—man—who had guaranteed the return. I read the name myself. And the Clan sign—just like the one on your door and—other places on Port. . . ." His voice squeaked out. He cleared his throat and continued.

"I knew he had to be on a straight course—at least on this deal—if it was backed by a Liaden's card."

"Hah." She plucked something flat and rectangular from her sleeve and held it out. "Honor me with your opinion of this."

He took the card, looked down and knew just how stupid he'd been.

"So wondrously expressive a face," commented Norn ven'Deelin. "Was this not the card you were shown, in earnest of fair dealing?"

He shook his head, remembered that the gesture had no analog among Liadens and cleared his throat again.

"No, ma'am," he said as steadily as he could. "The rabbit-and-moon were exactly the same. The name—the same style, the same spacing, the same spelling. The stock was white, with black ink, not tan with brown ink. I didn't touch it, but I'd guess it was low-rag. This card is high-rag content. . . ."

His fingers found a pattern on the obverse. He flipped the card over and sighed at the selfsame rabbit-and-moon, embossed into the card stock, then looked back to her bland, patient face.

"I beg your pardon, ma'am."

"So." She reached out and twitched the card from his fingers, sliding it absently back into her sleeve. "You do me a service, young Jethri. From my assistant I hear the name of this person who has, yet does not

Balance of Trade

have, my card in so piquant a fashion. Sirge Milton. This is a correctness? I do not wish to err."

The ice was back in Jethri's veins. Never insult a Liaden. Liadens lived for revenge, and to throw another Terran into Liaden revenge was about the worst—

"Ma'am, I—please. The whole matter is—is *my* error. I am the most junior of traders. Very likely I misunderstood a senior and have annoyed yourself and your household without cause. I—"

She held up a hand, stepped forward and lay it on his sleeve.

"Peace, child. I do nothing fatal to your *galandaria*—your countryman. No pellet in his ear. No nitrogen replacing good air in an emergency tank. Eh?" Almost, it seemed to Jethri that she smiled.

"Such tales. We of the Clans listen in Port bars—and discover ourselves monsters." She patted his arm, lightly. "But no. Unless he adopts a mode most stupid, fear not of his life." She stepped back, her hand falling from his sleeve.

"Your own actions reside in correctness. Very much is this matter mine of solving. A junior trader could do no other, than bring such at once before me.

"Now, I ask, most humbly, that you accept Ixin's protection in conveyance to your ship. It is come night-Port while we speak, and your kin will be distressful for your safety. Myself and yourself, we speak additionally, after solving."

She bowed again, hand over heart, and Jethri did his best to copy the thing with his legs shaking fit to tip him over. When he looked up the door was closing behind her. It opened again immediately and the assistant stepped inside with a bow of his own.

"Jethri Gobelyn," he said in his accentless Trade, "please follow me. A car will take you to your ship."

Gobelyn's Market

66 **S**he said she wouldn't kill him," he said hoarsely. The Captain, his mother, shook her head and Uncle Paitor sighed.

"There's worse things than killing, son," he said and that made Jethri want to scrunch into his chair and bawl, as though he had ten Standards fewer and stood about as tall as he felt.

What he did do, was take another swallow of coffee and meet Paitor's eyes straight. "I'm sorry, sir."

"You've got cause," his uncle acknowledged.

"Double-ups on dock," the Captain said, looking at them both. "Nobody works alone. We don't want trouble. We stay close and quiet and we lift as soon as we can without making it look like a rush."

Paitor nodded. "Agreed."

Jethri stirred, fingers tight 'round the coffee mug. "Ma'am, she—Master Trader ven'Deelin said she wanted to talk to me, after she—settled—things. I wouldn't want to insult her."

"None of us wants to insult her," his mother said, with more patience than he'd expected. "However, a Master Trader is well aware that a trade ship must trade. She can't expect us to hang around while our cargo loses value. If she wants to talk to you, boy, she'll find you."

"No insult," Paitor added, "for a junior trader to bow to the authority of his seniors. Liadens understand chain of command real well." The captain laughed, short and sharp, then stood up.

"Go to bed, Jethri—you're out on your feet. Be on dock second shift—" she slid a glance to Paitor. "Dyk?"

His uncle nodded.

"You'll partner with Dyk. We're unloading seed, ship's basics, trade tools. Barge's due Port-noon. Stick *close*, you understand me?"

"Yes, ma'am." Wobbling, Jethri got to his feet, saluted his seniors, put the mug into the wash-up and turned toward the door.

"Jethri."

He turned back, thinking his uncle's face looked—sad.

"I wanted to let you know," Paitor said. "The spice did real well for us."

Jethri took a deep breath. "Good," he said and his voice didn't shake at all. "That's good."

Gobelyn's Market

Loading Dock

OK," said Dyk, easing the forks on the hand-lift back. "Got it." He toggled the impeller fan and nodded over his shoulder. "Let's go, kid. Guard my back."

Jethri managed a weak grin. Dyk was inclined to treat the double-up and Paitor's even-voiced explanation of disquiet on the docks as a seam-splitting joke. He guided the hand-lift to the edge of the barge, stopped, theatrically craned both ways, flashed a thumbs-up over his shoulder to Jethri, who was lagging behind, and dashed out onto the *Market's* dock. Sighing, Jethri walked slowly in his wake.

"Hey, kid, hold it a sec." The voice was low and not entirely unfamiliar. Jethri spun.

Sirge Milton was leaning against a cargo crate, hand in the pocket of his jacket and nothing like a smile on his face.

"Real smart," he said, "setting a Liaden on me."

Jethri shook his head, caught somewhere between relief and dismay.

"You don't understand," he said, walking forward. "The card's a fake."

The man against the crate tipped his head. "Is it, now?"

"Yeah, it is. I've seen the real one, and it's nothing like like the one you have."

"So what?"

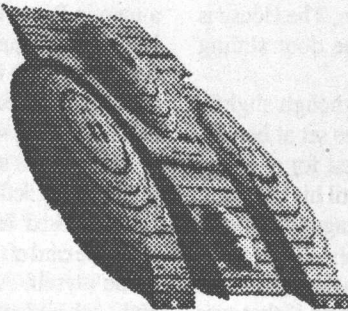
"So," Jethri said patiently, stopping and showing empty hands in the old gesture of goodwill, "whoever gave you the card wasn't Norm ven'Deelin. He was somebody who *said* he was Norm ven'Deelin and he used the card and her—the honor of her name—to cheat you."

Sirge Milton leaned, silent, against the cargo bail.

Jethri sighed sharply. "Look, Sirge, this is serious stuff. The Master Trader has to protect her name. She's not after you—she's after whoever gave you that card and told you he was her. All you have to do—"

Sirge Milton shook his head, sorrowful, or so it seemed to Jethri. "Kid," he said, "you still don't get it, do you?" He brought his hand out of the pocket and leveled the gun, matter-of-factly, at Jethri's stomach. "I know the card's bogus, kid. I know who made it—and so does your precious Master Trader. She got the scrivener last night. She'd've had me this morning, but I know the back way outta the 'ground.'"

The gun was high-gee plastic, sunb-nosed and black. Jethri stared at



Absolute Magnitude

it and then looked back at the man's face. Trade, he thought, curiously calm. Trade for your life.

Sirge Milton grinned. "You ratted another Terran to a Liaden. That's stupid, Jethri. Stupid people don't live long."

"You're right," he said, calmly, watching Sirge's face and not the gun at all. "And it'd be real stupid for you to kill me. Norm ven'Deelin said I'd done her a service. If you kill me, she's not going to have any choice but to serve you the same. You don't want to corner her."

"Jethri?" Dyk's voice echoed in from the dock. "Hey! Jethri!"

"I'll be out in a second!" he yelled, never breaking eye contact with the gunman. "Give me the gun," he said, reasonably. "I'll go with you to the Master Trader and you can make it right."

"Make it right," Sirge sneered and there was a sharp snap as the thumb of the gun's safety off.

"I urge you most strongly to heed the young trader's excellent advice, Sirge Milton," a calm voice commented in accentless Trade. "The Master Trader is arrived and balance may go forth immediately."

Master ven'Deelin's yellow-haired assistant walked into the edge of Jethri's field of vision. He stood lightly on the balls of his feet, as if he expected to have to run. There was a gun, holstered, on his belt.

Sirge Milton hesitated, staring at this new adversary.

"Sirge, it's not worth dying for," Jethri said, desperately.

But Sirge had forgotten about him. He was looking at Master ven'Deelin's assistant. "I think I'm gonna be some Liaden's slave until I worked off what she claims for debt?" He demanded. "Liaden Port? You think I got any chance of a fair hearing?"

"The Portmaster—" the yellow-haired Liaden began, but Sirge cut him off with a wave, looked down at the gun and brought it around.

"No!" Jethri jumped forward, meaning to grab the gun, but something solid slammed into his right side, knocking him to the barge's deck. There was a *crack* of sound, very soft, and Jethri rolled to his feet—

Sirge Milton was crumpled face down on the cold decking, the gun in his hand. The back of his head was gone. He took a step forward, found his arm grabbed and turned around to look down in to the grave blue eyes of Master ven'Deelin's assistant.

"Come," the Liaden said, and his voice was not—quite—steady. "The Master Trader must be informed."

Gobelyn's Market Common Room

The yellow-haired assistant came to an end of his spate of Liaden and bowed low.

"So it is done," Norm ven'Deelin said in Trade. "Advise the Portmaster and hold yourself at her word."

"Master Trader." The man swept a bow so low his forehead touched his knees, straightened effortlessly and left the common room. Norm ven'Deelin turned to Jethri, sitting shaken between Uncle Paitor and his mother.

"I am regretful," she said in her bad Terran, "that solving achieved this form. My intention, as I said to you, was not thus. Terrans—" She glanced around, at Paitor and the captain, at Dyk and Khat and Mel. "Forgive me. I mean to say that Terrans are of a mode most surprising. It was my error, to be think this solving would end not in dyings." She showed her palms. "The counterfeit-maker and the, ah—*distributor*—are of a mind, both, to achieve more seemly Balance."

"Counterfeiter?" asked Paitor and Norm ven'Deelin inclined her head.

"Indeed. Certain cards were copied—not well, as I find—and distributed to traders of dishonor. These would then use the—the—*melant*'i—you would say, the *worth* of the card to run just such a shadow-deal as young Jethri fell against." She sat back, mouth straight. "The game is closed, this Port, and I come now to Balance young Jethri's service to myself."

His mother shot a glance at Paitor, who rose to his feet and bowed, low and careful. "We are grateful for your condescension, Master Trader. Please allow us to put paid, in mutual respect and harmony, to any matter that may lie between us—"

"Yes, yes," she waved a hand. "In circumstance far otherwise, this would be the path of wisdom, all honor to you, Trader Gobelyn. But you and I, we are disallowed the comfort of old wisdom. We are honored, reverse-ward, to build new wisdom." She looked up at him, black eyes shining.

"See you, this young trader illuminates error of staggering immensity. To my hand he delivers one priceless gem of data: Terrans are using Liaden honor to cheat other Terrans." She leaned forward, catching their eyes one by one. "Liaden honor," she repeated; "to cheat other Terrans."

She lay her hand on her chest. "I am a Master Trader. My—my *duty* is to the increase of the trade. Trade cannot increase, where honor is commodity."

"But what does this," Dyk demanded, irrepressible, "have to do with Jethri?"

The black eyes pinned him. "A question of piercing excellence. Jethri has shown me this—that the actions of Liadens no longer influence the lives only of Liadens. Reverse-ward by logic follows for the actions of Terrans. So, for the trade to increase, wherein lies the proper interest of Trader and Master Trader, information cross-cultural must increase." She inclined her head.

"Trader, I suggest we write contract between us, with the future of Jethri Gobelyn in our minds."

Uncle Paitor blinked. "You want to—forgive me. I think you're trying to say that you want to take Jethri as an apprentice."

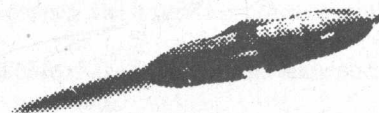
Another slight bow of the head. "Precisely so. Allow me, please, to praise him to you as a promising young trader, of learned instinct and strongly enmeshed in honor."

"But I did everything wrong!" Jethri burst out, seeing Sirge Milton laying there, dead of his own choice, and the stupid waste of it. . . .

"Regrettably, I must disagree," Master ven'Deelin said softly. "It is true that death untimely transpired. This was not your error. Pen Rel informs to me your eloquence in beseeching Trader Milton to the path of balance. This was not error. To solicit solving from she who is most able to solve—that is only correctness." She showed both of her hands, palms up. "I honor you for your actions, Jethri Gobelyn, and wonder if you will bind yourself as my apprentice."

He wanted it. In that one, searing moment, he knew he had never wanted anything in his life so much. He looked to his mother.

"I found my ship, Captain," he said.





In the Winds that Sleep

by Gene Kofayko

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The sound of Adila's ecstasy woke me. Through the aluminum blinds the flat shafts of the bleaklights from the outer corridor had found her backbone. Curved and knobbed, the vertebrae lay like finger bones trying to poke through her flesh. Her elbows, dirty and slightly scaled, hugged her skinny sides. She had no head, from my angle, bent as she was to see her injection site. But I could hear her ecstasy, a kind of blood singing, even though Adila never made a sound.

I closed my fist beneath my pillow. On emptiness. My hand, with a mind of its own, scabbled around like a five-legged spider searching the web.

Nothing.

Adila had stolen my morning fix.

Panic drove the last vestiges of sleep from my eyes. Apprehension blossomed in my stomach like a cancer. I hadn't fixed for 12 hours. Adila's ecstasy was my wake up, walk around, hustle for the next crystal, insurance. Without it we faced cold turkey and dread.

Like a symbiote, I sucked up to her naked spine, laying my cold face to the heat that radiated there. As if I could absorb some of the ecstasy. A fine patina of sweat had gathered around the knobby vertebrae, and I licked the droplets away. Sweet on my tongue. Even the salt in her body tasted sweet.

Her voice when she spoke vibrated down her spine. Like a serpent, I listened through my tongue.

"I'm sorry, Brody, but I was so sick, and it was there, just lying there, beneath your pillow. I couldn't help myself."

"You stole my bloodsong."

"No, Brody. I'll pay it back, I swear. I'm going out this morning to see Mando Kahn. He owes me. I'll get it back for you."

Her knobby, twisted spine was beginning to straighten. Lines of ridged, corrugated muscle starting to flatten. My bloodsong was singing for Adila. Growing her tall and strong. She was getting well on my stuff. But it wouldn't last.

She stretched and yawned wide enough to crack her jaw. When she stood, her face was flushed pink from the bloodrush.

It was already keyed, I thought.

It would be cruel of me to tell her what her body would tell her soon enough. Cruel to ruin what little psychological mind-high she could get for the fifteen minutes or so, before her brain receptors said no to the main body of the drug. A few percent would get through, in that essential bloodrush, but there would be no bone memory, no snapping of synaptic gates to let the rest rush in. Most of the drug would flush on through her system in less than an hour. In little more time than that, she'd be on the floor in an even more severe withdrawal.

I sat on the edge of the bed nursing stomach cramps while she dressed. She tried not to look at me directly, but her eyes flashed in

the mirror, quick little glances that were scitterish as the clouds over Solstice III. Solstice III, our Paradise, our Home.

I staggered to my feet and into the bathroom, trying to straighten up by pushing my hands down on the edges of the sink. The mirror glistened in front of me, but I didn't look. Didn't want to see the lank brown hair that hung almost into my pathetic brown eyes. Cow eyes, I'd always thought, with no hint of the Aryan steel of my masters on the planet above. Not that they ever called themselves that, of course. It was forbidden.

I splashed water and brushed my teeth and stepped into the sonic shower, holding my stomach with both hands. While the sound scrubbed me clean, I pushed up against the wall until I stood almost straight.

Adila still glowed as we left the underground flat. I was beginning to hunch again.

"Just stay home," she chided. "I'll connect with Mando Kahn and bring your upright to you."

"I don't trust him," I said.

"He owes me, I tell you."

"It won't be genome keyed. It'll be a false rush and I'll be sick again in an hour." As she would, I thought, thinking I should warn her, but the anger of her actions still burned me.

Her bloodrush glow made her confident. "You have to learn to trust people more," she said, moving with agile grace up the corridor to the lift. "Besides, Kahn has your genome key card. He can do it." I bit down on the retort and hunched after her.

Like moles emerging.

Blood rushing to my feet.

Millions of metric tons of bedrock falling behind us.

Into the light, with the whisper of the elevator AI in our ears:

"Have you remembered your UV cream? Have you had your insert viruses brought up to date? If not you may contact the Solstice Main Health Clinic without an appointment. Arrangements will be made according to your bloodwork and your needs."

Such crap, I thought, stepping out on the street.

I had, however, inserted my blue contacts. 'Brown eyes need not apply' was the rampant feeling on the street.

The street was wide and straight, fed by alleys that trailed off in all directions. Adila left me, taking a side road that would lead her to Mando Kahn's. As she waved goodbye, I watched as vendors hawked their goods from plastiform stands. Each stand had its own holo art and its own color scheme. Blues wrapped with burgundy wrapped with a purple that matched Solstice's sunset were a favorite.

"Fresh Snapper! Get it right here. Just caught this morning and flown in."

"Mementos from the Rim. Get your authenticated artifacts from the Krillich super-race."

In the Winds that Sleep

Abdul made eyebrows at me as I passed his stall. A small group of tourists lingered in front of his booth. The boys in Abdul's basement had been busy this morning, I thought. Making artifacts from the great Krillich race. Artwork, mostly, that was pretty to the eye, though a bit incomprehensible. All of it phony as my eye color.

I fought against my stomach cramps to stay upright as I navigated the street's Bazaar. The light seemed brighter than usual, and I had chills that rippled my flesh. I held my jaws tightly clenched, but there was a tremor in the very bone that made my teeth chatter.

"Mementos from the Rim, get your super-race mementos. . ."

But I had mine. My genome was threaded with Krillich chromosomes used as a filler because they seemed compatible. What a bad joke that had become. I'd needed credit badly and I'd applied for an experimental program. They were in the final development of insert viruses at the time, viruses that enhanced the human genome and greatly increased the human life span. Only the rich and powerful would get them: I knew that regardless of what the government promised, so I volunteered. Only I volunteered a bit too early. The filler they used on my genome screwed me up in a way I'd pay for the rest of my natural life. The government people were sorry, and they gave us room and board (what more could we want from life?), but there was little they could do to remedy the situation. Thank you and farewell. So we used the welfare, not the farewell, and we learned to score the right drugs from the right merchants. They were all vastly illegal and completely temporary answers. But they were relief. For a brief span.

The shops and factories grew from street level as I moved, rearing their steel and glass profiles. The crowds thickened along the slidewalks, and I moved to the curb. No sense in getting buffeted by the tourists from the Refederation. Besides, the next open door was my first stop.

Faruk's Emporium fronted the street with an archway surrounded by holo art. More than a doorway, it looked like a huge, gaudily colored mouth. And despite its enticing holos created from pastoral scenery of Old Earth, there was something ludicrous in the feeling one got as one crossed the portal. As if a mouth from hell had sucked one in, had shucked off all the known and disparate factors of a lifetime and thrown up a new set of rules.

For one thing, Faruk's was entirely underground. Only the doorway showed at street level. The rest descended through a series of underground caverns. Concentric shells of pleasure, Faruk would say.

The Seven Levels of Hell.

I was desperate and I had nothing left to sell.

"Where's Faruk?"

The barman stared at me like he had forgotten to take out the trash.

"I'll make it worth his while," I said, lying as calmly as I could. "Seventh Level."

I nodded my thanks and headed down the aisle that connected the concentric rings. In a large circle around me, the games went on. Furious and in full color, a circus on each level, barmen serving

whatever poison a patron said he wanted. There were stalls with VR games, and stalls with girls, and stalls with boys, and a drugstore, though they sold nothing esoteric enough to help me. Faruk and Mando Kahn were the two kingpins of Solstice Underground Entertainment. They were the only two with enough credit and pull to have licenses. On a planet with forced labor and little entertainment, they did very well.

I descended through the rings of hell.

The Seventh was the smallest and the most expensive. I'd never been this far below before. The walls were littered with expensive holos. They each had their own smell and their own textures; each promised another version of paradise. And they were expensive trips to take. Only the rich and influential traveled these borders. Some were known to get lost down here for weeks. Until their credit line came up zeroes. The most famous was a manufacturer of clothing who had actually lasted a month in Virtual, never coming out. What they found of him wasn't pretty. A skeleton sitting by the full-figured holo of a Krillich female.

No one sued.

Faruk would have beaten it in court, anyway. His contacts ran high into the government.

My posture was getting worse. At this rate I could untie my shoes without kneeling down. Very soon now. I spotted Faruk's broad back and pointed myself in that direction. He was smiling down at the top of my head when I got there.

"Bad day, Miles?"

I grunted.

"Bring Brody Miles a taste of ..." He leaned over and whispered something to the barman.

I couldn't cut it any longer; my face wanted to kiss my feet. I backed myself onto a stool and sat with my face almost on my knees.

"Here," Faruk said, passing me a hisser. "Kiss yourself with this."

I pressed the barrel to my inner elbow and felt the bite of familiar teeth. The stuff was good—it was hot in my vein. I could feel it trace its way up toward my heart.

"Ah," I moaned.

"Better?" he asked.

"Ah, gods of Krillich, yes. What was that?"

"A new one I've developed just for your kind," he said.

He meant the Experimentals the government had worked on. No one knew how many of us there were. But I had a feeling the number would stagger my imagination.

It wasn't like Faruk, though, to give anything away.

"Why?"

"Ah. Well. Follow me."

And I found I could. I stood up straight and I felt the blood rush through my limbs. Like oxygen to a man who had been struggling to breathe. I stood straight and strong and followed Faruk right into the further depths of hell.

His office was plush, lined with something red and furry and alien looking. The smell was wrong, not a fabric, but more like a skin of something very recently dead.

"Like it?"

"What did you kill?"



Absolute Magnitude

"Ah, Miles. You always think the worst of me. Why is that?"

I didn't answer. My focus, I'm afraid, was still on my own problem, which I was sure Faruk had only temporarily satiated. "How long will it last?"

"What, your fix?"

"Yeah, my fix."

"About two minutes longer than it will take you to answer my next few questions."

I listened with both ears.

I grunted once. "But that's illegal," I said.

He went on.

"They'll hang me if they catch me."

He went on.

The drug started to wear off.

"I'll take it," I said.

So I'm not strong willed. Show me a junkie who is.

I'd bent over and was cramped again when Faruk pushed his intercom button. "Bring Mr. Miles a week's supply of that new flavor he tried earlier, will you, Benedict? Right now, please."

He leaned over me, handing me the small handful of hissers. "One of these lasts about a day. Use them carefully and you'll have enough time to find what I want and make it back. Screw up or get caught by the authorities and you'll face worse than anything they can do to you." He waved them under my nose but wouldn't let me grab one. "Understood?"

"I understand," I croaked.

He handed me the handful.

Sweet rush of relief.

I fired one into my inner arm and sat back, rocking, waiting for it to hit. A light as white and pure as God went off behind my eyes, and my muscles jumped with new-found strength and energy. The vise that clamped my chest let go, and I could breathe again.

"Damn," I said.

"Bring back what I want and you'll get a six month's supply. Fair deal?"

I nodded, not trusting myself to speak.

"Anything else you need?"

"Yeah. A partner."

Faruk scowled. He was a big man, not fat so much as barrel bodied. His head was clean shaven, and his neck was almost as thick as his head. His shoulders were huge, but so were his waist and hips and thighs. He must have massed close to a hundred and fifty kilos.

"Who could you trust? No, no. Better than that. Who could I trust?"

"Adila," I said flatly, knowing he would.

Faruk smiled. Oily and nasty. Of course, with my drug in me, I could afford to feel that way.

"She does have her charms."

"Same deal only you give her a week's worth too."

"I could make you share yours."

"Cuts the time too short," I said.

"True.

"Send her to me. This afternoon."

I nodded and slipped the hissers into my security pocket on the inside of my jacket.

"Be careful now," he said, as I started through the door. "And remember what's at stake."

As I ascended, his big, hollow laugh followed me through the rings of hell.

But first, I had to find Adila. Before she tried to score with Mando Kahn. Mando was a worse crook than Faruk, and I hoped I wasn't too late. In my right hand pocket, I had my subsistence allowance for the week, so I hailed a cab. The bird came down with a hiss that scared the pedestrians and the tourists, scattered them like a flock of frightened sparrows. The cab settled on its cushion of gases, the driver a toothy smile behind the joystick.

"Where to, pard?"

"The Blue Gila," I said. "And make it quick."

"For three standard I can do it in less than four minutes." I passed him the credit, my implant to his—a kiss that only lasted a second.

He held up his arm and checked even though it beeped positive.

"Time me," he said, confidently.

"I'm counting," I said.

But I wasn't, really. I was thinking instead. Thinking of the penalty for stealing alien artifacts from Krillich II. There was only one penalty. Death. Immediate death by lethal injection. Somehow, though it scared me, it seemed appropriate. If I failed, I'd get the last fix, the final hiss, the fix that served paradise or hell—if one believed in such things. I believed in both. At least I'd seen both in life. In death. . . ? Well. In death, I thought one found

death.

The profound thoughts of a junkie followed me across town as the cabbie fired his bird through a rapidly brightening sky. He'd make it easily, I realized. It was a sucker bet.

ando Kahn's place was a sucker bet, too. At least Faruk gave pleasure for his money. Everything in Kahn's place was a rip, one way or the other. The drinks were thinned, and the drugs were diluted forms, rip-offs his own personal chemists made in the back rooms. They also made most of the tourist trade's *objets d'art*. I sometimes wondered about humanity and its tendency to let itself be ripped off with a smile. Of course, his stuff looked good. For a while. Things didn't start to deteriorate until the tourists were safely back on their ships, heading for home.

His drugs and alcohol were murder. Literally. Which is why I'd hurried. I needed to get there before Adila's rush wore off and she spent her allowance on something more dangerous. Maybe I'd make it.

Unlike the Rings of Hell, Kahn's joint was all on one underground level. A great bar ran the circumference around an imported hardwood floor. Rumors had the cost of that floor at a million credits, and I didn't doubt it. The hardwood was all



In the Winds that Sleep

imported from off planet, a laminating of all the best hardwoods from a dozen settled rim worlds. It cost a fortune. Unlike his competitor, Kahn dealt strictly in chemical and human entertainment. He sported the colony's largest warehouse and largest pharmacy and bar.

I scanned the people standing, and the people sitting, hoping almost against hope that I'd find Adila out on the floor somewhere. If she'd disappeared into one of the private rooms off the bar, then I'd have more trouble. Privacy was greatly respected in Mando Kahn's place; they wouldn't take lightly to my snooping for any reason.

What had she been wearing? The red sheath dress? Yes. Look for the color.

And then I spotted her. She was leaning against a far end of the north wall bar, barely propped up. Two men were near her, one on each side, arguing fiercely.

By the time I reached her, Adila was being pulled in two different directions.

"I asked the lady first," the man on the left said. He was short and squat and dressed like a buccaneer. His triangular hat held one purple feather, which almost matched the burgeoning red of his nose. The man on the right had set his jaw in a grimace as he tugged on the other arm. "But she promised me."

"Gentlemen," I said, loud enough to be heard over the music that emanated from the walls. "You don't want this one. She has Majori's Syndrome."

Both dropped their hands like they were holding something too hot to handle.

"She's a sickie?" the man on the left said.

"Arghh," said the man on the right.

"Time to see the doctor," I said to Adila, close into her face so she could see my eyes.

"You got well," she said, taking my hand and unfolding herself from the bar. She couldn't walk well; her bloodrush a memory now at least a quarter hour past. I could see the little tics that jiggled the flesh beneath her eyes, and I could see the pain deep in her eyes. It lay there like some dull serpent, a thing that must be eating her insides, dissolving her bones to dust.

I half shoved, half carried her past the crowds lining the great bar. There was no sign of Mando Kahn, and no one else tried to stop us.

"Kahn lied to me," Adila muttered, as I led us out.

"What's new about that?" I said.

"But he promised," she whimpered.

I moved her through the outer doors, out onto the hot, bright street, and propped her against the wall of the building. Her body wouldn't stay still; muscles leaped and played against her will, some symphony beneath the skin that danced to its own tune. I pressed a hisser to the inside of her left elbow and watched her eyes as she got well. A spark grew back there, then focused, the light becoming bright and strong.

"Ah, mercy," she said. "What was that?"

"Some new concoction."

"God, it's good. Is it keyed?"

"I don't think so—at least not in any specific genetic way. But it seems to hold."



Absolute Magnitude



She straightened up, rubbing her stomach as if the memory of withdrawal still created an ache in her gut. "How much of your soul did you have to sell?"

I stared deep into her quickly pinpointing eyes. "Both our souls, sweetheart. I cut you in."

She didn't complain, I'll give her that. She merely peeled herself from the wall and started striding along the walkway with me. Waiting for the pitch.

Krillich II tightly orbits a red dwarf star two kiloparsecs from Solstice III. The planet is closed, of course, under the jurisdiction and edicts of the Refederation. It has been since Jayson Orwell found evidence of a declining, once-advanced race that humanity thought a myth until then. But there were archaeologists on the planet, and paleoexobiologists, and a scattering of others who had legal permits to dig and find valuables for the government.

We'd be doing the same thing. Without the permit.

Our pilot was a combination of things: all of them bad. She had the look of an ex-mercenary, too much bulge and muscle, too much thew to the thigh. And she had a smart mouth that twisted in a grimace when she chose to speak.

"You two heads really know what you're doing?"

It set the tone.

"Just do your job," I told her, brushing by and winding my way down to the passenger cabin. The ship was old but I knew most of Faruk's tricks. She'd been rebuilt where it didn't show, maybe a new twin mini hole drive under all that deck. Only 26 hours flight time. For two kiloparsecs that was fast.

I took the top bunk.

"You don't get space sick do you, Adila?"

She peeked her helmet of dark hair from beneath the lip of the bunk. "I won't now that I've got the stuff in my system. Before I would have."

"What do you think of our driver?"

"She's a punk. But so what. As long as she's competent . . ."

I wasn't too worried about that; Faruk only hired the competent. Even Adila and I had more than enough experience for Faruk. Before coming dirtside to Solstice, we'd both beaten our way around the track of sites. I'd grown up in a family of exobiologists, and Adila came from a long line of psychosocial historians. She'd put more than one culture together from the remains and the artifacts. And I'd found more than one. None, though, as important as the Krillich.

Not that it mattered for this trip. All Faruk wanted were the bones, something to display in his private collection. He took pride in what he could have stolen, kind of a counter strike, I thought, for all the sin taxes his joint paid out to the government. And it was something he could trot out in pride after hours, the way some men used to trot out a painting by Picasso or Van Gogh.

We were to be thieves. Knowledgeable thieves, but thieves never the less. Stealing was always risky, but stealing from a planet officially closed by the Refederation carried the death penalty.

I kept thinking about that. About that last fix, the one with no withdrawal and no rewards. It made my neurotic side twitch because it was such a fitting way for a junkie to go out.

"What do you think it would feel like?" Adila echoed my own thoughts.

"What?"

"That last shot. If they catch us."

"Never thought about it," I said, hearing the lie come true from my lips. I'd gotten quite good at lying. There wasn't even a quiver in the words.

"Yeah, sure you haven't," she said.

And I let it go.

Asolar day later I leaned over the pilot's shoulder, staring at the surface map of Krillich II. All the government digs were marked in red. With little Xs, though someone had marked other possible sites. I supposed that Faruk's information was good.

"How do we get down?"

"Easy, junkie. They don't have any planetary defenses up in an outback like this. We just slide past their obvious nets, nice and easy. No big fusion burn in those little sleds you're taking down from orbit. I'll hide out up here."

Krillich had several moons, two in close orbit, so I didn't doubt it could be done.

"What if we get in trouble?"

"Don't," the pilot said. "If you do, I'm gone."

In the Winds that Sleep

So we crawled into a twoship and slid from Mother's belly and made our way toward an X. This one was on the farside of the planet, away from the rest of the digs.

We fell through the atmosphere like a hot stone, our ablation shields turning rainbow colors as the atmospheric gases boiled away on the edges.

"This part nauseates me," Adila said.

"When'd you fix last?"

"This morning, a couple of hours ago."

Junkies, reflexes—questions like that. But I couldn't help it. Below lay the remains of the creatures whose reconstructed genome were the reason for my junkiness. I felt a deep flush of shame and hate toward a race I'd never met.

"Yeah, I'll find their bones," I muttered.

"Huh?"

I shook my head. But then I said, "Don't you feel anything? For the Pithies?"

"You mean, do I hate them or something?"

I nodded.

"No. I hate the medical researchers who decided to use their genome as a filler in the virus inserts. I know why they did it"—because of the shortages of DNA from Earth—but I don't hate the Krillich for it."

"You're a more reasonable human than I am, then."

She grinned. "I could have told you that."

We had no more time for small talk as the ground rose to meet us. I prayed the autopilot was wise and well programmed, and ground my teeth together and held on. We finally slid to a stop a hundred yards from the shards of ancient civilization.

"Faruk has great intelligence to find this first," I said, as we walked toward the site. We both wore lightweight Synskins, with the helmet faceplates open. The air was breathable, though heavy still on carbon dioxide and some old, long-lasting industrial contaminants.

"There's a lot of sites and a limited budget."

I stopped on the crest of a hill. Looking down the other side I could see the first triangular spires rising from the overgrown earth. There was a lot of glass or something like it that winked back in the afternoon sun.

"Looks like a city asleep, doesn't it?"

"Looks like a city dead," she said. Then her eyes glazed over in memory. "A city that lies in the winds that sleep," she said. Then she smiled.

"What was that?" I asked.

"An allusion from a 20th century Earth novelist."

"Let's go find Faruk's bones," I said. We went, making our way through thistle and bush, entangled every few feet, until finally we came to ground growing sandier as we reached the first buildings.

"Can you imagine how much must be beneath ground?" Adila said.

"Most of it. Like an iceberg, only rooted in ground instead of water."

The city rose around us, spires that towered hundreds of meters above our heads. And that was only the tip. Some of the Krillich buildings were known to go a kilometer, from base to top. We walked entirely around one pyramid top, searching for an opening, and finding nothing. The sand was making it hard going.

"How do we get in?"

"Any way we can," she said. Her face was splotted from the heat and the exertion, and sweat ran down her cheeks like tears.

I was out of breath.

"I gotta stop and fix," I said.

Her look was openly suspicious. "Didn't you do yourself this morning?"

"Different schedule than you," I said.

"You aren't . . . fixing more than once a day are you?"

I didn't answer.

"Because if you are, something's wrong. There is no tolerance build to this drug. It's like an enzyme, and your body can only use so much. Any more is a waste. Worse, it's probably dangerous. Maybe fatally so . . ."

"I'm just on a different schedule," I snapped.

I didn't need Adila to regulate my life. But she was wrong about the tolerance. I needed a fix twice a day. The terror, of course, that rose from this was the time factor. I only had enough drug to last half as long this way. Faruk had given us enough for seven days each, but I'd effectively cut my time in half. Whatever there was to find, I'd have to find very quickly indeed.

I rested on the crest of the hill surrounding the next set of buildings while Adila walked ahead. The air had a tang to it of old chemicals not yet incorporated into the dust of the planetary soil.



Absolute Magnitude



Like a hangover, it irritated my throat and nose until I sneezed to clear the particles. Dust in my nose, sand at my feet. The storms that had slowly buried this city, how had it felt, to these buildings, being slowly covered? Like a drawn-out smothering, with plenty of time to know their eventual dark, silent death? Or had it been comforting as being snuggled into a warm blanket of soil, knowing it was time to sleep, now that their inhabitants and builders had already passed on?

With their genomes mixed with mine—why didn't I feel closer to the doomed Pithies? I felt more for their buried buildings, and I was about to raid those for secrets long hidden. Hidden myself from Adila's direct line of sight, I started to unseal my pouch of hissers.

"Come look at this," she called. "The ground is looser here, maybe we can dig down a few levels and find access."

Well, the cramps weren't that bad yet; maybe I could put off the fix for a few moments more—

And Adila vanished.

I blinked, thinking this some illusion of bright, planetary air and sunlight. But no, she was gone.

I started running toward the spot I'd last seen her.

Before I got there, the entire city started to vanish, just wink out like a mirage. Beneath me the sand became a slick-sided hole, and I flailed like some mad sea creature suddenly abandoned by the buoyancy of a lifetime. My arms flew over my head, the lights dimmed and I fell. Almost forever. But slowly. The way a body would fall in very low gee. No problem, I thought in the darkness. I won't even break a leg. And I probably wouldn't. The only other problem was: I couldn't breathe. Whatever had sucked the ground away had also taken the air. I tried not to panic but found myself screaming, anyway. The irony wasn't lost on me. It might be the

last breath of air I'd ever have. And I'd just wasted it. The city wanted me to know first-hand how it had died.

I passed out.

Have you ever had a general anesthetic for a surgical process? Time passes then, deep within the brain somewhere, but when one awakes he has the strangest feeling that nothing has happened, that time has stopped somehow. Then as that feeling subsides, one starts to realize that something major has taken place, that something has changed. Then the fear sets in as one realizes: maybe a month has gone by, or perhaps a year. Or perhaps a lifetime.

I felt like that as I came around. Woozy and groggy. There were sore places upon my body that I automatically rubbed, and my head thrummed with some sound I couldn't really hear, as though I'd been straining to listen to my own blood as it pulsed inside my arteries.

Am I alive? I seemed to ask myself. Has the city killed us?

I heard a moan.

Moved my head a bare inch, turning it toward the sound. Adila was a few meters away from me, her form indistinct in the dim light.

"Adila?"

I moved to her, hunched over in pain.

She lay curled like a child in sleep, nestled in the bed of sand our descent had brought with us from the surface, her thumb near her small mouth. Her black hair was ruffled, a cowlick jutting from the back of her head like a single, hairy horn. Her helmet lay on the floor beside her.

I shook her gently. "Wake up, baby." With the word, a flush of desire crested in me, and I leaned over and kissed her. Her lips were parted and warm, and she responded, and before I could pull away we were a wriggling mass of arms and legs. We tore our clothes away, heat seeking heat, until we joined in a rapid, mind-tearing kind of completion. It felt like mutual rape, and as soon as it was over, we pushed the other away, embarrassed at our sudden passion.

"Holy Josephine!" Adila said. "What caused that?"

I sat on the hard floor, pulling my clothes together while shaking out the sand, gathering the lightweight once more around me. "I don't know, it just—hit."

She sat up, one breast still exposed. Quickly, she covered herself. "Where is this place?"

"Beneath the city," I said. "You disappeared. I ran after you and fell down a hole."

She stared at me in disbelief.

"We're underground," I said.

She turned then, to look around her, and I noticed for the first time that the light had grown brighter, as if our impromptu love-making had warmed the walls themselves.

The light came from strips implanted in the walls, four roughly parallel lines at shoulder height, glowing like inflamed claw scratches. The sand around us was the only reminder of the planet's surface—only blackness stretched above us, but the corridor we'd fallen into was clear both ways. We stood, shakily and gazed about us.

"Which way now?" Adila asked.

I shrugged. "Does it matter? We'll search until we find what we need. Faruk's bones. Let's go this way." But I'd taken several steps before realizing she hadn't moved with me, but had indeed gone in the opposite direction. My irritation was sharp in my throat, and I

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tried to swallow it, and my need for a fix. "Why ask me at me all if you'd made up your mind?"

The frown she gave me wasn't one of irritation, but of concentration.

"Look at the lights."

I did. The panels closest to me had dimmed to their original muteness, while those in the direction Adila had chosen had brightened.

"Okay, I can take a hint. Lead on."

We came across the first door immediately, but couldn't get the inserted door to budge. Twenty paces later, another doorway just the same, and just as stubborn. Five doorways later, we came to a stretch of corridor where it took forty paces to reach the next door—and this door was easily three times the width of the others. No handles, no signal panel, no coding buttons were in sight. I tried my hand at budging the damned thing, then Adila took a turn.

"Maybe together?" she said. "It's obviously an important room—but I don't think it's locked, just stuck."

Side by side we stood, shoulders and hands jammed to the door surface, hoping we were pushing in the right direction. Nothing. We tried then right to left, and Adila's jaw clenched and I could see her throat muscles bunching with the effort. My own muscles spasmed with fix-need, and either that supplied the extra force needed or whatever Pithie gods were left took pity on us. The door trembled beneath our hands and slid gratingly away to recess within the wall.

The chamber within was dark, but even as Adila stepped in, the same lighting source brightened until we could see what occupied the room.

The entire center space was filled with a slightly raised circular pedestal that was encased with glass. Adila went straight to it and put a hand out to brush the transparency. No, it wasn't glass—more like frozen gases, though as clear as silicon or quartz. And what it held—Adila turned and grinned at me, and despite my pain and paranoia, I grinned back.

"Faruk's bones," she said.

And she was right. There was that and much much more. Behind the transparency lay a three dimensional cut out of Krillich culture. Some kind of domestic scene, I guessed. There were several of the Krillich in varied positions, like mannequins in an old fashioned store window.

"Are they a family unit?" Adila asked.

There were three adults and two that must have been children. And there was something six-legged that had a tail. "Museum of natural art?" I said.

We'd both had experience in this field, but neither of us had ever seen anything like this.

"They look so real."

I stared at the frozen tableau. "I think they are."

She stared at me, the realization dawning in her expression. "You mean—"

"It's some type of stasis field." I said, and stopped when I realized the edges looked like they were dissolving.

"We've set something off," I started to say, but I didn't get to finish the sentence. Suddenly, the air quivered, and there was a pressure change—my ears popped with it—and the tableau came slowly to life.

There were three adults dancing around a small table. As the edges of atmosphere dissolved, they moved. All three, somehow in



each other's arms, as though they were celebrating some great event. In their midst there was a small table, but we couldn't see that well, and I started toward them to reach Adila's side. "Be careful," Adila said, and moved behind me.

But it was too late to be careful: they'd seen me. Their eyes were filled with a renewed spark of life, yet still dazed as if from a too long sleep. They never stopped dancing, though the one who noticed me raised a hand in what I took to be greeting. They continued to circle the small table, and I realized this was a ritual of some kind, maybe something of religious significance. And then, before I could reach them, they started to gasp, as though the air were bad, and by the time I crossed the pedestal boundary to the table, all were on the floor. Their chests heaved, and their raccoon faces looked fragile and pain-ridden. "Dinok Sinkoli," one muttered, as it tried to raise a hand, then the creature coughed, one last glance at the table, and they died in frozen posture, still in each others embrace upon the floor.

"They can't breathe whatever their air has become," Adila said from behind me.

"That or their time was up long ago," I said. "And this was truly a last gasp?"

Something slithered on the table.

It so matched the design of the table top that I almost missed it, and carelessly placed my hand near its snout. It struck, a serpent with fangs, and I jerked my hand back quickly. Quickly, but way too late. Three spots of color appeared on the back of my hand as my blood pooled around the bite.

"Damn, it got me!"

Absolute Magnitude

The serpent had reared its head now, and its eyes—green and large pupiled—glazed over. The head thumped down and the tail twitched, and then it was still.

My hand was going quickly numb. This was not the injection I'd wanted.

"How bad is it?"

"I don't know," I said, trying to stand on the panic before it threw me into a fit.

Adila pulled a steri-bandage from a pocket of her lightweight and slapped it on the back of my hand. "It's good for almost everything known to infect humankind," she said. "Whether or not it will work with this. . .?"

"Look at the bodies," I said.

On the floor, they were quickly turning to dust, their faces blurring as the features lost definition. As if their very culture and advanced civilization were eating itself alive from the inside out. Within seconds, the last of the Krillich were gone, our entrance dooming them a final time.

"There go our bones," she said.

Even the serpent on the table had started to disintegrate. Soon all that was left were his triple fangs. For some unexplained reason, they remained whole on the tiny table. I felt dizzy, and my head was swelling from the inside out. My eyes wouldn't stay open, and the colors rushed from my brain, predominantly red, and filled my vision as the serpent's poison rushed to find its way to my heart and brain.

"I think I'm dying," I said.

Adila leaned against me, taking my weight. She'd always been strong, physically, and she seemed to half drag half carry me across the room.

"What are you doing—just let me lie down."

She pulled me along, against my will. All I wanted to do was sleep. There wasn't any pain, just a lethargy like the deepest fatigue I'd ever felt. I completely understood how the Pithies must have felt. Much easier to just lie down and disintegrate. No more pain—no more problems.

We were out of the chamber, back in the corridor—was I aware enough to notice that—or did Adila tell me? The warm haze made it hard to tell. My limbs grew heavier and my feet dragged. Adila took more of my weight on her.

"Hold on, Brody—we did trigger something. All the doors have opened along the way. There has to be something in one of these rooms. . . just hold on."

Did I hold on? I had no memory of that—only of Adila holding me and dragging me along. I felt it as we bumped into an open doorway—she'd brought me into another room.

"I saw something over here," I heard her say, as if from a great distance. She gasped in the stale air.

"Take it back to Faruk," I said, stupidly. "Maybe he'll accept it and give you your supply." I was rambling, and Adila was trying to pull me up. "What?" I said.

"Inside," she said.

"What?" I repeated. I was almost out on my feet.

Her fist pounded on something metal, and my head cried out at the noise. Then she half pushed me forward and blackness closed around me.

"No!" I cried out, positive she was dumping my body so she could go on alone. "Don't leave me!" I started to fall, then I could

feel Adila press close to me in the darkness. I felt closed in, and wondered if we were in a closet. Then something clicked, then whirred, high and electronic.

"Brody, pray I programmed this thing right."

"What is it?"

"I think," she said, "I think it's an—"

But I heard no more. She threw her arms around me to keep me standing, then darkness closed around the red inside of my eyelids and I went away.

To somewhere.

Maybe this was like that last shot would be—an empty land where I floated free, without pain or fear, but without feeling. And still its peacefulness nagged at me. There was so much I hadn't done, so much still to prove. And then . . .

Then I was back again.

The light seeping in from the open doorway struck my face and hurt my eyes as I blinked them open.

We were side by side in something that looked like an upright coffin.

"Where the hell are we?" I asked stupidly.

"Auto doc—Krillich version," Adila said.

The meaning of her words struck me and I blinked again. "You trusted an alien machine?!" I felt outraged.

"Ungrateful bastard," she said.

And she was right. Whatever had bit me might have been fatal without her intervention. It was just such a risk, such a stupid chance to take. And still . . . without that risk . . . would I still be alive?

Adila stepped out first. Then pulled me after her.

I looked back at the alien machine. It was vaguely coffin shaped, and lights still flickered across its surface. The room was small, with shelves, cabinets and tables all empty.

"I just turned it on. I'm good with machines; you know that."

"It could have killed both of us."

"Let go of it," she said. "Be grateful for once in your miserable life that someone else could do something for you."

She was right, and I let it go. It hadn't been for myself that I'd been mad. But endangering herself . . .

"All of the bodies . . ." I started.

"Are now dust," she said. "We disturbed the field when we entered the room, started some self-destruct cycle."

"And the thing that bit me?"

She looked into my eyes. "How do you feel?"

"Fine."

She looked troubled, though.

"Do you feel . . . different?"

I thought about it. "Stronger," I said, "than before." But there was something else, and I realized why she'd asked. The craving was gone. Since the techs had used the filler in the virus inserts, I'd had a gnawing, terrible craving for something indefinable. Only the drugs had eased the feeling. Until now. Now I felt . . . what?

"What do you think the machine did to us?" I asked.

Adila shrugged, as if she didn't care. But her eyes said differently. Her eyes still held a look of deep concern.

"You still need your fix?"

In the Winds that Sleep

I breathed deep and thought about that. It wouldn't normally take much thought; I'd always needed it before, since the filler and the insert viruses. But now, for the first time in years, I felt free.

"No," I said. "I don't."

"We're ahead, then, so call it quits," she said. "Now find us a way out of here."

And I did, after circling more of the corridor which lit up as we approached and dimmed as we passed. One of the few doors that still remained shut, opened up to a slanted vertical shaft with old fashioned hand rungs that led to the surface and exited through a plasteel cover. Every step of the way I kept expecting to see Pithy clawed hands juxtaposed over my own pale fleshed ones, climbing my way to freedom.

There was no thought of further exploring once we gained the outside. We just wanted off this planet.

As we crawled into the twoman, I said, "Faruk will be pissed."

Adila reached into a sealed pocket and then held out her hand toward me:

"He'll have to settle for these."

In her hand she held the serpent's teeth. They lay there, an inch of curving bone, with small holes in each tip. Like tiny scimitars. I remembered the bite of them on my flesh. We lifted from the planet, and I wondered: Krillich genomes, Krillich poison and Krillich medical cures in me; just how much of my former self was I left with?

I placed my hand over hers, covering the teeth.

Clean and free, frightened but alive, we broke for orbital rendezvous.



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Primary Ignition

Dispatch from the Radjah Club

by Allen Steele

On a mountain ridge on the Caribbean island of Dominica, by the side of a narrow road winding through the rain forest above the vast Roseau Valley, stands the tombstone of Will Parkerr. Whoever Mr. Parker was, he died here in 1832, outside the tiny village of Trafalgar; before he passed away, he took pains to write a long and detailed will, leaving all his property and possessions to his wife and family. His final testament is inscribed on both sides of the white-slate grave marker, placed in this lonely yet beautiful spot after many generations by one of his 20th-century descendants. It's impossible to miss the tombstone if you're passing this way; this far into the island's interior, any human artifact is immediately noticeable.

The tombstone's epitaph reads: "Madness Is Gladness."

There's no clue as to what Mr. Parker meant by this statement.

You reach Dominica by boarding a Boeing 757 airliner jammed with tourists and screaming babies and flying for several hours to San Juan, Puerto Rico, an international airport indistinguishable from any other in United States territory except that all the bilingual signs treat English as a second language. You make your way to an American Eagle gate where you make connections with the one and only daily flight to Dominica, a twin-engine turboprop with a passenger compartment little larger than a Greyhound bus. At this point, you leave most American tourists behind along with fast food, air conditioning, ATM machines, daily newspapers, rock music, and just about anything else you take for granted. They're easily found in the Bahamas or Martinique, but that's not where you're going.

Your first encounter with what's commonly referred to as "Caribbean time" is the fact that the plane leaves more than a half-hour after its scheduled departure time. No reason in particular, because the plane is sitting right out there on the tarmac, ready to go. It's just that no one is any special hurry,



and that's all there is to it. You meet your first native Dominican while waiting in the jetway which doesn't actually connect with the aircraft, but instead leads to a runway ladder: a friendly young guy in his early 20's, with the darkest skin you've ever seen and a lilting West Indies accent, approaches you and, after formally introducing himself and asking your name, tells you he's a taxi driver and inquires whether you'll need a lift to your hotel. When you politely refuse—your hotel is supposed to be sending a car and besides, to be honest, you really don't trust this dude—he smiles in the way no Boston cab driver has ever learned, and tells you that he hopes you have a good visit. And then he goes back to his wife, and softly says that the American didn't trust him. They both share a soft laugh at your expense, and you suddenly feel like a schmuck.

The flight takes just over an hour; much to your surprise, it's far smoother than the earlier flight, and the little Dominican girl sitting with her mother in front of you remains calm the entire time, every so often peeking shyly between the seats at you. The islands of the Lesser Antilles drift past your window one by one—St. Kitts, Nevis, Antigua, Montserrat, Guadeloupe—until halfway down the long archipelago the plane starts to descend and, all of a sudden, the island of Dominica passes below you. The Atlantic coastline has none of the white-sand beaches you're accustomed to seeing from travel posters; the shore is rugged and lined

with high, rocky bluffs, and as the plane makes its final approach, almost all you see are mountains and dense jungle. No resort hotels, no casinos, no shopping plazas. You're definitely not landing in St. Thomas.

The airport at Melville Hall is third-world primitive; no vending machines, no newsstands, no restaurants. The walls could use a fresh coat of paint; everything looks threadbare and worn-out. When a small cargo jet lifts off from the single runway, you hear the blast of its engines through the terminal's open doors. The thick woolen sweater you put on when you left Massachusetts before dawn is uncomfortable even tied around your waist; in mid-January, it's at least ninety degrees. Almost everyone here is a native Dominican, which means that you and the few other Americans or Europeans easily stand out, and not only because of skin color; the locals all speak a rapid-fire French patois you couldn't possibly understand unless you were born and raised here, and their attitude is far more laid-back. Not so the customs inspectors; they carefully examine your passport, making sure your face matches the one in its photograph, and thoroughly search the contents of your duffel bag. There are almost as many anti-drug signs on the walls as there are advertisements for Kabuli beer.

Just outside the terminal, a small horde of taxi drivers vie for your services. Your hotel didn't send a car after all, and since your friend from San Juan International is no where in sight, you pick a driver at random; when you tell him your destination, he informs you that the fare for you and your mate is fifty dollars American. Steep, but what are you going to do? The hotel clear across the island. American money turns out to be the favored means of exchange; even after you cash half of your travellers checks for several hundred dollars in Eastern Caribbean currency, you discover that almost everyone here prefers American green. The taxi is a Toyota stretch van with a left-hand steering wheel; the only other passengers are two other Americans, a young couple from New Jersey who look just about

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as nervous as you are, and a grey-haired gent in the front seat who reads a paperback and ignores you. The driver stows your baggage in the back, wanders around to see if he can get any more riders, then reluctantly climbs behind the wheel, and off you go.

The roads are one-lane, for the most part, and about as wide a city sidewalk, with crater-like potholes large enough kill a limo. This doesn't stop your driver from roaring down them at an average speed of 40 mph; as your taxi hurtles through the nearby village of Marigot, the driver hits the horn every few seconds, a constant Road Runner beep-beep! that sends roosters and dogs and teenagers and goats racing for the crumbling curbside. Its only when a truck or another taxi approaches from the opposite direction that your vehicle slows down; both drivers hit the brakes, gingerly slide past while exchanging a smile and a wave from a distance close enough for them to shake hands if they were so inclined—or call each other by name, as they often do—then it's pedal to the metal again, and you clutch the seatback, smile your helpless-tourist smile, and pray that you didn't forget to make a life insurance payment this month.

You leave Marigot behind. A last, brief glimpse of that hostile Atlantic coastline, then you begin a rapid ascent into the mountainous inland, racing along roads that twist and curl around bends in serpentine loops that make you sincerely grateful that your stomach is empty. Suddenly, you come up and around a ridge, and a great valley opens before you: coconut, palm and banana trees as far as the eye can see, the air thick with humid mist, hemmed on either side by towering cliffs, volcanic mountains lurking in the background. It's Jurassic Park without the dinosaurs, a fantasy landscape lifted straight from a Roy Krenkel painting for an old Ace paperback reprint of an Edgar Rice Burroughs novel. It's the land that time forgot, Pellucidar raised from the Earth's core. It's every unearthly landscape you've ever imagined, but raised to the power of ten, because it's real, and it's true, and it's there.

In some ways, Dominica (properly pronounced Domin-EEK-ah) could almost be viewed as a template for a science-fictional interstellar colony. This wasn't why I came here—I hadn't visited the Caribbean before, and I wanted a warm and uncrowded place to celebrate my 40th birthday—but during the week I spent

exploring the island, the more it gradually occurred to me that a SF author could model a colony world after this island.

Dominica was originally settled by the Carib Indians, who earned an unsavory (and, according to 20th century archaeologists, unwarranted) reputation among neighboring West Indies islanders for cannibalism. This rep, along with the fact that the island offers few sheltered harbors, meant that it was ignored by the Spanish, and even the privateers and pirates who freely roamed the Caribbean tended to stay away. Christopher Columbus named the place on his way to North America in 1493, and the French claimed the island during the 17th century as a plantation colony—their African slaves would eventually form the island's major population, making the Caribs an ethnic minority—until they were forced out by the English a century later after a series of nasty wars, most notably the War of the Saints with nearby Guadeloupe. Fort Shirley, the British fortress located on a low mountain just outside Portsmouth on the tip of the island's north Caribbean coast, stands to this day. Spectacular views, lousy quarters; the British Navy must have been considered it a hardship post. England held onto the island as a territorial possession until 1978, when it granted Dominica its independence.

As a long-term consequence, Dominica has remained remarkably underpopulated and undeveloped; it's like what the Bahamas might look today like if the indigenous population were once renowned for eating the tourists. Shaped somewhat like a kidney, the island is about 28 miles long and 15 miles wide, yet it supports a permanent population of only about 90,000 people, most of whom live in small towns scattered along its coasts. Although the official language is English, which nearly everyone I met spoke and read fluently, the preferred tongue is Eastern Caribbean patois, a creole dialect which I doubt a French-speaking American could readily understand. Since the major religion is Catholic, most of the schools are private and operated by convents; everywhere you go, in even the most remote village, you're likely to find children wearing school uniforms.

The capital city, Roseau, is approximately one-third the size of, say, Knoxville, Tennessee, or Worcester, Massachusetts; aside from a very American-style tourist hotel on the harborside across from the cruise ship port, it's hard to find a building

more than five stories tall. The island supports two radio stations; my wife and I visited one of them, Kairi (93.1 FM, "The Genuine Sound of Dominica"), and were granted a tour of the facilities its general manager, an alumnus of Boston College. The DJs serve up a sweet blend of reggae, hip-hop, and calypso that you hear all over the island, from taxi radios to grocery stores to the countless dozens of sidewalk bars. There are no local TV stations; the only TV set in my hotel, located in the open-air mezzanine, received satellite feeds of CNN, TNT, and TBS from a network of mountaintop microwave dishes; I was told that one of these antennas was hauled up a mountain by a 22-year-old kid who earned \$40 for his efforts. There's one weekly newspaper, *The Independent*, which somewhat resembles one of the alternative papers I used to work for when I was a journalist; no comic strips, but it has the most hilarious advice column I've ever read.

Buses run on schedule, more or less, between the major towns; they're really the aforementioned Toyota vans which also serve as taxis, but a little more cheap to ride if you don't mind high-speed drivers and a lot of company. The major mode of public transportation, though, is hitchhiking—you stand on the shoulder of the road and wait for someone who might give you a lift, if they don't run you down first. Yet it's an efficient way of getting around; Linda and I tried it one evening, making our way back to our hotel from a small town where we had dinner, and the first two cars to pass us nearly slammed into one another in their drivers' haste to offer us a ride.

Crime is negligible. Drug traffickers have discovered the island, resulting in a widespread anti-dope campaign by the government, but one taxi driver explained to me that, since convicts serve hard time working on public-service projects and their friends ostracize them when they get out, breaking the law just isn't worth it. The week I visited Dominica, the major crime story reported by *The Independent* was a Christmas Day prison breakout, and that was instigated by Puerto Rican drug thugs; otherwise, there was virtually no reportage of violent crime. Poverty is commonplace, particularly within the interior, and disheartening at first sight, but not nearly as bad as some other places in the world; indeed, I've seen worse in certain neighborhoods of St. Louis.

Absolute Magnitude

There are no dangerous animals on the island—no poisonous insects or snakes, no gators or crocs lurking in any of its 365 rivers, no jaguars, boars or bears within the humid rain forests. Not even any monkeys. Just the everpresent cattle, chicken, and goats who haunt the roadside; the iguanas and boa constrictors are harmless, the geckos so numerous that after awhile you stop noticing them. The rivers are clean and clear; some have their sources as hot springs nestled deep within gorges between the island's eight dormant volcanos, and mineral springs are commonplace along the trails. Mountain plantations are thick with fruit-bearing trees of every description—banana, grapefruit, orange, mango—along with coffee and cinnamon, cabbage and tobacco, rubber and sugar cane. One morning I walked out on my hotel room porch to see a teenager scurrying up a tall coconut tree to shake down a few nuts. His companion on the black-sand beach below cracked one open and drank its juice; when he saw me watching them, he offered to trade me a slice of fresh coconut for a cigarette. Fair deal, and with few regrets; with a daily diet and exercise regimen like that, I'm far more likely to get cancer than he is.

"Tropical paradise" is one of those cliches that bring to mind reruns of Gilligan's Island, yet Dominica is one of those few, unspoiled places left in the world that deserves the appellation. The fact that it exists at all is something of a miracle in itself. Whether it continues to stay this way is a story which has yet to unfold.

For centuries, the principal occupation of Dominicans has been citrus farming, but since England granted the island its independence twenty-one years ago, the cost of freedom has been a crippled economy, for Great Britain had been the buttress of the Eastern Caribbean dollar; you're given evidence of that every time you reach into your pocket for an E.C. coin and come out with a well-worn quarter or a dollar stamped with Queen Elizabeth's face. You see signs of post-colonial decay all over the island, particularly in Roseau and Portsmouth: large houses left to ruin, half-empty shops and stores, eroded sidewalks crumbling a little more with each step. England and Canada still have a presence here, but mostly in the form of banks, and it's outside them where you're most likely to find beggars. You may

find odd signs of foreign investment here and there—a sprawling manor deep within the jungle, complete with a satellite transceiver, allegedly owned by a Japanese businessman—but for the most part, Dominica seems to be suffering from the empire blues: what do you do after Sir Littlejohn-Smyth packs up and goes home?

The country hasn't been able to support itself solely upon citrus exports, mainly because it has a lot of competition. The fresh fruit you buy at the local Stop 'n' Shop is just as likely from Costa Rica or Mexico, and despite the fact I've cultivated a taste for Dominican coffee—it makes any other South American blend seem like Taster's Choice by comparison—I haven't been able to find it in any gourmet coffee stores in the states. Taxi-driving seems to be one of the island's growth industries. As one Canadian expatriate told me, Dominica may be paradise, but it's hard to live here; it's a great place to visit, but meeting the rent is murder.

Like many other Caribbean islands, much of Dominica's economy is dependent upon tourism. Much of this is pretty typical. Every morning, another enormous cruise ship makes port in Roseau; every afternoon, the plane from San Juan brings in another large handful of visitors from the States, Europe, and Asia. The people off the cruise ships are met by dozens of guides, licensed or otherwise, eager to take them anywhere they wish to go, whether it be a high-mountain pass or the nearest bar. One afternoon I watched a busload of Americans, Germans, and Brits invade my hotel like frat brothers on spring vacation; they got drunk, screwed around in the surf, and made fools of themselves until their driver rounded them up, loaded them back in the van, and spirited them back to their seagoing Marriott. And there were those staying at my hotel who seemed oddly misplaced: a New York yuppie who hogged the lobby phone as if it were a lifeline to civilization, a Massachusetts teenager who bitched ceaselessly about virtually everything, a skinny German woman who displayed her dubious charms one afternoon by nude sunbathing until she realized that no one was particularly interested in seeing two vanilla truffles on an ironing board.

Yet they were outnumbered by those who came here to savor the island for what it was, not what they wanted it to be. Ecotourism has become the fashionable term for

exploration, yet this is precisely the word which is on every native Dominican's mind. With its lack of boutiques, casinos, and movie theaters, Dominica is never going to compete with Martinique or the Bahamas as a holiday destination for the rich and spoiled. If you come here, it's because you want to hike through rainforest all day to reach a boiling lake within the caldera of an active volcano, or put on a neoprene wetsuit and oxygen tank and dive thirty feet to visit the homes of barracuda and moray eel, or take a mid-morning swim beneath mountain falls so pure and clean that you could brush your teeth in their waters. This is a place for adventurers, not tourists, and after a couple of days you recognized the latter, for they're the ones you'd see at dinner that evening, with sunburns and scrapes and bruises and big, goofy grins.

If Dominica is a tropical paradise, though, it's a paradise at the crossroads of the 21st century. The island is already being discovered by developers. An enormous resort hotel is already under construction on the banks of Roseau River, and a Canadian entrepreneur wants to build a cable-car tramway through Titou Gorge, where it will end in a mountaintop hotel overlooking Boiling Lake. There's a certain amount of madness in this gladness; a mountain landslide last year caused the Roseau River to rise fifty feet above its banks, and the half-built hotel was nearly washed away along with a nearby factory. That should have given its Japanese investors second thoughts about building on a flood plain. And when I happened to meet the Canadian developer while hiking the gorge—sitting on the rear gate of his Ford Explorer, GPS surveying unit in hand, miles from the nearest village—he told me how his hotel would include a restaurant, a bar, a gift shop, and a parking lot. Thirty feet away, a group of native teenagers were sitting on river rocks, rolling ganga spliffs while their younger brothers frolicked in nearby hot springs. It was difficult to tell who was more stoned.

This leaves Dominica in midst of a great debate over its future. Its residents are painfully aware of the fact that they live in poverty; their roads are filled with potholes large enough to break an axle, their children have few options other than driving taxis or waiting tables after they graduate from school, and an entire year's crop of citrus fruit can be destroyed by a single bad storm, as it was during Hurricane Hugo a few years ago. No amount of U.S. foreign aid or UNICEF relief

Primary Ignition

funds can change these things. Yet they're equally aware that Dominica's greatest asset is its wild, precious beauty; although it's tempting sell vast tracts of virgin rainforest European or American investors, Dominicans also realize that the very thing which makes their island unique is the fact that it is undeveloped.

This debate is foremost on the minds of every native Dominican I met: Danny and Israel the taxi drivers, Cornel the trail guide, Francis the dive-boat captain, James Bond (yes, that's his name, although he prefers to be known as 007), the flatboat paddler who took Linda and me down the Indian River to the Radjah Club, a tiny bar deep within the jungle just outside Portsmouth where I slugged back a shot of tequila to celebrate my 40th birthday (the club's motto, painted on a sign above the plank bar: "We Can Remake The World, Not The History."). They live on an island which, for all intents and purposes, could just as well be on another planet: A former colony of a once-mighty empire, now proudly independent yet regularly visited by giant vessels which resemble starships from another solar system. Do you let the aliens take over, and thereby reap the benefits of a technologically superior culture, or do you fight for the sanctity of your native soil, and risk remaining poor for the rest of your life?

If this were the plot of a science fiction novel, how do you think it would turn out?

Mama Falls and Papa Falls are twin waterfalls deep within the Roseau Valley, separated only by a huge bluff, yet they don't flow from the same tributary: Mama runs cold while Papa runs hot. The metaphor should be obvious to anyone who has ever been married more than a year, don't ask if you haven't.

Linda and I had just waded in cool waters beneath Mama Falls, and Cornel was leading us up the steep trail to Papa Falls, when I slipped while climbing some moss-covered boulders. My left leg plunged into a crevice between two rocks while the rest of my body continued to go the other direction. A sharp, jagged pain sliced through my knee; in that instant I realized that my leg was about to break, so I instinctively turned sideways and threw up my hands, deliberately taking the fall.

My leg popped out of the hole, and I rolled a few feet down the trail. Cornel and Linda were in front of me; when they heard me yell, they dashed back down the trail to make sure I was still alive. Cornel gently flexed my leg, my leg wasn't broken, but I wasn't in any

condition to make it up to Papa Falls; when I was able to stand up again, Cornel helped me hobble to a nearby mineral spring, where I sat in the lukewarm water for a few minutes. But my knee was badly twisted, and it wasn't long before it began to swell. As we made our way into nearby Titou Gorge, Cornel used his Swiss Army knife to cut off a branch from a rubber tree to serve as a walking stick.

I relied on that stick for the rest of my vacation. It helped me get up and down hotel steps, in and out of boats, through the ruins of Fort Shirley and to the bar of the Radjah Club, even across the hotel beach where, once a day, I exercised bruised ligaments and tendons in the warm Caribbean surf. It gave me a new nickname among the hotel staff: Stick-Man. Allen the Stick-Man. I was still using it when I lurched back through American customs at San Juan International and, looking every inch the sunburned adventurer, toppled into the First Class seat into which a TWA gate agent had thoughtfully bumped me in deference to my injury.

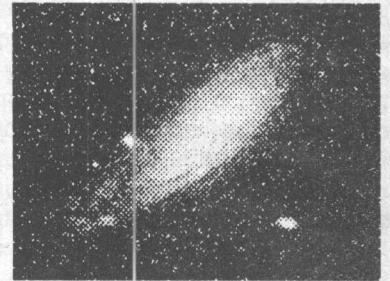
My walking stick now rests in a place of honor in my living room, next to the fireplace where it'll never be used as kindling: an unexpected souvenir from my journey to Dominica, and something of a object lesson. I never went to a doctor, either before I left Dominica or after I came back to the U.S., even though the flesh beneath my left knee had swelled and turned purple for a few days. And let there be no doubt; it hurt like a bitch. Yet I didn't refuse proper medical attention because I was playing tough-guy; I just had the odd notion that Dominica itself would cure me.

An utterly unscientific belief, reeking of New Age shamanism. And to be sure, it didn't hurt that another hotel guest happened to be a physical therapist from Rhode Island, who advised me to exercise my knee in salt water every day and place a pillow beneath it when I went to bed at night. But I can't help but to wonder if there's something about Dominica which lends aid and comfort to unfortunate souls such as mine.

I'm walking fine now, thank you. And I think Dominica is a place we should leave alone. There's enough concrete and high-tech on our planet today, and the course of the next century will doubtless be determined by miracles of high technology. Yet let's allow a few wild places to survive, please, for it's in the wilderness where we ultimately heal ourselves, and find our souls.



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In Memoriam

by Jamie Wild

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There it was on CNN again. *Luke Torington dead at fifty-six. The most decorated ace of the Consolidation War was found dead in a gutter this morning.* I turned away from the holovision and drained my beer. I couldn't watch it again. I wouldn't think of Luke that way. "Red, I need another, and while you're at it, bring me a shooter of 151."

Red looked at me with concern. He knew I'd been Luke's wing man. "Jim, are you going to be okay?"

"Yeah, I'll be just fine after about ten more drinks. Here, have my keys. I'll walk home tonight." Red brought me the beer and the shooter and took my keys.

"Excuse me," a voice to my left said. "Are you Jim Golly?"

I turned. The man owning the voice was a reporter, no question about it. He was maybe twenty-two, just a kid. At least he didn't have a camera crew with him. "I figured one of you guys would find me sooner or later."

"My name's Kyle Amberton. I'm with the *Herald*. I'd like to ask you a few questions about Luke Torington."

"Suit yourself."

He sat down and ordered an expensive imported beer. "According to my files you were Torington's wing man."

"Yup."

"Thirty-seven confirmed kills and eleven probables. That's impressive."

I looked him in eyes. "Look, kid, it was a war. I was a fighter pilot. That's what we did."

He nodded. "I understand."

"No, you don't. You weren't there, you couldn't possibly understand."

Amberton was trying to decide how to approach the rest of the interview. I wasn't being as cooperative as he'd hoped, and he was smart enough to figure out that flattery wasn't going to get him anywhere with me. Most people will bend over backwards to see their names in print. But unlike the masses, I know it doesn't matter. Seeing your name in print doesn't mean spit. Luke taught me that. God damn it, Luke, you never did come to terms with the war.

Amberton had apparently decided how to proceed. "Are you surprised that a hero like Luke Torington ended up in the gutter?"

"Luke wasn't a hero. At least not the kind of hero you're thinking of. He wasn't after glory or headlines. What was it that Pappy Boyington said back on Earth, before we moved our wars into space? 'Show me a hero and I'll show you a bum.' Luke wasn't about being a hero. He flew in that war because it had to be fought and it had to be won. He hated every day of it. Every time he flamed an enemy pilot, part of his soul died. It was sad watching him destroy himself one kill at a time."

"He couldn't have disliked combat that much, he had one hundred eleven kills—"

"And twenty-four probables," I finished for him. "Do you want to hear a story about Luke?"

"Definitely," he said, eyes lighting up.

I was twenty, and fresh out of flight school when I was assigned to Luke's squadron. He already had twenty three kills, so you can imagine my excitement at the thought of meeting him. Well, you're not a pilot so maybe you can't, but I was damn excited.

As soon as I got off the transport, I went straight to the bunks hoping to meet him. He and the squadron had just come back from a mission. Luke had gotten three kills. Now, you'd expect him to be whooping it up with the other pilots, but he wasn't. He was stinking drunk and depressed as all hell.

I walked up to him like an ass and introduced myself. "Captain Torington, I'm Lieutenant Golly, it's an honor to meet you."

He looked up at me. "Well, Golly-gee-whiz, I'm glad to make your acquaintance. Now get the fuck out of my face."

I didn't know what to say. Torington was my idol. I hadn't expected him to act that way. He didn't say another word to me until after our first mission. I don't think I've met a man as morose as Luke was then. I found out later that he could be a wonderful guy and the best friend you could ask for. It was just that after he killed he was impossible to talk with, or be with, for that matter.

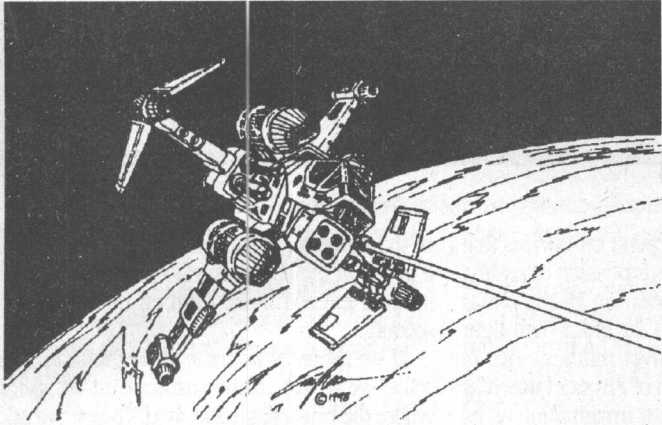
My first few weeks on the base were miserable. No one wants talk with a Cherry. It just doesn't pay to get to know a new guy before he's seen action. Too many Cherries go down their first time up. It's bad enough watching one of your own get flamed; you don't want it to be a friend.

Anyway, after two weeks of hell, we were ordered to scramble. A squadron of Vennies had just entered our space. I wasn't Luke's wing man then, I was just a new member of the squadron. We intercepted the Vennies about fifteen thousand kilometers from Safe Haven. The Planetary Defense guys had completely screwed up. We thought we were just going to be turning back a small sortie. This was a real attack.

We should have radioed for help and fallen back to the planet. Luke never turned away from a fight, no matter how badly he was out numbered. He just dove in.

"Okay, boys, hold onto your 'nads, we're going in," he shouted gleefully, as he lead us straight into the middle of the Vennies formation. Just as we were about to collide with the Vennies, Luke turned us hard to the right and then back to the left. It was the fastest three minutes of my life. I can't even begin to explain to you what it was like. You'd be shooting at this Venny and when you got him, his fighter would just flame up and explode. You wouldn't hear it or feel it, not in space, but somehow that just made it more

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terrifying. If you were moving fast enough, sometimes you'd be hammered with the shrapnel from the fighter you'd just flamed. I was almost paralyzed when the body of one of the Venny pilots bounced off my wing. It wasn't that I was hurt or scared, it was just that—well, it was just that I was numb. That had been a man. A man exposed to vacuum and then slammed into the wing of my fighter.

I spent more time dodging fuselage than I did fighting. Still, I flamed three Vennies that day. Luke got ten. I've never seen anything like it. He flew like a mad man. He'd get so close to a Venny, sometimes, that you'd swear he was going to crash into them. Then they'd flame and he'd roll and hit another one. The way he screamed when he fought made me think of one of those Norse Berserkers.

Like I said—oh yeah. I'm talking to a college man. As I said, it was over in three minutes. All told, we'd flamed twenty-seven of them. The rest turned tail and ran. We didn't lose a single fighter. It was pretty miraculous, but then every time Luke flew it was miraculous.

On the way back the other members of the squadron began to talk with me. I'd survived my first sortie. Luke never talked after an engagement, I didn't know that yet, but I'd soon find out.

"Hey, Golly-gee-whiz, congratulations, you got three of them. Not bad for a Cherry." It was Gonzales my wing man. I listened to a variation of that from everyone in the squadron, everyone except Luke. I was now a full member of the squadron. Damn, but I was proud. I'd gotten three Vennies my first time up. And better yet, my idol, Luke Torington, had seen me do it.

When we got back to base, there was a lot of back-slapping and general merry-making. What I didn't notice was that no one approached Luke. It was an unwritten rule, give Luke a week after a kill before making small talk with him. So, like an idiot, I went right over to him all gushing with pride and happiness.

"We did it! We turned those bastards back."

He looked at me with the coldest eyes I have ever seen. "You don't get it, do you, kid?"

"Get what?"

"Those bastards up there, they were men just like you and me. They had families, people who loved and needed them. Every time we shot one of them down we crushed somebody's dreams. One of the fighters I flamed had the picture of three kids painted on its fuselage. They were the pilot's kids. I killed their father.

"I keep telling myself that this war is right, that I have to do what I do. I go up there because I want this war to end as soon as possible. If I kill enough pilots fast enough, maybe, in the end, fewer of us will have to die. I don't know. Sometimes, I'm afraid I'm prolonging the war rather than shortening it. Do you know what the worst part of it is?"

I shook my head.

"The worst part of it is that while I'm up there flaming those guys, I'm enjoying it. I love it, I can't get enough and I can't stop. I'm watching all those dreams go down in flames and I'm enjoying it. Can't you see how monstrous that is?"

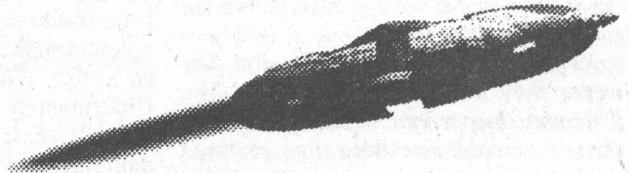
"I'm sorry, Captain, I didn't understand."

He nodded and smiled a sad smile. "I know, Golly-gee-whiz, you were just a Cherry. War is hell. If you're lucky you might get out alive. If you're even luckier you might get out with a piece of your soul, but I wouldn't count on it."

I turned to the reporter. "That was the Luke I knew. He couldn't help himself when he flew and he couldn't forgive himself afterwards. With every enemy he flamed, he flamed a part of himself.

"So getting back to your question, am I surprised that a hero like Luke ended up in the gutter? I guess I'd have to say no, I'm not surprised. I wish it could have gone another way, but Luke couldn't come to terms with what he'd had to do. He sacrificed his soul for the war effort, that's what made him a hero, not his kills."

I was done talking and apparently Amberton realized it because he walked away quietly. I never did find out how he reported on the story. Probably bullshit anyway.



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We don't want to
lose you!

Making Time Travel Work

by John Deakins

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The equations had worked! Time travel at last! Professor Temporal, a scientific adventurer, set the gauges on his machine for 200 years into the past and climbed into the pilot's seat. He pulled the red activating handle. The sky outside the laboratory window shimmered, and a wave of psychic nausea surged over the scientist. The laboratory disappeared, to be replaced by a vista of wild grasses. His device, Temporal Whizeroo III, settled slightly to one side on the uneven ground. Professor Temporal drew a deep breath of the unpolluted air of 1778. In that year, there had been a cow-pasture where his laboratory stood in 1998. He emerged to begin his adventure.

Meanwhile, back in the real universe, let's pick up the professor just after he pulls that red handle. Let us assume that Temporal Whizeroo III is indeed about to move 200 years into the past.

The sky outside the laboratory window shimmered, and a wave of psychic nausea surged over the scientist. (He should have savored the sensations, unpleasant as they were; they were among his last.) The laboratory disappeared, to be replaced by a vista of . . . cold, unwinking stars, scattered thinly in all directions. Professor Temporal's eyes were locked on the view, frozen open as they were. Remaining air whistled from unsealed portions of Temporal Whizeroo III. The professor would have been glad for a breath of any air just then, no matter how polluted. His last vision was of the contents of his chest cavity spraying redly into the hard vacuum. His desiccated remains drifted free of the wreckage of the time machine because of the final spasms in his legs. Thus began his great adventure, which lasted for considerably less time than he had planned, and concurrently for the life-span of the galaxy.

Hey! What happened?

To the generations raised on H. G. Wells' *The Time Machine* and SF short stories, the professor's fate is unexpected. Dozens of writers, some from before Wells, set the rules for us: A person travels in time, and arrives in his/her present location earlier or later in history. Everyone knows the premise. Such

traditional approaches depend on devices that move in time, as another dimension of reality, without altering their position in the usual three spatial dimensions. Like faster-than-light drives, current time travel mathematics is associated with the branch of Physics known as Fictional Mechanics, with imagination as its power source. However, science fiction often works on the principle of "negative impossibility." To quote Stanley Schmidt, "Anything that can't be rigorously proved impossible with present knowledge is fair game for science fiction."

Faster-than-light travel and time travel both fall under negative impossibility. Nevertheless, virtually every time travel story that you have ever read does *not* involve negative impossibility. Simply put, fictional time travel as we know it will not work. It *cannot* work.

In the geocentric universe, before Copernicus, all motions of heavenly bodies centered around a fixed Earth. Conventional time travel stories *absolutely require* a geocentric universe. The planet must hold still in space while we travel in time. Unfortunately, the secret is out: The sun doesn't really rise while we remain motionless; we only get that impression because of the earth turning on its axis. It is not still.

So, if we move our time machine exactly 24 hours into the past or future, we . . . end up floating in the same unforgiving vacuum as the professor. There is the matter of the Earth going around the sun. It won't be here when we arrive. Galileo already blew that one for us.

Then, if we move precisely one year forward or back in time, we . . . add more bodies to the freeze-dried collection. The entire solar system is in orbit around the core of the Milky Way galaxy, the Milky Way itself has a complex motion within the local group of galaxies, the local group is part of a super cluster of galactic groups, which itself may be speeding toward a major collection of super clusters called the Great Wall, which . . .

You get the picture. The planet just won't hold still for us! Not only does it go on moving, but we're whipping along at hundreds of kilometers per second against the background

of the universe. Even the localized motions of a point on the earth's surface, within the solar system, exceed more than eighteen miles a second.

If we move 24 hours into the future *in time* only, we arrive in the same point *in space* where the Earth passed 24 hours before, to add another (temporary) member to the Vacuum Breathers Club. Twenty-four hours into the past, we arrive in a space where the Earth will pass one day later. Perhaps our bodies will then burn up on re-entry into the atmosphere, but that will have long since ceased to matter to us. We almost certainly won't land on another planet or collide with the sun (although the bottom line of those events would be the same to us). There is an unspeakable amount of vacuum available in the universe.

Perhaps we're just going to have to give up time travel as a science fiction plot device. On the other hand, perhaps we can work something out to save time travel, but we're going to have to start with the basics.

The Newtonian universe can be described using its five major aspects: space, time, matter, energy, and charge. Einstein showed that two of those aspects—matter and energy—are interchangeable. For a moment, we can pretend that we understand the elevated mathematics of quantum mechanics which strongly hints that *all* five aspects should be mutually interchangeable. Matter should be convertible to charge; space convertible to energy; energy to time, etc. The speed of light, a large constant indeed, is certain to turn up in all the equations.

A very small amount of matter can be converted to a great deal of energy ($E = mc^2$). Notice how Einstein's equation is beautifully concise. It fits well into a sophomore chemistry class. Would it be unrealistic serendipity to expect that similar mathematics would allow a small amount of energy to be converted to a great deal of time? (The equation might be $T = Ec^2$ or $T = kEc^2$, with "k" being some kind of conversion constant.) Somewhere in a Grand Unified Field Theory some such conversion could well be discovered.

At present, a Grand Unified Field Theory, like the Second Coming, is both currently expected and nebulously distant. The celestial

Making Time Travel Work

realms of higher Mathematics and Physics might well spit out a solution from some other approach. Let us assume that the mathematical basis for time travel has been discovered. If ever given the theoretical mathematics, someone will eventually build an operating time-travel device.

Working from Professor Temporal's notes, Dr. Chronos duplicated the time-travelling machine. Aware of the likelihood that he would arrive in interstellar space, Dr. Chronos avoided Temporal's earlier mistake. Temporal Whizeroo IV had the vacuum integrity of a miniature space ship.

After throwing the red handle and experiencing the same disorientation as Professor Temporal had, Chronos found himself in the dark vacuum that fills most of the universe. There was, unsurprisingly, no sign of either the professor or Temporal Whizeroo III. Chronos spent several hours observing his fascinating new environment before reversing the machine.

At home, his assistants—Professors Minutae, Secondary, and Momentito—eventually held an empty-casket funeral for Dr. Chronos. The details of his death by starvation, suffocation, or freezing, when his power or air supply ultimately failed, can be left to the imagination.

The builder of Temporal Whizeroo IV had evidently forgotten to have the Law of Conservation of Momentum repealed before his exit. No matter that your local frame of reference gives you the impression that you are sitting still, any other cosmic frame of reference will reveal your rapid relative motion. A time machine, freed of Earth's gravity well, but still possessing the vector sum of all its various motions, would fly off from its exit point like the stone from little David's slingshot (with rocket assist.) Our rotation speed alone is over 1600 km/hr.

Dr. Chronos, though possessing the same velocity himself, would not possess the biological senses to take note of that motion until too late. To a human eye, one million kilometers in space would look pretty much like two million kilometers. On arrival, the temporal traveler would exit the region of space that would someday contain his temporal departure point at hundreds of kilometers per second. Returning to the right time would deliver the traveler to some new position in space, outside Earth's atmosphere and gravity well.

The actual working nature of time travel device itself is one of the *least* important parts of a time travel story. Perhaps a temporal

device would be based on some quality of the theorized FTL tachyon particle. Perhaps it would be directed by controlling shifts in quantum numbers of as-yet-undiscovered temporal "particles." (Why not a Time quark?)

If we ever succeeded in creating quantum black holes, perhaps we could convert their time-distorting qualities into a time-journing device. Perhaps there is a glitch that we could exploit, brought on by the stresses of an expanding universe. Maybe Quantum Tunneling theory will open us a tunnel through time. Maybe in matter-antimatter annihilation there is a temporary loophole created in time. If we break through into Hyperspace, it is effectively Hypertime as well. Who knows?

Essentially, it doesn't matter.

Our time device may have a tachyon drive, but the device itself is *not* made of tachyons at either its departure point or its arrival point. We, the intrepid time travelers, may take advantage of quantum black holes or antimatter devices that launch us into Hypertime, but we are not ourselves black holes, antimatter, or creatures of Hypertime. We may find a solution to time travel in the barely introduced Fifth Force, but Newton's archaic Law of Gravity will have far more impact on our daily lives in any time period into which we arrive.

We are just too bloody macroscopic for our own good. The Strong Force, the Weak Force, Electromagnetism, and (probably) the Fifth Force have virtually no effect outside individual atoms. Gravity, wimp that it is [10^{-38} as strong as the Strong Force] reaches the entire universe. Particle interactions in the families of sub-sub-atomic particles may involve exceptions to the Inverse Square Law and the Laws of Conservation of Momentum and of Angular Momentum. Interactions of macroscopic bodies at less than relativistic speeds have yet to find a way around those laws. In the day-to-day world of the time machine and the time traveler, Newton still reigns supreme.

No matter what gee-whiz, post-Einsteinian breakthrough drives our temporal device, we are going to have to be enormously careful after we emerge into conservative, old Newtonian space. The universe is like an unforgiving maiden aunt that oversees your curfew. No matter how elevated a discussion you were having with the Big Boys down at the university (about space and time and tachyons and antimatter and particle-particle interactions and time quanta) if you come in after hours, you're grounded.

As part of his doctorate thesis, Professor Minutae decided to re-approach Dr. Chronos' work. Aware of his superior's error, he proceeded with more caution. There would be no more multi-year time jaunts with human pilots, until smaller devices, shifting only fractions of a second, had been thoroughly tested. His first device, a few kilograms of sophisticated sensors, automatically jumped into Hyperspace and emerged again a hundred-thousandth of a second later.

Reports from survivors (i.e. those living several kilometers from the laboratory) described the explosion. Ash, some of it radioactive, that had once been the university, the laboratory, and doctoral candidate Minutae, settled over a substantial portion of the East Coast. Only the luckiest combinations of steady nerves prevented a nuclear response by the United States, a return strike by the Unified Russian Republics and the Chinese, nuclear winter, and the extinction of Homo sapiens.

Just exactly *where* (in mundane Newtonian space) were you planning to have your device re-emerge? The universe is chock-a-block with vacuum almost everywhere, but around where you're sitting right now, there's an awful lot of concentrated matter. How wise would it be to have a solid object (your machine) suddenly materialize inside another solid object? Exactly *how* does a time machine re-enter normal space-time? (You *do* want to come back, don't you?)

Maybe on re-entry, the temporal device is just *there*, its atoms distributed in exactly the same pattern as when they departed. The universe has some really picky rules about two pieces of matter occupying the same space. In that scenario, too many atomic nuclei in Minutae's device could be placed in impossibly close proximity to other nuclei, if a device were to emerge inside the Earth's crust. A smorgasbord of nuclear fusions, nuclear fissions, and atomic disintegrations might take place. There goes the neighborhood, literally. Emerging from time surrounded by water or even air might produce similar effects.

If the device expanded to full size in normal space from a dimensionless point, there would still be one heck of a shock wave or a substantial underground explosion. Maybe all that vacuum is the right place to be playing around with time machines.

As luck would have it, Professors Secondary and Momentito had been visiting Mexico at the time, but they had been in telephone contact with Minutae up to within minutes of the blast. Discussing their fellow

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researcher's experience, they realized his mistake. There had to be a minimum safety margin, which all temporal jumps would have to exceed, to be certain that the emerging device did not coincide with any part of the Earth. After a pair of strategic name changes, to distance themselves from what came to be known as the Time Bomb Disaster, they acquired another colleague and continued the research.

The trio of scientists had finally accumulated enough caution to prevent their personal extinction or the immediate endangerment of the planet. However, they disagreed as to which direction their studies should follow. Professor Hourglass (formerly Secondary) saw great possibilities in time travel as a means to space travel. Professor Stopwatch (formerly Momentito), using some hitherto-mentioned connections in the CIA, envisioned time-travel devices as weapons of mass destruction. Their new colleague, Dr. Juliann Calendar, refused to give up Professor Temporal's romantic notion of time travel to some past or future Earth.

As science fiction aficionados, let us examine where each of those research lines takes us. Professor Hourglass, for example, has a really good idea. One of the biggest problems with present space travel is initial escape from the Earth's gravity well. A move in time of one minute, more or less, would put the time travel device beyond any danger of materializing inside the planet itself. It would also place the device outside the earth's gravity well. Without gravity to fight, it should become much simpler to orbit satellites, colonize the Moon, and explore the planets. The one problem would be the possible unpredictability of emergence points. One launch might put you near the Moon; the next might leave you barely outside the atmosphere; the next might throw you off the Elliptic Plane of planetary orbits entirely. No matter how well we may know the orbits of the Earth, Moon, and planets, the orbit of the Sun around the galactic core is still vaguely defined. The relative motions of the galaxy against a super-galactic background is conjecture only. Without a fixed reference point (none of which are available in our expanding, Einsteinian universe), relativistic motions might cause our time-launches to possess more chaotic randomness than predictable trajectory.

Eventually, we might develop a computer model that would allow more-or-less predictable launches, mainly through trial and error. Still, for all its drawbacks, just being able

of get off the Earth cheaply should open up the solar system for humans.

Better yet, we might combine a time-travel device with conventional propulsion systems and explore the nearby stars. The requirements would still have to include either a "colony" ship for our explorers or a reliable form of suspended animation for the ship's crew. The latter would also require automated devices that could operate the effectively crewless interstellar craft for virtually all its voyage. At present, there is no way to explore Proxima Centauri, for example, and arrive while the scientific teams that had launched the ship are still alive. If we launched an automated ship toward its destination with conventional technology, its crew in suspended animation, the trip would take decades.

What if those decades could be effectively cancelled by moving backwards in time an equal amount, perhaps in small, carefully monitored and corrected steps? The ship might take fifty years to make the trip, but those fifty years could begin fifty years *before* the launch. The astronauts would arrive and be revived from their lead coffins in orbit around Proxima Centauri, perhaps only days after disappearing (into past time) from the solar system.

Such travel plans depend on technology not yet discovered, especially suspended animation techniques for humans. That option is still better than the multi-generation, colony-ship approach, however. People cause problems. They have to eat and breathe, and they interact in unpredictable ways. Colony ships would require a balanced internal ecology, stable for decades, an ecology that we have been unable to maintain in trials on earth even for a couple of years. All of local interstellar space is laced with far too many cosmic rays. Heavily shielded suspended animation units might survive a long voyage, since the crew would require almost no space. A colony ship, manned by healthy young people, who would be expected to breed up a new generation to crew their ship, would arrive instead with all the crew dead, cancerous, brain-damaged, and/or sterile from too much radiation.

Meanwhile, if a colony ship with a live crew launched itself, say, fifty years into the past before proceeding to Proxima Centauri, it would probably do so within radio range of the solar system. The crew could then effectively broadcast news from the future to a past earth, re-creating a favorite time travel paradox. Safeguards against such tampering would have to be a part of any launch.

Once in space, away from Earth, we could play all kinds of interesting games with time machines. Since "space" is actually the

"space-time continuum," any mathematics that let us convert, say, energy to time, might very well let us convert matter or energy or charge to space itself. "Instant" space might mean instant travel. Perhaps the mythical FTL drives of science fiction are closer than we think. On the other hand, conjecture is nice, but present understanding of Physics generally rules out both paradoxes caused by tampering time travelers and cheating on the speed of light.

Using time travel alone as a method of interstellar propulsion might work, but it is certain to have major drawbacks. Moved far enough ahead or back in time alone, the device might be able to emerge near enough some other star to rendezvous with it. The odds, however, of having the present location of Earth coincidentally pass through the past or future location of another solar system are not promising. Space contains mostly space. (That's why they call it that.) Even in our crowded neighborhood of the Milky Way, our solar system covers fewer than twenty light-hours, but the nearest star is over four light-years away. Within the galaxy, the chance of the time-stream accidentally carrying us through a volume containing some other star system in the past or future is about one in a hundred billion, by conservative estimate. Having the present location of Earth coincidentally pass through another solar system in another galaxy knocks the odds below one in one quadrillion.

Still, there are an awful lot of stars out there. Let's say that one of our time-exploring craft does happen to emerge inside the twenty light-hours diameter containing another star system. It now must depend on conventional means to rendezvous with any of that system's planets. The estimated flight time from here to Mars at expected interplanetary speeds is one to two years. Mars is almost in our back yard, as the solar system goes. A flight from, say, Uranus to Earth would take years more. Thank goodness for fully automated exploration ships and suspended animation! Otherwise, the crew would not survive to reach the inner planets of the newly discovered system.

Suppose luck is with us, and the automated temporal explorer discovers, approaches, and orbits a promising inner, earth-like world. The crew awakens and spends months mapping the new planet and/or attempting contact with its alien inhabitants. At last, they pop out of the new star's gravity well and head back for Earth, with data banks bulging. Tragically, we will never know what that data was.

That rendezvous made them part of the vector sum of another solar system and another planet. The chances are minuscule that

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that vector sum, in a three-dimensional universe, is anything at all like that of the Sun-Earth system. Like Dr. Chronos, our explorers forgot to include the Law of Conservation of Momentum in their calculations once they had emerged. Space-time voyages will forever possess an ugly tendency to become one-way trips.

Meanwhile, Professor Stopwatch's approach to uses for a time machine could be proceeding down entirely different lines - lines that could end civilization.

First, there is the matter of the time machine as an intelligence-gathering device. The CIA, or some equally well-meaning (but scientifically obtuse) agency of the U.S. government, would be eager to send spies or assassins into the past or future. Perhaps after a few months they could be persuaded that that particular usage is not possible. Considering the bureaucratic mentality, each succeeding influx of political appointees (following administration changes) would require months more to re-educate. Time after time, some rich contributor's nephew would use his seventh grade science education to re-invent H.G. Wells. The time researchers would have to devote more and more resources fending off eager idiots, ready to ascend the bureaucratic ladder on the back of their "new" idea.

Still, even bureaucratic research is research. Professor Stopwatch, or someone like him, has several possibilities open for their temporal devices. A time travel device could be placed in orbit as the ultimate early warning system. In case of a major meteor impact or a nuclear war or an alien landing on the White House lawn, the machine could pop, say, one day into the past and broadcast the warning. A lot of lead time would be impossible; the device would otherwise emerge too far from earth for its broadcast to be picked up. A one-day time jump represents several hundred thousand kilometers, minimum. Still, imagine the advantages.

Likewise, imagine the possibilities for paradox. The recipients of the warning would have to make preparations to survive the coming event, without trying to divert it. Mobilize, get the populace to shelter, or have the President prepare his best "Welcome to Earth" speech, but don't try to shoot down a meteor that you already know you're going to miss or use the ABM defenses around Cleveland, since it will be slag tomorrow anyway. The twists and counter-twists of possibility and paradox are endless. Let's just build the device and have faith that government can screw up any paradoxical advantage it might confer.

As a weapon, on the other hand, a temporal device has much less problem with paradox. Plant temporal devices in basements in Peking, Baghdad, or your enemy city of choice. Flick a lump of ordinary rock a ten-millionth of a second into time, preferably by remote control, and let it emerge inside the Earth's crust. The offending totalitarians will be immediately sent to the Great Commune in the Sky, Islamic Paradise, or a considerably warmer destination. No elaborate delivery systems are required, no enriched plutonium, no military-industrial complex. Dozens of nations would have the technology to build such devices, cheaply, if the secret of their construction ever escaped our control. We wouldn't tell anybody—would we?

Do the words "leak," "unnamed Congressional source," "KGB operative," "blabbermouth allies," or "illegal arms sales" ring any bells? How long would it be before Sadaam Hussein had such a device under Tel Aviv, and (our friends) the Israelis had one under Bagdad? How long would it be until Paraguay, Uganda, and Taiwan had their own Time Bombs?

Are you ready for a half dozen flea-scratching terrorists to hold up an entire city with one cheap, hidden device? Why stop with a few kilograms of temporal inserted mass? Why not launch a mountain, for Allah to drop where He wills on the infidels. The mountainous mass might arrive under North America, sending all us Ugly Americans directly to Allah, special delivery. Given human cleverness, how long would it be until some unstable individual sent a large mass deep enough to crack the Earth's crust? Maybe the Asteroid Belt is the result of long ago alien experiments with time travel. With luck, Professor Stopwatch/Momentito will be run over by a garbage truck before he spills his ideas to the wrong people.

Dr. Juliann Calendar arrived late enough in the time research game to be aware of the dangers, but to retain her belief in "old fashioned" time travel. Does Ms. Calendar, a lifelong fan of H.G. Wells, have anywhere to go with her research? Haven't we discounted conventional time travel forever?

Maybe.

We have to make the earth hold still somehow, while we move in time. It doesn't look hopeful. Still, one such scenario does exist. If we were to move not forward or backward in time but *sideways*, an alternate Earth should be in the same position in space as our own planet is.

Alternate time tracks—hurrah! We could visit an Earth where the South had won the

Civil War, or where the Mongols crushed both Europe and Islam, or where a giant meteor did not exterminate the dinosaurs, or where no life ever existed, or where only ocean covers the planet, or . . . Every major SF writer has been there before you, but the possibilities are truly endless. No wonder Alternate Earths have usurped the place time travel once held in science fiction. They are so much fun!

The preliminary mathematics indicate that alternate universes could indeed have formed as part of the Big Bang. Sadly, the same math indicates that those universes would almost certainly possess rules that preclude the formation of matter, or perhaps no matter more complex than hydrogen atoms, much less life.

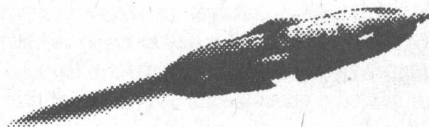
We can still hope that Dr. Calendar's research team stumbles onto some way to reach Alternate Earths that differ only in the minor details that humans find so important—like which society rules Europe.

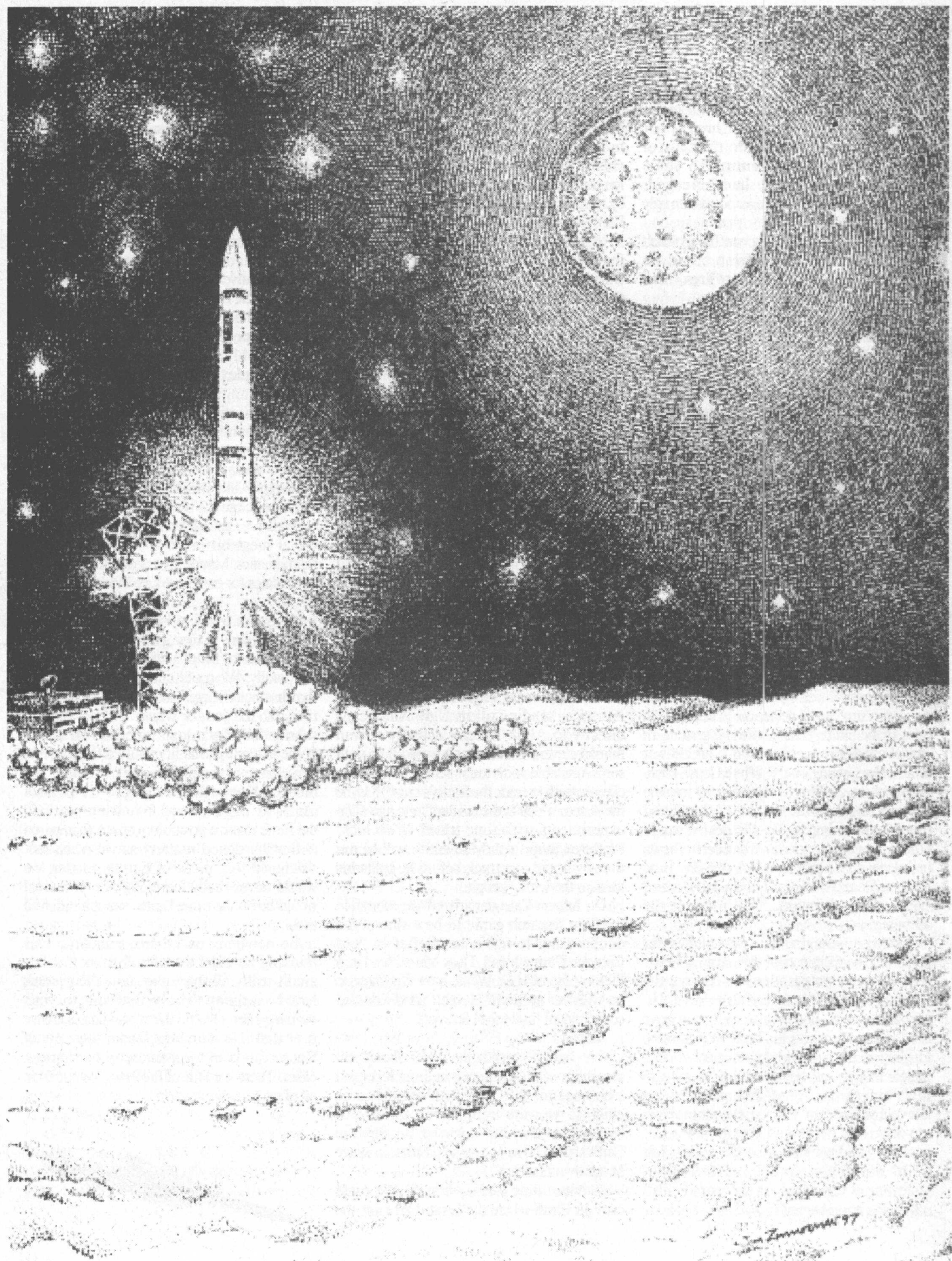
Do we close the books on time travel now?

Well . . . not quite. We got into the time travel mess initially by means of exotic mathematics. Maybe if we reach into Fictional Mechanics for one more Gee Whiz formula . . .

Instead of trying to lock the Earth in place while we move in time, perhaps we could lock ourselves to it physically as we move temporally. We could choose a piece of Earth that has not changed substantially for a long time into the past, or which will not change substantially for a long time into the future. Some matter that might qualify is the core of a dense piece of metal. Somehow "locking" our time machine on that unchanging collection of atoms, we might emerge from our time trip in the same relative position in space (compared to that hardened matter) as we when left. Anchored to a piece of Earthly matter, we would never really leave Earth. Our arrival would be on the same Earth, but at a different time!

Somewhere out there someone was thinking heretical thoughts about how solids aren't really all that solid, how their atoms have been shown to be continuously moving, even migrating within the crystal lattices. Leave it at that. No mumbling about the Law of Conservation of Momentum in the corners, either. There is a little of Professor Temporal in all of us.





Fionna

by Chuck Rothman

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Fionna had left my apartment early, saying that the 13th of May was always a bad day for her, and that she didn't want the bad luck to wear off on me if she woke up beside me that morning. I didn't believe it until I had to kill her.

The moment haunts me: Fionna standing beside Eric, his gun in her hand and pointed at my heart.

"I'll count to five, Tom," she said. "Then I pull the trigger."

I already had her covered. One shot and it would all be over. "You're not going to do it," I said.

"I don't have any choice." There was a vicious tone in her voice, with a slight overtone of desperation. You'll have to kill me."

Eric was unconscious; I could expect no help from him. It was up to me to save myself.

"One."

"Don't do this," I said, trying not to plead. "Just give me the gun and you won't get hurt."

"You know that's not true."

I stared at Eric's gun in her hand. Like mine, it was powerful, its hundreds of flechettes ready to turn its target into hamburger. Easy to use, simple to aim, and deadly as hell. There would be little left of me if Fionna fired.

Or of her, if I had to.

"Two," Fionna said.

"This is ridiculous, Fionna." We'd been seeing each other for a couple of months now, ever since I got the job in immigration control at the spaceport. Fionna worked in the administration building servicing the voice mail system. We had hit it off at once—love at first sight, she once called it—even if she didn't approve of my occupation. And by now, our relationship had turned into something quite serious. "Come to your senses and put that thing down."

"You know what they'll do to me. I'm dead anyway."

"That's not true."

"They're not going to believe me. And even if they do, they're not going to care. Either way, I'm dead. This is just quicker." She laughed just a little bit. "I told you that this would be a bad day for me. Three!"

It was hard to keep my hand from shaking. I couldn't tell what was going on in her head; she had gone from lover to total stranger in the time it took for her to pick up the gun. I think that was what bothered me the most, that so much I had assumed about her turned out to be a lie.

It was hard to tell if she was as desperate as her tone seemed to indicate. There was no sign of emotion on her face. It was as though she didn't care that she was about to die, or that the only alternative she allowed was to shoot me first.

I remembered what Eric had always said: they don't look at death the same way we do. It doesn't bother them.

"Jumping butterballs, Tom," Fionna said, reverting to the strange phrase that was always a sign of her frustration. "I mean it. Four."

I could see her finger tightening and I knew for sure that she would fire at the next count. I'd seen that cold look before, on others of her kind, dozens of times since I went to work here.

"Remember," she said. "There are good days, too." She smiled just a bit, as though there were some private joke. "Goodbye, Tom. And remember." Then, more softly, she added, "five."

God help me, I pulled the trigger.

It was quick; she didn't feel a thing. And I tried to pretend that neither did I.

I first guessed the truth a few hours earlier, after I had shot the two returnees. I was shaken: it was my first termination—Eric had jokingly dubbed me "Mr. Hesitation"—and I took it hard. I found it difficult to remember that the corpses weren't really human.

Eric had noticed my feelings when he came to congratulate me. "Don't let it bother you," he said. "They think different from us." He had been in Immigration Control for seven years now; in a profession where burnout was endemic, he showed no sign of it. The only thing that bothered him about a termination was having to fill out the paperwork. "They don't mind dying. Or killing, for that matter, which is why you did the right thing."

It wasn't much comfort. I could still see them going for me, challenging my gun with a few lengths of pipe. It was suicidal, but that didn't stop them.

I had to get out. Take some time off to go for a walk and clear my mind. I would be no good if I didn't. Eric agreed.

It was a warm spring day, the first since I had begun work in Immigration Control. It wasn't my idea of a great job, but nowadays you took whatever you could. Like most people, I was lucky to be working at all.

I wandered without thinking about where I was going. The land around the spaceport was overgrown and wild; even with the real estate at a premium these days, no one wanted it. Over the years, it had become something like a nature preserve, peaceful except when the roar of the rockets shattered the stillness.

I was halfway around the perimeter when I saw the castle, its two towers rising from the underbrush.

I stared, wondering for a moment if this was a hallucination. Apparition or not, it was like something out of a fairy tale: two towers, like giant rooks on a chessboard, their crenelated tops worn down by the elements.

I did what anyone would do: took a closer look.

They were a disappointment. The towers were barely two stories high, in a state of intense disrepair, with bricks missing and cracked, looking like it would tumble down at any time. They were connected by the remains of an arch that had fallen ages ago. Two fences of iron spikes, rusty and vine covered, stretched out away from the towers.

There was a brass plate, green with verdigris, on the left tower. The words on it said, "Calvary Cemetery."

It took a moment for the words to register. I had heard of cemeteries, of course, but I'd never actually been inside one. My family, like most people, believed in cremation, and I had never thought there was any reason to visit the dead. The idea of using a hole in the

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ground for the storage of corpses seemed as bizarre to me as leaving the dead for the vultures to eat.

Today, though, I decided to go inside. It seemed appropriate.

At first, the land on the other side of the gate didn't look like much. Trees and wildflowers grew all over and there was the faint, insecticide smell of magnolias. There were the remnants of a path leading outward, nature winning the battle to turn the old asphalt back into soil.

Then I stubbed my toe on something. Cursing, I saw a slab of marble, hidden by tall grass, its top pitted and a chunk fallen off its edge.

I pushed the grass away, to read the inscription: "Barnabas Horton. Born January 14, 1869. Died June 2, 1907."

Now that I better knew what to look for, I spotted more monuments, flecks of gray amid the wild greenery. In the distance, I saw something that looked like an obelisk. Not too far away, in the shadow of a tree, I could make out a statue of a man and woman, sitting together on a bench, holding hands. Years of rain had obliterated their faces; the man's was now covered with a beard of blue-green lichen.

I pressed on. It was hard to make out everything; the years and nature had reclaimed the land from the dead, obliterating any traces of a walkway. Many of the markers had toppled; other were covered with moss, while some had small plants nesting in their crevices.

But, a few meters further on, I was surprised to find a small cleared area, the grass recently cut. It was just large enough for a single headstone, a single grave still tended as though someone actually cared.

I wondered if it was the burial place of some famous person.

The name was unfamiliar: Mary O'Donoghue. Born August 22, 1911. Died May 13, 1932. Our beloved daughter.

The second date shook me. Today was the anniversary of her death. And, beneath the inscription, there was a photograph.

I knelt down and touched it, unbelieving. It felt as smooth and cold as the marble; some process had etched the image into a metal plate. But the girl it portrayed looked out at him with a playful smile.

It was Fiona.

There was a small stone bench a few meters from the grave. I sat on it, trying to make sense of the coincidence.

There were some differences between the marble photo and the woman I knew. Mary had longer hair, and was younger. But her smile was unmistakable and her eyes held the same warmth.

I remembered what Fiona had said about today: a bad day for her. I giggled nervously. Yup, I thought, any day you die is bound to be a bad one. . . .

I heard a rustling in the bushes behind me, then the sound of a foot snapping a twig.

I turned.

Fionna came out of the clearing, pushing branches away, searching out something. In her hand, she held a bouquet of flowers.

Then she spotted me. She froze for a moment like a frightened animal, and I thought that she might bolt and run.

"Fionna?" I asked. "What is all this?"

Her eyes went to her feet. "Hello, Tom," she said. Her voice was soft, as though I had caught her at something she shouldn't have been doing.

"Why are you here?"

She laughed, the same silvery tone I had grown so fond of. "I could ask you the same question. But I just had to come here today."

I pointed at the marker. "Who is she?"

Fionna shrugged. "No one. Just an ancestor of mine."

"I'll bet," I said, rising. "A heck of a resemblance."

She looked from me to the grave, her eyes darting nervously. "That's how it works out sometimes."

"I killed a clone today," I said.

She tensed even more. "Oh?"

"Three of them, actually." I stepped nearer to her. "What do you think about the clone laws?"

"What do you mean?"

"Are they a good idea? Do you think they should be repealed?"

Fionna sighed. "No, Tom, I don't think they are a good idea. Murder is never a good idea."

"Even if the victim's not really human?"

"That's what every murderer claims. It's never true."

"Are you calling me a murderer, then?"

"Jumping butterballs, Tom," she said. "Of course not."

"Then what are you saying?" I asked.

She paused a moment. The wind rustled the leaves as though in anticipation. Finally, "You know I never liked your profession."

I steeled myself for one final question. "Fionna, are you a—?"

"Do you want to hear the answer to that, Tom?"

I paused. "I don't know," I whispered.

She nodded. "I was born on Earth, Tom. Not in the asteroids."

I could tell she was telling the truth. But there was plenty of leeway between that statement and what I wanted—but was afraid—to ask. The first of the clones came from Earth, after all, before they developed the fast-growth techniques that made them cheap labor. It had caused riots when they were dumped on the work force; good jobs were scarce enough without people being manufactured to fill them. They had been kicked off Earth, kept only in the asteroid belt, where life expectancy was measured in months, and no one in his right mind would dare work.

"It's all politics, Tom. People say the clones take away jobs from real people. But the way I see it, they *are* real people. Just because they never had parents doesn't make that any different."

"You know," I murmured, "I think they preferred dying to returning to the rocks."

Fionna shrugged. "It's a death sentence either way. They don't live three years working in the rocks. I'm sure they know that." Seeing I wasn't going to stop her, knelt to put the flowers on the grave.

I watched her, then said, very softly, "I need to know."

She looked at me. "Do you, Tom?" She approached and gave me a gentle kiss. "It's been a bad day for you, Tom. Do you want to take the chance of making it worse?"

I thought for a long time, then shook my head.

She took my hand. "Come on," she said. "Let's get away from here."

The spaceport seemed more subdued than usual. I don't know if it was my imagination, or if people knew what I had done and were afraid to speak in my presence, either out of fear, or from not knowing what to say.

"Enjoy your walk?" Eric asked, as we paced our rounds in silence for a half hour.

I nodded. "There's a cemetery near the spaceport. I saw it."

"Really? Sounds creepy."

"It was. They put the bodies in the ground, as if they were a resource to be conserved."

"What would be left?" Eric asked, playfully scornful.

Fionna

A few cells, I thought. Ideal for a clandestine experiment. "If someone dug one up and cloned the cells . . ."

"What are you talking about?"

"Just thinking out loud. If that happened, it would sort of be a form of resurrection, wouldn't it?"

Eric stopped. "Tom, you really aren't helping yourself by dwelling on matters. They really don't care."

"Why not?" I asked.

"Because they're all the same. One may die, but they still go on. Makes death easier to take."

"But what about their identity? Their personality?"

"Same thing. That's mostly genetic."

"Don't be ridiculous."

Eric smiled. "You don't have kids, Tom. When Amelia was born, you could see her personality traits within a couple of days. And they've done studies. With identical twins, years before the first human clone. Even when they were separated, they tended to develop the same likes and dislikes. In all sorts of unexpected ways. Sure, there were variations. But there were many more similarities."

"Twins mind dying."

"There are only two. Not dozens. The chances of survival are that much greater."

I shook my head. "You've looked into this."

Eric grinned. "Had to. How else could I keep doing this for a living?"

I tried not to think about Fionna as I made my rounds, but it was futile. I knew she would eventually tell me the truth if I continued to press her, and what her answer would be. The question was, would I do what was expected of me and report her?

The USX shuttle landed a half hour before quitting time. I felt no sense of relief that the day would soon be over; it only brought the confrontation nearer. Eric and I went through the cargo hold, though my mind wasn't exactly on the search.

Still, I was the one who spotted the stowaway.

Some movement by a set of plastic ore carriers caught my eye. Instantly, I forgot about the past and future and my gun was in my hand. "All right," I said. "Come on out."

There was the soft rustle of movement, and a face appeared from behind the crate.

It was a woman this time, dark haired and bright eyed. She was a younger version of Fionna.

I stood, paralyzed.

She must have sensed my shock. Before I could think of what to do, she had darted by me and cut the hold.

We gave chase. She was fast and, for a moment, I thought she would get away, but she made a mistake by running into the blind alley by the administration building. Soon we had her cornered.

"Turn around," Eric ordered.

She did so reluctantly, as though she wished she could pass through the bricks in front of her. "Look," she said, her voice Fionna's, "I promise I'll go back. But I need to—"

"You're going back now," said Eric. He had out his cuffs and was preparing to snap them onto her wrists.

"I just want to pay my respects," she said. She didn't look frightened, only angry. As though the gun meant nothing. "One hour. You can come with me."

"Hands behind your back," Eric said.

"Jumping butterballs," she said. "Why won't you *listen!*"

I started.

She looked toward me. "You seem like a decent guy," she said. "Tell your friend—"

"Hands behind—"

She broke away, slapping aside Eric's arm.

The gun went off.

It was an accident. But the flechettes didn't care.

She screamed.

"Damn it," said Eric.

I stared. Fionna, I thought.

But it wasn't Fionna. It was merely a clone who looked like her. Someone—no, some *thing*—that had to be killed.

"You know," Eric said, pushing the dead clone over with his foot. "This one looks familiar."

I felt my heart thumping in my chest. "You know they all look alike," I said, forcing out the joke.

Eric didn't laugh. "I've seen her face around here."

"You've been on the job a long time." I desperately hoped my smoke screen would do some good. "You may have stopped one like her before."

Eric shook his head. "No. Not a stowaway. Someone here at the port."

I desperately wanted to pass off his suspicions as a joke, but I knew I'd fail. Eric had seen Fionna before and sooner or later he'd make the connection. I'd have to warn her. She'd could to leave the spaceport . . .

A part of me couldn't believe what I was thinking. It was my job to tell Eric the truth. He wouldn't have to kill Fionna; they'd just send her to the asteroids. She was a sensible woman.

But I remembered the look on the face of the clone. Sensible? She didn't seem to care that there was a weapon pointed at her.

I heard footsteps at the end of the alley, someone drawn by the sound of the scream.

It was Fionna.

I kept my job. I'm convinced that one reason Fionna did what she did was so I wouldn't get fired for letting her get away.

Just over three months later, I visited the cemetery again, walking among its broken gravestones to the spot I had first made the discovery.

I had done a lot of thinking during the time. And about death and clones and bad days and good. Mostly about Fionna's clone, so intent on paying respects that she had come back from the stars. So resolute that she had no fear of certain death.

The tombstone was still the most neatly kept in the cemetery. The grass was brown in the late summer heat.

And I read the inscription again: Born August 22, 1911. Died May 13, 1932. Our beloved daughter.

May 13. She had died many times on that day, it seemed.

But this was August.

I stared at the tombstone. The name engraved on it didn't matter; it was a memorial to Fionna. And for the first time I understood how seeing the marble made the loss that much more bearable.

"Happy Birthday," I whispered, then sat at the bench.

There are good days, too, Fionna had said to me. I realized now it was a message. She had been born once on this day. And now, maybe . . .

I waited for Fionna to return.

I had no other choice.



Far Haze and Distant Thunder

by Steve Sawicki

I think it must be human nature to want to try to find patterns in things; to label processes; to genrify and categorize. This is taken to extremes in Hollywood where a pitch, sometimes just a single sentence full of simile and schmooze rather than content, can decide whether or not a movie will be made. I'm guilty of it myself on rare occasions, particularly when it comes to the small press. I don't see every small press magazine that's out there, but I do look at a fair number of them—hundreds each year. I've got nearly 40 spread in front of me as I write this. How do you know what's worth reading? How do you know what's worth subscribing to? How do you know which ones are even still alive? Tricky questions, but questions which need answers. I'll be tackling some of these questions here. There are a number of ways to look at the small press. One can peer out from the writer's perspective and from the attitude that this is a proving ground for individuals practicing their trade, in which case you'll want to consider payment rates, regularity of publication, and overall production values. One can look from the editorial and publishing perspective focusing on production values, white space, story placement and art usage. Or, one can look at the whole mass of words from a purely emotional perspective. In others words, in matters of enjoyment, did I spend my money wisely?

Space & Time #87, Gordon Linzner ed., 138 W 70th St. #4B, New York, NY 10023-4468, \$5 + \$1.50 handling for single issue, 2/\$10, 4/\$20 (outside US 2/\$11, 4/\$22), 48 pgs.

Space & Time was the first magazine I ever reviewed. It was nearly ten years ago and *S&T* was going strong, one of the pioneers of the small press and one of the few carryovers of the fanzine wars of the 1960s. *S&T* has come a long way since then, playing multiple roles along the way. Sure, the publishing schedule has been inconsistent and the fiction

sometimes seemed more fannish than pro, but overall, Linzner produced a quality product—good art, good fiction, and poetry. I have the 30th anniversary issue in front of me. It has a wonderful full color-cover by Jill Bauman and pretty good interior art by Ron Wilber, Gary Kato, Jim Garrison, Cathy Buburuz, Gary McClusky, Herb Bresky, Alfred Klosterman, Cathy Burgoyne Miller, Andrew Tubbesing and Dawn Kimberling.

S&T opens with a very strong story by Dale Philips—"Yesterday And Today." Philips ponders the question of memory and age, wanting to show us what one possible world of the future might be like if a disease such as Alzheimer's struck intermittently so that you might know who and where you are today but not tomorrow, why you are here tomorrow but not the day after. Philips does an excellent job with this broad premise; choosing a stable focal point character to follow he shows us the effects this has on the individual as well as the global effects. This is a strong piece of fiction, well written and compelling, the kind of story that *S&T* is known for. If "Yesterday and Today" is indicative of the best of the small press, then "A Light For The Abyss," by Gene Cachexia, is indicative of what the small press is best for. Cachexia spins a story of religion, alien gods, two races, an enlightenment, and a journey down a crooked path. That the story is not always clear is fine, due to Cachexia's pacing and weaving of imagery. I'm not sure that this story would work anywhere but in a small press magazine. It's well done but with just enough of a sideways slant to make it unpalatable to a pro editor. I wonder if Cachexia tried to place it in *Analog*? It'd be a close fit, but one which would none-the-less end up being rejected. "It's Steady Work," by Paul Walther is another story which falls on that shadowy line between pro and small press. I liked this story but fear that Walther did not go far enough. It's a

twilight zone kind of tale about retribution and perhaps revenge. Walther manages to keep enough from the reader so that even though they see the end coming they still wonder if they're right. It's not so much a snap ending as an ending that reader recognizes in shape and form. It's a good read, which is always important, and Walther is a name worth looking for.

A rather interesting piece of philosophical wanderlust is put forth by Bill Eakin. Eakin's "Welcome To Merland" is a psychological tale of change, loss, regret, fear, and deep yearning. It's wonderfully told, with Akin meting out bits of information in such a way as to keep you wondering what's going on. It's a basic story of a man and the sea and the hold it has over him. Eakin delves deeper and asks questions about why we are who we are and what we are.

The answers might or might not be provided, as is the way with much fiction. Eakin provides us with paths and with sights along the way leaving it up to us to decide whether we've seen the solution or merely the history. This is fine writing in top form. *S&T* also includes some nonfiction and I would be remiss not to mention it. There is a review of an anime video and a brief look at Russian SF. There are also reviews by Norm Hartman. Hartman and I reviewed together in *Heliocentric Net* and it's nice to see he's still working. He does a nice job of talking about all of the Honor Harrington books.

There is one more story of note here, Sue Storm's, "Ashes To Bones, All Fall Down." This is an apocalyptic tale, sort of, about a family that seems to self destruct. You never really know whether it's just this one family or the entire world which has gone nuts. The ending doesn't give you any answers, but this is a story to be enjoyed more for the way it gets you to the end rather than for the end itself. It's interesting, if only for the juxtaposition amongst the more straightforward tales. A head scratcher.

Far Haze and Distant Thunder

There are other stories in this issue but none as strong as the above mentioned. While I liked more than half the fiction, I ended up with a sense that the complete package was a bit thin. I'm not sure if I should recommend *S&T*. Perhaps you might want to investigate a single issue or two before subscribing. Perhaps stick to a couple of back issues just to see if the mix is to your liking. Overall an enjoyable issue but with enough borderline stuff to make me hold back on a hearty recommendation.

Just as the pro press has its old dogs (*Analog*), its dead dogs (*Galaxy*), its rabid dogs (*Amazing*), its fat cats (*Asimov's*) and its young Turks (Lock at the cover), so too does the small press. There are still a few magazines around from the sixties and a few magazines from the sixties trying to act like they are still around. There are many mags that skirt the extreme edges of genre, filling niches that no pro press would dare approach. And new magazines pop up every day; it's a chaotic and changing field that looks different on a day by day basis. The small press is both a proving ground and a bone field. There are more dead than living. There are almost as many undead as dying. It's a joy and a curse and you'll rue the day you ever picked up one of these small press magazines if the writing is good enough to get under your skin. Every conceivable sub-genre is covered here. Every conceivable gimmick, idea, convention is tried here first. It's a brutal killing field where success is measured not by talent or survival but by stubbornness and luck. Things change.

Stigmata, Lisa Jean Bothell, ed., BAST Media Inc., 17650 1st Ave. S., Box 291, Seattle, WA 98148, \$8.95 (add \$2 if from outside the US), 88 pgs.

This is a rather unusual incarnation. *Stigmata* is a *Heliocentric Net* Anthology. *Heliocentric Net* used to be a small press magazine. Thus, *Stigmata* bears a volume 6, issue #1 designation. This is perhaps a path to the future. Of course, with the small press, it could be nothing more than a twisted alley leading to a fatal dead end. In any case, there are a fair number of magazines that, for whatever reason—timing, cost, personal obligation, content, have moved to the annual

anthology format. It should be noted that more than one that has made the move has either never produced an annual anthology or failed to produce a #2. That's not the case here but it must, as so much has to, be made note of.

This issue contains mostly fiction with some poetry mixed in. Both the fiction and the poetry are generally accompanied by some pretty good art by Virgil Barfield, Cathy Buburuz (and you begin to see Cathy's name everywhere along with her distinctive bubble art), Bob Crouch, Charles Fallis (a great artist), Randy Moore, Chad Savage, Lee Seed, and Marge Simon. I should mention here that I like art, I think it serves both a complimentary and solitary purpose. Good art draws the eye more than one time. Great art does that and enhances the tale it accompanies.

Fiction, though, is what magazines live or die by. And there are 20 pieces of it within these stiff covers. Unfortunately the first piece, "Unblinking," by Paula Fleming, is a good example of fiction that goes nowhere. It's slice of life fiction, a mad life at that. We are taken on a brief escapade in the mind of madness. These trips can be disconcerting since one needs to wonder about the validity of the surroundings. In the hands of a master these tales are difficult at best. In the hands of lesser writers they tend to be either incomprehensible jumbles or clear, if twisted paths, to an evident ending. The latter is the case here, and while there is some interest in the main character it is momentary. Placed in the middle of the magazine, this story would be easier to forgive. An opening story must grab the reader and be a clear indicator of a magazine's philosophy and content. Strong beginning and strong ending allow you to experiment and play in the middle. A weak opening may not lead the reader further, a weak ending will not entice the reader back. Luckily here, the second story, "The Sofa Is Beige," by James Mastous, is a masterful rendition of the sentence story. A sentence story takes individual sentences which are not linked by cause, time, or place and uses them to build a scene. This is a one pager and is an absolute creative wonder. Each line entices and informs. You never really know how things will develop although it is pretty clear what will happen to whom

and who the perpetrator will be. This story alone is almost worth the price of admission. Denise Dumars provides us with another good story with "Angel Baby." This is a straight forward tale of a young mother who stubbornly gives birth to a baby destined to live for but moments. It's an unusual child and it must be dealt with in unusual ways. This is also a tale of madness but it is well done and one is never really quite sure whether the madness is real or not. After all, a sane person can do insane things given the right circumstances. Michael E. Pryor also provides quite an entertaining story with his "The Dream Of Little Cervantes." Pryor takes the rather tired plot of an asteroid heading for Earth and puts a great new spin on it. He compares the existence of humans and dinosaurs. The take is a great one and Pryor plays it with just the right amount of attention and focus. The pacing is a bit slow but not enough to really set the story back.

The rest of the fiction in the issue didn't move me. I read it, I enjoyed it briefly, and then promptly forgot it. Overall, though, I did enjoy the magazine. There were a half dozen good to great stories and even a dozen entertaining ones. Not a bad value for the money, and it's been around for a few years. Hard to go wrong making a purchase of something that's already in print. I'd definitely check out a recent copy and then use that to decide if you want to invest in a future one.

A relatively recent explosion in the small press has been the publication of single author collections. These are pretty evenly split between brand new work and collections of previously published material. It should be noted that some of these single author collections are pretty close to vanity publishing. The best ones collect authors who have labored in the small press for a while and who have accumulated a body of work. Some pretty interesting names have had collections done—Mark Rich, Joe Lansdale, Ardath Mayhar, John Eric Holmes, Jessica Amanda Salmanson, Tom Piccirelli, and John Shirley. It's an interesting presentation, usually because the author has quite a bit of input into how the finished product actually looks and is laid out.

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Animated Objects, Linda Addison, Space and Time, 138 West 70th St.#4B, New York, NY 10023-4432, \$7.95, 110 pgs.

There is no relationship between my doing *Space & Time* above and doing an *S&T* publication here. In fact I was not even aware of the relationship until just now. Thanks for believing me, and be sure to purchase an official *Space & Time* muffin in the lobby during intermission.

Seriously, Linda Addison thrust this copy into my hot little hands at a recent Lunacon right after a panel discussion I sat in on with Octavia Butler concerning alien sex. It was me and five women writers, so you can figure out who the alien was. Needless to say I was uncharacteristically quiet. Very sexy, but quiet. But all that has little to do with content and nothing at all to do with value.

Animated Objects is a collection of Addison's science fiction, fantasy and horror short stories and poetry. It's an interesting collection in that it is constructed by a poet rather than a prose writer. Prose writers tend to be somewhat linear (beginning, middle, end) whereas poets can be all over the place. My sense is that there is an order which is not all that apparent at first glance; a flow from piece to piece from word to word and page to page. Or, I could be wrong.

Everything in here is pretty short. The book is filled to the brim with short fiction and poetry of all types. They all share a single unifying aspect though—they are all deeply personal. One does not need to read too deeply to understand that here are Addison's personal experiences thinly veiled by the fantastic and the unusual. This is true writing what you know.

It is hard to review short material without giving everything away. Let me just say that there is fiction and poetry here for everyone. Clearly this is the winner of this batch. For example, let me quote in full one of Addison's poems. This one is called "Writing Magic."

"So many words, so many combinations, and from the infinite sea of combinations, Some writers choose just a scant few to say a lifetime of feelings, while other writers gather thousands of words in a book to paint a few days of one life, This is real magic."

In a way, this sums up Addison's abilities as a writer quite nicely. She is able to use a few words to paint vivid images. In the back of this book is a section of journal entries within which Addison shares some personal material. There is much here to look at; pieces, fragments, bits of life, bits of loss and joy; as when she writes "I have found the wings of my childhood daydreams in words."

This is emotional writing, words with soul and heart, wrapped in the tissue of fantasy and the full metal jacket of a vacuum suit.

I am often asked how I pick items for review, why I only review what I like. These are questions from people who have not read my reviews. I approach reviewing more as a reader and a fan than as a critic. Still I am honest when I think something is a waste of time. I start by looking at everything in terms of whether or not I would buy it. This starts with the advertising and presentation (cover art and text, blurb, ad copy, word of mouth), what I know of the writer/author, what I know of the publisher, and of course, the spontaneous feelings that just wash over me as I stand before something. I occasionally buy and/or read strange things. I choose to explore a lot. Usually my taste is confirmed. Once in awhile I'm shocked and surprised with delight.

The Urbanite, Mark McLaughlin, Ed., Urban Legends Press, P. O. Box 4737, Davenport, IA 52808, \$5, 3/\$13.50, 80 pgs.

The Urbanite is self proclaimed to contain urban horror, wry humor and contemporary surrealism. Now, the problem with surrealism is that, in its more extreme forms, it can be very hard to understand, what with its emphasis on the subconscious manifestation of imagery. In its less extreme form it approaches us as magic realism. Let me state right off that I struggle with this form of writing. Mild surrealism tends to slip past me. I take things pretty cut and dried, so I often miss symbolism. If I'm hit repeatedly over the head with it I get it, sure, but that's pretty poor writing. Extreme forms of surrealism lose me totally and I'm left to wonder at structure and ponder meaning. Not being one who likes to wallow in discussions of

what means what, I tend not to enjoy this form of fiction. However, I realize that I am not everyone and that there are significant magazines dedicated to this style, so others must enjoy it. Surrealism survives in art as well, where else would we get melting clocks and those odd paintings that people spend hours discussing?

The fiction inside *The Urbanite* tends to be surreal in the mild to mid-range. There is Joel Lane's "Piano Without Strings," which opens the issue and which is a pretty straightforward story about a man who's searching for a lost love. It is the search that carries the tale, and the imagery that fills the piece and makes it surreal. Lane does a good job of not being overbearing. The story is told from the first person. This can be complicated since protagonists in surreal tales can appear to be insane or at least not right. Lane counters this by being fairly straightforward until the end where things start to become clearer. I liked this story because I could read it on at least two levels at the same time, and the ending did not change the story so much as it changed how I perceived the story. This is surrealism at its least invasive.

I should also like to note that Editor McLaughlin provides the artwork—lots of little pen and ink drawings of eggs, larvae, and butterflies of varying sorts. Nice touches on nearly every third or fourth page.

Scott H. Urban's story "Play clothes" is another example of the surreal in understandable terms. His story is about aliens who can embody beings and use those bodies for locomotion. This is a story about being too long gone, getting lost, and also of discovery. While it's straight forward it's also full of symbolism.

Perhaps my favorite story here is "A Word For Warmth," by Rachel Russell. This is a story about colonists on a far planet of cold and bitter winds. It is a story about survival and what happens if you start giving up. It's also a story about the unusual and the way that the unusual can work in, well, unusual ways. Again, a story full of imagery and context. Interesting stuff. One can almost play games with these pieces by going back and doing some analyzing of how they were constructed, why the authors chose

Far Haze and Distant Thunder

to add things and to emphasize things in the places that they Without author input you're just guessing. "Lunch With Janoscz, The Deconstruction Worker" by Pamela Briggs is an unusual tale in a magazine full of such and it goes in some strange directions. There are, needless to say, things which appear to be more than they are. This is true not only for the reader but also for the characters, thus Briggs double dips into what might or might not be real. It's a well done story that uses some difficult transitions. The protagonist sometimes becomes a bit invisible but otherwise this is a tale worth getting into.

This issue has lots of poetry, which makes some sense since poetry is often full of images which really mean other things and which take lots of interpretation to figure out.

The *Urbanite* is a great magazine for those wondering about surrealism. It's mild enough that it will either tempt you to go deeper or allow you to recognize that deeper is way too much for you. The fiction is well done so it's hard to go wrong in any case. Try a back issue and use it to decide if it's for you.

There is a progression in the small press of magazines which cascade from mild to wild, from short to long, from mostly fiction to mostly non-fiction. One can start at many points and head off in many directions.

The Silver Web, Ann Kennedy, Buzzcity Press, P. O. Box 38190, Tallahassee, FL, 32315, \$6.95, 2/\$10 (\$7.95, 2/\$12 Foreign and Canada), 120 pgs.

If *The Urbanite* is mild then *The Silver Web* is wild. This is another entry in the surreal/fantasy subgenre. I should probably note that this type of writing comes closest to pure literature since much of literature contains not only elements of the fantastic but huge dollops of surrealism. In any case, this particular issue of *The Silver Web* revolves around music. There are five long and in-depth interviews, a dozen pieces of fiction, some non-fiction and poetry. The artwork here fits right in with the words—from the oddly disjointed multi-torn cover to the interior illustrations. I found the interviews more to my liking than the fiction, but that is probably because, as I

stated above, I struggle at times with surreal imagery. It's pretty hard to do a surreal interview. At least I think it is.

Besides doing three of the interviews, Jeff VanderMeer also has the lead off story, "Black Duke Blues." Jeff writes in his sleep and edits in the shower as I understand it. Jeff's story is about the blues and about the south. Music is an appropriate medium for surrealism since it is so full of imagery to begin with and so much an interpretation of reality. It's interesting to read writers struggling with that concept and trying to add story and structure to something that is nearly formless to begin with. It's an interesting juxtaposition and Editor Kennedy does an excellent job of interspersing poetry with fiction and non-fiction so there is constant movement from one to the other and you sometimes aren't even aware of the change. This is some excellent editing. The magazine is usually worth picking up, stuffed with things just barely on the edge of comprehension. Some of the contents will leave you scratching your head and some won't even give you that much information. Whatever the case, it's interesting reading to say the least.

I feel the urge to close by mentioning poetry. In all the talk of genre, format, presentation, style, editorial whim and whimsy, one tends to forget that poetry is more than just filler for that 5,000 word short story that fell 300 words short of filling the last page. Poetry bridges the gap between lyric and prose by bringing us verse. Ann Kennedy shows us this best by example. The difficulty, as there are difficulties with all specialized forms of writing, is that you need to know something to learn more about something. True, some poetry can just be read and enjoyed, limericks for example, right off the shelf, but the great deal of it must be pondered and chewed and thought of. Poetry is, perhaps, as much a victim of presentation as anything else. Bad production values will not entice you. Spacing, white space and line placement all play a part. It's an editor's and writer's nightmare when it comes to how you best present something like this.

Asylums and Labyrinths: Deviance And Damnation Chronicled In Verse, Rob Cook, Ed., Rain Mountain Press, RPO

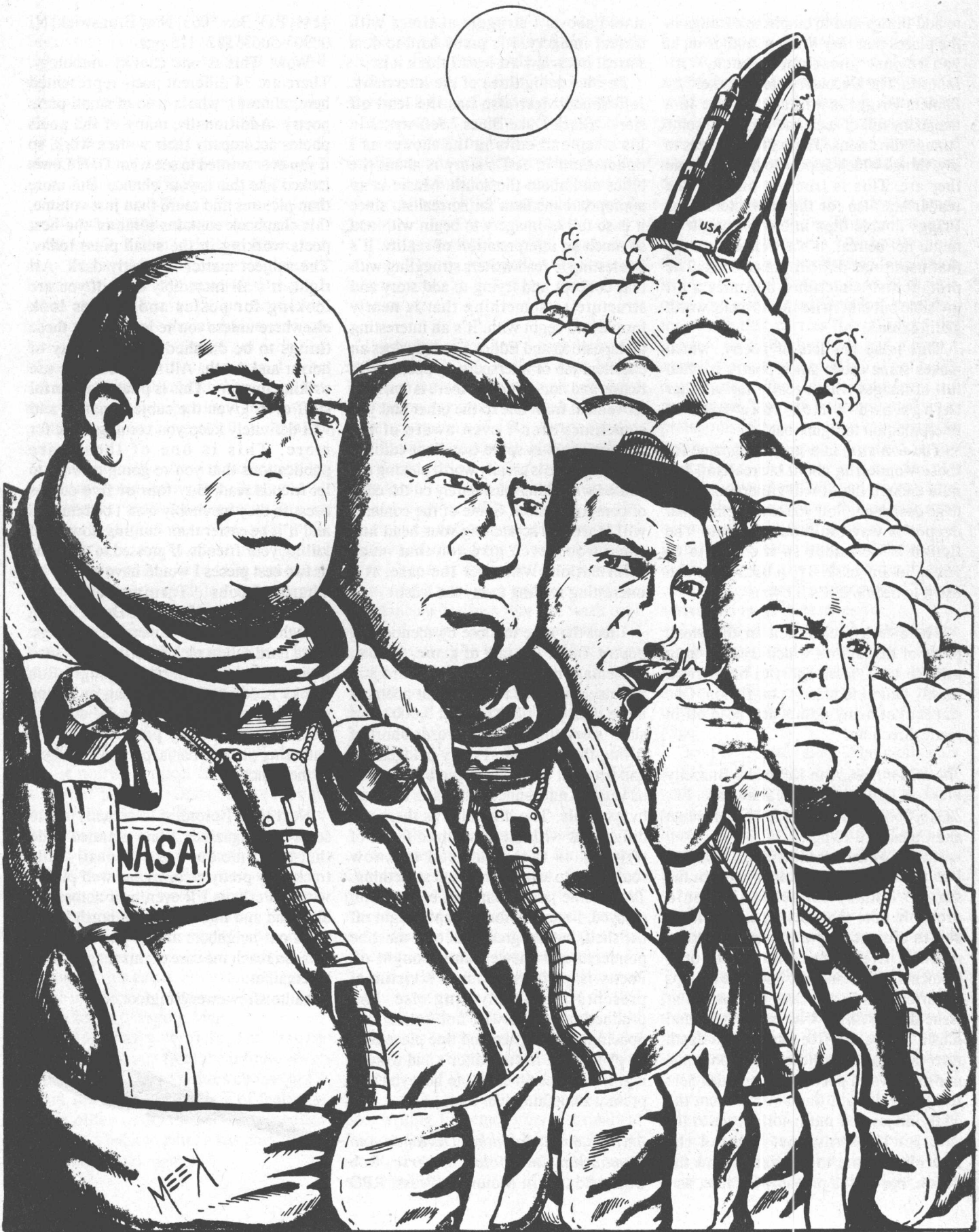
4141, P.O. Box 5063, New Brunswick, NJ 08903-5063, \$12, 115 pgs.

Wow! This is one chunky anthology. There are 34 different poets represented here; almost a who's who of small press poetry. Additionally, many of the poets photos accompany their written work, so if you ever wanted to see what D. F. Lewis looked like this is your chance. But more than pictures and more than just volume, this chapbook contains some of the best poets working in the small press today. The subject matter is mostly dark. All right, it's all incredibly dark. If you are looking for posies and birdies look elsewhere unless you're looking for those things to be crushed by the reality of horror and death. All the poets here use striking imagery. This is pretty wonderful stuff even given the subject matter and will definitely keep you coming back for more. This is one of those rare publications that you're going to want to let friends read. Buy four or five copies because they inevitably won't be returned and it'll be easier than hunting down and killing your friends. If pressed to pick one or two best pieces I would have to go with Charlee Jacobs' "Turning Point" and Patrick McKinnon's "Me & Death." Both brought me back for numerous readings. It's a hard call to pick favorites from such a distinguished collection though. Rob Cook needs to keep editing and keep producing works such as this. He does the field a huge favor by providing poets a gathering place. This is, perhaps, the best of the bunch.

Next time I promise to actually get to some SF magazines. I had planned to do that this time but I get so easily sidetracked by pretty pictures and well placed words. Perhaps I'll even peer across the big pond and into the frozen north to see what our neighbors are up to. As always you can reach me care of this magazine or by email at:

"mailto:sfreviewer@bigfoot.com"





Fat Guys In Space

by Linda Tiernan Kepner

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Cap Little's chest had stopped working for a moment, and there was a hollow spot in his stomach. "Say that again, Doc. Real slow. I musta missed something the first time."

The VA hospital doctor shook his head. "You didn't miss anything, Cap. I asked you if you wanted to go into the space program."

"Doc, how's your eyes? How much do I weigh?" Cap Little demanded.

"Today—" Patterson checked the chart—"you weighed in at three hundred and fifteen pounds."

"Then one of us is crazy."

"Neither." Patterson set down the chart firmly. "Cap, I have a call here for registered ex-military pilots weighing over two hundred fifty pounds. There's no top limit. Didn't you tell me once," he demanded, "that you wished you'd been in space?"

"That was a joke," he protested.

"Well, this isn't. You still flying?"

"Yeah, but—"

"Then call this number, and talk to the people at the other end. I don't think this is a joke. Inside all this—" he tapped Cap Little's voluminous stomach—"is a Navy pilot. And maybe it's time you changed your goddamn lifestyle."

66 **M**aybe it's time I changed my goddamn lifestyle," Cap Little growled, as he frantically pulled levers and sealed every blasted seal he could find in the tiny command compartment of the shuttle.

It carried over the helmet headset. Alex's voice—a clear, feverish treble—came back, "What, Cap? What'd you say?"

"I said you got the aft compartment sewed up?"

"Yeah—yeah. I do. Jeez, Cap, I'm scared!"

"I noticed you ain't passed out either. They were right, boy, we can do it. You remember why we're here? We're here because NASA wants to prove that we have now reached the day when anyone can go up in space, even with tons of medical problems, and be OK. People like you 'n' me've got more medical problems sneaking up on us than them skinny guys. If we can do it, anybody can do it. You hang in there."

His voice seemed to reassure the younger man. "All right, Cap, I'll hang on till you give the word."

"Great." Cap growled into the speaker again. "Tynan, you copy? We need you up here, boy, to tell us what the hell hit us." It was tough working in the full pressure-suit, but—like Alex, the young man in the aft compartment—Cap Little had known that any sound he could hear was a good reason to slap a suit shut and seal it.

It was supposed to be a piece of cake. The *Oma's* last survey of these asteroids had some equipment malfunctions, and some of the tests had to be redone—a perfect "milk run" for a moderately-untrained, woefully unfit space crew. The job was routine; the crew were the experiment. Seeing if obese human beings, people with more medical problems than the average, could last up here without cashing in, was the only goal. It was a test of endurance, if nothing else. It was not supposed to be a test

of the ship or the equipment, just the crew. But somewhere, in the considerable amount of space between Cap Little, the pilot, and Alex Buchanan, the younger of the two mission specialists, something was seriously wrong.

Ninety-six feet of space—possibly without air, or even structure—were between him and Alex. The midsection, divided into three pairs of compartments numbered odd on the port side and even on the starboard, was a completely unfathomable conundrum at the moment. Cap couldn't see in any direction except forward. He could hear little whimpers—the kid was young, barely twenty, although he weighed three hundred in his stocking feet, back on Earth—and Cap knew he'd better talk. "Near's I can tell," said Cap, "that peculiar bright shimmer they were seeing from S107 was a new shear—I can see fissures."

He heard Alex take a breath—and speak, God bless his fat little hide. "I get it. No oxides or anything yet, so it didn't register properly. Think that's what hit us, Cap? One of the pieces that broke off?"

"I'm pretty sure, but I can't see back thataway. We ain't got a communications window yet, so we'll jest sit and twiddle our thumbs for awhile 'til the other guys feel like talkin' to us." The six midsection compartments were independently sealable. We can't have lost 'em both, Cap hoped. But he hid his fear away from the kid. Cap had done his time—he'd been around. The kid hadn't been on the spot like this before. He didn't want to panic him.

A groan broke into their conversation. A voice said, "Damn, I'm half into and half out of this suit." There was the kind of grunt that only a fat man makes when he's settling baggage around his midriff bulge, bulged even more by the generous floating assistance of weightlessness. They heard the sound of a seal taking hold, and then full radio capability. "Ah! Cap? Alex? Tynan? Anybody out there?"

Alex and Cap both answered at once. "Yeah, Dennis," Cap overrode, "we're here. Where are you?"

"Compartment 6. I was just coming out of Number 5 when I heard it, and I remembered them talking about 'the bullets you hear.'"

"You weren't at the food, were you?" Alex asked suspiciously.

"Hell no. That's radio controlled. I feel like one of those apes they used to give banana-pills to. Besides," Dennis added, "I couldn't figure out the locks."

Cap grinned. "How are things down in your area?"

"Give me some light and I'll tell you."

Cap turned a knob. "Sorry."

"What hit us?"

"Asteroid fragment, we think. S107's broken up—that's what they couldn't dope out from the telescopes on earth. It's been hit by one of these other smaller asteroids. We just got hit by the shrapnel."

"Makes sense," said Dennis Longford. "Where's Tynan? He's the only one who can put us back together."

"Down there near you somewhere." Cap did not say more; he knew Dennis understood because they thought just that much alike. Don't panic the kid.

Absolute Magnitude

"OK," said Dennis, after a moment, in a careful tone of voice that showed Cap he had not underestimated him. Not bad for a science teacher from somewhere. "Look, Cap, I can go through the even-numbered compartments fine—we can go fore and aft without trouble, I think—but I've got a red light on the door for Compartment 5. Give it a little power and no more oxygen, and see what happens."

"Doing it now." Cap turned another knob carefully.

"OK, cut it. The light wavered to green for a minute, and back again. We've got a leak for sure in there, and the circulators can't keep up the pressure. Can you get to me?"

"Negative. Fore and aft compartments are sealed."

"So it's just me and Tynan in here, huh?"

"Yeah. Find each other and hold hands. I haven't raised him yet."

"OK. I'm going out through the hatch to Compartment 4." A pause, punctuated by occasional grunts. "If I was ten pounds more, I wouldn't make this one." At three hundred and eighty-five pounds, Dennis was the fattest of the lot. It was a good thing that the *Oma* was not designed with the original space shuttle crew in mind, but more toward the idea that, someday, anyone might go into space. "I'm in Compartment 4."

Alex asked eagerly, "Is Mr. Tynan there?"

Pause. "No." They heard Dennis grunt, the grunt of someone lifting or pushing something. "Now I'm back in 6. Cap, push the Compartment 5 pressure up a couple more pounds per inch, can you? I'm going to open the door."

"You got a patch?"

"I've got a patch." That had been the grunting noise—Dennis opening drawers and lockers, getting out the emergency patch materials they'd all been shown how to use. "On my mark. 3. 2. 1. Mark."

Cap gunned the air pressure, and waited tensely. There was no telling how much of their precious oxygen would be wasted if Dennis found a hole he couldn't patch mighty fast. And where the hell was their shuttle expert, Tynan? It was an eternity before he heard another response, and it didn't come from Dennis Longford—it came from one of Cap's panels, as a red light turned to green and Compartment 5's air and electrical systems came back to life.

"Out of sight," Cap said, slowly and approvingly. "A-OK job, Dennis." He wondered why Dennis wasn't responding.

Then he heard Dennis take a deep breath. "Yeah, there was a big hole in the bulkhead, Cap."

"In the shell, you mean."

"In the bulkhead. Compartment 3's out, completely depressurized. You may as well be standing outside. And, Cap—I can see Tynan's pressure suit. It's hanging on a hook—here, in Compartment 5."

"God damn him!" said Cap Little fervently.

"That stubborn bastard," muttered Cap as he rewired panels on the number 5 side of the number 3 midcompartment bulkhead. One of the reasons this particular team had been chosen was their positive attitudes. Despite the peculiarities of their weights, these men had dreams and ambitions, and had worked to fulfill them (Cap was an electronics store owner, Dennis a published author, Alex a Congressional aide.) They had drive, and they needed it all now. They were stubborn—of course, it was Tynan's stubborn refusal to wear the clothes appropriate to the job that got them in this fix to begin with. Tynan knew everything and wouldn't do as he was told. It had been a problem all through training. But everyone, themselves included, expected fat men to have their idiosyncrasies. Like fools, both the team and NASA had let it pass.

Cap didn't know space shuttles but he knew submarines. As near as he could see, the only difference was that on one you blew in, and the

other you blew out. He got Alex and Dennis organized, as well as himself, as rapidly as possible. First priority was air. They by-passed the equipment in the sealed compartment. Then they strengthened the bulkheads, knowing they would have to fix the hole soon enough. The electrical system was the next priority—if they couldn't crank that up, they would have no communication with Earth.

What made things particularly awkward was that the head, the water supply, and the food containers were all located in the sealed compartment.

"God help me," said Dennis, leaning back against a sleeping-compartment panel, "I haven't worked this hard since that summer in my dad's garage." He sounded impressed. "I'm not nearly as tired out as I expected to be."

"Make a note of it," Cap said dryly, "they'll want to know. Me, I'd kill for a beer."

"Good thing there isn't any. The methane-converter is in the head."

"Wise-ass." Cap hadn't liked the Yankee teacher before, but now he felt perfectly comfortable insulting him. Dennis, in turn, just grinned.

Alex somersaulted through a lock like a kid half his age, and said in a quick voice, "Hey, we have that stuff for the plants. I think if you'll help me, Mr. Longford, I can rig up a water-recycling station for us!"

"All right, Alex!" the teacher said approvingly. They disappeared into the aft compartment. Cap shook his head, and went into the forward compartment to try to raise NASA.

"Repeat, please," said NASA.

"NASA, your hearing's just fine." Cap waited for them to hear it, and respond.

It took an eternity. "Affirmative, Captain Little, we did. What is your assessment of the damage?"

"We have the repair materials, but it will take time. At least eight hours. And we need to rest before we try it. We've been at it for over twenty hours without a break, and it's taking all three of us to do it."

Another interminable wait. "Oma, that will throw your schedule off by at least seventeen hours."

"Oh, shit," Cap whispered. "The window." He spoke up. "What will the next window be?"

This pause beat all previous records. "Eight hours and it will be a near thing."

"Roger, NASA, that it will, because we don't know how long the repairs will take. Oma out."

Dennis slid into the seat beside his. He had heard the last part of the conversation. "So we're going to miss our window?"

"Yeah. We'll spend three weeks riding back toward nothing." Cap gritted his teeth. "I got mad only when they said too bad about the food."

"They've got three weeks to fix up someplace for us to land," Dennis objected. "We were almost done here, anyway. Are we so far off schedule?"

"The windows are mighty precise, and we need a lot of room, not being able to judge the condition we're in," Cap replied. "And since we were sent up here so low-key, just billed as being a 'routine flight,' NASA would be mighty embarrassed to have to announce to the world that they'd sent up a bunch of fat guys to see if they'd float. They want us down as quietly as possible."

Dennis's eyes flashed. "Dammit! Do you mean they'd waste us just for good public relations?"

"Hell, no. Cool your jets. They'd rather have us get back down to earth in one piece, under our own power, if we can do it, for a lot of other reasons, too. It ain't been too many years since the *Challenger* explosion. People still remember. It'd be nice for them to be able to

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show that every shuttle accident ain't a total disaster. It'd be nice if we can walk away from it. 'Sides, getting a shuttle quickfit and up to meet us would cost a fortune in money, time, and government hearings."

Dennis said wryly, "They can't win. That would still give us publicity."

"Well, so long as we're alive to enjoy it. How's the kid?"

"Right as rain, and then some. I'm beginning to think I've underestimated him. His plants did have their own water-recycling system, and there ought to be enough for both them and us. He can shunt our wastes through their fertilizer system. And they're pretty much responsible for their own respiration, you know, so they won't be a drain on our oxygen supplies."

"Plus they're food, and I'm dyin'."

"Well," Dennis grinned, "given a choice between eating a geranium or a banana chip, I'd rather have a banana chip, but yes, I suppose they'll do. How soon till real food?"

Cap shook his head. "I suspect we'll find everything has seized up good, once we get in there."

Dennis looked doubtful. "Cap, those plants aren't going to hold us three weeks. An ordinary human being will starve to death in that amount of time."

Cap grinned. "Then it's a good thing they didn't send up ordinary guys, isn't it?"

One of the few good things Tynan had left them was a course for Earth all laid in and ready for Cap to execute. It wasn't any good in its present condition, because the repairs would take them beyond the execution point, but Cap could modify it and double-check with NASA.

The three men slept the sleep of the exhausted, two sleeping while the other watched, for a cumulative eight hours. Then they removed everything that could float or be damaged by a vacuum from Compartment 5. Five became a sort of "air-lock" for them to enter Compartment 3. It was a safer operation than using Compartment 4—if they had trouble with 3 and 4 at the same time, the shuttle could theoretically snap in half, right across the middle. Alex operated the pressure controls from the forward compartment while Dennis and Cap took the first repair shift.

The hole was a black space tunnel. Everything around the opening—sheet metal, wiring, supports—was blown outward like a wet clay balloon. Maybe a rock had shot in—but everything had shot out. The compartment was open, empty, bankrupt.

Cap drifted, one hand on his safety line, over to the hole. He could see stars. His helmet light let him see something else, too, on the edges of the hole. He lost his appetite. For the first time in years, Gabe Tynan was blown all over the edges of that hole. What was left were glutinous-looking raspberry-like clumps frozen in place, generally unidentifiable. It was like nothing Cap had ever seen, even on his old medical piloting runs.

He heard Dennis behind him. "I'm going to be sick."

"No, goddamn it, you aren't. Get a grip on yourself and hand me that torch."

Dennis took a deep breath, then two. "I'm dizzy—my stomach—"

"You'll suck on a leaf and like it," Cap said fiercely. "Move!"

"You guys OK in there?"

"Yeah, Alex, we're fine," Cap replied. "Just discussing the merits of leaf-chewing."

"Moo," Alex opined.

"Asshole," Cap told him too, and chuckled. He passed some steel mesh to Dennis. "OK, Longford, shake a leg. We gotta have something to show for all this oxygen we're using up."

Cap compared notes with NASA and discovered that he was only a little bit off—or they were—on the course corrections. He plugged in their figures ("Ours not to question why") and turned the shuttle gently toward Earth, with Dennis Longford taking his third session ever in the co-pilot's seat during this maneuver. Nothing like on-the-job training.

On the first week of the trip back, Compartment 3 suffered a partial decompression. The only thing worse and more unreliable than a patch was a patch on a patch. They worked on it, wrestled with it, bumped against it, and licked it—they hoped. Then they returned to the midcompartment, wilted and discouraged. Alex looked at their faces and said nothing. He turned and disappeared into his little nest in the aft compartment.

Dennis shook his head. "I don't know how much more of this I can take."

Cap felt fears far deeper than Dennis's, if possible, about the structural integrity of that graft.

Alex reappeared. He motioned them to the aft compartment.

Curiously, they followed. Alex was standing over his hydroponics tanks. They watched a miraculous conjuring trick: four potatoes appeared, dripping wet. "They're ready," he announced. "Do we make French fries or potato chips?"

Cap stared. "Oh, God, peel them or do something! I'll jump them now!"

"Don't peel them! Don't peel them!" Dennis said urgently. "Don't waste a gram!" It was the first time that slicing four potatoes became a team effort, but no one would leave the others alone with the wonderful vegetables. They had a jerry-rigged microwave oven, because they had recovered most of the pieces of that from Compartment 5, as well as a few of the food packets, which tasted like sweat socks boiled in yogurt and smelled almost as good; this was manna from heaven. On top of that, Alex had discovered that one of the indecipherable foil packages salvaged from Compartment 5 contained something remotely resembling margarine: and so they had microwaved, greasy potato chips. It was probably the high point of the trip.

Back in training, they had been warned that the return would be boring. NASA had never expected a return like this. They did some things which, looking at them rationally, were morbid, but they seemed necessary and kept them fully occupied. They sent back the data they had collected on the Apollo asteroids, including their interpretations, especially the fissure on S107 which had been a puzzle from the ground and space telescopes. They also sent a lot of the material which was usually saved for examination on the ground; but they didn't know if there would be ground again. Keeping the *Oma* operational, considering that they were amateurs, took three times as long as if they were professionals—and therefore kept them going morning, noon, and night instead of just morning and noon. They also read up on things about the ship which had never before been their responsibilities. Dennis discovered that he had the records of the original Seattle-Everett VA Hospital weight-loss experiments, where seven men and a woman had lost about three hundred pounds apiece; he read them to an interested audience, and they started compiling their own follow-up paper for professional publication. Dennis observed, stomach rumbling loudly, that staying alive kept their minds almost too occupied for food. Alex, eyeing a piece of paper which was beginning to look more edible with every passing day, commented that pity for his poor, stripped plants helped to curb his appetite. Cap added the most brutal and cogent reason for weight loss: if he cheated on the food, the others would kill him and eat him.

Absolute Magnitude



When they spotted a small leak in Compartment 3 in the third week, Cap found himself, one knee wrapped around a safety post doing upside-down situps with a patch kit, thinking half about the problem and half about what Alex would come up with this time. He knew Dennis was doing the same. After six edgy hours of trying to track down a pinhole leak, and finally locating it, the job was done and Alex came through. In his personal effects, he had a thick, scrumptious chocolate bar. They sliced it with the microtome and ate it a karat at a time. Alex had become the Morale Magician of Space.

They were well into their final run to Earth before they picked up full communication and telemetry from NASA. NASA gave the ship a checkup, and found them in fairly good condition: they had to double-seal Compartment 3, just for luck, and test one of the engines. The heat-shield, they hoped, was all right.

The window was another problem. Cap suspected NASA had not expected them to make it back this far, and had been caught with their pants down. Only Canaveral, they insisted, could take this shuttle, no place else; and they would have to mark time to get to it.

Cap and Dennis had discussed this beforehand. Dennis handed Cap the paper they had worked on previously, during the long days heading home. He nodded and frowned. "NASA, what about the Soviet Union? What about the Arabian strip? We can try for one of those and still have a second chance. We've got the calculations here, roughly. You just need to smooth them out for us."

"Negative on Asia strips one and two, *Oma*. US only."

"NASA, why not?"

"We are the only location prepared to receive you."

Their suspicions were confirmed. "NASA," Cap Little said sharply, "this has gone far enough. We don't care if you will be embarrassed, goddamn it, it's our lives you're putting on the line. I'm a goddamn vet and so is Longford. Buchanan is a Congressional staffer. We got our rights. We know how to make noise. You have been saying you want the day to come when a shuttle flight is just an ordinary flight, by ordinary guys. All right, if you want to pretend that this is just an ordinary flight, then I'm the Captain, and I say it's too dangerous for me to risk my ship. You sent us up here, we want a fair shake at getting back down. Now we can try calculating the Arabia window—and take

our chances on crashing—or you can do it for us. Which is it gonna be?"

A million years later, NASA replied instantly, "*Oma*, the condition of your ship is our major concern."

"What's Canaveral got special? A crash crew waiting for us? Dead is dead. Sooner or later you're gonna have to let the world know that you're sending up anybody who can pay the price, ordinary joes, joes who don't want to die. You may as well let them know now. Not only that," he added, overriding someone trying to reply, "ordinary joes that can bring down a winged bird. Now throw us some numbers."

Cap held his breath for about nine hundred years.

"*Oma*, we're aiming for the Arabian window. Stand by."

"I will be damned," Dennis Longford breathed, "they are more worried about fat-guy jokes than whether we live or die."

"Tolja," said Cap. "Y'know, there's enough good hackers out there that could be hearin' our speeches right now, maybe the stink has already started."

Dennis sweated out the landing more than Cap. Cap got her nose up and kept it up, letting the heat shield take the brunt of it and trying to favor the port side as much as possible. It was a tender operation, but Cap had done worse. Dennis claimed to lose fifteen pounds in that one hour. Alex had switched off his microphone in case he screamed. It was tribute to Cap Little's piloting that it looked like an anticlimactic, ordinary landing on a stretch of hard desert.

Nothing, however, was ordinary about the expressions on the faces of the American men and women who watched the crew of the *Oma* disembark. They saw the hole in the *Oma*'s flank.

They saw three truly outworldly figures: men in drooping, outsize clothes, walking with little difficulty despite the weeks in space, because the muscles they had developed over the years had been attuned to carrying a far heavier load. Men who should have died of panic, heart attack, starvation.

They were separated for their first debriefing by the NASA officials who had been hurriedly dispatched by jet to this location—the first time the three men had been apart in months. Alex was waiting in the lounge when Cap Little (in borrowed clothes) rejoined him, many hours later. "They gave me the strawberry milk shake I've been dreaming about for weeks," Alex explained unhappily, "and now I can't drink it."

"You'd better," Cap said slowly. He looked stunned. "You'll need to get your weight back."

"Need to? Hell, look at me. I look the best I've ever looked in my life, Cap! The—" he blushed—"the girls were even looking at me. I never, never had that happen before. This was the best thing that ever happened to me!"

"Well, you'll have to make a decision." Cap still sounded stunned. "Me—I'm staying on."

"You? Why? You couldn't wait to get back to the store! What about Dennis?"

"Him, too. He's staying."

Alex stared. "For God's sake, why?"

Cap shook his head slowly, still as stunned as he had been in Patterson's office that day so long ago. "I was right when I said people all over the world were tappin' into our adventures. The weight-watcher people just booked the next shuttle. They want us to go up again with fat girls."



Book Reviews

Reviews by Joe Mayhew

Darwinia by Robert Charles Wilson
Tor Books, 320 pages, \$22.95
ISBN 0-312-86038-2

While the premise of this book borders on fantasy, it is told in the traditions of pure science fiction. In March of 1912, when Guilford Law was 14, Europe suddenly disappeared. By some power, which many think miraculous, an alien jungle world has been grafted over the erased continent's geography, making it a new "New World."

In 1920, Guilford Law, now a photographer, joins a scientific expedition which eventually takes him across the edge of the old world to the former Europe, popularly known as "Darwinia." But the "miracle" which caused Darwinia took away the entire population, cities, barns, buildings of any sort, animals and every other terrestrial life form. Europeans off the continent at the time of the "miracle" soon set up governments in exile to claim their former homelands; however, the USA wants it to be held in trust for all. An exception is made for England, but the miracle's continental scars begin to fester with political infighting, sabotaging and piracy by the surviving French, Germans, etc.

The replacement England is little more than a frontier clearing struggling with alien life forms and shattered social traditions. Law leaves his wife and child there as he sets out for the Rhine, or its replacement. Their separation becomes surprisingly important to the plot.

Wilson's alien plants and animals are plausible. He seems to have carefully and logically worked out his alternative life forms. Some are frightening, some benign, some irrelevant to man, but all are refreshingly natural, yet they are compatible with Earth's biology and thus can eat or be eaten. Wilson, a Canadian, has that deep focus into natural environments found so often in many of the better works of his countrymen.

A confidence man named Elias Vale slithers into the story. But we soon learn that, beyond his considerable bunkum, Vale has preternatural gifts from a "God" who is using him for his own purposes. The stories of these two characters eventually collide, propagating a larger and larger scope for this novel. Law discovers that he is a veteran of World War I (Which couldn't happen in his own time-line). The author continues to dish up a hyperbolic genre smorgasbord, but with the cause and effect analysis of science fiction rather than the stunning wonder of fantasy. Wilson is a vivid, careful writer who at times reads a bit like Tim Powers or even Michael Swanwick. By the way, the dust jacket, featuring a Jim Burns illustration, is exceptionally handsome.

O Pioneer! by Frederik Pohl
Tor Books, 254 pages, \$21.95
ISBN 0-312-86164-8

Perhaps this book has a 1940s—1950s feel to it because Frederik Pohl had so much to do with shaping the SF of that period. The hero has a golden age type

name, Evesham Giyt. His ex-prostitute wife calls him "Shammy."

Giyt has immigrated to a far distant planet, "Tupelo," by means of an instantaneous transport system. But there are other sentient races with whom the humans have to share what the aliens call "The Peace Planet." Pohl's humans interact like characters in a Frank Capra film. His aliens are eccentric critters: annoying monkeylike "Petty Primes," chattering "Kalkaboos," super civil engineer "Slugs," foul smelling semihumanoids called Delts, and huge anteaterlike Centaurians. The Centaurian leader, Mrs. Brown Benttalon, takes a shine to Giyt and helps him over the hurdles of interspecies conflicts as well as the traps set for him by the human corporate representative, Hoak Hagbarth.

Hagbarth is the snake in the Garden. His corporation wants to discard the aliens and capitalize Tupelo. He arranges for Giyt to be elected Mayor of the Earthling community and uses him as a patsy in the company plot to destroy the multispecies co-op.

While Pohl's technological furbelows reflect the nineties, the social milieu would have made Eisenhower feel at home. Giyt and his wife are a sort of Ozzie and Harriet with sordid pasts. One can imagine Pohl sitting at his typewriter grinning affectionately at his characters, devising wry faulty translation speech: quaint, even disgusting, alien antics: and sticking it to the sinister right-wing human villains. Pete Seeger would have approved.

Absolute Magnitude

O Pioneer is charming, comfortable, and dependable old-timey science fiction. More than likely, it will make you smile.

Secret Realms by Tom Cool
Tor Books, 304 pages, \$22.95
ISBN 0-312-86417-5

This is the kind of adventure book designed to be worn rather than watched. Its protagonists are a tribe of virtual super-action heroes and a certain Lt. Commander Mike McCulloch of the United States Navy. (The dust jacket says, "Commander Tom Cool, USN, currently serves a Deputy Director of Intelligence for Plans and Programs, United States Southern Command."—making one think that McCulloch is Cool's avatar.)

The Tribe of 15 cyber warriors with names like Trickster, Cat, and Snake engage bodacious battle scenarios in a computer-construct learning environment, but they have a reality outside the computer. They were taken as children by the Chinese government into an analog cage where their real bodies are stimulated and cared for, but their conscious life is only inside the system. Inside the system, each can change their physical attributes or avatar.

Their training has reached the point where the Chinese government decides to use them in a real world scenario. China and Japan are on the brink of war and the tribe are their secret weapon. But one of their managers has conscience problems and lets their leader, Trickster, know about the real world.

Tom Cool's incredible slash-and-burn battle scenes are done in loving detail. The tribe's discovery of their real bodies and sex parts is close-in and loud. Their unflinching tactics and super strength relentlessly overcome all comers with the glib bravado of a pre-adolescent daydream.

Cool seems inspired by adventure gaming, and those who enjoy playing through a lively dungeon will best enjoy this book. The characters are a bit cartoonish and their relationships are two-dimensional, but their adventures are over the top.

Reviews by John Deakins

Between the Rivers by Harry Turtledove
Tor Books, 381 pages, \$24.95
ISBN: 0-312-86202-4

Has my hero, Harry Turtledove, finally slipped? He has chosen a different setting (Bronze Age Earth) and a single theme (humanistic determinism) on which to hang an entire novel.

All humanity, created for unknown reasons, is dominated by the gods. Each city has its own; each region, its pantheon. Anthropomorphic gods can enter their subject's minds. They control every aspect of human life—except in Gibil. The Gibli have tricked their god into lounging in his temple, satisfied with offerings and lip service, while they go their own way. Metalworkers especially have released new forces into the world that the none-too-bright gods can neither understand nor control. Worse, the gods tend to store their powers in minor objects that can be destroyed. Sharur, a Gibilut bronze worker, is first to discover that the gods have decided to ally against his city, and the first to reveal their vulnerability.

Between the Rivers is the light-hearted story of the Gibilis' interpersonal struggles, laid over a very serious humanistic theme. The message is unmistakable: Humans no longer need the gods. Only the dimmest reader will miss the real theme: Humans no longer need God. For the metalworking that threatens the (rather silly) gods, read "technology." Personally, I couldn't disagree more with Turtledove's philosophy, and I would love to argue with him about it, but here, let's stick with the facts.

Turtledove has chosen a dialogue/narration style that is a cross between "See Spot Run" and the Old Testament. Nevertheless, each time you think he can't carry it off, he both comes through and entertains. Though not identical, influence of his previous work, *Prince of the North*, shows in his use of ghosts. Ignore the jacket blurbs, half of which trumpet a previous book, *The Two Georges* (Turtledove's worst). If you like good writing, you'll like *Between the Rivers*. If you are offended by naked humanism, maybe this isn't for you.

An Enemy Reborn by Michael Stackpole
HarperPrism, 450 pages, \$5.99
ISBN: 0-06-105681-2

An Enemy Reborn was originally part of a book proposal by Stackpole and William F. Wu, a novel shot down by Roc Books during the new-authors' Recession Massacre of 1991. (Been there; done that.) Stackpole's portion grew into *Once a Hero*. *Enemy* is a pleasing sequel, based on William Wu's part of the original collaboration.

Book Two of any series can be frustrating, requiring connections to Book One. In this case, there are a few, but Stackpole generates an excellent stand alone novel, weaving background smoothly into the sequel's fabric.

Long ago, when Fialchar shattered the Seal of Reality and Chaos exploded into the world, the overpowerful sorceress Spiriastar was imprisoned by her son-in-law, Dashan, a mighty hero-magician. That time-manipulating wizardess has been awakened by a Chaos storm, to find that Dashan intentionally divided his migrating soul at death. He is Myat, a conscienceless princess, with magic knowledge but without magical power; Shoth, a minor magician seduced by Myat; and Len Fong, an American shoe salesman in another dimension. The same Chaos storm that wakened Spiriastar,

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yanked Len into a magical world and animated his lapel-mike, step-stool, and shoe-sizer. Throughout, he insists that everything is only his dream. Dream-versus-reality and free-will-versus-predestination themes are dissected philosophically throughout the book (sometimes too thoroughly).

With the help of Chaos riders (from *Once a Hero*) and an uncomfortable alliance with Fialchar, Myat, and four unpleasant varieties of Chaos demons, Len reluctantly takes on Spriastar and her antlike crystalline minions. It is a rousing, fine tale. Stackpole, however, seems reluctant to kill off his protagonists. Though bodies litter the battlefield, the reader has entered the mind of one only. This novel is mainline fantasy, with enough new twists to really enjoy. I strongly recommend it.

A Wizard in Midgard by Christopher Stasheff

Tor Books, 256 pages, \$21.95
ISBN: 0-312-86033-1

With thirty-one books behind him, many in the same "Warlock" universe, Stasheff has turned out another in his Rogue Wizard subseries, comfortable with the future he has created. I have (unintentionally) never before read a Stasheff book, though I have several in my "someday" library. Twenty-five books into a universe and seven books into a subseries is a tough place to start.

Nevertheless, the book was an easy read. ("Easy?" "Comfortable?" Space-opera fluff?) *Midgard* does emerge briefly from the fluff with a fast-paced action tale.

That's it.

The lost-colony world of Midgard is a cartoon. Dwarves, giants, and average Midgarders have somehow duplicated a pocket version of Norse mythology. The science is very thin, contrived to create the setting. The psi powers of the

protagonist turn on and off at convenient moments. Most interhuman violence is threatened, nonfatal, off-stage, or implied. Technology is a rabbit from the magician's hat, to keep the story moving.

Gar Pike (Magnus, Son of Warlock) is determined to stop the exploitation of tall, short, enslaved, and/or female Midgarders. You'll never doubt that he can do it, aided by his psi powers, and your pulse will remain unchanged when he does. His love-interest, Alea, reaches the final punctuation mark unknissed.

Stasheff is so careful to maintain political correctness that his story slips back into the fluff. If the reader wants to explore exploitation of women and to experience the idealized sensitive male and the ideal female sisterhood, "All aboard!" I didn't say you had to believe that that train would actually move. *A Wizard in Midgard* is so patently parked in one more minor siding on a series track that only the diehard Stasheff fan will find it worthwhile. The rest of us, who are actually going somewhere, should blow the whistle in a friendly way and chug on by.

The Great War: The American Front by Harry Turtledove

Del Rey Books, 503 pages, \$25.00
ISBN: 0-345-40615-X

Turtledove has produced (in record time) the sequel to *So Few Remain*. It is hard to imagine where he's going from here, but *The American Front* is designated the first volume of a "Great War" tetology.

In 1863, Lee's crushing defeat of McClellan permanently divided the Union and created a Confederacy allied to France and Britain. In the Second Mexican War of the 1880s, the embittered North renewed the fight against the trio. Forced into another harsh armistice, the Yankees allied themselves to the militaristic Prussians. Thus, both North and South are drawn into the inevitable bloodbath of

World War I, on opposite sides. There will be no American troops to keep the Germans out of Paris; there will be gory civil war in the trenches of Virginia, Ontario, Kentucky, and Utah.

Turtledove views the war through the eyes of a dozen ordinary people. The reader is not again subjected to the bedroom antics of (now President) Theodore Roosevelt or Mark Twain. Some live; some die; but all are twisted by the war. Historical leaders in WWI tried to fight it with Civil War tactics. Americans charging into machine guns evolves into the same bloody, men-eating stalemate. Aircraft, submarines, and poison gas produce only token gains as the whole world is dragged into the grinder. The book has no conventional ending. Americans are mutually massacring one another on land and sea, as the fanatical Mormons try to secede from the Union, and the southern blacks rise in a Red Socialist revolution. The novel is intricate, deep, and well-written, but you will have to buy the sequels to finish the various plotlines.

Confederate President Woodrow Wilson is a trifle unbelievable, and the Yankees are too Nazilike for such an early historical period. Such nit-picking flaws never distract from Turtledove's panoramic tapestry, woven from mud, blood, human lives and emotions. This book is well worth the read.

Island in the Sea of Time by S.M. Stirling
Roc Books, 608 pages, \$10.98
ISBN: 1-56865-652-1

Stirling can be bluntly shocking, but in *Island*, he is never boring. This time-travel novel ignores the physics of the journey itself: Nantucket Island—people, ships and structures—are instantaneously transported to 1250 B.C. The book drops you into continual crisis; you'll never have time to ask, "How did that happen?" The author peoples his island with '90s

Absolute Magnitude

stereotypes: the Jewish Intellectuals; the Single-Minded Tree-huggers; the Crazy Conservative Christian Fundamentalists; the Benign Priest; the Black Lesbian Military Officer (two birds with . . . you know.) Stirling's talent shines when those stereotypes crash headlong into the "reality" of a modern society thrust unsupported into the Bronze Age. Stirling's omniscient, multiple-protagonist point of view works well. With the continuous action of an Indiana Jones movie, *Island* keeps the reader breathless. You'll stay up late with this one. The harshly real Central American Olmecs and prehistoric Britons behave as greedy primitives do when they collide with a more advanced culture (and its weapons). Battle follows battle—against the elements; primitive savagery; social upheaval; and each other. Stirling has done his research, both for modern Nantucket and for 1250 B.C.

The frightening villains are not stereotypes, but someone thinking "sequel" (Stirling himself?) saves them at the last second. Otherwise, *Island* is strongly self-contained. Civilization flowers again; babies are born; in blood and bravery, the good guys and girls whip the bad guys; lovers walk toward the sunset hand in hand.

Stirling is strongly pro-gay throughout. I should confirm that he is talented enough to keep a C.C.C.F., such as myself, eagerly turning the pages.

The Merro Tree by Katie Waitman
Del Rey; 437 pages, \$5.99
ISBN: 0-345-41436-5

Newcomer Katie Waitman is one fine author. She has chosen a theme (Art Against the Establishment) about which I am personally indifferent, and spun it into a tale of a richly textured future. Her book is not a "page turner"; the imagery is so compelling that you may (as I did) have to take the book in small bites.

Against a galactic background of myriad planets and sentient races (many nonbipeds), a new performance master comes into existence. The product of superior genetics and traumatizing abuse, Mikk of Vyzania becomes the last apprentice of a nine-hundred-year-old master performer. Mastering every performing art-form he encounters, Mikk is baffled only by the Somalite songdance—until the Somalites themselves are obliterated by a cosmic catastrophe.

Mikk, the ultimate performer, revives the songdance against the orders of the totalitarian Council, which controls performing arts. *The Merro Tree* is both the story of Mikk's trial before the Council and a flashback history of his remarkable life. Waitman's tapestry of the future is so colorful that, without the single bright thread of Mikk's life to tie it together, all would unravel.

One other thematic thread that binds the book is that of exotic romance. There are no explicit interspecies love scenes, but exploration of love between members of unrelated galactic cultures is Waitman's second most common theme. If eternal, interpersonal love can cut across planetary, species, and gender barriers, then on our present earth. . . . The author's careful craftsmanship repeatedly prevents the novel from slipping into another modern, self-justifying journey through perversion.

The Merro Tree is a difficult book to read. It is neither light entertainment, nor is it "literary" fiction trying to sneak into the genre in an SF overcoat. It is serious science fiction, which will require you to invest time in it: an investment worth the price.

Moonfall by Jack McDevitt
HarperPrism, 464 pages, \$24.00
ISBN: 0-06-105036-9

Every McDevitt book seems to get reviewed here, and a pattern is emerging:

McDevitt will keep you up at night, turning the pages, but he won't respect you in the morning.

A super-fast extra-solar comet will collide with the Moon, shattering it. Newly opened Moonbase must be abandoned, all space-craft and stations are in danger. Earth will be struck by massive debris, with the potential to end civilization.

Moonfall hopscotches between more protagonist points of view than a Tom Clancy novel, but the main action follows the heroic U.S. Vice President, from his last-second escape from Moonbase, through a helmetless space walk, to his crew's interception of a dinosaur-killer Moon fragment. For a politically correct humanist, McDevitt produces a sensitive handling of religious belief during the crisis. The action is continuous and satisfying, but the book still falters in the morning light.

McDevitt either did not do his research (sin!) or fudged his science (blasphemy!). He emphasizes tidal-wave damage from massive earth-impactors and pushes other calamities into minor roles. He gets the facts about nuking a meteoroid essentially wrong, and he overlooks several obvious solutions to the destroying the approaching moon-rock. The tension of his crisis makes the plot ride like a thunderbolt, but at what price?

His villains are cardboard-cutout Crazy Conservatives, bent on controlling the few survivors of a post-impact world. Yeah. Worse, he shrinks his multitudinous points of view to single-person status in a totally insufficient two-page denouement. The largest crisis in human history is (incredibly) followed by: "And they all lived happily ever after."

McDevitt takes you on one heck of a roller-coaster ride, but (in the morning) you'll find that somebody picked your pocket while you were shouting, "Whee!"





July '98©

The Pilgrim

by Richard R. Harris

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The Walking Dead were closing in on him again. Corporal Conrad broke from cover and fled along the scarred faces of gutted buildings and smoldering rubble. They never tired—and Conrad had not slept in two days. His blue helmet and soiled body armor stood out garishly amid the lifeless moonlike landscape strewn without end in all directions.

Conrad crouched in the remains of a shattered office building. He eased his M-40 through a gap in the debris and set the scope for automatic selection. The neural drugs made them impervious to pain, a general's dream—their bodies said to continue functioning long aft they were clinically dead. The rebels used it to help counter the desperate government's indiscriminate use of robotics, and it was said commanders often gave it to soldiers without their knowledge.

He panted feverishly. The sealed uniform hummed audibly in a frantic effort to filter in untainted oxygen. His tongue ran over dry cracked lips, sweat trickling freely down his sides even though the uniform was set for maximum coolant. He blinked to clear his vision, salty droplets stinging his eyes.

He would have to kill them. All of them. It would take precious ammunition, including his last anti-personnel rocket. They had murdered the Czechs, probably the entire Czech contingent in the capital by this time. From the erratic bursts of static messages coming over the Netlink in his helmet he knew the Canadians were stubbornly holding out at the airport, though under attack from both sides. That was his only chance now. Somehow slip across kilometers of God forsaken no-man's land that had been the heart of the capital less than a week before.

But first, he had to kill the dead.

He sighted on the first one. The scope automatically sharpened the visual image, giving him targeting data and optimum firing options. He tried not to look at the face. They always taught you that, like not looking down when climbing. They were going to butcher him just like they did to the Czechs, using honed machetes if possible to avoid wasting bullets—caveman weapons that had bettered the most sophisticated armorments in the U.N. arsenal.

There were five in the patrol tracking him. It was their eyes that yanked in his attention. Dead shark eyes in shiny black faces, unblinking, all pupil and no color. He found himself shivering in the oppressive heat, unable to stop his hands from trembling. His helmet warned him without words that he was letting them get too close, passing well within optimum firing range. The scope cross-hairs sighted on the lead rebel and blinked frantically, urging him to fire.

He had seen it happen when they attacked the Czechs. In his mind he could sense the lack of recoil from the M-40, see a bio-seeking cannon shell impale the man exposed chest, erupting in a hellish shower of crimson and bright sinewy gore. He knew he would have to fire again, and again, tearing away great gaping

chunks of the man, eventually a grotesque decapitated torso dragging along pale intestines in the dirt, ghoulishly animated legs continuing forward for a few more steps before toppling into sterilized dust.

He ran instead, fleeing blindly down the ruined street, dodging great piles of rubble sprouting jagged outcroppings that threatened to impale the unwary. Ancient large caliber bullets splattered the ground around him as he ran. A sudden sharp pain stabbed his left thigh, almost throwing him off balance.

He knew the uniform's body armor would prevent the bullet from penetrating—medical reconstructives had not even been activated—but it still hurt like hell.

Conrad had no idea how long he blundered ahead before stopping behind a charred upended land rover. The bodies of two government soldiers were laid nearby. Stripped and hacked savagely, bloated to twice their original size under a ripe yellow sun blazing through a haze of smoke and chemicals, their potent stench was blocked by his sealed uniform. He struggled to catch his breath, suspecting the uniform's oxygen recycle filter was failing. Better to suffocate, he reasoned, than have the Living Dead refresh themselves on your blood.

He knew that running was stupid. Sooner or later he would stumble into more rebels. The area was crawling with them. But moving cautiously took precious time, and he knew he would never lose his pursuers that way. He shook his head, hoping it would clear his mind. He was desperate to sleep, but knew it would be like a freezing man surrendering to exhaustion in a blizzard.

Conrad stole a glimpse over the land rover and froze. His sensors flashed a new contact. The robotic suddenly came into view from behind the rubble of a collapsed building next to him. He could tell it was an outdated Warrior Class model, the size of a small man, companies of them set loose by the government in rebel held areas—Conrad was suddenly an easy target.

He closed his eyes. They said these things could not bioscan, locating instead by simple motion sensors. He stood frozen, in plain view, knowing he could not possibly get a rocket off before he and his thermal protective uniform were incinerated.

The rebel patrol slowly materialized out of a swirling haze of mustard gas.

The robotic suddenly moved like a sleek jungle predator catching sight of its prey, turning so close Conrad could have reached out and touched it. He did not dare breathe. A thin grate in its head glowed with pure hellish fire. As it passed, Conrad could not resist slowly turning his head.

The rebels began firing at once. Bullets tore and slashed about the machine like swarms of angry bees. They immediately charged in a ragged line, guns blazing, reckless bravery born of desperation and heavy neural drugging. The robotic paused as though savoring the moment

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A beautiful beam of shimmering crystal light materialized from the robotic. The nearest rebel burst into flame. In a blink he was a living torch, fighting against it as though forcing his way against a stiff wind. Even as he moved his flesh melted like candle wax. Bare skin faded to expose taut muscle, which almost at once peeled away to reveal underlying bone. In seconds he was an animated skeleton, the fleshless gargoyle skull filled with unnatural light and grinning maliciously. It collapsed upon itself, a pile of clean white bone.

Other rebels became grotesque melting candles in their turn. The last two were close enough to set upon the robotic, clubbing it with maniacal frenzy. Fire was everywhere, writhing up from their smoldering comrades like avenging wraiths. The robotic tottered under the savage onslaught, fire spewing out in all directions.

Conrad slipped away unseen. He stumbled like a drunken man, nearly spent, too numb and exhausted to be horrified by the spectacle.

He found a quiet alcove in a demolished storefront just off the main street. He barely remembered to set the defensive controls on automatic before collapsing. Sweet oblivion swept over him molasses thick, tumbling through a grinning gaping whole into waiting darkness.

A delicate hand over his visor set him bolt upright.

Thomas whirled away violently. He came up with his M-40, looking down the mean barrel into the face of a small African child.

She had a pixie face. The little girl could not have been more than nine years old. Her eyes were immense, great dark innocent orbs regarding him with childish frankness, almost as though on the verge of bursting into uncontrollable giggles.

She was very beautiful.

"What are you doing here?"

She continued to regard him with interest. He kept the weapon carefully poised on her.

"I don't speak monkey," he made clear. "Get the hell out of here!"

The gesture was unmistakable. He jerked the ugly weapon toward the doorway, no more now than a gaping whole in the twisted remains. She kept her distance but continued to regard him with frank curiosity. He lowered the weapon slightly, keeping a wary eye on her.

"Can't talk? Or just don't talk to strangers? Looks like your mama taught you right, kid."

Thomas looked her over closely. Clearly she carried no weapon—the ragged brightly floral-colored dress was thin and barely covered her nakedness—but he knew both the government and the rebels routinely used small children as spies. And assassins. Yet he kept caning back to her eyes—wondrously large and round, like a newborn colt's, innocently absorbing everything that came before them. She had not moved, standing casually in the bombed out building as though it were the most natural of things.

"What's your name?"

Her eyes narrowed slightly, but she retained her poised silence.

"Suit yourself," he shrugged. "I'm Thomas Conrad, corporal, First Canadian Paratroop Regiment. Don't think you're going to get any handouts from me, kid. I've barely got enough to keep myself alive. Take off and find another sucker."

He put the M-40 down within easy reach—on the side away from the girl. It seemed that every single fiber of muscle in his body ached and throbbed when he tried to move it. He ran a quick scan of the immediate area, and did a diagnostic on his defensive system. Both gave a clear reading.

"You aren't much, but the biosensor should have picked you up," he muttered to himself. "Everything's been banged up pretty good the last couple of days."

It dawned on him that he must look like a deformed man with a grotesque insect head—the helmet boasting a sophisticated array of weapons tracking, and monitoring devices. He carefully checked the air for chemical or biological contaminants before breaking the seal and removing it, taking care while disconnecting the neural linkage.

"Damn thing never did work right," he grumbled. "And someone's jamming the communications links. I've been out of touch most of the time since this whole business started. How about it, kid—when did everybody go native and decide to level the place?"

Her immense eyes seemed to grow even larger as dusk crept about the ruins around them.

His nostrils flared warily, sensing a faint metallic odor mixed with the pervading reek of decaying flesh. Thomas rubbed sore tired eyes. It was inhumanly hot and humid, seemingly all the more so after the climate controlled uniform. His implant chronometer had been damaged, red numerals frozen in his peripheral vision, but he guessed he must have dozed off for a couple of hours before she woke him. He rechecked the helmet.

"Hope this damn thing is working. I don't relish the thought of one of those ghouls finding us in the night . . . you and your monkey friends can have this God-forsaken piss hole of a country."

Thomas looked around. The structure seemed stable, though it had taken a direct hit which collapsed the upper stories. The street outside was deserted, thick clouds of smoke (not gas, the helmet assured him) drifted lazily by, the dark battered structures across the street fading in and out of view at the whim of the breeze. Except for the distant booming of artillery fire, it was unnaturally still.

He turned suddenly to the child.

"Which way is the airport?"

She just looked at him.

"The airport, damn it!" he shouted. "Can't you understand?"

She clearly understood the roaring whine he made imitating low flying choppers and pointed to the right.

"Wish I knew if I could trust you," he stuttered, again rubbing red swollen eyes.

When the child eased slightly closer Thomas jerked as though scalded.

"Get away from me!" he screamed, bringing up the M-40. "Nobody's going to get through to me! I ought to roast you right now you damn little . . ."

She looked up at him silently, not at all afraid, not even offended by his sudden outburst.



The Pilgrim

"Sorry," he muttered, running a hand through dark sweaty hair. "Going crazy, I guess. Need some sleep. They never trained us for . . . for what's going on here."

Thomas squatted by the side of the wrecked doorway, cradling the M-40 gently. On the horizon, a shadowy flickering ring of fire encircled the city, a sinister false dawn growing more ominous as darkness fell. All around them, dusk deepened in the quiet shadows, the dark seeming to soothe and heal the broken twisted moonscape. The ever present heat remained oppressive. The little girl looked less substantial, only the great curious eyes standing out clearly. Faint wicked shadows played about the walls.

"You picked poor company, kid. You'd be better off on your own. Well, get some sleep. At dawn I'll see if I can get through the lines to the airport. Hopefully my unit will hold out."

She seemed to understand the tone if not the words, sitting up against a broken wall opposite him. Some dust drifted down from the sagging ceiling when the ground shook from a distant blast. Thomas surreptitiously took a few precious swallows from the uniform's recycler, his canteen emptied long ago.

"Get some sleep," he repeated tonelessly. "It'll be a long day tomorrow."

The dull rumbling of artillery almost seemed the deep rhythmic beat of some impossible tribal drums. As darkness settled fully, the glowing horizon swelled brighter, buildings and fields set ablaze reflecting sinisterly off the rainbow clouds of smoke and toxic fumes.

Thomas preferred the darkness. "Hey, U.N. soldier." Thomas jerked awake. He had dozed off in an uncomfortable position by the doorway, pain shooting up a red hot nerve in his neck when he moved. The sudden voice came from inside his head, and it took a few seconds to realize its source.

"Can you hear me, U.N. soldier?"

It was velvety maniacal, transmitting over the helmet's translator channel reserved for U.N. troops. How? he started to ask, then slammed his fist to the floor. Of course! Stolen from one of the dead Czechs. Thomas knew better than to answer and let them get a bearing on his hideout. Instead he routed his signal off the geosynchronous satellite a few hundred kilometers overhead.

"I can hear you, monkey," he shot back. "Want to give up?"

"My friend, do you know what it is like to feel the Drug?"

The unexpected response caught him off guard.

"It gives strength and power," the voice whispered softly, sinuously. "You become a man who can do anything."

Thomas had heard the rumors. The sexual prowess. The euphoria. A rush of pure joy, superhuman strength, virility . . . at least at first . . .

"Go to hell."

"We have beaten the government soldiers. You know it is true. They have turned loose robotics, poisons, even set the capital on fire to drive us out, but nothing can stop us."

"Lucky you."

"You will like it, my friend," he coaxed, still whispering. "All of them did."

"Who?"

The voice laughed softly.

"The ones we took alive. You will like it too. We will find you, my friend. You will be ours—and you will like it."

"Fuck you!"

Thomas disconnected his Netlink, smiling grimly. If they knew where he was, they wouldn't have bothered to try contacting him. They had hoped he would panic and give away his position. Thomas knew he'd passed the test—he had earned the right to live a few more minutes.

It was just dawn and already steamroom hot. He had sealed the helmet before drifting off, fearing a chemical or biological agent might seep into the building before the defense system would alert him. The air showed clear, but as he took off the helmet it still bore an unpleasant metallic tinge, and he sniffed warily like a dog sensing an intruder. The immediate area showed clear of contacts, if he could trust the sensors.

The night had been long and his sleep stolen in brief fitful snatches, a few precious minutes here and there before noises ice-picked his mind—sudden explosions, low flying aircraft, distant human screaming. He ran a hand over sweaty stubble. He was drenched in sweat, and he knew the stifling heat would only get worse as the day wore on. Feeling something odd in

one of his pockets, he discovered a well worn envelope carefully folded. He smiled and shook his head. She must have slipped it in there while he dozed, maybe for safekeeping, or maybe some important childish message. It was only then he realized the child was gone.

He instinctively grabbed for the M-40, sighing in relief when he found it next to him. She had been lying on the floor the last time he drifted off less than an hour ago. He thought she had been asleep, but if she had gone to the rebels—he quickly reconnected his helmet and sealed it. He stepped outside slowly, M-40 ready for the first hint of trouble.

Something made him whirl around. She was standing right behind him, gazing up at the insect head with the same unabashed curiosity, and perhaps a slight Mona Lisa smile. He had almost killed her.

"And just where the hell have you been?"

She beckoned him to follow.

The little girl proved a cunning and resourceful street rat. Thomas was amazed at her ability to slip through the wreckage of shattered office buildings, dart across open streets, and sense danger even before the unreliable sensors registered a contact. Twice they were forced to duck down behind rubble just in time to avoid patrols of Walking Dead. To her it seemed to be an exciting game, her eyes sparkling mischievously.

She did not seem to notice random artillery shells falling nearby, likely erupting in either poison gas or deadly short-lived biologicals. The child moved with a blithe disregard for danger or exhaustion, and it was Thomas who occasionally had to call for a rest. The heat was consuming, sapping his strength like some invisible vampire draining his blood.

He forced himself to sip sparingly from the foul tasting water recycled by his uniform. The girl seemed almost oblivious to the heat, dipping down occasionally to sip from dark polluted puddles. He found that there were never mosquitoes or flies,



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even about the corpses—the great clouds of poisonous gas acted as a potent bug spray.

Late in the day they stumbled upon the blackened wreckage of a chopper. Thomas made out U.N. markings and cursed silently. The rebels had proven amazingly adept at bringing down sophisticated low flying aircraft, both government and U.N., with almost no high-tech weapons. Assuming his communications equipment would still transmit, this was a prime reason why he had not tried to call in his position for a rescue attempt—that, and the likelihood that the rebels would intercept any message and reach him first. The girl started forward but Thomas waved her back. The pilots were beyond caring, and the rebels would have already picked it clean. And likely booby-trapped it for good measure.

They seemed to be making good progress, though Thomas had no clear idea where they were. She could easily lead him into a trap, but he knew he had little chance on his own. She never asked for food or water. Thomas suspected her kind was used to scavenging for scraps, doggedly finding a way to survive at any cost, which was one reason he did not trust her.

At dusk Thomas followed her down a deserted side street and into a looted storefront where they made camp. Aircraft were coming and going more frequently now.

“How close are we?”

He had become skillful at explaining himself with gestures and sound effects. She nodded at once and pointed eagerly, indicating that they were indeed close. Thomas smiled at the frequent sounds of high explosive mortar rounds instead of the dull bursts of chemical or biological warheads—Canadian weapons, his unit still stubbornly holding out at the airport. The grin caused his chapped lips to bleed, leaving a bitter copper taste.

The familiar reddish glow all along the horizon seemed brighter, as though the entire continent were now in flames.

“Tomorrow we should be able to chance crossing over the lines,” he told her as he munched on his last tasteless energy wafer, doubting she understood the words. “If we can slip past the rebels. And if my unit doesn’t shoot first and ask questions later.”

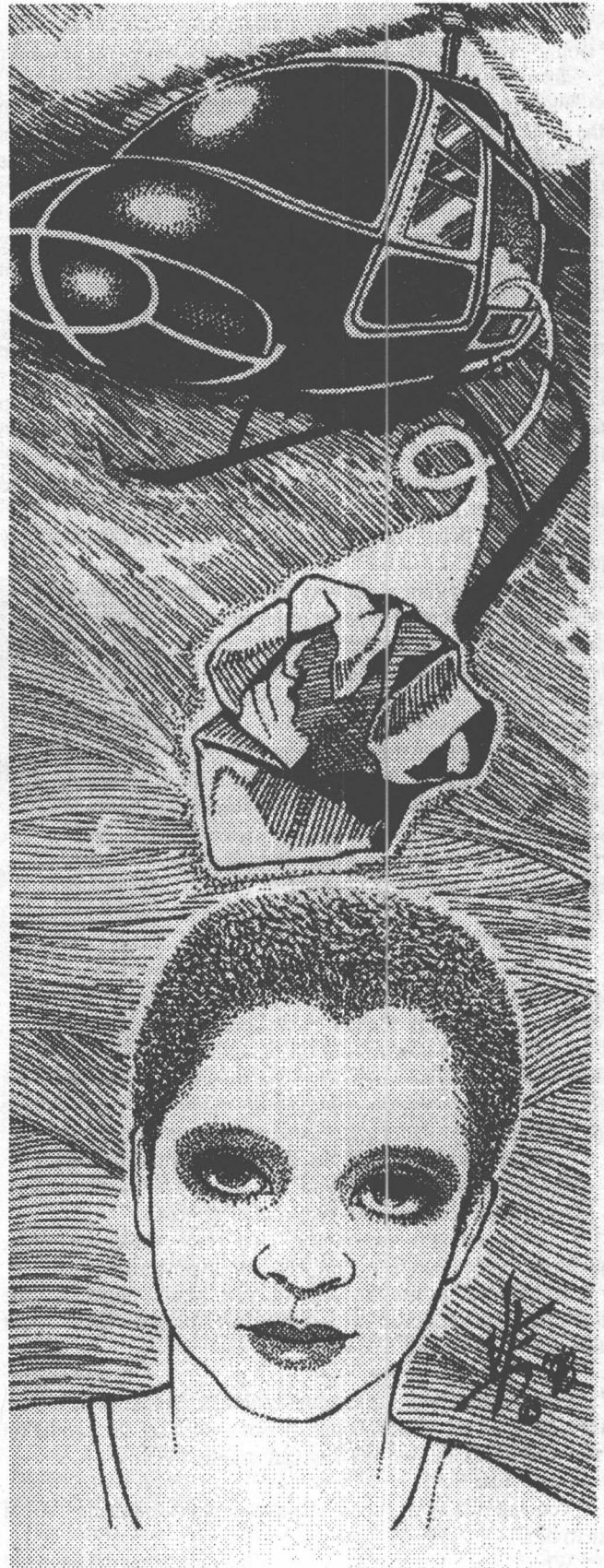
He was secretly glad she was not locking at him when he sipped the last few precious drops of rancid recycled water, though it was little more now than sweaty urine run through a fine sieve. His body trembled, pleading desperately for more.

A sudden explosion lit up the sky and rattled the ground beneath them.

“What about you?” he asked suddenly, unnerved by an unexpected quiet. “Are you an orphan or something?”

Strangely, she seemed to have understood and nodded slightly. He leaned back and tried to relax, the defensive systems in his helmet set on automatic, folding his hands behind his head. The girl continued to sit against the adjoining wall, gazing out what was left of a window. Her features were strangely lit by the almost translucent glow of the distant fires, as though reflected off rippling water. Thomas had the peculiar sensation that the same glow had been seen from the righteous burning of witches.

He raised up on one elbow.



The Pilgrim

"You did good today, kid. I couldn't have made it this far without you. Once we make it to the airport, we're home free."

She did not seem to hear him, staring out at the distant incandescence surrounding the capital. Her dark beautiful face was wondrously aglow.

From his vantage point, Thomas caught a glimpse of a scythe moon hanging over the twisted flames.

He awoke with a start.

There was an intermittent contact on the street outside. He carefully edged up alongside the doorway, the M-40 poised and ready. Many of the buildings nearby seemed largely untouched although deserted, indicating the fighting had not been too fierce here. Even the sounds of battle had faded, only occasional shelling and sporadic small arms fire sparking stubbornly in the distance, smoke from the fires leaving a hazy pall about the area. The sun was hot and red, sizzling right through the pale overcast. Thomas watched and waited.

The contact moved again. He recognized it at once as one of the small robotics, popularly known as scorpions, scurrying along the opposite side of the street. Little more than roving mines, they had been dropped all over the capital by the government, and now lurked amid the rubble waiting for the unwary. When their motion sensors picked up movement in a set radius they attacked, scurrying forward like large poisonous insects, clamping onto the nearest contact and detonating.

Thomas unconsciously rubbed at the helmet, trying to wipe away small droplets of sweat trickling along his face. His mouth burned with thirst, tasting as though he had sucked on old coins. The scorpion moved with agonizing slowness. Though he was rated a marksman he was not going to try to destroy it. The things were notoriously hard to disable, and he had precious little ammunition left. In a few endless minutes the scorpion made its way along the street, the flickering contact fading from his sensors.

It was only then he noticed her body.

Thomas did not need the sophisticated biosensors to know she was dead. It could have been a creeping cloud of toxic gas, or some unseen biologicals. But those deaths left their victims contorted, writhing in agony as though their guts had been twisted from the inside, their faces a mask of pure horror. The child's face was peaceful, happy even, as though thinking of a fun game played with other children.

Exposure to some toxic chemical maybe, something in one of the smelly pools she drank from, or malnutrition, or dehydration . . . her eyes were still open, almost as though the large innocent orbs were taking in beauty Thomas could not begin to understand. He stood there for some time before reaching down and gently closing them with a hand carefully sealed against contamination.

Thomas looked out the doorway. In the morning light he could just make out the airport. He again edged up beside the opening, trying to avoid looking at the child's body. Nearby buildings blocked most of the view, but he could tell the Canadians had managed to set up a Dome, the shimmering force field intended to block out most incoming fire. If he'd known last night he would have been tempted . . . but rebel and government soldiers would surely have been prowling the darkness, and even his own unit would probably have opened up on any movement outside their perimeter. Most of his

equipment including the communications were completely gone now—probably damaged by the pervasive hot humidity that seemed to corrode any sophisticated devices—and his personal ID signal was surely gone with it. Smarter to wait, he knew. He trusted his unit's eyes, rather than unreliable sensors. What a cruel joke to die now by friendly fire!

He jumped at the sound. Voices, very close, seemingly right under his feet. Furtive whispers, abruptly silenced. Thomas checked the M-40 one more time before venturing out.

The street was clear, to voices too close to have come from across the street. He crouched and waited. The bioscanner was gone now too, but he knew he had to be right on top of them. After a long minute there was more whispering, along with the same urgent hushing, but not before he located their hiding place.

The building he had been hiding in clearly had a cellar. Random rocket and mortar fire boomed nearby as he eased forward. He cursed himself for not being more careful. They must have known he was there all the time and could have ambushed him at any moment. He found small steps buried under debris—camouflaged, he could tell at once. Watchful of booby traps, he eased aside a piece of twisted corrugated metal and saw the steps led down to another level directly beneath where he had slept. Thomas cocked an armor-piercing rocket into the chamber of the M-40—his last one—and took up a position alongside the steps.

"The game's up!" he called out. "One of you monkeys had damn well better speak English! You've got five seconds to come out of there with your hands up before I blow you all straight to hell!"

There was tense silence. Even the shelling died down. Thomas had no idea how many seconds passed, but he did know he gave them plenty of time.

As he took careful aim on the narrow darkened doorway, Thomas sensed movement within, even as the rickety old door slowly opened. He crouched down, finger closing on the trigger.

An unarmed woman emerged from the dark, holding up a quick hand to ward off the sudden morning light. To his amazement, behind her streamed out children—over a dozen of them—frail malnourished kids blinking back the light and gazing at him with an unabashed mix of fear and curiosity. The woman kept in front of them and they closed in behind her, as though she could protect them from armor-piercing shells. Judging the air safe, he broke the seal and removed his helmet.

The woman had recovered her composure and glared at him defiantly.

"I speak your language, Englishman—and we are not monkeys!"

"Canadian," Thomas corrected absently. "What are you doing here?"

"You destroyed the orphanage," she accused, pointing to a thoroughly demolished building at the end of the street. "Where were we to go?"

The naked children looked around her thin legs, frank curiosity replacing any fear. Her accent was strong but her English was surprisingly good. Her age appeared to be about 30, worn old by long African years, dressed in a shabby rag that must have once been a dress. She too showed no fear, though Thomas suspected in her case it was more whistling through a

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graveyard. Still, he smiled at her bravado and lowered the M-40, tucking his helmet under one arm.

"I know the feeling," he agreed. "Anyone else down there?"

"You have captured all of us, brave soldier."

"Anybody else around? Walking Dead? Robotics?"

"Do you have water?" she demanded instead. "The children have not had water in days."

Their emaciated frames indicated it had been longer since any had eaten. The woman seemed slightly dizzy, and Thomas realized she had her arms around two of the children as much for support as to comfort them. He suspected it was a lot longer since she'd had any water.

"No," Thomas replied, the recycling of his uniform squeezed dry. "But there should be plenty at the airport."

"They shoot at anything," she spat. "Even children."

"That's because even children have been shooting at them. Hopefully—they'll let me get close enough to ID me. If I make it in, I'll send food and water out to you."

She snorted.

"We are just monkeys to you, Englishman! Things that run through the jungle. You forget us as soon as you are safe with your friends."

Thomas looked over the children, dirty naked bodies exposed to the fullness of the morning sun.

"Someone's bound to spot us if you come with me. You'd be better off hiding out, but I'll try to get you in. Something tells me I was suckered into this in the first place. She was one of your orphans, wasn't she?"

"Who?"

"A little girl, maybe nine if that, wearing a bright colored floral dress. One sharp little street rat."

"A child who could not speak?"

"That's the one."

"Thank God!" she whispered, hands trembling, the children clustering about her legs as though offering their meager support. "She is our oldest. Such an angel! She wanted to help the other children. She was determined to go out to get help for us. I tell her not to, but I guess maybe she did at that."

The woman looked around.

"Where is she?"

Thomas avoided the eager hopeful eyes, instead carefully resealing his helmet.

The ear-splitting whine of the thrusters was barely reduced inside the sleek black chopper.

Thomas was forced to cram himself in among the chill cocoons of U.N. corpses. The lull in the fighting had allowed Uzbeki reinforcements and supplies to be rushed in, wounded and dead going out on the freshly emptied choppers—few were being downed now, as they had learned to evade the rebels, although venturing beyond the Dome was still dangerous and required extreme countermeasures.

"Monkeys!" laughed Lieutenant Kharon, the Uzbeki pilot, yelling backwards to be heard over the shriek of the thrusters. "They not get their hands on us! Uzbekis know how to fly these things! We have killed many Russians in these fine choppers, yes? Ha ha!"

The U.N. commander had not been happy to have refugee children brought to the base. It set a very bad precedent, he said. And after looking Thomas over, he quickly pronounced him a

case of battle stress syndrome and ordered him evacuated on the next available chopper. Thomas had not bothered to tell the commander about the truckload of government soldiers that had come upon them before leaving the orphanage area, and how they had given them the ancient truck to help the children escape—though it probably meant certain death for them at the hands of the rebels. Or about the wounded Canadian paratroopers who gave up their flight out so the children could be evacuated first. Or the stubborn orphanage director, who died before she could be evacuated. Or even the rebels, who for some unexplained reason had not fired on them during their foolhardy dash for the airport perimeter in the dilapidated truck.

Packed in tightly among the chill cocoons, Thomas found himself chuckling. It occurred to him that he was being ejected from the carnage and not allowed to kill anyone—because he might not be completely sane. He shook his head, tears brimming in his eyes, the thrusters' rage carrying away his laughter. Pinned between the bodies, he was barely able to smear the precious moisture across his grimy face.

The chopper jerked suddenly off the ground. The powerful thrusters held them steady a few meters in the air as the pilot awaited clearance. The air inside became a cyclone, the hoarse screaming of the fully activated thrusters invading the open hatchway. In the distance he glimpsed the shimmering protective domes, and beyond the majestic fields smoldering in ruins.

Lieutenant Kharon looked back, a huge grin sweeping over the dark face, making a large circle with thumb and forefinger.

"Now you see how good I fly!" he bellowed, the words all but lost in the deafening roar. "I make many trips! Monkeys not get us, yes? Ha ha ha ha!"

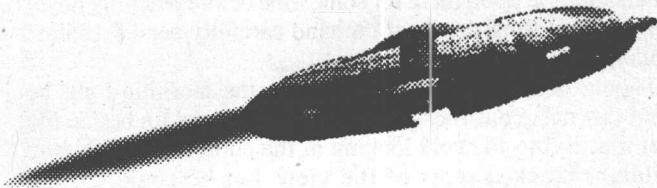
Laughing uproariously, he swung the agile chopper sharply about and accelerated straight for the shimmering river-like Dome wall.

Freeing one arm, Thomas felt about in the pockets of his uniform. After several tries, he came upon a soiled envelope crammed down in the bottom of one of his last pockets.

He gazed at it for a long time, finally crumpling it slowly into a tight ball and letting it drop.

It was swept about the narrow confines of the chopper, swirling in the back draft of the thrusters as though caught in the maelstrom of a tornado. Eventually, it was sucked out the hatchway, fluttering back toward Africa.

Thomas knew he couldn't read it anyway.



Letters Page

Dear Mr. Lapine,

I really appreciate the energy, dedication, and apparent staying power you've shown in not only improving *Absolute Magnitude* with each issue, but to add two more titles is truly impressive. While *Analog*, *Asimov's*, and *F&SF* will always be there (or the genre will be dead as I don't count media tie-in propaganda), the vitality of the smaller publications is the true measure of this genre's health.

Robert Mudlitz
Hudson WI

—Robert, I think you're right. Corporate money makers can't be looked to as a reliable gauge of the Genre's health. And science fiction has always been led by the smaller presses.

Dear Warren:

Thought I'd comment some on the Spring '98 issue of *Absolute Magnitude*.

I find your remark that SF is entering a new Golden Age to be quite depressing. Mainly because I'm not capable of following. I grew up in the forties and fifties loving SF. I've finally gotten to where I think I'm writing good SF. And the field has moved away from me. I can't read most of the Hugo winners over the past 15 years. I once got 6 copies of *Isaac Asimov's* and could not completely read a single story. I read some of both *Aboriginal SF* and *Terra Incognita*. Finished about 5 stories in the 2 mags. The ones I finished were all "So What-ers." I'd read them, shrug, and say, "So what? Why did I bother?"

I have all the issues of *Astounding* from the forties. I personally believe that the twelve 1942 issues of *Astounding* are superior to everything published in the '90's.

I have published 27 sf & fantasy stories in such publications as *Classic Pulp Fiction Stories*, *Double Danger Tales*, *Startling Science Stories*, and *Weird Stories*. All are available from Tom & Ginger Johnson, Fading Shadows, Inc., 504 East Morris St., Seymour, TX 76380. Cost \$6.30 for one. \$36 for 6 issues I had a story in each of the four November '97 issues.

These are stories written in the old pulp magazine tradition. I find them somewhat crude in terms of style, but powerful in terms of story-telling, which I consider more important.

Classic Pulp Fiction Stories had its 36th monthly issue this May; *Weird Stories* its 20th monthly issue, *Double Danger Tales* its 16th monthly issue, and *Startling Science Stories* its 10th monthly issue.

Each copy is a saddle stitched 8" X 5.5" with 80 pages including the heavier paper covers with a black and white cover and a few interior illios.

The Johnsons have published nearly 100 issues of *Echoes*, the pulp magazine fandom zine, so they have the economics down. But I doubt that you will be interested in this particular manifestation of your Golden Age. I've read all of the nonfiction in this issue, but haven't nerved myself up to try any of the fiction yet.

Liked Allen Steele's "Primary Ignition." But one remark threw me. "...spacecraft designed when Grandma was wearing miniskirts..." Both my grandmothers were married and had children by 1900. Granny Colpus died in the late '30's and Grandmother Brooks in 1944 when I was three years old. I seriously doubt either ever wore a miniskirt. Is Steele really a rugrat?

Liked John Deakins book reviews readable. He reviews stuff that I find readable. But I must disagree with his remarks on time travel. A time machine would follow the path of the Earth in space for one reason: Gravity. The Earth's gravitation field has been there since the Earth formed and will be there until the Earth is destroyed. A time machine, unless it had a space drive could no more break free of Earth's gravitation field than I could driving my car from home to Angola.

Good to see Pam Meek's review of *Star Trek* books. I don't consider *Star Trek* or *Star Wars* books to be really great. But they stand out as well told adventure stories in today's lackluster sf field.

I dropped *Locus* mainly because I couldn't read most of the books that they reviewed. So I'm sorry to say that I won't renew my subscription. I Subscribed for the Hal

Clement novel and it's over. And I really see no point in submitting my stories to *Absolute Magnitude* when I find your editorial selections hard to read. I'm afraid that our tastes are too different. Unfortunately for me, most of the sf field tends to agree with you.

I wish you luck anyway I enjoyed the first two issues of *Harsh Mistress*. (How did a ghost story get in there, though?)

Yours,
Rick Brooks
Angola, IN

—Rick, I'm sorry to hear that you're unhappy with the direction of the field. I must admit that I'm surprised to have *Absolute Magnitude* lumped in with *Asimov's* and the like. I founded AM with the intent of publishing a modern day pulp magazine. Certainly the stories are somewhat more mature than what was published in the pulp era, but the spirit, I think, is the same. As for Allen being a rugrat the miniskirt remark was hyperbole; and John explains his time travel remarks in an article in this issue. Now about that ghost in *Harsh Mistress*, you know, from time to time, I wonder about that myself.

Dear Mr. Lapine,

I rarely feel compelled to write to an SF magazine, but several recent items have grabbed my attention. First, let me add my voice in support of your editorial in AM #9. I too have been a long time reader of science fiction and fantasy (and more recently of horror), and despite my interest and enthusiasm for the genre, I have never done much to directly support or enhance our field. Though I have attended several conventions in the Boston area, I have never volunteered to help out at one.

Your comments have inspired me to try to do more to aid the science fiction and fantasy fields. Currently I subscribe to only two genre magazines—*Absolute Magnitude* and a small horror magazine called *Lore*—though I do occasionally pick up other small press magazines. I also plan on subscribing to at least a couple of other small press magazines. I also plan to volunteer at a convention or two in the near future.

Letters Page

I was very excited to see that you folks will be publishing *Weird Tales*, and as a token of my support, I have included a subscription order with this letter. I have met Darrell Schweitzer at several conventions and found him to be quite interesting. I am sure that under his and Mr. Scithers' editorial direction, the new *Weird Tales* will be a success.

I am also very pleased with the addition of Steven Sawicki's column on the small press to the pages of *AM*. For a number of readers (myself included), it is often difficult to get information on current small press publications. For the last couple of years I have been avidly trying to collect back issues of several small press SF and horror magazines. Usually I have to rely on word of mouth to learn about what is good or what is interesting. Hopefully, Mr. Sawicki can also address the topic of collecting out of print magazines as well as current ones.

In closing, let me say thanks for a wonderful magazine, and keep those great stories coming. My best wishes for continued success.

Sincerely
Brian Lingard
Shrewsbury MA

—Brian, when I wrote that editorial I was hoping for reactions such as yours. I've gotten so many letters of support that I could never print them all. Gardner Dozois even quoted a portion of the editorial in his *Years Best Anthology*. I hope my words have a lasting effect.

Dear Warren:

As I finished another batch of reviews for *Absolute Magnitude*, I was struck by an aspect of today's sf market that just keeps turning up. The ideal villains for any science fiction story often seem to come from one group. Once, it was safe to take any number of moral free-shots at Nazis (Who, after all, was going to complain?). Further back, it was quite acceptable to assign a block of demeaning characteristics to all African Americans, using that now-unacceptable "N"-word, or to Jews.

Now, the safe target has become Crazy Christian Conservative Fundamentalists. As a C.C.C.F. myself, one of the few still struggling at the fringes of the SF field, I may be the only one in position to speak in our defense. We are not all paranoid hypocrites out to destroy the world, as in

Haldeman's *forever peace*, or bent on sabotaging the only surviving civilization, as in Stirling's *An Island in the Sea of Time*. We are not all nut cases who would let a dinosaur-killer asteroid wipe out humanity, to further some illogical conservative ideology, as in McDevitt's *Moonfall*. Several of us even know quite a bit of math and science.

A lot of us cried when homegrown conservative terrorists blew up the Oklahoma City Federal building. Yes, most of us hate abortion, but we don't all shoot nurses from ambush. If you are Catholic, would you chose Torquemada as your spokesman? Does the JDL speak for every Jew, or Fidel Castro for every Hispanic, or the Black Panthers for every black American? We did not chose the bloodthirsty idiots who claim to be conservative Christian spokesmen.

Science fiction writers *do* choose their villains, however. Must those always be us? Most other American religions don't have a high enough moral profile even to be good targets. We're easy to hit, but consider: An easy shot is sometimes a cheap shot. What kind of moral victory is it to shoot into a crowd, without distinguishing your armed enemies from unarmed Christians who are forbidden even to hate you?

Read Sagan's *Contact* all the way through sometime (and forget the [ugh!] movie). It IS possible to present a balanced picture, instead of sliding into a knee-jerk plot whose villains are wild-eyed C.C.C.F.'s instead of Bug-eyed Monsters. Humbly, please choose the writers' difficult, correct road instead of the easy, cheap-shot route.

Thank you.

Sincerely Yours
John Deakins
Harrison, Arkansas

—John, while I'm not a C.C.C.F. I do believe you have a point. Enough of a point that I tend to reject stories that portray all Christians as crazy villains out of hand. Of course, I also tend to reject stories that show how righteous all Christians are. A note of reality on both sides of the issue would be nice.

Classified Ads

THE MARTIAN SOLUTION, a Martian murder mystery by Richard R. Harris, the author of story "The Pilgrim" in this issue. Available for \$8.00 plus \$2.25 shipping from: University Editions, 59 Oak Lane, Spring Valley, Huntington WV 25704.

LOVECRAFT, horror, weird fiction—new & used hardcovers, British imports, paperbacks, small press, chapbooks, magazines. FREE CATALOG: Mythos Books, 218 Hickory Meadow Lane, Poplar Bluff, MO 63901-2160 or dwynn@1dd.net

THE SPACE-CRIME CONTINUUM: Western Massachusetts' only SF and Mystery Bookstore. Thousands of titles, role-playing games, and trading card games. 92 King Street, Northampton, MA 01060. Phone 413-584-0944 or check us out on the web at <http://www.io.com/~avlott/>

WANTED *Absolute Magnitude* #7 (Spring 1997) Chris Oliwa, 1708-330 Alton Towers Circle, Scarborough, Ontario, Canada, M1V 543 or e-mail me oliwa@math.interonto.ca

Interested in the Liaden Universe or other stories by Sharon Lee and Steve Miller? Chapbooks, t-shirts, more—visit www.korval.com or write to SRM, PO Box 179, Unity, ME 04988

Contributors Page

Steve Miller has been a reviewer of music, books, and typewriters; a reporter, a professional chess tournament director, a librarian, an editor, and a resource specialist for a statewide electronic bulletin board system. He is married to **Sharon Lee**, with whom he has written a number of books in the Liaden universe.

Sharon Lee has owned a book store, delivered tractor trailers, and worked as an advertising copy writer. She is currently the executive secretary for SFFWA. She is married to **Steve Miller**, with whom she has written a number of books in the Liaden universe.

You can visit both Sharon and Steve on the web at:

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Gene KoKayKo's work has appeared in *Espionage Magazine*, *Modern Short Story*, *Tomorrow*, and *Hitchcock's Mystery Magazine*. This is his fourth appearance *Absolute Magnitude*. He lives with his fiancée in California.

Allen Steele became a full-time science fiction writer in 1988, following publication of his first short story, "Live From The Mars Hotel" (Asimov's, mid-Dec. '88). Since then he has been a prolific author of novels, short stories, and essays, with his work appearing in England, France, Germany, Spain, Italy, Brazil, Russia, the Czech Republic, Poland, and Japan. He has won two Hugo Awards and is hard at work on a new novel.

Jamie Wild makes his fourth appearance in the pages of *Absolute Magnitude*. He plays lead guitar, and occasionally sings badly, in a New York Metal band. He says he is trying to stay away from alternative rock and literary sf. "You can either sell out and try to impress people you don't like or have fun with it. I'm having fun!"

John Deakins is a retired science teacher. He has one novel, from Roc, to his credit: *Barrow*.

Linda Tiernan Kepner holds the distinction of having received more fan mail than any other writer we've ever published. She is the assistant director of the Peterborough New Hampshire Town Library (the oldest public library in the world) and an instructor at Keene State College. This is her second appearance in our pages.

Steven Sawicki is the foremost reviewer of the small press. He has written more words on stories that no one will ever read than any other living person.

Joe Mayhew won the 1997 Hugo Award for best fan artist. Before retiring he was the science fiction recommender for the Library of Congress. He writes occasional reviews for the *Washington Post*.

Richard R. Harris is the author of *A Martian Conspiracy*. This is his first appearance in *Absolute Magnitude*.

Eric Ren, this issue's cover artist, works primarily in the gaming industry. This is his first cover for a science fiction magazine.

Dominic Emile Harman is a British artist that has just begun breaking into the U.S. market. His work has appeared in *Interzone* and *SF Age*. This is his second appearance in *Absolute Magnitude*. Look for a cover from him on the Fall 1999 issue.

Newton Ewel's work has appeared in gaming manuals from Palladium Books. This is his first appearance in *Absolute Magnitude*.

James B. Zimmerman has worked for a number of magazines. He illustrated the cover of Roger Zelazny's book *Hymn to the Sun, An Imitation*. Jim is an avid Ravens fan.

Lloyd W. Meek is primarily a comic book artist and a sculptor. This is his third appearance in *Absolute Magnitude*.

Kelly Faltermayer is one of the top semi-pro illustrators. This is his second appearance in *Absolute Magnitude*.

